THE FORTISBC ENERGY UTILITIES

(comprised of FortisBC Energy Inc., FortisBC Energy (Vancouver Island) Inc. and FortisBC Energy (Whistler) Inc.)

2012-2013 Revenue Requirements and Rates Application

Attachments to the Response to BCUC Information Requests No. 2

August 19, 2011

Attachment 12.1

REFER TO LIVE SPREADSHEET

Provided in electronic format only

(accessible by opening the Attachments Tab in Adobe)

Attachment 12.4

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Attachment 15.1

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Attachment 16.2

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Attachment 21.1

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Attachment 21.4

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Attachment 26.1

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Attachment 29.1

Fortis Group of Companies of BC

Communications & Public Affairs Plan

2010/2011

25 August 2010

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Executive Summary

Terasen and Fortis BC have combined leadership and are about to announce a name change by early 2011. This marks a very exciting time for the combined organization and a significant opportunity to strengthen the brand.

This communications and public affairs plan outlines the most effective strategies to capitalize on this opportunity throughout 2010 and 2011. It focuses on leveraging combined leadership to reinforce priority messages and the most powerful ways to deliver them to the many stakeholder groups across the province.

The plan is divided into three main sections that are summarized below:

1. Business Objectives and Strategic Priorities

The plan was developed to support the objectives and initiatives outlined in the combined July 20th strategic plan. The business priorities include:

- The integration of Terasen and FortisBC
- Renaming the companies with a common name
- Securing the base businesses (natural gas and electric)
- Integrating new products such as biogas and natural gas for transportation, and
- Growth – organic, energy infrastructure (capital projects) and acquisition

In addition, there will continue to be an ongoing corporate focus on customer care, community involvement, safety, operational excellence, employee retention and attraction and corporate social responsibility. All of the above will help differentiate the organization and provide a competitive advantage against other energy providers.

2. Communications Directions

An integrated strategy was established for all communications and public affairs initiatives in 2010/11. This section reflects the umbrella brand positioning and overall process for developing communications that are unified and working towards a common goal.

Communications Framework

All communication budgets and projects will be centralized in each company in order to maximize the impact of all resources and align all activities by:

a) focusing the message and drawing upon the relevant support points;

b) crafting the means in which the content is packaged (brand language) to align with the brand

c) strategically selecting the method by which the content is transmitted or delivered to the receiver

d) addressing the perceptions and biases of the stakeholder that might affect interpretation

e) identifying the desired actions or outcomes to be attained

f) evaluating the resulting effectiveness or contribution towards corporate strategic goals

Key Brand Message

The single most important part of this strategy is the key brand message. All of the brand analyses have funneled down into the following statement that will be communicated in all communication efforts:

FortisBC is leading British Columbia to a sustainable energy future.

Brand Pillars

The brand is supported by three pillars, which are reflected in the key messages and are considered for the corporate social responsibility plan under development 1) Reliability - the critical importance of safety, 2) Relationships - the value of being a good corporate neighbour and 3) Readiness - the need to develop sustainable energy solutions to meet our customers' future energy requirements.

All three of these concepts are integral to the plan and are highlighted in all key lines of business strategies to reach each of the stakeholder groups.

Support Points

The support points are based on the key lines of business and focus on the most motivating and concrete reasons why the key brand message is true and more so than any other organization in the marketplace. The points include:

- Energy solutions that optimize conventional and alternative energy sources (including geo-exchange, district energy systems, biogas, waste heat recovery and solar thermal)
- Natural gas for efficiency (homes, business, vehicles)
- Electricity for clean, B.C. generated energy (TBC)
- Top-notch customer care
- Energy efficiency and conservation tools and resources
- Strong employee engagement
- Strong commitments to communities

Success Stories

Current projects were chosen as proof points to most clearly demonstrate the company's commitment to the sustainable future of British Columbia, to each of the key lines of business and to the CSR plan.

Desired Outcomes

The following were deemed priority outcomes for the 2010/11 communications and public affairs plan:

a) Increased awareness and demand for integrated energy solutions

b) Increased awareness and demand for natural gas solutions

c) Increased perception of value for electricity service

d) Increased customer commitment and community engagement across the province

e) Increased customer participation in energy efficiency and conservation programs

f) Maintenance of excellent safety and environmental awareness measures

g) Retention, attraction and motivation top employees in all business areas

All efforts will be evaluated against their ability to deliver these outcomes.

Brand Language

All company communications will reflect a consistent tone of confidence, knowledge, leadership, trust and upbeat energy. A new, common brand design for both companies will be rolled out gradually prior to renaming, after which all communications will have a common brand, look and feel. A tagline will need to be developed to support the new name and will be evaluated to support the key brand message.

Channels

Priority communication channels were selected for their ability to engage with each of our stakeholder groups and to most effectively deliver the key brand message. Three media goals were established along with the key modes of communication for each:

a) Reach - Mass media

b) Efficiency - Social media and traditional media

c) Effectiveness - Strategic partnerships, presentations and events, face-to-face

Stakeholder Assessments

An analysis was conducted of all key stakeholder groups: 1) residential and commercial customers, 2) builders, developers and HVAC contractors, 3) policy makers, elected officials and bureaucrats, 4) vehicle fleet managers, 5) First Nations and other key NGO opinion leaders and 6) current and prospective employees.

Current perceptions, attitudes, issues, motivations and challenges were identified to ensure that the communications/interactions are better tailored to meet their needs and to engage them to want to learn more.

3. Lines of Business

Strategies were developed for each key line of business to support the overall key brand message. The strategy and tactics are aligned to address the stakeholder assessments in the previous section. While tactics are categorized under a line of business it is recommended that care be taken to ensure that tactics do not overlap or compete for the attention of an external stakeholder. Centralization of budgets and governance of these tactics will minimize these risks.

Energy Solutions

Builders and developers, policy makers and the general public are the key targets for this line of business. Employee tools, social media, video, trade advertising and presentations will be used to:

- Generate interest in integrated energy solutions and secure deals with developers, provincial government, municipalities and facility owners to design and implement projects
- Demonstrate alignment with provincial energy policy
- Educate public about integrated energy solutions and the role the company plays
- Generate awareness, understanding and participation in the biomethane "Green Gas Program"

Natural Gas

Key targets include customers, policy makers, transportation companies, the media and employees. The objectives are as follows:

- Position natural gas as a clean, safe and reliable energy source that produces fewer emissions compared to many other traditional energy sources
- Demonstrate knowledge and expertise in natural gas as a transportation fuel alternative for fleet vehicles.
- Educate audiences that natural gas is an important contributor to B.C.'s economy

Online tools, sales collateral, media relations, newsletters and employee tools were selected to achieve these objectives.

Electricity

FortisBC targets include customers, policy makers, First Nations, transportation companies, the media and employees and have strategies similar to that of Terasen with the addition of objectives that reflect strong ties to the regions they serve.

1) Demonstrate FortisBC's commitment to communicating openly about its activities, consulting with stakeholders about developments that affect them,

and contributing to the economic, environmental and social fabric of the communities the company serves

2) Enhance FortisBC's strong, recognizable identity within its service territory with a focus on strategic relationship building and awareness of the company's proud history in the province as the oldest electric utility in B.C.

Energy Efficiency and Conservation

The following objectives were developed to support both the Terasen program and FortisBC PowerSense program:

- Reduce energy consumption and overall GHG emissions while helping meet B.C.'s climate action challenges
- Manage energy bills more effectively
- Increase awareness for incentives for upgrades to more energy efficient appliances & equipment in existing buildings
- Increase awareness for programs for new home construction that use latest energy efficient technologies

Online tools, advertising, strategic partnerships, events and print materials will be targeted at customers and builders and developers.

Customer Care

Key targets include customers, employees, First Nations government officials and the media. Online tools, print materials, employee programs as well as community, media and government relations will be used to:

- Generate awareness and excitement of Terasen's new B.C.-based contact centres and maintain awareness of FortisBC's commitment to in-house customer care.
- Maintain reputation as a transparent and trustworthy organization
- Demonstrate commitment to being a customer-focused organization through accurate, timely and friendly communication
- Demonstrate commitment to corporate social responsibility and sustainability through the selection of a local workforce and the energy and environmental standards of the new buildings in addition to the sustainable, B.C.-sourced materials used

Commitments

In order to support the companies' commitment to corporate social responsibility, the following objectives were established:

- Increased awareness of safety measures
- Increased awareness of environmental performance

- Better understanding on rates and service value
- Increased awareness of community investment and employee giving / volunteerism

Advertising, media relations, online tools, print, events, direct mail and employee programs will be used to reach the general public.

Employee Engagement

Employee events, newsletters and promotional materials will be developed in order to achieve the following:

- Combined leadership and renaming of Terasen and FortisBC
- Retention, attraction and motivation of employees in all lines of business
- Development of knowledgeable brand ambassadors that clearly understand and support the brand's leadership positioning in energy sustainability
- Development of the brand pillars and cultures – Culture of Care (Relationships), Culture of Innovation (Readiness), Culture of Excellence (Reliability).

Business Objectives and Strategic Priorities

Recognizing customers' needs and acknowledging the environment in which Terasen and FortisBC operate is becoming more challenging; the companies must position their resources to proactively meet these challenges and continue to build strong relationships with customers, employees and regulators. This is best accomplished as one company.

The retirement announcement of the Terasen Inc. President and CEO in March 2010 provided the opportunity for common leadership with one leadership team for both companies, effective July 1, 2010. Integrating business functions where it makes sense will create a stronger, more diverse entity.

Together, Terasen and FortisBC will now follow a common vision and carry a unified voice and integrated energy solutions to their customers and stakeholders, to further the objective of better leveraging the Fortis brand in B.C. By Fall of 2010, planning will be underway to rename Terasen and FortisBC with a common name – FortisBC. This will require additional budget and a separate integrated communications, marketing and public affairs plan.

A combined Terasen and FortisBC 2010 strategic plan has been prepared for the companies' Board of Directors (July 2010) which outlines the combined strategic business priorities for both organizations. All Communications and Public Affairs activities in 2010 and 2011 will be prioritized to support the objectives and initiatives outlined in the combined strategic plan.

Theses priorities include:

- The integration of Terasen and FortisBC
- Renaming the companies with a common name
- Securing the base businesses (natural gas and electric)
- Integrating new products such as biogas and natural gas for transportation, and
- Growth – organic, energy infrastructure (capital projects) and acquisition

Woven through these priorities is an ongoing focus on the customer and the use of high quality service and community involvement as a differentiator and competitive advantage versus other energy providers in the province. This includes an emphasis on the new contact centres; exploring technology such as advanced meters, energy efficiency programs, community investment, employee fundraising and volunteerism and being part of the social fabric of the communities we serve in addition to leveraging our strong relationships with First Nations communities.

Further to the business and strategic objectives, Terasen and FortisBC will continue to strengthen the communications of our commitments – safety; operational excellence; operating agreements with municipalities; employee retention and attraction; a focus on corporate social responsibility in the management of our operations; and ongoing public information and consultation on the companies' new capital projects.

Communications Directions in 2010/2011

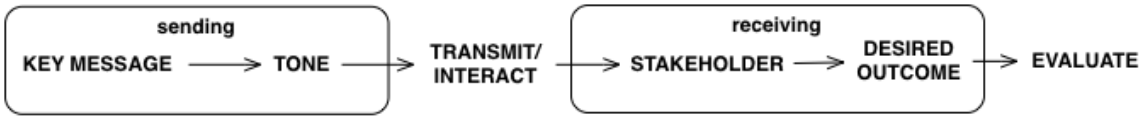
a) Communications Framework

Given the recent combined leadership of Terasen and FortisBC, the new organization will be renamed to FortisBC with planning beginning as early as the fall of 2010. A complete separate strategy has been developed to launch the new name and the unique strength of the combined energy organization in British Columbia.

The new company, FortisBC, will be positioned as a leader in sustainable energy, offering a full-spectrum of energy products and services in British Columbia. The following plan highlights how this key message will best be communicated with all key lines of business to support it and will be further supported by the corporate social responsibility plan under development. It will also outline the most impactful channels to deliver this message to all of the key stakeholder groups.

This plan focuses all communication budgets and projects into one centralized process in order to maximize the impact of all resources and align all activities by:

- focusing the message and drawing upon the relevant support points;
- crafting the means in which the content is packaged (brand language) to align with the brand;
- strategically selecting the method by which the content is transmitted or delivered to the receiver;
- addressing the perceptions and biases of the stakeholder that might affect interpretation;
- identifying the desired actions or outcomes to be attained; and
- evaluating the resulting effectiveness or contribution towards corporate strategic goals.



This framework requires analysis of all communications requests to ensure that they are integrated and support the key message. In addition, it confirms that all stakeholder groups and desired outcomes are accounted for.

b) Key Brand Message

All of the brand analyses funnel down into one single important message to communicate about FortisBC in all communication efforts:

> *FortisBC is leading British Columbia to a sustainable energy future.*

This message provides the foundation on which the entire strategy is developed. Until the companies are renamed the individual company name (Terasen or FortisBC) will be used. This message will:

1) be demonstrated in everything the organization does and says;

2) be integrated across all facets of the organization;

3) differentiate the organization in the marketplace; and

4) support the future Corporate Social Responsibility Plan.

All communications efforts will be evaluated against their ability to powerfully communicate this key brand message.

c) Brand Pillars

The brand is supported by three pillars that are reflected in the key message. These pillars represent the critical importance of safety, the value of being a good corporate neighbour and the need to develop sustainable energy solutions to meet our customers' future energy requirements.

All three of these concepts naturally originate from the work employees undertaken at Terasen and FortisBC, particularly while part of the Fortis group of companies and will no question continue to be at the core of the new FortisBC organization. The following descriptions provide more detail on each of the brand pillars and these pillars will be brought to life in our messaging.

It should be noted that the brand relevance for the new combined organization and the awareness of each pillar is currently being evaluated in Terasen's June 2010 wave of customer research, including customers in the FortisBC service territory.

Leading Pillar: Readiness

The company embodies all senses of the word: being fully prepared to do something and the characteristics of quickness, promptness and immediacy. This theme is present throughout the organization, embodied in the Terasen's Asset Integrity Management Plan (AIMP) to managing the fluidity of the business development realm. Towards asset integrity, FortisBC is also moving towards condition-based maintenance and taking a holistic stance for energy planning through their Integrated Services Plan (ISP) application. Planning ahead is required to deal with the unpredictable nature of business opportunities for projects and to reduce the risks to service quality.

From a human resources perspective, the training and career development opportunities for staff ensure that the evolving workforce meets the needs of the organization. In

governmental relations there is a need to be seen as part of policy planning, rather than just responding to policy implementation. The company wishes to be perceived as having the right ideas/tools/process/people for the job - whether it's the development of a customer solution or choosing sources of energy that are appropriate in certain instances.

A key part of the company's operational success and superior customer service is the ability to "plan ahead", "forecast demand" or be "anticipatory" of the needs of its stakeholders. Many examples of how this plays out exist. For example, from the early days as a gas company Terasen negotiated franchise rights to bring gas to undeveloped areas of the province to ensure that supply would be there as the community grew. FortisBC's strategy for developing relationships with First Nations communities also requires long-term planning as fruitful partnerships develop over time and in styles that are unique and appropriate to each nation. The evolution of safety practices through embedding AIMP into culture moves from a stance of "rudimentary repair" to proactive risk assessment. And possibly the most significant example is the strategic move towards being known as an integrated energy service provider which anticipates the energy needs of the province and the changing energy policies. Similarly, FortisBC's ISP thinking looks at solving demand issues by considering generation, transmission and conservation strategies simultaneously when they have traditionally been treated as discrete plans. Terasen's decision to in-source the customer contact centre to create a better service platform for customers is another example of the company's customer-centric approach, consistent with all Fortis companies.

The brand characteristic of "being anticipatory" also acknowledges the key messages and behaviors concerning safety, relationships and reliability (service, information, etc). In other words, you have to have your "house in order" before you can confidently plan for the future. The company's track record and relationships built over the lifetime of the organization provides the backdrop to this pillar. Additional character traits can also be presented atop this pillar. These could include: speed, nimble, diverse and innovative – all of which help evolve the perception away from slow, singular and monopolistic.

Second Pillar: Relationships

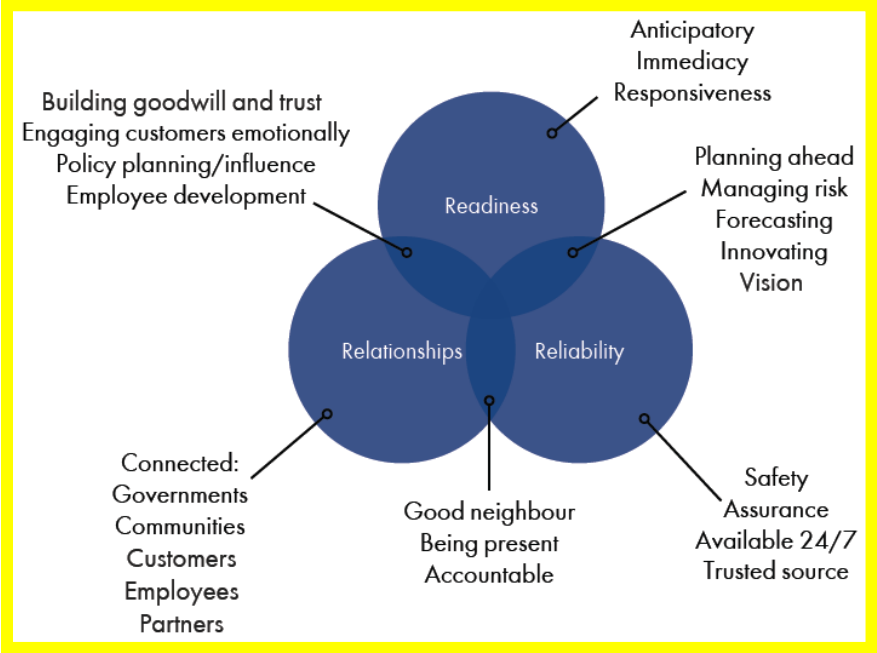
Terasen and FortisBC needs to be seen "everywhere in the community", investing financially or through volunteerism. It was noted that personal relationships are a strategic asset when gaining permission to operate. Examples include increased participation in industry and policy making organizations at all levels of government. There is recognition that while we can't necessarily match the deep pockets of other organizations in terms of philanthropy, the way our company supports the community is more at the grass roots or at the level of neighbour-to-neighbour. A strength of Terasen and FortisBC, and the future combined company is that it can be intimate and close with customers while having the assets and resources of a larger organization. The combined company should continue to make efforts to be seen at all levels of community. Attending special gatherings with First Nations elders, visits to small businesses from the CEO or summits with the Premier all contribute to this brand pillar.

Third Pillar: Reliability

Closely tied to the notion of safety in the context of reliable service, the theme of reliability extends to other aspects of relationship building in the community. Both FortisBC and

Terasen would like to do a better job at educating people about all energy matters ranging from behavioral changes through conservation tips; understanding the economics of energy policy; and housing this on their respective websites in forms that everyone from kids to business owners can understand. At community events, FortisBC attracts visitors to their safety demonstrations geared for children as well as first responders. New safety initiatives at FortisBC include a solution to the problem of field operations staff not having regular desktop computer access. A computer display at morning muster stations will display relevant safety information for review and discussion.

Reliability also infers always being present, investing in the community – offering a sense of longevity which competitors or new entrants lack. Being a provider of information also translates into training and skill building, whether it's working with school-age children or creating opportunities for people to develop professionally or gain additional trade skills (e.g. accelerated ticket program in conjunction with BC Safety Authority).



FortisBC Brand Considerations

Terasen and FortisBC share many of the same characteristics that make up the three brand pillars. Reliability is naturally a cornerstone to both brands in their respective lines of business. Both organizations are also placing emphasis around the notion of Readiness as positioning the joint companies at the forefront of innovative solutions for BC's energy needs is a high priority.

It is worth noting that the Relationships pillar drives FortisBC's brand perception, given its size and roots in smaller communities. As the companies come together, it is recommended that attention is paid to how drivers of strong relationships can be used as a lever to propel the joint brand forward and the notion of Readiness.

d) Support Points

Support points based on all of Terasen's and FortisBC's key lines of business have been developed to support the key brand message: FortisBC is leading British Columbia to a sustainable energy future (until the name change the individual company names would be used.) The goal is to focus on the most motivating and concrete reasons why the key brand message is true and more so than any other organization in the marketplace.

The support points are listed below in order of priority to substantiate the key brand message. These support points are deemed the most effective ways to help the key stakeholders engage, understand and feel compelled to learn more about FortisBC.

- Energy solutions that optimize conventional and alternative energy sources (including geo-exchange, district energy systems, biogas, waste heat recovery and solar thermal).
- Natural gas for efficiency (homes, business, vehicles).
- Electricity for clean, B.C. generated energy
- Top-notch customer care.
- Energy efficiency and conservation tools and resources.
- Strong employee engagement.
- Strong commitments to communities.

e) Success Stories & Examples

The following current initiatives have been chosen as proof points that most clearly demonstrate the companies' commitment to the sustainable future of British Columbia, the support points/lines of business above and the CSR plan.

The list will be updated regularly to ensure the most powerful examples are utilized in all communications.

Energy Solutions

- The City of Quesnel
- The Village at Fraser Mills in Coquitlam
- Dockside Green in Victoria
- Biogas Recovery From Salmon Arm Regional Landfill

Natural Gas

- Mount Hayes Storage Project
- Fraser River South Arm Crossing Upgrade Project
- Spectra Energy Enhanced Transportation Service
- LNG Transportation Fuel Proposal

Electricity

- Nationally recognized PowerSense Programs that makes the topic of conservation fun and engaging
- Information sharing about net metering opportunities for customers
- Strong, regulator supported public consultation plans for capital projects and Cost of Service Applications
- Strong working relationships with First Nations communities

Customer Care

- Contact Centres in B.C.
- Energy Efficiency & Conservation Program
- PowerSense Program

Employee

- Community Giving Day
- Employee volunteerism in hundreds of community organizations

Commitments

- Gas odour detection and tips
- Electrical safety – preventing contact with wires
- Positive environmental performance measures
- High value rate calculations and rationale
- Visible, impactful community investment

f) Desired Outcomes

We believe that the outlined strategy will be successful in delivering seven priority outcomes:

1) Increased awareness and demand for integrated energy solutions.
2) Increased awareness and demand for natural gas solutions and continued perception of value of electricity within the FortisBC service area.
3) Increased customer commitment and community engagement across the province.
4) Increased customer participation in energy efficiency and conservation programs.
5) Maintenance of excellent safety and environment awareness measures.
6) Retention, attraction and motivation top employees in all business areas.
7) Consistent use of brand language

All communications will reflect a consistent brand language in order to effectively communicate the key brand message and create one unified voice.

g) Brand Language

The tone of all company communications will most importantly reflect confidence, knowledge and leadership. The brand will also be seen as modern, energetic and ready to take on a variety of challenges now and in the future.

The company will convey trust and respect because of the level of experience and commitment to its customers served over many years by both Terasen and Fortis BC. The brand is a true expert in the energy field and as such, it will be shown to deliver new ideas with the same care and professionalism as both companies have in the past.

Design and Tagline

A new, common brand design for both companies will be rolled out gradually prior to renaming, after which all communications will have a common brand, look and feel. A tagline will need to be developed to support the new name and will be evaluated to support the key brand message. The following objectives have been kept in mind:

1) To evolve the visual language as the company repositions itself in the marketplace and enters competitive markets.
2) To create a language that has a symbolic reference to 'readiness' and provides a way to speak to the broader product offering.
3) To be current and look less like typical utility communications.

The new design and tagline will launch in the fall in combination with the official name change.

A comprehensive graphic standard is also under development in collaboration with the communications department.

h) Channels

All communication channels have been evaluated for their ability to engage with each of our stakeholder groups and to most effectively deliver the key brand message. There are three main considerations for each priority channel of communication: reach, efficiency and effectiveness.

It is important to note that no budget has been allocated to date for promoting integrated energy solutions and natural gas - in comparison to the many millions that BC Hydro spends annually on communications in B.C. Consideration should be given to exploring the benefit of a moderate increase in the public awareness budgets for these lines of business. In the interim, choosing very impactful yet cost-effective channels is critical. Creating buzz through unpaid media/within the community is an important part of the strategy and can be done with minimal dollars if executed creatively.

Each of the priority channels described below contributes to all three of the goals (reach, efficiency and effectiveness). However, each channel has been listed according to the goal it

most powerfully achieves. Each line of business has also been aligned with the most effective channel(s).

1) Reach

Mass Media

Mass media will be used for priority messages that have broad based appeal with virtually all of our stakeholder groups. It will create the most impact in the shortest amount of time.

The primary mass media campaign will be the name change announcement that could be made by the end of the year. In addition to creating awareness of the name it would provide the opportunity to reposition the company before a mass audience. This is best way to reach the most people across the province in an engaging way. Radio and print are strong recommendations and are currently being analyzed for cost and effectiveness with the media agency. Ethnic media is also an important component in the mix. Clear examples and benefits of successfully completed integrated energy solutions are the best way to support the new organization and its key brand message.

Secondly, pertinent safety messages (like gas odour and electrical safety) are very effectively communicated through radio and newspaper and should continue to be used. Quantitative awareness levels are easily measured through research providing a valuable metric and ROI.

2) Efficiency

Social Media

Social media is a critical part of the communications mix to efficiently reach our audiences and becoming increasingly so. It will be particularly important as part of the name change campaign.

Given the technological opportunities available through this medium, it is a very effective channel for delivering our message of innovation that supports the readiness pillar. Also, given the unique opportunities to create true dialogues with our customers, it is an excellent vehicle to support our relationships pillar.

Video is at the heart of the social media strategy given that it helps make complex, technical messages more fun and much easier to understand. This is particularly true in demonstrating integrated energy solutions and their benefits. A longer brand video will be developed as well as a series of short integrated videos to demonstrate integrated energy solutions along with some key project success stories to date. The efficiency of natural gas will also be included as part of the 'new energy solution'.

Twitter, Flickr, Wikipedia, YouTube and Facebook will be used to post announcements of the name change and new energy solutions developments including video, graphics and photographs. Response time to issues is critical and should be a maximum of 30 minutes.

Social media also plays an important role in reflecting our commitment to all of the communities we serve. It provides the perfect opportunity to highlight various community events and demonstrate customer service - particularly with solutions to customer

problems. It is also a great way to educate staff and create a sense of pride and teamwork within the organization. All videos and key information posts should be available to employees before they are sent to the public.

Traditional Media

Traditional media coverage is still an important part of the strategy and innovative bites of information (as per content used in social media) should continue to be supplied to broadcast and print (both mainstream and niche publications) editorial media. The name change will provide the perfect opportunity to leverage the media and highlight the new brand with its commitment to the future of B.C. It is an opportunity that should be used to create as much excitement and innovation as possible. At the same time, the combined history and experience is critical to support the reliability pillar.

3) Effectiveness

Strategic Partnerships

Partnerships with trusted third party experts will add more credibility to the brand message and increase visibility in the community. When possible, conversations with the media should be initiated to jointly express the shared vision on the future of B.C. energy and the environment.

As part of this strategy, a key target list of potential partnerships needs to be developed along with a process that clearly outlines responsibilities, timing and communication requirements. This target list should include key NGOs and non-profits that are strategically aligned with our key message.

Presentations

Building on the success of Canadian District Energy Association CDEA materials (June 2010), targeted presentations are required for groups in the following areas: key government committees, builders & developers organizations, schools, universities, hospitals, key NGOs and vehicle fleet managers. All presentations should follow the consistent brand messaging and feel but be tailored to the specific audience. Examples of success in integrated energy solutions are a critical part of all presentations.

Schools are a key opportunity on several levels including teachers/administration, parents and students. Influence in all of the groups is important from a sales perspective and chance to apply additional, local pressure on municipalities to develop greener buildings to meet climate action challenges.

There are several ways to effectively accomplish this including student presentations and fun demonstrations that educate on our commitment to sustainable energy solutions as well as to safety. Take-home materials aimed at both parents and students are an important part of the follow-up.

Parent Advisory Councils are an additional area of focus for educational presentations, relationship building in the community and key contact generation for an increased voice within the local municipality.

Events

All types of events described below are important opportunities to reflect the company name change and new leadership positioning.

Community events play a vital role on many fronts. First, they enable the organization to interact with our customers on a one-on-one basis to reflect our top-notch customer care. They also provide the perfect opportunity to:

1) educate on our new initiatives and their benefits,
2) reinforce safety messages and
3) be seen as a true community partner by donating time and dollars to important local projects.
4) build relationships with community leaders

From an employee perspective, they are also critical in building pride and teamwork. Special consideration is required to ensure we are selecting the right events based on employee input and feedback.

Relevant trade shows, conferences and recruitment fairs (including the Union of British Columbia Municipalities, CDEA trade show and the upcoming contact centre events) are key opportunities to demonstrate leadership in sustainable energy solutions. All booths and materials should be highly interactive and innovative (including videos developed for social media that do not require sound to be effective). Video should play a prominent role on large screen monitors placed in at eye level.

Sustainability and innovation must be at the core of every element of the trade show booth - flooring, booth construction materials, paper and inks used in pamphlets, fabrics and accessories. Location of the booth is critical in terms of visibility/traffic and placement amongst competitors. Attention should be given to all factors at the time of booking conformation.

Educational tools are important not only for trade shows participants but also as take-away materials for attendees (especially the trade) to use when educating others on our energy solutions and their benefits, also accessed by electronic bulletin boards

Company events are also effective ways to engage government officials at all levels. More emphasis should be given to the types of government events, timing, invitation list and focus of the presentation. It is imperative that key news and innovations are communicated but the events must also be used as an opportunity to build one-on-one relationships. The April 28, 2010 MLA dinner and premier's meeting in Victoria is viewed as an example of success on all of these fronts.

Post government events, a clear plan with responsibilities and timing should be implemented to conduct follow-up calls with key individuals that express interest in specific areas. To note, consultants are an important part of the process in gaining influence amongst the right people in government. However, they should be used as behind the scenes researchers and strategists rather than as face-to-face representatives of the brand at events.

Last but not least, employee events are a key part of the strategy and the combined leadership and name change is a great start to increased momentum with staff at regular educational and team building events. A new vision for the company will be announced with specific ways each and every employee can contribute to that vision. A structure should be in place to evaluate and recognize contributions throughout the year that best illustrate the vision in a variety of ways (big or small).

Employee events that educate and provide clear examples of success across the organization are critical. The goal should be to ensure that every employee, regardless of department, role or seniority, is knowledgeable about what the company is currently doing, plans to do and can briefly communicate examples of sustainability and innovation.

The regularity of the employee events is what is most important. Size and format are less so. Events can be done online as a monthly company address from the CEO along with selected video illustrating recent key developments.

j) Stakeholder Assessment

Terasen

In order to truly understand the target audiences, an analysis was conducted of all key stakeholder groups. The information is based on existing research findings (including the Terasen May 2010 report) and feedback from employees who manage the relationships with each of the stakeholder groups.

Current perceptions, attitudes, issues, motivations and challenges were identified to ensure that the communications/interactions are better tailored to meet their needs and to engage them to want to learn more.

Eight main groups with common traits have been identified but there may be additional segments with specific needs, within each group. It is assumed that when necessary unique communications will be developed to address any particular needs of a key stakeholder.

Residential & Commercial Customers:

- Overall, there is very high brand awareness amongst all B.C. customers. They are also generally aware that they have a choice in their natural gas supplier.
- Customer satisfaction levels are generally very good with the exception of Vancouver Island. Timing and quality of call centre communication appears to be the greatest concern. However, all areas voiced a need for increased communication on local issues and plans that affect them.
- Larger commercial customers also request more detailed information that is easily accessible including consumption history, rate options, alternative energy and efficiency recommendations, computer modeling programs and current energy market news.
- Price is a critical factor for all. There is some dissatisfaction and confusion among smaller commercial customers on billing and how gas costs are calculated. This is particularly true on Vancouver Island.

- Safety and reliability are also rated as one of the highest concerns. There are currently high levels of awareness as it relates to gas odour but low awareness on the appropriate steps to take when a gas leak is detected.
- The environment continues to be an important factor and will continue to increase again as economy strengthens. They are bombarded and frustrated by climate change issues and fears through the media and are aware of the popular notion of 'green washing'.
- In general, Terasen is not currently viewed as an organization that cares about the environment and seek energy efficiency and conservation programs that reduce cost, demand for natural gas, GHG emissions and meet future energy demands.
- However, about two-thirds of B.C. residents polled report that they are very willing to use alternative energy sources in a new or renovated home and that they believe Terasen should provide alternative energy sources like biogas.

Builders, Developers & HVAC Contractors

- Given customer demand, they are increasingly interested in more energy-efficient solutions for single-family homes, townhomes, multi-family residential buildings, commercial/retail developments and institutional developments such as schools and hospitals.
- There is limited knowledge about alternative energies, green building techniques and how to align with government regulations and bylaws. Therefore, most are open to education and help in this area.
- Their concerns revolve around up-front costs and how easily they can be passed on to their buyers. As such, they seek additional incentives for implementing energy efficient solutions.
- Diverse range of motivation to seek green alternatives given that the significance of cost varies from customer to customer.
- Timing is also very important and getting through the 'red tape' quickly is always a concern.
- Ultimately driven by the needs and wants of the end B.C. customer - both residential and commercial - while adhering to government regulation to achieve climate change targets.
- Currently dissatisfied with a lack of Terasen flexible scheduling options on Vancouver Island versus the rest of the province.

Policy Makers, Elected Officials & Bureaucrats

Provincial:

- Under strong pressure to act responsibility on the world stage to reduce climate change and set targets and policies that will maximize success.
- Looking for partnership opportunities to demonstrate real success in reducing climate change versus policies only.

- Focused on the economy and the fact that taxpayers have little appetite for increased government spending to fund alternative energy projects.
- Sensitive to citizen's fear of environmental problems but also to the idea of change to alternatives (questions of reliability, greater environmental damage, etc).
- Currently leaning towards further electrification.
- Inconsistent thinking with federal government and its comparatively weak climate change policies and targets.'
- The BCUC make-up has evolved over the years from mainly engineering focused to a broader range of skill sets and backgrounds.

Municipal:

- Overall, much more progressive business orientation than in the past. Interested in revenue sharing business partnerships like district energy systems.
- Feeling additional financial pressure given less funding from the provincial government and decreased appetite to raise taxes particularly in light of the weaker economy. Therefore, looking for innovative ways to fund their operations using more strategic, non-traditional opportunities while holding operating and staffing costs stable.
- Require ongoing negotiations and relationship building to educate and influence policies on new developments and infrastructure projects.
- Do not always see the benefit in the service/expertise of having a third party expert develop and manage the operations of new energy infrastructure.

Industrial Operators & Engineers

- They are very knowledgeable about alternative energy solutions but perhaps not as concerned about environmental sustainability compared with other stakeholders.
- They tend to be motivated by the 'payback' time period when considering the costs of each of proposed alternative energies.
- In addition, they are very pragmatic and seek technical information and detailed rationale.

Vehicle Fleet Managers

- The group is largely comprised of municipal return-to-base fleets – waste haulers, buses, trucks, forklifts and other port vehicles.
- They seek to reduce energy costs and GHG emissions from diesel and gasoline.
- Under government pressure to meet emissions reduction targets and open to solutions that help to achieve them without additional cost.
- Believe that electric cars are the ultimate solution and that adopting any other alternative at this point may be jeopardizing their position for electric vehicles in the future.

- Very risk adverse and look for solutions that are tried and true. As such, are motivated by the fact that natural gas for vehicles is a very common solution all over the world, including the USA.

First Nations & Other Key NGO Opinion Leaders

- Interested in working together to maintain social, economic, environmental and cultural interests of local and global communities.
- Spread out across the province with a diverse range of issues, challenges and opportunities specific to each community.
- Are motivated to preserve and protect a variety of things including historic sites, the environment, cultural traditions and jobs.
- Look for ways to be positive partners with other organizations in order to put themselves in a leadership versus critic position.
- Often work in conjunction with other government parties such as the Ministry of Forests, , BC Hydro and the B.C. Multi-Sectoral Aboriginal Leadership Initiative to negotiate appropriate solutions.
- Develop videos that illustrate key partnerships and the value to both parties. Use the videos online, at trade shows and distribute to media for key initiatives that could earn media attention.

Current & Prospective Employees

- Large staff of 1,300 largely concentrated in the Lower Mainland.
- A large percentage of new employees with one third of total employees being hired since 2007.
- An increasingly larger proportion of younger staff that is very tech savvy and has high technology and speed of information expectations. Transparency, adaptability and flexibility are all key to this group in particular.
- Diverse range of cultures and business areas with a varied level of technical knowledge regarding energy options.
- Combination of two cultures and mindsets: of FortisBC (electricity) and Terasen (natural gas).
- Some misunderstanding that energy efficiency programs are indeed an investment that is good for the business interests of the company.
- Compared with average B.C. citizen, likely have an increased level of motivation to reduce climate change and GHG emissions.
- Generally motivated to constantly improve the corporation' s positive public image by acting responsibly within the community and with our environment.
- Feel more job satisfaction when connected to the business and have full information on its objectives, priorities and key initiatives.

- Large percentage (48%) at risk of retiring in the next five years and limited supply of young, skilled workers graduating from trades and technology programs.
- Will continue to increase the proportion within the younger demographic
- Strong culture of volunteerism - for example in 2009 through the company's Warm Hearts Charitable Foundation and Community Giving Day, employees raised $133K for B.C. non-profits.
- Active members of various communities in B.C. and influential with the public and community organizations.

FortisBC

The following section represents characteristics specific to FortisBC stakeholders.

Residential and Commercial

- Generally have good relationships with their base business customers, customer satisfaction considered very good.
- Awareness of PowerSense programs is good, but overall uptake could be better. Customer base increases have helped achieve conversion targets which haven't increased at the same rate. Access to information about programs is inconsistent and commercial customers could benefit from simpler, easier to market rebate programs
- FortisBC rates are currently considerably higher than BC Hydro's (approximately 20%). Although the spread is anticipated to diminish within the next five years, having higher rates remains a concern as they impact customer satisfaction and the company's competitive position. In the company's customer satisfaction surveys which are conducted each quarter, customers continue to rate reliability and price as their top two issues of concern. Complexity in pricing schemes (e.g. peak hour variable rates) could pose a risk of confusing customers.
- FortisBC customers may also be concerned about the need for new generation, transmission and distribution lines and substations – activities that traditionally meet with apprehension from property owners and community representatives in the vicinity of the proposed infrastructure locations. As such there is a need to increase this stakeholders' understanding of the regulatory process and increase participation in consultation. This would minimize risks to new project planning and continue build value on existing electricity service.
- FortisBC has succeeded reaching Low-income stakeholders through a PowerSense kit marketed through third-party social services such as the Food Bank.

First Nations

- FortisBC has enjoys long-term relationships with First Nations bands. In part due to the fact that productive relationships require development over time with the same individuals.

- With over 200 First Nations bands in the region, FortisBC staff are skilled in recognizing the nuances in styles of engagement and the choice of engagement strategy. Some nations are more adept to planning and developing economic plans; others require more assistance to envision projects, the tangible and intangible benefits; and others prefer FortisBC's participation in spontaneous special events.

Current & Prospective Employees

- Staff of 600 headquartered in Kelowna with offices in the interior.
- Some employees will have been with the company through many acquisitions and name changes (West Kootenay Energy, Utilicorp, Aquila and FortisBC).
- The combination of companies over the years has also resulted in multiple benefit plans and organizational reform that centralizes activities such as HR and Corporate Communications. In some cases, not everyone is aware of what internal corporate services are available

Lines of Business

Integrated Energy Solutions

This line of business aligns with the support point: Energy solutions that optimize conventional and alternative energy sources (including geoexchange, district energy systems, biogas, waste heat recovery and solar thermal).

Objectives

- Generate interest in integrated energy solutions and secure deals with developers, provincial government, municipalities and facility owners to design and implement projects
- Demonstrate alignment with provincial energy policy
- Educate public about integrated energy solutions and the role the company plays
- Generate awareness, understanding and participation in the biomethane "Green Gas Program"

Stakeholder Strategies

Builders, Developers and HVAC contractors

This stakeholder struggles with balancing costs, regulatory compliance and consumer needs when it comes to offering green building alternatives. As such, the strategy is to help reduce the confusion and offer clear and informative information. As a reliable source and potential partner, the company can help educate and solve problems as this stakeholder works to offer more sustainable buildings.

Materials such as presentations, proposals or project case studies will be consistently branded, feature high-quality images and easy-to-understand diagrams to ensure complex ideas are communicated easily.

In-person communications is preferred and appearances and participation at industry events or conferences will be an important part of creating awareness and relationship building.

Policy Makers, Elected Officials (including First Nations) and Bureaucrats

The primary strategy will be to take advantage of the combined leadership to contact key stakeholders and build on the successful meetings held with the Premier and MLAs in late April. The new CEO has recently sat on a number of provincial government energy committees primarily focused on electricity and now this will provide the opportunity to have natural gas and other alternates such as district energy systems to be reflected in those discussion and policy decisions.

Government contacts and key committees should continue to be assessed and resources in the various departments in Marketing should be assigned to help foster these relationships. The company's corporate communications managers should continue to expand their reach

of contacts in the provincial Public Affairs Bureau and with the various municipalities to share messaging and explore opportunities to support mutual goals.

Government officials at all levels but particularly municipal and provincial, would be invited to participate in all alternative energy media activities (news release, event, speaking opportunity) driven by the company as it will help them demonstrate their leadership and further validate the company's activities. These types of events would support each of the brand pillars, highlighting relationships, expertise and that the company is actively delivering future energy solutions.

The sub point of the company being able to finance, own and operate geoexchange and district energy systems is of key importance to this group as the company can help them with two issues: 1) meeting climate action challenges and 2) helping free up provincial capital for other priorities such as health care.

The company will also continue to work with influential media to prepare positive earned media coverage for its integrated energy solutions and use that positive coverage to help influence policy development and generate sales opportunities with provincial government buildings.

Social media such as Twitter can be used to support and comment on government clean energy initiatives as appropriate. The company follows and are followed by a number of key government ministers and the Premier. This is powerful when seen by followers of each group which includes all of the company's key stakeholders such as media, influential British Columbians and even the company's own employees (at home).

General Public

Increase the use of advertising and public relations to educate and gain awareness of the integrated energy products and that the company is more than natural gas delivery. Social media can be used to further push out and create awareness of key initiatives that the company is pursuing.

Currently the company does not have sufficient resources for brand and image advertising on TV, radio or print; however, a YouTube channel will be launched by the end of the third quarter providing a forum to highlight the company's corporate videos which are now limited to the website and presentations.

Advertising in the business press (from O&M budgets of other corporate areas) could potentially spill over into the residential market given that many business readers are also residential customers.

The company has regular communications with customers through bill messages and newsletters however research has demonstrated that this channel has a very low readership rate at about 10 per cent.

One of the most effective methods for the company to reach customers is to ensure that every one of the company's employees are very well versed on the benefits of the integrated energy systems, how the company is helping to provide solutions to meet climate action challenges and can demonstrate that everything we do for this product line (and everything

else) is supported by the brand pillars. Our employees will then be empowered to be effective ambassadors for the organization and can share their knowledge with all of our contacts.

Tactics Summary and Budget

The following is a summary of tactics described in this section which may apply across multiple stakeholders. Also note that these tactics may also apply to other Lines of Businesses, as such prioritizing or sharing of budgets will help maximize effectiveness and reduce redundancy.

Description	Budget
Employee tools	$ 30,000
- Shared image galleries, proposal library and presentation templates	
- Online event calendar shared with other lines of business	
- Integrated Energy Solutions 101 online tutorial	
Social Media	$ Part of overall cmns budget
- Following energy technology and policy thought leaders	
- Participate in conversation to promote expertise and to share solutions	
Mass communications	$ 160,000
- Advertising in relevant trade magazines	
Presentations	$ 25,000
- Schools	
Green Gas Campaign (2010-2011)	$400,000
- Print, Online, Direct materials, video and event signage	

Evaluation

- Stronger voice in provincial policy development
- Politicians' participation in company driven media events or stakeholder events
- Increase in sales due to relationships, networking, presentations, or proposals
- Positive media coverage
- Employees that can speak effectively about our business to the public and customers
- "Green Gas" product uptake

Natural Gas

This line of business aligns with the support point: Natural gas for efficiency (homes, business, vehicles).

Objectives

- Position natural gas as a clean, safe and reliable energy source that produces fewer emissions compared to many other traditional energy sources.
- Demonstrate knowledge and expertise in natural gas as a transportation fuel alternative for fleet vehicles.
- Educate audiences that natural gas is an important contributor to B.C.'s economy.

Stakeholder Strategies

Residential & Commercial Customers

This stakeholder group has trust in natural gas as a safe, reliable source of energy for heating/cooling and cooking in their homes and businesses. It is important to maintain this level of awareness and trust as the energy market becomes more diverse and confusing. Given the enormous pressure on B.C. residents and business owners to understand and adhere to new environmental standards, the focus of communications should be on natural gas as a clean energy alternative for buildings as well as vehicles.

There is still a negative bias within the general public against natural gas as compared to other energy sources such as electricity. Therefore, educational communication needs to be delivered that clearly points out efficiency and emissions benefits to chip away at this negative bias. In addition, natural gas should be positioned as an important part of the new clean energy solution combined with alternative integrated energies such as geoexchange, solar thermal and biogas. By demonstrating natural gas as part of the integrated energy system, the company will achieve a positive halo effect over natural gas and reinforce its leadership positioning in sustainability.

Given the complexity and technicality of this information, the communication formats need to be very simple and easy-to-understand. For the most part, educational video is by far the most effective way to accomplish this via online channels. Success stories that demonstrate the ideal applications for natural gas are important as part of the videos as well as educational charts, graphics and stories in the newsletter and website.

Last but not least, an open dialogue is important with customers in terms of issues, challenges and fears regarding all types of energy. It is important that feedback is easily delivered and responded to in a timely manner. This can be done via the contact centres as well as on the website and with social media. This will help communicate information that is not always easily understood by this audience.

Government Officials & Policy Makers

This group is comprised of both municipal and provincial government officials and policy makers (including BCUC) that have influence over natural gas policies for all applications - homes, business, government building including hospitals and schools and vehicle fleets.

Educational one-on-one presentations with key officials, select committee meetings and company sponsored events are the most effective way of reaching this group. Taking both climate change and economic pressures into consideration, the presentations should provide clear rationale for natural gas as a clear choice against electricity for heating, cooking and vehicles. Presentations for the provincial government should also emphasize that the efficient use of natural gas would assist them in achieving climate action challenges, reduce the amount of electrical generation required in order for the province to achieve electric self-sufficiency by 2016 and that revenue from the sale of natural gas - the largest source of revenue for the province which also employees thousands of British Columbians – continues to be a large contributor to funding infrastructure and services for all British Columbians. In addition, it is important to note that the company is increasingly using natural gas as a base with layers of alternative integrated piped energies such as geoexchange and waste heat recovery.

Proven safety, reliability and widespread availability across the province are important points to back up the main environmental and economic benefits. Given the influence this group has throughout the province, this group should be utilized to gain access to decision makers at various municipal departments including fleets.

Municipal Return-To-Base Fleets

This stakeholder group is comprised of mangers of municipal waste haulers, buses, trucks, forklifts and other port vehicles. Given the pressure to reduce costs and GHG emissions from diesel and gasoline, they are highly receptive to solutions that will achieve both objectives. Presentations should be developed that are specific to the benefits of liquefied natural gas of each specific type of fleet vehicle.

All educational presentations should include a clear cost-benefit analysis on natural gas versus other energy sources, specifically electricity given that they currently have a general predisposition to adopting this type of energy for the future.

Facts and supporting data on safety, efficiency, emissions and costs are imperative to this very risk-adverse group in all communications. Natural gas fleet examples from the U.S. and other parts of the world are excellent ways to verify the widespread acceptance of natural gas as an ideal choice for fleet vehicles.

Natural Gas Transportation Companies

The strategy for this group should essentially be the same as for the public sector fleet managers above. The key difference is a somewhat heavier emphasis on the economic benefits versus the environmental ones.

Similar presentations should be used to address leaders of these organizations and should include both private and public sector LNG success story examples.

Media

As influencers for all other stakeholder groups, the media is an important part of the equation in demonstrating natural gas as a safe, clean energy solution.

The best way to add credibility to this message is by supplying both news and industry media with regular highlights of recently approved/completed projects that use natural gas as part of an integrated energy solution. These messages should also include CNG and LNG for vehicles and estimated reductions in emissions from natural gas projects across the province.

Again video is an important vehicle to deliver this message but ongoing regular bites of information including photographs are important to keep the company top-of-mind in the sustainable energy solutions area. This will contribute to the overall leadership positioning and pro-active approach to developing new and better energy alternatives that contribute positively to both the environment and economy.

Employees

Given that this group has varying levels of knowledge regarding natural gas as part of the clean energy solution, educational communication is important in order to maximize the company's natural gas ambassadors across the province.

In addition to all of the channels of communication used for the general public, regular employee events are effective ways to demonstrate natural gas benefits and the company's leadership in complimentary forms of alternative energy. It is important that these events are held on a regular basis and that all new information is communicated to employees prior to release to external groups. The expansion of natural gas vehicles in the company's own fleet, including industrial work vehicles should by highlighted and include testimonials from employees using those vehicles for their day-to-day responsibilities.

Tactics Summary and Budget

The following is a summary of tactics described in this section which may apply across multiple stakeholders. Also note that these tactics may also apply to other Lines of Businesses, as such prioritizing or sharing of budgets will help maximize effectiveness and reduce redundancy.

Description	Budget
Online	$ Part of overall cmns budget
- Updated and expanded web content.	
- Educational videos on LNG and CNG for vehicles and natural gas a part of the clean energy solution.	
- Regular posts on social media that reflect key natural gas approvals and developments throughout the province.	
- Online ads with industry related websites.	
Sales Collateral	$ 200,000
- Educational PowerPoint presentations for government officials and managers of vehicle fleets. - Brochures, folders and stationary.	
Media Relations	$ Part of overall cmns budget
- Stories pitched to news and industry media regarding new developments.	
- Pursue opportunities such as 'The Taste of BC" TV show to highlight natural gas for cooking and vehicles.	
- Feature politicians and business people in natural gas vehicles as validators.	
Newsletters	$ Part of overall cmns budget
- Articles in Get Comfortable and Service Line.	
- Large and small scale events.	
Employee	$ Part of overall cmns budget
- Page on Pipeline - with regular updates.	
- Large and small scale events.	

Description	Budget
- Share educational natural gas (including for vehicles) videos with employees prior to external release and explain the strategy behind the activity.	

Evaluation

- Feedback from sales dept and community relations managers.
- Sales increases/ interest for 2010 over 2009.
- Customer comments via contact centres, website and social media.
- Website analytic reports for web pages and online video.
- Research results from customer surveys.

Electricity

This line of business aligns with the support point: Electricity for clean, B.C. generated energy.

Objectives

1) Build and maintain customer, stakeholder and First Nations support
2) Position FortisBC's commitment to exceptional customer service while delivering safe, reliable electricity at the highest perceived value.
3) Help maintain FortisBC's high customer satisfaction levels
4) Demonstrate FortisBC's commitment to communicating openly about its activities, consulting with stakeholders about developments that affect them, and contributing to the economic, environmental and social fabric of the communities the company serves
5) Enhance FortisBC's strong, recognizable identity within its service territory with a focus on strategic relationship building and awareness of the company's proud history in the province as the oldest electric utility in B.C.
6) Demonstrate FortisBC's leadership in energy efficiency and conservation, and engage both customers and employees in energy efficiency and conservation behaviour that helps them save energy and on their bills while helping meet 30 per cent of forecasted load growth.

Stakeholder Strategies

Residential & Commercial Customers

The company's communications and public affairs budget is cast to reflect activities that provide value and support continued high levels of customer satisfaction. Value is created through strong, transparent community and First Nations relationships supported by regular and timely communications on topics significant to customers including safety, energy efficiency - PowerSense, rates, planned and unplanned outages, and capital projects. Ongoing information sharing about major equipment/facility upgrades and advance consultation on proposed capital projects is critical to success. This approach that has been instrumental in helping manage issues and achieve regulatory approvals for major capital projects.

The customers of FortisBC in many cases are also served by Terasen Gas. Joint communications and stakeholder relations activities in 2010 have worked well to convey information about the new combined leadership structure and the companies' new shared focus and strategy. There is the opportunity to leverage the strength of existing relationships with customers in this service area. By demonstrating natural gas and Terasen-offered alternates such as geo-exchange as part of an integrated energy system, the company will reinforce its diversified energy expertise and its ability to provide innovative solutions for B.C.'s sustainable energy future.

Last but not least, an open dialogue is important with customers in terms of issues, challenges and fears regarding all types of energy. Feedback should be easily delivered and responded to in a timely manner. This can be done via the company's established, in-house contact centre, on the website, social media , and other channels This will help communicate information that is technical and not always easily understood by this audience.

Government Officials & Policy Makers

At a provincial level FortisBC is well positioned as the President and CEO is involved with key government energy committees and has strong relationships with key stakeholders.

Personal interaction with key officials or group presentations position FortisBC as an industry leader and focus on: FortisBC's strategic priorities; generating understanding about future power supply resource challenges and the need for capital investments to both maintain the system and serve the growing demand for electricity; building awareness and support for FortisBC energy efficiency programs; and, issues briefings as needed to make sure concerns, issues and interests are responded to in a way that reduces risks.

First Nations

A significant number of FortisBC power facilities and lines are located on reserve land and in traditional First Nations territories. FortisBC has built strong working relationships with the nine bands and three nations in its service territory.

This strategy requires building relationships and consulting with First Nations and all of our stakeholders, including customers and government, about the company's activities and at the first stages of all major infrastructure projects.

Continual contact and information sharing, as well as direct involvement by the executive has been very effective in establishing strong relationships built on trust and respect with First Nations. Forging these relationships is a long-term investment, both for the company and First Nations.

Media

Supply news and industry media with regular highlights of recently approved/completed projects and any future projects that partner with Terasen for natural gas or alternates such as geo-exchange, waste heat recovery, solar thermal etc, as part of an integrated energy solution. Media relations announcements in the shared service territory should be co-ordinated to prevent the companies from scooping one-another. Existing media relationships should be leveraged to the benefit of both FortisBC and Terasen.

Ongoing regular bites of information including photographs are important to facilitate fair and balanced media coverage on issues, and keep the company top-of-mind with this audience in the areas of energy efficiency and sustainable energy solutions. This will contribute to the overall leadership positioning of the company, and a pro-active approach to developing new and better energy alternatives that contribute positively to both the environment and economy.

Employees

FortisBC employees receive regular information on all key developments and strategic priorities of the business, and are active ambassadors for the company in their

communities. Major energy efficiency campaigns include employee engagement tactics to generate excitement and participation by employees, and strengthen FortisBC and its employees as a role model for energy efficiency.

Since the combined leadership announcement, it is now important to focus on raising the level of awareness and education regarding FortisBC for all Terasen employees and to build a stronger sense of team among employees of both companies. Employee communications initiatives will serve to raise levels of awareness progressively over the next year.

Tactics Summary and Budget

The following is a summary of tactics described in this section which may apply across multiple stakeholders. Also note that these tactics may also apply to other Lines of Businesses, as such prioritizing or sharing of budgets will help maximize effectiveness and reduce redundancy.

Description	Budget
Customer Collateral (Newsletters, Annual Report, Brochures, Displays)	$ 168,000
Media/Government Relations	$ 18,500
Research	$ 1,500
Advertising	$ 65,000
Community investment (corporate donations/sponsorships	$ 205,000
Corporate merchandise	$ 30,000
Employee Staff events Employee recognition (LSA) Newsletters	$ 135,500
Total	$ 623,500
Transfer or contribution from somewhere?	($40,000)
Total	$ 583,500

Evaluation

- Feedback from managers.
- Customer comments via contact centres, website and social media.
- Research results from customer satisfaction surveys.

Energy Efficiency & Conservation (Terasen)

This line of business aligns with the support point: Energy efficiency and conservation tools and resources at Terasen.

In 2009, Terasen introduced a $41.5-million Energy Efficiency and Conservation initiative to enhance the energy efficiency tools and incentives provided to residential customers and businesses across B.C. This initiative was later expanded through 2011, with an additional $38.5 million.

Over the life of the expanded program, Terasen will help customers eliminate more than 775,000 tonnes of greenhouse gas emissions, saving a total 15.5 million gigajoules of natural gas – enough to fuel approximately 155,000 homes for one year.

Objectives

- Reduce energy consumption and overall GHG emissions while helping meet B.C.'s climate action challenges.
- Manage energy bills more effectively.
- Increase awareness for incentives for upgrades to more energy efficient appliances & equipment in existing buildings.
- Increase awareness for programs for new home construction that use latest energy efficient technologies.

Stakeholder Strategies

Customers

This group includes a wide range of customers with varying needs and motivations: residential, commercial, industrial, multi-family buildings, office buildings and schools/universities. It also includes those in affordable housing and ways to ensure these customers can participate in energy efficient initiatives or practices.

The overall goal is to generate awareness, stimulate interest and participation in EEC programs and incentive offers by communicating the specific benefits of each program to each type of customer. These benefits must be of personal value and more than simply what is best for the environment in order to truly motivate and engage.

In addition to current customers, communications also focus on students (elementary, high school and university) who have influence on their parents' energy consumption behaviour/purchases and are important targets for long-term brand building.

Given the diverse range of programs and incentives, it is important to simplify the information and focus on the key customer benefit for each particular program. Key considerations should be given to the BC Hydro Power Smart program and communications should try to focus on areas that differentiate versus compete with this well-established multi-million dollar program.

The positive halo effect on the company's sustainable leadership positioning should be considered in all communications, and programs that most powerfully support this positioning should be highlighted.

Builders, Developers & HVAC Contractors

The main focus with the trades is on educational materials that help them sell efficiency upgrades or new technologies to their customers. These materials should focus on the programs that maximize the win-win benefit in terms of increased revenue and business for them and long term cost savings for their customers.

Tactics Summary and Budget

The following is a summary of tactics described in this section which may apply across multiple stakeholders. Also note that these tactics may also apply to other Lines of Business, and such prioritizing or sharing of budgets will help maximize effectiveness and reduce redundancy.

Description	Budget
Online	$ 80,000
- Website including application downloads.	
- Videos with energy savings tips.	
- Social media posts with video, short tips and event promotion.	
Advertising	$ 250,000
- Radio	
- Newspaper and niche magazines.	
Strategic Partnerships	$ 535,000
- Trusted third parties that can share success stories (for example BC Lions, Vancouver Canucks, Vancouver Giants).	
Events	$ 294,000
- Industry trade shows.	
- Home shows and community events.	
Print	$ 200,000
- Bill inserts and brochures.	
- Newsletters.	

Evaluation

- Page views for EEC program web pages and application downloads.
- Number of program applications received.
- Customer feedback and customer satisfaction research results

PowerSense (FortisBC)

This line of business aligns with the support point: Energy efficiency and conservation tools and resources at FortisBC called PowerSense.

PowerSense, FortisBC's demand side management program, is one of longest-running demand side management programs (DSM) in Canada. Since 1989, the PowerSense program has helped FortisBC customers cumulatively save more than 360 GWh of energy, or enough to power 27,700 homes for a year

Leveraging this success, FortisBC has voluntarily committed to increase DSM resources from current levels of meeting approximately 50 percent of electricity needed to support new growth by 2020. This supports the Provincial Government's ambitious conservation targets contained within the 2007 Energy Plan.

On the road to meeting this target, in 2009 increased the amount of load growth offset by DSM initiatives to 30 per cent, up from 25 per cent the year before. FortisBC's 2009/10 capital plan includes a commitment to achieve a 35 per cent target by the end of 2010..

Objectives

- Position FortisBC as an industry leader in energy efficiency and conservation with all customer/stakeholder groups
- Increase awareness, interest and participation in incentive programs and adoption of energy conservation behaviour with FortisBC customers, as well as customers of the following municipal utilities: Grand Forks, Kelowna, Penticton, Summerland and Nelson Hydro.
- Create awareness about how conserving energy helps keep rates lower and lessens the need for new electrical infrastructure and power purchases at peak periods in order to meet customer's future electricity demand.
- Collaborate with government agencies and the other BC energy utilities to work towards the objectives of the BC Energy Plan, and ensure customers are receiving consistent DSM messages.
- Reach the underserved low-income customer market and educate them about opportunities to lower their energy consumption and reduce their bill through energy efficiency improvements.
- Engage employees to act as ambassadors for energy efficiency and think about what they can do at work and home to conserve energy.

Stakeholder Strategies

Customers

This group includes a wide range of customers with varying needs and motivations: residential, commercial, and industrial, including low-income and rental, business, institutional, irrigation, and builders/developers.

It also includes developing and delivering a conservation program for low-income and rental customers which involves providing specifically tailored tools (i.e. energy efficiency kits co branded with Terasen Gas), programs and outreach to ensure energy efficiency and conservation practices are accessible by removing barriers. This is being achieved through partnerships with municipal, provincial and federal agencies, other utilities and non-profit organizations to leverage investment and align service and program delivery.

The overall goal is to generate awareness, stimulate interest and participation in PowerSense programs and incentive offers through community based public awareness and education campaigns that communicate the specific benefits of each program to each type of customer. These benefits must be of personal value and more than simply what is best for the environment in order to truly motivate and engage.

Residential sector programs support improvements/renovations to existing homes and efficiency enhancements to new home construction. This is achieved through government and utility partnership programs, like LiveSmartBC, for single-family home retrofits and direct financial incentives for single and multi-family developers and builders.

General service sector programs support improvements to existing facilities or upgrades to higher efficiency levels for new construction in the General Service sector, as well as provide funding for audits and engineering studies. The General Service sector consists of non-residential customers such as commercial, institutional, government and small manufacturing facilities.

The industrial sector consists of programs for improvements to existing facilities or upgrades to higher efficiency levels for new facilities in the industrial sector. This sector consists of non-residential customers that have a minimum demand of 500 kilovolt amperes (kVA) and includes sawmills, mining and other processing facilities such as a pulp mill. Industrial program offerings for both existing and new facilities offer rebates for energy efficiency improvements and co-fund engineering studies to identify and implement efficiency measures.

Contractor / Wholesaler

Recent surveys show that heating contractors, electricians and lighting wholesalers are largely unaware of PowerSense incentive programs. A long-term direct marketing campaign to build partnerships with this sector will be introduced early in the fall of 2010. This will also provide another effective channel to reach customers with PowerSense messaging.

Tactics Summary and Budget

The following is a summary of tactics described in this section which may apply across multiple customer groups.

Description	2010 Budget
Online	$0
- Website	
Promotional activities	$100,000
- Point of purchase give-aways	
- Public relations	
Advertising	$150,000
- Radio, Newspapers, Magazines	
Strategic Partnerships	$10,000
- Letters to community advocates and service groups - Contractors - Information sessions coordinated with retailers - Wholesale lighting point-of-sale instant rebates - Retail point-of-sale instant rebates - Fire Department distribution of PS information and product samples - Partnerships with NGOs to provide EE information and rebate services	
Outreach	$231,000
- Community events/trade shows	
- Displays/exhibits	
- Product give-aways (events and radio campaigns)	
- Rewards	
- Donations & sponsorship	
Print	$40,000
- Bill inserts/customer newsletters and brochures.	

Description	2010 Budget
- Factsheets	
- Point of sale displays	
Other	$8000
- Photography	
TOTAL	$539,000

PowerSense is experiencing unprecedented growth in its goals, objectives and programming offers. As such, it is more important than ever to provide effective communications and social marketing strategy and delivery that meets the increased expectations.

Customers are also requesting more education and information about energy efficiency and conservation. To help meet the demand and develop a "conservation culture" a number of events and/or social marketing campaigns are needed. A number of school education programs will also be rolled out and need to be supported in upcoming years

To successfully promote existing PowerSense programs and prepare to meet the aggressive 2011 energy efficiency savings goals, additional employees in the communications group will be required.

Evaluation

- Page views for PowerSense program web pages and application downloads.
- Number of program applications received.
- Volume and tone of earned media received
- Customer participation levels in social marketing campaigns
- Customer and third party feedback
- Results of customer surveys (pre- and post-program surveys)

Customer Care

This line of business aligns with the support point: Top-notch customer care.

Objectives:

- Generate awareness and excitement of new B.C.-based contact centres.
- Maintain reputation as a transparent and trustworthy organization.
- Demonstrate commitment to being a customer-focused organization through accurate, timely and friendly communication.
- Demonstrate commitment to corporate social responsibility and sustainability through the selection of a local workforce and the energy and environmental standards of the new buildings in addition to the sustainable, B.C.-sourced materials used.

Stakeholder Strategies

Residential & Commercial Customers

Given that customer satisfaction levels are generally very good, the main goal is to build on this success and provide even more reasons to believe the company is very committed to its customers. By far, the best way to do this will be through the introduction of the new B.C. based contact centres.

On Vancouver Island there are additional concerns with respect to the current level of customer care (timing and quality of communication). As a result, more focus will be required to drive home the benefits of the new local contact centres and how they will alleviate previous frustrations.

The benefits of the new customer care model should be highlighted as: 1) quicker and more accurate information that is tailored to each local area, 2) greater flexibility to introduce new services, 3) expanded energy efficiency programs and 4) economic benefits for all British Columbians by creating new jobs.

Expanding the contact centre communications, beyond the announcement of the locations, should begin as soon as possible to ensure that customers feel part of the process and to help generate excitement about the improved service as well as local job opportunities. Communications should acknowledge that changes are coming as far in advance as possible and that the company is committed to making them efficiently as possible.

A two-way dialogue is critical in this communication. Feedback about the new centres should be easy for customers to provide and quickly responded to in order to build trust that the new operations will provide an even higher quality of service.

It should be noted that FortisBC has operated its own in-house contact centres since 2007 and focuses on high quality service and system reliability to provide its customers with the greatest sense of value. This is a significant service differentiator as currently FortisBC rates are 17 percent higher than BC Hydro although the that rate spread for the average customer is expected to decline to approximately 12 per cent by 2015. FortisBC is very active in

engaging in the communities it serves and sharing those activities in its communications and public affairs activities with all stakeholders but especially its customers. For both Terasen and FortisBC, the B.C. –based contact centres provide an opportunity to promote high-quality customer care and relationships as a Fortis brand value.

Employees

All employees, regardless of location and department, need to be aware of the contact centres development/launch timing, changes to existing customer service operations and benefits to customers In addition , to the company's commitment to corporate social responsibility. This education can then be utilized to communicate with the general public in all of their communities.

Given that this is a significant undertaking for the organization, the launch of the centres should be celebrated to help generate excitement and reinforce the additional benefits province-wide.

Employees in the company should be assured that existing contact centres will remain open and not be replaced by the two new B.C.-based contact centres scheduled for operation in 2012.

Government Officials & Policy Makers

The new contact centres provide an excellent large-scale example of the company's commitment to the province of B.C. and its economy. The contact centres will increase provincial GDP and tax revenues, which is of obvious benefit to this group.

This point should be leveraged within all presentations and meetings in ordered to help generate interest and action in other lines of business like energy solutions. Government representatives, particularly at the community and provincial level, should be invited to speak at company sponsored media events scheduled to take place at the key project milestones and would be encouraged to speak to the company's actions that support positive community impact and corporate social responsibility.

Media

As influencers for all other stakeholder groups, the media is an important part of the equation in demonstrating the company's commitment to quality, in-house customer service that provides enhanced value for customers and makes financial sense versus outsourced customer care options.

The best way to add credibility to this message is by supplying both media and community stakeholders with regular highlights of the project milestones from the contact centre project. These messages should also include economic benefits for the contact centre communities and the province as a whole and recruitment opportunities.

Media would be educated on the company's commitment to corporate social responsibility beyond the local workforce to include the substantial upgrades to the building envelope and mechanical systems, and the replacement of the building's electrical systems to meet higher energy efficiency standards. Design and construction will follow the principles and guidelines of LEED (Leadership in Energy and Environmental Design) by focusing on recycled and recyclable materials, using natural light, locally sourced would such as mountain pine beetle impacted would from Prince George and avoiding unnecessary landfill.

Tactics Summary and Budget for Terasen's Customer Care Enhancement project

Customer Care budget for FortisBC is included in the electric line of business.

The following is a summary of tactics described in this section which may apply across multiple stakeholders.

Description	Budget
Online	$ 20,000
- Website page with news and updates, key milestones, video and photos.	
- Social media posts highlighting key developments with video and photos.	
Print	$ 700,000
- Bill inserts and Get Comfortable and Service Line newsletters and a mailout to all customers explaining actions they may need to take and changes they will see when the new centres are implemented	
Media Relations	$ 60,000
- Launch media event at Prince George and Lower Mainland contact centre locations.	

Description	Budget
- Targeted pitches to local media as milestones are achieved in advance of launch.	
Government Relations	$ Part of overall cmns budget
- Regular updates to local officials.	
Employee	$ 60,000
- Page on Pipeline - with regular updates, including video designed for external audiences.	
- Regular updates on Headline News, Check it Out, Employee Connections and in Focus.	
- Lunch n' Learn Sessions	
- Road show events by project team members to areas such as Prince George, Kelowna, Victoria and Cranbrook.	
Community Relations	$ 48,000
- Open house for community leaders at both new contact centres.	
- Brochures at relevant community events including home shows.	

Evaluation

- Customer feedback to contact centre, online media and website.
- Volume and tone of media coverage, including letters to the editor.
- Research results in customer surveys.
- Employee feedback.

Commitments

This line of business aligns with the support point: Strong commitments to communities.

Objectives

To support a future CSR plan by achieving the following objectives:

- Increased awareness of public and work safety measures.
- Increased awareness of environmental performance.
- Better understanding on demand, rates and service value.
- Increased awareness of community investment and employee giving / volunteerism.

Stakeholder Strategies - Safety

Customers & General Public

Safety is the company's number one priority. Through public communications, it is critical that safety information is effectively communicated to ensure that the public is adequately informed about all aspects of natural gas safety and emergency procedures.

Key natural gas safety messages include:

- Natural gas has a rotten egg or sulphur-like odour so that it can easily be detected.
    - Anyone who thinks they smell gas, should act fast, get out of the building and call 1-888-663-9911, 911 or the local fire department.
- Always “Call Before You Dig” to obtain information on the location of buried gas lines and other utilities. Call BC One Call at 1-800-474-6886.
- Customers should ensure that their natural gas appliances are regularly serviced and inspected by a licensed gas contractor registered with the BC Safety Authority.
- Keep your meter clear of ice and snow. Remove any built-up snow by hand until the regulator and shut off valve are clear. When shoveling snow, don’t pile it up against or around your meter. If ice builds up on your meter or regulator, call 1-888-224-2710.
- If there is a leak from a pipe, the safest and least impactful solution is often to let the gas rise and dissipate quickly given that it is lighter than air. This is a short term solution until the leak can be totally stopped.
- It is not hazardous to ingest natural gas or the mercaptan which is added to gas to give it its 'rotten egg like' odour.
- Caution should always be taken near any gas source but it is important to note that it can only be ignited in limited gas to air mixtures.

Key electricity safety messages include:

- Electricity safety messages include “Look up and Live” and “a downed power line is deadly” Use caution when working in areas containing overhead power lines to prevent accidents caused by contact with the lines.
- A downed power line is deadly. If your vehicle contacts one, stay in the vehicle and call 911. Follow detailed instructions if you must leave the vehicle. Never touch your vehicle or a machine at the same time as the ground.
- You do not have to touch a power line to be injured or killed.

Given the importance of these safety messages for all British Columbians, mass communications are required to reach as many people as possible. This includes radio and newspaper advertising as well as corresponding editorial and social media posts. Awareness building is key and prompts to seek more detailed information and tips on the website are important.

Messages should be delivered in the most impactful way to maximize potential for audiences to engage, understand and act.

Employees

There is nothing more critical to the business than having each employee return home safe at the end of each workday. The company has rigorous safety standards to prevent injury and all staff and contractors are required to meet these standards.

Internal communications via online, posters and printed materials are important tools to communicate these tips and standards, in addition to training from supervisors. Workshops like 'Dig Safe BC' are also encouraged for all contractors.

Key messages include:

- Each employee must protect his or her health and safety and the safety of others by following established safety practices and procedures.
- Short cuts for expediency, at the expense of health and safety, are unacceptable.
- Every employee has the responsibility to report/act on observed unsafe conditions/acts.

Stakeholder Strategies - Environmental Performance

Customers & General Public

The company is committed to bringing its customers the most reliable and efficient energy services in an environmentally and socially responsible manner. It works with communities and stakeholders openly and honestly to ensure that all activities have no lasting negative effects on the environment. Employees are vigorously trained in environmental standards and practices to ensure compliance with all national, provincial and regional laws and climate change targets.

There are two key environmental areas that require operational focus and external communication: 1) GHG emissions management and 2) management of all land and waterways that are affected by pipelines and electrical lines.

From an emissions management standpoint, key messages include:

- Natural gas is the cleanest burning carbon-based fuel on the market today.
- Switching to natural gas from oil or coal helps reduce overall GHG emissions and helps Canada meet climate change targets.
- Transporting and distributing natural gas has fewer environmental impacts than transporting other energy sources such as oil, wood waste or coal, because pipelines are more energy-efficient than marine transportation, railways or trucks.

Key messages regarding land and water management include:

- A comprehensive environmental review is completed and shared with potential stakeholders prior to the start of any new project - to protect the land, water, fish and wildlife that could be affected by pipelines or electrical lines.
- The Osprey nest management program works with professional biologists to prevent nesting on energized poles and relocate them to keep the birds safe from electrocution.
- As part of the vegetation management program, trees that are too close to power lines are carefully assessed, trimmed or removed to reduce the likelihood of any public safety hazard.

Environmental messages are communicated to the public through the website, social media and bill inserts as well as being an important part of all community events.

Government Officials & Policy Makers

It is important that the organization is perceived as a pro-active leader in supporting the government's commitment to the environment and climate change goals. Proposals to policy makers that reflect ways to positively contribute to government requirements will go a long way in creating ongoing favourable opportunities for the company.

Environmental performance and initiatives should be communicated as part of an government presentation or event.

Stakeholder Strategies – Rates

Residential & Commercial Customers

The company is regulated by the British Columbia Utilities Commission (BCUC) and this includes rate review and approval. Value is a key priority for the company and it employs several strategies to ensure it delivers the best value to all customers for all types of energy.

Given that rate structures are complex and rate increases are sometimes necessary to offset infrastructure improvements, it is important to communicate this information in a simple and direct way. The most effective vehicles to accomplish this are the website and bill inserts.

Key natural gas rate messages include:

- Terasen purchases natural gas and propane and passes the cost of the commodity on to the customer without mark-up.
- Terasen projects customers from market fluctuations by: 1) purchasing gas from a variety of sources under varying terms, 2) locking in the price of gas through the use of futures contracts and 3) purchasing a portion of the supply from the spot market.
- Weather, supply and demand, international events and market speculation all affect natural gas commodity rates.
- Our expanded energy efficiency and conservation programs will provide customers with enhanced tools and incentives to manage their natural gas consumption and reduce their monthly energy bills.

Key electricity rate messages include:

- The company works hard to minimize rate increases through careful management of capital expenditure programs and increased productivity overall.
- Rates are increasing in 2010 as a result of the company's ongoing investment in new and upgraded infrastructure, the higher cost of capital, and from higher power purchase costs due to continued customer growth and increased electrical demand.
- FortisBC purchases a portion of its power requirements from BC Hydro. Therefore any changes to BC Hydro's power costs will affect FortisBC and will require FortisBC to flow-through this price change to customers.
- The FortisBC PowerSense program will continue to help customers manage their energy use and reduce costs.

Stakeholder Strategies - Community Investment and Employee Giving / Volunteerism

Customers & General Public

The company strongly believes in being active partners with the communities it serves and supports a host of community-based initiatives throughout the province. Community programs are designed to directly benefit the local community and to highlight the organization in a positive way.

There are four key messages that stem from the organization's commitment in these areas:

- Safety and accident prevention.
- Education, skill building and training.
- Environmental preservation and protection.
- First Nations culture and unique needs.

All community project requests are reviewed and carefully evaluated to ensure that resources are effectively being used to deliver on the above commitments. Programs include donations, in kind contributions, event sponsorship, presentations/workshops and

booths at events. One of the larger and most important programs is the RENEW job training program which aims to create a much-needed pool of skilled workers in the growing energy industry.

The company also strongly supports the active volunteer involvement of employees in the communities where they live and work. Every year, Terasen employees take part in Community Giving Day, when volunteer time and funds are donated to three selected non-profits in different communities throughout the province. A total of $30,000 is donated each year.

On the other hand, FortisBC has an employee donations program and all employees have an opportunity to apply for a cash donation towards organizations where they are a volunteer leader (coach, guardian or instructor). In 2009, more than $19, 500 was donated to 30 different organizations.

It is important that the public is aware of all of our community efforts to ensure this part of the business is contributing to the leadership positioning in creating a sustainable future for all British Columbians. All communication within the communities, on the website, in social media and in the annual report should focus on the direct benefit to the community versus the company's contribution in order to reflect the appropriate tone.

Employees

Community giving is an important part of the employee retention program. It provides employees with a sense of teamwork, pride and accomplishment.

Internal communications via online vehicles and posters are effective ways to increase awareness, participation and goodwill throughout the organization.

Tactics Summary and Budget

The following is a summary of tactics described in this section which may apply across multiple stakeholders. Also note that these tactics may also apply to other Lines of Businesses, as such prioritizing or sharing of budgets will help maximize effectiveness and reduce redundancy.

Description	Budget
Advertising	$ 980,000
- Radio.	
- Newspaper	
Media Relations	$ Part of overall cmns budget
- Targeted stories to correspond with advertising timing	
Online	$ Part of overall cmns budget
- Website	

Description	Budget
- Social media posts.	
Print	$ 215,000
- Collateral materials including posters and bill inserts	
- Newsletters	
Events	$ Within the budgets of other lines or business
- Home shows	
- Presentations at schools	
- Street teams at community festivals	
Direct Mail	$ 5,000
- Targeted at those that live or work in rights of way	
Donations & Sponsorships	
- Non-Profits	
- Community Projects	
Government	
- Presentations	
- Events	

Evaluation

- Telephone survey awareness results.
- Results from customer focus groups.

Employee Engagement

This line of business aligns with the support point: Strong employee engagement.

Objectives

- Combined leadership and renaming of Terasen and FortisBC.
- Retention, attraction and motivation of employees in all lines of business.
- Development of knowledgeable brand ambassadors that clearly understand and support the brand's leadership positioning in energy sustainability.
- Development of the brand pillars and cultures – Culture of Care (Relationships), Culture of Innovation (Readiness), Culture of Excellence (Reliability).

Stakeholder Strategies

Employees

The recent combined leadership structure is the first step of the eventual integration of Terasen and FortisBC. Although, still run as separate legal entities there will be cross reporting in corporate areas where it makes business sense. Employee communications will work to inform employees that this is about making the organization a stronger, better company – not a smaller company as the organization is well positioned for growth and needs all of the team members to help realize this potential. It is important that timely communications to employees work to dispel any misconceptions and create excitement that employees will now be part of B.C.'s largest energy delivery company.

It is anticipated that the Terasen and FortisBC could be renamed as early as the end of 2010 – employee communications would take place just in advance to external announcements to ensure that all employees are aware of the change and could speak knowledgeably and positively about it.

Communications to employees will support our key brand message and business priorities, while making these messages inclusive, meaningful, and easy to internalize – for any employee, in any role around the company. The goal is to inspire all employees to learn more about the business and be proud to discuss it within their communities. This feeling of pride will in turn create a more positive, productive working environment.

The messages will include:

- The company is a leading integrated energy provider, committed to providing responsible, innovative, flexible energy solutions, ensuring natural gas and electricity are readily available, while expanding upon our existing service and product base to integrate innovative energy offerings such as alternative energies, geoexchange, waste heat recovery, solar thermal and biogas.
- Natural gas is a safe and reliable energy source and the cleanest burning carbon-based fuel on the market today; it produces significantly less particulate matter and fewer greenhouse gas (GHG) emissions than other carbon-based fuels like oil and coal.
- Electricity infrastructure is viewed as an integrated system, looking at generation, distribution and demand side management as a whole.
- The energy transmission and distribution systems have an excellent safety record, and we take all possible steps to ensure our pipelines are safe and secure, including monitoring our system 24-hours a day, 365 days a year, and performing regular inspections and maintenance of our infrastructure and equipment.
- Customer service is at the heart of the business, underscoring everything it does, and actively seeks for better ways to serve all customers, and provide them with optimal value.
- The company works hard to help deliver a sustainable future for British Columbia, not only through our provision of reliable integrated energies, but also by giving back to the communities where all employees live and work through our Give Where You Live, Environmental Community Outreach (ECO) and FortisBC's community investment programs, and by mitigating environmental impacts through our operations management plans, GHG reduction initiatives, while building the energy efficiency and options that will empower our customers to minimize their environmental impacts too.
- The company takes pride in our workplace, and in ensuring it remains a preferred place to work, by supporting employees' career development, safety and wellness, community activities, and fostering a workplace culture where everyone has the opportunity to lead, learn and grow.

These messages will be communicated using employee-centred stories and using multiple channels. Open communication is vital so audiences have a way to communicate feedback at any time with a company commitment to responding in a very timely fashion.

Tactics Summary and Budget

The following is a summary of tactics described in this section which may apply across multiple stakeholders. Note that these tactics may also apply to other Lines of Business, and such prioritizing or sharing of budgets will help maximize effectiveness and reduce redundancy.

Description	Budget
Events	$ Part of renaming budget
- Name change announcement	
- Regular updates including video on project developments, approvals and media coverage	
- Community Giving Day	$ part of existing Community Giving Day budget
- FortisBC Community Investment announcements and local announcements	
Newsletters	$ 60,000
- Monthly submissions to Insight/Around The System & Check it Outs	
- Focus and Pipeline stories including Headline News and Employee Connections.	
- Content for FortisBC employee communications – weekly news update and managers pre-packs	
Print	$ part of budgets from other lines of business
- Posters	
- Promotional collateral including t-shirts, etc	

Evaluation

- Feedback via word-of-mouth and communications e-mail inbox.
- Employee Experience Survey results comparison on an annual basis.
- Zoomerang surveys as appropriate.
- Employee retention levels measured against industry standards
- Recruitment statistics
- Customer satisfaction surveys and comment to call centre

Attachment 41.1

FEU
CPCN CAPITAL EXPENDITURES
FOR THE YEARS ENDING DECEMBER 31, 2010 TO 2013
($000)

Line No.		BCUC Order # Reference	Approved	2010 Opening WIP (from detail tabs)	2010 Actual	2011 Projected	2012 Forecast	2013 Forecast	2010-2013 AUFDC (from detail tabs)	Total Forecast	Variance
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10) = (4) + (5) + (6) + (7) + (8) + (9)	(11)
1	Special Projects - CPCN's										
2	Customer Care Enhancement	C-1-10	$ 74,542	$ -	$ 28,826	$ 27,503	$ 14,916	$ -	$ 3,297	$ 74,542	$ (0)
3	Fraser River Xing Seismic Upg	C-2-09	$ 29,751	$ 10,366	$ 8,875	$ 14,717	$ -	$ -	$ 2,322	$ 36,280	$ 6,529
4	Kootenay River Xing	C-9-10	$ 8,304	$ -	$ 1,085	$ 5,627	$ 1,223	$ -	$ 285	$ 8,220	$ (84)
5	Okanagan Reinforcement Project [1]		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
6	Huntingdon Bypass [2]		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
7	Mt Hayes LNG Facility	C-9-07	$ 212,962	$ 117,750	$ 49,439	$ 31,436	$ -	$ -	$ 14,337	$ 212,962	$ -
8	Victoria Regional Office	C-1-11	$ 14,324	$ -	$ -	$ 8,456	$ 4,782	$ -	$ 884	$ 14,122	$ (202)
9											
10	Total CPCN's		$ 339,883	$ 128,116	$ 88,225	$ 87,739	$ 20,921	$ -	$ 21,125	$ 346,126	$ 6,243
11											
12	Gateway Project [3]		$ -	$ -	$ -	$ 4,500	$ 11,500	$ 1,750	$ -	$ 17,750	

[1] Okanagan Reinforcement Project is not yet approved and is included in this table solely for comparison to the table in this IR question

[2] Huntingdon Bypass Project is not yet approved and is included in this table solely for comparison to the table in this IR question

[3] Gateway Project is not a CPCN and is fully recoverable through CIAC. It is included in this table solely for comparison to the table in this IR question

FortisBC Energy Inc. - Mainland
CPCN CAPITAL EXPENDITURES
FOR THE YEARS ENDING DECEMBER 31, 2010 TO 2013
($000)

Line No.		BCUC Order # Reference	Approved	2010 Opening WIP (from detail tab)	2010 Actual	2011 Projected	2012 Forecast	2013 Forecast	2010-2013 AUFDC (from detail tab)	Total Forecast	Variance
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10) = (4) + (5) + (6) + (7) + (8) + (9)	(11)
1	Special Projects - CPCN's										
2	Customer Care Enhancement	C-1-10	$ 66,470	$ -	$ 25,936	$ 24,252	$ 13,291	$ -	$ 2,991	$ 66,470	$ (0)
3	Fraser River Xing Seismic Upg	C-2-09	$ 29,751	$ 10,366	$ 8,875	$ 14,717	$ -	$ -	$ 2,322	$ 36,280	$ 6,529
4	Kootenay River Xing	C-9-10	$ 8,304	$ -	$ 1,085	$ 5,627	$ 1,223	$ -	$ 285	$ 8,220	$ (84)
5	Okanagan Reinforcement Project [1]		$ -		$ -	$ -	$ -	$ -	$ -	$ -	$ -
6	Huntingdon Bypass [2]		$ -		$ -	$ -	$ -	$ -	$ -	$ -	$ -
7											$ -
8	Total CPCN's		$ 104,525	$ 10,366	$ 35,896	$ 44,596	$ 14,514	$ -	$ 5,598	$ 110,970	$ 6,445
9											
10	Gateway Project [3]			$ -	$ -	$ 4,500	$ 11,500	$ 1,750	$ -	$ 17,750	

[1] Okanagan Reinforcement Project is not yet approved and is included in this table solely for comparison to the table in this IR question

[2] Huntingdon Bypass Project is not yet approved and is included in this table solely for comparison to the table in this IR question

[3] Gateway Project is not a CPCN and is fully recoverable through CIAC. It is included in this table solely for comparison to the table in this IR question

FortisBC Energy Inc. - Mainland
CPCN CAPITAL EXPENDITURES
FOR THE YEARS ENDING DECEMBER 31, 2010 TO 2013
($000)

Special Projects - CPCN's	Customer Care Enhancement	Fraser River Xing Seismic Upg	Kootenay River Xing	
CPCN Expenditures - 2010 Actual	$ 25,936	$ 8,875	$ 1,085	
Add - Opening WIP - 2010	$ -	$ 10,366		
Less - Closing WIP - 2010	$ (26,723)	$ (20,075)	$ (1,147)	
Add: Projects transferred to Deferral Accounts - 2010				
Less: Adjustments - 2010				
Add - AFUDC - 2010	$ 787	$ 834	$ 62	
TOTAL CPCN ADDITIONS 2010	$ -	$ -	$ -	
CPCN Expenditures - 2011 Projected	$ 24,252	$ 14,717	$ 5,627	
Add - Opening WIP - 2011 Actual	$ 26,723	$ 20,075	$ 1,147	
Less - Closing WIP - 2011 Projected	$ (53,179)		$ -	
Add: Projects transferred from Deferral Accounts - 2011 Projected				
Less: Adjustments - 2011 Projected				
Add - AFUDC - 2011 Projected	$ 2,204	$ 1,488	$ 223	
TOTAL CPCN ADDITIONS 2011	$ -	$ 36,280	$ 6,997	
CPCN Expenditures - 2012 Forecasted	$ 13,291	$ -	$ 1,223	
Add - Opening WIP - 2012 Forecasted	$ 53,179	$ -	$ -	
Less - Closing WIP - 2012 Forecasted	$ -	$ -		
Add: Projects transferred from Deferral Accounts - 2012 Forecasted				
Less: Adjustments - 2012 Forecasted				
Add - AFUDC - 2012 Forecasted				
TOTAL CPCN ADDITIONS 2012	$ 66,470	$ -	$ 1,223	
CPCN Expenditures - 2013 Forecasted	$ -	$ -	$ -	
Add - Opening WIP - 2013 Forecasted	$ -	$ -	$ -	
Less - Closing WIP - 2013 Forecasted				
Add: Projects transferred from Deferral Accounts - 2013 Forecasted				
Less: Adjustments - 2013 Forecasted				
Add - AFUDC - 2013 Forecasted				
TOTAL CPCN ADDITIONS 2013	$ -	$ -	$ -	
Total budgeted cost to complete the project	$ 66,470	$ 29,751	$ 8,304	Note 1
% over/(under original budgeted amount)	0%	22%	-1%	

Notes:

1 Budgeted costs include AFUDC for comparability

FortisBC Energy Inc. - Vancouver Island
CPCN CAPITAL EXPENDITURES
FOR THE YEARS ENDING DECEMBER 31, 2010 TO 2013
($000)

Line No.		BCUC Order # Reference	Approved	2010 Opening WIP (from detail tab)	2010 Actual	2011 Projected	2012 Forecast	2013 Forecast	2010-2013 AUFDC (from detail tab)	Total Forecast	Variance
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10) = (4) + (5) + (6) + (7) + (8) + (9)	(11)
1	Special Projects - CPCN's										
2	Customer Care Enhancement	C-1-10	$ 7,851	$ -	$ 2,801	$ 3,170	$ 1,581	$ -	$ 299	$ 7,851	$ 0
3	Mt Hayes LNG Facility	C-9-07	$ 212,962	$ 117,750	$ 49,439	$ 31,436	$ -	$ -	$ 14,337	$ 212,962	$ -
4	Victoria Regional Office	C-1-11	$ 14,324	$ -	$ -	$ 8,456	$ 4,782	$ -	$ 884	$ 14,122	$ (202)
5											
6	Total CPCN's		$ 235,137	$ 117,750	$ 52,240	$ 43,062	$ 6,363	$ -	$ 15,520	$ 234,935	$ (202)

FortisBC Energy Inc. - Vancouver Island
CPCN CAPITAL EXPENDITURES
FOR THE YEARS ENDING DECEMBER 31, 2010 TO 2013
($000)

Special Projects - CPCN's	Customer Care Enhancement	Mt Hayes LNG Facility	Victoria Regional Office	
CPCN Expenditures - 2010 Actual	$ 2,801	$ 49,439	$ -	
Add - Opening WIP - 2010	$ -	$ 117,750	$ -	
Less - Closing WIP - 2010	$ (2,850)	$ (176,257)	$ -	
Add: Projects transferred to Deferral Accounts - 2010				
Less: Adjustments - 2010				
Add - AFUDC - 2010	$ 49	$ 9,068		
TOTAL CPCN ADDITIONS 2010	$ -	$ -	$ -	
CPCN Expenditures - 2011 Projected	$ 3,170	$ 31,436	$ 8,456	
Add - Opening WIP - 2011 Actual	$ 2,850	$ 176,257	$ -	
Less - Closing WIP - 2011 Projected	$ (6,270)	$ -	$ (8,736)	
Add: Projects transferred from Deferral Accounts - 2011 Projected				
Less: Adjustments - 2011 Projected				
Add - AFUDC - 2011 Projected	$ 250	$ 5,269	$ 280	
TOTAL CPCN ADDITIONS 2011	$ -	$ 212,962	$ -	
CPCN Expenditures - 2012 Forecasted	$ 1,581	$ -	$ 4,782	
Add - Opening WIP - 2012 Forecasted	$ 6,270	$ -	$ 8,736	
Less - Closing WIP - 2012 Forecasted	$ -	$ -		
Add: Projects transferred from Deferral Accounts - 2012 Forecasted				
Less: Adjustments - 2012 Forecasted				
Add - AFUDC - 2012 Forecasted			$ 604	
TOTAL CPCN ADDITIONS 2012	$ 7,851	$ -	$ 14,122	
CPCN Expenditures - 2013 Forecasted	$ -	$ -	$ -	
Add - Opening WIP - 2013 Forecasted	$ -	$ -	$ -	
Less - Closing WIP - 2013 Forecasted				
Add: Projects transferred from Deferral Accounts - 2013 Forecasted				
Less: Adjustments - 2013 Forecasted				
Add - AFUDC - 2013 Forecasted				
TOTAL CPCN ADDITIONS 2013	$ -	$ -	$ -	
Total budgeted cost to complete the project	$ 7,851	$ 212,962	$ 14,324	Note 1
% over/(under original budgeted amount)	0%	0%	-1%	

Notes:

1 Budgeted costs include AFUDC for comparability

FortisBC Energy Inc. - Whistler
CPCN CAPITAL EXPENDITURES
FOR THE YEARS ENDING DECEMBER 31, 2010 TO 2013
($000)

Line No.		BCUC Order # Reference	Approved	2010 Opening WIP (from detail tab)	2010 Actual	2011 Projected	2012 Forecast	2013 Forecast	2010-2013 AUFDC (from detail tab)	Total Forecast	Variance
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10) = (4) + (5) + (6) + (7) + (8) + (9)	(11)
1	Special Projects - CPCN's										
2	Customer Care Enhancement	C-1-10	$ 221	$ -	$ 89	$ 81	$ 44	$ -	$ 7	$ 221	$ -
3											
4	Total CPCN's		$ 221	$ -	$ 89	$ 81	$ 44	$ -	$ 7	$ 221	$ -

FortisBC Energy Inc. - Whistler
CPCN CAPITAL EXPENDITURES
FOR THE YEARS ENDING DECEMBER 31, 2010 TO 2013
($000)

Special Projects - CPCN's	Customer Care Enhancement	
CPCN Expenditures - 2010 Actual	$ 89	
Add - Opening WIP - 2010	$ -	
Less - Closing WIP - 2010	$ (117)	
Add: Projects transferred to Deferral Accounts - 2010		
Less: Adjustments - 2010	$ 28	Note 1
Add - AFUDC - 2010		
TOTAL CPCN ADDITIONS 2010	$ -	
CPCN Expenditures - 2011 Projected	$ 81	
Add - Opening WIP - 2011 Actual	$ 117	
Less - Closing WIP - 2011 Projected	$ (177)	
Add: Projects transferred from Deferral Accounts - 2011 Projected		
Less: Adjustments - 2011 Projected	$ (28)	Note 1
Add - AFUDC - 2011 Projected	$ 7	
TOTAL CPCN ADDITIONS 2011	$ -	
CPCN Expenditures - 2012 Forecasted	$ 44	
Add - Opening WIP - 2012 Forecasted	$ 177	
Less - Closing WIP - 2012 Forecasted	$ -	
Add: Projects transferred from Deferral Accounts - 2012 Forecasted		
Less: Adjustments - 2012 Forecasted		
Add - AFUDC - 2012 Forecasted		
TOTAL CPCN ADDITIONS 2012	$ 221	
CPCN Expenditures - 2013 Forecasted	$ -	
Add - Opening WIP - 2013 Forecasted	$ -	
Less - Closing WIP - 2013 Forecasted		
Add: Projects transferred from Deferral Accounts - 2013 Forecasted		
Less: Adjustments - 2013 Forecasted		
Add - AFUDC - 2013 Forecasted		
TOTAL CPCN ADDITIONS 2013	$ -	
Total budgeted cost to complete the project	$ 221	Note 2
% over/(under original budgeted amount)	0%	

Notes:

1 2010 and 2011 adjustments to WIP due to timing of expenditures and does not impact the anticipated overall project costs.
2 Budgeted costs include AFUDC for comparability

Attachment 41.4

Schedule A

FortisBC Energy Utilities (the "FEU")
2012-2013 Revenue Requirements and Natural Gas Rates Application
Fraser River South Arm Crossing Upgrade Project Quarterly Progress Report for Q2 2011 in Compliance with Commission Order No. C-2-09 Confidential Filing

CONFIDENTIAL Undertaking

I, _____, am a participant acting for _____ in the matter of the review of the FEU *2012-2013 Revenue Requirements and Natural Gas Rates Application.*

In this capacity, I request access to the Fraser River Q2 Quarterly Progress Report. I understand that the execution of this undertaking is a condition of an Order of the Commission, and the Commission may enforce this Undertaking pursuant to the provisions of the *ATA.*

I hereby undertake

a) to use the information disclosed under the conditions of the Undertaking exclusively for duties performed in respect of this proceeding;

b) not to divulge information disclosed under the conditions of this Undertaking except to a person granted access to such information or to staff of the Commission;

c) not to reproduce, in any manner, information disclosed under the conditions of this Undertaking except for purposes of the proceeding;

d) to keep confidential and to protect the information disclosed under the conditions of this Undertaking;

e) to return to the FEU, under the direction of the Commission, all documents and materials containing information disclosed under the conditions of this Undertaking, including notes and memoranda based on such information, or to destroy such documents and materials and to file with the Commission a certification of destruction at the end of the proceeding or within a reasonable time after the end of my participation in the proceeding; and

f) to report promptly to the Commission any violation of this Undertaking.

Dated at _____ this _____day of _____, 2011.

Signature: _____

Name: _____
(please print)

Address: _____

Telephone: _____

Fax: _____

E-mail: _____

Attachment 41.4

FILED CONFIDENTIALLY

Attachment 71.2

MAINS AND SERVICE PLANNER

Duties & Responsibilities:
Under the direction of the Planning & Design Technologist, they will plan gas service and meter set renewals, new installations, replacements and alterations, including staking of main and service running lines and locating other utilities. They will provide on-site advice and guidance to Company work crews on work order implementations to overcome problems encountered and to other public utilities, municipal work crews and contractors whose work impacts on gas system planning or operations. They may provide technical advice and guidance to customers on alternative types of equipment or appliance applications. In addition, they will identify needs for private or municipal property access in cooperation with municipal authorities and other Company departments and obtain property owners' signatures on legal agreement documents. Developing and maintaining records on the effects of Municipal project planning on existing or planned gas distribution system and recommending action and priorities as well as compiling plans and sketches of layouts of service lines, meter sets and their locations, premise piping layouts, etc. on an as required basis will form some of their duties.

Qualifications:
Must have:

They will be a high school graduate and have related post secondary courses in drafting. Technical report writing is desirable. Knowledge of the gas distribution systems and installation practices, utilization and installation codes is required along with knowledge of design and layout of Municipal Services including water, sewer, lighting, telephone and power.

COPE JOB DESCRIPTION

Job Code: OOD28X							
Job Title: Planning and Design Technician					Job Family: Technical Design		
Business Unit: Distribution Operations	Effective Date: March 12, 2008				Job Level: 8		
Department: Operations Support Centre	S	'S' - Supersedes 'D' - Derived From				'S' - Supersedes 'D' - Derived From	
Section	Job Title: Install Coordinator 1				Job Title		
	Job Code: Same	Level: 8	Dated: Jan. 1, 2003		Job Code	Level	Dated

PURPOSE

The purpose of this position is to process project requests from key accounts (e.g. builders and developers) as well as end-use customers. This role matches customer requirements to established service and product definitions and pricing to produce the customer contract. This role processes routine project requests professionally and in accordance with established policies and procedures.

The scope of projects co-ordinated by this position will typically be limited to:

- Mains and service piping 114 mm (4") or less;
- DP (420/550 kPa) system work only;
- Residential, commercial and multi-metering projects, with maximum load not to exceed 80 cubic metres per hour on any single service attachment.

Projects exceeding these criteria are to be referred to the Workleader for reassignment or referral.

DUTIES & RESPONSIBILITIES

Job Descriptions are intended to describe only the principal duties and responsibilities of a position. They are not meant to be either an inclusive or exclusive list of all work, tasks and functions of any particular job.

1. Acts as primary contact for customer calls and project submissions to capture customer requirements, following established procedures to:
   a) create and maintain customer data,
   b) ensure all service product requirements are collected,
   c) explain Terasen Gas processes, procedures and requirements to customers,
   d) select the appropriate service products and pricing,
   e) convey related permit requirements to customers,
   f) inform the customer of the price for the service product(s),
   g) schedule the work with the customer following a verification of crew (capacity planning) and materials availability and create work orders,
   h) refer customer calls and enquiries to others as required (e.g. complaint/issue resolution).

2. Performs planning and design intervention to process and coordinate projects in accordance with Terasen Gas policies, procedures and standards. Related activities include but are not limited to the following:
   a) preparing appropriate gas plant layout, giving consideration to existing and future foreign utility data and legal land-base information, in accordance with Terasen Gas standards,
   b) confirming and updating pipe sizing as defined by System Planning,

c) utilizing economic test tool to determine cost to customer of installation,
d) identifying and obtaining required internal and external approvals and prerequisites,
e) identifying and requesting required inventoried materials and manufactured items as appropriate,
f) coordinating mains, service and meter work,
g) attending meetings with customers and their agents, and
h) conducting site visits, as required.

3. Responds to customer inquiries including but not limited to installations costs, bill calculations, and the scheduling of work.

4. Performs duties of a minor nature related to the above duties, including driving a vehicle, which do not affect the rating of the job.

QUALIFICATIONS

1. High school graduation and completion of a recognized post-secondary certificate of technology, or equivalent post-secondary education in a technical discipline such as Gas and Oil, Civil Engineering, Public Works or Urban Planning.
2. Fifteen (15) months directly related, relevant work experience
3. Demonstrated organizational skills including the ability to multi-task, prioritize and work under pressure during peak workload periods in order to meet tight deadlines.
4. Demonstrated sound verbal communication skills including telephone call-handling skills and the ability to respond to difficult or demanding situations with tact and diplomacy.
5. Demonstrated courteous, professional manner in dealing with internal and external contacts and customers, including positive interpersonal skills and the ability to work effectively in a team environment.
6. Capable of keyboarding at an intermediate level.
7. Demonstrated sound working knowledge of various specialized software applications required to support operations activities (e.g. SAP, GIS, CAFÉ, PEACE) and the MS Office suite of applications.
8. Demonstrated knowledge of natural gas utilization and construction practices.
9. Demonstrated ability to work independently.
10. Demonstrated sound analytical and decision-making skills.
11. Demonstrated ability to follow established procedures with attention to detail.
12. Valid British Columbia Drivers License.

ADDITIONAL INFORMATION

1. This position has restricted holiday availability based on operational requirements for certain months of the year, as per Article 14 of the COPE/Terasen Gas Inc. Collective Agreement.
2. This position may involve working shift work or late coverage depending on customer and operational requirements. (There is potential for day, afternoon and night shifts, 7 days a week, 24 hours a day.)
3. Following a minimum of two (2) years in this role, the opportunity exists for candidates to progress to the position of Planning and Design Technologist 1. Technicians must possess the necessary qualifications, and will be required to demonstrate competencies and efficiencies through testing in order to be eligible for this progression.

PLANNING & DESIGN TECHNOLOGIST

Duties and Responsibilities:

1. Coordinates the installation of main extensions and services by preparing work orders and service orders, ensuring all approvals are obtained and all foreign utilities are noted.
2. Stake service and main extensions ensuring proper standards are maintained and installations are assigned offsets.
3. Maintain a continuous record as to the status of each work order and service order.
4. Liaise with other utilities and municipalities to overcome problems resulting from the installation of mains and services.
5. Provide advice as to the location of mains and services to other utilities and municipalities and project department employees and assist them where required.
6. Prepare documentation and data required for road crossings, rail crossings and easements and follow-up to ensure approvals are obtained.
7. Document and follow up construction orders, work orders, etc. to ensure all approvals are obtained and that as-builts are received when the projects are completed.
8. Maintain plan record files for all work completed.

Qualifications:

1. High school diploma or equivalent.
2. A valid Class 5 B. C. Driver's License.
3. Completion of a recognized post-secondary technology diploma in an appropriate discipline, or acceptable equivalent.
4. Certified (or eligible for certification) at the technologist level by the Applied Science Technologists and Technicians of British Columbia.
5. Two (2) years directly-related, relevant experience.
6. Demonstrated computer literacy, including familiarity with applications software in use in the department, including SAP, AM/FM, CAFÉ, and the MS Office suite of applications.
7. Demonstrated oral and written communication skills.
8. Knowledge of gas distribution systems and installation practices, utilization and installation codes.
9. Knowledge of design and layout of municipal services, including water, sewer, telephone and power.

COPE JOB DESCRIPTION

Job Code: OOD31X							
Job Title: Planning and Design Technologist 1				Job Family: Technical Design			
Business Unit: Distribution Operations	Effective Date: March 12, 2008			Job Level: 9			
Department: Operations Support Centre	D	'S' - Supersedes 'D' - Derived From		D	'S' - Supersedes 'D' - Derived From		
Section	Job Title: Install Coordinator 1			Job Title: Install Coordinator 2			
	Job Code: OOD28X	Level: 8	Dated: Jan. 1, 2003	Job Code: OOD29X	Level: 10	Dated: Jan. 1, 2003	

PURPOSE

The purpose of this position is to process project requests from key accounts (e.g. builders and developers), external agencies, Terasen Gas departments, as well as end-use customers, and perform a variety of increasingly complex operational and maintenance functions. This role matches customer requirements to established service and product definitions and pricing to produce the customer contract. This role processes routine project requests professionally and in accordance with established policies and procedures. Requests generated by Terasen Gas may involve raising billable and non-billable orders.

The scope of projects co-ordinated by this position will typically be limited to:

- Maximum project pipe sizing of 219 mm (8”);
- Metering requirements with load profiles, per meter, of less than 400 cubic metres per hour;
- DP system work only.

Projects exceeding these criteria are to be referred to the Workleader for reassignment or referral.

DUTIES & RESPONSIBILITIES

Job Descriptions are intended to describe only the principal duties and responsibilities of a position. They are not meant to be either an inclusive or exclusive list of all work, tasks and functions of any particular job.

1. Acts as primary contact for customer calls and project submissions to capture customer requirements, following established procedures to:
   a) create and maintain customer data,
   b) ensure all service product requirements are collected,
   c) explain Terasen Gas processes, procedures and requirements to customers,
   d) select the appropriate service products and pricing,
   e) convey related permit requirements to customers,
   f) inform the customer of the price for the service product(s),
   g) schedule the work with the customer following a check of crew (capacity planning) and materials availability and create work orders, and,
   h) resolve or refer customer calls and enquiries to others as required (e.g. complaint/issue resolution).

2. Performs planning and design intervention to process and coordinate projects in accordance with Terasen Gas policies, procedures and standards. Related activities include but are not limited to the following:
   a) preparing appropriate gas plant layout, giving consideration to existing and future foreign utility data and legal land-base information, in accordance with Terasen Gas standards,
   b) confirming and updating pipe sizing as defined by System Planning,
   c) utilizing economic test tool to determine price of installation,
   d) identifying and obtaining required internal and external approvals and prerequisites,
   e) identifying and requesting required inventoried materials and manufactured items as appropriate,
   f) coordinating mains, service and meter work,
   g) attending meetings with customers and their agents, and
   h) conducting site visits, as required.

3. Responsible for completing the project and maintaining customer relations, including but not limited to:
   a) building relationships with current, repeat and potential customers and external contacts, and
   b) responding to customer inquiries including but not limited to installation costs, bill calculations, and the scheduling of work.

4. Responds to a variety of operational and maintenance issues which may include (but are not limited to):
   a) overbuilds of plant related to all customer classes and identified by both the customer and company programs,
   b) metering consolidations/de-consolidations,
   c) meter protection,
   d) commercial/industrial metering assembly upgrades (company driven),
   e) corrosion maintenance (houseline/riser replacement, anode bed install/removal),
   f) DP service line additions/removals,
   g) simple main and valve lowerings, raisings, and/or abandonments,
   h) activities related to hazard remediation and system maintenance.

   (Projects may include low-rise vertical subdivisions.)

5. Provides direction to Planning and Design Technicians within the department.

6. Provides support to the Project Management Office (e.g. minor level coordination of activities such as station signage, painting, electrical requirements, fencing).

7. Performs duties of a minor nature related to the above duties, including driving a vehicle, which do not affect the rating of the job.

QUALIFICATIONS

1. Completion of a recognized post-secondary Technology Diploma in an appropriate discipline, or equivalent education.

2. Certified or eligible for certification at the technologist level by the Applied Science Technologists and Technicians of British Columbia (ASTTBC).
3. Two (2) years directly related, relevant work experience, typically gained as a Planning and Design Technician.
4. Demonstrated strong organizational skills including the ability to multi-task, prioritize and work under pressure during peak workload periods in order to meet tight deadlines.
5. Demonstrated sound verbal communication skills including telephone call handling skills and the ability to respond to difficult or demanding situations with tact and diplomacy.
6. Demonstrated courteous, professional manner in dealing with internal and external contacts and customers, including positive interpersonal skills and the ability to provide direction in a team environment.
7. Demonstrated sound working knowledge of various specialized software applications required to support operations activities (e.g. SAP, GIS, CAFÉ, PEACE) and the MS Office suite of applications.
8. Demonstrated knowledge of natural gas utilization and construction practices.
9. Demonstrated superior customer service and product promotion skills.
10. Demonstrated ability to work independently.
11. Demonstrated sound analytical and decision-making skills.
12. Capable of keyboarding at an intermediate level.
13. Valid British Columbia Drivers license.

ADDITIONAL INFORMATION

1. This position has restricted holiday availability based on operational requirements for certain months of the year, as per Article 14 of the COPE/Terasen Gas Inc. Collective Agreement.
2. This position may involve working shift work or late coverage depending on customer and operational requirements. (There is potential for day, afternoon and night shifts, 7 days a week, 24 hours a day.)
3. This position may be located in Surrey Operations Centre, or various Terasen Gas locations throughout the province of B.C.

COPE JOB DESCRIPTION

Job Code: OOD29X							
Job Title: Planning and Design Technologist 2				Job Family: Technical Design			
Business Unit: Distribution Operations	Effective Date: March 12, 2008			Job Level: 10			
Department: Operations Support Centre	S	'S' - Supersedes 'D' - Derived From		D	'S' - Supersedes 'D' - Derived From		
Section	Job Title: Install Coordinator 2			Job Title: Technologist 4 – Project Specialist			
	Job Code: Same	Level: 10	Dated: Jan. 1, 2003	Job Code: OOD18X	Level: 11	Dated: April 10, 2001	

PURPOSE

The purpose of this position is to plan, estimate and coordinate project requests from premium key accounts (e.g. builders and developers), external agencies, Terasen Gas departments, as well as end-use customers, where the projects present the greatest complexity. This role works both independently and with guidance to develop designs for distribution projects of the greatest complexity. This position prepares pricing and cost estimates and conducts field reconnaissance for related projects. The role is a liaison with customers, contractors, developers and others in matters related to alterations, renewals, upgrades, improvements and additions to the distribution systems.

DUTIES & RESPONSIBILITIES

Job Descriptions are intended to describe only the principal duties and responsibilities of a position. They are not meant to be either an inclusive or exclusive list of all work, tasks and functions of any particular job.

1. Coordinates projects, including but not limited to:
   a) defining customer requirements and project scope, creating and maintaining customer data,
   b) ensuring all service product requirements are collected,
   c) explaining Terasen Gas processes, procedures and requirements to customers,
   d) selecting the appropriate service products and pricing,
   e) conveying related permit requirements to customers,
   f) informing the customer of the price for the service product(s),
   g) scheduling the work with the customer following a check of crew (capacity planning) and materials availability and creating work orders.

2. Processes jobs, including but not limited to:
   a) reviewing foreign utility data, legal land-base considerations and geography to determine appropriate gas layout and depth in accordance with Terasen Gas standards,
   b) drafting written work procedures (per company standard OHS 03-14) for manager's review and approval,
   c) completing electronic layout or Engineering drawings,
   d) confirming and updating pipe sizing on drawings as defined by System Planning,
   e) identifying and obtaining required internal and external approvals and prerequisites,
   f) identifying and requisitioning required inventoried materials and manufactured items,
   g) completing detailed estimates,
   h) utilizing economic test tools to determine pricing of installations,

i) explaining Terasen Gas procedures, policies, rate processes and municipal, provincial and federal regulations to customers,
j) working with customers and authorities to ensure all service products requirements are collected and met,
k) scheduling the work with the customer by checking for crew availability using the capacity planning information.

(Projects will include vertical subdivision designs.)

3. Ensures completion of the job and maintains customer relations, including but not limited to:
   a) building relationships with current, repeat and potential customers and external contacts,
   b) responding to customer inquiries including but not limited to installation costs, bill calculations, and the scheduling of work,
   c) acting as primary contact for premium rated builder/developers and internal/external customers.

4. Responds to a variety of operational and maintenance issues which may include (but are not limited to):
   a) overbuilds of plant related to all customer classes and identified by both the customer and company programs,
   b) metering consolidations/de-consolidations,
   c) meter protection,
   d) commercial/industrial metering assembly upgrades (company driven),
   e) corrosion maintenance (houseline/riser replacement, anode bed install/removal),
   f) IP/TP service line additions/removals,
   g) complex main and valve lowerings, raisings, and/or abandonments,
   h) activities related to hazard remediation and system maintenance requirements.

5. Provides direction to Planning and Design Technicians and Technologist 1's within the department.

6. Performs duties of a minor nature related to the above duties, including driving a vehicle, which do not affect the rating of the job.

QUALIFICATIONS

1. Completion of a recognized post-secondary Technology Diploma in an appropriate discipline, or equivalent education.
2. Certified or eligible for certification at the technologist level by the Applied Science Technologists and Technicians of British Columbia (ASTTBC).
3. Four (4) years directly related relevant work experience (a minimum of two (2) years which are gained as a Planning and Design Technologist 1).
4. Demonstrated strong organizational skills including the ability to multi-task, prioritize and work under pressure during peak workload periods in order to meet tight deadlines.
5. Demonstrated excellent communication skills including telephone call handling skills and the ability to respond to difficult or demanding situations with tact and diplomacy.
6. Demonstrated courteous, professional manner in dealing with internal and external contacts and customers, including positive interpersonal skills and the ability to provide direction in a team environment.

7. Demonstrated ability to analyze and resolve problems of a technical nature, and understand the implication of costs, risks, operability and safety.
8. Demonstrated sound working knowledge of various specialized software applications required to support operations activities (e.g. SAP, GIS, CAFÉ, PEACE) and the MS Office suite of applications.
9. Demonstrated knowledge of natural gas utilization and construction practices.
10. Demonstrated superior customer service and product promotion skills.
11. Demonstrated ability to work independently.
12. Demonstrated sound analytical and decision making skills.
13. Capable of keyboarding at an intermediate level.
14. Valid British Columbia Drivers license.

ADDITIONAL INFORMATION

1. This position has restricted holiday availability based on operational requirements for certain months of the year, as per Article 14 of the COPE/Terasen Gas Inc. Collective Agreement.
2. This position may involve working shift work or late coverage depending on customer and operational requirements. (There is potential for day, afternoon and night shifts, 7 days a week, 24 hours a day.)
3. This position may be located in Surrey Operations Centre, or various Terasen Gas locations throughout the province of B.C.

COPE JOB DESCRIPTION

Job Title: Planning and Design Workleader	
Department: Operations Support Centre	Job Code: OOD30X
Business Area: Distribution Operations	Job Level: 11
Effective Date: June 8, 2010	Supersedes (S) or Derived From (D): S
Date of Last Review:	Date Established: March 12, 2009

DUTIES & RESPONSIBILITIES:

Job Descriptions are intended to describe only the principal duties and responsibilities of a position. They are not meant to be either an inclusive or exclusive list of all work, tasks and functions of any particular job.

1. Holds work leadership responsibility for the Planning and Design Technician, Technologist 1 and Technologist 2 positions.

2. May perform duties largely similar to those whose work s/he directs.

3. May perform duties related to, but at a higher level than the work of the subordinates whom they direct.

4. Provides leadership and coaching to the Planning and Design Technicians, Technologist 1's and Technologist 2's in order to develop and maintain strong customer service, project and time management skills and ensure even workflow and consistency of effort. This includes:
   a) allocating projects and various phases of work to different individuals within a general framework laid down by the manager;
   b) assisting in the development of staff to ensure a focus on customer service standards is established;
   c) ensuring problems and inefficiencies are recognized and resolved through discussion, feedback and follow-up;
   d) performing a quality control function with respect to Planning and Design Technicians, Technologist 1's and Technologist 2's; and,
   e) warning subordinates of unacceptable behaviour (quality and/or quantity of work) or conduct (observance of hours, appearance, etc.).

5. Reviews projects assigned to Planning and Design Technicians, Technologist 1's and Technologist 2's, including:
   a) reviewing projects to ensure standards and codes are being complied with and customer requirements are being met prior to field release;
   b) preparing coaching notes and feedback based on the projects reviewed;
   c) meeting with Planning and Design Technicians, Technologist 1's and Technologist 2's to discuss results and provide recommendations.

6. Implements and ensures compliance with approved work procedures.

7. Contributes to the preparation of and delivers training sessions/workshops, as required.

8. Collects, analyses and reports on various statistics within the Install Coordination Centre, including:
   a) daily queue of projects, customer requirement dates and individuals' throughput;

COPE JOB DESCRIPTION

Job Title: Planning and Design Workleader	
Department: Operations Support Centre	Job Code: OOD30X
Business Area: Distribution Operations	Job Level: 11
Effective Date: June 8, 2010	Supersedes (S) or Derived From (D): S
Date of Last Review:	Date Established: March 12, 2009

b) daily schedule of availability of Planning and Design staff (factoring in projects, vacation, ADO's, etc.); and,
c) year-to-date and year–to–year statistical information, individual and departmental, for performance appraisals.

9. Performs duties of a minor nature related to the above duties which do not affect the rating of the job.

QUALIFICATIONS:

1. High school graduation and completion of a recognized post-secondary diploma of technology or equivalent post-secondary education in a technical discipline such as Gas and Oil, Civil Engineering, Public Works, or Urban Planning.
2. Six (6) years directly related relevant work experience gained as a Planning and Design Technologist 1, Technologist 2, or combination.
3. Demonstrated leadership competencies of: expertise, initiative, problem solving and results orientation, customer focus, and business understanding and alignment.
4. Demonstrated excellent interpersonal and communication skills (both written and verbal), including the ability to respond to difficult and demanding customers (internal or external) with tact while enforcing company policies or procedures.
5. Demonstrated excellent leadership and organizational skills including the ability to multi-task, prioritize, direct the work of others and provide training as required.
6. Demonstrated ability to adapt in a quick paced changing work environment and function as a team member, and work under pressure during peak workloads and to meet tight deadlines.
7. Demonstrated intermediate level keyboarding skills, including the ability to format various types of correspondence, reports, forms, charts, and layout electronic spreadsheets.
8. Demonstrated superior working knowledge of various specialized software applications required to support operational activities (SAP, GIS, CAFÉ, PEACE) and the MS Office suite of applications.
9. Demonstrated superior knowledge of gas utilization and construction.
10. Valid British Columbia drivers' license.

Additional Information:

1. This position has restricted holiday availability based on operational requirements for certain months of the year, as per Article 14 of the COPE/Terasen Gas Inc. Collective Agreement.
2. This position may involve working shift work or late coverage depending on customer and operational requirements. There is potential for day, afternoon and night shifts, 7 days per week, 24 hours per day.

COPE JOB DESCRIPTION

Job Title: Planning and Design Workleader	
Department: Operations Support Centre	Job Code: OOD30X
Business Area: Distribution Operations	Job Level: 11
Effective Date: June 8, 2010	Supersedes (S) or Derived From (D): S
Date of Last Review:	Date Established: March 12, 2009

APPROVAL:

Signature ***Date***

COPE JOB DESCRIPTION

Job Code: OCC36X							
Job Title: Operations Support Representative 1				Job Family: Clerical			
Business Unit: Distribution Operations	Effective Date: January 1, 2003			Job Level: 4			
Department: Operations Process Support	D	'S' - Supersedes 'D' - Derived From			'S' - Supersedes 'D' - Derived From		
Section: Integrated Resource Management	Job Title: Appointment Clerk			Job Title			
	Job Code: OCA06X	Level: 4	Dated: Feb 5/00	Job Code	Level	Dated	

DUTIES & RESPONSIBILITIES

Job Descriptions are intended to describe only the principal duties and responsibilities of a position. They are not meant to be either an inclusive or exclusive list of all work, tasks and functions of any particular job.

Basic Purpose:

Operations Support Representatives ("OSR's") provide a wide range of support to FortisBC operations. The focus of these roles is administrative support of the end-to-end Order Fulfillment, Operate & Maintain, Emergency, and Meter-to-Cash process steps:

- Initiating and Preparing
- Scheduling and Dispatching
- Field work support and logistics
- Closing and Completing

Duties & Responsibilities:

1. Initiates and receives calls to and from customers in regards to various customer appointments for operational work.

2. Processes a variety of work orders, gas service orders, service change orders, and customer service field orders. Segregates calls and work orders that require immediate or special attention. Prepares correspondence for Customer appointments.

3. Utilizes various communication devices and relays messages, arranges appointments, attends to routine enquiries, and refers calls to appropriate personnel.

4. Processes completed meter exchanges, meter installations and similar orders in computerized and hard copy files, including:

   a) ensuring they contain all required information, data, and referring rejected data to others for investigation and correction;

   b) verifying account numbers, meter numbers, meter readings, and related data;

   c) updating billing and metering details;

d) reviewing previously entered orders to ensure accuracy and quality, and correcting entry errors; referring rejected orders to others for investigation and correction;

e) filing of all account related orders, and maintaining all related records and files; and,

f) maintaining a daily activity record of the number of meter installation and meter exchange orders received and processed.

5. May provide additional clerical duties including:

a) receiving, checking, recording, and processing a variety of documents (such as work orders, tenders, local purchase orders, invoices, mail, personnel documents, time sheets, and/or claim documents, some of which may require interpretation);

b) following up on discrepancies;

c) setting up and maintaining filing systems;

d) gathering, laying out, transcribing, reconciling, and/or recording a variety of information;

e) composing replies to routine correspondence, completing forms and/or reports;

f) performing calculations using prescribed formula;

g) maintaining supplies, records, logs and/or registers;

h) answering routine enquiries; and,

i) may maintain reference materials, make travel or other arrangements, input, edit, and retrieve data using a variety of computer systems;

6. Performs duties of a minor nature related to the above duties which do not affect the rating of the job.

Qualifications:

1. High school graduation including courses in office practices and business communications.

2. Three (3) months directly related experience.

3. Demonstrated sound organizational skills.

4. Demonstrated sound verbal communication skills including telephone call handling skills

5. Demonstrated sound written communication skills including the ability to correct spelling, punctuation, and grammatical errors as required in the preparation and composing of a variety of internal and external correspondence and process enquiries.

6. Demonstrated courteous, professional manner dealing with internal and external contacts.

7. Demonstrated intermediate level keyboarding skills, including the ability to format various types of correspondence, reports, forms and charts, and layout electronic spreadsheets.

8. Basic knowledge of related computer systems operations, environment and peripherals. Familiarity with applications software in use in the department.

Other Information:

1. This position has restricted holiday availability, based on operational requirements, for certain months of the year as per Article 14 of the COPE/FortisBC Collective Agreement.

2. This position may be required to work evenings, Saturdays and/or non-core hours in accordance with Article 15.01 of the COPE/FortisBC Collective Agreement.

Attachment 71.4

REFER TO LIVE SPREADSHEET

Provided in electronic format only

(accessible by opening the Attachments Tab in Adobe)

Attachment 74.2

PricewaterhouseCoopers

Questions and Answers*

Interpretations for the Utility Industry

Accounting for Property, Plant and Equipment, Asset Retirement Obligations and Depreciation

*connectedthinking

Introduction

Accounting for property, plant and equipment and the related retirement obligations has been a fundamental element of financial reporting by utilities for many years. However, deregulation of generation assets in some jurisdictions and the issuance of FASB 143, *Accounting for Asset Retirement Obligations*, have challenged industry members to rethink previous accounting and reporting methods. FIN 47, *Conditional Asset Retirement Obligations*, effective in the fourth quarter of 2005 for most utilities, will provide new challenges.

This Questions and Answers paper was written to provide practical guidance and to assist utility companies with the challenges of implementing FIN 47. As always, the people of PricewaterhouseCoopers are available to assist you with any questions you may have regarding this publication.

I would like to acknowledge the PwC contributors and editors to this publication for a job well done.

Warmest Regards,

Paul M. Keglevic
PricewaterhouseCoopers U.S. Utilities Leader

Background

Utilities often apply the mass-asset convention of accounting[1] (also known as the "group" method) to certain fixed assets such as utility poles and other components of their transmission and distribution systems which are too numerous to practically track on an individual basis given the small relative value of each individual asset. Similarly, many utility companies utilize the composite convention of accounting for component parts of larger assets such as electric generating stations which also contain numerous components and parts which are impractical to separately track. As opposed to the unitary convention of accounting for fixed assets, generally neither the group or composite convention of accounting result in the recognition of a gain or loss upon the retirement of an asset. Rather, any difference between the net book value of the assets and the value realized at retirement (salvage proceeds less removal and disposal costs) are embedded in accumulated depreciation and considered in the determination of prospective depreciation rates.

In addition to the longstanding acceptance of the group and composite accounting conventions as Generally Accepted Accounting Principles ("GAAP"), regulatory guidance and industry practice[2] specifically address the appropriate convention of accounting for retirements of utility plant. The Federal Energy Regulatory Commission's (FERC) Uniform System of Accounts ("USoA") General Instructions specify that retirements should be recorded as: (i) a credit to the plant account; and (ii) a debit to the accumulated provision for depreciation. The cost of removal and the proceeds from salvage are also charged against the accumulated depreciation accounts when they are incurred. As a result, generally gains or losses are not recorded in the retirement of utility plant.

In order to demonstrate an example of this accounting convention, assume a utility installs an asset with an estimated useful life of 19 years incurring a total cost upon purchase and installation of $20,000. At the time of installation, the expected net salvage value of the asset (expected salvage less the expected cost of removal and disposal) is $1,000 resulting in a depreciable base of $19,000. Assume that at the end of 15 years of service the asset is replaced at a removal cost of $500 and salvage proceeds of $1,250, resulting in net salvage of $750. Pursuant to industry accounting described above, the resulting journal entries for the removal would be:

Dr. Cash (proceeds from net salvage)	$ 750	
Dr. Accumulated Depreciation	*19,250	
Cr. Property		($20,000)

** Calculated as $15,000 accumulated depreciation plus the $4,250 calculated loss [net salvage of $750 less the cost of the asset ($20,000 – $15,000)]*

Another layer of complexity to retirement accounting results from the common rate-making convention of including a provision for cost-of-removal in depreciation rates, thereby increasing depreciation expense over the life of an asset. If we were to assume a 10% removal cost for an asset for which no salvage proceeds are expected to be received, the depreciation over the life of the asset would be 110% of the cost of the asset. Under cost-of-service ratemaking, depreciation expense is recovered from customers over the life of the asset providing the utility with the revenues over the life of the asset to fund the eventual removal cost of the asset.

Prior to the implementation of Financial Accounting Standards Board ("FASB") Statement of Financial Accounting Standards No. 143, *Accounting for Asset Retirement Obligations* ("FAS 143"), GAAP considered this "excess depreciation" expense or "negative salvage" embedded in utilities accumulated depreciation accounts to be "regulatory liabilities" representing cash previously collected to fund anticipated future expenditures.[3] Since industry

[1] As defined in the American Institute of Certified Public Accountants ("AICPA") Draft Statement of Position, *Accounting For Certain Costs and Activities Related to Property, Plant and Equipment*, the mass-asset convention of accounting applies to the accounting for large numbers of homogeneous assets in situations in which the accounting for individual assets is not practical. Under this convention, homogeneous assets are aggregated and depreciated by applying a rate based on the average expected useful life of the assets.

[2] As defined by the Uniform System of Accounts of the Federal Energy Regulatory Commission, ("USoA"), specifically 18 CFR chapter 1, General Instruction 10, *Additions and Retirements of Electric Plant*.

[3] See Statement of Financial Accounting Standards No. 71, *Accounting for the Effects of Certain Types of Regulation,* paragraph 11. b. and FAS 143, paragraph 20.

fixed asset accounting conventions resulted in these cost of removal expenditures eventually being debited to accumulated depreciation, the industry saw no benefit in grossing-up balance sheets to provide for the separate accounting of these amounts. However, concurrent with the implementation of FAS 143, the Staff of the Securities and Exchange Commission ("SEC") provided informal guidance to the Big Four Accounting Firms and to the Edison Electric Institute that these embedded regulatory liabilities should be reclassified out of accumulated depreciation to the liability section of the balance sheet. Accordingly, utilities collecting cost of removal in their depreciation rates estimated and reclassified previously collected but unspent recoveries for removal costs to a regulatory liability.[4]

While FAS 143 required the accrual of an asset retirement obligation ("ARO") liability for legally required removal costs, prior to the release of FASB Interpretation No. 47, *Accounting for Conditional Asset Retirement Obligations, an interpretation of FASB Statement No. 143* ("FIN 47"), AROs were not recorded for legally required disposal costs related to assets which themselves were never legally required to be retired (pursuant to previous interpretations of FAS 143 paragraphs A15 and A17). Therefore, even though a legal requirement may have existed to dispose of items such as treated utility poles once the utility pole was removed from service, no ARO had been recorded because there was no legal requirement to ever remove the pole from service. FIN 47 has provided interpretative guidance around this issue which will result in the establishment of AROs for these "conditional" obligations based on the premise that eventually the treated pole will be removed from service as a result of its eventual deterioration. Accordingly, we expect that many utility companies will record AROs for these conditional disposal obligations when they implement FIN 47, thereby establishing a liability for the portion of the costs that are attributable to the legal obligation. Of course, to the extent such disposal costs have previously been included in a company's estimated removal cost included in its regulatory depreciation rates, a regulatory liability already exists for the portion of the disposal costs.

In considering these two further layers of complexity to our simple example above would result in the following assumptions and balances as of December 31st of year 15, the day of the implementation of FIN 47:

Original asset cost	$20,000
Salvage value:	
Cost of removal (no legal obligation)	(450)
Cost of disposal (legal obligation)	(50)
Salvage value	1,500
Net salvage value	1,000
Net depreciable value	$19,000
Estimated depreciable life	19 yrs

Upon adoption of FIN 47, it is assumed that the Company has reclassified the cost of removal and disposal to a regulatory liability. In addition, an asset retirement cost and obligation of $30 were recorded. For simplicity, the cumulative effect was not considered. As of year 15, the Company has already recognized approximately $40 ($50/19 yrs*15) in removal cost through accumulated depreciation. As such, these costs have been reclassified out of the regulatory liability. Resulting balances at the end of year 15 assuming the implementation of FIN No. 47 has been completed:

Dr. Adjusted asset cost	$20,030	
Cr. ARO @ 12/31/05 (assumed)		($ 30)
Cr. Accrued regulatory liability for cost of removal and disposal [(450+50)/19*15]-ARO of 30		(365)
Cr. Accumulated depreciation [(20,000-1,500)/19*15]		(14,600)

[4] Generally, removal costs remain embedded in as accumulated depreciation for regulatory reporting as outlined in paragraph 37 of FERC Order 631.

Finally, assume the asset is disposed of January 1st of year 16 with an actual cost of disposal of $100, cost of removal of $200 and proceeds from salvage of $6,300. If the asset was accounted for under unit convention of accounting, the following entry would be recorded:

Dr. ARO	$ 30	
Dr. Accrued regulatory liability	365	
Dr. Cash	6,000	
Dr. Accumulated depreciation	14,600	
Cr. Property		($20,030)
Cr. Gain on Sale		(965)

Depending upon the regulatory mechanism, the difference between the actual disposal and removal costs of $300 and the accrued balance of $395 (accrued regulatory liability plus ARO) may remain as a regulatory liability and flowed back to the customer in future years.

Under the composite convention of accounting, no gain or loss would be recorded as follows:

Dr. ARO	$ 30	
Dr. Accrued regulatory liability	365	
Dr. Cash	6,000	
Dr. Accumulated depreciation	*13,635	
Cr. Property		($20,030)

*The accumulated depreciation balance includes the following:

Accumulated depreciation of the asset	$14,600
Gain on salvage - $6,300 less $5,430	(870)
Gain on removal costs - $200 less $365	(165)
Loss on ARO settlement - $100 less $30	70
Total impact to accumulated deprecation	$13,635

In this circumstance, depending upon the regulatory mechanism, the embedded gains and losses are flowed back through the customer through depreciation rates adjusted periodically going forward.

While tracking this detail is not difficult for one asset as demonstrated above, utilities typically have tens or hundreds of thousands of these assets which have accumulated over many years. For instance, as disclosed in the property section of their Form 10-K, a single small integrated electric utility company with a market capitalization of approximately $1.1 billion has approximately 10 generating units, 300 transmission and distribution substations, and 12,000 miles of transmission and distribution lines.

As a result of the complexities detailed above, the following Q&A has been designed to address some of the common questions regarding mass unit accounting conventions and the impact on asset retirement obligations.

Q. 1. Many owners of previously regulated generation assets continued the use of the composite convention of accounting for their generating assets after deregulation. Is it appropriate for these companies to continue to apply the composite or group convention of accounting to these unregulated generating stations?

A.1. The composite convention of accounting is an acceptable convention regardless of whether an entity is subject to cost-of-service regulation. As noted above, the composite or group convention was established as a means of simplifying the process of tracking a large asset system with many small components with small relative values compared to the larger composite group. As discussed in the following excerpts from Chapter 11 of Kieso, Weygandt, and Warfield's Intermediate Accounting Text (11th Edition), both of these conventions of accounting are considered acceptable conventions pursuant to GAAP.

> Two methods of depreciating multiple-asset accounts are employed: the group method and the composite method. The term "group" refers to a collection of assets that are similar in nature. "Composite" refers to a collection of assets that are dissimilar in nature. The group method is frequently used when the assets are fairly homogeneous and have approximately the same useful lives. The composite approach is used when the assets are heterogeneous and have different lives. The group method more closely approximates a single-unit cost procedure because the dispersion from the average is not as great. The method of computation for group or composite is essentially the same: find an average and depreciate on that basis.
>
> The differences between the group or composite method and the single-unit depreciation method become accentuated when we look at asset retirements. If an asset is retired before, or after, the average service life of the group is reached, the resulting gain or loss is buried in the Accumulated Depreciation account. This practice is justified because some assets will be retired before the average service life and others after the average life. For this reason, the debit to Accumulated Depreciation is the difference between original cost and cash received. No gain or loss on disposition is recorded.
>
> The group or composite method simplifies the bookkeeping process and tends to average out errors caused by over-or under depreciation. As a result, periodic income is not distorted by gains or losses on disposals of assets.

It also may be suitable for an entity to use both unit and group depreciation conventions on different groups of assets based on the type of assets and ease of application. As outlined in the AICPA Audit Guide *Audits of Airlines* section 3.104, unit depreciation could be used for other fixed assets which have large units cost and are comparatively few in number.

However, we believe it would generally not be appropriate for a company to switch to composite or group depreciation convention from the unitary convention of depreciation based on preferability as established by Accounting Principles Board ("APB") Opinion No. 20, *Accounting Changes* or FASB Statement of Financial Accounting Standards No 154, *Accounting Changes and Error Corrections -- a replacement of APB No. 20 and FAS No. 3*. The selection of the composite or group depreciation is an acceptable convention of accounting when entities have not maintained detail records to support the unitary convention. One would assume that those companies who have historically used the unitary bases of depreciation should have the capability to continue the use of this convention of depreciation. Those who have historically used group or composite depreciation have not maintained detail records to their mass asset accounts and may not have the information available to establish a single unit convention of accounting.

We also believe that those businesses using the composite or group deprecation convention should regularly obtain updated depreciation studies (perhaps every 3 – 5 years), which is consistent with FERC regulations. The periodic update of depreciation rates is necessary to level actual incurred disposition gains or losses and is part of the underlying basis for the acceptability of these group accounting conventions.

Q.2. How do the composite and group depreciation conventions impact the recognition of gains and losses in the case of "abnormal" or "extraordinary" retirement of assets?

A.2. To the extent that a company may choose to depreciate assets on a group or composite basis, the policy for recognizing gains or losses on its retirement of assets should be consistent. The AICPA Audit Guide, *Audit of Airlines,* in its glossary defines group depreciation as follows:

> "A plan under which (1) depreciation is based on the application of a single depreciation rate to the total book cost of all property included in a given depreciable property and equipment account or class, despite differences in service life of individual items of property and equipment, (2) the full original cost, less any salvage realized, of a retired item of depreciable property or equipment is charged to the allowance for depreciation regardless of the age of the item, and (3) no gain or loss is recognized on the retirement of individual items."

As noted above, in the case of normal retirement, no gain or loss would be recognized. As such, gains or losses which would be recognized if one used the unitary convention of accounting are simply included in the entity's net property balance and are depreciated over future years. However, although not specifically addressed in the audit guide, we believe a gain or loss should be considered in cases where abnormal or extraordinary retirements have occurred. We believe that the occurrence of an abnormal or extraordinary retirement would be rare.[5]

As mentioned in A.1., above, businesses using the composite or group deprecation convention should obtain updated depreciation studies periodically (every 3 – 5 years), which is consistent with FERC regulations. However, in a circumstance where an entity experiences a significant and unplanned level of retirements we recommend that an updated depreciation study be obtained more immediately. It is likely that as a result of the significant and unplanned level of retirements that the characteristics (i.e. average age of the assets, average remaining life if the assets, etc.) of the entity's property may have changed so significantly that the previous depreciation rates may no longer be a reasonable estimate of the assets' remaining depreciable life.

[5] This topic is also addressed by the USoA, specifically 18 CFR chapter 1, General Instruction 10, *Additions and Retirements of Electric Plant* paragraphs 5F and 10F. Paragraph 5F discusses the retirement of an entire system or operating unit which requires the recognition of the entire gain or loss in income rather than as an adjustment to accumulated depreciation. Paragraph 10F discusses that the early retirement of material property units, referred to as "extraordinary retirements," can lead to separate deferred amortization of unrecovered plant costs, but usually requires specific regulatory approval.

Q. 3. What is the appropriate accounting for differences between estimated accrued ARO liabilities and the actual cost of extinguishing those liabilities under composite or group convention of accounting?

A. 3. While not addressed in the body of FAS 143, the accounting for the extinguishment of AROs was alluded to in paragraph B41 of Appendix B: Background Information and Basis for Conclusions. As further described in PwC's DataLine 2001-22: *FASB Statement No. 143, Accounting for Obligations Associated with the Retirement of Long-Lived Assets* paragraph 4, "The Board acknowledges that if the cost actually incurred to settle an ARO is less than the obligation accrued by the company based on fair value, **the company will have a gain on retirement**. The fair value measurement convention of FAS 143 was one of the most controversial of its provisions during the exposure period. The FASB published an article entitled *Understanding the Issues: The Case for Initially Measuring Liabilities at Fair Value* to explain and defend its conclusions on measurement of AROs. Consequently, we have concluded that the accounting for the extinguishment of AROs would be consistent with the accounting for the extinguishment of any other non-financial liability: any difference between the accrued and actual cost should be recognized when the liability is fully satisfied." (Emphasis added) However, we believe that the accounting for AROs is a sub-set of an entity's fixed asset accounting policies and, therefore, to the extent that an entity has elected to use the group or composite convention of accounting for depreciation, the entity should follow the group or composite accounting as described below for their accounting of AROs.

Referencing the simple example above, the recognition of a loss on retirement of $70 (the release of the $30 ARO liability as compared to the cash expenditure of $100 assumed in the example) is straight-forward, and to the extent that AROs are established on a unitary basis and actual retirement costs incurred can be matched to an individual asset and ARO, this accounting is appropriate. However, many (if not substantially all) of the AROs recorded by utilities (at least those not related to nuclear plant decommissioning costs) relate to assets which are accounted for under either the group or composite conventions of accounting. Therefore the assets for which these AROs have been established are not tracked separately. These AROs have been estimated using methodologies similar to those used to establish the average or composite depreciable life of the assets: developing averages for the estimated remaining life of the assets, the period remaining until the obligations will be incurred, and the fair value of the obligations. Therefore, for the same reasons that utilities would have difficulties determining the specific gain or loss resulting from the retirement of a specific asset as a result of not maintaining detailed records of their mass asset accounts, it will also be difficult for utilities to determine the difference between the accrued ARO for an asset's retirement and the actual cost incurred for the retirement of the obligation. Entities that utilize the group or composite conventions of accounting for their property, plant and equipment do not have detailed records to track the asset and ARO information for literally thousands of group and component assets.

We believe that given: (i) the accepted convention of the group and composite accounting to embed gains and losses on the retirement of assets in the accumulated depreciation account[6]; and (ii) the FERC USoA's accounting instructions to account for gains, losses, salvage and cost of removal as charges to accumulated depreciation[7]; a modified group and composite accounting convention for AROs is acceptable. Such a method might include the following conventions:

1. The continued real-time accounting for actual costs incurred for the cost of removal of assets (including those amounts for which an ARO has been accrued) as charges to accumulated depreciation;

2. Recording accretion expense for the ARO during the current year based on the prior year's balance;

[6] See excerpt from Chapter 11 of Kieso, Weygandt, and Warfield's Intermediate Accounting Text (11th Edition) above.
[7] See footnote 2 above.

3. A periodic (at least annually, however more frequently if there have been significant amounts of property additions or retirements) revision of the estimated ARO and regulatory liability (amounts already collected in rates) for removal and disposal costs based on a current statistical analysis of updated fixed assets considering the impact on current year additions, retirements, and other changes to the asset average age, ARO fair value, or other relevant assumptions (i.e. similar to an updated depreciation study) and costed and discounted using current year assumptions.

Any adjustment required as a result of the analyses would result in a charge to accumulated depreciation. It is noted that some consideration was given to charging this entry to the ARC and adjusting depreciation of the ARC accordingly. However, the impact of recording the adjustment against the ARC does not result in different income treatments and adjusting accumulated depreciation preserves consistency with current accounting conventions of group depreciation. Consistent with the application of group and composite accounting theory, adjustments to accumulated depreciation will be reflected in future depreciation expense based on the utility's updated depreciation studies.

In order to provide a practical example of the three-step approach above, assume a utility has 1,000 of the assets in the previous example accounted for under the composite method. The balances as of the end of year 15 are assumed to be as follows:

Original asset cost	$ 20,000,000
Asset Retirement Costs (ARC)	30,000
Assumed ARO @ 12/31/05	(30,000)
Accrued regulatory liability for cost of removal and disposal [(450,000+50,000)/19*15]-ARO of 30	(365,000)
Accumulated depreciation [(20,000,000-1,500,000)/19*15]	(14,600,000)

The following journal entries would be recorded if ten of the 1,000 assets were removed and disposed at a cost of $4,000 and $250, respectively. The total salvage value of the assets was $14,000.

Step 1 – Real time accounting for the cost of removal:

Dr. Cash – Earned in salvage	$ 14,000	
Dr. Accumulated depreciation	190,550	
Cr. Cash – Cost of removal and disposal		($ 4,250)
Cr. Utility Plant		(200,300)

The balance charged to accumulated depreciation represents the adjustment to the accumulated depreciation of the assets sold as well as the gains and losses related to the difference between the estimated removal costs, disposal costs, and salvage value as of the date of the disposal.

Step 2 – Record accretion expense based on the liability as of the beginning of the year (assuming 7% * 30,000):

Dr. Accretion expense	$2,100	
Cr. ARO		($2,100)

By recording the accretion expense based upon prior liability, one assumes that there have been no significant changes in total ARO during the year (i.e. there are some new additions to offset the disposals.)

Step 3 – Annual revision of the estimated ARO assuming an increase in overall estimate of costs of disposal for remaining assets to $35,000 based on an updated ARO cost study:

Dr. Accumulated depreciation	$2,900	
Cr. ARO		($2,900)*

*The adjustment to the ARO is equal to the following:

Beginning ARO	$30,000
Accretion expense	2,100
Less: Required ARO	35,000
Total adjustment recorded	$ 2,900

It is noted that step 2 and 3 above do not contemplate potential impacts of regulatory recovery of removal and disposal costs. Certain regulatory recovery mechanisms will also require periodic adjustment to regulatory asset or liabilities based on the timing differences between collection, recognition and payment of removal and disposal costs. In addition, accretion expense may qualify as a deferred cost.

We also note that companies that follow the full cost rules in accordance with the SEC's Article 4-10 of Regulation S-X, which prescribes financial accounting and reporting standards for public companies engaged in the production of crude oil or natural gas in the United States, account for gains and losses resulting from the settlement of AROs in a manner similar to companies that follow the group or composite conventions of accounting for property, plant and equipment. Upon the issuance of FAS 143, the SEC Staff addressed a number of accounting issues for companies that utilize the full cost rules in Staff Accounting Bulletin No. 106, *Topic 12 D (4) Interaction of Statement 143 and the Full Cost Rules* ("SAB 106"). One issue that was not specifically addressed in SAB 106 was the accounting for gains or losses resulting from the settlement of AROs. However, the SEC did provide informal guidance to companies utilizing the full cost method that allowed those companies to preclude the recognition of gains or losses from the settlement of AROs. Instead, those companies were to record any gains or losses as adjustments to accumulated depreciation of the full cost pool, which is consistent with the overall theoretical basis of full cost accounting. This SEC guidance provides a useful analogy to the accounting concepts described above.

(Note: entities that have selected the unitary convention of accounting for fixed assets would not follow the guidance above but would recognize the difference between the estimated ARO and actual cost in earnings upon settlement of the ARO)

Q. 4. How frequently should cost studies supporting the computation of AROs for the decommissioning of nuclear plants be updated?

A. 4. FAS 143, paragraph 13, states that "an entity shall recognize period-to-period changes in the liability for an asset retirement obligation resulting from (a) the passage of time and (b) revisions to either the timing or the original estimate of undiscounted cash flows." However, the standard does not provide specific guidance on the frequency that updates to the original estimate of undiscounted cash flows should be performed.

The estimate of an ARO for nuclear decommissioning is generally calculated using expected-cash flow technique as described in FASB Concepts Statement 7, *Using Cash Flow Information and Present Value in Accounting Measurements* ("CON 7") and is subject to significant variability from even slight changes to key assumptions or inputs into the cash-flow model. Estimates of nuclear decommissioning costs involve a number of assumptions and cost estimates including: a) decommissioning costs for many discrete components; b) cost escalation factors; c) decommission approach/scenario regarding timing and methodologies; and d) choice of credit-adjusted risk free rates. Changes and revisions to these key assumptions may occur for various reasons including changes in technology and/or management's approach to decommissioning.

The Nuclear Regulatory Commission ("NRC") is responsible for overseeing the decommissioning of all nuclear plants in the United States. NRC regulation Section 50.75, *Reporting and Record Keeping for Decommissioning Planning*, establishes the requirements for how nuclear plant owners (known as licensees) are to provide the NRC reasonable assurance that the appropriate level of funds will be available for the decommissioning process. As part of the reporting process to the NRC, all licensees are required to provide a site specific cost study for the decommissioning of each nuclear unit owned every five years. These cost studies are used by the NRC to verify the licensee will have adequate funds available for the ultimate decommissioning of the unit. The preparation of these studies is generally performed by a third-party engineering firm and is an extremely expensive and time consuming process, sometimes requiring over a year to complete. Cost estimates are developed by the individual task or project required to decommission the unit. Also, the original design and subsequent modifications make each nuclear unit unique. As a result, cost estimates are specific to each nuclear unit.

The NRC provides for three alternative time choices to decommission a nuclear facility, DECON, SAFSTOR (or Delayed DECON) and ENTOMB. The DECON alternative involves the more immediate removal or decontamination of the equipment, structures and portions of the facility that contain radioactive containments so that the property can be released and the NRC license can be terminated. The SAFSTOR or Delayed DECON allows for the nuclear facility to be maintained in a condition that allows sufficient time for the radioactivity to decay; and afterwards, it is dismantled. Under ENTOMB, radioactive contaminants are encased in a structurally sound material such as concrete and appropriately maintained and monitored until the radioactivity decays to a level permitting release of the property. These time periods would generally be substantial, i.e., measured in decades rather than years.

Cost studies are typically prepared by an independent third-party consultant for each nuclear unit. The cost studies may reflect the cost to decommission a nuclear facility under a single approach or under different scenarios using a probability determination to calculate the cost estimate. The site specific cost estimate for each decommissioning scenario is prepared using the present day costs that are then escalated to the year that the decommissioning is planned for the unit. Each nuclear unit has its own specific timeline for completion, cost estimate and management's assessment of the likelihood of which decommissioning strategy will be followed that is incorporated into the expected cash flow model used to calculate the cost estimate.

The escalation factors used to determine the future cost of labor, materials and equipment, energy, burial and other decommissioning activities at the planned time of decommissioning are typically based on an assessment of the consumer price index, employment cost index, producer price index and other indices.

Considerations

Of course, ARO should be updated when cost studies are completed at least every five years as required by the NRC. However, if circumstances warrant a change to management's approach to decommissioning a nuclear unit prior to the completion of an updated cost study, then the ARO calculation should be adjusted accordingly in the period the change is made. It may also be possible to annually obtain independent third-party verification, or an internal representation from qualified engineers, that there have been no material changes to the previously completed cost studies to further support the reasonableness of the estimated ARO. Additionally when decommissioning activities begin, the update of the applicable cost estimates should become more frequent to ensure the accuracy of the ARO.

From an accounting perspective, it is good practice to obtain all site-specific cost estimates within the same reporting period. However, for entities that own multiple nuclear units, this may not be feasible from an operational perspective. If cost estimates for different plants are updated in different periods, management should document its consideration of the feasibility of extrapolating cost study updates from one nuclear unit to other nuclear units for which updated cost estimates have not been obtained during a period.

Changes in escalation factors can have a significant impact to the ARO estimate. The underlying indices of the escalation factors' change are based on current and expected future economic conditions. As such, the rates used to escalate the costs as determined by the site-specific cost estimates should be evaluated by management at least annually and preferably within the same reporting period (i.e. quarter) for consistency between years. Additionally, for entities with multiple nuclear units, the escalation factors for all units should be updated within the same reporting period during the year. Management may obtain updates to its escalation factors from its third-party provider that was utilized to provide cost study updates or from internal sources; however, management should be consistent with its sources when determining changes to escalation factors.

The probability weightings assigned to the decommissioning scenarios incorporated into the expected cash flow model used to calculate the ARO should be updated when site-specific cost estimates are prepared. In addition, management should consider whether any events have occurred that would impact the previous probability weightings used in the calculation. Such events could include a new nuclear management team, a change in the strategic direction of the company related to the operation of their nuclear facilities, or advances in the technology and methods of decommissioning nuclear facilities.

Accounting Recognition

Pursuant to FAS 143, changes resulting from revisions in the timing or amount of estimated cash flows should be recognized as an increase or decrease in the carrying amount of the ARO and the associated capitalized ARC. Increases in the ARO as a result of upward revisions in undiscounted cash flow estimates should be considered a new obligation and initially measured using a current credit-adjusted risk-free interest rate. Any decreases in the ARO as a result of downward revisions in cash flow estimates should be treated as a modification of an existing ARO, and should be measured at the historical interest rate used to measure the initial ARO.

Q.5. How should one account for an asset retirement obligation when a previously inestimable ARO becomes estimable?

A.5. Paragraph 4 of FIN 47 states that an ARO would be reasonably estimable if one of the following conditions were met: (a) It is evident that the fair value of the obligation is embodied in the acquisition price of the asset; (b) An active market exists for the transfer of the obligation; (c) Sufficient information exists to apply an expected present value technique.

Additional clarity around the ability to estimate and the subsequent accounting has been outlined under example 4 of Appendix A of the Interpretation which demonstrates that an obligation may be recognized at a date subsequent to the date that the obligation was incurred. Paragraphs A26 and A27 of FAS 143 provide guidance for the revisions of asset retirement obligations and the impact on the asset retirement cost as follows:

> A26. Revisions to a previously recorded asset retirement obligation will result from changes in the assumptions used to estimate the cash flows required to settle the asset retirement obligation, including changes in estimated probabilities, amounts, and timing of the settlement of the asset retirement obligation, as well as changes in the legal requirements of an obligation. Any changes that result in upward revisions to the undiscounted estimated cash flows shall be treated as a new liability and discounted at the current rate. Any downward revisions to the undiscounted estimated cash flows will result in a reduction of the asset retirement obligation. For downward revisions, the amount of the liability to be removed from the existing accrual shall be discounted at the rate that was used at the time the obligation to which the downward revision relates was originally recorded (or the historical weighted-average rate if the year(s) to which the downward revision applies cannot be determined).
>
> A27. Revisions to the asset retirement obligation result in adjustments of capitalized asset retirement costs and will affect subsequent depreciation of the related asset. Such adjustments are depreciated on a prospective basis.

The preceding excerpt provides implied guidance on how to account for the recognition of an asset retirement obligation which was previously inestimable at the date it was incurred or upon the implementation of FAS 143 and FIN 47. In summary, the asset retirement obligation is recorded at fair value with an equal and offsetting asset retirement cost resulting in no income statement impact. The asset retirement cost is amortized over the remaining life of the asset, mimicking the prospective approach to change in estimate[8].

[8] See paragraph 31 of APB 20 and paragraph 19 of FAS 154.

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Attachment 89.1

end of 2012. This conservative estimate assumes no customer or volume growth, no backstopping to on-system or off-system sales customers or expansion to additional rate classes and results in take-up of 80% of the volume from the 2 projects proposed in this Application.

Table 6-1: Targeted Demand

		# of Customers	Volume	# of Eligible Customers[1]	% of Customers	Enrolments	Volume	Volume @ 10 %
Oct 2010-Dec 2010	Residential - Terasen Gas Rate 1	752,416	72,348,220	616,981	0.50%	3,085	73,267	7,327
2011	Residential - Terasen Gas Rate 1	752,416	72,348,220	616,981	1.00%	6,170	586,132	58,613
2012[2]	Residential - Terasen Gas Rate 1	752,416	72,348,220	616,981	2.00%	12,340	1,172,264	117,226

Notes:
[1] eligible customers are those not currently enrolled with a marketer
[2] 2012 projections do not include commercial market customers or growth in residential customers

6.6 Customer Education Plan

Communications will be critical to the successful implementation of a Green Gas program. As a Biomethane / natural gas blend is a new energy concept for residential use, Terasen Gas will need to educate customers about it in a simple, easy-to-understand manner. In addition to providing customers with details about the Terasen Gas Green Gas program, communications will motivate those interested in participating to make the decision to participate now. The uptake in Phase 1 will be key to encouraging future development of new renewable sources and sustainable platform from which to expand.. Therefore, communication activities will be a key component for educating consumers about Terasen Gas' Green Gas program and encouraging participation in the program.

6.6.1 CUSTOMER EDUCATION OBJECTIVES

There are four objectives for the communication efforts of the Green Gas program. They are to:

- generate awareness and understanding of Biomethane as a renewable energy and its availability today;
- generate awareness and understanding of the Terasen Gas Green Gas program;
- stimulate interest and participation in the program; and
- maintain participation and support for the program.

Customer education will be an ongoing activity until the Green Gas program reaches a level of market maturity whereby customer groups who have access to the program are sufficiently

aware of it and able to make an informed decision as to whether or not they wish to participate in it.

6.6.2 CUSTOMER EDUCATION BUDGET

Terasen Gas is proposing a very modest customer education budget in order to achieve the targeted demand and customer awareness. In contrast to comparatively much larger budgets for programs such as Customer Choice, this initial budget for 2010-2011 is estimated at only $400,000 and will be amortized over three years (see Table 6-2 below for details). For purposes of the rate determinations included in this Application, $300,000 has been included for customer education in 2012, escalated annually thereafter by inflation (see Table 6-3 below for details). The proposed rate recovery mechanism for customer education is discussed in Section 10.4.

Table 6-2: Customer Education Budgets for 2010-2011

Type	Amount
Media	
Targeted print & online communications	$ 220,000
Direct marketing	20,000
	240,000
Production	
Print communications (incl. bill insert)	40,000
Videos	20,000
Event materials (incl. signage)	5,000
Quarterly email newsletter	20,000
	85,000
Promotions	
Incentives (for joining the program and/or referring others)	75,000
Total	**$ 400,000**

Table 6-3: Customer Education Annual Budgets for 2012-2013

Type	Minimum	Maximum
Media		
Targeted print & online communications	$ 100,000	$ 185,000
Direct marketing	0	20,000
	100,000	205,000
Production		
Print communications (incl. bill insert)	15,000	40,000
Video updates	0	0
Event materials (incl. booth signage)	0	5,000
Quarterly email newsletter	10,000	20,000
	25,000	45,000
Promotions		
Incentives (for joining the program and/or referring others)	25,000	50,000
Total	**$ 150,000**	**$ 300,000**

6.6.3 SUCCESS METRICS

The success of the customer education plan overall will be measured by:

- Mainstream media interest, indicated by quality and quantity of media coverage;
- Online activity, indicated by discussions on blogs and social media sites, links to program information on terasengas.com and traffic to our website;
- Awareness levels;
- Customer inquiries;
- Customer subscriptions;
- Subscriber referrals; and
- Rate of attrition.

Customer education will be an ongoing activity until the Green Gas program reaches a level of market maturity whereby customer groups who have access to the program are sufficiently aware of it and able to make an informed decision as to whether or not they wish to participate in it.

Additional Details of the Customer Education Plan are provided in Appendix H.

6.7 Tariffs Proposed in this Application

The Company is proposing three different tariff offerings under the Green Gas program:

14.0 Reference: Guiding Principles

Exhibit B-1, Section 6.2, page 48

14.1 Below is an excerpt from the Application:

The Green Gas Guiding Principles are:

A) The Green Gas offering should provide customers the opportunity to reduce their carbon footprint or carbon intensity.

B) The Green Gas offering should be compatible with the Essential Services Model, which underlies the Customer Choice Program.

14.1.1 Does TGI foresee the need for Rules and Guidelines surrounding the Green Gas program similar to those of the Customer Choice Program?

Response:

The Green Gas program does not require Rules and Guidelines similar to those used for the Customer Choice program. The Rules and Guidelines used to manage Customer Choice participants were largely developed to help provide consumer protection. As such these rules play a key role in influencing the behaviour of gas marketers participating in the Customer Choice program. These Rules and Guidelines were proposed by Terasen Gas, Gas Marketers and other stakeholders through the Customer Choice regulatory process, and were augmented directly by the Commission in response to excessive dispute and complaint activity. The Green Gas offering represents an open tariff, not a fixed contract. Customers may choose to enrol or leave the Green Gas program on a monthly basis. As such, Terasen Gas does not foresee elevated dispute or complaint activity when the Green Gas program is introduced.

Terasen Gas also believes that dedicated Rules and Guidelines for the Green Gas program are not needed because as a regulated utility, the Company must meet well established customer service responsibilities that work well in the interest of customers. Our sales goals represent realistic market share potential, achievable through non-intrusive marketing activities (i.e., advertising). Customers will be able to enrol or leave the program on a monthly basis, or choose to switch to a fixed-rate contract from a gas marketer. As a regulated utility, the introduction of the proposed Green Gas program will not compromise our commitment to providing excellent customer service.

14.1.2 How will TGI ensure that other "green" programs offered by non-TGI entities will be treated equally?

Response:

Please refer to the response to BCUC IR 1.14.1.4.

14.1.3 Does TGI see the need to separately operate BioGas Programs outside the public utility in the future?

Response:

No. Please see TGI's response to BCUC IR 1.1.1.

Competition issues are addressed in TGI's response to BCUC IR 1.21.6.

14.1.4 How does TGI intend to ensure that its proposed BioGas Programs are advertised in a way that is fair to other potential "green" gas providers?

Response:

Non-TGI entities with Biomethane product offerings will be treated equally. See the response to BCUC IR 1.16.1 and 1.16.2 for details on their potential participation in this market. Terasen Gas has successfully differentiated its variable rate from gas marketer fixed rates since 2004 when the commercial unbundling program was first introduced. TGI's Green Gas program is distinct from gas providers' current "green" gas products in two ways: TGI's gas commodity is at a variable rate (vs. marketers' fixed rates) and the program features a unique blend of Biomethane and natural gas. Communications will generate awareness for the benefits of Biomethane as a renewable energy source. The proposed Green gas offered by Terasen Gas represents an open tariff, not a fixed-rate contract. This regulated variable rate offering can easily be differentiated from the gas marketers fixed rate contracts, which like our variable rate, may or may not include a green component (e.g. carbon offset, or Biomethane offering).

TGI will develop Green Gas communications which are specific and focused on Biomethane as a renewable energy source and the details of the program itself. In the event that other providers develop Biomethane projects or offer other "green" gas products, there will be a

greater level of public understanding than there is today. Additionally, they would benefit from TGI's Customer Education efforts which would reference green offerings available through gas marketers and other parties.

As discussed in the response to BCUC IR 1.60.9, similar to Customer Choice, in its print collateral pieces TGI will inform customers that they have a choice of other green programs offered by gas marketers. The treatment of this information will be similar to the manner in which gas marketer fixed rate offerings have been referenced in customer communications about TGI's variable commodity rate. Bill inserts and other brochures can provide the space needed to provide additional messaging that mass media does not.

14.2 Below is an excerpt from the Application:

F) Sufficient Biogas production infrastructure should be developed to ensure that a sufficient volume of Biomethane is available to meet customer demand.

14.2.1 Please define "sufficient" for 2010 and 2011 including a quantification of what is the maximum and minimum amount of Biomethane TGI believes is necessary during phase 1.

Response:

This response includes information from the Confidential Appendix J-3 and is therefore provided to the Commission confidentially under a separate cover.

14.2.2 How much of this maximum and minimum supply of Biomethane has TGI contracted for at this time.

Response:

This is included in the response to BCUC IR 1.14.2.1, which is provided to the Commission confidentially under a separate cover.

18.0 Reference: Customer Offering, Product Rollout and Proposed Tariffs

Exhibit B-1, Section 6.6, Customer Education Plan, page 56 - 57

18.1 If gas marketers cover the cost of education and promotion with revenue generated in their green gas offering, why should the Terasen Gas Biomethane rate option not cover the Customer Education Plan costs?

Response:

As discussed in BCUC IR 1.14.1.4 and BCUC IR 1.60.9, TGI will develop Green Gas communications which are specific and focused on Biomethane as a renewable energy source and the details of the program itself.

This approach benefits other providers of "green" products.

- In the event that other providers develop Biomethane projects or offer other "green" gas products, there will be a greater level of public understanding than there is today.
- Additionally, Gas Marketers would benefit from TGI's Customer Education efforts which would reference green offerings available through gas marketers and other parties. Similar to Customer Choice, in its print collateral pieces TGI will inform customers that they have a choice of other green programs offered by gas marketers. The treatment of this information will be similar to the manner in which gas marketer fixed rate offerings have been referenced in customer communications about TGI's variable commodity rate. Bill inserts and other brochures can provide the space needed to provide additional messaging that mass media does not.

The Company is of the opinion that customer education costs should be recovered from all non-bypass customers as the purpose of customer education is to ensure that all customers can make an informed decision about whether or not they wish to participate in a given program.

18.2 TGI states that: *"Customer education will be an ongoing activity until the Green Gas program reaches a level of market maturity whereby customer groups who have access to the program are sufficiently aware of it and able to make an informed decision as to whether or not they wish to participate."*

Isn't an education program more effective with generic advertising where the sponsor of the advertising is not promoting a product or service but a credible independent third party?

Response:

Generic advertising, "advertising for a general product category, as opposed to advertising for a specific brand in that category"[3], is effective in a well-established market for a homogeneous commodity where there are a large number of suppliers in the product category, customers are aware of how to get the product and there is little or no differentiation between supplier products. An example of generic advertising would be communications that promote drinking milk, such as the Dairy Farmers of Canada's website (www.dairygoodness.ca). These communications contain no mention of the category suppliers' brands. They promote the category without promoting any individual suppliers. Generic advertising is designed to increase the overall size of an existing market, not to create a new market.

The effectiveness of a customer education program for a new product category is determined by many factors, including the source of the information being communicated and the action that the audience is asked to take. As a leading energy provider in B.C., serving 96 per cent of the province's natural gas consumers, Terasen Gas is a well-respected, credible source of new energy information. Those most predisposed to participate in the program will be asked to contribute to the province's energy future by supporting the use of Biomethane through TGI's Green Gas program. As discussed in BCUC IR's 1.18.1 & 1.18.4, TGI's customer education plan consists of both generic advertising that will benefit all customers as well as gas marketers should they become involved in Biomethane or green products, as well as promotion of the TGI product.

TGI has suggested an educational /advertising budget to assist in the introduction of the program and for customers to take action by enrolling in the program. This budget, as outlined on page 1 of Appendix H of the Application, has been designed to meet four objectives:

- generate awareness and understanding of biomethane as a renewable energy and its availability today;
- generate awareness and understanding of the TGI Green Gas program;
- stimulate interest and participation in the program; and
- maintain participation and support for the program.

In summary, TGI feels the proposed customer education strategy is an appropriate means for ensuring education about Biomethane and other green offerings as well as promotion of the

[3] http://www.allbusiness.com/glossaries/generic-advertising/4961720-1.html

proposed Green Gas program to ensure the Company's renewable energy projects are supported through customer enrolment.

18.3 The customer education program overlaps with TGI's own advertising as it will develop awareness for name recognition, goodwill and provide arguments to support the expansion of natural gas demand. Since many of the spill-over effects from "education" or advertising benefit TGI directly should all of these costs be absorbed in TGI's current budget for advertising and promotion?

Response:

No, costs for the Biomethane customer education campaign cannot be absorbed in TGI's current advertising and promotion budgets.

The current funding for TGI advertising and promotion budget that was approved as part of the TGI 2010-2011 Negotiated Settlement Agreement, dated November 5, 2010, did not include funding to undertake a customer education campaign in relation to Biomethane to support a successful product launch to customers. If TGI was to fund this offering from existing budgets, customer education programs such as safety and energy efficiency and conservation messaging would be compromised.

Currently, the dollars TGI spends on advertising and educational material is recovered from customers.

Renewable energy development and meeting customer demand for GHG reduction solutions will not be successful if consumers are not aware that TGI offers such a program. The customer education budget was proposed based on the incremental requirements to generate awareness of TGI's proposed Green Gas program.

18.4 Since many Gas Marketers offer a green rate option should not advertising and promotion be generic advertising similar to the branding created for the Customer Choice program?

Response:

Terasen Gas has proposed an educational / advertising plan to assist in the introduction of this new service offering and to encourage customers to enrol in the service. This budget is outlined

on page 58 of the Application and details are provided in Appendix H of the Application. Terasen Gas believes the advertising supporting the Green Gas product should reflect the utility's graphic standards[4] because this will best support the success of the program. The Company's belief in the requirement for this education plan is supported by three primary reasons that are discussed below. The customer education plan, which the Company believes best supports the introduction of the Biomethane program, has been designed to meet four objectives:

- generate awareness and understanding of biomethane as a renewable energy and its availability today;
- generate awareness and understanding of the Terasen Gas Green Gas program;
- stimulate interest and participation in the program; and
- maintain participation and support for the program.

First, the Green Gas offering is a product exclusively offered by Terasen Gas and should thus be identified as such. Fixed price contracts provided through Customer Choice, although facilitated by Terasen Gas (e.g., providing billing services to customers, acting as supplier of last resort, providing customer awareness and education, and managing the enrolment process), is not a product offered by the utility. The commodity rate that Terasen Gas offers to customers is similar in nature pre and post Customer Choice.

Second, Terasen Gas believes using communications that follow its graphic standards act to legitimize the product and assist in efforts to achieve the four objectives stated above.

- Associating the product with Terasen Gas will improve consumer acceptance of the new Green Gas product, especially after the level of dispute activity that arose upon introduction of Customer Choice into the residential market in 2007/2008. Introducing a green product via the same generic approach currently used for Customer Choice exposes the product to unnecessary risk. Customer Choice contracts have failed to grow since the program rolled out, and Terasen Gas specific communications ended. Overall program participation has contracted by approximately 9 per cent since peak enrolment levels were achieved in 2009. Some of this market share erosion is attributable to depressed natural gas rates, but Terasen Gas believes many customers remain uncertain about the program because of the sales approach used and the cost of the rate offerings put forth by gas marketers participating in the program.

[4] Technical information that specifies the visual identity of Terasen Gas marketing and customer communications. Graphic standards ensure TGI communications are designed consistently and uniformly.

- Customer Choice communications are designed to help consumers make an informed purchase decision, but remain neutral with respect to choosing the Terasen Gas regulated variable rate, or a fixed rate contract offered by gas marketers. Green Gas advertising must also include messaging to encourage participation to ensure program success.

Third, utility communications denote the inherent difference between the gas marketers' green products. The biomethane product that Terasen Gas is proposing to bring to market will be a regulated, variable rate, while gas marketers continue to sell fixed rate contracts that may or may not include a green component.

Terasen Gas believes that its proposed communication efforts will ensure the program objectives are attained and then help distinguish the utility product from gas marketers' offerings. Appreciating the sensitivity of this role, Terasen Gas commits to relate the availability of gas marketer green products when the utility is distinguishing between its regulated, variable rate offerings and the fixed rate contracts of gas marketers. The Company will reference the price comparison page on 'Terasen Gas.com', for a listing of the competitive green product offers available through gas marketers; and our website will allow customers to hyperlink to any offer they are interested in.

Please also refer to the response to BCUC IR 1.18.1 and BCUC IR 1.18.2.

options are, and ensure they have the information that will permit an educated purchase decision.

60.3 Can TGI explain the difference between education and promotion of the proposed TGI BioGas Program?

Response:

The customer education plan Terasen Gas foresees being required to support the successful launch of the Biomethane program includes an educational and a promotional component.

As Biomethane has not previously been available as an energy source in B.C., customers must first be made aware of its introduction to the marketplace and its environmental benefits. TGI conducted an Alternative Energy Study in 2009 which found that "[B.C.] residents were far less confident in suggesting that their awareness extended to being knowledgeable about the alternative energy sources." [7] As people are less likely to buy products or services that they don't understand, educational communication is necessary. Customers will be informed about Biogas and Biomethane as a real, practical and safe energy source that is available today, and the benefits of its use in B.C. Customer education supports both the establishment of a Biomethane market and TGI's Green Gas program.

Promotional communication is necessary to stimulate interest and participation in the Company's Green Gas program. With participation, in a timely manner, further supply can be developed and additional environmental benefits realized. It is not a matter of providing information that customers can act on at a time in the future when it may interest them. Rather program participation by those most predisposed to support a Biomethane initiative is needed within a reasonable time frame so that further initiatives can be developed and the long-term benefits realized.)

An example of customer communication which must combine educational and promotional messages for a new product introduction to be successful would be yogurt products with active probiotic culture. Customers were familiar with yogurt, but not with this new ingredient; just as they are familiar with natural gas but not with Biogas or Biomethane as an energy source for their home. One player in the yogurt market is Danone. Their website for their DanActive yogurt drink with active probiotic culture (www.danactive.ca/en/) includes educational and promotional messages. Educational messages explain how probiotic culture works in the human body and

[7] Alternative Energy in BC Study conducted for Terasen Gas by Angus Reid Strategies, Executive Summary pg 1.

provide scientific evidence; while the promotional messages feature information on the product's flavours and encourage shoppers to buy the drink with a $2.00 coupon.

As the supply of the Biomethane/natural gas blend warrants, and within the proposed communications budget, communications for the Biomethane program will continue to require educational and promotional elements after the program launch. New TGI customers and others paying attention to the communications for the first time will require education about the product, its use and its benefits. On-going communications would also contain promotional components to stimulate participation in the program into the future.

60.4 What portion of the customer education program related to the roll out of Customer Choice program was promotional?

Response:

Communications conducted by TGI for the roll out of the Customer Choice program (as well as subsequent communications) did not include promotional elements. The objectives of the Customer Education plan for Customer Choice were limited to:

- generating awareness of the program; and
- providing customers with the information they needed to make a decision about choosing

As the program facilitator, TGI provided independent information about Customer Choice. The Company did not promote any aspect of the program, or offerings. Gas Marketers were responsible for promoting their product offerings when the program was rolled out and continue to have this responsibility. Please refer to the response to BCUC IR 1.60.7 for a budget breakdown of the initial Customer Choice education plan.

60.5 Is TGI's customer educational plan more promotional than that of the Customer Choice campaign as it will promote TGI's green gas program rather than the existence of a biomethane market?

Response:

Yes, TGI's customer educational plan is more promotional than that of the Customer Choice campaign (See the responses to BCUC IR's 1.60.2 and 1.60.7 for more detail). In addition to educating customers about this new energy source and providing information for customers to make an informed choice about the Biomethane program, communications will also encourage customers to participate. Their participation is critical to the success of the program, and the program is integral to the development of a Biomethane market in B.C. which supports the province's Climate Action Goals.

The Customer Choice communications objectives centred on education and increasing customer awareness, and directing customers on where to find additional program information. Importantly, this customer education plan did not explicitly promote a particular product offering. Promotional activities were left the responsibility of gas markers, who offered specific products for customers to consider. The Biomethane program in contrast, combines the need for customer education, with the need to promote the product offering in order to help ensure that interested customers enrol in the program. Customer participation by enrolling in the program is critical for the successful development of the Biomethane program because customer interest will drive the development of new biomethane production sources. The development of a robust biomethane market also provides an additional benefit to customers because it would help to optimize the TGI system and also be a significant contribution to helping reduce GHG emissions in British Columbia and help meet the province's Climate Action Goals.

60.6 Are costs included in Customer Education Tactics such as mass media, direct mailings, promotional offers consumer shows, community level events, street teams, videos and an employee communications campaign promotional in nature?

Response:

The items outlined under "Customer Education Tactics" combine both educational and promotional messages. Therefore it is not possible to distinguish educational costs from promotional costs in the manner suggested by this question. (See the response to BCUC IR 1.60.3 for more information.)

Attachment 94.4

(Provided in electronic format only due to
document size and in order to conserve paper)

FORTIS BC

2010 Residential Programs	PROGRAM															ALTERNATE		NET PRESENT VALUE									BENEFIT/COST						PARAMETERS														
	COSTS ($000)										SAVINGS (GJ)			LIFE	Impact		Levelized Cost	Utility Benefits (Costs)		Participant Benefits (Costs)			Program Net Savings			Natural Gas	Participant			Natural Gas		SCT Net Benefits	UTILITY				PARTICIPANT									
FEI	Utility			Partners										Years	Energy	Capacity	($/GJ)	Program	Alternate	Program	Carbon Tax	Alternate	Natural Gas	Alternate Energy	Alternate Capacity	Total Costs	Total Benefits	Benefit/Cost	Rate Impact	Societal Cost Test	($'000s)	Natural Gas Utility Discount Rate	Natural Gas Supply	Alternate Discount Rate	Alternate Supply	Discount Rate	Natural Gas NPV	Carbon Tax NPV	Alternate Energy NPV	Alternate Capacity NPV	Natural Gas Tariff	Energy Tariff	Capacity Tariff
	Incentives	Administration	Total	Incentives	Administration	Total	Participant	Total	% Utility	% Partner	% Participant	Gross	Net-to-Gross	Net		MWh	kW		($'000s)	($'000s)	($'000s)	($'000s)	($'000s)	(GJ)	(MWh)	(kW)	Utility	($'000s)	($'000s)																				
Label	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR	AS	AT
Source Sheet or Calculation	Program	Program	B+C	Program	Program	E+F	Program	D+G+H	D/I	G/I	H/I	Program	Program	M+N	Program	Program	Program	D/Y	OxAJ	Q x N x AL	M x N x AN	M x N x AO	N x (QxAP + RxAQ)	PV(AI,P,-O)	PV(AK,P,-Q*N)	PV(AK,P,-R)	T/D	H>0, (V+W)>0	H<0, (V+W)>0, X	AO/AC	T/(V+O)	(T+U)/I	(T+U)-I	Input	Program	Input	Input	Input	PV(AM,P,-InputD25)	Input	PV(AM,P,-InputD28)	PV(AM,P,-InputD29)	Input	Input	Input
2010																																														
RESIDENTIAL:																																														
Energy STAR Heating System Upgrade _Fortis (Retrofit)	962	51	1,013	0	0	0	1,316	2,329	43%	0%	57%	42,713	57%	24,346	18	0	-	3	7,000	N/A	3,348	504	N/A	334,847	0	-	6.9	1,316	3,852	2.9	1.6	3.0	4,671	3.00%	221.16	3%	1.65	3.0%	137.52	20.71	1.14	0.00	9.999	0.083	-
Energy STAR Heating System Upgrade _Live Smart BC (Retrofit)	1,372	0	1,372	0	0	0	1,877	3,249	42%	0%	58%	60,928	57%	34,729	18	0	-	3	9,985	N/A	4,776	719	N/A	477,644	0	-	7.3	1,877	5,495	2.9	1.6	3.1	6,735	3.00%	221.16	3%	1.65	3.0%	137.52	20.71	1.14	0.00	9.999	0.083	-
EnerChoice Fireplaces (Retrofit)	16	40	56	0	0	0	56	100%	0%	0%	850	76%	646	15	0	-	7	163	N/A	77	12	N/A	7,714	0	-	2.9	-	89	N/A	1.2	2.9	106	3.00%	193.94	3%	1.43	3.0%	119.37	18.08	0.99	0.00	9.999	0.083	-
ENERGY STAR Hot Water Heaters (Retrofit)	15	52	67	0	0	0	6	73	92%	0%	8%	304	80%	243	13	0	-	26	55	N/A	26	4	N/A	2,586	0	-	0.8	6	30	4.9	0.6	0.8	(18)	3.00%	174.41	3%	1.28	3.0%	106.34	16.18	0.88	0.00	9.999	0.083	-
TLC	320	112	432	0	0	0	0	432	100%	0%	0%	0	100%	0	1	0	-	LB	LB	N/A	N/A	N/A	N/A	-	0	-	LB	-	-	N/A	N/A	LB	LB	3.00%	0.00	3%	0.12	3.0%	9.71	2.14	0.08	0.00	9.999	0.083	-
2010 Total Residential	2,686	254	2,940	-	-	-	3,199	6,139	48%	-	52%	104,795		59,965		0	-	4	17,203	0	8,227	1,239	0	822,792	-	-	5.9	3,199	9,466	3.0	1.5	2.8	11,063													

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ
1	**UTILITY**		**FORTIS BC**																																	
2																																				
3																																				
4			**Year**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	
5			Units																																	
6		**NATURAL GAS**																																		
7		Incremental Cost of Gas (nominal)	$ Per GJ	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.43
8	1		*Year*	*0*	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*	*16*	*17*	*18*	*19*	*20*	*21*	*22*	*23*	*24*	*25*	*26*	*27*	*28*	*29*	*30*	*31*	
9		carbon tax	$ per GJ	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	
10		Distribution adder	$ per GJ	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*		
11		Total incremental cost of gas including carbon		*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.28*		
12	2	GDP Deflator		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
13	3	Incremental Cost of Gas (Real)		$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.28		
14	4	Net Present Value -2010			$29.54	$43.67	$57.39	$70.71	$83.64	$96.20	$108.38	$120.22	$131.71	$142.86	$153.69	$164.20	$174.41	$184.32	$193.94	$203.28	$212.35	$221.16	$229.71	$238.01	$246.07	$253.89	$261.48	$268.86	$276.02	$282.97	$289.72	$296.27	$302.63	$308.81	$314.74		
15	5	Net Present Value -2011			$29.54	$43.67	$57.39	$70.71	$83.64	$96.20	$108.38	$120.22	$131.71	$142.86	$153.69	$164.20	$174.41	$184.32	$193.94	$203.28	$212.35	$221.16	$229.71	$238.01	$246.07	$253.89	$261.48	$268.86	$276.02	$282.97	$289.72	$296.27	$302.63	$308.81	$308.74		
16	6	Net Present Value -2012			$29.54	$43.67	$57.39	$70.71	$83.64	$96.20	$108.38	$120.22	$131.71	$142.86	$153.69	$164.20	$174.41	$184.32	$193.94	$203.28	$212.35	$221.16	$229.71	$238.01	$246.07	$253.89	$261.48	$268.86	$276.02	$282.97	$289.72	$296.27	$302.56				
17																																				
18																																				
19		**ELECTRICITY**																																		
20		Incremental Cost of Elec	$ Per kWh	$0.12																																
21		Incremental Cost of E Capacity	$ Per kW/a	$170.00																																
22		**Oil**																																		
23		Cost of Oil	$ Per GJ	$22.50																																
24		Cost of Oil	$ Per KWH	$0.08																																
25	**RETAIL**																																			
26			Rate		Customers		789,928	Total Customers in BC			80,000	Total Residential and Commercial Customers on VI																									
27		Residential Retail			*,000's*																															
28		**TGI**	$ Per MJ	$0.0100	640		712,304	Total Residential Customers in BC																													
29		**TGVI**	$ Per MJ	$0.0145	72																															
30		**Electricity**	$ Per MJ	$0.0230																																
31		**Electricity**	$ per kWh	$0.0827	1,511		1,511,435	Total BCH Residential Customers in BC				89%																									
32		**Electricity**	$ per kW per year																																	
33		Commercial Retail																																		
34		**TGI**	$ Per MJ	$0.0094	78		77,624	Total Commercial Customers in BC																													
35		**TGVI**	$ Per MJ	$0.0169	8																															
36		**Electricity**	$ Per MJ	$0.0214																																
37		**Electricity**	$ per kWh	$0.0769	190		189,764	Total Light Industrial and Commercial Customers in BC																													
38		**Electricity**	$ per kW per year	$52.0000	15																															
39																																				
40	**TAX**																																			
41			**Year**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	
42	1		*Year*		*0*	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*	*16*	*17*	*18*	*19*	*20*	*21*	*22*	*23*	*24*	*25*	*26*	*27*	*28*	*29*	*30*	
43	2	Carbon	$ Per tonne		$20.00	$25.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	
44	3	Carbon	$ Per GJ		$0.9976	$1.2470	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964		
45	4	GDP Deflator			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
46	5	Carbon (Real)			$1.00	$1.25	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50		
47	6	Net Present Value -2010				$2.14	$3.51	$4.84	$6.13	$7.39	$8.60	$9.78	$10.93	$12.05	$13.13	$14.18	$15.19	$16.18	$17.14	$18.08	$18.98	$19.86	$20.71	$21.54	$22.35	$23.13	$23.89	$24.62	$25.34	$26.03	$26.71	$27.36	$27.99	$28.61	$29.21			
48	7	Net Present Value -2011					$2.62	$3.99	$5.32	$6.61	$7.86	$9.08	$10.26	$11.41	$12.52	$13.60	$14.65	$15.67	$16.66	$17.62	$18.55	$19.46	$20.34	$21.19	$22.02	$22.82	$23.61	$24.36	$25.10	$25.81	$26.51	$27.18	$27.84	$28.47	$29.09		
49	8	Net Present Value -2012						$2.86	$4.23	$5.56	$6.85	$8.11	$9.32	$10.50	$11.65	$12.76	$13.85	$14.90	$15.91	$16.90	$17.86	$18.80	$19.70	$20.58	$21.43	$22.26	$23.07	$23.85	$24.61	$25.34	$26.06	$26.75	$27.42	$28.08	$28.71		
50																																				
51		**Discount Rate (real)[1]**																																		
52		**TERASEN GAS**																																		
53		**Rate of Inflation**	1.90%																																	
54		**TGI**	3.00%																																	
55		**TGVI**	3.00%																																	
56		**BC HYDRO**																																		
57		**Rate of Inflation**	2.00%																																	
58		**BC Hydro**	3.00%																																	
59		**Customer**	3.00%																																	
60		*Footnote 1: Source LR 070531*																																		
61																																				
62				**SHEET LABELS**																																
63	**New Construction**																																			
64		Energy STAR Heating System Upgrade _Fortis (Retro		**BASEBOARD**																																
65		Energy STAR Heating System Upgrade _Live Smart		**HEATPUMP**																																
66																																				
67																																				
68	**Heating Oil vs Nat Ga**	**0.02**	**Year**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**
69	1	**tonnes/GJ**	*Year*	*0*	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*	*16*	*17*	*18*	*19*	*20*	*21*	*22*	*23*	*24*	*25*	*26*	*27*	*28*	*29*	*30*	*31*	*32*
70	2	Carbon	$ Per tonne	$15.00	$20.00	$25.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00
71	3	Carbon	$ Per GJ	$0.30	$0.40	$0.50	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60
72	4	GDP Deflator		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00
73	5	Carbon (Real)		$0.30	$0.40	$0.50	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$1.20
74	6	Net Present Value -2009			$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
75	7	Net Present Value -2010				$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
76	8	Net Present Value -2011					$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00

FORTIS BC

RESIDENTIAL

NEW

only enter in boxes marked in blue

Measure Data for Energy STAR Heating System Upgrade _Fortis (Retrofit)

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$	850		
Total Incentive	$	250	$ 250	$ -
Participant	$	600		

Annual Impact Per Measure

Energy Savings per installation	11.1	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	43%	0.57		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	18	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	3,736	3,848	3,848	0		Estimated Participation
Impact						
Gross Energy Savings (GJ)	41,469	42,713	42,713	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	23,637	24,346	24,346	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$221.16	$221.16	$221.16	
Energy Purchases	$ 5,384,414	$ 5,384,414	$ 5,384,414	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 962,000	$ 962,000	$ -	$ -	
Administration		$ 50,894	$ 50,894			
Subtotal	$ 983,392	$ 1,012,894	$ 1,012,894	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 1,316,016	$ 1,316,016	$ -	$ -	
Subtotal	$ 1,277,685	$ 1,316,016	$ 1,316,016	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.650 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 3,123,336		$ 3,055,504	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant C
Utility Levelized Cost per GJ (Lifetime)	**$ 7.0**		**$ 7.0**	**$ -**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Energy STAR Heating System Upgrade _Live Smart BC (Retrofit)

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$	850		
Total Incentive	$	250	$ 250	$ -
Participant	$	600		

Annual Impact Per Measure

Energy Savings per installation	11.1	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	43%	0.57		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	18	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	5,329	5,489	5,489	0		Estimated Participation
Impact						
Gross Energy Savings (GJ)	59,153	60,928	60,928	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	33,717	34,729	34,729	0	0	Gross Energy Savings less Free Riders
Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012		
Avoided Revenue Requirements							
PV $ per GJ			$221.16	$221.16	$221.16		
Energy Purchas	$ 7,680,625	$ 7,680,625	$ 7,680,625	$ -	$ -		
Utility Program Costs							
DSM Incentives		$ 1,372,250	$ 1,372,250	$ -	$ -		
Administration		$ -	$ -				
Subtotal	$ 1,332,282	$ 1,372,250	$ 1,372,250	$ -	$ -		
Partner Program Costs							
DSM Incentives		$ -	$ -	$ -	$ -		
Administration		$ -	$ -	$ -	$ -		
Subtotal	$ -	$ -	$ -	$ -	$ -		
Participants' Net Costs							
Incremental Cost		$ 1,877,238	$ 1,877,238	$ -	$ -		
Subtotal	$ 1,822,561	$ 1,877,238	$ 1,877,238	$ -	$ -		
Alternate Savings - Net							
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.650	PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -		PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -		
Total Resource Net Benefit (Co	$ 4,525,783		$ 4,431,137	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings	
Utility Levelized Cost per GJ (L	**$ 6.8**		**$ 6.8**	**$ -**	**$ -**	Informational (for comparison with supply options)	

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Measure Data for EnerChoice Fireplaces (Retrofit)

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$	150		
Total Incentive	$	150	$ 150	$ -
Participant	$	-		

Annual Impact Per Measure

Energy Savings per installation	7.8	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	24%	0.76		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	15	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	106	109	109	0		Estimated Participation
Impact						
Gross Energy Savings (GJ)	825	850	850	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	627	646	646	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$193.94	$193.94	$193.94	
Energy Purchases	$ 125,317	$ 125,317	$ 125,317	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 16,350	$ 16,350	$ -	$ -	
Administration		$ 40,113	$ 40,113			
Subtotal	$ 54,818	$ 56,463	$ 56,463	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.433 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 70,498		$ 68,854	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 7.3**		**$ 7.3**	**$ -**	**$ -**	Informational (for comparison with supply options)

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Measure Data for ENERGY STAR Hot Water Heaters (Retrofit)

PER MEASURE			Utility Incentive to the participant	partner incentive	
Incremental Cost	$	100			
Total Incentive	$	50	$ 100	$ -	**) spiff + $50 consumer**
Participant	$	50			

Annual Impact Per Measure

nergy Savings per installation	2.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	20%	0.80		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	13	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	148	152	152	0		Estimated Participation
Impact						
Gross Energy Savings (GJ)	295	304	304	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	236	243	243	0	0	Gross Energy Savings less Free Riders
nergy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
acity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012		
Avoided Revenue Requirements							
PV $ per GJ			$174.41	$174.41	$174.41		
Energy Purchas	$ 42,417	$ 42,417	$ 42,417	$ -	$ -		
Utility Program Costs							
DSM Incentives		$ 15,200	$ 15,200	$ -	$ -		
Administration		$ 51,709	$ 51,709				
Subtotal	$ 64,960	$ 66,909	$ 66,909	$ -	$ -		
Partner Program Costs							
DSM Incentives		$ -	$ -	$ -	$ -		
Administration		$ -	$ -	$ -	$ -		
Subtotal	$ -	$ -	$ -	$ -	$ -		
Participants' Net Costs							
Incremental Cost		$ 6,080	$ 6,080	$ -	$ -		
Subtotal	$ 5,903	$ 6,080	$ 6,080	$ -	$ -		
Alternate Savings - Net							
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.276	PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -		PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -		
Total Resource Net Benefit (C	$ (28,446)		$ (30,572)	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings	
Utility Levelized Cost per GJ (I	**$ 28.2**		**$ 28.2**	**$ -**	**$ -**	Informational (for comparison with supply options)	

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Measure Data for TLC

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$	23		
Total Incentive	$	23	$ 23	$ -
Participant	$	-		

Annual Impact Per Measure

nergy Savings per installation	0.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	1	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	13,506	13,911	13,911	0		Estimated Participation
Impact						
Gross Energy Savings (GJ)	0	0	0	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	0	0	0	0	0	Gross Energy Savings less Free Riders
nergy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
acity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$0.00	$29.54	$29.54	
Energy Purchas	$ -	$ -	$ -	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 319,953	$ 319,953	$ -	$ -	
Administration		$ 111,667	$ 111,667			
Subtotal	$ 419,049	$ 431,620	$ 431,620	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$0.117 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (C	$ (419,049)		$ (431,620)	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (I	$ -		$ -	$ -	$ -	Informational (for comparison with supply options)

FORTIS BC

2010 Residential Programs	PROGRAM															ALTERNATE		NET PRESENT VALUE									BENEFIT/COST						PARAMETERS													
	COSTS ($000)											SAVINGS (GJ)			LIFE	Impact		Levelized Cost	Utility Benefits (Costs)		Participant Benefits (Costs)			Program Net Savings												UTILITY				PARTICIPANT									
FEI	Utility			Partners																																											
	Incentives	Administration	Total	Incentives	Administration	Total	Participant	Total	% Utility	% Partner	% Participant	Gross	Net-to-Gross	Net	Years	Energy	Capacity	($/GJ)	Program	Alternate	Program	Carbon Tax	Alternate	Natural Gas	Alternate Energy	Alternate Capacity	Natural Gas	Total Costs	Total Benefits	Benefit/Cost	Natural Gas	Total Resource	TRC Net Benefits	Natural Gas Utility Discount Rate	Natural Gas Supply	Alternate Discount Rate	Alternate Supply	Discount Rate	Natural Gas NPV	Carbon Tax NPV	Alternate Energy NPV	Alternate Capacity NPV	Natural Gas Tariff	Energy Tariff	Capacity Tariff
																MWh	kW		($'000s)	($'000s)	($'000s)	($'000s)	($'000s)	(GJ)	(MWh)	(kW)	Utility	($'000s)	($'000s)		Rate Impact		($'000s)		$/GJ			$/GJ	$/GJ	$/kWh	$/kW/a	$/GJ	$/kWh	$/kW/a
Label	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR	AS	AT
Source Sheet or Calculation	Program	Program	B+C	Program	Program	E+F	Program	D+G+H	D/I	G/I	H/I	Program	Program	M x N	Program	Program	Program	D/Y	OxAJ	Q x N x AL	M x N x AN	M x N x AO	N x (QxAP + RxAQ)	PV(AL,P,-O)	PV(AK,P,-Q*N)	PV(AK,P,-R)	T/D	H=0, (V+W)=0	H=0, (V-W)=0, X	AD/AC	T/(V+D)	(T+U)/I	(T+U)-I	Input	Program	Input	Input	Input	PV(AM,P,-Input!D25)	Input	PV(AM,P,-Input!D28)	PV(AM,P,-Input!D29)	Input	Input	Input
2010																																													
RESIDENTIAL:																																													
Energy STAR Heating System Upgrade _Fortis (Retrofit)	962	51	1,013	0	0	0	1,316	2,329	43%	0%	57%	42,713	57%	24,346	18	0	-	4	2,412	N/A	2,636	349	N/A	238,325	0	-	2.4	1,316	2,985	2.3	0.7	1.0	83	7.38%	99.07	6%	1.30	6.0%	108.27	14.35	0.90	0.00	9.999	0.083	-
Energy STAR Heating System Upgrade _Live Smart BC (Retrofit)	1,372	0	1,372	0	0	0	1,877	3,249	42%	0%	58%	60,928	57%	34,729	18	0	-	4	3,441	N/A	3,760	499	N/A	339,960	0	-	2.5	1,877	4,258	2.3	0.7	1.1	191	7.38%	99.07	6%	1.30	6.0%	108.27	14.35	0.90	0.00	9.999	0.083	-
EnerChoice Fireplaces (Retrofit)	16	40	56	0	0	0	0	56	100%	0%	0%	850	76%	646	15	0	-	10	57	N/A	63	8	N/A	5,746	0	-	1.0	-	71	N/A	0.5	1.0	1	7.38%	88.58	6%	1.17	6.0%	97.11	13.11	0.80	0.00	9.999	0.083	-
ENERGY STAR Hot Water Heaters (Retrofit)	15	52	67	0	0	0	6	73	92%	0%	8%	304	80%	243	13	0	-	34	20	N/A	22	3	N/A	1,990	0	-	0.3	6	24	4.0	0.2	0.3	(53)	7.38%	80.61	6%	1.06	6.0%	88.52	12.11	0.73	0.00	9.999	0.083	-
TLC	320	112	432	0	0	0	0	432	100%	0%	0%	0	100%	0	1	0	-	LB	LB	N/A	N/A	N/A	N/A	-	0	-	LB	-	-	N/A	N/A	LB	LB	7.38%	12.32	6%	0.11	6.0%	9.43	2.01	0.08	0.00	9.999	0.083	-
2010 Total Residential	2,686	254	2,940	-	-	-	3,199	6,139	48%	-	52%	104,795		59,965		0	-	5	5,929	0	6,480	859	0	586,021	-	-	2.0	3,199	7,339	2.3	0.6	1.0	(210)												

Row	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
1	UTILITY		FORTIS BC													
2																
3																
4			Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
5			Units													
6		NATURAL GAS														
7		Incremental Cost of Gas (nominal)	$ Per GJ	$5.50	$6.17	$6.81	$7.35	$7.87	$8.26	$8.56	$8.78	$8.99	$9.19	$9.40	$9.60	$9.81
8	1		Year	0	1	2	3	4	5	6	7	8	9	10	11	12
9		carbon tax	$ per GJ	0.75	1.00	1.25	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
10		Distribution adder	$ per GJ	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16
11		Total incremental cost of gas including carbon		6.41	7.32	8.21	9.01	9.52	9.92	10.22	10.43	10.64	10.85	11.05	11.26	11.47
12	2	GDP Deflator		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
13	3	Incremental Cost of Gas (Real)		$6.41	$7.32	$8.21	$9.01	$9.52	$9.92	$10.22	$10.43	$10.64	$10.85	$11.05	$11.26	$11.47
14	4	Net Present Value -2010			$12.32	$18.95	$25.73	$32.40	$38.87	$45.08	$50.98	$56.59	$61.91	$66.96	$71.75	$76.30
15	5	Net Present Value -2011				$13.94	$21.22	$28.38	$35.33	$42.00	$48.33	$54.36	$60.07	$65.50	$70.64	$75.52
16	6	Net Present Value -2012					$15.46	$23.15	$30.61	$37.77	$44.58	$51.04	$57.18	$63.00	$68.53	$73.77
17																
18																
19		ELECTRICITY														
20		Incremental Cost of Elec	$ Per kWh	$0.12												
21		Incremental Cost of E Capacity	$ Per kW/a	$170.00												
22		Oil														
23		Cost of Oil	$ Per GJ	$22.50												
24		Cost of Oil	$ Per KWH	$0.08												
25	RETAIL															
26				Rate	Customers		789,928	Total Customers in BC		80,000	Total Residential and Commercial Customers on VI					
27		Residential Retail			000's											
28		TGI	$ Per MJ	$0.0100	640		712,304	Total Residential Customers in BC								
29		TGVI	$ Per MJ	$0.0143	72											
30		Electricity	$ Per MJ	$0.0230												
31		Electricity	$ per kWh	$0.0827	1,511		1,511,435	Total BCH Residential Customers in BC				89%				
32		Electricity	$ per kW per year													
33		Commercial Retail														
34		TGI	$ Per MJ	$0.0094	78		77,624	Total Commercial Customers in BC								
35		TGVI	$ Per MJ	$0.0169	8											
36		Electricity	$ Per MJ	$0.0214												
37		Electricity	$ per kWh	$0.0769	190		189,764	Total Light Industrial and Commercial Customers in BC								
38		Electricity	$ per kW per year	$52.0000	15											
39																
40	TAX															
41			Year	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
42	1		Year		0	1	2	3	4	5	6	7	8	9	10	11
43	2	Carbon	$ Per tonne		$20.00	$25.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00
44	3	Carbon	$ Per GJ		$0.9976	$1.2470	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964
45	4	GDP Deflator			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
46	5	Carbon (Real)			$1.00	$1.25	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50
47	6	Net Present Value -2010				$2.01	$3.22	$4.34	$5.39	$6.37	$7.28	$8.12	$8.91	$9.65	$10.33	$10.97
48	7	Net Present Value -2011					$2.46	$3.67	$4.79	$5.84	$6.82	$7.73	$8.57	$9.36	$10.10	$10.78
49	8	Net Present Value -2012						$2.69	$3.90	$5.03	$6.07	$7.05	$7.96	$8.81	$9.59	$10.33
50																
51		Discount Rate (real)[1]														
52		TERASEN GAS														
53		Rate of Inflation	1.90%													
54		TGI	7.38%													
55		TGVI	6.87%													
56		BC HYDRO														
57		Rate of Inflation	2.00%													
58		BC Hydro	6.00%													
59		Customer	6.00%													
60		Footnote 1: Source LR 070531														
61																
62				SHEET LABELS												
63	New Construction															
64		Energy STAR Heating System Upgrade	Fortis (Ret	BASEBOARD												
65		Energy STAR Heating System Upgrade	Live Smart	HEATPUMP												
66																
67																
68	Heating Oil vs Nat Ga	0.02	Year	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
69	1	tonnes/GJ	Year	0	1	2	3	4	5	6	7	8	9	10	11	12
70	2	Carbon	$ Per tonne	$15.00	$20.00	$25.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00
71	3	Carbon	$ Per GJ	$0.30	$0.40	$0.50	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60
72	4	GDP Deflator		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
73	5	Carbon (Real)		$0.30	$0.40	$0.50	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60
74	6	Net Present Value -2009			$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
75	7	Net Present Value -2010				$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
76	8	Net Present Value -2011					$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00

Row	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ
4	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	
7	$10.03	$10.25	$10.47	$10.70	$10.93	$11.17	$11.42	$11.67	$11.92	$12.19	$12.45	$12.73	$13.01	$13.29	$13.58	$13.88	$14.19	$14.50	$14.82	$15.14
8	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
9	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	
10	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16		
11	11.68	11.90	12.13	12.35	12.59	12.83	13.07	13.32	13.58	13.84	14.11	14.38	14.66	14.95	15.24	15.54	15.84	16.15	16.31	
12	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
13	$11.68	$11.90	$12.13	$12.35	$12.59	$12.83	$13.07	$13.32	$13.58	$13.84	$14.11	$14.38	$14.66	$14.95	$15.24	$15.54	$15.84	$16.15	$16.31	
14	$80.61	$84.70	$88.58	$92.26	$95.75	$99.07	$102.22	$105.21	$108.04	$110.73	$113.29	$115.71	$118.02	$120.20	$122.28	$124.25	$126.12	$127.90	$129.57	
15	$80.15	$84.54	$88.71	$92.66	$96.41	$99.98	$103.36	$106.56	$109.61	$112.50	$115.24	$117.85	$120.32	$122.67	$124.89	$127.01	$129.02	$130.93	$132.72	
16	$78.74	$83.46	$87.93	$92.18	$96.21	$100.03	$103.66	$107.10	$110.37	$113.48	$116.42	$119.22	$121.87	$124.39	$126.79	$129.06	$131.22	$133.27	$135.19	
41	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	
42	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
43	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	
44	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	
45	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
46	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	
47	$11.56	$12.11	$12.63	$13.11	$13.55	$13.97	$14.35	$14.71	$15.05	$15.36	$15.65	$15.92	$16.18	$16.41	$16.63	$16.83	$17.02	$17.20	$17.37	
48	$11.42	$12.01	$12.56	$13.08	$13.55	$14.00	$14.42	$14.80	$15.16	$15.50	$15.81	$16.10	$16.37	$16.63	$16.86	$17.08	$17.28	$17.47	$17.65	
49	$11.01	$11.65	$12.24	$12.79	$13.31	$13.79	$14.23	$14.65	$15.04	$15.40	$15.73	$16.04	$16.33	$16.61	$16.86	$17.09	$17.31	$17.51	$17.70	
68	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041
69	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
70	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00
71	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60
72	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00
73	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$1.20
74	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
75	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
76	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00

FORTIS BC
RESIDENTIAL
NEW

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Measure Data for Energy STAR Heating System Upgrade _Fortis (Retrofit)

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 850			
Total Incentive	$ 250		$ 250	$ -
Participant	$ 600			

Annual Impact Per Measure

Energy Savings per installation	11.1	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	43%	0.57		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	18	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	3,584	3,848	3,848	0		Estimated Participation
Impact						
Gross Energy Savings (GJ)	39,777	42,713	42,713	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	22,673	24,346	24,346	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$99.07	$103.36	$107.10	
Energy Purchases	$ 2,412,017	$ 2,412,017	$ 2,412,017	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 962,000	$ 962,000	$ -	$ -	
Administration		$ 50,894	$ 50,894			
Subtotal	$ 943,280	$ 1,012,894	$ 1,012,894	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 1,316,016	$ 1,316,016	$ -	$ -	
Subtotal	$ 1,225,569	$ 1,316,016	$ 1,316,016	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.299 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 243,168		$ 83,107	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 9.8**		**$ 9.8**	**$ -**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Energy STAR Heating System Upgrade _Live Smart BC (Retrofit)

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 850			
Total Incentive	$ 250		$ 250	$ -
Participant	$ 600			

Annual Impact Per Measure

nergy Savings per installation	11.1	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	43%	0.57		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	18	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	5,112	5,489	5,489	0		Estimated Participation
Impact						
Gross Energy Savings (GJ)	56,740	60,928	60,928	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	32,342	34,729	34,729	0	0	Gross Energy Savings less Free Riders
:nergy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
acity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$99.07	$103.36	$107.10	
Energy Purchas	$ 3,440,634	$ 3,440,634	$ 3,440,634	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 1,372,250	$ 1,372,250	$ -	$ -	
Administration		$ -	$ -			
Subtotal	$ 1,277,938	$ 1,372,250	$ 1,372,250	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 1,877,238	$ 1,877,238	$ -	$ -	
Subtotal	$ 1,748,219	$ 1,877,238	$ 1,877,238	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.299 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (C	$ 414,477		$ 191,146	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (L	**$ 9.6**		**$ 9.6**	**$ -**	**$ -**	Informational (for comparison with supply options)

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Measure Data for EnerChoice Fireplaces (Retrofit)

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 150			
Total Incentive	$ 150		$ 150	$ -
Participant	$ -			

Annual Impact Per Measure

Energy Savings per installation	7.8	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	24%	0.76		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	15	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	102	109	109	0		Estimated Participation
Impact						
Gross Energy Savings (GJ)	792	850	850	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	602	646	646	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$88.58	$92.66	$96.21	
Energy Purchases	$ 57,235	$ 57,235	$ 57,235	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 16,350	$ 16,350	$ -	$ -	
Administration		$ 40,113	$ 40,113			
Subtotal	$ 52,582	$ 56,463	$ 56,463	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.165 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 4,652		$ 772	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 9.8**		**$ 9.8**	**$ -**	**$ -**	Informational (for comparison with supply options)

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Measure Data for ENERGY STAR Hot Water Heaters (Retrofit)

PER MEASURE			Utility Incentive to the participant	partner incentive	
Incremental Cost	$ 100				
Total Incentive	$ 50		$ 100	$ -	) spiff + $50 consumer
Participant	$ 50				

Annual Impact Per Measure

nergy Savings per installation	2.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	20%	0.80		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	13	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	142	152	152	0		Estimated Participation
Impact						
Gross Energy Savings (GJ)	283	304	304	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	226	243	243	0	0	Gross Energy Savings less Free Riders
nergy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
acity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$80.61	$84.54	$87.93	
Energy Purchas	$ 19,604	$ 19,604	$ 19,604	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 15,200	$ 15,200	$ -	$ -	
Administration		$ 51,709	$ 51,709			
Subtotal	$ 62,310	$ 66,909	$ 66,909	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 6,080	$ 6,080	$ -	$ -	
Subtotal	$ 5,662	$ 6,080	$ 6,080	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.062 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (C	$ (48,369)		$ (53,385)	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (L	**$ 36.7**		**$ 36.7**	**$ -**	**$ -**	Informational (for comparison with supply options)

FORTIS BC

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Measure Data for TLC

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 23			
Total Incentive	$ 23		$ 23	$ -
Participant	$ -			

Annual Impact Per Measure

nergy Savings per installation	0.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	1	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	12,955	13,911	13,911	0		Estimated Participation
Impact						
Gross Energy Savings (GJ)	0	0	0	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	0	0	0	0	0	Gross Energy Savings less Free Riders
nergy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
acity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$12.32	$13.94	$15.46	
Energy Purchas	$ -	$ -	$ -	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 319,953	$ 319,953	$ -	$ -	
Administration		$ 111,667	$ 111,667			
Subtotal	$ 401,956	$ 431,620	$ 431,620	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$0.113 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (C	$ (401,956)		$ (431,620)	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (L	$ -		$ -	$ -	$ -	Informational (for comparison with supply options)

FORTIS BC

2010 Residential Programs

FEVI	PROGRAM: COSTS ($000) Utility			Partners									SAVINGS (GJ)			LIFE
	Incentives	Administration	Total	Incentives	Administration	Total	Participant	Total	% Utility	% Partner	% Participant	Gross	Net-to-Gross	Net	Years
Label	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
Source Sheet or Calculation	Program	Program	B+C	Program	Program	E+F	Program	D+G+H	D/I	G/I	H/I	Program	Program	MxN	Program
2010															
RESIDENTIAL:															
ENERGY STAR Domestic Hot Water Heaters (Retrofit)	2	12	14	0	0	0	1	15	95%	0%	5%	40	80%	32	13
EnerChoice Fireplaces (Retrofit)	4	11	15	0	0	0	0	15	100%	0%	0%	203	76%	154	15
ENERGY STAR Heating System Upgrade - Fortis (Retrofit)	27	11	38	0	0	0	36	74	51%	0%	49%	1,177	57%	671	18
ENERGY STAR Heating System Upgrade_LiveSmart BC (Retrofit)	48	0	48	0	0	0	66	114	42%	0%	58%	2,131	57%	1,215	18
TLC	36	42	79	0	0	0	0	79	100%	0%	0%	0	100%	0	1
Total Residential	117	76	193	-	-	-	103	296	65%	-	35%	3,551		2,072	

FEVI	ALTERNATE: Impact Energy	Capacity	NET PRESENT VALUE: Levelized Cost	Utility Benefits (Costs) Program	Alternate	Participant Benefits (Costs) Program	Carbon Tax	Alternate	Program Net Savings Natural Gas	Alternate Energy	Alternate Capacity
	MWh	kW	($/GJ)	($'000s)	($'000s)	($'000s)	($'000s)	($'000s)	(GJ)	(MWh)	(kW)
Label	Q	R	S	T	U	V	W	X	Y	Z	AA
Source Sheet or Calculation	Program	Program	D/Y	OxAJ	Q x N x AL	M x N x AN	M x N x AO	N x (QxAP + RxAQ)	PV(AI,P,-O)	PV(AK,P,-Q*N)	PV(AK,P,-R)
2010											
RESIDENTIAL:											
ENERGY STAR Domestic Hot Water Heaters (Retrofit)	0	-	41	7	N/A	5	1	N/A	340	0	-
EnerChoice Fireplaces (Retrofit)	2	-	8	39	2	26	3	1	1,840	16	-
ENERGY STAR Heating System Upgrade - Fortis (Retrofit)	0	-	4	193	N/A	132	14	N/A	9,224	0	-
ENERGY STAR Heating System Upgrade_LiveSmart BC (Retrofit)	0	-	3	349	N/A	239	25	N/A	16,708	0	-
TLC	0	-	LB	LB	N/A	N/A	N/A	N/A	-	0	-
Total Residential	2	-	7	588	2	403	42	1	28,112	16	-

FEVI	BENEFIT/COST: Natural Gas	Participant Total Costs	Total Benefits	Benefit/Cost	Natural Gas	Societal Cost Test	SCT Net Benefits
	Utility	($'000s)	($'000s)		Rate Impact		($'000s)
Label	AB	AC	AD	AE	AF	AG	AH
Source Sheet or Calculation	T/D	H>0, (V+W)<0	H<0, (V+W)>0, X	AD/AC	T/(V+D)	(T+U)/I	(T+U)-I
2010							
RESIDENTIAL:							
ENERGY STAR Domestic Hot Water Heaters (Retrofit)	0.5	1	5	6.7	0.4	0.5	(7)
EnerChoice Fireplaces (Retrofit)	2.6	-	30	N/A	0.9	2.8	27
ENERGY STAR Heating System Upgrade - Fortis (Retrofit)	5.1	36	146	4.0	1.1	2.6	119
ENERGY STAR Heating System Upgrade_LiveSmart BC (Retrofit)	7.3	66	264	4.0	1.2	3.1	235
TLC	LB	-	-	N/A	N/A	LB	LB
Total Residential	3.0	103	446	4.3	1.0	2.0	295

FEVI	PARAMETERS: UTILITY Natural Gas Utility Discount	Natural Gas Supply	Alternate Discount Rate	Alternate Supply	PARTICIPANT Discount Rate	Natural Gas NPV	Carbon Tax NPV	Alternate Energy NPV	Alternate Capacity NPV	Natural Gas Tariff	Energy Tariff	Capacity Tariff
		$/GJ		$/kWh		$/GJ	$/GJ	$/kWh	$/kW/a	$/GJ	$/kWh	$/kW/a
Label	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR	AS	AT
Source Sheet or Calculation	Input	Program	Input	Input	Input	PV(AM,P,-InputD25)	Input	PV(AM,P,-InputD28)	PV(AM,P,-InputD29)	Input	Input	Input
2010												
RESIDENTIAL:												
ENERGY STAR Domestic Hot Water Heaters (Retrofit)	3.00%	174.30	3%	1.28	3.0%	152.35	16.18	0.88	0.00	9.999	0.083	-
EnerChoice Fireplaces (Retrofit)	3.00%	193.82	3%	1.43	3.0%	171.01	18.08	0.99	0.00	9.999	0.083	-
ENERGY STAR Heating System Upgrade - Fortis (Retrofit)	3.00%	221.02	3%	1.65	3.0%	197.02	20.71	1.14	0.00	9.999	0.083	-
ENERGY STAR Heating System Upgrade_LiveSmart BC (Retrofit)	3.00%	221.02	3%	1.65	3.0%	197.02	20.71	1.14	0.00	9.999	0.083	-
TLC	3.00%	29.52	3%	0.12	3.0%	13.91	2.14	0.08	0.00	9.999	0.083	-
Total Residential												

Row	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
1	UTILITY		FORTIS BC															
2																		
3																		
4			Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
5			Units															
6		NATURAL GAS																
7		Incremental Cost of Gas (nominal)	$ Per GJ	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28
8	1		Year	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14
9		carbon tax	$ per GJ	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10		Distribution adder	$ per GJ	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
11		Total incremental cost of gas including carbon		15.43	15.43	15.43	15.43	15.43	15.43	15.43	15.43	15.43	15.43	15.43	15.43	15.43	15.43	15.43
12	2	GDP Deflator		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
13	3	Incremental Cost of Gas (Real)		$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43
14	4	Net Present Value -2010		$14.98	$29.52	$43.65	$57.35	$70.66	$83.59	$96.13	$108.31	$120.14	$131.62	$142.77	$153.59	$164.10	$174.30	$184.20
15	5	Net Present Value -2011				$29.52	$43.65	$57.35	$70.66	$83.59	$96.13	$108.31	$120.14	$131.62	$142.77	$153.59	$164.10	$174.30
16	6	Net Present Value -2012					$29.52	$43.65	$57.35	$70.66	$83.59	$96.13	$108.31	$120.14	$131.62	$142.77	$153.59	$164.10
17																		
18																		
19		ELECTRICITY																
20		Incremental Cost of Elec	$ Per kWh	$0.12														
21		Incremental Cost of E Capacity	$ Per kW/a	$170.00														
22		Oil																
23		Cost of Oil	$ Per GJ	$22.01														
24		Cost of Oil	$ Per KWH	$0.08														
25	RETAIL																	
26				Rate	Customers		789,928	Total Customers in BC		80,000	Total Residential and Commercial Customers on VI							
27		Residential Retail			000's													
28		TGI	$ Per MJ	$0.0100	640		712,304	Total Residential Customers in BC										
29		TGVI	$ Per MJ	$0.0143	72													
30		Electricity	$ Per MJ	$0.0230														
31		Electricity	$ per kWh	$0.0827	1,511		1,511,435	Total BCH Residential Customers in BC				89%						
32		Electricity	$ per kW per year															
33		Commercial Retail																
34		TGI	$ Per MJ	$0.0094	78		77,624	Total Commercial Customers in BC										
35		TGVI	$ Per MJ	$0.0169	8													
36		Electricity	$ Per MJ	$0.0214														
37		Electricity	$ per kWh	$0.0769	190		189,764	Total Light Industrial and Commercial Customers in BC										
38		Electricity	$ per kW per year	$52.0000	15													
39																		
40	TAX																	
41			Year	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
42	1		Year		0	1	2	3	4	5	6	7	8	9	10	11	12	13
43	2	Carbon	$ Per tonne		$20.00	$25.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00
44	3	Carbon	$ Per GJ		$0.9976	$1.2470	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964
45	4	GDP Deflator			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
46	5	Carbon (Real)			$1.00	$1.25	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50
47	6	Net Present Value -2010				$2.14	$3.51	$4.84	$6.13	$7.39	$8.60	$9.78	$10.93	$12.05	$13.13	$14.18	$15.19	$16.18
48	7	Net Present Value -2011					$2.62	$3.99	$5.32	$6.61	$7.86	$9.08	$10.26	$11.41	$12.52	$13.60	$14.65	$15.67
49	8	Net Present Value -2012						$2.86	$4.23	$5.56	$6.85	$8.11	$9.32	$10.50	$11.65	$12.76	$13.85	$14.90
50																		
51		Discount Rate (real)[1]																
52		TERASEN GAS																
53		Rate of Inflation	1.90%															
54		TGI	3.00%															
55		TGVI	3.00%															
56		BC HYDRO																
57		Rate of Inflation	2.00%															
58		BC Hydro	3.00%															
59		Customer	3.00%															
60		Footnote 1: Source LR 070531																
61																		
62				SHEET LABELS														
63	New Construction																	
64		ENERGY STAR Domestic Hot Water Heaters (Retro		BASEBOARD														
65		EnerChoice Fireplaces (Retrofit)		HEATPUMP														
66																		
67																		
68	Heating Oil vs Nat Ga	0.02	Year	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
69	1	tonnes/GJ	Year	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14
70	2	Carbon	$ Per tonne	$15.00	$20.00	$25.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00
71	3	Carbon	$ Per GJ	$0.30	$0.40	$0.50	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60
72	4	GDP Deflator		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
73	5	Carbon (Real)		$0.30	$0.40	$0.50	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60
74	6	Net Present Value -2009			$0.64	$1.05	$1.52	$1.96	$2.37	$2.76	$3.13	$3.47	$3.80	$4.10	$4.39	$4.66	$4.91	$5.15
75	7	Net Present Value -2010				$0.82	$1.32	$1.79	$2.23	$2.64	$3.03	$3.40	$3.74	$4.06	$4.37	$4.65	$4.92	$5.18
76	8	Net Present Value -2011					$1.00	$1.50	$1.97	$2.41	$2.82	$3.21	$3.58	$3.92	$4.25	$4.55	$4.84	$5.10

Row	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ
4	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	
7	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.43
8	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
10	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15		
11	15.43	15.43	15.43	15.43	15.43	15.43	15.43	15.43	15.43	15.43	15.43	15.43	15.43	15.43	15.43	15.43		
12	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
13	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43		
14	$193.82	$203.15	$212.22	$221.02	$229.56	$237.85	$245.91	$253.72	$261.32	$268.68	$275.84	$282.79	$289.53	$296.08	$302.43	$308.61		
15	$184.20	$193.82	$203.15	$212.22	$221.02	$229.56	$237.85	$245.91	$253.72	$261.32	$268.68	$275.84	$282.79	$289.53	$296.08	$302.43		
16	$174.30	$184.20	$193.82	$203.15	$212.22	$221.02	$229.56	$237.85	$245.91	$253.72	$261.32	$268.68	$275.84	$282.79	$289.53	$296.08		
41	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	
42	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
43	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	
44	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	
45	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
46	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	
47	$17.14	$18.08	$18.98	$19.86	$20.71	$21.54	$22.35	$23.13	$23.89	$24.62	$25.34	$26.03	$26.71	$27.36	$27.99	$28.61	$29.21	
48	$16.66	$17.62	$18.55	$19.46	$20.34	$21.19	$22.02	$22.82	$23.61	$24.36	$25.10	$25.81	$26.51	$27.18	$27.84	$28.47	$29.09	
49	$15.91	$16.90	$17.86	$18.80	$19.70	$20.58	$21.43	$22.26	$23.07	$23.85	$24.61	$25.34	$26.06	$26.75	$27.42	$28.08	$28.71	
68	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041
69	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
70	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00
71	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60
72	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00
73	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$1.20
74	$5.37	$5.58	$5.78	$5.96	$6.14	$6.30	$6.46	$6.60	$6.74	$6.87	$6.99	$7.10	$7.21	$7.31	$7.40	$7.49	$7.57	$7.65
75	$5.41	$5.64	$5.85	$6.04	$6.23	$6.40	$6.57	$6.72	$6.87	$7.00	$7.13	$7.25	$7.36	$7.47	$7.57	$7.67	$7.75	$7.84
76	$5.36	$5.60	$5.82	$6.03	$6.23	$6.41	$6.59	$6.75	$6.90	$7.05	$7.19	$7.31	$7.43	$7.55	$7.65	$7.75	$7.85	$7.94

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Measure Data for ENERGY STAR Domestic Hot Water Heaters (Retrofit)

PER MEASURE			Utility Incentive to the participant	partner incentive	
Incremental Cost	$ 100				
Total Incentive	$ 50		$ 100	$ -	spiff + $50 to consumer
Participant	$ 50				

Annual Impact Per Measure

Energy Savings per installation	2.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	20%	0.80		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	13	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	19	20	20	0	0	Estimated Participation
Impact						
Gross Energy Savings (GJ)	39	40	40	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	31	32	32	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$174.30	$174.30	$174.30	
Energy Purchases	$ 5,578	$ 5,578	$ 5,578	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 2,000	$ 2,000	$ -	$ -	
Administration		$ 11,812	$ 11,812	$ -	$ -	
Subtotal	$ 13,410	$ 13,812	$ 13,812	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 800	$ 800	$ -	$ -	
Subtotal	$ 777	$ 800	$ 800	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.276 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ (8,609)		$ (9,034)	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 42.9**		**$ 42.9**	**$ -**	**$ -**	Informational (for comparison with supply options)

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Measure Data for EnerChoice Fireplaces (Retrofit)

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 150			
Total Incentive	$ 150		$ 150	$ -
Participant	$ -			

Annual Impact Per Measure

nergy Savings per installation	7.8	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	24%	0.76		Net-to-Gross
Alternate Energy Impact	0	GJ	67	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	15	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	25	26	26	0	0	Estimated Participation
Impact						
Gross Energy Savings (GJ)	197	203	203	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	150	154	154	0	0	Gross Energy Savings less Free Riders
nergy Impact (Increase) (kWh)	1,683	1,733	1,733	0	0	Other Utility Billed energy impact
acity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$193.82	$184.20	$193.82	
Energy Purchas	$ 29,873	$ 29,873	$ 29,873	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 3,900	$ 3,900	$ -	$ -	
Administration		$ 10,827	$ 10,827	$ -	$ -	
Subtotal	$ 14,298	$ 14,727	$ 14,727	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ 1,887	$ 1,887	$ -	$ -	$1.433 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ 1,887	$ 1,887	$ 1,887	$ -	$ -	
Total Resource Net Benefit (C	$ 17,462		$ 17,033	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (L	**$ 8.0**		**$ 8.0**	**$ -**	**$ -**	Informational (for comparison with supply options)

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Measure Data for ENERGY STAR Heating System Upgrade - Fortis (Retrofit)

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 850			
Total Incentive	$ 250		$ 250	$ -
Participant	$ 600			

Annual Impact Per Measure

nergy Savings per installation	11.1	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	43%	0.57		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	18	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	103	106	106	0	0	Estimated Participation
Impact						
Gross Energy Savings (GJ)	1,142	1,177	1,177	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	651	671	671	0	0	Gross Energy Savings less Free Riders
nergy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
acity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$221.02	$221.02	$221.02	
Energy Purchas	$ 148,227	$ 148,227	$ 148,227	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 26,500	$ 26,500	$ -	$ -	
Administration		$ 11,223	$ 11,223	$ -	$ -	
Subtotal	$ 36,624	$ 37,723	$ 37,723	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 36,252	$ 36,252	$ -	$ -	
Subtotal	$ 35,196	$ 36,252	$ 36,252	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.650 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (C	$ 76,407		$ 74,252	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (L	**$ 8.0**		**$ 8.0**	**$ -**	**$ -**	Informational (for comparison with supply options)

FORTIS BC
RESIDENTIAL
NEW

only enter in boxes marked in blue

Measure Data for ENERGY STAR Heating System Upgrade_LiveSmart BC (Retrofit)

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 850			
Total Incentive	$ 250		$ 250	$ -
Participant	$ 600			

Annual Impact Per Measure

nergy Savings per installation	11.1	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	43%	0.57		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	18	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	186	192	192	0	0	Estimated Participation
Impact						
Gross Energy Savings (GJ)	2,069	2,131	2,131	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	1,179	1,215	1,215	0	0	Gross Energy Savings less Free Riders
nergy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
acity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$221.02	$221.02	$221.02	
Energy Purchas	$ 268,487	$ 268,487	$ 268,487	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 48,000	$ 48,000	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ 46,602	$ 48,000	$ 48,000	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 65,664	$ 65,664	$ -	$ -	
Subtotal	$ 63,751	$ 65,664	$ 65,664	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.650 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (C	$ 158,134		$ 154,823	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (L	**$ 6.8**		**$ 6.8**	**$ -**	**$ -**	Informational (for comparison with supply options)

FORTIS BC
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NEW

only enter in boxes marked in blue

Measure Data for TLC

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 100			
Total Incentive	$ 50		$ 24	$ -
Participant	$ -			

Annual Impact Per Measure

nergy Savings per installation	0.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	1	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1,505	1,550	1,550	0	0	Estimated Participation
Impact						
Gross Energy Savings (GJ)	0	0	0	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	0	0	0	0	0	Gross Energy Savings less Free Riders
nergy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
acity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$29.52	$29.52	$29.52	
Energy Purchas	$ -	$ -	$ -	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 36,425	$ 36,425	$ -	$ -	
Administration		$ 42,333	$ 42,333	$ -	$ -	
Subtotal	$ 76,464	$ 78,758	$ 78,758	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$0.117 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (C	$ (76,464)		$ (78,758)	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (L	$ -		$ -	$ -	$ -	Informational (for comparison with supply options)

FORTIS BC

2010 Residential Programs	PROGRAM															ALTERNATE		NET PRESENT VALUE									BENEFIT/COST						PARAMETERS																	
	COSTS ($000)											SAVINGS (GJ)			LIFE	Impact		Levelized Cost	Utility Benefits (Costs)		Participant Benefits (Costs)			Program Net Savings			Participant						UTILITY				PARTICIPANT													
FEVI	Utility			Partners																																														
	Incentives	Administration	Total	Incentives	Administration	Total	Participant	Total	% Utility	% Partner	% Participant	Gross	Net-to-Gross	Net	Years	Energy	Capacity	($/GJ)	Program	Alternate	Program	Carbon Tax	Alternate	Natural Gas	Alternate Energy	Alternate Capacity	Natural Gas	Total Costs	Total Benefits	Benefit/Cost	Natural Gas	Total Resource	TRC Net Benefits	Natural Gas Utility Discount	Natural Gas Supply	Alternate Discount Rate	Alternate Supply	Discount Rate	Natural Gas NPV	Carbon Tax NPV	Alternate Energy NPV	Alternate Capacity NPV	Natural Gas Tariff	Energy Tariff	Capacity Tariff					
																MWh	kW	($/GJ)	($'000s)	($'000s)	($'000s)	($'000s)	($'000s)	(GJ)	(MWh)	(kW)	Utility	($'000s)	($'000s)	Rate Impact			($'000s)	$/GJ	$/GJ	$/kWh	$/kW/a		$/GJ	$/GJ	$/kW/a		$/GJ	$/kWh	$/kW/a					
Label	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR	AS	AT					
Source Sheet or Calculation	Program	Program	B+C	Program	Program	E+F	Program	D+G+H	D/I	G/I	H/I	Program	Program	MxN	Program	Program	Program	D/Y	OxAJ	Q x N x AL	M x N x AN	M x N x AO	N x (QxAP + RxAQ)	PV(AI,P,-O)	PV(AK,P,-Q*N)	PV(AK,P,-R)	T/D	H=D, (V=W)=0	H=D, (V=W)>D, X	AD/AC	T/(V=D)	(T+U)/I	(T+U)-I	Input	Program	Input	Input	Input	PV(AM,P,-InputD25)	Input	PV(AM,P,-InputD28)	PV(AM,P,-InputD29)	Input	Input	Input					
2010																																																	
RESIDENTIAL:																																																
ENERGY STAR Domestic Hot Water Heaters (Retrofit)	2	12	14	0	0	0	1	15	95%	0%	5%	40	80%	32	13	0	-	51	3	N/A	4	0	N/A	269	0	-	0.2	1	4	5.6	0.1	0.2	(12)	6.87%	83.27	6%	1.06	6.0%	126.81	12.50	0.73	0.00	9.999	0.083	-					
EnerChoice Fireplaces (Retrofit)	4	11	15	0	0	0	0	15	100%	0%	0%	203	76%	154	15	2	-	10	14	2	21	2	1	1,415	13	-	1.0	-	25	N/A	0.4	1.1	1	6.87%	91.84	6%	1.17	6.0%	139.13	13.57	0.80	0.00	9.999	0.083	-					
ENERGY STAR Heating System Upgrade - Fortis (Retrofit)	27	11	38	0	0	0	36	74	51%	0%	49%	1,177	57%	671	18	0	-	6	69	N/A	104	10	N/A	6,810	0	-	1.8	36	114	3.1	0.5	0.9	(5)	6.87%	103.26	6%	1.30	6.0%	155.11	14.93	0.90	0.00	9.999	0.083	-					
ENERGY STAR Heating System Upgrade_LiveSmart BC (Retrofit)	48	0	48	0	0	0	66	114	42%	0%	58%	2,131	57%	1,215	18	0	-	4	125	N/A	188	18	N/A	12,335	0	-	2.6	66	207	3.1	0.5	1.1	12	6.87%	103.26	6%	1.30	6.0%	155.11	14.93	0.90	0.00	9.999	0.083	-					
TLC	36	42	79	0	0	0	0	79	100%	0%	0%	0	100%	0	1	0	-	LB	LB	N/A	N/A	N/A	N/A	-	0	-	LB	-	-	N/A	N/A	LB	LB	6.87%	12.39	6%	0.11	6.0%	13.51	2.03	0.08	0.00	9.999	0.083	-					
Total Residential	117	76	193	-	-	-	103	296	65%	-	35%	3,551		2,072		2	-	9	212	2	318	31	1	20,830	13	-	1.1	103	350	3.4	0.4	0.7	(83)																	

#	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
1	UTILITY		FORTIS BC														
4			Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
5			Units														
6		NATURAL GAS															
7		Incremental Cost of Gas (nominal)	$ Per GJ	$5.50	$6.17	$6.81	$7.35	$7.87	$8.26	$8.56	$8.78	$8.99	$9.19	$9.40	$9.60	$9.81	$10.03
8	1		Year	0	1	2	3	4	5	6	7	8	9	10	11	12	13
9		carbon tax	$ per GJ	0.75	1.00	1.25	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
10		Distribution adder	$ per GJ	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
11		Total incremental cost of gas including carbon		6.40	7.31	8.20	9.00	9.51	9.91	10.21	10.42	10.63	10.84	11.04	11.25	11.46	11.67
12	2	GDP Deflator		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
13	3	Incremental Cost of Gas (Real)		$6.40	$7.31	$8.20	$9.00	$9.51	$9.91	$10.21	$10.42	$10.63	$10.84	$11.04	$11.25	$11.46	$11.67
14	4	Net Present Value -2010			$12.39	$19.11	$26.01	$32.83	$39.48	$45.90	$52.02	$57.87	$63.45	$68.76	$73.83	$78.66	$83.27
15	5	Net Present Value -2011				$14.03	$21.40	$28.69	$35.80	$42.65	$49.20	$55.45	$61.41	$67.09	$72.51	$77.67	$82.59
16	6	Net Present Value -2012					$15.55	$23.35	$30.94	$38.27	$45.26	$51.94	$58.31	$64.39	$70.17	$75.69	$80.95
19		ELECTRICITY															
20		Incremental Cost of Elec	$ Per kWh	$0.12													
21		Incremental Cost of E Capacity	$ Per kW/a	$170.00													
22		Oil															
23		Cost of Oil	$ Per GJ	$22.01													
24		Cost of Oil	$ Per KWH	$0.08													
25	RETAIL																
26				Rate	Customers		789,928	Total Customers in BC		80,000	Total Residential and Commercial Customers on VI						
27		Residential Retail			000's												
28		TGI	$ Per MJ	$0.0100	640		712,304	Total Residential Customers in BC									
29		TGVI	$ Per MJ	$0.0143	72												
30		Electricity	$ Per MJ	$0.0230													
31		Electricity	$ per kWh	$0.0827	1,511		1,511,435	Total BCH Residential Customers in BC				89%					
32		Electricity	$ per kW per year														
33		Commercial Retail															
34		TGI	$ Per MJ	$0.0094	78		77,624	Total Commercial Customers in BC									
35		TGVI	$ Per MJ	$0.0169	8												
36		Electricity	$ Per MJ	$0.0214													
37		Electricity	$ per kWh	$0.0769	190		189,764	Total Light Industrial and Commercial Customers in BC									
38		Electricity	$ per kW per year	$52.0000	15												
40	TAX																
41			Year	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
42	1		Year		0	1	2	3	4	5	6	7	8	9	10	11	12
43	2	Carbon	$ Per tonne		$20.00	$25.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00
44	3	Carbon	$ Per GJ		$0.9976	$1.2470	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964
45	4	GDP Deflator			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
46	5	Carbon (Real)			$1.00	$1.25	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50
47	6	Net Present Value -2010				$2.03	$3.25	$4.40	$5.47	$6.48	$7.42	$8.30	$9.12	$9.89	$10.61	$11.28	$11.91
48	7	Net Present Value -2011					$2.48	$3.70	$4.85	$5.92	$6.93	$7.87	$8.75	$9.57	$10.34	$11.06	$11.73
49	8	Net Present Value -2012						$2.71	$3.94	$5.08	$6.16	$7.16	$8.10	$8.98	$9.80	$10.57	$11.29
51		Discount Rate (real)[1]															
52		TERASEN GAS															
53		Rate of Inflation	1.90%														
54		TGI	7.38%														
55		TGVI	6.87%														
56		BC HYDRO															
57		Rate of Inflation	2.00%														
58		BC Hydro	6.00%														
59		Customer	6.00%														
60		Footnote 1: Source LR 070531															
62				SHEET LABELS													
63	New Construction																
64		ENERGY STAR Domestic Hot Water Heaters (Retro		BASEBOARD													
65		EnerChoice Fireplaces (Retrofit)		HEATPUMP													
68	Heating Oil vs Nat Ga	0.02	Year	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
69	1	tonnes/GJ	Year	0	1	2	3	4	5	6	7	8	9	10	11	12	13
70	2	Carbon	$ Per tonne	$15.00	$20.00	$25.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00
71	3	Carbon	$ Per GJ	$0.30	$0.40	$0.50	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60
72	4	GDP Deflator		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
73	5	Carbon (Real)		$0.30	$0.40	$0.50	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60
74	6	Net Present Value -2009			$0.64	$1.05	$1.52	$1.96	$2.37	$2.76	$3.13	$3.47	$3.80	$4.10	$4.39	$4.66	$4.91
75	7	Net Present Value -2010				$0.82	$1.32	$1.79	$2.23	$2.64	$3.03	$3.40	$3.74	$4.06	$4.37	$4.65	$4.92
76	8	Net Present Value -2011					$1.00	$1.50	$1.97	$2.41	$2.82	$3.21	$3.58	$3.92	$4.25	$4.55	$4.84

#	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ
4	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	
7	$10.25	$10.47	$10.70	$10.93	$11.17	$11.42	$11.67	$11.92	$12.19	$12.45	$12.73	$13.01	$13.29	$13.58	$13.88	$14.19	$14.50	$14.82	$15.14
8	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		
9	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50		
10	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15		
11	11.89	12.12	12.34	12.58	12.82	13.06	13.31	13.57	13.83	14.10	14.37	14.65	14.94	15.23	15.53	15.83	16.14		
12	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
13	$11.89	$12.12	$12.34	$12.58	$12.82	$13.06	$13.31	$13.57	$13.83	$14.10	$14.37	$14.65	$14.94	$15.23	$15.53	$15.83	$16.14		
14	$87.66	$91.84	$95.83	$99.63	$103.26	$106.72	$110.02	$113.17	$116.17	$119.03	$121.76	$124.36	$126.85	$129.22	$131.48	$133.64	$135.69		
15	$87.28	$91.75	$96.02	$100.08	$103.96	$107.66	$111.18	$114.54	$117.75	$120.81	$123.73	$126.51	$129.16	$131.70	$134.11	$136.42	$138.62		
16	$85.96	$90.74	$95.30	$99.64	$103.79	$107.74	$111.51	$115.10	$118.53	$121.79	$124.91	$127.89	$130.72	$133.43	$136.01	$138.48	$140.83		
41	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	
42	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
43	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	
44	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	
45	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
46	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	
47	$12.50	$13.06	$13.57	$14.06	$14.51	$14.93	$15.33	$15.70	$16.05	$16.37	$16.68	$16.96	$17.23	$17.47	$17.71	$17.93	$18.13	$18.32	
48	$12.37	$12.96	$13.51	$14.03	$14.51	$14.96	$15.38	$15.78	$16.15	$16.50	$16.82	$17.13	$17.41	$17.68	$17.93	$18.16	$18.38	$18.58	
49	$11.97	$12.60	$13.19	$13.74	$14.26	$14.74	$15.19	$15.62	$16.01	$16.39	$16.73	$17.06	$17.36	$17.64	$17.91	$18.16	$18.39	$18.61	
68	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041
69	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
70	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00
71	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60
72	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00
73	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$1.20
74	$5.15	$5.37	$5.58	$5.78	$5.96	$6.14	$6.30	$6.46	$6.60	$6.74	$6.87	$6.99	$7.10	$7.21	$7.31	$7.40	$7.49	$7.57	$7.65
75	$5.18	$5.41	$5.64	$5.85	$6.04	$6.23	$6.40	$6.57	$6.72	$6.87	$7.00	$7.13	$7.25	$7.36	$7.47	$7.57	$7.67	$7.75	$7.84
76	$5.10	$5.36	$5.60	$5.82	$6.03	$6.23	$6.41	$6.59	$6.75	$6.90	$7.05	$7.19	$7.31	$7.43	$7.55	$7.65	$7.75	$7.85	$7.94

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Measure Data for ENERGY STAR Domestic Hot Water Heaters (Retrofit)

PER MEASURE			Utility Incentive to the participant	partner incentive	
Incremental Cost	$ 100				
Total Incentive	$ 50		$ 100	$ -	spiff + $50 to consumer
Participant	$ 50				

Annual Impact Per Measure

Energy Savings per installation	2.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	20%	0.80		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	13	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	19	20	20	0	0	Estimated Participation
Impact						
Gross Energy Savings (GJ)	37	40	40	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	30	32	32	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$83.27	$87.28	$90.74	
Energy Purchases	$ 2,665	$ 2,665	$ 2,665	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 2,000	$ 2,000	$ -	$ -	
Administration		$ 11,812	$ 11,812	$ -	$ -	
Subtotal	$ 12,863	$ 13,812	$ 13,812	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 800	$ 800	$ -	$ -	
Subtotal	$ 745	$ 800	$ 800	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.062 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ (10,943)		$ (11,947)	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 55.8**		**$ 55.8**	**$ -**	**$ -**	Informational (for comparison with supply options)

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Measure Data for EnerChoice Fireplaces (Retrofit)

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 150			
Total Incentive	$ 150		$ 150	$ -
Participant	$ -			

Annual Impact Per Measure

nergy Savings per installation	7.8	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	24%	0.76		Net-to-Gross
Alternate Energy Impact	0	GJ	67	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	15	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	24	26	26	0	0	Estimated Participation
Impact						
Gross Energy Savings (GJ)	189	203	203	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	144	154	154	0	0	Gross Energy Savings less Free Riders
nergy Impact (Increase) (kWh)	1,635	1,733	1,733	0	0	Other Utility Billed energy impact
acity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$91.84	$96.02	$99.64	
Energy Purchas	$ 14,155	$ 14,155	$ 14,155	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 3,900	$ 3,900	$ -	$ -	
Administration		$ 10,827	$ 10,827	$ -	$ -	
Subtotal	$ 13,715	$ 14,727	$ 14,727	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ 1,535	$ 1,535	$ -	$ -	$1.165 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ 1,535	$ 1,535	$ 1,535	$ -	$ -	
Total Resource Net Benefit (C	$ 1,976		$ 964	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (L	**$ 10.7**		**$ 10.7**	**$ -**	**$ -**	Informational (for comparison with supply options)

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Measure Data for ENERGY STAR Heating System Upgrade - Fortis (Retrofit)

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 850			
Total Incentive	$ 250		$ 250	$ -
Participant	$ 600			

Annual Impact Per Measure

nergy Savings per installation	11.1	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	43%	0.57		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	18	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	99	106	106	0	0	Estimated Participation
Impact						
Gross Energy Savings (GJ)	1,096	1,177	1,177	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	625	671	671	0	0	Gross Energy Savings less Free Riders
nergy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
acity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$103.26	$107.66	$111.51	
Energy Purchas	$ 69,254	$ 69,254	$ 69,254	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 26,500	$ 26,500	$ -	$ -	
Administration		$ 11,223	$ 11,223	$ -	$ -	
Subtotal	$ 35,130	$ 37,723	$ 37,723	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 36,252	$ 36,252	$ -	$ -	
Subtotal	$ 33,760	$ 36,252	$ 36,252	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.299 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (C	$ 363		$ (4,721)	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (L	**$ 11.3**		**$ 11.3**	**$ -**	**$ -**	Informational (for comparison with supply options)

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Measure Data for ENERGY STAR Heating System Upgrade_LiveSmart BC (Retrofit)

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 850			
Total Incentive	$ 250		$ 250	$ -
Participant	$ 600			

Annual Impact Per Measure

nergy Savings per installation	11.1	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	43%	0.57		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	18	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	179	192	192	0	0	Estimated Participation
Impact						
Gross Energy Savings (GJ)	1,985	2,131	2,131	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	1,131	1,215	1,215	0	0	Gross Energy Savings less Free Riders
nergy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
acity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$103.26	$107.66	$111.51	
Energy Purchas	$ 125,441	$ 125,441	$ 125,441	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 48,000	$ 48,000	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ 44,701	$ 48,000	$ 48,000	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 65,664	$ 65,664	$ -	$ -	
Subtotal	$ 61,151	$ 65,664	$ 65,664	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.299 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (C	$ 19,589		$ 11,777	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (L	**$ 9.6**		**$ 9.6**	**$ -**	**$ -**	Informational (for comparison with supply options)

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Measure Data for TLC

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 100			
Total Incentive	$ 50		$ 24	$ -
Participant	$ -			

Annual Impact Per Measure

nergy Savings per installation	0.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	1	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1,443	1,550	1,550	0	0	Estimated Participation
Impact						
Gross Energy Savings (GJ)	0	0	0	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	0	0	0	0	0	Gross Energy Savings less Free Riders
nergy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
acity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$12.39	$14.03	$15.55	
Energy Purchas	$ -	$ -	$ -	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 36,425	$ 36,425	$ -	$ -	
Administration		$ 42,333	$ 42,333	$ -	$ -	
Subtotal	$ 73,345	$ 78,758	$ 78,758	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$0.113 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (C	$ (73,345)		$ (78,758)	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (L	$ -		$ -	$ -	$ -	Informational (for comparison with supply options)

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2010 Commercial Programs	PROGRAM															ALTERNATE		NET PRESENT VALUE									BENEFIT/COST						PARAMETERS														
	COSTS ($000)											SAVINGS (GJ)			LIFE	Impact		Levelized Cost	Utility Benefits (Costs)		Participant Benefits (Costs)			Program Net Savings			Natural Gas	Participant			Natural Gas		SCT Net Benefits	UTILITY				PARTICIPANT									
FEI	Utility			Partners																																											
	Incentives	Administration	Total	Incentives	Administration	Total	Participant	Total	% Utility	% Partner	% Participant	Gross	Net-to-Gross	Net	Years	Energy	Capacity	($/GJ)	Program	Alternate	Program	Carbon Tax	Alternate	Natural Gas	Alternate Energy	Alternate Capacity	Natural Gas	Total Costs	Total Benefits	Benefit/Cost	Natural Gas	Societal Cost Test	($'000s)	Natural Gas Utility Discount	Natural Gas Supply	Alternate Discount Rate	Alternate Supply	Discount Rate	Natural Gas NPV	Carbon Tax NPV	Alternate Energy NPV	Alternate Capacity NPV	Natural Gas Tariff	Energy Tariff	Capacity Tariff
																MWh	kW	($/GJ)	($'000s)	($'000s)	($'000s)	($'000s)	($'000s)	(GJ)	(MWh)	(kW)	Utility	($'000s)	($'000s)		Rate Impact			$/GJ	$/kWh		$/GJ	$/GJ	$/kWh	$/kW/a	$/GJ	$/kWh	$/kW/a
Label	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR	AS	AT
Source Sheet or Calculation	Program	Program	B+C	Program	Program	E+F	Program	D+G+H	D/I	G/I	H/I	Program	Program	MxN	Program	Program	Program	D/Y	OxAJ	Q x N x AL	M x N x AN	M x N x AO	N x (QxAP + RxAQ)	PV(AL,P,-O)	PV(AK,P,-Q*N)	PV(AK,P,-R)	T/D	H=O, (V+W)=O	(V+W)=O, X	AD/AC	T/(V+O)	(T+U)/I	(T+U)-I	Input	Program	Input	Input	Input	PV(AM,P,-Input!D33)	Input	PV(AM,P,-Input!D28)	PV(AM,P,-Input!D29)	Input	Input	Input
2010																																														
Commercial Energy Efficiency Programs																																														
New Construction																																														
Efficient Boiler Program	74	1	75	0	0	0	101	176	43%	0%	57%	3,207	82%	2,630	20	0	-	2	814	N/A	366	59	N/A	39,124	0	-	10.9	101	425	4.2	1.8	4.6	638	3.00%	238.01	3%	1.79	3.0%	139.27	22.35	1.14	0.00	9.999	0.083	-
Light Comm. ENERGY STAR® Boiler Program	0	0	1	0	0	0	1	2	31%	0%	69%	111	82%	91	20	0	-	0	28	N/A	13	2	N/A	1,354	0	-	45.8	1	15	10.7	2.1	14.2	26	3.00%	238.01	3%	1.79	3.0%	139.27	22.35	1.14	0.00	9.999	0.083	-
Retrofit																		-											-																	
Retrofit Efficient Boiler Program	1,189	23	1,213	0	0	0	1,610	2,823	43%	0%	57%	44,880	82%	36,802	20	0	-	2	11,387	N/A	5,125	822	N/A	547,515	0	-	9.4	1,610	5,948	3.7	1.8	4.0	8,564	3.00%	238.01	3%	1.79	3.0%	139.27	22.35	1.14	0.00	9.999	0.083	-
Retrofit Light Comm. ENERGY STAR® Boiler Program	90	5	95	0	0	0	325	420	23%	0%	77%	7,696	82%	6,311	20	0	-	1	1,953	N/A	879	141	N/A	93,888	0	-	20.5	325	1,020	3.1	2.0	4.7	1,533	3.00%	238.01	3%	1.79	3.0%	139.27	22.35	1.14	0.00	9.999	0.083	-
Retrofit Efficient Commercial Water Heater	15	3	19	0	0	0	21	40	47%	0%	53%	623	95%	592	12	0	-	3	126	N/A	55	9	N/A	5,891	0	-	6.8	21	64	3.0	1.7	3.2	87	3.00%	164.20	3%	1.19	3.0%	93.18	15.19	0.77	0.00	9.999	0.083	-
Fireplace timer pilot program	10	0	10	0	0	0	0	10	100%	0%	0%	585	100%	585	5	0	-	4	64	N/A	25	4	N/A	2,679	0	-	6.5	-	29	N/A	1.8	6.5	54	3.00%	83.64	3%	0.55	3.0%	42.87	7.39	0.35	0.00	9.999	0.083	-
Retrofit Energy Assessment	66	25	91	0	0	0	0	91	100%	0%	0%	26,840	65%	17,446	1	0	-	5	670	N/A	159	37	N/A	16,938	0	-	7.4	-	196	N/A	2.7	7.4	580	3.00%	29.54	3%	0.12	3.0%	9.09	2.14	0.07	0.00	9.999	0.083	-
PSECA	519	25	543	0	0	0	974	1,517	36%	0%	64%	18,222	100%	18,222		1,768	-	2	4,679	3,298	2,077	336	1,626	221,901	21,144	-	8.6	974	4,039	4.1	1.8	5.3	6,461	3.00%	193.94	3%	0.00	3.0%	0.00	0.00	0.00	0.00	9.999	0.083	-
2010 Total Commercial	1,964	81	2,045	0	0	0	3,032	5,078	40%	0%	60%	102,164		82,678		1,768	-	2	19,721	3,298	8,699	1,411	1,626	929,290	21,144	0	9.6	3,032	11,736	3.9	1.8	4.5	17,941													

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	UTILITY		FORTIS BC												
2															
3															
4			Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
5			Units												
6		NATURAL GAS													
7		Incremental Cost of Gas (nominal)	$ Per GJ	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28
8	1		Year	0	1	2	3	4	5	6	7	8	9	10	11
9		carbon tax	$ per GJ	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10		Distribution Adder	$ per GJ	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16
11		Total incremental cost of gas including carbon		15.44	15.44	15.44	15.44	15.44	15.44	15.44	15.44	15.44	15.44	15.44	15.44
12	2	GDP Deflator		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
13	3	Incremental Cost of Gas (Real)		$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44
14	4	Net Present Value -2010		$14.99	$29.54	$43.67	$57.39	$70.71	$83.64	$96.20	$108.38	$120.22	$131.71	$142.86	$153.69
15	5	Net Present Value -2011				$29.54	$43.67	$57.39	$70.71	$83.64	$96.20	$108.38	$120.22	$131.71	$142.86
16	6	Net Present Value -2012					$29.54	$43.67	$57.39	$70.71	$83.64	$96.20	$108.38	$120.22	$131.71
17															
18															
19		ELECTRICITY													
20		Incremental Cost of Elec	$ Per kWh	$0.12											
21		Incremental Cost of E Capacity	$ Per kW/a	$170.00											
22															
23															
24															
25	RETAIL														
26				Rate	Customers		789,928	Total Customers in BC		80,000	Total Residential and Commercial Customers on VI				
27		Residential Retail			000's										
28		TGI	$ Per MJ	$0.0100	640		712,304	Total Residential Customers in BC							
29		TGVI	$ Per MJ	$0.0143	72										
30		Electricity	$ Per MJ	$0.0230											
31		Electricity	$ per kWh	$0.0827	1,511		1,511,435	Total BCH Residential Customers in BC				89%			
32		Electricity	$ per kW per year												
33		Commercial Retail													
34		TGI	$ Per MJ	$0.0094	78		77,624	Total Commercial Customers in BC							
35		TGVI	$ Per MJ	$0.0169	8										
36		Electricity	$ Per MJ	$0.0214											
37		Electricity	$ per kWh	$0.0769	190		189,764	Total Light Industrial and Commercial Customers in BC							
38		Electricity	$ per kW per year	$52.0000	15										
39															
40	TAX														
41			Year	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
42	1		Year		0	1	2	3	4	5	6	7	8	9	10
43	2	Carbon	$ Per tonne		$20.00	$25.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00
44	3	Carbon	$ Per GJ		$0.9976	$1.2470	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964
45	4	GDP Deflator			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
46	5	Carbon (Real)			$1.00	$1.25	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50
47	6	Net Present Value -2010				$2.14	$3.51	$4.84	$6.13	$7.39	$8.60	$9.78	$10.93	$12.05	$13.13
48	7	Net Present Value -2011					$2.62	$3.99	$5.32	$6.61	$7.86	$9.08	$10.26	$11.41	$12.52
49	8	Net Present Value -2012						$2.86	$4.23	$5.56	$6.85	$8.11	$9.32	$10.50	$11.65
50															
51		Discount Rate (real)[1]													
52		TERASEN GAS													
53		Rate of Inflation	1.90%												
54		TGI	3.00%												
55		TGVI	3.00%												
56		BC HYDRO													
57		Rate of Inflation	2.00%												
58		BC Hydro	3.00%												
59		Customer	3.00%												
60		Footnote 1: Source LR 070531													
61															
62				SHEET LABELS											
63	New Construction														
64		Efficient Boiler Program		BASEBOARD											
65		Light Comm. ENERGY STAR® Boiler Program		HEATPUMP											
66															
67															

	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ
4	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	
7	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.43
8	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.50	
10	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16		
11	15.44	15.44	15.44	15.44	15.44	15.44	15.44	15.44	15.44	15.44	15.44	15.44	15.44	15.44	15.44	15.44	15.44	15.44	15.44	16.78	
12	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
13	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$16.78	
14	$164.20	$174.41	$184.32	$193.94	$203.28	$212.35	$221.16	$229.71	$238.01	$246.07	$253.89	$261.48	$268.86	$276.02	$282.97	$289.72	$296.27	$302.63	$308.81	$315.32	
15	$153.69	$164.20	$174.41	$184.32	$193.94	$203.28	$212.35	$221.16	$229.71	$238.01	$246.07	$253.89	$261.48	$268.86	$276.02	$282.97	$289.72	$296.27	$302.63	$309.34	
16	$142.86	$153.69	$164.20	$174.41	$184.32	$193.94	$203.28	$212.35	$221.16	$229.71	$238.01	$246.07	$253.89	$261.48	$268.86	$276.02	$282.97	$289.72	$296.27	$303.18	
41	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	
42	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
43	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	
44	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	
45	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
46	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	
47	$14.18	$15.19	$16.18	$17.14	$18.08	$18.98	$19.86	$20.71	$21.54	$22.35	$23.13	$23.89	$24.62	$25.34	$26.03	$26.71	$27.36	$27.99	$28.61	$29.21	
48	$13.60	$14.65	$15.67	$16.66	$17.62	$18.55	$19.46	$20.34	$21.19	$22.02	$22.82	$23.61	$24.36	$25.10	$25.81	$26.51	$27.18	$27.84	$28.47	$29.09	
49	$12.76	$13.85	$14.90	$15.91	$16.90	$17.86	$18.80	$19.70	$20.58	$21.43	$22.26	$23.07	$23.85	$24.61	$25.34	$26.06	$26.75	$27.42	$28.08	$28.71	

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Measure Data for Efficient Boiler Program

PER MEASURE			Utility Incentive to the participant	partner incentive
Total Incremental Cost	$ 65,711			
Utility Incentive	$ 24,687		$ 24,687	$ -
Incremental Participant cost	$ 41,024			

Annual Impact Per Measure

Energy Savings per installation	1069.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	18%	0.82		Net-to-Gross
Alternate Energy Impact		GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	20	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	3	3	3	0		Estimated Participation
Impact						
Gross Energy Savings (GJ)	3,114	3,207	3,207	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	2,553	2,630	2,630	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$238.01	$238.01	$238.01	
Energy Purchases	$ 625,899	$ 625,899	$ 625,899	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 74,061	$ 74,061	$ -	$ -	
Administration		$ 796	$ 796	$ -		
Subtotal	$ 72,677	$ 74,857	$ 74,857	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -		$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 100,919	$ 100,919	$ -	$ -	
Subtotal	$ 97,980	$ 100,919	$ 100,919	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.785 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 455,243		$ 450,123	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 4.5**		**$ 4.5**	**$ -**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Light Comm. ENERGY STAR® Boiler Program

PER MEASURE			Implementation Lag	
Total Cost	$ 2,047			
Total Incentive	$ 375			
Utility Incentive	***$ 375***		*No lag*	*Present Value accounts for any implementation lag*
Partner Incentive	***$ -***		*No lag*	*Present Value accounts for any implementation lag*
Participant Cost	**$ 1,672**			

Annual Impact Per Measure			Average Annual Energy Savings per Measure	
Time to implementation		Years		
Energy Savings per installation	**111.0**	GJ	-	Present Value accounts for any implementation lag
Free Rider Rate / Net-to-Gross	**18%**	82%		Net-to-Gross
Alternate Energy Impact		GJ	-	kWh; Present Value accounts for any lag
Alternate Capacity Impact		kW/a	-	kW/a; Present Value accounts for any lag
Measure Lifetime	**20**	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	Explanatory Notes
	1	1	**1**	Estimated Participation
Impact				
Gross Energy Savings (GJ)	104	111	111	Extension of Unit Savings x No. of Upgrades (Including Lag)
Net Energy Savings (GJ)	86	91	91	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	-	-	-	Other Utility Billed energy impact (Including any lag)
Alternate Capacity Impact (Increase) (kW/a)	-	-	-	Other Utility Billed capacity impact (Including any lag)

Cost Benefit Summary

	2009 NPV	*$ Total*	2010	
Avoided Revenue Requirements				
PV $ per GJ			$238.01	
Energy Purchases	$ 21,663	$ 21,663	$ 21,663	
Utility Program Costs				
DSM Incentives		$ 375	$ 375	Including Implementation Lag
Administration		$ 240	**$ 240**	
Subtotal	$ 578	$ 615	$ 615	
Partner Program Costs				
DSM Incentives		$ -	$ -	Including Implementation Lag
Administration		$ -	**$ -**	
Subtotal	$ -	$ -	$ -	
Participants' Net Costs				
Incremental Cost		$ 1,371	$ 1,371	
Subtotal	$ 1,293	$ 1,371	$ 1,371	
Alternate Savings - Net				
Energy (Purchases)		$ -	$ -	$1.376 PV $ per kWh
Capacity (Purchases)		$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 19,792		$ 19,677	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 0.6**		**$ 0.6**	Informational (for comparison with supply options)

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Measure Data for Efficient Commercial Water Heater

PER MEASURE			Implementation Lag	
Total Cost	$ -			
Total Incentive	$ -			
Utility Incentive	$ -		*No lag*	*Present Value accounts for any implementation lag*
Partner Incentive	$ -		*No lag*	*Present Value accounts for any implementation lag*
Participant Cost	$ -			

Annual Impact Per Measure			Average Annual Energy Savings per Measure	
Time to implementation		Years		
Energy Savings per installation	0.0	GJ	-	Present Value accounts for any implementation lag
Free Rider Rate / Net-to-Gross	5%	95%		Net-to-Gross
Alternate Energy Impact		GJ	-	kWh; Present Value accounts for any lag
Alternate Capacity Impact		kW/a	-	kW/a; Present Value accounts for any lag
Measure Lifetime	13	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	Explanatory Notes
	0	0	0	Estimated Participation
Impact				
Gross Energy Savings (GJ)	0	0	0	Extension of Unit Savings x No. of Upgrades (Including Lag)
Net Energy Savings (GJ)	0	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	-	-	-	Other Utility Billed energy impact (Including any lag)
Alternate Capacity Impact (Increase) (kW/a)	-	-	-	Other Utility Billed capacity impact (Including any lag)

Cost Benefit Summary

	2009 NPV	*$ Total*	2010	
Avoided Revenue Requirements				
PV $ per GJ			$174.41	
Energy Purchases	$ -	$ -	$ -	
Utility Program Costs				
DSM Incentives		$ -	$ -	Including Implementation Lag
Administration		$ -	$ -	
Subtotal	$ -	$ -	$ -	
Partner Program Costs				
DSM Incentives		$ -	$ -	Including Implementation Lag
Administration		$ -	$ -	
Subtotal	$ -	$ -	$ -	
Participants' Net Costs				
Incremental Cost		$ -	$ -	
Subtotal	$ -	$ -	$ -	
Alternate Savings - Net				
Energy (Purchases)		$ -	$ -	$1.062 PV $ per kWh
Capacity (Purchases)		$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ -		$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ -**		**$ -**	Informational (for comparison with supply options)

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Measure Data for Retrofit Efficient Boiler Program

PER MEASURE

Total Cost	$ 35,834		**Implementation Lag**	
Total Incentive	$ 13,517			
Utility Incentive	***$ 13,517***		*No lag*	*Present Value accounts for any implementation lag*
Partner Incentive	***$ -***		*No lag*	*Present Value accounts for any implementation lag*
Participant Cost	**$ 22,317**			

Annual Impact Per Measure — Average Annual Energy Savings per Measure

Time to implementation		Years		
Energy Savings per installation	**510.0**	GJ	-	Present Value accounts for any implementation lag
Free Rider Rate / Net-to-Gross	**18%**	82%		Net-to-Gross
Alternate Energy Impact		GJ	-	kWh; Present Value accounts for any lag
Alternate Capacity Impact		kW/a	-	kW/a; Present Value accounts for any lag
Measure Lifetime	**20**	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	Explanatory Notes
	83	88	**88**	Estimated Participation
Impact				
Gross Energy Savings (GJ)	42,192	44,880	44,880	Extension of Unit Savings x No. of Upgrades (Including Lag)
Net Energy Savings (GJ)	34,598	36,802	36,802	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	-	-	-	Other Utility Billed energy impact (Including any lag)
Alternate Capacity Impact (Increase) (kW/a)	-	-	-	Other Utility Billed capacity impact (Including any lag)

Cost Benefit Summary

	2009 NPV	*$ Total*	2010	
Avoided Revenue Requirements				
PV $ per GJ			$238.01	
Energy Purchases	$ 8,759,074	$ 8,759,074	$ 8,759,074	
Utility Program Costs				
DSM Incentives		$ 1,189,496	$ 1,189,496	Including Implementation Lag
Administration		$ 23,087	**$ 23,087**	
Subtotal	$ 1,139,967	$ 1,212,583	$ 1,212,583	
Partner Program Costs				
DSM Incentives		$ -	$ -	Including Implementation Lag
Administration		$ -	**$ -**	
Subtotal	$ -	$ -	$ -	
Participants' Net Costs				
Incremental Cost		$ 1,610,395	$ 1,610,395	
Subtotal	$ 1,519,240	$ 1,610,395	$ 1,610,395	
Alternate Savings - Net				
Energy (Purchases)		$ -	$ -	$1.376 PV $ per kWh
Capacity (Purchases)		$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 6,099,867		$ 5,936,096	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 3.0**		**$ 3.0**	Informational (for comparison with supply options)

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Measure Data for Retrofit Light Comm. ENERGY STAR® Boiler Program

PER MEASURE			Implementation Lag	
Total Cost	$	18,695		
Total Incentive	$	3,462		
Utility Incentive	**$**	***3,462***	*No lag*	*Present Value accounts for any implementation lag*
Partner Incentive	**$**	**-**	*No lag*	*Present Value accounts for any implementation lag*
Participant Cost	**$**	**15,233**		

Annual Impact Per Measure			Average Annual Energy Savings per Measure	
Time to implementation		Years		
nergy Savings per installation	**296.0**	GJ	-	Present Value accounts for any implementation lag
Free Rider Rate / Net-to-Gross	**18%**	82%		Net-to-Gross
Alternate Energy Impact		GJ	-	kWh; Present Value accounts for any lag
Alternate Capacity Impact		kW/a	-	kW/a; Present Value accounts for any lag
Measure Lifetime	**20**	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	Explanatory Notes
	24	26	**26**	Estimated Participation
Impact				
Gross Energy Savings (GJ)	7,235	7,696	7,696	Extension of Unit Savings x No. of Upgrades (Including Lag)
Net Energy Savings (GJ)	5,933	6,311	6,311	Gross Energy Savings less Free Riders
nergy Impact (Increase) (kWh)	-	-	-	Other Utility Billed energy impact (Including any lag)
acity Impact (Increase) (kW/a)	-	-	-	Other Utility Billed capacity impact (Including any lag)

Cost Benefit Summary

	2009 NPV	*$ Total*	2010	
Avoided Revenue Requirements				
PV $ per GJ			$238.01	
Energy Purchas	$ 1,502,002	$ 1,502,002	$ 1,502,002	
Utility Program Costs				
DSM Incentives		$ 90,012	$ 90,012	Including Implementation Lag
Administration		$ 5,035	**$ 5,035**	
Subtotal	$ 89,355	$ 95,047	$ 95,047	
Partner Program Costs				
DSM Incentives		$ -	$ -	Including Implementation Lag
Administration		$ -	**$ -**	
Subtotal	$ -	$ -	$ -	
Participants' Net Costs				
Incremental Cost		$ 324,768	$ 324,768	
Subtotal	$ 306,384	$ 324,768	$ 324,768	
Alternate Savings - Net				
Energy (Purchases)		$ -	$ -	$1.376 PV $ per kWh
Capacity (Purchases)		$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	
Total Resource Net Benefit (C	$ 1,106,262		$ 1,082,187	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (	**$ 1.4**		**$ 1.4**	Informational (for comparison with supply options)

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Measure Data for Retrofit Efficient Commercial Water Heater

PER MEASURE			Implementation Lag	
Total Cost	$	5,378		
Total Incentive	$	2,206		
Utility Incentive	***$***	***2,206***	*No lag*	*Present Value accounts for any implementation lag*
Partner Incentive	***$***	***-***	*No lag*	*Present Value accounts for any implementation lag*
Participant Cost	**$**	**3,172**		

Annual Impact Per Measure			Average Annual Energy Savings per Measure
Time to implementation		Years	
nergy Savings per installation	**89.0**	GJ	- Present Value accounts for any implementation lag
Free Rider Rate / Net-to-Gross	**5%**	95%	Net-to-Gross
Alternate Energy Impact		GJ	- kWh; Present Value accounts for any lag
Alternate Capacity Impact		kW/a	- kW/a; Present Value accounts for any lag
Measure Lifetime	**12**	Years	Estimated lifespan of measure

ANNUAL ACTIVITY	2009 NPV	Total	2010	Explanatory Notes
	7	7	**7**	Estimated Participation
Impact				
Gross Energy Savings (GJ)	586	623	623	Extension of Unit Savings x No. of Upgrades (Including Lag)
Net Energy Savings (GJ)	556	592	592	Gross Energy Savings less Free Riders
nergy Impact (Increase) (kWh)	-	-	-	Other Utility Billed energy impact (Including any lag)
acity Impact (Increase) (kW/a)	-	-	-	Other Utility Billed capacity impact (Including any lag)

Cost Benefit Summary

	2009 NPV	*$ Total*	2010	
Avoided Revenue Requirements				
PV $ per GJ			$164.20	
Energy Purcha	$ 97,184	$ 97,184	$ 97,184	
Utility Program Costs				
DSM Incentives		$ 15,442	$ 15,442	Including Implementation Lag
Administration		$ 3,261	**$ 3,261**	
Subtotal	$ 17,583	$ 18,703	$ 18,703	
Partner Program Costs				
DSM Incentives		$ -	$ -	Including Implementation Lag
Administration		$ -	**$ -**	
Subtotal	$ -	$ -	$ -	
Participants' Net Costs				
Incremental Cost		$ 21,094	$ 21,094	
Subtotal	$ 19,900	$ 21,094	$ 21,094	
Alternate Savings - Net				
Energy (Purchases)		$ -	$ -	$1.006 PV $ per kWh
Capacity (Purchases)		$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	
Total Resource Net Benefit (C	$ 59,701		$ 57,387	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (	**$ 3.8**		**$ 3.8**	Informational (for comparison with supply options)

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Measure Data for Retrofit Energy Assessment

PER MEASURE			Implementation Lag	
Total Cost	$	1,200		
Total Incentive	$	1,200		
Utility Incentive	*$*	*1,200*	*No lag*	*Present Value accounts for any implementation lag*
Partner Incentive	*$*	*-*	*No lag*	*Present Value accounts for any implementation lag*
Participant Cost	$	-		

Annual Impact Per Measure			Average Annual Energy Savings per Measure
Time to implementation		Years	
Energy Savings per installation	488.0	GJ	- Present Value accounts for any implementation lag
Free Rider Rate / Net-to-Gross	35%	65%	Net-to-Gross
Alternate Energy Impact		GJ	- kWh; Present Value accounts for any lag
Alternate Capacity Impact		kW/a	- kW/a; Present Value accounts for any lag
Measure Lifetime	1	Years	Estimated lifespan of measure

ANNUAL ACTIVITY	2009 NPV	Total	2010	Explanatory Notes
	52	55	55	Estimated Participation
Impact				
Gross Energy Savings (GJ)	25,233	26,840	26,840	Extension of Unit Savings x No. of Upgrades (Including Lag)
Net Energy Savings (GJ)	16,401	17,446	17,446	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	-	-	-	Other Utility Billed energy impact (Including any lag)
Alternate Capacity Impact (Increase) (kW/a)	-	-	-	Other Utility Billed capacity impact (Including any lag)

Cost Benefit Summary

	2009 NPV	*$ Total*	2010	
Avoided Revenue Requirements				
PV $ per GJ			$29.54	
Energy Purchases	$ 515,424	$ 515,424	$ 515,424	
Utility Program Costs				
DSM Incentives		$ 66,000	$ 66,000	Including Implementation Lag
Administration		$ 24,523	$ 24,523	
Subtotal	$ 85,102	$ 90,523	$ 90,523	
Partner Program Costs				
DSM Incentives		$ -	$ -	Including Implementation Lag
Administration		$ -	$ -	
Subtotal	$ -	$ -	$ -	
Participants' Net Costs				
Incremental Cost		$ -	$ -	
Subtotal	$ -	$ -	$ -	
Alternate Savings - Net				
Energy (Purchases)		$ -	$ -	$0.113 PV $ per kWh
Capacity (Purchases)		$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 430,322		$ 424,901	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 5.5**		**$ 5.5**	Informational (for comparison with supply options)

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Measure Data for Fireplace timer pilot program

PER MEASURE

			Implementation Lag	
Total Cost	$	50		
Total Incentive	$	50		
Utility Incentive	*$*	*50*	*No lag*	*Present Value accounts for any implementation lag*
Partner Incentive	*$*	*-*	*No lag*	*Present Value accounts for any implementation lag*
Participant Cost	$	-		

Annual Impact Per Measure — Average Annual Energy Savings per Measure

Time to implementation		Years		
Energy Savings per installation	3.0	GJ	-	Present Value accounts for any implementation lag
Free Rider Rate / Net-to-Gross	0%	100%		Net-to-Gross
Alternate Energy Impact		GJ	-	kWh; Present Value accounts for any lag
Alternate Capacity Impact		kW/a	-	kW/a; Present Value accounts for any lag
Measure Lifetime	5	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	Explanatory Notes
	183	195	**195**	Estimated Participation
Impact				
Gross Energy Savings (GJ)	550	585	585	Extension of Unit Savings x No. of Upgrades (Including Lag)
Net Energy Savings (GJ)	550	585	585	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	-	-	-	Other Utility Billed energy impact (Including any lag)
Alternate Capacity Impact (Increase) (kW/a)	-	-	-	Other Utility Billed capacity impact (Including any lag)

Cost Benefit Summary

	2009 NPV	*$ Total*	2010	
Avoided Revenue Requirements				
PV $ per GJ			$83.64	
Energy Purchases	$ 48,930	$ 48,930	$ 48,930	
Utility Program Costs				
DSM Incentives		$ 9,750	$ 9,750	Including Implementation Lag
Administration		$ -	$ -	
Subtotal	$ 9,166	$ 9,750	$ 9,750	
Partner Program Costs				
DSM Incentives		$ -	$ -	Including Implementation Lag
Administration		$ -	$ -	
Subtotal	$ -	$ -	$ -	
Participants' Net Costs				
Incremental Cost		$ -	$ -	
Subtotal	$ -	$ -	$ -	
Alternate Savings - Net				
Energy (Purchases)		$ -	$ -	$0.505 PV $ per kWh
Capacity (Purchases)		$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 39,764		$ 39,180	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 4.0**		**$ 4.0**	Informational (for comparison with supply options)

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2010 Commercial Programs	PROGRAM															ALTERNATE		NET PRESENT VALUE								BENEFIT/COST						PARAMETERS														
	COSTS ($000)											SAVINGS (GJ)			LIFE	Impact		Levelized Cost	Utility Benefits (Costs)		Participant Benefits (Costs)			Program Net Savings			Natural Gas	Participant			Natural Gas		TRC Net Benefits	UTILITY				PARTICIPANT									
FEI	Utility			Partners																																										
	Incentives	Administration	Total	Incentives	Administration	Total	Participant	Total	% Utility	% Partner	% Participant	Gross	Net-to-Gross	Net	Years	Energy	Capacity	($/GJ)	Program	Alternate	Program	Carbon Tax	Alternate	Natural Gas	Alternate Energy	Alternate Capacity	Natural Gas	Total Costs	Total Benefits	Benefit/Cost	Natural Gas	Total Resource	($'000s)	Natural Gas Utility Discount	Natural Gas Supply	Alternate Discount Rate	Alternate Supply	Discount Rate	Natural Gas NPV	Carbon Tax NPV	Alternate Energy NPV	Alternate Capacity NPV	Natural Gas Tariff	Energy Tariff	Capacity Tariff
																MWh	kW	($/GJ)	($'000s)	($'000s)	($'000s)	($'000s)	($'000s)	(GJ)	(MWh)	(kW)	Utility	($'000s)	($'000s)		Rate Impact			$/GJ	$/GJ	$/kWh	$/kW/a		$/GJ	$/GJ	$/kWh	$/kW/a	$/GJ	$/kWh	$/kW/a
Label	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR	AS	AT
Source Sheet or Calculation	Program	Program	B+C	Program	Program	E+F	Program	D+G+H	D/I	G/I	H/I	Program	Program	M+N	Program	Program	Program	D/Y	OxAJ	Q x N x AL	M x N x AN	M x N x AO	N x (QxAP + RxAQ)	PV(AI,P,-O)	PV(AK,P,-Q*N)	PV(AK,P,-R)	T/D	H=O, (V+W)=O	H=0, (V+W)=O, X	AD/AC	T/(V+O)	(T+U)/I	(T+U)-I	Input	Program	Input	Input	Input	PV(AM,P,-Input!D33)	Input	PV(AM,P,-Input!D28)	PV(AM,P,-Input!D29)	Input	Input	Input
2010																																													
Commercial Energy Efficiency Programs																																												
New Construction																																													
Efficient Boiler Program	74	1	75	0	0	0	101	176	43%	0%	57%	3,207	82%	2,630	20	0	-	3	277	N/A	282	40	N/A	27,055	0	-	3.7	101	322	3.2	0.8	1.6	101	7.38%	105.21	6%	1.38	6.0%	107.37	15.05	0.88	0.00	9.999	0.083	-
Light Comm. ENERGY STAR® Boiler Program	0	0	1	0	0	0	1	2	31%	0%	69%	111	82%	91	20	0	-	1	10	N/A	10	1	N/A	936	0	-	15.6	1	11	8.1	0.9	4.8	8	7.38%	105.21	6%	1.38	6.0%	107.37	15.05	0.88	0.00	9.999	0.083	-
Retrofit																		-											-																	
Retrofit Efficient Boiler Program	1,189	23	1,213	0	0	0	1,610	2,823	43%	0%	57%	44,880	82%	36,802	20	0	-	3	3,872	N/A	3,951	554	N/A	378,622	0	-	3.2	1,610	4,505	2.8	0.7	1.4	1,049	7.38%	105.21	6%	1.38	6.0%	107.37	15.05	0.88	0.00	9.999	0.083	-
Retrofit Light Comm. ENERGY STAR® Boiler Program	90	5	95	0	0	0	325	420	23%	0%	77%	7,696	82%	6,311	20	0	-	1	664	N/A	678	95	N/A	64,926	0	-	7.0	325	773	2.4	0.9	1.6	244	7.38%	105.21	6%	1.38	6.0%	107.37	15.05	0.88	0.00	9.999	0.083	-
Retrofit Efficient Commercial Water Heater	15	3	19	0	0	0	21	40	47%	0%	53%	623	95%	592	12	0	-	4	45	N/A	46	7	N/A	4,607	0	-	2.4	21	53	2.5	0.7	1.1	5	7.38%	76.30	6%	1.01	6.0%	78.48	11.56	0.64	0.00	9.999	0.083	-
Fireplace timer pilot program	10	0	10	0	0	0	0	10	100%	0%	0%	585	100%	585	5	0	-	4	23	N/A	23	4	N/A	2,374	0	-	2.3	-	27	N/A	0.7	2.3	13	7.38%	38.87	6%	0.51	6.0%	39.43	6.37	0.32	0.00	9.999	0.083	-
Retrofit Energy Assessment	66	25	91	0	0	0	0	91	100%	0%	0%	26,840	65%	17,446	1	0	-	6	215	N/A	154	35	N/A	16,247	0	-	2.4	-	189	N/A	0.9	2.4	124	7.38%	12.32	6%	0.11	6.0%	8.83	2.01	0.07	0.00	9.999	0.083	-
PSECA	519	25	543	0	0	0	974	1,517	36%	0%	64%	18,222	100%	18,222		1,768	-	3	1,634	2,061	1,676	241	1,321	163,420	17,177	-	3.0	974	3,237	3.3	0.7	2.4	2,179	7.38%	88.58	6%	0.00	6.0%	0.00	0.00	0.00	0.00	9.999	0.083	-
2010 Total Commercial	1,964	81	2,045	0	0	0	3,032	5,078	40%	0%	60%	102,164		82,678		1,768	-	3	6,739	2,061	6,820	976	1,321	658,188	17,177	0	3.3	3,032	9,117	3.0	0.8	1.7	3,723												

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
1	UTILITY		FORTIS BC														
4			Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
5			Units														
6		NATURAL GAS															
7		Incremental Cost of Gas (nominal)	$ Per GJ	$5.50	$6.17	$6.81	$7.35	$7.87	$8.26	$8.56	$8.78	$8.99	$9.19	$9.40	$9.60	$9.81	$10.03
8	1		*Year*	*0*	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*
9		carbon tax	$ per GJ	*0.75*	*1.00*	*1.25*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*
10		Distribution Adder	$ per GJ	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*
11		Total incremental cost of gas including carbon		*6.41*	*7.32*	*8.21*	*9.01*	*9.52*	*9.92*	*10.22*	*10.43*	*10.64*	*10.85*	*11.05*	*11.26*	*11.47*	*11.68*
12	2	GDP Deflator		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
13	3	Incremental Cost of Gas (Real)		$6.41	$7.32	$8.21	$9.01	$9.52	$9.92	$10.22	$10.43	$10.64	$10.85	$11.05	$11.26	$11.47	$11.68
14	4	Net Present Value -2010			$12.32	$18.95	$25.73	$32.40	$38.87	$45.08	$50.98	$56.59	$61.91	$66.96	$71.75	$76.30	$80.61
15	5	Net Present Value -2011				$13.94	$21.22	$28.38	$35.33	$42.00	$48.33	$54.36	$60.07	$65.50	$70.64	$75.52	$80.15
16	6	Net Present Value -2012					$15.46	$23.15	$30.61	$37.77	$44.58	$51.04	$57.18	$63.00	$68.53	$73.77	$78.74
19		**ELECTRICITY**															
20		Incremental Cost of Elec	$ Per kWh	$0.12													
21		Incremental Cost of E Capacity	$ Per kW/a	$170.00													
25	RETAIL																
26				Rate	Customers		789,928	Total Customers in BC		80,000	Total Residential and Commercial Customers on VI						
27		Residential Retail			000's												
28		**TGI**	$ Per MJ	$0.0100	640		712,304	Total Residential Customers in BC									
29		**TGVI**	$ Per MJ	$0.0143	72												
30		**Electricity**	$ Per MJ	$0.0230													
31		**Electricity**	$ per kWh	$0.0827	1,511		1,511,435	Total BCH Residential Customers in BC				89%					
32		**Electricity**	$ per kW per year														
33		Commercial Retail															
34		**TGI**	$ Per MJ	$0.0094	78		77,624	Total Commercial Customers in BC									
35		**TGVI**	$ Per MJ	$0.0169	8												
36		**Electricity**	$ Per MJ	$0.0214													
37		**Electricity**	$ per kWh	$0.0769	190		189,764	Total Light Industrial and Commercial Customers in BC									
38		**Electricity**	$ per kW per year	$52.0000	15												
40	TAX																
41			Year	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
42	1		*Year*		*0*	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*
43	2	Carbon	$ Per tonne		$20.00	$25.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00
44	3	Carbon	$ Per GJ		$0.9976	$1.2470	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964
45	4	GDP Deflator			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
46	5	Carbon (Real)			$1.00	$1.25	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50
47	6	Net Present Value -2010				$2.01	$3.22	$4.34	$5.39	$6.37	$7.28	$8.12	$8.91	$9.65	$10.33	$10.97	$11.56
48	7	Net Present Value -2011					$2.46	$3.67	$4.79	$5.84	$6.82	$7.73	$8.57	$9.36	$10.10	$10.78	$11.42
49	8	Net Present Value -2012						$2.69	$3.90	$5.03	$6.07	$7.05	$7.96	$8.81	$9.59	$10.33	$11.01
51		**Discount Rate (real)[1]**															
52		**TERASEN GAS**															
53		**Rate of Inflation**	1.90%														
54		**TGI**	7.38%														
55		**TGVI**	6.87%														
56		**BC HYDRO**															
57		**Rate of Inflation**	2.00%														
58		**BC Hydro**	6.00%														
59		**Customer**	6.00%														
60		*Footnote 1: Source LR 070531*															
62				**SHEET LABELS**													
63	**New Construction**																
64		Efficient Boiler Program		**BASEBOARD**													
65		Light Comm. ENERGY STAR® Boiler Program		**HEATPUMP**													

	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ
4	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	
7	$10.25	$10.47	$10.70	$10.93	$11.17	$11.42	$11.67	$11.92	$12.19	$12.45	$12.73	$13.01	$13.29	$13.58	$13.88	$14.19	$14.50	$14.82	$15.14
8	*14*	*15*	*16*	*17*	*18*	*19*	*20*	*21*	*22*	*23*	*24*	*25*	*26*	*27*	*28*	*29*	*30*	*31*	
9	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	
10	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*		
11	*11.90*	*12.13*	*12.35*	*12.59*	*12.83*	*13.07*	*13.32*	*13.58*	*13.84*	*14.11*	*14.38*	*14.66*	*14.95*	*15.24*	*15.54*	*15.84*	*16.15*	*16.31*	
12	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
13	$11.90	$12.13	$12.35	$12.59	$12.83	$13.07	$13.32	$13.58	$13.84	$14.11	$14.38	$14.66	$14.95	$15.24	$15.54	$15.84	$16.15	$16.31	
14	$84.70	$88.58	$92.26	$95.75	$99.07	$102.22	$105.21	$108.04	$110.73	$113.29	$115.71	$118.02	$120.20	$122.28	$124.25	$126.12	$127.90	$129.57	
15	$84.54	$88.71	$92.66	$96.41	$99.98	$103.36	$106.56	$109.61	$112.50	$115.24	$117.85	$120.32	$122.67	$124.89	$127.01	$129.02	$130.93	$132.72	
16	$83.46	$87.93	$92.18	$96.21	$100.03	$103.66	$107.10	$110.37	$113.48	$116.42	$119.22	$121.87	$124.39	$126.79	$129.06	$131.22	$133.27	$135.19	
41	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	
42	*13*	*14*	*15*	*16*	*17*	*18*	*19*	*20*	*21*	*22*	*23*	*24*	*25*	*26*	*27*	*28*	*29*	*30*	
43	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	
44	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	
45	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
46	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	
47	$12.11	$12.63	$13.11	$13.55	$13.97	$14.35	$14.71	$15.05	$15.36	$15.65	$15.92	$16.18	$16.41	$16.63	$16.83	$17.02	$17.20	$17.37	
48	$12.01	$12.56	$13.08	$13.55	$14.00	$14.42	$14.80	$15.16	$15.50	$15.81	$16.10	$16.37	$16.63	$16.86	$17.08	$17.28	$17.47	$17.65	
49	$11.65	$12.24	$12.79	$13.31	$13.79	$14.23	$14.65	$15.04	$15.40	$15.73	$16.04	$16.33	$16.61	$16.86	$17.09	$17.31	$17.51	$17.70	

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only enter in boxes marked in blue

Measure Data for Efficient Boiler Program

PER MEASURE			Utility Incentive to the participant	partner incentive
Total Incremental Cost	$ 65,711			
Utility Incentive	$ 24,687		$ 24,687	$ -
Incremental Participant cost	$ 41,024			

Annual Impact Per Measure

Energy Savings per installation	1069.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	18%	0.82		Net-to-Gross
Alternate Energy Impact		GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	20	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	3	3	3	0		Estimated Participation
Impact						
Gross Energy Savings (GJ)	2,987	3,207	3,207	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	2,449	2,630	2,630	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$105.21	$109.61	$113.48	
Energy Purchases	$ 276,664	$ 276,664	$ 276,664	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 74,061	$ 74,061	$ -	$ -	
Administration		$ 796	$ 796	$ -		
Subtotal	$ 69,712	$ 74,857	$ 74,857	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -		$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 100,919	$ 100,919	$ -	$ -	
Subtotal	$ 93,983	$ 100,919	$ 100,919	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.376 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 112,969		$ 100,888	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 6.5**		**$ 6.5**	**$ -**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Light Comm. ENERGY STAR® Boiler Program

PER MEASURE			Implementation Lag	
Total Cost	$ 2,047			
Total Incentive	$ 375			
Utility Incentive	***$ 375***		*No lag*	*Present Value accounts for any implementation lag*
Partner Incentive	***$ -***		*No lag*	*Present Value accounts for any implementation lag*
Participant Cost	**$ 1,672**			

Annual Impact Per Measure			Average Annual Energy Savings per Measure	
Time to implementation		Years		
Energy Savings per installation	**111.0**	GJ	-	Present Value accounts for any implementation lag
Free Rider Rate / Net-to-Gross	**18%**	82%		Net-to-Gross
Alternate Energy Impact		GJ	-	kWh; Present Value accounts for any lag
Alternate Capacity Impact		kW/a	-	kW/a; Present Value accounts for any lag
Measure Lifetime	**20**	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	Explanatory Notes
	1	1	**1**	Estimated Participation
Impact				
Gross Energy Savings (GJ)	104	111	111	Extension of Unit Savings x No. of Upgrades (Including Lag)
Net Energy Savings (GJ)	86	91	91	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	-	-	-	Other Utility Billed energy impact (Including any lag)
Alternate Capacity Impact (Increase) (kW/a)	-	-	-	Other Utility Billed capacity impact (Including any lag)

Cost Benefit Summary

	2009 NPV	*$ Total*	2010	
Avoided Revenue Requirements				
PV $ per GJ			$105.21	
Energy Purchases	$ 9,576	$ 9,576	$ 9,576	
Utility Program Costs				
DSM Incentives		$ 375	$ 375	Including Implementation Lag
Administration		$ 240	**$ 240**	
Subtotal	$ 578	$ 615	$ 615	
Partner Program Costs				
DSM Incentives		$ -	$ -	Including Implementation Lag
Administration		$ -	**$ -**	
Subtotal	$ -	$ -	$ -	
Participants' Net Costs				
Incremental Cost		$ 1,371	$ 1,371	
Subtotal	$ 1,293	$ 1,371	$ 1,371	
Alternate Savings - Net				
Energy (Purchases)		$ -	$ -	$1.376 PV $ per kWh
Capacity (Purchases)		$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 7,704		$ 7,590	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 0.6**		**$ 0.6**	Informational (for comparison with supply options)

Fortis BC
COMMERCIAL
NEW

Measure Data for Efficient Commercial Water Heater

PER MEASURE			Implementation Lag	
Total Cost	$ -			
Total Incentive	$ -			
Utility Incentive	$ -		*No lag*	*Present Value accounts for any implementation lag*
Partner Incentive	$ -		*No lag*	*Present Value accounts for any implementation lag*
Participant Cost	$ -			

Annual Impact Per Measure			Average Annual Energy Savings per Measure	
Time to implementation		Years		
Energy Savings per installation	0.0	GJ	-	Present Value accounts for any implementation lag
Free Rider Rate / Net-to-Gross	5%	95%		Net-to-Gross
Alternate Energy Impact		GJ	-	kWh; Present Value accounts for any lag
Alternate Capacity Impact		kW/a	-	kW/a; Present Value accounts for any lag
Measure Lifetime	13	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	Explanatory Notes
	0	0	0	Estimated Participation
Impact				
Gross Energy Savings (GJ)	0	0	0	Extension of Unit Savings x No. of Upgrades (Including Lag)
Net Energy Savings (GJ)	0	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	-	-	-	Other Utility Billed energy impact (Including any lag)
Alternate Capacity Impact (Increase) (kW/a)	-	-	-	Other Utility Billed capacity impact (Including any lag)

Cost Benefit Summary

	2009 NPV	*$ Total*	2010	
Avoided Revenue Requirements				
PV $ per GJ			$80.61	
Energy Purchases	$ -	$ -	$ -	
Utility Program Costs				
DSM Incentives		$ -	$ -	Including Implementation Lag
Administration		$ -	$ -	
Subtotal	$ -	$ -	$ -	
Partner Program Costs				
DSM Incentives		$ -	$ -	Including Implementation Lag
Administration		$ -	$ -	
Subtotal	$ -	$ -	$ -	
Participants' Net Costs				
Incremental Cost		$ -	$ -	
Subtotal	$ -	$ -	$ -	
Alternate Savings - Net				
Energy (Purchases)		$ -	$ -	$1.062 PV $ per kWh
Capacity (Purchases)		$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ -		$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ -**		**$ -**	Informational (for comparison with supply options)

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Measure Data for Retrofit Efficient Boiler Program

PER MEASURE

			Implementation Lag	
Total Cost	$	35,834		
Total Incentive	$	13,517		
Utility Incentive	**$**	***13,517***	*No lag*	*Present Value accounts for any implementation lag*
Partner Incentive	**$**	**-**	*No lag*	*Present Value accounts for any implementation lag*
Participant Cost	**$**	**22,317**		

Annual Impact Per Measure — Average Annual Energy Savings per Measure

Time to implementation		Years		
Energy Savings per installation	**510.0**	GJ	-	Present Value accounts for any implementation lag
Free Rider Rate / Net-to-Gross	**18%**	82%		Net-to-Gross
Alternate Energy Impact		GJ	-	kWh; Present Value accounts for any lag
Alternate Capacity Impact		kW/a	-	kW/a; Present Value accounts for any lag
Measure Lifetime	**20**	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	Explanatory Notes
	83	88	**88**	Estimated Participation
Impact				
Gross Energy Savings (GJ)	42,192	44,880	44,880	Extension of Unit Savings x No. of Upgrades (Including Lag)
Net Energy Savings (GJ)	34,598	36,802	36,802	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	-	-	-	Other Utility Billed energy impact (Including any lag)
Alternate Capacity Impact (Increase) (kW/a)	-	-	-	Other Utility Billed capacity impact (Including any lag)

Cost Benefit Summary

	2009 NPV	*$ Total*	2010	
Avoided Revenue Requirements				
PV $ per GJ			$105.21	
Energy Purchases	$ 3,871,744	$ 3,871,744	$ 3,871,744	
Utility Program Costs				
DSM Incentives		$ 1,189,496	$ 1,189,496	Including Implementation Lag
Administration		$ 23,087	**$ 23,087**	
Subtotal	$ 1,139,967	$ 1,212,583	$ 1,212,583	
Partner Program Costs				
DSM Incentives		$ -	$ -	Including Implementation Lag
Administration		$ -	**$ -**	
Subtotal	$ -	$ -	$ -	
Participants' Net Costs				
Incremental Cost		$ 1,610,395	$ 1,610,395	
Subtotal	$ 1,519,240	$ 1,610,395	$ 1,610,395	
Alternate Savings - Net				
Energy (Purchases)		$ -	$ -	$1.376 PV $ per kWh
Capacity (Purchases)		$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 1,212,536		$ 1,048,766	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 3.0**		**$ 3.0**	Informational (for comparison with supply options)

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Measure Data for Retrofit Light Comm. ENERGY STAR® Boiler Program

PER MEASURE			Implementation Lag	
Total Cost	$	18,695		
Total Incentive	$	3,462		
Utility Incentive	**$**	***3,462***	*No lag*	*Present Value accounts for any implementation lag*
Partner Incentive	**$**	**-**	*No lag*	*Present Value accounts for any implementation lag*
Participant Cost	**$**	**15,233**		

Annual Impact Per Measure			Average Annual Energy Savings per Measure	
Time to implementation		Years		
nergy Savings per installation	**296.0**	GJ	-	Present Value accounts for any implementation lag
Free Rider Rate / Net-to-Gross	**18%**	82%		Net-to-Gross
Alternate Energy Impact		GJ	-	kWh; Present Value accounts for any lag
Alternate Capacity Impact		kW/a	-	kW/a; Present Value accounts for any lag
Measure Lifetime	**20**	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	Explanatory Notes
	24	26	**26**	Estimated Participation
Impact				
Gross Energy Savings (GJ)	7,235	7,696	7,696	Extension of Unit Savings x No. of Upgrades (Including Lag)
Net Energy Savings (GJ)	5,933	6,311	6,311	Gross Energy Savings less Free Riders
nergy Impact (Increase) (kWh)	-	-	-	Other Utility Billed energy impact (Including any lag)
acity Impact (Increase) (kW/a)	-	-	-	Other Utility Billed capacity impact (Including any lag)

Cost Benefit Summary

	2009 NPV	*$ Total*	2010	
Avoided Revenue Requirements				
PV $ per GJ			$105.21	
Energy Purchas	$ 663,925	$ 663,925	$ 663,925	
Utility Program Costs				
DSM Incentives		$ 90,012	$ 90,012	Including Implementation Lag
Administration		$ 5,035	**$ 5,035**	
Subtotal	$ 89,355	$ 95,047	$ 95,047	
Partner Program Costs				
DSM Incentives		$ -	$ -	Including Implementation Lag
Administration		$ -	**$ -**	
Subtotal	$ -	$ -	$ -	
Participants' Net Costs				
Incremental Cost		$ 324,768	$ 324,768	
Subtotal	$ 306,384	$ 324,768	$ 324,768	
Alternate Savings - Net				
Energy (Purchases)		$ -	$ -	$1.376 PV $ per kWh
Capacity (Purchases)		$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	
Total Resource Net Benefit (C	$ 268,185		$ 244,110	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (	**$ 1.4**		**$ 1.4**	Informational (for comparison with supply options)

Fortis BC
COMMERCIAL
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Measure Data for Retrofit Efficient Commercial Water Heater

PER MEASURE			Implementation Lag	
Total Cost	$	5,378		
Total Incentive	$	2,206		
Utility Incentive	*$*	*2,206*	*No lag*	*Present Value accounts for any implementation lag*
Partner Incentive	*$*	*-*	*No lag*	*Present Value accounts for any implementation lag*
Participant Cost	$	3,172		

Annual Impact Per Measure			Average Annual Energy Savings per Measure
Time to implementation		Years	
nergy Savings per installation	89.0	GJ	- Present Value accounts for any implementation lag
Free Rider Rate / Net-to-Gross	5%	95%	Net-to-Gross
Alternate Energy Impact		GJ	- kWh; Present Value accounts for any lag
Alternate Capacity Impact		kW/a	- kW/a; Present Value accounts for any lag
Measure Lifetime	12	Years	Estimated lifespan of measure

ANNUAL ACTIVITY	2009 NPV	Total	2010	Explanatory Notes
	7	7	7	Estimated Participation
Impact				
Gross Energy Savings (GJ)	586	623	623	Extension of Unit Savings x No. of Upgrades (Including Lag)
Net Energy Savings (GJ)	556	592	592	Gross Energy Savings less Free Riders
nergy Impact (Increase) (kWh)	-	-	-	Other Utility Billed energy impact (Including any lag)
acity Impact (Increase) (kW/a)	-	-	-	Other Utility Billed capacity impact (Including any lag)

Cost Benefit Summary

	2009 NPV	*$ Total*	2010	
Avoided Revenue Requirements				
PV $ per GJ			$76.30	
Energy Purcha	$ 45,156	$ 45,156	$ 45,156	
Utility Program Costs				
DSM Incentives		$ 15,442	$ 15,442	Including Implementation Lag
Administration		$ 3,261	$ 3,261	
Subtotal	$ 17,583	$ 18,703	$ 18,703	
Partner Program Costs				
DSM Incentives		$ -	$ -	Including Implementation Lag
Administration		$ -	$ -	
Subtotal	$ -	$ -	$ -	
Participants' Net Costs				
Incremental Cost		$ 21,094	$ 21,094	
Subtotal	$ 19,900	$ 21,094	$ 21,094	
Alternate Savings - Net				
Energy (Purchases)		$ -	$ -	$1.006 PV $ per kWh
Capacity (Purchases)		$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	
Total Resource Net Benefit (C	$ 7,673		$ 5,359	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (	**$ 3.8**		**$ 3.8**	Informational (for comparison with supply options)

Fortis BC
COMMERCIAL
NEW

Measure Data for Retrofit Energy Assessment

PER MEASURE

			Implementation Lag	
Total Cost	$	1,200		
Total Incentive	$	1,200		
Utility Incentive	***$***	***1,200***	*No lag*	*Present Value accounts for any implementation lag*
Partner Incentive	***$***	***-***	*No lag*	*Present Value accounts for any implementation lag*
Participant Cost	**$**	**-**		

Annual Impact Per Measure — Average Annual Energy Savings per Measure

Time to implementation		Years	
Energy Savings per installation	**488.0**	GJ	- Present Value accounts for any implementation lag
Free Rider Rate / Net-to-Gross	**35%**	65%	Net-to-Gross
Alternate Energy Impact		GJ	- kWh; Present Value accounts for any lag
Alternate Capacity Impact		kW/a	- kW/a; Present Value accounts for any lag
Measure Lifetime	**1**	Years	Estimated lifespan of measure

ANNUAL ACTIVITY	2009 NPV	Total	2010	Explanatory Notes
	52	55	**55**	Estimated Participation
Impact				
Gross Energy Savings (GJ)	25,233	26,840	26,840	Extension of Unit Savings x No. of Upgrades (Including Lag)
Net Energy Savings (GJ)	16,401	17,446	17,446	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	-	-	-	Other Utility Billed energy impact (Including any lag)
Alternate Capacity Impact (Increase) (kW/a)	-	-	-	Other Utility Billed capacity impact (Including any lag)

Cost Benefit Summary

	2009 NPV	*$ Total*	2010	
Avoided Revenue Requirements				
PV $ per GJ			$12.32	
Energy Purchases	$ 214,912	$ 214,912	$ 214,912	
Utility Program Costs				
DSM Incentives		$ 66,000	$ 66,000	Including Implementation Lag
Administration		$ 24,523	**$ 24,523**	
Subtotal	$ 85,102	$ 90,523	$ 90,523	
Partner Program Costs				
DSM Incentives		$ -	$ -	Including Implementation Lag
Administration		$ -	**$ -**	
Subtotal	$ -	$ -	$ -	
Participants' Net Costs				
Incremental Cost		$ -	$ -	
Subtotal	$ -	$ -	$ -	
Alternate Savings - Net				
Energy (Purchases)		$ -	$ -	$0.113 PV $ per kWh
Capacity (Purchases)		$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 129,810		$ 124,389	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 5.5**		**$ 5.5**	Informational (for comparison with supply options)

Fortis BC
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NEW

Measure Data for Fireplace timer pilot program

PER MEASURE

Total Cost	$ 50		**Implementation Lag**	
Total Incentive	$ 50			
Utility Incentive	***$ 50***		*No lag*	*Present Value accounts for any implementation lag*
Partner Incentive	***$ -***		*No lag*	*Present Value accounts for any implementation lag*
Participant Cost	**$ -**			

Annual Impact Per Measure — Average Annual Energy Savings per Measure

Time to implementation		Years	
Energy Savings per installation	**3.0**	GJ	- Present Value accounts for any implementation lag
Free Rider Rate / Net-to-Gross	**0%**	100%	Net-to-Gross
Alternate Energy Impact		GJ	- kWh; Present Value accounts for any lag
Alternate Capacity Impact		kW/a	- kW/a; Present Value accounts for any lag
Measure Lifetime	**5**	Years	Estimated lifespan of measure

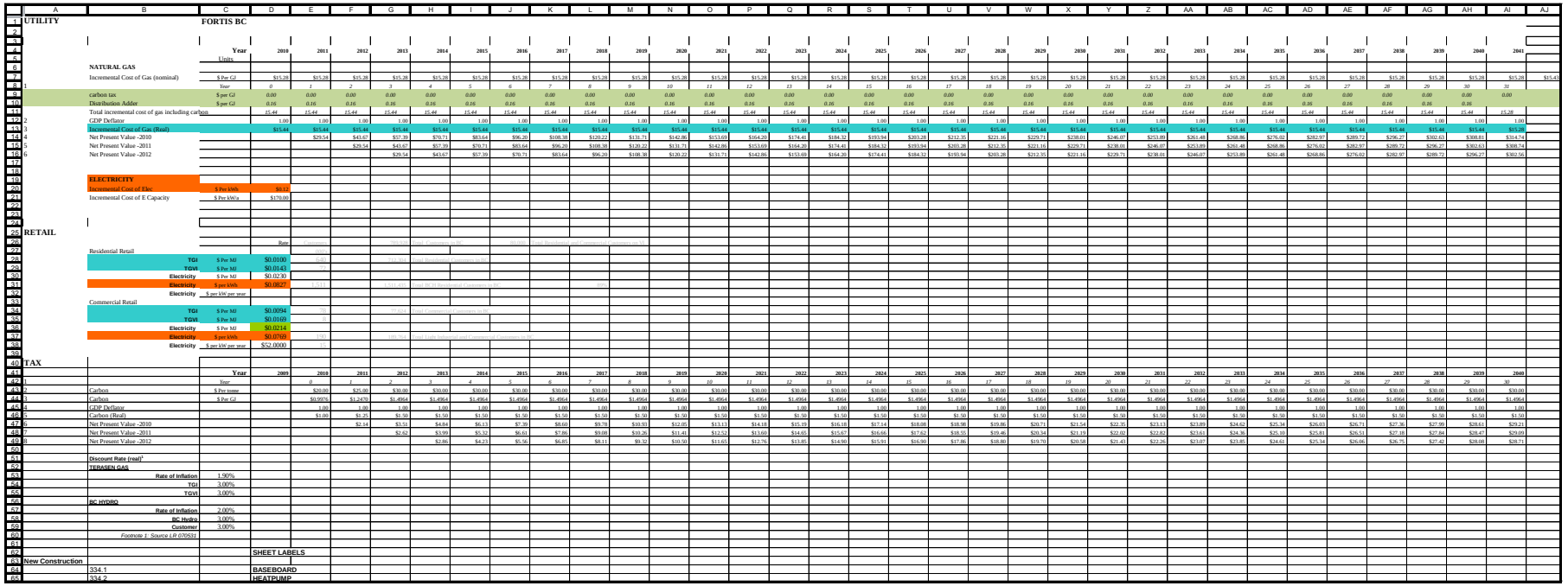
ANNUAL ACTIVITY	2009 NPV	Total	2010	Explanatory Notes
	183	195	**195**	Estimated Participation
Impact				
Gross Energy Savings (GJ)	550	585	585	Extension of Unit Savings x No. of Upgrades (Including Lag)
Net Energy Savings (GJ)	550	585	585	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	-	-	-	Other Utility Billed energy impact (Including any lag)
Alternate Capacity Impact (Increase) (kW/a)	-	-	-	Other Utility Billed capacity impact (Including any lag)

Cost Benefit Summary

	2009 NPV	*$ Total*	2010	
Avoided Revenue Requirements				
PV $ per GJ			$38.87	
Energy Purchases	$ 22,738	$ 22,738	$ 22,738	
Utility Program Costs				
DSM Incentives		$ 9,750	$ 9,750	Including Implementation Lag
Administration		$ -	$ -	
Subtotal	$ 9,166	$ 9,750	$ 9,750	
Partner Program Costs				
DSM Incentives		$ -	$ -	Including Implementation Lag
Administration		$ -	$ -	
Subtotal	$ -	$ -	$ -	
Participants' Net Costs				
Incremental Cost		$ -	$ -	
Subtotal	$ -	$ -	$ -	
Alternate Savings - Net				
Energy (Purchases)		$ -	$ -	$0.505 PV $ per kWh
Capacity (Purchases)		$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 13,572		$ 12,988	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 4.0**		**$ 4.0**	Informational (for comparison with supply options)

FORTIS BC

	PROGRAM														ALTERNATE		NET PRESENT VALUE									BENEFIT/COST							PARAMETERS																	
	COSTS ($000)										SAVINGS (GJ)			LIFE	Impact		Levelized Cost	Utility Benefits (Costs)		Participant Benefits (Costs)			Program Net Savings			Natural Gas	Participant			Natural Gas		SCT Net Benefits	UTILITY				PARTICIPANT													
	Utility			Partners			Participant	Total	% Utility	% Partner	% Participant	Gross	Net-to-Gross	Net	Years	Energy	Capacity		Program	Alternate	Program	Carbon Tax	Alternate	Natural Gas	Alternate Energy	Alternate Capacity		Total Costs	Total Benefits	Benefit/Cost				Natural Gas Utility Discount Rate	Natural Gas Supply	Alternate Discount Rate	Alternate Supply	Discount Rate	Natural Gas NPV	Carbon Tax NPV	Alternate Energy NPV	Alternate Capacity NPV	Natural Gas Tariff	Energy Tariff	Capacity Tariff								
	Incentives	Administration	Total	Incentives	Administration	Total											($/GJ)	($'000s)	($'000s)	($'000s)	($'000s)	($'000s)	(GJ)	(MWh)	(kW)	Utility	($'000s)	($'000s)		Rate Impact	Societal Cost Test	($'000s)		$/GJ		$/kWh		$/GJ	$/GJ	$/kWh	$/kW/a	$/GJ	$/kWh	$/kW/a								
Label	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR	AS	AT								
Source Sheet or Calculation	Program	Program	B+C	Program	Program	E+F	Program	D+G+H	D/I	G/I	H/I	Program	Program	M-N	Program	Program	Program	D/Y	O-A-J	Q x N x AL	M x N x AN	M x N x AO	N x (Q-AP + R-A-Q)	PV(AI,P,-O)	PV(AK,P,-Q*N)	PV(AK,P,-R)	T/D	H>0, (V+W)<0	H<0, (V+W)>0, X	AD/AC	T/(V+D)	(T+U)/I	(T+U)-I	Input	Program	Input	Input	Input	PV(AM,P,-InputD33)	Input	PV(AM,P,-InputD28)	PV(AM,P,-InputD29)	Input	Input	Input								
2010																																																					
RESIDENTIAL:																																																					
334.1	5	0	6	0	0	0	17	23	25%	0%	75%	195	100%	195	15	36	-	2	38	51	22	4	33	2,328	428	-	6.6	17	58	3.3	1.4	3.9	66	3.00%	193.94	3%	1.43	3.0%	111.75	18.08	0.92	0.00	9.999	0.083	-								
334.2	2	0	2	0	0	0	4	6	38%	0%	62%	97	100%	97	10	5	-	3	14	5	8	1	3	827	45	-	6.2	4	12	3.4	1.4	3.3	13	3.00%	142.86	3%	1.02	3.0%	79.85	13.13	0.66	0.00	9.999	0.083	-								
334.3	8	0	8	0	0	0	5	14	61%	0%	39%	398	100%	398	10	23	-	2	57	24	32	5	15	3,395	197	-	6.8	5	52	10.0	1.4	5.9	67	3.00%	142.86	3%	1.02	3.0%	79.85	13.13	0.66	0.00	9.999	0.083	-								
334.4	1	0	1	0	0	0	2	2	35%	0%	65%	22	100%	22	15	3	-	3	4	4	2	0	2	263	30	-	4.9	2	5	3.3	1.3	3.2	5	3.00%	193.94	3%	1.43	3.0%	111.75	18.08	0.92	0.00	9.999	0.083	-								
334.5	10	0	10	0	0	0	0	10	100%	0%	0%	353	100%	353	15	0	-	2	68	N/A	39	6	N/A	4,214	0	-	7.0	-	46	N/A	1.4	7.0	59	3.00%	193.94	3%	1.43	3.0%	111.75	18.08	0.92	0.00	9.999	0.083	-								
334.6	3	0	3	0	0	0	24	27	13%	0%	87%	114	100%	114	15	18	-	3	22	26	13	2	17	1,361	216	-	6.4	24	31	1.3	1.4	1.8	21	3.00%	193.94	3%	1.43	3.0%	111.75	18.08	0.92	0.00	9.999	0.083	-								
334.7	5	0	5	0	0	0	14	19	25%	0%	75%	162	100%	162	15	47	-	2	31	67	18	3	43	1,934	560	-	6.6	14	64	4.4	1.4	5.1	79	3.00%	193.94	3%	1.43	3.0%	111.75	18.08	0.92	0.00	9.999	0.083	-								
350	13	2	15	0	0	0	146	161	9%	0%	91%	397	100%	397	15	186	-	3	77	267	44	7	171	4,739	2,222	-	5.2	146	222	1.5	1.3	2.1	182	3.00%	193.94	3%	1.43	3.0%	111.75	18.08	0.92	0.00	9.999	0.083	-								
360.1	42	0	43	0	0	0	164	207	21%	0%	79%	1,323	100%	1,323	15	733	-	3	257	1,050	148	24	673	15,794	8,751	-	6.0	164	845	5.1	1.3	6.3	1,100	3.00%	193.94	3%	1.43	3.0%	111.75	18.08	0.92	0.00	9.999	0.083	-								
360.2	1	0	1	0	0	0	35	36	3%	0%	97%	37	100%	37	12	44	-	3	6	52	3	1	34	368	437	-	5.4	35	38	1.1	1.3	1.6	22	3.00%	164.20	3%	1.19	3.0%	93.18	15.19	0.77	0.00	9.999	0.083	-								
360.3	10	0	11	0	0	0	26	37	29%	0%	71%	303	100%	303	20	77	-	2	72	138	42	7	88	4,508	1,149	-	6.7	26	137	5.3	1.4	5.8	173	3.00%	238.01	3%	1.79	3.0%	139.27	22.35	1.14	0.00	9.999	0.083	-								
361.1	13	0	13	0	0	0	1	14	90%	0%	10%	369	100%	369	20	0	-	2	88	N/A	51	8	N/A	5,490	0	-	6.8	1	60	40.7	1.4	6.1	73	3.00%	238.01	3%	1.79	3.0%	139.27	22.35	1.14	0.00	9.999	0.083	-								
361.2	17	0	18	0	0	0	31	48	36%	0%	64%	618	100%	618	15	92	-	2	120	132	69	11	84	7,378	1,098	-	6.8	31	165	5.3	1.4	5.2	203	3.00%	193.94	3%	1.43	3.0%	111.75	18.08	0.92	0.00	9.999	0.083	-								
361.3	4	0	5	0	0	0	4	8	56%	0%	44%	157	100%	157	15	28	-	2	30	40	18	3	26	1,874	335	-	6.5	4	46	12.4	1.4	8.5	62	3.00%	193.94	3%	1.43	3.0%	111.75	18.08	0.92	0.00	9.999	0.083	-								
361.4	39	0	39	0	0	0	122	161	24%	0%	76%	1,374	100%	1,374	15	115	-	2	266	165	154	25	106	16,403	1,376	-	6.9	122	284	2.3	1.4	2.7	271	3.00%	193.94	3%	1.43	3.0%	111.75	18.08	0.92	0.00	9.999	0.083	-								
362.2	82	0	82	0	0	0	17	99	83%	0%	17%	2,552	100%	2,552	15	0	-	3	495	N/A	285	46	N/A	30,466	0	-	6.0	17	331	19.3	1.3	5.0	396	3.00%	193.94	3%	1.43	3.0%	111.75	18.08	0.92	0.00	9.999	0.083	-								
362.3	0	0	0	0	0	0	7	7	4%	0%	96%	156	100%	156	10	0	-	0	22	N/A	12	2	N/A	1,331	0	-	88.8	7	15	2.1	1.8	3.1	15	3.00%	142.86	3%	1.02	3.0%	79.85	13.13	0.66	0.00	9.999	0.083	-								
362.4	12	0	12	0	0	0	0	12	100%	0%	0%	844	100%	844	10	0	-	2	121	N/A	67	11	N/A	7,199	0	-	9.8	-	78	N/A	1.5	9.8	108	3.00%	142.86	3%	1.02	3.0%	79.85	13.13	0.66	0.00	9.999	0.083	-								
362.5	1	0	1	0	0	0	0	1	100%	0%	0%	59	100%	59	20	0	-	1	14	N/A	8	1	N/A	878	0	-	10.7	-	10	N/A	1.5	10.7	13	3.00%	238.01	3%	1.79	3.0%	139.27	22.35	1.14	0.00	9.999	0.083	-								
398	3	0	3	0	0	0	22	25	12%	0%	88%	102	100%	102	15	50	-	3	20	71	11	2	46	1,218	594	-	6.4	22	59	2.7	1.4	3.6	66	3.00%	193.94	3%	1.43	3.0%	111.75	18.08	0.92	0.00	9.999	0.083	-								
399.1	23	0	23	0	0	0	23	46	50%	0%	50%	853	100%	853	20	0	-	2	203	N/A	119	19	N/A	12,690	0	-	8.7	23	138	6.0	1.4	4.4	157	3.00%	238.01	3%	1.79	3.0%	139.27	22.35	1.14	0.00	9.999	0.083	-								
399.2	15	0	15	0	0	0	60	75	20%	0%	80%	619	100%	619	15	96	-	2	120	138	69	11	88	7,390	1,147	-	7.9	60	169	2.8	1.4	3.4	183	3.00%	193.94	3%	1.43	3.0%	111.75	18.08	0.92	0.00	9.999	0.083	-								
401.1	39	2	41	0	0	0	24	65	63%	0%	37%	1,386	100%	1,386	15	0	-	2	269	N/A	155	25	N/A	16,546	0	-	6.6	24	180	7.6	1.4	4.2	204	3.00%	193.94	3%	1.43	3.0%	111.75	18.08	0.92	0.00	9.999	0.083	-								
401.2	14	2	16	0	0	0	32	48	33%	0%	67%	491	100%	491	15	107	-	3	95	154	55	9	98	5,862	1,280	-	6.0	32	162	5.0	1.3	5.2	201	3.00%	193.94	3%	1.43	3.0%	111.75	18.08	0.92	0.00	9.999	0.083	-								
401.3	22	5	27	0	0	0	30	57	48%	0%	52%	788	100%	788	15	107	-	3	153	154	88	14	98	9,407	1,280	-	5.6	30	201	6.7	1.3	5.4	249	3.00%	193.94	3%	1.43	3.0%	111.75	18.08	0.92	0.00	9.999	0.083	-								
447.1	77	5	82	0	0	0	133	215	38%	0%	62%	2,227	100%	2,227	20	0	-	2	530	N/A	310	50	N/A	33,132	0	-	6.5	133	360	2.7	1.4	2.5	315	3.00%	238.01	3%	1.79	3.0%	139.27	22.35	1.14	0.00	9.999	0.083	-								
447.2	3	0	3	0	0	0	3	6	47%	0%	53%	114	100%	114	12	0	-	3	19	N/A	11	2	N/A	1,135	0	-	6.4	3	12	3.7	1.4	3.0	12	3.00%	164.20	3%	1.19	3.0%	93.18	15.19	0.77	0.00	9.999	0.083	-								
447.3	9	0	9	0	0	0	5	14	62%	0%	38%	363	100%	363	12	0	-	2	60	N/A	34	6	N/A	3,613	0	-	6.8	5	39	7.2	1.4	4.2	45	3.00%	164.20	3%	1.19	3.0%	93.18	15.19	0.77	0.00	9.999	0.083	-								
447.4	6	0	6	0	0	0	5	11	54%	0%	46%	249	100%	249	12	0	-	2	41	N/A	23	4	N/A	2,479	0	-	6.7	5	27	5.3	1.4	3.6	30	3.00%	164.20	3%	1.19	3.0%	93.18	15.19	0.77	0.00	9.999	0.083	-								
447.5	1	0	1	0	0	0	2	3	42%	0%	58%	40	100%	40	15	0	-	3	8	N/A	4	1	N/A	478	0	-	5.7	2	5	2.8	1.3	2.4	5	3.00%	193.94	3%	1.43	3.0%	111.75	18.08	0.92	0.00	9.999	0.083	-								
447.7	11	0	11	0	0	0	9	20	57%	0%	43%	401	100%	401	15	0	-	2	78	N/A	45	7	N/A	4,787	0	-	6.8	9	52	5.9	1.4	3.8	58	3.00%	193.94	3%	1.43	3.0%	111.75	18.08	0.92	0.00	9.999	0.083	-								
451.1.	4	0	4	0	0	0	1	5	82%	0%	18%	144	100%	144	15	0	-	2	28	N/A	16	3	N/A	1,719	0	-	6.5	1	19	19.5	1.4	5.3	23	3.00%	193.94	3%	1.43	3.0%	111.75	18.08	0.92	0.00	9.999	0.083	-								
451.2	2	0	2	0	0	0	0	2	100%	0%	0%	112	100%	112	15	0	-	2	22	N/A	13	2	N/A	1,337	0	-	9.7	-	15	N/A	1.5	9.7	19	3.00%	193.94	3%	1.43	3.0%	111.75	18.08	0.92	0.00	9.999	0.083	-								
451.3	1	0	1	0	0	0	1	2	62%	0%	38%	30	100%	30	15	0	-	3	6	N/A	3	1	N/A	358	0	-	5.3	1	4	5.9	1.3	3.3	4	3.00%	193.94	3%	1.43	3.0%	111.75	18.08	0.92	0.00	9.999	0.083	-								
451.4	3	0	3	0	0	0	0	3	90%	0%	10%	114	100%	114	12	0	-	3	19	N/A	11	2	N/A	1,135	0	-	6.4	0	12	39.2	1.4	5.8	15	3.00%	164.20	3%	1.19	3.0%	93.18	15.19	0.77	0.00	9.999	0.083	-								
453.2	1	0	1	0	0	0	0	1	100%	0%	0%	51	100%	51	15	0	-	2	10	N/A	6	1	N/A	609	0	-	7.9	-	7	N/A	1.4	7.9	9	3.00%	193.94	3%	1.43	3.0%	111.75	18.08	0.92	0.00	9.999	0.083	-								
453.3	1	0	1	0	0	0	1	2	47%	0%	53%	25	100%	25	15	0	-	4	5	N/A	3	0	N/A	298	0	-	4.6	1	3	2.7	1.3	2.2	3	3.00%	193.94	3%	1.43	3.0%	111.75	18.08	0.92	0.00	9.999	0.083	-								
453.5	2	0	2	0	0	0	0	2	100%	0%	0%	93	100%	93	15	0	-	2	18	N/A	10	2	N/A	1,110	0	-	8.0	-	12	N/A	1.4	8.0	16	3.00%	193.94	3%	1.43	3.0%	111.75	18.08	0.92	0.00	9.999	0.083	-								
460	16	0	16	0	0	0	2	18	87%	0%	13%	490	100%	490	15	0	-	3	95	N/A	55	9	N/A	5,850	0	-	6.0	2	64	27.8	1.3	5.2	77	3.00%	193.94	3%	1.43	3.0%	111.75	18.08	0.92	0.00	9.999	0.083	-								
Total Commercial	519	25	543	0	0	0	974	1,517	36%	0%	64%	18,222		18,222		1,768	0	2	4,679	3,298	2,077	336	1,626	221,901	21,144	0	8.6	974	4,039	4.1	1.8	5.3	6,461																					
ial with partner's incentive	519	25	543	0	0	167	807	1,517	36%	11%	53%	18,222		18,222		1,768	0	2	4,679	3,298	2,077	336	1,626	221,901	21,144	0	8.6	807	4,039	5.0	1.8	5.3	6,461																					



	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ
1	**UTILITY**		**FORTIS BC**																																	
2																																				
3																																				
4			**Year**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	
5			Units																																	
6		**NATURAL GAS**																																		
7		Incremental Cost of Gas (nominal)	$ Per GJ	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.43
8	1		*Year*	*0*	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*	*16*	*17*	*18*	*19*	*20*	*21*	*22*	*23*	*24*	*25*	*26*	*27*	*28*	*29*	*30*	*31*	
9		carbon tax	$ per GJ	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	
10		Distribution Adder	$ per GJ	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	
11		Total incremental cost of gas including carbon		*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.28*	
12	2	GDP Deflator		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
13	3	Incremental Cost of Gas (Real)		$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.28	
14	4	Net Present Value -2010			$29.54	$43.67	$57.39	$70.71	$83.64	$96.20	$108.38	$120.22	$131.71	$142.86	$153.69	$164.20	$174.41	$184.32	$193.94	$203.28	$212.35	$221.16	$229.71	$238.01	$246.07	$253.89	$261.48	$268.86	$276.02	$282.97	$289.72	$296.27	$302.63	$308.81	$314.74		
15	5	Net Present Value -2011			$29.54	$43.67	$57.39	$70.71	$83.64	$96.20	$108.38	$120.22	$131.71	$142.86	$153.69	$164.20	$174.41	$184.32	$193.94	$203.28	$212.35	$221.16	$229.71	$238.01	$246.07	$253.89	$261.48	$268.86	$276.02	$282.97	$289.72	$296.27	$302.63	$308.74			
16	6	Net Present Value -2012				$29.54	$43.67	$57.39	$70.71	$83.64	$96.20	$108.38	$120.22	$131.71	$142.86	$153.69	$164.20	$174.41	$184.32	$193.94	$203.28	$212.35	$221.16	$229.71	$238.01	$246.07	$253.89	$261.48	$268.86	$276.02	$282.97	$289.72	$296.27	$302.56				
17																																				
18																																				
19		**ELECTRICITY**																																		
20		Incremental Cost of Elec	$ Per kWh	$0.10																																
21		Incremental Cost of E Capacity	$ Per kW/a	$170.00																																
22																																				
23																																				
24																																				
25	**RETAIL**																																			
26				Rate	Customers																															
27		Residential Retail			1,000																															
28		**TGI**	$ Per MJ	$0.0100	1,000																															
29		**TGVI**	$ Per MJ	$0.0143	1,000																															
30		**Electricity**	$ Per MJ	$0.0230																																
31		**Electricity**	$ per kWh	$0.0829	1,000																															
32		**Electricity**	$ per kW per year		1,000																															
33		Commercial Retail																																		
34		**TGI**	$ Per MJ	$0.0094	50																															
35		**TGVI**	$ Per MJ	$0.0160	50																															
36		**Electricity**	$ Per MJ	$0.0214																																
37		**Electricity**	$ per kWh	$0.0749	750																															
38		**Electricity**	$ per kW per year	$52.0000	50																															
39																																				
40	**TAX**																																			
41			**Year**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**		
42	1		*Year*		*0*	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*	*16*	*17*	*18*	*19*	*20*	*21*	*22*	*23*	*24*	*25*	*26*	*27*	*28*	*29*	*30*	
43	2	Carbon	$ Per tonne		$20.00	$25.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	
44	3	Carbon	$ Per GJ		$0.9976	$1.2470	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	
45	4	GDP Deflator			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
46	5	Carbon (Real)			$1.00	$1.25	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	
47	6	Net Present Value -2010			$2.14	$3.51	$4.84	$6.13	$7.39	$8.60	$9.78	$10.93	$12.05	$13.13	$14.18	$15.19	$16.18	$17.14	$18.08	$18.98	$19.86	$20.71	$21.54	$22.35	$23.13	$23.89	$24.62	$25.34	$26.03	$26.71	$27.38	$27.99	$28.61	$29.21			
48	7	Net Present Value -2011				$2.62	$3.99	$5.32	$6.61	$7.86	$9.08	$10.26	$11.41	$12.52	$13.60	$14.65	$15.67	$16.66	$17.62	$18.55	$19.46	$20.34	$21.19	$22.02	$22.82	$23.61	$24.36	$25.10	$25.81	$26.51	$27.18	$27.84	$28.47	$29.09				
49	8	Net Present Value -2012					$2.86	$4.23	$5.56	$6.85	$8.11	$9.32	$10.50	$11.65	$12.76	$13.85	$14.90	$15.91	$16.90	$17.86	$18.80	$19.70	$20.58	$21.43	$22.26	$23.07	$23.85	$24.61	$25.34	$26.06	$26.75	$27.42	$28.08	$28.71			
50																																				
51		**Discount Rate (real)**[1]																																		
52		**TERASEN GAS**																																		
53		**Rate of Inflation**	1.90%																																	
54		**TGI**	3.00%																																	
55		**TGVI**	3.00%																																	
56		**BC HYDRO**																																		
57		**Rate of Inflation**	2.00%																																	
58		**BC Hydro**	3.00%																																	
59		**Customer**	3.00%																																	
60		*Footnote 1: Source LR 670531*																																		
61																																				
62				**SHEET LABELS**																																
63	**New Construction**																																			
64		334.1		**BASEBOARD**																																
65		334.2		**HEATPUMP**																																

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NEW

Measure Data for 334.1

PER MEASURE			Utility Incentive to the participant	partner incentive
Total Incremental Cost	$ 22,900			
Utility Incentive	$ 5,466		$ 5,466	$ -
Incremental Participant cost	$ 17,434			

Annual Impact Per Measure

Energy Savings per installation	195.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	129	GJ	35,833	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	15	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0		Estimated Participation
Impact						
Gross Energy Savings (GJ)	189	195	195	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	189	195	195	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	34,790	35,833	35,833	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$193.94	$184.32	$184.32	
Energy Purchases	$ 37,819	$ 37,819	$ 37,819	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 5,466	$ 5,466	$ -	$ -	
Administration		$ 250	$ 250	$ -		
Subtotal	$ 5,550	$ 5,716	$ 5,716	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -		$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 17,434	$ 17,434	$ -	$ -	
Subtotal	$ 16,926	$ 17,434	$ 17,434	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ 51,333	$ 51,333	$ -	$ -	$1.433 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ 51,333	$ 51,333	$ 51,333	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 66,676		$ 66,002	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 9.9**		**$ 9.9**	**$ -**	**$ -**	Informational (for comparison with supply options)

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NEW

Measure Data for 334.2

PER MEASURE			Utility Incentive to the participant	partner incentive
Total Incremental Cost	$ 5,600			
Utility Incentive	$ 1,969		$ 1,969	$ -
Incremental Participant cost	$ 3,631			

Annual Impact Per Measure

nergy Savings per installation	97.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	19	GJ	5,278	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	10	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0		Estimated Participation
Impact						
Gross Energy Savings (GJ)	94	97	97	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	94	97	97	0	0	Gross Energy Savings less Free Riders
nergy Impact (Increase) (kWh)	5,124	5,278	5,278	0	0	Other Utility Billed energy impact
acity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$142.86	$142.86	$142.86	
Energy Purchas	$ 13,857	$ 13,857	$ 13,857	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 1,969	$ 1,969	$ -	$ -	
Administration		$ 250	$ 250	$ -		
Subtotal	$ 2,154	$ 2,219	$ 2,219	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -		$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 3,631	$ 3,631	$ -	$ -	
Subtotal	$ 3,525	$ 3,631	$ 3,631	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ 5,402	$ 5,402	$ -	$ -	$1.024 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ 5,402	$ 5,402	$ 5,402	$ -	$ -	
Total Resource Net Benefit (C	$ 13,580		$ 13,410	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (L	**$ 7.1**		**$ 7.1**	**$ -**	**$ -**	Informational (for comparison with supply options)

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NEW

Measure Data for 334.3

PER MEASURE			Utility Incentive to the participant	partner incentive
Total Incremental Cost	$ 13,300			
Utility Incentive	$ 8,077		$ 8,077	$ -
Incremental Participant cost	$ 5,223			

Annual Impact Per Measure

nergy Savings per installation	398.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	83	GJ	23,056	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	10	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0		Estimated Participation
Impact						
Gross Energy Savings (GJ)	386	398	398	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	386	398	398	0	0	Gross Energy Savings less Free Riders
nergy Impact (Increase) (kWh)	22,384	23,056	23,056	0	0	Other Utility Billed energy impact
acity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$142.86	$142.86	$142.86	
Energy Purchas	$ 56,858	$ 56,858	$ 56,858	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 8,077	$ 8,077	$ -	$ -	
Administration		$ 250	$ 250	$ -		
Subtotal	$ 8,084	$ 8,327	$ 8,327	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -		$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 5,223	$ 5,223	$ -	$ -	
Subtotal	$ 5,071	$ 5,223	$ 5,223	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ 23,600	$ 23,600	$ -	$ -	$1.024 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ 23,600	$ 23,600	$ 23,600	$ -	$ -	
Total Resource Net Benefit (C	$ 67,303		$ 66,909	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (L	**$ 4.0**		**$ 4.0**	**$ -**	**$ -**	Informational (for comparison with supply options)

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NEW

Measure Data for 334.4

PER MEASURE			Utility Incentive to the participant	partner incentive
Total Incremental Cost	$ 2,200			
Utility Incentive	$ 617		$ 617	$ -
Incremental Participant cost	$ 1,583			

Annual Impact Per Measure

nergy Savings per installation	22.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	9	GJ	2,500	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	15	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0		Estimated Participation
Impact						
Gross Energy Savings (GJ)	21	22	22	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	21	22	22	0	0	Gross Energy Savings less Free Riders
nergy Impact (Increase) (kWh)	2,427	2,500	2,500	0	0	Other Utility Billed energy impact
acity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$193.94	$193.94	$193.94	
Energy Purchas	$ 4,267	$ 4,267	$ 4,267	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 617	$ 617	$ -	$ -	
Administration		$ 250	$ 250	$ -		
Subtotal	$ 842	$ 867	$ 867	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -		$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 1,583	$ 1,583	$ -	$ -	
Subtotal	$ 1,537	$ 1,583	$ 1,583	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ 3,581	$ 3,581	$ -	$ -	$1.433 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ 3,581	$ 3,581	$ 3,581	$ -	$ -	
Total Resource Net Benefit (C	$ 5,469		$ 5,398	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (L	**$ 9.3**		**$ 9.3**	**$ -**	**$ -**	Informational (for comparison with supply options)

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NEW

Measure Data for 334.5

PER MEASURE			Utility Incentive to the participant	partner incentive
Total Incremental Cost	$ 9,600			
Utility Incentive	$ 9,600		$ 9,600	$ -
Incremental Participant cost	$ -			

Annual Impact Per Measure

Energy Savings per installation	353.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact		GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	15	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0		Estimated Participation
Impact						
Gross Energy Savings (GJ)	343	353	353	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	343	353	353	0	0	Gross Energy Savings less Free Riders
ernate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
ıate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$193.94	$193.94	$193.94	
Energy Purchases	$ 68,462	$ 68,462	$ 68,462	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 9,600	$ 9,600	$ -	$ -	
Administration		$ 250	$ 250	$ -		
Subtotal	$ 9,563	$ 9,850	$ 9,850	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -		$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.433 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 58,899		$ 58,612	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime	**$ 2.3**		**$ 2.3**	**$ -**	**$ -**	Informational (for comparison with supply options)

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NEW

Measure Data for 334.6

PER MEASURE		Utility Incentive to the participant	partner incentive
Total Incremental Cost	$ 27,100		
Utility Incentive	$ 3,195	$ 3,195	$ -
Incremental Participant cost	$ 23,905		

Annual Impact Per Measure

Energy Savings per installation	114.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	65	GJ	18,056	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	15	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0		Estimated Participation
Impact						
Gross Energy Savings (GJ)	111	114	114	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	111	114	114	0	0	Gross Energy Savings less Free Riders
Energy Impact (Increase) (kWh)	17,530	18,056	18,056	0	0	Other Utility Billed energy impact
Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$193.94	$193.94	$193.94	
Energy Purchas	$ 22,110	$ 22,110	$ 22,110	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 3,195	$ 3,195	$ -	$ -	
Administration		$ 250	$ 250	$ -		
Subtotal	$ 3,345	$ 3,445	$ 3,445	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -		$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 23,905	$ 23,905	$ -	$ -	
Subtotal	$ 23,209	$ 23,905	$ 23,905	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ 25,866	$ 25,866	$ -	$ -	$1.433 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ 25,866	$ 25,866	$ 25,866	$ -	$ -	
Total Resource Net Benefit (C	$ 21,422		$ 20,625	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (L	**$ 20.1**		**$ 20.1**	**$ -**	**$ -**	Informational (for comparison with supply options)

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NEW

Measure Data for 334.7

PER MEASURE			Utility Incentive to the participant	partner incentive
Total Incremental Cost	$ 19,000			
Utility Incentive	$ 4,541		$ 4,541	$ -
Incremental Participant cost	$ 14,459			

Annual Impact Per Measure

nergy Savings per installation	162.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	169	GJ	46,944 kWh	
Alternate Capacity Impact		kW/a		
Measure Lifetime	15	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0		Estimated Participation
Impact						
Gross Energy Savings (GJ)	157	162	162	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	157	162	162	0	0	Gross Energy Savings less Free Riders
nergy Impact (Increase) (kWh)	45,577	46,944	46,944	0	0	Other Utility Billed energy impact
acity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$193.94	$193.94	$193.94	
Energy Purchas	$ 31,419	$ 31,419	$ 31,419	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 4,541	$ 4,541	$ -	$ -	
Administration		$ 250	$ 250	$ -		
Subtotal	$ 4,651	$ 4,791	$ 4,791	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -		$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 14,459	$ 14,459	$ -	$ -	
Subtotal	$ 14,038	$ 14,459	$ 14,459	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ 67,250	$ 67,250	$ -	$ -	$1.433 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ 67,250	$ 67,250	$ 67,250	$ -	$ -	
Total Resource Net Benefit (C	$ 79,980		$ 79,419	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (L	**$ 10.0**		**$ 10.0**	**$ -**	**$ -**	Informational (for comparison with supply options)

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NEW

Measure Data for 350

PER MEASURE			Utility Incentive to the participant	partner incentive
Total Incremental Cost	$ 159,200			
Utility Incentive	$ 12,725		$ 12,725	$ -
Incremental Participant cost	$ 146,475			

Annual Impact Per Measure

nergy Savings per installation	397.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	670	GJ	186,111	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	15	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0		Estimated Participation
Impact						
Gross Energy Savings (GJ)	385	397	397	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	385	397	397	0	0	Gross Energy Savings less Free Riders
nergy Impact (Increase) (kWh)	180,690	186,111	186,111	0	0	Other Utility Billed energy impact
acity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$193.94	$193.94	$193.94	
Energy Purchas	$ 76,996	$ 76,996	$ 76,996	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 12,725	$ 12,725	$ -	$ -	
Administration		$ 2,000	$ 2,000	$ -		
Subtotal	$ 14,296	$ 14,725	$ 14,725	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -		$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 146,475	$ 146,475	$ -	$ -	
Subtotal	$ 142,209	$ 146,475	$ 146,475	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ 266,614	$ 266,614	$ -	$ -	$1.433 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ 266,614	$ 266,614	$ 266,614	$ -	$ -	
Total Resource Net Benefit (C	$ 187,105		$ 182,409	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (L	**$ 34.0**		**$ 34.0**	**$ -**	**$ -**	Informational (for comparison with supply options)

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NEW

Measure Data for 360.1

PER MEASURE			Utility Incentive to the participant	partner incentive
Total Incremental Cost	$ 206,500			
Utility Incentive	$ 42,410		$ 42,410	$ -
Incremental Participant cost	$ 164,090			

Annual Impact Per Measure

nergy Savings per installation	1323.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	2639	GJ	733,056	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	15	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0		Estimated Participation
Impact						
Gross Energy Savings (GJ)	1,284	1,323	1,323	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	1,284	1,323	1,323	0	0	Gross Energy Savings less Free Riders
nergy Impact (Increase) (kWh)	711,704	733,056	733,056	0	0	Other Utility Billed energy impact
acity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$193.94	$193.94	$193.94	
Energy Purchas	$ 256,587	$ 256,587	$ 256,587	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 42,410	$ 42,410	$ -	$ -	
Administration		$ 250	$ 250	$ -		
Subtotal	$ 41,417	$ 42,660	$ 42,660	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -		$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 164,090	$ 164,090	$ -	$ -	
Subtotal	$ 159,311	$ 164,090	$ 164,090	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$1,050,140	$1,050,140	$ -	$ -	$1.433 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ 1,050,140	$1,050,140	$1,050,140	$ -	$ -	
Total Resource Net Benefit (C	$ 1,105,999		$ 1,099,978	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (L	**$ 13.1**		**$ 13.1**	**$ -**	**$ -**	Informational (for comparison with supply options)

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NEW

Measure Data for 360.2

PER MEASURE			Utility Incentive to the participant	partner incentive
Total Incremental Cost	$ 36,000			
Utility Incentive	$ 872		$ 872	$ -
Incremental Participant cost	$ 35,128			

Annual Impact Per Measure

nergy Savings per installation	37.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	158	GJ	43,889	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	12	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0		Estimated Participation
Impact						
Gross Energy Savings (GJ)	36	37	37	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	36	37	37	0	0	Gross Energy Savings less Free Riders
nergy Impact (Increase) (kWh)	42,611	43,889	43,889	0	0	Other Utility Billed energy impact
acity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$164.20	$164.20	$164.20	
Energy Purchas	$ 6,076	$ 6,076	$ 6,076	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 872	$ 872	$ -	$ -	
Administration		$ 250	$ 250	$ -		
Subtotal	$ 1,089	$ 1,122	$ 1,122	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -		$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 35,128	$ 35,128	$ -	$ -	
Subtotal	$ 34,105	$ 35,128	$ 35,128	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ 52,424	$ 52,424	$ -	$ -	$1.194 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ 52,424	$ 52,424	$ 52,424	$ -	$ -	
Total Resource Net Benefit (C	$ 23,306		$ 22,250	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (L	**$ 98.4**		**$ 98.4**	**$ -**	**$ -**	Informational (for comparison with supply options)

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NEW

Measure Data for 360.3

PER MEASURE			Utility Incentive to the participant	partner incentive
Total Incremental Cost	$ 36,250			
Utility Incentive	$ 10,458		$ 10,458	$ -
Incremental Participant cost	$ 25,792			

Annual Impact Per Measure

nergy Savings per installation	303.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	278	GJ	77,222	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	20	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0		Estimated Participation
Impact						
Gross Energy Savings (GJ)	294	303	303	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	294	303	303	0	0	Gross Energy Savings less Free Riders
nergy Impact (Increase) (kWh)	74,973	77,222	77,222	0	0	Other Utility Billed energy impact
acity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$238.01	$238.01	$238.01	
Energy Purchas	$ 72,116	$ 72,116	$ 72,116	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 10,458	$ 10,458	$ -	$ -	
Administration		$ 250	$ 250	$ -		
Subtotal	$ 10,396	$ 10,708	$ 10,708	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -		$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 25,792	$ 25,792	$ -	$ -	
Subtotal	$ 25,041	$ 25,792	$ 25,792	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ 137,865	$ 137,865	$ -	$ -	$1.785 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ 137,865	$ 137,865	$ 137,865	$ -	$ -	
Total Resource Net Benefit (C	$ 174,544		$ 173,481	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (L	**$ 8.1**		**$ 8.1**	**$ -**	**$ -**	Informational (for comparison with supply options)

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NEW

Measure Data for 361.1

PER MEASURE			Utility Incentive to the participant	partner incentive
Total Incremental Cost	$ 14,200			
Utility Incentive	$ 12,733		$ 12,733	$ -
Incremental Participant cost	$ 1,467			

Annual Impact Per Measure

nergy Savings per installation	369.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact		GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	20	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0		Estimated Participation
Impact						
Gross Energy Savings (GJ)	358	369	369	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	358	369	369	0	0	Gross Energy Savings less Free Riders
nergy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
acity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$238.01	$238.01	$238.01	
Energy Purchas	$ 87,825	$ 87,825	$ 87,825	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 12,733	$ 12,733	$ -	$ -	
Administration		$ 250	$ 250	$ -		
Subtotal	$ 12,605	$ 12,983	$ 12,983	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -		$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 1,467	$ 1,467	$ -	$ -	
Subtotal	$ 1,424	$ 1,467	$ 1,467	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.785 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (C	$ 73,796		$ 73,375	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (L	**$ 2.6**		**$ 2.6**	**$ -**	**$ -**	Informational (for comparison with supply options)

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NEW

Measure Data for 361.2

PER MEASURE		Utility Incentive to the participant	partner incentive
Total Incremental Cost	$ 48,127		
Utility Incentive	$ 17,325	$ 17,325	$ -
Incremental Participant cost	$ 30,802		

Annual Impact Per Measure

nergy Savings per installation	618.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	331	GJ	91,944	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	15	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0		Estimated Participation
Impact						
Gross Energy Savings (GJ)	600	618	618	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	600	618	618	0	0	Gross Energy Savings less Free Riders
nergy Impact (Increase) (kWh)	89,266	91,944	91,944	0	0	Other Utility Billed energy impact
acity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$193.94	$193.94	$193.94	
Energy Purchas	$ 119,857	$ 119,857	$ 119,857	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 17,325	$ 17,325	$ -	$ -	
Administration		$ 250	$ 250	$ -		
Subtotal	$ 17,063	$ 17,575	$ 17,575	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -		$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 30,802	$ 30,802	$ -	$ -	
Subtotal	$ 29,905	$ 30,802	$ 30,802	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ 131,715	$ 131,715	$ -	$ -	$1.433 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ 131,715	$ 131,715	$ 131,715	$ -	$ -	
Total Resource Net Benefit (C	$ 204,604		$ 203,195	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (L	**$ 6.6**		**$ 6.6**	**$ -**	**$ -**	Informational (for comparison with supply options)

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NEW

Measure Data for 361.3

PER MEASURE			Utility Incentive to the participant	partner incentive
Total Incremental Cost	$ 8,107			
Utility Incentive	$ 4,401		$ 4,401	$ -
Incremental Participant cost	$ 3,706			

Annual Impact Per Measure

nergy Savings per installation	157.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	101	GJ	28,056	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	15	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0		Estimated Participation
Impact						
Gross Energy Savings (GJ)	152	157	157	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	152	157	157	0	0	Gross Energy Savings less Free Riders
nergy Impact (Increase) (kWh)	27,238	28,056	28,056	0	0	Other Utility Billed energy impact
acity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$193.94	$193.94	$193.94	
Energy Purchas	$ 30,449	$ 30,449	$ 30,449	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 4,401	$ 4,401	$ -	$ -	
Administration		$ 250	$ 250	$ -		
Subtotal	$ 4,516	$ 4,651	$ 4,651	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -		$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 3,706	$ 3,706	$ -	$ -	
Subtotal	$ 3,598	$ 3,706	$ 3,706	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ 40,191	$ 40,191	$ -	$ -	$1.433 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ 40,191	$ 40,191	$ 40,191	$ -	$ -	
Total Resource Net Benefit (C	$ 62,527		$ 62,283	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (L	**$ 4.5**		**$ 4.5**	**$ -**	**$ -**	Informational (for comparison with supply options)

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NEW

Measure Data for 361.4

PER MEASURE			Utility Incentive to the participant	partner incentive
Total Incremental Cost	$ 160,325			
Utility Incentive	$ 38,516		$ 38,516	$ -
Incremental Participant cost	$ 121,809			

Annual Impact Per Measure

nergy Savings per installation	1374.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	415	GJ	115,278	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	15	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0		Estimated Participation
Impact						
Gross Energy Savings (GJ)	1,334	1,374	1,374	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	1,334	1,374	1,374	0	0	Gross Energy Savings less Free Riders
nergy Impact (Increase) (kWh)	111,920	115,278	115,278	0	0	Other Utility Billed energy impact
acity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$193.94	$193.94	$193.94	
Energy Purchas	$ 266,478	$ 266,478	$ 266,478	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 38,516	$ 38,516	$ -	$ -	
Administration		$ 250	$ 250	$ -		
Subtotal	$ 37,637	$ 38,766	$ 38,766	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -		$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 121,809	$ 121,809	$ -	$ -	
Subtotal	$ 118,261	$ 121,809	$ 121,809	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ 165,141	$ 165,141	$ -	$ -	$1.433 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ 165,141	$ 165,141	$ 165,141	$ -	$ -	
Total Resource Net Benefit (C	$ 275,722		$ 271,045	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (L	**$ 9.8**		**$ 9.8**	**$ -**	**$ -**	Informational (for comparison with supply options)

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NEW

Measure Data for 362.2

PER MEASURE			Utility Incentive to the participant	partner incentive
Total Incremental Cost	$ 99,000			
Utility Incentive	$ 81,840		$ 81,840	$ -
Incremental Participant cost	$ 17,160			

Annual Impact Per Measure

Energy Savings per installation	2552.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact		GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	15	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0		Estimated Participation
Impact						
Gross Energy Savings (GJ)	2,478	2,552	2,552	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	2,478	2,552	2,552	0	0	Gross Energy Savings less Free Riders
Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$193.94	$193.94	$193.94	
Energy Purchas	$ 494,944	$ 494,944	$ 494,944	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 81,840	$ 81,840	$ -	$ -	
Administration		$ 250	$ 250	$ -		
Subtotal	$ 79,699	$ 82,090	$ 82,090	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -		$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 17,160	$ 17,160	$ -	$ -	
Subtotal	$ 16,660	$ 17,160	$ 17,160	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.433 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (C	$ 398,584		$ 395,694	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (L	**$ 3.3**		**$ 3.3**	**$ -**	**$ -**	Informational (for comparison with supply options)

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NEW

Measure Data for 362.3

PER MEASURE			Utility Incentive to the participant	partner incentive
Total Incremental Cost	$ 10,000			
Utility Incentive	$ 3,165		$ 3,165	$ -
Incremental Participant cost	$ 6,835			

Annual Impact Per Measure

nergy Savings per installation	156.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact		GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	10	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0		Estimated Participation
Impact						
Gross Energy Savings (GJ)	151	156	156	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	151	156	156	0	0	Gross Energy Savings less Free Riders
nergy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
acity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$142.86	$142.86	$142.86	
Energy Purchas	$ 22,286	$ 22,286	$ 22,286	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 1	$ 1	$ -	$ -	
Administration		$ 250	$ 250	$ -		
Subtotal	$ 244	$ 251	$ 251	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -		$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 6,835	$ 6,835	$ -	$ -	
Subtotal	$ 6,636	$ 6,835	$ 6,835	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.024 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (C	$ 15,407		$ 15,200	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (L	**$ 5.3**		**$ 5.3**	**$ -**	**$ -**	Informational (for comparison with supply options)

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NEW

Measure Data for 362.4

PER MEASURE			Utility Incentive to the participant	partner incentive
Total Incremental Cost	$ 12,047			
Utility Incentive	$ 12,047		$ 12,047	$ -
Incremental Participant cost	$ -			

Annual Impact Per Measure

Energy Savings per installation	844.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact		GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	10	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0		Estimated Participation
Impact						
Gross Energy Savings (GJ)	819	844	844	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	819	844	844	0	0	Gross Energy Savings less Free Riders
Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$142.86	$142.86	$142.86	
Energy Purchas	$ 120,574	$ 120,574	$ 120,574	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 12,047	$ 12,047	$ -	$ -	
Administration		$ 250	$ 250	$ -		
Subtotal	$ 11,939	$ 12,297	$ 12,297	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -		$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.024 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (C	$ 108,635		$ 108,277	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (L	**$ 1.7**		**$ 1.7**	**$ -**	**$ -**	Informational (for comparison with supply options)

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NEW

Measure Data for 362.5

PER MEASURE			Utility Incentive to the participant	partner incentive
Total Incremental Cost	$ 1,065			
Utility Incentive	$ 1,065		$ 1,065	$ -
Incremental Participant cost	$ -			

Annual Impact Per Measure

nergy Savings per installation	59.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact		GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	20	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0		Estimated Participation
Impact						
Gross Energy Savings (GJ)	57	59	59	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	57	59	59	0	0	Gross Energy Savings less Free Riders
nergy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
acity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$238.01	$238.01	$238.01	
Energy Purchas	$ 14,042	$ 14,042	$ 14,042	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 1,065	$ 1,065	$ -	$ -	
Administration		$ 250	$ 250	$ -		
Subtotal	$ 1,277	$ 1,315	$ 1,315	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -		$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.785 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (C	$ 12,766		$ 12,727	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (L	**$ 1.5**		**$ 1.5**	**$ -**	**$ -**	Informational (for comparison with supply options)

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NEW

Measure Data for 398

PER MEASURE			Utility Incentive to the participant	partner incentive
Total Incremental Cost	$ 25,000			
Utility Incentive	$ 2,860		$ 2,860	$ -
Incremental Participant cost	$ 22,140			

Annual Impact Per Measure

nergy Savings per installation	102.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	179	GJ	49,722	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	15	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0		Estimated Participation
Impact						
Gross Energy Savings (GJ)	99	102	102	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	99	102	102	0	0	Gross Energy Savings less Free Riders
nergy Impact (Increase) (kWh)	48,274	49,722	49,722	0	0	Other Utility Billed energy impact
acity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$193.94	$193.94	$193.94	
Energy Purchas	$ 19,782	$ 19,782	$ 19,782	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 2,860	$ 2,860	$ -	$ -	
Administration		$ 250	$ 250	$ -		
Subtotal	$ 3,019	$ 3,110	$ 3,110	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -		$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 22,140	$ 22,140	$ -	$ -	
Subtotal	$ 21,495	$ 22,140	$ 22,140	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ 71,230	$ 71,230	$ -	$ -	$1.433 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ 71,230	$ 71,230	$ 71,230	$ -	$ -	
Total Resource Net Benefit (C	$ 66,497		$ 65,762	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (L	**$ 20.7**		**$ 20.7**	**$ -**	**$ -**	Informational (for comparison with supply options)

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NEW

Measure Data for 399.1

PER MEASURE			Utility Incentive to the participant	partner incentive
Total Incremental Cost	$ 46,000			
Utility Incentive	$ 23,000		$ 23,000	$ -
Incremental Participant cost	$ 23,000			

Annual Impact Per Measure

Energy Savings per installation	853.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact		GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	20	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0		Estimated Participation
Impact						
Gross Energy Savings (GJ)	828	853	853	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	828	853	853	0	0	Gross Energy Savings less Free Riders
Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$238.01	$238.01	$238.01	
Energy Purchas	$ 203,021	$ 203,021	$ 203,021	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 23,000	$ 23,000	$ -	$ -	
Administration		$ 250	$ 250	$ -		
Subtotal	$ 22,573	$ 23,250	$ 23,250	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -		$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 23,000	$ 23,000	$ -	$ -	
Subtotal	$ 22,330	$ 23,000	$ 23,000	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.785 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (C	$ 158,118		$ 156,771	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (L	**$ 3.6**		**$ 3.6**	**$ -**	**$ -**	Informational (for comparison with supply options)

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NEW

Measure Data for 399.2

PER MEASURE			Utility Incentive to the participant	partner incentive
Total Incremental Cost	$ 74,965			
Utility Incentive	$ 14,965		$ 14,965	$ -
Incremental Participant cost	$ 60,000			

Annual Impact Per Measure

nergy Savings per installation	619.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	346	GJ	96,111	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	15	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0		Estimated Participation
Impact						
Gross Energy Savings (GJ)	601	619	619	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	601	619	619	0	0	Gross Energy Savings less Free Riders
nergy Impact (Increase) (kWh)	93,312	96,111	96,111	0	0	Other Utility Billed energy impact
acity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$193.94	$193.94	$193.94	
Energy Purchas	$ 120,051	$ 120,051	$ 120,051	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 14,965	$ 14,965	$ -	$ -	
Administration		$ 250	$ 250	$ -		
Subtotal	$ 14,772	$ 15,215	$ 15,215	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -		$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 60,000	$ 60,000	$ -	$ -	
Subtotal	$ 58,252	$ 60,000	$ 60,000	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ 137,684	$ 137,684	$ -	$ -	$1.433 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ 137,684	$ 137,684	$ 137,684	$ -	$ -	
Total Resource Net Benefit (C	$ 184,711		$ 182,520	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (L	**$ 10.2**		**$ 10.2**	**$ -**	**$ -**	Informational (for comparison with supply options)

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NEW

Measure Data for 401.1

PER MEASURE			Utility Incentive to the participant	partner incentive
Total Incremental Cost	$ 62,625			
Utility Incentive	$ 38,855		$ 38,855	$ -
Incremental Participant cost	$ 23,770			

Annual Impact Per Measure

nergy Savings per installation	1386.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	15	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0		Estimated Participation
Impact						
Gross Energy Savings (GJ)	1,346	1,386	1,386	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	1,346	1,386	1,386	0	0	Gross Energy Savings less Free Riders
nergy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
acity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$193.94	$193.94	$193.94	
Energy Purchas	$ 268,806	$ 268,806	$ 268,806	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 38,855	$ 38,855	$ -	$ -	
Administration		$ 2,000	$ 2,000	$ -		
Subtotal	$ 39,665	$ 40,855	$ 40,855	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -		$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 23,770	$ 23,770	$ -	$ -	
Subtotal	$ 23,078	$ 23,770	$ 23,770	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.433 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (C	$ 206,063		$ 204,181	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (L	**$ 3.9**		**$ 3.9**	**$ -**	**$ -**	Informational (for comparison with supply options)

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NEW

Measure Data for 401.2

PER MEASURE			Utility Incentive to the participant	partner incentive
Total Incremental Cost	$ 46,000			
Utility Incentive	$ 13,765		$ 13,765	$ -
Incremental Participant cost	$ 32,235			

Annual Impact Per Measure

nergy Savings per installation	491.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	386	GJ	107,222	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	15	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0		Estimated Participation
Impact						
Gross Energy Savings (GJ)	477	491	491	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	477	491	491	0	0	Gross Energy Savings less Free Riders
nergy Impact (Increase) (kWh)	104,099	107,222	107,222	0	0	Other Utility Billed energy impact
acity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$193.94	$193.94	$193.94	
Energy Purchas	$ 95,226	$ 95,226	$ 95,226	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 13,765	$ 13,765	$ -	$ -	
Administration		$ 2,000	$ 2,000	$ -		
Subtotal	$ 15,306	$ 15,765	$ 15,765	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -		$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 32,235	$ 32,235	$ -	$ -	
Subtotal	$ 31,296	$ 32,235	$ 32,235	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ 153,601	$ 153,601	$ -	$ -	$1.433 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ 153,601	$ 153,601	$ 153,601	$ -	$ -	
Total Resource Net Benefit (C	$ 202,226		$ 200,828	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (L	**$ 8.2**		**$ 8.2**	**$ -**	**$ -**	Informational (for comparison with supply options)

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NEW

Measure Data for 401.3

PER MEASURE			Utility Incentive to the participant	partner incentive
Total Incremental Cost	$ 52,000			
Utility Incentive	$ 22,090		$ 22,090	$ -
Incremental Participant cost	$ 29,910			

Annual Impact Per Measure

Energy Savings per installation	788.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	386	GJ	107,222	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	15	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0		Estimated Participation
Impact						
Gross Energy Savings (GJ)	765	788	788	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	765	788	788	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	104,099	107,222	107,222	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$193.94	$193.94	$193.94	
Energy Purchases	$ 152,827	$ 152,827	$ 152,827	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 22,090	$ 22,090	$ -	$ -	
Administration		$ 5,000	$ 5,000	$ -		
Subtotal	$ 26,301	$ 27,090	$ 27,090	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -		$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 29,910	$ 29,910	$ -	$ -	
Subtotal	$ 29,039	$ 29,910	$ 29,910	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ 153,601	$ 153,601	$ -	$ -	$1.433 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ 153,601	$ 153,601	$ 153,601	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 251,089		$ 249,429	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 6.1**		**$ 6.1**	**$ -**	**$ -**	Informational (for comparison with supply options)

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NEW

Measure Data for 447.1

PER MEASURE			Utility Incentive to the participant	partner incentive
Total Incremental Cost	$ 210,000			
Utility Incentive	$ 76,850		$ 76,850	$ -
Incremental Participant cost	$ 133,150			

Annual Impact Per Measure

nergy Savings per installation	2227.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact		GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	20	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0		Estimated Participation
Impact						
Gross Energy Savings (GJ)	2,162	2,227	2,227	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	2,162	2,227	2,227	0	0	Gross Energy Savings less Free Riders
nergy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
acity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$238.01	$238.01	$238.01	
Energy Purchas	$ 530,044	$ 530,044	$ 530,044	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 76,850	$ 76,850	$ -	$ -	
Administration		$ 5,000	$ 5,000	$ -		
Subtotal	$ 79,466	$ 81,850	$ 81,850	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -		$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 133,150	$ 133,150	$ -	$ -	
Subtotal	$ 129,272	$ 133,150	$ 133,150	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.785 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (C	$ 321,306		$ 315,044	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (L	**$ 6.5**		**$ 6.5**	**$ -**	**$ -**	Informational (for comparison with supply options)

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Measure Data for 447.2

PER MEASURE			Utility Incentive to the participant	partner incentive
Total Incremental Cost	$ 6,000			
Utility Incentive	$ 2,685		$ 2,685	$ -
Incremental Participant cost	$ 3,315			

Annual Impact Per Measure

nergy Savings per installation	114.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact		GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	12	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0		Estimated Participation
Impact						
Gross Energy Savings (GJ)	111	114	114	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	111	114	114	0	0	Gross Energy Savings less Free Riders
nergy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
acity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$164.20	$164.20	$164.20	
Energy Purchas	$ 18,719	$ 18,719	$ 18,719	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 2,685	$ 2,685	$ -	$ -	
Administration		$ 250	$ 250	$ -		
Subtotal	$ 2,850	$ 2,935	$ 2,935	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -		$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 3,315	$ 3,315	$ -	$ -	
Subtotal	$ 3,218	$ 3,315	$ 3,315	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.194 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (C	$ 12,651		$ 12,469	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (L	**$ 5.5**		**$ 5.5**	**$ -**	**$ -**	Informational (for comparison with supply options)

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NEW

Measure Data for 447.3

PER MEASURE			Utility Incentive to the participant	partner incentive
Total Incremental Cost	$ 14,000			
Utility Incentive	$ 8,550		$ 8,550	$ -
Incremental Participant cost	$ 5,450			

Annual Impact Per Measure

nergy Savings per installation	363.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact		GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	12	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0		Estimated Participation
Impact						
Gross Energy Savings (GJ)	352	363	363	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	352	363	363	0	0	Gross Energy Savings less Free Riders
nergy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
acity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$164.20	$164.20	$164.20	
Energy Purchas	$ 59,606	$ 59,606	$ 59,606	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 8,550	$ 8,550	$ -	$ -	
Administration		$ 250	$ 250	$ -		
Subtotal	$ 8,544	$ 8,800	$ 8,800	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -		$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 5,450	$ 5,450	$ -	$ -	
Subtotal	$ 5,291	$ 5,450	$ 5,450	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.194 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (C	$ 45,771		$ 45,356	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (L	**$ 3.9**		**$ 3.9**	**$ -**	**$ -**	Informational (for comparison with supply options)

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NEW

Measure Data for 447.4

PER MEASURE			Utility Incentive to the participant	partner incentive
Total Incremental Cost	$ 11,000			
Utility Incentive	$ 5,865		$ 5,865	$ -
Incremental Participant cost	$ 5,135			

Annual Impact Per Measure

nergy Savings per installation	249.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact		GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	12	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0		Estimated Participation
Impact						
Gross Energy Savings (GJ)	242	249	249	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	242	249	249	0	0	Gross Energy Savings less Free Riders
nergy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
acity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$164.20	$164.20	$164.20	
Energy Purchas	$ 40,887	$ 40,887	$ 40,887	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 5,865	$ 5,865	$ -	$ -	
Administration		$ 250	$ 250	$ -		
Subtotal	$ 5,937	$ 6,115	$ 6,115	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -		$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 5,135	$ 5,135	$ -	$ -	
Subtotal	$ 4,985	$ 5,135	$ 5,135	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.194 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (C	$ 29,964		$ 29,637	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (L	**$ 4.5**		**$ 4.5**	**$ -**	**$ -**	Informational (for comparison with supply options)

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NEW

Measure Data for 447.5

PER MEASURE			Utility Incentive to the participant	partner incentive
Total Incremental Cost	$ 3,000			
Utility Incentive	$ 1,122		$ 1,122	$ -
Incremental Participant cost	$ 1,878			

Annual Impact Per Measure

nergy Savings per installation	40.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact		GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	15	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0		Estimated Participation
Impact						
Gross Energy Savings (GJ)	39	40	40	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	39	40	40	0	0	Gross Energy Savings less Free Riders
nergy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
acity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$193.94	$193.94	$193.94	
Energy Purchas	$ 7,758	$ 7,758	$ 7,758	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 1,122	$ 1,122	$ -	$ -	
Administration		$ 250	$ 250	$ -		
Subtotal	$ 1,332	$ 1,372	$ 1,372	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -		$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 1,878	$ 1,878	$ -	$ -	
Subtotal	$ 1,823	$ 1,878	$ 1,878	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.433 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (C	$ 4,602		$ 4,508	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (L	**$ 6.8**		**$ 6.8**	**$ -**	**$ -**	Informational (for comparison with supply options)

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NEW

Measure Data for 447.7

PER MEASURE			Utility Incentive to the participant	partner incentive
Total Incremental Cost	$ 20,000			
Utility Incentive	$ 11,241		$ 11,241	$ -
Incremental Participant cost	$ 8,759			

Annual Impact Per Measure

nergy Savings per installation	401.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact		GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	15	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0		Estimated Participation
Impact						
Gross Energy Savings (GJ)	389	401	401	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	389	401	401	0	0	Gross Energy Savings less Free Riders
nergy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
acity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$193.94	$193.94	$193.94	
Energy Purchas	$ 77,771	$ 77,771	$ 77,771	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 11,241	$ 11,241	$ -	$ -	
Administration		$ 250	$ 250	$ -		
Subtotal	$ 11,156	$ 11,491	$ 11,491	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -		$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 8,759	$ 8,759	$ -	$ -	
Subtotal	$ 8,504	$ 8,759	$ 8,759	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.433 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (C	$ 58,111		$ 57,521	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (L	**$ 4.2**		**$ 4.2**	**$ -**	**$ -**	Informational (for comparison with supply options)

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NEW

Measure Data for 451.1.

PER MEASURE			Utility Incentive to the participant	partner incentive
Total Incremental Cost	$ 5,000			
Utility Incentive	$ 4,040		$ 4,040	$ -
Incremental Participant cost	$ 960			

Annual Impact Per Measure

nergy Savings per installation	144.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact		GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	15	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0		Estimated Participation
Impact						
Gross Energy Savings (GJ)	140	144	144	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	140	144	144	0	0	Gross Energy Savings less Free Riders
nergy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
acity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$193.94	$193.94	$193.94	
Energy Purchas	$ 27,928	$ 27,928	$ 27,928	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 4,040	$ 4,040	$ -	$ -	
Administration		$ 250	$ 250	$ -		
Subtotal	$ 4,165	$ 4,290	$ 4,290	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -		$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 960	$ 960	$ -	$ -	
Subtotal	$ 932	$ 960	$ 960	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.433 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (C	$ 22,831		$ 22,678	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (L	**$ 3.1**		**$ 3.1**	**$ -**	**$ -**	Informational (for comparison with supply options)

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NEW

Measure Data for 451.2

PER MEASURE			Utility Incentive to the participant	partner incentive
Total Incremental Cost	$ 2,000			
Utility Incentive	$ 2,000		$ 2,000	$ -
Incremental Participant cost	$ -			

Annual Impact Per Measure

Energy Savings per installation	112.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	15	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0		Estimated Participation
Impact						
Gross Energy Savings (GJ)	109	112	112	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	109	112	112	0	0	Gross Energy Savings less Free Riders
Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$193.94	$193.94	$193.94	
Energy Purchas	$ 21,722	$ 21,722	$ 21,722	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 2,000	$ 2,000	$ -	$ -	
Administration		$ 250	$ 250	$ -		
Subtotal	$ 2,184	$ 2,250	$ 2,250	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -		$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.433 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (C	$ 19,537		$ 19,472	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (L	**$ 1.7**		**$ 1.7**	**$ -**	**$ -**	Informational (for comparison with supply options)

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NEW

Measure Data for 451.3

PER MEASURE			Utility Incentive to the participant	partner incentive
Total Incremental Cost	$ 1,500			
Utility Incentive	$ 840		$ 840	$ -
Incremental Participant cost	$ 660			

Annual Impact Per Measure

nergy Savings per installation	30.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact		GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	15	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0		Estimated Participation
Impact						
Gross Energy Savings (GJ)	29	30	30	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	29	30	30	0	0	Gross Energy Savings less Free Riders
nergy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
acity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$193.94	$193.94	$193.94	
Energy Purchas	$ 5,818	$ 5,818	$ 5,818	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 840	$ 840	$ -	$ -	
Administration		$ 250	$ 250	$ -		
Subtotal	$ 1,058	$ 1,090	$ 1,090	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -		$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 660	$ 660	$ -	$ -	
Subtotal	$ 641	$ 660	$ 660	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.433 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (C	$ 4,119		$ 4,068	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (L	**$ 4.9**		**$ 4.9**	**$ -**	**$ -**	Informational (for comparison with supply options)

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NEW

Measure Data for 451.4

PER MEASURE			Utility Incentive to the participant	partner incentive
Total Incremental Cost	$ 3,000			
Utility Incentive	$ 2,685		$ 2,685	$ -
Incremental Participant cost	$ 315			

Annual Impact Per Measure

nergy Savings per installation	114.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact		GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	12	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0		Estimated Participation
Impact						
Gross Energy Savings (GJ)	111	114	114	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	111	114	114	0	0	Gross Energy Savings less Free Riders
nergy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
acity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$164.20	$164.20	$164.20	
Energy Purchas	$ 18,719	$ 18,719	$ 18,719	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 2,685	$ 2,685	$ -	$ -	
Administration		$ 250	$ 250	$ -		
Subtotal	$ 2,850	$ 2,935	$ 2,935	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -		$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 315	$ 315	$ -	$ -	
Subtotal	$ 306	$ 315	$ 315	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.194 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (C	$ 15,564		$ 15,469	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (L	**$ 2.9**		**$ 2.9**	**$ -**	**$ -**	Informational (for comparison with supply options)

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NEW

Measure Data for 453.2

PER MEASURE			Utility Incentive to the participant	partner incentive
Total Incremental Cost	$ 1,000			
Utility Incentive	$ 1,000		$ 1,000	$ -
Incremental Participant cost	$ -			

Annual Impact Per Measure

Energy Savings per installation	51.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact		GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	15	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0		Estimated Participation
Impact						
Gross Energy Savings (GJ)	50	51	51	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	50	51	51	0	0	Gross Energy Savings less Free Riders
Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$193.94	$193.94	$193.94	
Energy Purchas	$ 9,891	$ 9,891	$ 9,891	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 1,000	$ 1,000	$ -	$ -	
Administration		$ 250	$ 250	$ -		
Subtotal	$ 1,214	$ 1,250	$ 1,250	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -		$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.433 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (C	$ 8,678		$ 8,641	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (L	**$ 2.1**		**$ 2.1**	**$ -**	**$ -**	Informational (for comparison with supply options)

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NEW

Measure Data for 453.3

PER MEASURE			Utility Incentive to the participant	partner incentive
Total Incremental Cost	$ 2,000			
Utility Incentive	$ 800		$ 800	$ -
Incremental Participant cost	$ 1,200			

Annual Impact Per Measure

nergy Savings per installation	25.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact		GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	15	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0		Estimated Participation
Impact						
Gross Energy Savings (GJ)	24	25	25	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	24	25	25	0	0	Gross Energy Savings less Free Riders
nergy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
acity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$193.94	$193.94	$193.94	
Energy Purchas	$ 4,849	$ 4,849	$ 4,849	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 800	$ 800	$ -	$ -	
Administration		$ 250	$ 250	$ -		
Subtotal	$ 1,019	$ 1,050	$ 1,050	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -		$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 1,200	$ 1,200	$ -	$ -	
Subtotal	$ 1,165	$ 1,200	$ 1,200	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.433 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (C	$ 2,664		$ 2,599	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (L	**$ 7.5**		**$ 7.5**	**$ -**	**$ -**	Informational (for comparison with supply options)

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NEW

Measure Data for 453.5

PER MEASURE			Utility Incentive to the participant	partner incentive
Total Incremental Cost	$ 2,000			
Utility Incentive	$ 2,000		$ 2,000	$ -
Incremental Participant cost	$ -			

Annual Impact Per Measure

nergy Savings per installation	93.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact		GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	15	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0		Estimated Participation
Impact						
Gross Energy Savings (GJ)	90	93	93	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	90	93	93	0	0	Gross Energy Savings less Free Riders
nergy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
acity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$193.94	$193.94	$193.94	
Energy Purchas	$ 18,037	$ 18,037	$ 18,037	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 2,000	$ 2,000	$ -	$ -	
Administration		$ 250	$ 250	$ -		
Subtotal	$ 2,184	$ 2,250	$ 2,250	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -		$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.433 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (C	$ 15,852		$ 15,787	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (L	**$ 2.0**		**$ 2.0**	**$ -**	**$ -**	Informational (for comparison with supply options)

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NEW

Measure Data for 460

PER MEASURE			Utility Incentive to the participant	partner incentive
Total Incremental Cost	$ 18,000			
Utility Incentive	$ 15,710		$ 15,710	$ -
Incremental Participant cost	$ 2,290			

Annual Impact Per Measure

nergy Savings per installation	490.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact		GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	15	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0		Estimated Participation
Impact						
Gross Energy Savings (GJ)	476	490	490	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	476	490	490	0	0	Gross Energy Savings less Free Riders
nergy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
acity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$193.94	$193.94	$193.94	
Energy Purchas	$ 95,032	$ 95,032	$ 95,032	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 15,710	$ 15,710	$ -	$ -	
Administration		$ 250	$ 250	$ -		
Subtotal	$ 15,495	$ 15,960	$ 15,960	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -		$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 2,290	$ 2,290	$ -	$ -	
Subtotal	$ 2,223	$ 2,290	$ 2,290	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.433 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (C	$ 77,314		$ 76,782	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (L	**$ 3.1**		**$ 3.1**	**$ -**	**$ -**	Informational (for comparison with supply options)

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	PROGRAM														ALTERNATE		NET PRESENT VALUE								BENEFIT/COST							PARAMETERS													
	COSTS ($000)											SAVINGS (GJ)			LIFE	Impact		Levelized Cost	Utility Benefits (Costs)		Participant Benefits (Costs)			Program Net Savings			Natural Gas	Participant						TRC Net Benefits	UTILITY					PARTICIPANT								
	Utility			Partners																																										
	Incentives	Administration	Total	Incentives	Administration	Total	Participant	Total	% Utility	% Partner	% Participant	Gross	Net-to-Gross	Net	Years	Energy	Capacity	($/GJ)	Program	Alternate	Program	Carbon Tax	Alternate	Natural Gas	Alternate Energy	Alternate Capacity	Natural Gas	Total Costs	Total Benefits	Benefit/Cost	Natural Gas	Total Resource		Natural Gas Utility Discount	Natural Gas Supply	Alternate Discount Rate	Alternate Supply	Discount Rate	Natural Gas NPV	Carbon Tax NPV	Alternate Energy NPV	Alternate Capacity NPV	Natural Gas Tariff	Energy Tariff	Capacity Tariff	
																			($'000s)	($'000s)	($'000s)	($'000s)	($'000s)	(GJ)	(MWh)	(kW)		($'000s)	($'000s)		Rate Impact		($'000s)														
Label	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR	AS	AT	
Source Sheet or Calculation	Program	Program	B+C	Program	Program	E+F	Program	D+G+H	D/I	G/I	H/I	Program	Program	MxN	Program	Program	Program	D/Y	OxAJ	Q x N x AL	M x N x AN	M x N x AO	N x (QxAP + RxAQ)	PV(AL,P,-O)	PV(AK,P,-Q*N)	PV(AK,P,-R)	T/D	H>0, (V+W)>0	H>0, (V+W)>0, X	AD/AC	T/(V+O)	(T+U)/I	(T+U)-I	Input	Program	Input	Input	Input	PV(AM,P,-Input!D33)	Input	PV(AM,P,-Input!D28)	PV(AM,P,-Input!D29)	Input	Input	Input	
2010																																													
Commercial:																																													
334.1	5	0	6	0	0	0	17	23	25%	0%	75%	195	100%	195	15	36	-	3	17	42	18	3	27	1,734	348	-	3.0	17	47	2.7	0.7	2.6	36	7.38%	88.58	6%	1.17	6.0%	90.92	13.11	0.75	0.00	9.999	0.083	-	
334.2	2	0	2	0	0	0	4	6	38%	0%	62%	97	100%	97	10	5	-	3	6	5	7	1	3	669	39	-	2.9	4	11	2.9	0.7	1.9	5	7.38%	66.96	6%	0.88	6.0%	68.90	10.33	0.57	0.00	9.999	0.083	-	
334.3	8	0	8	0	0	0	5	14	61%	0%	39%	398	100%	398	10	23	-	3	27	20	27	4	13	2,747	170	-	3.2	5	45	8.5	0.7	3.5	33	7.38%	66.96	6%	0.88	6.0%	68.90	10.33	0.57	0.00	9.999	0.083	-	
334.4	1	0	1	0	0	0	2	2	35%	0%	65%	22	100%	22	15	3	-	4	2	3	2	0	2	196	24	-	2.2	2	4	2.6	0.7	2.0	2	7.38%	88.58	6%	1.17	6.0%	90.92	13.11	0.75	0.00	9.999	0.083	-	
334.5	10	0	10	0	0	0	0	10	100%	0%	0%	353	100%	353	15	0	-	3	31	N/A	32	5	N/A	3,139	0	-	3.2	-	37	N/A	0.7	3.2	21	7.38%	88.58	6%	1.17	6.0%	90.92	13.11	0.75	0.00	9.999	0.083	-	
334.6	3	0	3	0	0	0	24	27	13%	0%	87%	114	100%	114	15	18	-	3	10	21	10	1	13	1,014	175	-	2.9	24	25	1.1	0.7	1.1	4	7.38%	88.58	6%	1.17	6.0%	90.92	13.11	0.75	0.00	9.999	0.083	-	
334.7	5	0	5	0	0	0	14	19	25%	0%	75%	162	100%	162	15	47	-	3	14	55	15	2	35	1,441	456	-	3.0	14	52	3.6	0.7	3.6	50	7.38%	88.58	6%	1.17	6.0%	90.92	13.11	0.75	0.00	9.999	0.083	-	
350	13	2	15	0	0	0	146	161	9%	0%	91%	397	100%	397	15	186	-	4	35	217	36	5	139	3,531	1,808	-	2.4	146	180	1.2	0.7	1.6	91	7.38%	88.58	6%	1.17	6.0%	90.92	13.11	0.75	0.00	9.999	0.083	-	
360.1	42	0	43	0	0	0	164	207	21%	0%	79%	1,323	100%	1,323	15	733	-	4	117	854	120	17	547	11,766	7,120	-	2.7	164	685	4.2	0.7	4.7	765	7.38%	88.58	6%	1.17	6.0%	90.92	13.11	0.75	0.00	9.999	0.083	-	
360.2	1	0	1	0	0	0	35	36	3%	0%	97%	37	100%	37	12	44	-	4	3	44	3	0	28	288	368	-	2.5	35	32	0.9	0.7	1.3	11	7.38%	76.30	6%	1.01	6.0%	78.48	11.56	0.64	0.00	9.999	0.083	-	
360.3	10	0	11	0	0	0	26	37	29%	0%	71%	303	100%	303	20	77	-	3	32	106	33	5	68	3,117	886	-	3.0	26	105	4.1	0.7	3.8	102	7.38%	105.21	6%	1.38	6.0%	107.37	15.05	0.88	0.00	9.999	0.083	-	
361.1	13	0	13	0	0	0	1	14	90%	0%	10%	369	100%	369	20	0	-	3	39	N/A	40	6	N/A	3,796	0	-	3.0	1	45	30.8	0.7	2.7	24	7.38%	105.21	6%	1.38	6.0%	107.37	15.05	0.88	0.00	9.999	0.083	-	
361.2	17	0	18	0	0	0	31	48	36%	0%	64%	618	100%	618	15	92	-	3	55	107	56	8	69	5,496	893	-	3.1	31	133	4.3	0.7	3.3	114	7.38%	88.58	6%	1.17	6.0%	90.92	13.11	0.75	0.00	9.999	0.083	-	
361.3	4	0	5	0	0	0	4	8	56%	0%	44%	157	100%	157	15	28	-	3	14	33	14	2	21	1,396	272	-	3.0	4	37	10.1	0.7	5.6	38	7.38%	88.58	6%	1.17	6.0%	90.92	13.11	0.75	0.00	9.999	0.083	-	
361.4	39	0	39	0	0	0	122	161	24%	0%	76%	1,374	100%	1,374	15	115	-	3	122	134	125	18	86	12,219	1,120	-	3.1	122	229	1.9	0.7	1.6	95	7.38%	88.58	6%	1.17	6.0%	90.92	13.11	0.75	0.00	9.999	0.083	-	
362.2	82	0	82	0	0	0	17	99	83%	0%	17%	2,552	100%	2,552	15	0	-	4	226	N/A	232	33	N/A	22,696	0	-	2.8	17	265	15.5	0.7	2.3	127	7.38%	88.58	6%	1.17	6.0%	90.92	13.11	0.75	0.00	9.999	0.083	-	
362.3	0	0	0	0	0	0	7	7	4%	0%	96%	156	100%	156	10	0	-	0	10	N/A	11	2	N/A	1,077	0	-	41.6	7	12	1.8	0.9	1.5	3	7.38%	66.96	6%	0.88	6.0%	68.90	10.33	0.57	0.00	9.999	0.083	-	
362.4	12	0	12	0	0	0	0	12	100%	0%	0%	844	100%	844	10	0	-	2	57	N/A	58	9	N/A	5,825	0	-	4.6	-	67	N/A	0.8	4.6	44	7.38%	66.96	6%	0.88	6.0%	68.90	10.33	0.57	0.00	9.999	0.083	-	
362.5	1	0	1	0	0	0	0	1	100%	0%	0%	59	100%	59	20	0	-	2	6	N/A	6	1	N/A	607	0	-	4.7	-	7	N/A	0.8	4.7	5	7.38%	105.21	6%	1.38	6.0%	107.37	15.05	0.88	0.00	9.999	0.083	-	
398	3	0	3	0	0	0	22	25	12%	0%	88%	102	100%	102	15	50	-	3	9	58	9	1	37	907	483	-	2.9	22	48	2.2	0.7	2.7	42	7.38%	88.58	6%	1.17	6.0%	90.92	13.11	0.75	0.00	9.999	0.083	-	
399.1	23	0	23	0	0	0	23	46	50%	0%	50%	853	100%	853	20	0	-	3	90	N/A	92	13	N/A	8,776	0	-	3.9	23	104	4.5	0.8	1.9	43	7.38%	105.21	6%	1.38	6.0%	107.37	15.05	0.88	0.00	9.999	0.083	-	
399.2	15	0	15	0	0	0	60	75	20%	0%	80%	619	100%	619	15	96	-	3	55	112	56	8	72	5,505	933	-	3.6	60	136	2.3	0.8	2.2	92	7.38%	88.58	6%	1.17	6.0%	90.92	13.11	0.75	0.00	9.999	0.083	-	
401.1	39	2	41	0	0	0	24	65	63%	0%	37%	1,386	100%	1,386	15	0	-	3	123	N/A	126	18	N/A	12,326	0	-	3.0	24	144	6.1	0.7	1.9	58	7.38%	88.58	6%	1.17	6.0%	90.92	13.11	0.75	0.00	9.999	0.083	-	
401.2	14	2	16	0	0	0	32	48	33%	0%	67%	491	100%	491	15	107	-	4	43	125	45	6	80	4,367	1,041	-	2.8	32	131	4.1	0.7	3.5	120	7.38%	88.58	6%	1.17	6.0%	90.92	13.11	0.75	0.00	9.999	0.083	-	
401.3	22	5	27	0	0	0	30	57	48%	0%	52%	788	100%	788	15	107	-	4	70	125	72	10	80	7,008	1,041	-	2.6	30	162	5.4	0.7	3.4	138	7.38%	88.58	6%	1.17	6.0%	90.92	13.11	0.75	0.00	9.999	0.083	-	
447.1	77	5	82	0	0	0	133	215	38%	0%	62%	2,227	100%	2,227	20	0	-	4	234	N/A	239	34	N/A	22,912	0	-	2.9	133	273	2.0	0.7	1.1	19	7.38%	105.21	6%	1.38	6.0%	107.37	15.05	0.88	0.00	9.999	0.083	-	
447.2	3	0	3	0	0	0	3	6	47%	0%	53%	114	100%	114	12	0	-	3	9	N/A	9	1	N/A	887	0	-	3.0	3	10	3.1	0.7	1.4	2	7.38%	76.30	6%	1.01	6.0%	78.48	11.56	0.64	0.00	9.999	0.083	-	
447.3	9	0	9	0	0	0	5	14	62%	0%	38%	363	100%	363	12	0	-	3	28	N/A	28	4	N/A	2,826	0	-	3.1	5	33	6.0	0.7	1.9	13	7.38%	76.30	6%	1.01	6.0%	78.48	11.56	0.64	0.00	9.999	0.083	-	
447.4	6	0	6	0	0	0	5	11	54%	0%	46%	249	100%	249	12	0	-	3	19	N/A	20	3	N/A	1,938	0	-	3.1	5	22	4.4	0.7	1.7	8	7.38%	76.30	6%	1.01	6.0%	78.48	11.56	0.64	0.00	9.999	0.083	-	
447.5	1	0	1	0	0	0	2	3	42%	0%	58%	40	100%	40	15	0	-	4	4	N/A	4	1	N/A	356	0	-	2.6	2	4	2.2	0.7	1.1	0	7.38%	88.58	6%	1.17	6.0%	90.92	13.11	0.75	0.00	9.999	0.083	-	
447.7	11	0	11	0	0	0	9	20	57%	0%	43%	401	100%	401	15	0	-	3	36	N/A	36	5	N/A	3,566	0	-	3.1	9	42	4.8	0.7	1.8	15	7.38%	88.58	6%	1.17	6.0%	90.92	13.11	0.75	0.00	9.999	0.083	-	
451.1.	4	0	4	0	0	0	1	5	82%	0%	18%	144	100%	144	15	0	-	3	13	N/A	13	2	N/A	1,281	0	-	3.0	1	15	15.6	0.7	2.4	8	7.38%	88.58	6%	1.17	6.0%	90.92	13.11	0.75	0.00	9.999	0.083	-	
451.2	2	0	2	0	0	0	0	2	100%	0%	0%	112	100%	112	15	0	-	2	10	N/A	10	1	N/A	996	0	-	4.4	-	12	N/A	0.8	4.4	8	7.38%	88.58	6%	1.17	6.0%	90.92	13.11	0.75	0.00	9.999	0.083	-	
451.3	1	0	1	0	0	0	1	2	62%	0%	38%	30	100%	30	15	0	-	4	3	N/A	3	0	N/A	267	0	-	2.4	1	3	4.7	0.7	1.5	1	7.38%	88.58	6%	1.17	6.0%	90.92	13.11	0.75	0.00	9.999	0.083	-	
451.4	3	0	3	0	0	0	0	3	90%	0%	10%	114	100%	114	12	0	-	3	9	N/A	9	1	N/A	887	0	-	3.0	0	10	32.6	0.7	2.7	5	7.38%	76.30	6%	1.01	6.0%	78.48	11.56	0.64	0.00	9.999	0.083	-	
453.2	1	0	1	0	0	0	0	1	100%	0%	0%	51	100%	51	15	0	-	3	5	N/A	5	1	N/A	454	0	-	3.6	-	5	N/A	0.8	3.6	3	7.38%	88.58	6%	1.17	6.0%	90.92	13.11	0.75	0.00	9.999	0.083	-	
453.3	1	0	1	0	0	0	1	2	47%	0%	53%	25	100%	25	15	0	-	5	2	N/A	2	0	N/A	222	0	-	2.1	1	3	2.2	0.7	1.0	(0)	7.38%	88.58	6%	1.17	6.0%	90.92	13.11	0.75	0.00	9.999	0.083	-	
453.5	2	0	2	0	0	0	0	2	100%	0%	0%	93	100%	93	15	0	-	3	8	N/A	8	1	N/A	827	0	-	3.7	-	10	N/A	0.8	3.7	6	7.38%	88.58	6%	1.17	6.0%	90.92	13.11	0.75	0.00	9.999	0.083	-	
460	16	0	16	0	0	0	2	18	87%	0%	13%	490	100%	490	15	0	-	4	43	N/A	45	6	N/A	4,358	0	-	2.7	2	51	22.3	0.7	2.4	25	7.38%	88.58	6%	1.17	6.0%	90.92	13.11	0.75	0.00	9.999	0.083	-	
Total Commercial	519	25	543	0	0	0	974	1,517	36%	0%	64%	18,222		18,222		1,768	0	3	1,634	2,061	1,676	241	1,321	163,420	17,177	0	3.0	974	3,237	3.3	0.7	2.4	2,179													
Final Commercial with partner's incentive	519	25	543	0	0	167	807	1,517	36%	11%	53%	18,222		18,222		1,768	0	3	1,634	2,061	1,676	241	1,321	163,420	17,177	0	3.0	807	3,237	4.0	0.7	2.4	2,179													

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ
1	**UTILITY**		**FORTIS BC**																																	
2																																				
3																																				
4			**Year**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	
5			Units																																	
6		**NATURAL GAS**																																		
7		Incremental Cost of Gas (nominal)	$ Per GJ	$5.50	$6.17	$6.81	$7.35	$7.87	$8.26	$8.56	$8.78	$8.99	$9.19	$9.40	$9.60	$9.81	$10.03	$10.25	$10.47	$10.70	$10.93	$11.17	$11.42	$11.67	$11.92	$12.19	$12.45	$12.73	$13.01	$13.29	$13.58	$13.88	$14.19	$14.50	$14.82	$15.18
8	1		*Year*	*0*	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*	*16*	*17*	*18*	*19*	*20*	*21*	*22*	*23*	*24*	*25*	*26*	*27*	*28*	*29*	*30*	*31*	
9		carbon tax	$ per GJ	*0.75*	*1.00*	*1.25*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	
10		Distribution Adder	$ per GJ	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	
11		Total incremental cost of gas including carbon		*6.41*	*7.32*	*8.21*	*9.01*	*9.52*	*9.92*	*10.22*	*10.43*	*10.64*	*10.85*	*11.05*	*11.26*	*11.47*	*11.68*	*11.90*	*12.13*	*12.35*	*12.59*	*12.83*	*13.07*	*13.32*	*13.58*	*13.84*	*14.11*	*14.38*	*14.66*	*14.95*	*15.24*	*15.54*	*15.84*	*16.15*	*16.31*	
12	2	GDP Deflator		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
13	3	Incremental Cost of Gas (Real)		$6.41	$7.32	$8.21	$9.01	$9.52	$9.92	$10.22	$10.43	$10.64	$10.85	$11.05	$11.26	$11.47	$11.68	$11.90	$12.13	$12.35	$12.59	$12.83	$13.07	$13.32	$13.58	$13.84	$14.11	$14.38	$14.66	$14.95	$15.24	$15.54	$15.84	$16.15	$16.31	
14	4	Net Present Value -2010			$12.32	$18.95	$25.73	$32.40	$38.87	$45.48	$50.98	$56.59	$61.91	$66.96	$71.75	$76.30	$80.61	$84.70	$88.58	$92.26	$95.75	$99.07	$102.22	$105.21	$108.04	$110.73	$113.29	$115.71	$118.02	$120.20	$122.28	$124.25	$126.12	$127.90	$129.57	
15	5	Net Present Value -2011			$13.94	$21.22	$28.38	$35.33	$42.00	$48.33	$54.36	$60.07	$65.50	$70.64	$75.52	$80.15	$84.54	$88.71	$92.66	$96.41	$99.98	$103.36	$106.56	$109.61	$112.50	$115.24	$117.85	$120.32	$122.67	$124.89	$127.01	$129.02	$130.93	$132.72		
16	6	Net Present Value -2012			$15.46	$23.15	$30.61	$37.77	$44.58	$51.04	$57.18	$63.00	$68.53	$73.77	$78.74	$83.46	$87.93	$92.18	$96.21	$100.03	$103.66	$107.10	$110.37	$113.48	$116.42	$119.22	$121.87	$124.39	$126.78	$129.06	$131.22	$133.27	$135.19			
17																																				
18																																				
19		**ELECTRICITY**																																		
20		Incremental Cost of Elec	$ Per kWh	$0.10																																
21		Incremental Cost of E Capacity	$ Per kW/a	$170.00																																
22																																				
23																																				
24																																				
25	**RETAIL**																																			
26				Rate	Customers																															
27		Residential Retail			1,000																															
28		**TGI**	$ Per MJ	$0.0100	1,000																															
29		**TGVI**	$ Per MJ	$0.0143	1,000																															
30		**Electricity**	$ Per MJ	$0.0230																																
31		**Electricity**	$ per kWh	$0.0829	1,000																															
32		**Electricity**	$ per kW per year		1,000																															
33		Commercial Retail																																		
34		**TGI**	$ Per MJ	$0.0094	50																															
35		**TGVI**	$ Per MJ	$0.0160	50																															
36		**Electricity**	$ Per MJ	$0.0214																																
37		**Electricity**	$ per kWh	$0.0709	750																															
38		**Electricity**	$ per kW per year	$52.0000	50																															
39																																				
40	**TAX**																																			
41			**Year**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	
42			*Year*	*-1*	*0*	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*	*16*	*17*	*18*	*19*	*20*	*21*	*22*	*23*	*24*	*25*	*26*	*27*	*28*	*29*	*30*	
43	2	Carbon	$ Per tonne		$20.00	$25.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	
44	3	Carbon	$ Per GJ		$0.9976	$1.2470	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	
45	4	GDP Deflator			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
46	5	Carbon (Real)			$1.00	$1.25	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	
47	6	Net Present Value -2010			$2.01	$3.22	$4.34	$5.39	$6.37	$7.28	$8.12	$8.91	$9.65	$10.33	$10.97	$11.58	$12.13	$12.63	$13.11	$13.55	$13.97	$14.35	$14.71	$15.05	$15.36	$15.65	$15.91	$16.18	$16.41	$16.63	$16.83	$17.02	$17.20	$17.37		
48	7	Net Present Value -2011				$2.46	$3.67	$4.79	$5.84	$6.82	$7.73	$8.57	$9.36	$10.10	$10.78	$11.42	$12.01	$12.56	$13.08	$13.55	$14.00	$14.42	$14.80	$15.16	$15.50	$15.81	$16.10	$16.37	$16.63	$16.86	$17.08	$17.28	$17.47	$17.65			
49	8	Net Present Value -2012					$2.69	$3.90	$5.03	$6.07	$7.05	$7.96	$8.81	$9.59	$10.33	$11.01	$11.65	$12.24	$12.79	$13.31	$13.79	$14.23	$14.65	$15.04	$15.40	$15.73	$16.04	$16.33	$16.61	$16.86	$17.09	$17.31	$17.51	$17.70		
50																																				
51		**Discount Rate (real)**[1]																																		
52		**TERASEN GAS**																																		
53		**Rate of Inflation**	1.90%																																	
54		**TGI**	7.38%																																	
55		**TGVI**	6.87%																																	
56		**BC HYDRO**																																		
57		**Rate of Inflation**	2.00%																																	
58		**BC Hydro**	6.00%																																	
59		**Customer**	6.00%																																	
60		*Footnote 1: Source LR 070531*																																		
61																																				
62				**SHEET LABELS**																																
63	**New Construction**																																			
64		334.1		**BASEBOARD**																																
65		334.2		**HEATPUMP**																																

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Measure Data for 334.1

PER MEASURE			Utility Incentive to the participant	partner incentive
Total Incremental Cost	$ 22,900			
Utility Incentive	$ 5,466		$ 5,466	$ -
Incremental Participant cost	$ 17,434			

Annual Impact Per Measure

Energy Savings per installation	195.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	129	GJ	35,833	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	15	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0		Estimated Participation
Impact						
Gross Energy Savings (GJ)	182	195	195	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	182	195	195	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	33,805	35,833	35,833	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$88.58	$92.66	$96.21	
Energy Purchases	$ 17,273	$ 17,273	$ 17,273	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 5,466	$ 5,466	$ -	$ -	
Administration		$ 250	$ 250	$ -		
Subtotal	$ 5,323	$ 5,716	$ 5,716	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -		$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 17,434	$ 17,434	$ -	$ -	
Subtotal	$ 16,236	$ 17,434	$ 17,434	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ 41,763	$ 41,763	$ -	$ -	$1.165 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ 41,763	$ 41,763	$ 41,763	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 37,476		$ 35,885	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 13.3**		**$ 13.3**	**$ -**	**$ -**	Informational (for comparison with supply options)

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Measure Data for 334.2

PER MEASURE			Utility Incentive to the participant	partner incentive
Total Incremental Cost	$ 5,600			
Utility Incentive	$ 1,969		$ 1,969	$ -
Incremental Participant cost	$ 3,631			

Annual Impact Per Measure

nergy Savings per installation	97.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	19	GJ	5,278	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	10	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0		Estimated Participation
Impact						
Gross Energy Savings (GJ)	90	97	97	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	90	97	97	0	0	Gross Energy Savings less Free Riders
nergy Impact (Increase) (kWh)	4,979	5,278	5,278	0	0	Other Utility Billed energy impact
acity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$66.96	$70.64	$73.77	
Energy Purchas	$ 6,495	$ 6,495	$ 6,495	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 1,969	$ 1,969	$ -	$ -	
Administration		$ 250	$ 250	$ -		
Subtotal	$ 2,066	$ 2,219	$ 2,219	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -		$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 3,631	$ 3,631	$ -	$ -	
Subtotal	$ 3,381	$ 3,631	$ 3,631	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ 4,661	$ 4,661	$ -	$ -	$0.883 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ 4,661	$ 4,661	$ 4,661	$ -	$ -	
Total Resource Net Benefit (C	$ 5,709		$ 5,307	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (L	**$ 8.7**		**$ 8.7**	**$ -**	**$ -**	Informational (for comparison with supply options)

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Measure Data for 334.3

PER MEASURE			Utility Incentive to the participant	partner incentive
Total Incremental Cost	$ 13,300			
Utility Incentive	$ 8,077		$ 8,077	$ -
Incremental Participant cost	$ 5,223			

Annual Impact Per Measure

nergy Savings per installation	398.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	83	GJ	23,056	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	10	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0		Estimated Participation
Impact						
Gross Energy Savings (GJ)	371	398	398	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	371	398	398	0	0	Gross Energy Savings less Free Riders
nergy Impact (Increase) (kWh)	21,751	23,056	23,056	0	0	Other Utility Billed energy impact
acity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$66.96	$70.64	$73.77	
Energy Purchas	$ 26,650	$ 26,650	$ 26,650	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 8,077	$ 8,077	$ -	$ -	
Administration		$ 250	$ 250	$ -		
Subtotal	$ 7,755	$ 8,327	$ 8,327	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -		$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 5,223	$ 5,223	$ -	$ -	
Subtotal	$ 4,864	$ 5,223	$ 5,223	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ 20,363	$ 20,363	$ -	$ -	$0.883 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ 20,363	$ 20,363	$ 20,363	$ -	$ -	
Total Resource Net Benefit (C	$ 34,394		$ 33,463	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (L	**$ 4.9**		**$ 4.9**	**$ -**	**$ -**	Informational (for comparison with supply options)

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Measure Data for 334.4

PER MEASURE			Utility Incentive to the participant	partner incentive
Total Incremental Cost	$ 2,200			
Utility Incentive	$ 617		$ 617	$ -
Incremental Participant cost	$ 1,583			

Annual Impact Per Measure

nergy Savings per installation	22.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	9	GJ	2,500	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	15	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0		Estimated Participation
Impact						
Gross Energy Savings (GJ)	20	22	22	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	20	22	22	0	0	Gross Energy Savings less Free Riders
nergy Impact (Increase) (kWh)	2,358	2,500	2,500	0	0	Other Utility Billed energy impact
acity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$88.58	$92.66	$96.21	
Energy Purchas	$ 1,949	$ 1,949	$ 1,949	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 617	$ 617	$ -	$ -	
Administration		$ 250	$ 250	$ -		
Subtotal	$ 807	$ 867	$ 867	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -		$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 1,583	$ 1,583	$ -	$ -	
Subtotal	$ 1,474	$ 1,583	$ 1,583	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ 2,914	$ 2,914	$ -	$ -	$1.165 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ 2,914	$ 2,914	$ 2,914	$ -	$ -	
Total Resource Net Benefit (C	$ 2,581		$ 2,412	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (L	**$ 12.5**		**$ 12.5**	**$ -**	**$ -**	Informational (for comparison with supply options)

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NEW

Measure Data for 334.5

PER MEASURE			Utility Incentive to the participant	partner incentive
Total Incremental Cost	$ 9,600			
Utility Incentive	$ 9,600		$ 9,600	$ -
Incremental Participant cost	$ -			

Annual Impact Per Measure

Energy Savings per installation	353.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact		GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	15	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0		Estimated Participation
Impact						
Gross Energy Savings (GJ)	329	353	353	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	329	353	353	0	0	Gross Energy Savings less Free Riders
ernate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
ıate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$88.58	$92.66	$96.21	
Energy Purchases	$ 31,268	$ 31,268	$ 31,268	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 9,600	$ 9,600	$ -	$ -	
Administration		$ 250	$ 250	$ -		
Subtotal	$ 9,173	$ 9,850	$ 9,850	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -		$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.165 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 22,095		$ 21,418	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime	**$ 3.1**		**$ 3.1**	**$ -**	**$ -**	Informational (for comparison with supply options)

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NEW

Measure Data for 334.6

PER MEASURE		Utility Incentive to the participant	partner incentive
Total Incremental Cost	$ 27,100		
Utility Incentive	$ 3,195	$ 3,195	$ -
Incremental Participant cost	$ 23,905		

Annual Impact Per Measure

Energy Savings per installation	114.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	65	GJ	18,056	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	15	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0		Estimated Participation
Impact						
Gross Energy Savings (GJ)	106	114	114	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	106	114	114	0	0	Gross Energy Savings less Free Riders
Energy Impact (Increase) (kWh)	17,034	18,056	18,056	0	0	Other Utility Billed energy impact
Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$88.58	$92.66	$96.21	
Energy Purchas	$ 10,098	$ 10,098	$ 10,098	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 3,195	$ 3,195	$ -	$ -	
Administration		$ 250	$ 250	$ -		
Subtotal	$ 3,208	$ 3,445	$ 3,445	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -		$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 23,905	$ 23,905	$ -	$ -	
Subtotal	$ 22,262	$ 23,905	$ 23,905	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ 21,043	$ 21,043	$ -	$ -	$1.165 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ 21,043	$ 21,043	$ 21,043	$ -	$ -	
Total Resource Net Benefit (C	$ 5,671		$ 3,791	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (L	**$ 27.0**		**$ 27.0**	**$ -**	**$ -**	Informational (for comparison with supply options)

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NEW

Measure Data for 334.7

PER MEASURE			Utility Incentive to the participant	partner incentive
Total Incremental Cost	$ 19,000			
Utility Incentive	$ 4,541		$ 4,541	$ -
Incremental Participant cost	$ 14,459			

Annual Impact Per Measure

nergy Savings per installation	162.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	169	GJ	46,944 kWh	
Alternate Capacity Impact		kW/a		
Measure Lifetime	15	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0		Estimated Participation
Impact						
Gross Energy Savings (GJ)	151	162	162	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	151	162	162	0	0	Gross Energy Savings less Free Riders
nergy Impact (Increase) (kWh)	44,287	46,944	46,944	0	0	Other Utility Billed energy impact
acity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$88.58	$92.66	$96.21	
Energy Purchas	$ 14,350	$ 14,350	$ 14,350	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 4,541	$ 4,541	$ -	$ -	
Administration		$ 250	$ 250	$ -		
Subtotal	$ 4,462	$ 4,791	$ 4,791	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -		$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 14,459	$ 14,459	$ -	$ -	
Subtotal	$ 13,465	$ 14,459	$ 14,459	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ 54,712	$ 54,712	$ -	$ -	$1.165 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ 54,712	$ 54,712	$ 54,712	$ -	$ -	
Total Resource Net Benefit (C	$ 51,135		$ 49,812	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (L	**$ 13.4**		**$ 13.4**	**$ -**	**$ -**	Informational (for comparison with supply options)

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NEW

Measure Data for 350

PER MEASURE			Utility Incentive to the participant	partner incentive
Total Incremental Cost	$ 159,200			
Utility Incentive	$ 12,725		$ 12,725	$ -
Incremental Participant cost	$ 146,475			

Annual Impact Per Measure

nergy Savings per installation	397.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	670	GJ	186,111	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	15	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0		Estimated Participation
Impact						
Gross Energy Savings (GJ)	370	397	397	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	370	397	397	0	0	Gross Energy Savings less Free Riders
nergy Impact (Increase) (kWh)	175,577	186,111	186,111	0	0	Other Utility Billed energy impact
acity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$88.58	$92.66	$96.21	
Energy Purchas	$ 35,165	$ 35,165	$ 35,165	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 12,725	$ 12,725	$ -	$ -	
Administration		$ 2,000	$ 2,000	$ -		
Subtotal	$ 13,713	$ 14,725	$ 14,725	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -		$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 146,475	$ 146,475	$ -	$ -	
Subtotal	$ 136,408	$ 146,475	$ 146,475	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ 216,907	$ 216,907	$ -	$ -	$1.165 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ 216,907	$ 216,907	$ 216,907	$ -	$ -	
Total Resource Net Benefit (C	$ 101,951		$ 90,872	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (L	**$ 45.7**		**$ 45.7**	**$ -**	**$ -**	Informational (for comparison with supply options)

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NEW

Measure Data for 360.1

PER MEASURE			Utility Incentive to the participant	partner incentive
Total Incremental Cost	$ 206,500			
Utility Incentive	$ 42,410		$ 42,410	$ -
Incremental Participant cost	$ 164,090			

Annual Impact Per Measure

nergy Savings per installation	1323.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	2639	GJ	733,056	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	15	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0		Estimated Participation
Impact						
Gross Energy Savings (GJ)	1,232	1,323	1,323	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	1,232	1,323	1,323	0	0	Gross Energy Savings less Free Riders
nergy Impact (Increase) (kWh)	691,562	733,056	733,056	0	0	Other Utility Billed energy impact
acity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$88.58	$92.66	$96.21	
Energy Purchas	$ 117,189	$ 117,189	$ 117,189	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 42,410	$ 42,410	$ -	$ -	
Administration		$ 250	$ 250	$ -		
Subtotal	$ 39,728	$ 42,660	$ 42,660	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -		$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 164,090	$ 164,090	$ -	$ -	
Subtotal	$ 152,812	$ 164,090	$ 164,090	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ 854,354	$ 854,354	$ -	$ -	$1.165 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ 854,354	$ 854,354	$ 854,354	$ -	$ -	
Total Resource Net Benefit (C	$ 779,002		$ 764,793	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (L	**$ 17.6**		**$ 17.6**	**$ -**	**$ -**	Informational (for comparison with supply options)

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NEW

Measure Data for 360.2

PER MEASURE			Utility Incentive to the participant	partner incentive
Total Incremental Cost	$ 36,000			
Utility Incentive	$ 872		$ 872	$ -
Incremental Participant cost	$ 35,128			

Annual Impact Per Measure

nergy Savings per installation	37.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	158	GJ	43,889	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	12	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0		Estimated Participation
Impact						
Gross Energy Savings (GJ)	34	37	37	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	34	37	37	0	0	Gross Energy Savings less Free Riders
nergy Impact (Increase) (kWh)	41,405	43,889	43,889	0	0	Other Utility Billed energy impact
acity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$76.30	$80.15	$83.46	
Energy Purchas	$ 2,823	$ 2,823	$ 2,823	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 872	$ 872	$ -	$ -	
Administration		$ 250	$ 250	$ -		
Subtotal	$ 1,045	$ 1,122	$ 1,122	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -		$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 35,128	$ 35,128	$ -	$ -	
Subtotal	$ 32,714	$ 35,128	$ 35,128	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ 44,155	$ 44,155	$ -	$ -	$1.006 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ 44,155	$ 44,155	$ 44,155	$ -	$ -	
Total Resource Net Benefit (C	$ 13,219		$ 10,728	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (L	**$ 125.9**		**$ 125.9**	**$ -**	**$ -**	Informational (for comparison with supply options)

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NEW

Measure Data for 360.3

PER MEASURE			Utility Incentive to the participant	partner incentive
Total Incremental Cost	$ 36,250			
Utility Incentive	$ 10,458		$ 10,458	$ -
Incremental Participant cost	$ 25,792			

Annual Impact Per Measure

Energy Savings per installation	303.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	278	GJ	77,222	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	20	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0		Estimated Participation
Impact						
Gross Energy Savings (GJ)	282	303	303	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	282	303	303	0	0	Gross Energy Savings less Free Riders
Energy Impact (Increase) (kWh)	72,851	77,222	77,222	0	0	Other Utility Billed energy impact
Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$105.21	$109.61	$113.48	
Energy Purchas	$ 31,877	$ 31,877	$ 31,877	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 10,458	$ 10,458	$ -	$ -	
Administration		$ 250	$ 250	$ -		
Subtotal	$ 9,972	$ 10,708	$ 10,708	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -		$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 25,792	$ 25,792	$ -	$ -	
Subtotal	$ 24,019	$ 25,792	$ 25,792	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ 106,288	$ 106,288	$ -	$ -	$1.376 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ 106,288	$ 106,288	$ 106,288	$ -	$ -	
Total Resource Net Benefit (C	$ 104,174		$ 101,665	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (L	**$ 11.7**		**$ 11.7**	**$ -**	**$ -**	Informational (for comparison with supply options)

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NEW

Measure Data for 361.1

PER MEASURE			Utility Incentive to the participant	partner incentive
Total Incremental Cost	$ 14,200			
Utility Incentive	$ 12,733		$ 12,733	$ -
Incremental Participant cost	$ 1,467			

Annual Impact Per Measure

nergy Savings per installation	369.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact		GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	20	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0		Estimated Participation
Impact						
Gross Energy Savings (GJ)	344	369	369	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	344	369	369	0	0	Gross Energy Savings less Free Riders
nergy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
acity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$105.21	$109.61	$113.48	
Energy Purchas	$ 38,821	$ 38,821	$ 38,821	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 12,733	$ 12,733	$ -	$ -	
Administration		$ 250	$ 250	$ -		
Subtotal	$ 12,091	$ 12,983	$ 12,983	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -		$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 1,467	$ 1,467	$ -	$ -	
Subtotal	$ 1,366	$ 1,467	$ 1,467	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.376 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (C	$ 25,364		$ 24,371	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (L	**$ 3.8**		**$ 3.8**	**$ -**	**$ -**	Informational (for comparison with supply options)

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NEW

Measure Data for 361.2

PER MEASURE			Utility Incentive to the participant	partner incentive
Total Incremental Cost	$ 48,127			
Utility Incentive	$ 17,325		$ 17,325	$ -
Incremental Participant cost	$ 30,802			

Annual Impact Per Measure

nergy Savings per installation	618.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	331	GJ	91,944 kWh	
Alternate Capacity Impact		kW/a		
Measure Lifetime	15	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0		Estimated Participation
Impact						
Gross Energy Savings (GJ)	576	618	618	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	576	618	618	0	0	Gross Energy Savings less Free Riders
nergy Impact (Increase) (kWh)	86,740	91,944	91,944	0	0	Other Utility Billed energy impact
acity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$88.58	$92.66	$96.21	
Energy Purchas	$ 54,741	$ 54,741	$ 54,741	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 17,325	$ 17,325	$ -	$ -	
Administration		$ 250	$ 250	$ -		
Subtotal	$ 16,367	$ 17,575	$ 17,575	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -		$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 30,802	$ 30,802	$ -	$ -	
Subtotal	$ 28,685	$ 30,802	$ 30,802	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ 107,158	$ 107,158	$ -	$ -	$1.165 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ 107,158	$ 107,158	$ 107,158	$ -	$ -	
Total Resource Net Benefit (C	$ 116,847		$ 113,523	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (L	**$ 8.8**		**$ 8.8**	**$ -**	**$ -**	Informational (for comparison with supply options)

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NEW

Measure Data for 361.3

PER MEASURE			Utility Incentive to the participant	partner incentive
Total Incremental Cost	$ 8,107			
Utility Incentive	$ 4,401		$ 4,401	$ -
Incremental Participant cost	$ 3,706			

Annual Impact Per Measure

nergy Savings per installation	157.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	101	GJ	28,056	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	15	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0		Estimated Participation
Impact						
Gross Energy Savings (GJ)	146	157	157	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	146	157	157	0	0	Gross Energy Savings less Free Riders
nergy Impact (Increase) (kWh)	26,468	28,056	28,056	0	0	Other Utility Billed energy impact
acity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$88.58	$92.66	$96.21	
Energy Purchas	$ 13,907	$ 13,907	$ 13,907	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 4,401	$ 4,401	$ -	$ -	
Administration		$ 250	$ 250	$ -		
Subtotal	$ 4,331	$ 4,651	$ 4,651	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -		$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 3,706	$ 3,706	$ -	$ -	
Subtotal	$ 3,451	$ 3,706	$ 3,706	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ 32,698	$ 32,698	$ -	$ -	$1.165 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ 32,698	$ 32,698	$ 32,698	$ -	$ -	
Total Resource Net Benefit (C	$ 38,822		$ 38,248	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (L	**$ 6.0**		**$ 6.0**	**$ -**	**$ -**	Informational (for comparison with supply options)

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NEW

Measure Data for 361.4

PER MEASURE			Utility Incentive to the participant	partner incentive
Total Incremental Cost	$ 160,325			
Utility Incentive	$ 38,516		$ 38,516	$ -
Incremental Participant cost	$ 121,809			

Annual Impact Per Measure

nergy Savings per installation	1374.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	415	GJ	115,278	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	15	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0		Estimated Participation
Impact						
Gross Energy Savings (GJ)	1,280	1,374	1,374	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	1,280	1,374	1,374	0	0	Gross Energy Savings less Free Riders
nergy Impact (Increase) (kWh)	108,753	115,278	115,278	0	0	Other Utility Billed energy impact
acity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$88.58	$92.66	$96.21	
Energy Purchas	$ 121,706	$ 121,706	$ 121,706	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 38,516	$ 38,516	$ -	$ -	
Administration		$ 250	$ 250	$ -		
Subtotal	$ 36,102	$ 38,766	$ 38,766	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -		$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 121,809	$ 121,809	$ -	$ -	
Subtotal	$ 113,437	$ 121,809	$ 121,809	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ 134,353	$ 134,353	$ -	$ -	$1.165 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ 134,353	$ 134,353	$ 134,353	$ -	$ -	
Total Resource Net Benefit (C	$ 106,520		$ 95,484	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (L	**$ 13.1**		**$ 13.1**	**$ -**	**$ -**	Informational (for comparison with supply options)

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NEW

Measure Data for 362.2

PER MEASURE			Utility Incentive to the participant	partner incentive
Total Incremental Cost	$ 99,000			
Utility Incentive	$ 81,840		$ 81,840	$ -
Incremental Participant cost	$ 17,160			

Annual Impact Per Measure

nergy Savings per installation	2552.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact		GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	15	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0		Estimated Participation
Impact						
Gross Energy Savings (GJ)	2,377	2,552	2,552	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	2,377	2,552	2,552	0	0	Gross Energy Savings less Free Riders
nergy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
acity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$88.58	$92.66	$96.21	
Energy Purchas	$ 226,051	$ 226,051	$ 226,051	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 81,840	$ 81,840	$ -	$ -	
Administration		$ 250	$ 250	$ -		
Subtotal	$ 76,448	$ 82,090	$ 82,090	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -		$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 17,160	$ 17,160	$ -	$ -	
Subtotal	$ 15,981	$ 17,160	$ 17,160	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.165 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (C	$ 133,622		$ 126,801	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (L	**$ 4.4**		**$ 4.4**	**$ -**	**$ -**	Informational (for comparison with supply options)

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NEW

Measure Data for 362.3

PER MEASURE			Utility Incentive to the participant	partner incentive
Total Incremental Cost	$ 10,000			
Utility Incentive	$ 3,165		$ 3,165	$ -
Incremental Participant cost	$ 6,835			

Annual Impact Per Measure

nergy Savings per installation	156.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact		GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	10	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0		Estimated Participation
Impact						
Gross Energy Savings (GJ)	145	156	156	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	145	156	156	0	0	Gross Energy Savings less Free Riders
nergy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
acity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$66.96	$70.64	$73.77	
Energy Purchas	$ 10,446	$ 10,446	$ 10,446	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 1	$ 1	$ -	$ -	
Administration		$ 250	$ 250	$ -		
Subtotal	$ 234	$ 251	$ 251	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -		$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 6,835	$ 6,835	$ -	$ -	
Subtotal	$ 6,365	$ 6,835	$ 6,835	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$0.883 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (C	$ 3,847		$ 3,360	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (L	**$ 6.6**		**$ 6.6**	**$ -**	**$ -**	Informational (for comparison with supply options)

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NEW

Measure Data for 362.4

PER MEASURE			Utility Incentive to the participant	partner incentive
Total Incremental Cost	$ 12,047			
Utility Incentive	$ 12,047		$ 12,047	$ -
Incremental Participant cost	$ -			

Annual Impact Per Measure

Energy Savings per installation	844.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact		GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	10	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0		Estimated Participation
Impact						
Gross Energy Savings (GJ)	786	844	844	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	786	844	844	0	0	Gross Energy Savings less Free Riders
Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$66.96	$70.64	$73.77	
Energy Purchas	$ 56,515	$ 56,515	$ 56,515	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 12,047	$ 12,047	$ -	$ -	
Administration		$ 250	$ 250	$ -		
Subtotal	$ 11,452	$ 12,297	$ 12,297	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -		$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$0.883 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (C	$ 45,063		$ 44,218	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (L	**$ 2.1**		**$ 2.1**	**$ -**	**$ -**	Informational (for comparison with supply options)

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NEW

Measure Data for 362.5

PER MEASURE			Utility Incentive to the participant	partner incentive
Total Incremental Cost	$ 1,065			
Utility Incentive	$ 1,065		$ 1,065	$ -
Incremental Participant cost	$ -			

Annual Impact Per Measure

nergy Savings per installation	59.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact		GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	20	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0		Estimated Participation
Impact						
Gross Energy Savings (GJ)	55	59	59	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	55	59	59	0	0	Gross Energy Savings less Free Riders
nergy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
acity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$105.21	$109.61	$113.48	
Energy Purchas	$ 6,207	$ 6,207	$ 6,207	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 1,065	$ 1,065	$ -	$ -	
Administration		$ 250	$ 250	$ -		
Subtotal	$ 1,225	$ 1,315	$ 1,315	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -		$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.376 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (C	$ 4,983		$ 4,892	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (L	**$ 2.2**		**$ 2.2**	**$ -**	**$ -**	Informational (for comparison with supply options)

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NEW

Measure Data for 398

PER MEASURE			Utility Incentive to the participant	partner incentive
Total Incremental Cost	$ 25,000			
Utility Incentive	$ 2,860		$ 2,860	$ -
Incremental Participant cost	$ 22,140			

Annual Impact Per Measure

nergy Savings per installation	102.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	179	GJ	49,722	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	15	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0		Estimated Participation
Impact						
Gross Energy Savings (GJ)	95	102	102	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	95	102	102	0	0	Gross Energy Savings less Free Riders
nergy Impact (Increase) (kWh)	46,908	49,722	49,722	0	0	Other Utility Billed energy impact
acity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$88.58	$92.66	$96.21	
Energy Purchas	$ 9,035	$ 9,035	$ 9,035	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 2,860	$ 2,860	$ -	$ -	
Administration		$ 250	$ 250	$ -		
Subtotal	$ 2,896	$ 3,110	$ 3,110	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -		$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 22,140	$ 22,140	$ -	$ -	
Subtotal	$ 20,618	$ 22,140	$ 22,140	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ 57,950	$ 57,950	$ -	$ -	$1.165 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ 57,950	$ 57,950	$ 57,950	$ -	$ -	
Total Resource Net Benefit (C	$ 43,470		$ 41,735	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (L	**$ 27.8**		**$ 27.8**	**$ -**	**$ -**	Informational (for comparison with supply options)

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NEW

Measure Data for 399.1

PER MEASURE			Utility Incentive to the participant	partner incentive
Total Incremental Cost	$ 46,000			
Utility Incentive	$ 23,000		$ 23,000	$ -
Incremental Participant cost	$ 23,000			

Annual Impact Per Measure

nergy Savings per installation	853.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact		GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	20	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0		Estimated Participation
Impact						
Gross Energy Savings (GJ)	794	853	853	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	794	853	853	0	0	Gross Energy Savings less Free Riders
nergy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
acity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$105.21	$109.61	$113.48	
Energy Purchas	$ 89,741	$ 89,741	$ 89,741	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 23,000	$ 23,000	$ -	$ -	
Administration		$ 250	$ 250	$ -		
Subtotal	$ 21,652	$ 23,250	$ 23,250	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -		$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 23,000	$ 23,000	$ -	$ -	
Subtotal	$ 21,419	$ 23,000	$ 23,000	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.376 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (C	$ 46,669		$ 43,491	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (L	**$ 5.3**		**$ 5.3**	**$ -**	**$ -**	Informational (for comparison with supply options)

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NEW

Measure Data for 399.2

PER MEASURE			Utility Incentive to the participant	partner incentive
Total Incremental Cost	$ 74,965			
Utility Incentive	$ 14,965		$ 14,965	$ -
Incremental Participant cost	$ 60,000			

Annual Impact Per Measure

nergy Savings per installation	619.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	346	GJ	96,111	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	15	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0		Estimated Participation
Impact						
Gross Energy Savings (GJ)	576	619	619	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	576	619	619	0	0	Gross Energy Savings less Free Riders
nergy Impact (Increase) (kWh)	90,671	96,111	96,111	0	0	Other Utility Billed energy impact
acity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$88.58	$92.66	$96.21	
Energy Purchas	$ 54,830	$ 54,830	$ 54,830	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 14,965	$ 14,965	$ -	$ -	
Administration		$ 250	$ 250	$ -		
Subtotal	$ 14,169	$ 15,215	$ 15,215	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -		$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 60,000	$ 60,000	$ -	$ -	
Subtotal	$ 55,876	$ 60,000	$ 60,000	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ 112,015	$ 112,015	$ -	$ -	$1.165 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ 112,015	$ 112,015	$ 112,015	$ -	$ -	
Total Resource Net Benefit (C	$ 96,799		$ 91,629	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (L	**$ 13.7**		**$ 13.7**	**$ -**	**$ -**	Informational (for comparison with supply options)

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NEW

Measure Data for 401.1

PER MEASURE			Utility Incentive to the participant	partner incentive
Total Incremental Cost	$ 62,625			
Utility Incentive	$ 38,855		$ 38,855	$ -
Incremental Participant cost	$ 23,770			

Annual Impact Per Measure

nergy Savings per installation	1386.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	15	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0		Estimated Participation
Impact						
Gross Energy Savings (GJ)	1,291	1,386	1,386	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	1,291	1,386	1,386	0	0	Gross Energy Savings less Free Riders
nergy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
acity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$88.58	$92.66	$96.21	
Energy Purchas	$ 122,769	$ 122,769	$ 122,769	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 38,855	$ 38,855	$ -	$ -	
Administration		$ 2,000	$ 2,000	$ -		
Subtotal	$ 38,047	$ 40,855	$ 40,855	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -		$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 23,770	$ 23,770	$ -	$ -	
Subtotal	$ 22,136	$ 23,770	$ 23,770	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.165 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (C	$ 62,586		$ 58,144	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (L	**$ 5.2**		**$ 5.2**	**$ -**	**$ -**	Informational (for comparison with supply options)

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NEW

Measure Data for 401.2

PER MEASURE			Utility Incentive to the participant	partner incentive
Total Incremental Cost	$ 46,000			
Utility Incentive	$ 13,765		$ 13,765	$ -
Incremental Participant cost	$ 32,235			

Annual Impact Per Measure

nergy Savings per installation	491.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	386	GJ	107,222	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	15	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0		Estimated Participation
Impact						
Gross Energy Savings (GJ)	457	491	491	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	457	491	491	0	0	Gross Energy Savings less Free Riders
nergy Impact (Increase) (kWh)	101,153	107,222	107,222	0	0	Other Utility Billed energy impact
acity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$88.58	$92.66	$96.21	
Energy Purchas	$ 43,492	$ 43,492	$ 43,492	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 13,765	$ 13,765	$ -	$ -	
Administration		$ 2,000	$ 2,000	$ -		
Subtotal	$ 14,682	$ 15,765	$ 15,765	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -		$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 32,235	$ 32,235	$ -	$ -	
Subtotal	$ 30,020	$ 32,235	$ 32,235	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ 124,964	$ 124,964	$ -	$ -	$1.165 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ 124,964	$ 124,964	$ 124,964	$ -	$ -	
Total Resource Net Benefit (C	$ 123,755		$ 120,456	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (L	**$ 11.0**		**$ 11.0**	**$ -**	**$ -**	Informational (for comparison with supply options)

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NEW

Measure Data for 401.3

PER MEASURE		Utility Incentive to the participant	partner incentive
Total Incremental Cost	$ 52,000		
Utility Incentive	$ 22,090	$ 22,090	$ -
Incremental Participant cost	$ 29,910		

Annual Impact Per Measure

Energy Savings per installation	788.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	386	GJ	107,222	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	15	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0		Estimated Participation
Impact						
Gross Energy Savings (GJ)	734	788	788	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	734	788	788	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	101,153	107,222	107,222	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$88.58	$92.66	$96.21	
Energy Purchases	$ 69,799	$ 69,799	$ 69,799	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 22,090	$ 22,090	$ -	$ -	
Administration		$ 5,000	$ 5,000	$ -		
Subtotal	$ 25,228	$ 27,090	$ 27,090	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -		$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 29,910	$ 29,910	$ -	$ -	
Subtotal	$ 27,854	$ 29,910	$ 29,910	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ 124,964	$ 124,964	$ -	$ -	$1.165 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ 124,964	$ 124,964	$ 124,964	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 141,681		$ 137,764	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 8.1**		**$ 8.1**	**$ -**	**$ -**	Informational (for comparison with supply options)

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NEW

Measure Data for 447.1

PER MEASURE			Utility Incentive to the participant	partner incentive
Total Incremental Cost	$ 210,000			
Utility Incentive	$ 76,850		$ 76,850	$ -
Incremental Participant cost	$ 133,150			

Annual Impact Per Measure

nergy Savings per installation	2227.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact		GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	20	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0		Estimated Participation
Impact						
Gross Energy Savings (GJ)	2,074	2,227	2,227	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	2,074	2,227	2,227	0	0	Gross Energy Savings less Free Riders
nergy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
acity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$105.21	$109.61	$113.48	
Energy Purchas	$ 234,293	$ 234,293	$ 234,293	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 76,850	$ 76,850	$ -	$ -	
Administration		$ 5,000	$ 5,000	$ -		
Subtotal	$ 76,225	$ 81,850	$ 81,850	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -		$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 133,150	$ 133,150	$ -	$ -	
Subtotal	$ 123,999	$ 133,150	$ 133,150	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.376 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (C	$ 34,070		$ 19,293	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (L	**$ 9.4**		**$ 9.4**	**$ -**	**$ -**	Informational (for comparison with supply options)

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NEW

Measure Data for 447.2

PER MEASURE			Utility Incentive to the participant	partner incentive
Total Incremental Cost	$ 6,000			
Utility Incentive	$ 2,685		$ 2,685	$ -
Incremental Participant cost	$ 3,315			

Annual Impact Per Measure

Energy Savings per installation	114.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact		GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	12	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0		Estimated Participation
Impact						
Gross Energy Savings (GJ)	106	114	114	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	106	114	114	0	0	Gross Energy Savings less Free Riders
Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$76.30	$80.15	$83.46	
Energy Purchas	$ 8,698	$ 8,698	$ 8,698	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 2,685	$ 2,685	$ -	$ -	
Administration		$ 250	$ 250	$ -		
Subtotal	$ 2,733	$ 2,935	$ 2,935	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -		$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 3,315	$ 3,315	$ -	$ -	
Subtotal	$ 3,087	$ 3,315	$ 3,315	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.006 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (C	$ 2,877		$ 2,448	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (L	**$ 7.0**		**$ 7.0**	**$ -**	**$ -**	Informational (for comparison with supply options)

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NEW

Measure Data for 447.3

PER MEASURE			Utility Incentive to the participant	partner incentive
Total Incremental Cost	$ 14,000			
Utility Incentive	$ 8,550		$ 8,550	$ -
Incremental Participant cost	$ 5,450			

Annual Impact Per Measure

Energy Savings per installation	363.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact		GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	12	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0		Estimated Participation
Impact						
Gross Energy Savings (GJ)	338	363	363	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	338	363	363	0	0	Gross Energy Savings less Free Riders
Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$76.30	$80.15	$83.46	
Energy Purchas	$ 27,695	$ 27,695	$ 27,695	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 8,550	$ 8,550	$ -	$ -	
Administration		$ 250	$ 250	$ -		
Subtotal	$ 8,195	$ 8,800	$ 8,800	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -		$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 5,450	$ 5,450	$ -	$ -	
Subtotal	$ 5,075	$ 5,450	$ 5,450	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.006 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (C	$ 14,425		$ 13,445	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (L	**$ 5.0**		**$ 5.0**	**$ -**	**$ -**	Informational (for comparison with supply options)

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NEW

Measure Data for 447.4

PER MEASURE			Utility Incentive to the participant	partner incentive
Total Incremental Cost	$ 11,000			
Utility Incentive	$ 5,865		$ 5,865	$ -
Incremental Participant cost	$ 5,135			

Annual Impact Per Measure

Energy Savings per installation	249.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact		GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	12	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0		Estimated Participation
Impact						
Gross Energy Savings (GJ)	232	249	249	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	232	249	249	0	0	Gross Energy Savings less Free Riders
Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$76.30	$80.15	$83.46	
Energy Purchas	$ 18,998	$ 18,998	$ 18,998	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 5,865	$ 5,865	$ -	$ -	
Administration		$ 250	$ 250	$ -		
Subtotal	$ 5,695	$ 6,115	$ 6,115	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -		$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 5,135	$ 5,135	$ -	$ -	
Subtotal	$ 4,782	$ 5,135	$ 5,135	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.006 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (C	$ 8,521		$ 7,748	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (L	**$ 5.8**		**$ 5.8**	**$ -**	**$ -**	Informational (for comparison with supply options)

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NEW

Measure Data for 447.5

PER MEASURE			Utility Incentive to the participant	partner incentive
Total Incremental Cost	$ 3,000			
Utility Incentive	$ 1,122		$ 1,122	$ -
Incremental Participant cost	$ 1,878			

Annual Impact Per Measure

nergy Savings per installation	40.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact		GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	15	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0		Estimated Participation
Impact						
Gross Energy Savings (GJ)	37	40	40	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	37	40	40	0	0	Gross Energy Savings less Free Riders
nergy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
acity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$88.58	$92.66	$96.21	
Energy Purcha	$ 3,543	$ 3,543	$ 3,543	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 1,122	$ 1,122	$ -	$ -	
Administration		$ 250	$ 250	$ -		
Subtotal	$ 1,278	$ 1,372	$ 1,372	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -		$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 1,878	$ 1,878	$ -	$ -	
Subtotal	$ 1,749	$ 1,878	$ 1,878	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.165 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (C	$ 516		$ 293	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (	**$ 9.1**		**$ 9.1**	**$ -**	**$ -**	Informational (for comparison with supply options)

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NEW

Measure Data for 447.7

PER MEASURE			Utility Incentive to the participant	partner incentive
Total Incremental Cost	$ 20,000			
Utility Incentive	$ 11,241		$ 11,241	$ -
Incremental Participant cost	$ 8,759			

Annual Impact Per Measure

nergy Savings per installation	401.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact		GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	15	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0		Estimated Participation
Impact						
Gross Energy Savings (GJ)	373	401	401	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	373	401	401	0	0	Gross Energy Savings less Free Riders
nergy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
acity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$88.58	$92.66	$96.21	
Energy Purchas	$ 35,520	$ 35,520	$ 35,520	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 11,241	$ 11,241	$ -	$ -	
Administration		$ 250	$ 250	$ -		
Subtotal	$ 10,701	$ 11,491	$ 11,491	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -		$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 8,759	$ 8,759	$ -	$ -	
Subtotal	$ 8,157	$ 8,759	$ 8,759	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.165 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (C	$ 16,661		$ 15,270	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (L	**$ 5.7**		**$ 5.7**	**$ -**	**$ -**	Informational (for comparison with supply options)

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NEW

Measure Data for 451.1.

PER MEASURE			Utility Incentive to the participant	partner incentive
Total Incremental Cost	$ 5,000			
Utility Incentive	$ 4,040		$ 4,040	$ -
Incremental Participant cost	$ 960			

Annual Impact Per Measure

nergy Savings per installation	144.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact		GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	15	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0		Estimated Participation
Impact						
Gross Energy Savings (GJ)	134	144	144	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	134	144	144	0	0	Gross Energy Savings less Free Riders
nergy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
acity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$88.58	$92.66	$96.21	
Energy Purchas	$ 12,755	$ 12,755	$ 12,755	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 4,040	$ 4,040	$ -	$ -	
Administration		$ 250	$ 250	$ -		
Subtotal	$ 3,995	$ 4,290	$ 4,290	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -		$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 960	$ 960	$ -	$ -	
Subtotal	$ 894	$ 960	$ 960	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.165 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (C	$ 7,866		$ 7,505	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (L	**$ 4.1**		**$ 4.1**	**$ -**	**$ -**	Informational (for comparison with supply options)

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NEW

Measure Data for 451.2

PER MEASURE			Utility Incentive to the participant	partner incentive
Total Incremental Cost	$ 2,000			
Utility Incentive	$ 2,000		$ 2,000	$ -
Incremental Participant cost	$ -			

Annual Impact Per Measure

nergy Savings per installation	112.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	15	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0		Estimated Participation
Impact						
Gross Energy Savings (GJ)	104	112	112	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	104	112	112	0	0	Gross Energy Savings less Free Riders
nergy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
acity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$88.58	$92.66	$96.21	
Energy Purchas	$ 9,921	$ 9,921	$ 9,921	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 2,000	$ 2,000	$ -	$ -	
Administration		$ 250	$ 250	$ -		
Subtotal	$ 2,095	$ 2,250	$ 2,250	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -		$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.165 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (C	$ 7,825		$ 7,671	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (L	**$ 2.3**		**$ 2.3**	**$ -**	**$ -**	Informational (for comparison with supply options)

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NEW

Measure Data for 451.3

PER MEASURE			Utility Incentive to the participant	partner incentive
Total Incremental Cost	$ 1,500			
Utility Incentive	$ 840		$ 840	$ -
Incremental Participant cost	$ 660			

Annual Impact Per Measure

nergy Savings per installation	30.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact		GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	15	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0		Estimated Participation
Impact						
Gross Energy Savings (GJ)	28	30	30	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	28	30	30	0	0	Gross Energy Savings less Free Riders
nergy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
acity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$88.58	$92.66	$96.21	
Energy Purchas	$ 2,657	$ 2,657	$ 2,657	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 840	$ 840	$ -	$ -	
Administration		$ 250	$ 250	$ -		
Subtotal	$ 1,015	$ 1,090	$ 1,090	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -		$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 660	$ 660	$ -	$ -	
Subtotal	$ 615	$ 660	$ 660	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.165 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (C	$ 1,028		$ 907	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (L	**$ 6.6**		**$ 6.6**	**$ -**	**$ -**	Informational (for comparison with supply options)

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NEW

Measure Data for 451.4

PER MEASURE			Utility Incentive to the participant	partner incentive
Total Incremental Cost	$ 3,000			
Utility Incentive	$ 2,685		$ 2,685	$ -
Incremental Participant cost	$ 315			

Annual Impact Per Measure

nergy Savings per installation	114.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact		GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	12	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0		Estimated Participation
Impact						
Gross Energy Savings (GJ)	106	114	114	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	106	114	114	0	0	Gross Energy Savings less Free Riders
nergy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
acity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$76.30	$80.15	$83.46	
Energy Purchas	$ 8,698	$ 8,698	$ 8,698	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 2,685	$ 2,685	$ -	$ -	
Administration		$ 250	$ 250	$ -		
Subtotal	$ 2,733	$ 2,935	$ 2,935	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -		$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 315	$ 315	$ -	$ -	
Subtotal	$ 293	$ 315	$ 315	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.006 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (C	$ 5,671		$ 5,448	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (L	**$ 3.7**		**$ 3.7**	**$ -**	**$ -**	Informational (for comparison with supply options)

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NEW

Measure Data for 453.2

PER MEASURE			Utility Incentive to the participant	partner incentive
Total Incremental Cost	$ 1,000			
Utility Incentive	$ 1,000		$ 1,000	$ -
Incremental Participant cost	$ -			

Annual Impact Per Measure

Energy Savings per installation	51.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact		GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	15	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0		Estimated Participation
Impact						
Gross Energy Savings (GJ)	47	51	51	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	47	51	51	0	0	Gross Energy Savings less Free Riders
Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$88.58	$92.66	$96.21	
Energy Purchas	$ 4,517	$ 4,517	$ 4,517	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 1,000	$ 1,000	$ -	$ -	
Administration		$ 250	$ 250	$ -		
Subtotal	$ 1,164	$ 1,250	$ 1,250	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -		$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.165 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (C	$ 3,353		$ 3,267	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (L	**$ 2.8**		**$ 2.8**	**$ -**	**$ -**	Informational (for comparison with supply options)

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NEW

Measure Data for 453.3

PER MEASURE			Utility Incentive to the participant	partner incentive
Total Incremental Cost	$ 2,000			
Utility Incentive	$ 800		$ 800	$ -
Incremental Participant cost	$ 1,200			

Annual Impact Per Measure

nergy Savings per installation	25.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact		GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	15	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0		Estimated Participation
Impact						
Gross Energy Savings (GJ)	23	25	25	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	23	25	25	0	0	Gross Energy Savings less Free Riders
nergy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
acity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$88.58	$92.66	$96.21	
Energy Purchas	$ 2,214	$ 2,214	$ 2,214	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 800	$ 800	$ -	$ -	
Administration		$ 250	$ 250	$ -		
Subtotal	$ 978	$ 1,050	$ 1,050	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -		$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 1,200	$ 1,200	$ -	$ -	
Subtotal	$ 1,118	$ 1,200	$ 1,200	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.165 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (C	$ 119		$ (36)	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (L	**$ 10.1**		**$ 10.1**	**$ -**	**$ -**	Informational (for comparison with supply options)

FORTIS BC

only enter in boxes marked in blue

NEW

Measure Data for 453.5

PER MEASURE			Utility Incentive to the participant	partner incentive
Total Incremental Cost	$ 2,000			
Utility Incentive	$ 2,000		$ 2,000	$ -
Incremental Participant cost	$ -			

Annual Impact Per Measure

Energy Savings per installation	93.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact		GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	15	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0		Estimated Participation
Impact						
Gross Energy Savings (GJ)	87	93	93	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	87	93	93	0	0	Gross Energy Savings less Free Riders
Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$88.58	$92.66	$96.21	
Energy Purchas	$ 8,238	$ 8,238	$ 8,238	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 2,000	$ 2,000	$ -	$ -	
Administration		$ 250	$ 250	$ -		
Subtotal	$ 2,095	$ 2,250	$ 2,250	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -		$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.165 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (C	$ 6,142		$ 5,988	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (L	**$ 2.7**		**$ 2.7**	**$ -**	**$ -**	Informational (for comparison with supply options)

FORTIS BC

only enter in boxes marked in blue

NEW

Measure Data for 460

PER MEASURE			Utility Incentive to the participant	partner incentive
Total Incremental Cost	$ 18,000			
Utility Incentive	$ 15,710		$ 15,710	$ -
Incremental Participant cost	$ 2,290			

Annual Impact Per Measure

nergy Savings per installation	490.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact		GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	15	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0		Estimated Participation
Impact						
Gross Energy Savings (GJ)	456	490	490	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	456	490	490	0	0	Gross Energy Savings less Free Riders
nergy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
acity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$88.58	$92.66	$96.21	
Energy Purchas	$ 43,403	$ 43,403	$ 43,403	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 15,710	$ 15,710	$ -	$ -	
Administration		$ 250	$ 250	$ -		
Subtotal	$ 14,863	$ 15,960	$ 15,960	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -		$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 2,290	$ 2,290	$ -	$ -	
Subtotal	$ 2,133	$ 2,290	$ 2,290	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.165 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (C	$ 26,407		$ 25,153	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (L	**$ 4.2**		**$ 4.2**	**$ -**	**$ -**	Informational (for comparison with supply options)

FORTIS BC

2010 Commercial Programs

PROGRAM

FEVI	COSTS ($000) Utility Incentives	Utility Administration	Utility Total	Partners Incentives	Partners Administration	Partners Total	Participant	Total	% Utility	% Partner	% Participant	SAVINGS (GJ) Gross	Net-to-Gross	Net	LIFE Years
Label	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
Source Sheet or Calculation	Program	Program	B+C	Program	Program	E+F	Program	D+G+H	D/I	G/I	H/I	Program	Program	MxN	Program
2010															
Commercial Energy Efficiency Programs															
New Construction															
Efficient Boiler Program	6	1	6	0	0	0	3	10	67%	0%	33%	125	82%	103	20
Retrofit															
Efficient Boiler Program	97	5	103	0	0	0	148	251	41%	0%	59%	3,560	82%	2,919	18
Light Comm. ENERGY STAR® Boiler Program	12	1	13	0	0	0	49	62	21%	0%	79%	788	82%	646	20
Retrofit Efficient Commercial Water Heater Program	3	1	4	0	0	0	9	12	30%	0%	70%	152	95%	144	12
Spray N'Save	12	4	16	0	0	0	0	16	100%	0%	0%	1,746	88%	1,536	5
Retrofit Energy Assessment Program	16	2	17	0	0	0	0	17	100%	0%	0%	6,344	65%	4,124	1
PSECA	291	6	298	0	0	0	414	711	42%	0	58%	11,706	100%	11,706	
Total Commercial	437	20	456	0	0	0	623	1,079	42%		58%	24,421		21,178	

ALTERNATE / NET PRESENT VALUE

FEVI	ALTERNATE Impact Energy MWh	Impact Capacity kW	Levelized Cost ($/GJ)	Utility Benefits (Costs) Program ($'000s)	Utility Benefits (Costs) Alternate ($'000s)	Participant Benefits (Costs) Program ($'000s)	Participant Benefits (Costs) Carbon Tax ($'000s)	Participant Benefits (Costs) Alternate ($'000s)	Program Net Savings Natural Gas (GJ)	Program Net Savings Alternate Energy (MWh)	Program Net Savings Alternate Capacity (kW)
Label	Q	R	S	T	U	V	W	X	Y	Z	AA
Source Sheet or Calculation	Program	Program	D/Y	OxAJ	Q x N x AL	M x N x AN	M x N x AO	N x (QxAP + RxAQ)	PV(AI,P,-O)	PV(AK,P,-Q*N)	PV(AK,P,-R)
2010											
Commercial Energy Efficiency Programs											
New Construction											
Efficient Boiler Program	1	-	4	32	2	26	2	1	1,525	10	-
Retrofit											
Efficient Boiler Program	7	-	3	839	12	680	60	6	40,149	75	-
Light Comm. ENERGY STAR® Boiler Program	0	-	1	200	N/A	163	14	N/A	9,613	0	-
Retrofit Efficient Commercial Water Heater Program	0	-	3	31	N/A	24	2	N/A	1,437	0	-
Spray N'Save	0	-	2	167	N/A	119	11	N/A	7,037	0	-
Retrofit Energy Assessment Program	0	-	4	158	N/A	68	9	N/A	4,003	0	-
PSECA	274	0	2	2,957	487	2,399	214	258	141,626	3,123	0
Total Commercial	282	0	2	4,383	501	3,479	314	265	205,391	3,208	0

BENEFIT/COST

FEVI	Natural Gas Utility	Participant Total Costs ($'000s)	Participant Total Benefits ($'000s)	Participant Benefit/Cost	Natural Gas Rate Impact	Societal Cost Test	SCT Net Benefits ($'000s)
Label	AB	AC	AD	AE	AF	AG	AH
Source Sheet or Calculation	T/D	H>0, (V+W)<0	H<0, (V+W)>0, X	AD/AC	T/(V+D)	(T+U)/I	(T+U)-I
2010							
Commercial Energy Efficiency Programs							
New Construction							
Efficient Boiler Program	4.9	3	29	9.1	1.0	3.5	24
Retrofit							
Efficient Boiler Program	8.2	148	747	5.0	1.1	3.4	599
Light Comm. ENERGY STAR® Boiler Program	15.6	49	177	3.6	1.1	3.2	138
Retrofit Efficient Commercial Water Heater Program	8.2	9	27	3.1	1.1	2.5	18
Spray N'Save	10.6	-	131	N/A	1.2	10.6	151
Retrofit Energy Assessment Program	9.0	-	77	N/A	1.9	9.0	141
PSECA	9.9	414	2,872	6.9	1.1	4.8	2733
Total Commercial	9.6	623	4,059	6.5	1.1	4.5	3,805

PARAMETERS

FEVI	UTILITY Natural Gas Utility Discount Rate	Natural Gas Supply $/GJ	Alternate Discount Rate	Alternate Supply $/kWh	PARTICIPANT Discount Rate	Natural Gas NPV $/GJ	Carbon Tax NPV $/GJ	Alternate Energy NPV $/kWh	Alternate Capacity NPV $/kW/a	Natural Gas Tariff $/GJ	Energy Tariff $/kWh	Capacity Tariff $/kW/a
Label	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR	AS	AT
Source Sheet or Calculation	Input	Program	Input	Input	Input	PV(AM,P,-InputD25)	Input	PV(AM,P,-InputD28)	PV(AM,P,-InputD29)	Input	Input	Input
2010												
Commercial Energy Efficiency Programs												
New Construction												
Efficient Boiler Program	3.00%	237.85	3%	1.79	3.0%	252.02	22.35	1.23	0.00	9.999	0.083	-
Retrofit												
Efficient Boiler Program	3.00%	221.02	3%	1.65	3.0%	232.98	20.71	1.14	0.00	9.999	0.083	-
Light Comm. ENERGY STAR® Boiler Program	3.00%	237.85	3%	1.79	3.0%	252.02	22.35	1.23	0.00	9.999	0.083	-
Retrofit Efficient Commercial Water Heater Program	3.00%	164.10	3%	1.19	3.0%	168.62	15.19	0.82	0.00	9.999	0.083	-
Spray N'Save	3.00%	83.59	3%	0.55	3.0%	77.58	7.39	0.38	0.00	9.999	0.083	-
Retrofit Energy Assessment Program	3.00%	29.52	3%	0.12	3.0%	16.45	2.14	0.08	0.00	9.999	0.083	-
PSECA	3.00%	83.59	3%	0.00	3.0%	0.00	0.00	0.00	0.00	9.999	0.083	-
Total Commercial												

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ
1	**UTILITY**		**FORTIS BC**																																	
2																																				
3																																				
4			**Year**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	
5			Units																																	
6		**NATURAL GAS**																																		
7		Incremental Cost of Gas (nominal)	$ Per GJ	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.18
8	1		*Year*	*0*	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*	*16*	*17*	*18*	*19*	*20*	*21*	*22*	*23*	*24*	*25*	*26*	*27*	*28*	*29*	*30*	*31*	
9		carbon tax	$ per GJ	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	
10		Distribution adder	$ per GJ	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	
11		Total incremental cost of gas including carbon		*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.28*	
12	2	GDP Deflator		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
13	3	Incremental Cost of Gas (Real)		$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.28	
14	4	Net Present Value -2010		$14.98	$29.52	$43.65	$57.35	$70.66	$83.59	$96.13	$108.31	$120.14	$131.62	$142.77	$153.59	$164.10	$174.30	$184.20	$193.82	$203.15	$212.22	$221.02	$229.56	$237.85	$245.91	$253.72	$261.32	$268.68	$275.84	$282.79	$289.53	$296.08	$302.43	$308.61	$314.54	
15	5	Net Present Value -2011			$29.52	$43.65	$57.35	$70.66	$83.59	$96.13	$108.31	$120.14	$131.62	$142.77	$153.59	$164.10	$174.30	$184.20	$193.82	$203.15	$212.22	$221.02	$229.56	$237.85	$245.91	$253.72	$261.32	$268.68	$275.84	$282.79	$289.53	$296.08	$302.43	$308.61	$314.54	
16	6	Net Present Value -2012				$29.52	$43.65	$57.35	$70.66	$83.59	$96.13	$108.31	$120.14	$131.62	$142.77	$153.59	$164.10	$174.30	$184.20	$193.82	$203.15	$212.22	$221.02	$229.56	$237.85	$245.91	$253.72	$261.32	$268.68	$275.84	$282.79	$289.53	$296.08	$302.37				
17																																				
18																																				
19		**ELECTRICITY**																																		
20		Incremental Cost of Elec	$ Per kWh	$0.10																																
21		Incremental Cost of E Capacity	$ Per kW/a	$170.00																																
22																																				
23																																				
24																																				
25	**RETAIL**																																			
26				Rate	Customers																															
27		Residential Retail			1,000																															
28		**TGI**	$ Per MJ	$0.0100	1,000																															
29		**TGVI**	$ Per MJ	$0.0143	1,000																															
30		**Electricity**	$ Per MJ	$0.0230																																
31		**Electricity**	$ per kWh	$0.0829	1,000																															
32		**Electricity**	$ per kW per year		1,000																															
33		Commercial Retail																																		
34		**TGI**	$ Per MJ	$0.0094	50																															
35		**TGVI**	$ Per MJ	$0.0160	50																															
36		**Electricity**	$ Per MJ	$0.0214																																
37		**Electricity**	$ per kWh	$0.0749	750																															
38		**Electricity**	$ per kW per year	$52.0000	50																															
39																																				
40	**TAX**																																			
41			**Year**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	
42	1		*Year*		*0*	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*	*16*	*17*	*18*	*19*	*20*	*21*	*22*	*23*	*24*	*25*	*26*	*27*	*28*	*29*	*30*	
43	2	Carbon	$ Per tonne		$20.00	$25.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	
44	3	Carbon	$ Per GJ		$0.9976	$1.2470	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	
45	4	GDP Deflator			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
46	5	Carbon (Real)			$1.00	$1.25	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	
47	6	Net Present Value -2008			$2.14	$3.51	$4.84	$6.13	$7.38	$8.60	$9.78	$10.93	$12.05	$13.13	$14.18	$15.19	$16.18	$17.14	$18.08	$18.98	$19.86	$20.71	$21.54	$22.35	$23.13	$23.89	$24.62	$25.34	$26.03	$26.71	$27.38	$27.99	$28.61	$29.21			
48	7	Net Present Value -2009				$2.62	$3.99	$5.32	$6.61	$7.86	$9.08	$10.26	$11.41	$12.52	$13.60	$14.65	$15.67	$16.66	$17.62	$18.55	$19.46	$20.34	$21.19	$22.02	$22.82	$23.61	$24.36	$25.10	$25.81	$26.51	$27.18	$27.84	$28.47	$29.09				
49	8	Net Present Value -2010				$1.45	$2.86	$4.23	$5.56	$6.85	$8.11	$9.32	$10.50	$11.65	$12.76	$13.85	$14.90	$15.91	$16.90	$17.86	$18.80	$19.70	$20.58	$21.43	$22.26	$23.07	$23.85	$24.61	$25.34	$26.06	$26.75	$27.42	$28.08	$28.71				
50																																				
51		**Discount Rate (real)**[1]																																		
52		**TERASEN GAS**																																		
53		**Rate of Inflation**	1.90%																																	
54		**TGI**	3.00%																																	
55		**TGVI**	3.00%																																	
56		**BC HYDRO**																																		
57		**Rate of Inflation**	2.00%																																	
58		**BC Hydro**	3.00%																																	
59		**Customer**	3.00%																																	
60		*Footnote 1: Source LR 670531*																																		
61																																				
62				**SHEET LABELS**																																
63	**New Construction**																																			
64		New Construction		**BASEBOARD**																																
65		Efficient Boiler Program		**HEATPUMP**																																

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Measure Data for Efficient Boiler Program

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 9,652			
Total Incentive	$ 5,770		$ 5,770	$ -
Participant	$ 3,882			

Annual Impact Per Measure

Energy Savings per installation	125.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	18%	0.82		Net-to-Gross
Alternate Energy Impact	3	GJ	833	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	20	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0	0	Estimated Participation
Impact						
Gross Energy Savings (GJ)	121	125	125	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	100	103	103	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	809	833	833	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$237.85	$237.85	$237.85	
Energy Purchases	$ 24,380	$ 24,380	$ 24,380	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 5,770	$ 5,770	$ -	$ -	
Administration		$ 655	$ 655	$ -	$ -	
Subtotal	$ 6,238	$ 6,425	$ 6,425	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 3,183	$ 3,183	$ -	$ -	
Subtotal	$ 3,091	$ 3,183	$ 3,183	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ 1,220	$ 1,220	$ -	$ -	$1.785 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ 1,220	$ 1,220	$ 1,220	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 16,272		$ 15,992	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 6.3**		**$ 6.3**	**$ -**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Light Comm. ENERGY STAR® Boiler Program

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ -			
Total Incentive	$ -		$ -	$ -
Participant	$ -			

Annual Impact Per Measure

Energy Savings per installation	0.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	20	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	0	0	0	0	0	Estimated Participation
Impact						
Gross Energy Savings (GJ)	0	0	0	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	0	0	0	0	0	Gross Energy Savings less Free Riders
Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$237.85	$237.85	$237.85	
Energy Purchas	$ -	$ -	$ -	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.785 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (C	$ -		$ -	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (L	**$ -**		**$ -**	**$ -**	**$ -**	Informational (for comparison with supply options)

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NEW

Measure Data for Efficient Commercial Water Heater

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ -			
Total Incentive	$ -		$ -	$ -
Participant	$ -			

Annual Impact Per Measure

Energy Savings per installation	0.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	0	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	0	0	0	0	0	Estimated Participation
Impact						
Gross Energy Savings (GJ)	0	0	0	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	0	0	0	0	0	Gross Energy Savings less Free Riders
Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$14.98	$0.00	$0.00	
Energy Purchas	$ -	$ -	$ -	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$0.000 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (C	$ -		$ -	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (L	**$ -**		**$ -**	**$ -**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Efficient Boiler Program

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 34,787			
Total Incentive	$ 12,176		$ 12,176	$ -
Participant	$ 22,611			

Annual Impact Per Measure

Energy Savings per installation	445.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	18%	0.82		Net-to-Gross
Alternate Energy Impact	3	GJ	833	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	18	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	8	8	8	0	0	Estimated Participation
Impact						
Gross Energy Savings (GJ)	3,456	3,560	3,560	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	2,834	2,919	2,919	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	6,472	6,667	6,667	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$221.02	$221.02	$221.02	
Energy Purchases	$ 645,191	$ 645,191	$ 645,191	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 97,408	$ 97,408	$ -	$ -	
Administration		$ 5,244	$ 5,244	$ -	$ -	
Subtotal	$ 99,662	$ 102,652	$ 102,652	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 148,328	$ 148,328	$ -	$ -	
Subtotal	$ 144,008	$ 148,328	$ 148,328	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ 9,022	$ 9,022	$ -	$ -	$1.650 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ 9,022	$ 9,022	$ 9,022	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 410,543		$ 403,233	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 6.3**		**$ 6.3**	**$ -**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Light Comm. ENERGY STAR® Boiler Program

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 17,833			
Total Incentive	$ 2,905		$ 2,905	$ -
Participant	$ 14,928			

Annual Impact Per Measure

nergy Savings per installation	197.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	18%	0.82		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	20	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	4	4	4	0	0	Estimated Participation
Impact						
Gross Energy Savings (GJ)	765	788	788	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	627	646	646	0	0	Gross Energy Savings less Free Riders
nergy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
acity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$237.85	$237.85	$237.85	
Energy Purchas	$ 153,692	$ 153,692	$ 153,692	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 11,620	$ 11,620	$ -	$ -	
Administration		$ 1,210	$ 1,210	$ -	$ -	
Subtotal	$ 12,456	$ 12,830	$ 12,830	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 48,964	$ 48,964	$ -	$ -	
Subtotal	$ 47,538	$ 48,964	$ 48,964	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.785 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (C	$ 93,698		$ 91,898	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (L	**$ 6.4**		**$ 6.4**	**$ -**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Retrofit Efficient Commercial Water Heater Program

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 6,023			
Total Incentive	$ 1,493		$ 1,493	$ -
Participant	$ 4,530			

Annual Impact Per Measure

nergy Savings per installation	76.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	5%	0.95		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	12	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	2	2	2	0	0	Estimated Participation
Impact						
Gross Energy Savings (GJ)	148	152	152	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	140	144	144	0	0	Gross Energy Savings less Free Riders
nergy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
acity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$164.10	$164.10	$164.10	
Energy Purchas	$ 23,696	$ 23,696	$ 23,696	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 2,986	$ 2,986	$ -	$ -	
Administration		$ 765	$ 765	$ -	$ -	
Subtotal	$ 3,642	$ 3,751	$ 3,751	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 8,607	$ 8,607	$ -	$ -	
Subtotal	$ 8,356	$ 8,607	$ 8,607	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.194 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (C	$ 11,698		$ 11,338	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (L	**$ 8.6**		**$ 8.6**	**$ -**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Retrofit Energy Assessment Program

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 1,200			
Total Incentive	$ 1,200		$ 1,200	$ -
Participant	$ -			

Annual Impact Per Measure

Energy Savings per installation	488.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	35%	0.65		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	1	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	13	13	13	0	0	Estimated Participation
Impact						
Gross Energy Savings (GJ)	6,159	6,344	6,344	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	4,003	4,124	4,124	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$29.52	$29.52	$29.52	
Energy Purchases	$ 121,749	$ 121,749	$ 121,749	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 15,600	$ 15,600	$ -	$ -	
Administration		$ 1,898	$ 1,898	$ -	$ -	
Subtotal	$ 16,988	$ 17,498	$ 17,498	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$0.117 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 104,760		$ 104,251	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 4.4**		**$ 4.4**	**$ -**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Spray N'Save

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 63			
Total Incentive	$ 63		$ 63	$ -
Participant	$ -			

Annual Impact Per Measure

Energy Savings per installation	9.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	12%	0.88		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	5	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	188	194	194	0	0	Estimated Participation
Impact						
Gross Energy Savings (GJ)	1,695	1,746	1,746	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	1,492	1,536	1,536	0	0	Gross Energy Savings less Free Riders
Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$83.59	$83.59	$83.59	
Energy Purchas	$ 128,430	$ 128,430	$ 128,430	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 12,144	$ 12,144	$ -	$ -	
Administration		$ 3,545	$ 3,545	$ -	$ -	
Subtotal	$ 15,233	$ 15,690	$ 15,690	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$0.550 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (C	$ 113,198		$ 112,741	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (L	**$ 2.2**		**$ 2.2**	**$ -**	**$ -**	Informational (for comparison with supply options)

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2010 Commercial Programs	PROGRAM															ALTERNATE		NET PRESENT VALUE									BENEFIT/COST							PARAMETERS														
	COSTS ($000)											SAVINGS (GJ)			LIFE	Impact		Levelized Cost	Utility Benefits (Costs)		Participant Benefits (Costs)			Program Net Savings			Natural Gas	Participant					TRC Net Benefits	UTILITY				PARTICIPANT											
FEVI	Utility			Partners			Participant	Total	% Utility	% Partner	% Participant	Gross	Net-to-Gross	Net	Years	Energy	Capacity	($/GJ)	Program	Alternate	Program	Carbon Tax	Alternate	Natural Gas	Alternate Energy	Alternate Capacity	Natural Gas	Total Costs	Total Benefits	Benefit/Cost	Natural Gas	Total Resource	($'000s)	Natural Gas Utility Discount Rate	Natural Gas Supply	Alternate Discount Rate	Alternate Supply	Discount Rate	Natural Gas NPV	Carbon Tax NPV	Alternate Energy NPV	Alternate Capacity NPV	Natural Gas Tariff	Energy Tariff	Capacity Tariff						
	Incentives	Administration	Total	Incentives	Administration	Total										MWh	kW		($'000s)	($'000s)	($'000s)	($'000s)	($'000s)	(GJ)	(MWh)	(kW)	Utility	($'000s)	($'000s)		Rate Impact					$/GJ	$/GJ	$/kWh	$/kW/a	$/GJ	$/kWh	$/kW/a						
Label	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR	AS	AT						
Source Sheet or Calculation	Program	Program	B+C	Program	Program	E+F	Program	D+G+H	D/I	G/I	H/I	Program	Program	M-N	Program	Program	Program	D/Y	O+AJ	Q x N x AL	M x N x AN	M x N x AO	N x (QxAP + RxAQ)	P(AI,P,-O)	PV(AM,P,-Q*%)	P(AK,P,-R)	T/D	H=O, (V=W)=0	H=0, (V=W)=O, X	AD/AC	T/(V+O)	(T+U)/I	(T+U)-I	Input	Program	Input	Input	Input	P(AM,P,-Input!D25)	Input	P(AM,P,-Input!D28)	P(AM,P,-Input!D29)	Input	Input	Input						
2010																																																	
Commercial Energy Efficiency Programs																																																
New Construction																																																
Efficient Boiler Program	6	1	6	0	0	0	3	10	67%	0%	33%	125	82%	103	20	1	-	6	11	1	20	2	1	1,097	8	-	1.8	3	22	7.0	0.4	1.3	3	6.87%	110.02	6%	1.38	6.0%	194.30	15.70	0.95	0.00	9.999	0.083	-						
Retrofit																																																	
Efficient Boiler Program	97	5	103	0	0	0	148	251	41%	0%	59%	3,560	82%	2,919	18	7	-	3	301	7	535	44	5	29,642	59	-	2.9	148	584	3.9	0.5	1.2	58	6.87%	103.26	6%	1.30	6.0%	183.42	14.93	0.90	0.00	9.999	0.083	-						
Light Comm. ENERGY STAR® Boiler Program	12	1	13	0	0	0	49	62	21%	0%	79%	788	82%	646	20	0	-	2	71	N/A	126	10	N/A	6,915	0	-	5.5	49	136	2.8	0.5	1.2	9	6.87%	110.02	6%	1.38	6.0%	194.30	15.70	0.95	0.00	9.999	0.083	-						
Retrofit Efficient Commercial Water Heater Program	3	1	4	0	0	0	9	12	30%	0%	70%	152	95%	144	12	0	-	3	11	N/A	21	2	N/A	1,155	0	-	3.0	9	22	2.6	0.5	0.9	(1)	6.87%	78.66	6%	1.01	6.0%	142.02	11.91	0.69	0.00	9.999	0.083	-						
Spray N'Save	12	4	16	0	0	0	0	16	100%	0%	0%	1,746	88%	1,536	5	0	-	2	61	N/A	110	10	N/A	6,322	0	-	3.9	-	120	N/A	0.5	3.9	45	6.87%	39.48	6%	0.51	6.0%	71.36	6.48	0.35	0.00	9.999	0.083	-						
Retrofit Energy Assessment Program	16	2	17	0	0	0	0	17	100%	0%	0%	6,344	65%	4,124	1	0	-	5	51	N/A	66	8	N/A	3,859	0	-	2.9	-	74	N/A	0.6	2.9	34	6.87%	12.39	6%	0.11	6.0%	15.98	2.03	0.08	0.00	9.999	0.083	-						
PSECA	291	6	298	0	0	0	414	711	42%	0	58%	11,706	100%	11,706		274	0	3	1,067	307	1,937	160	212	107,935	2,559	0	3.6	414	2,308	5.6	0.5	1.9	663	6.87%	39.48	6%	0.00	6.0%	0.00	0.00	0.00	0.00	9.999	0.083	-						
Total Commercial	437	20	456	0	0	0	623	1,079	42%		58%	24,421		21,178		282	0	3	1,574	315	2,814	235	217	156,925	2,626	0	3.4	623	3,266	5.2	0.5	1.8	810																	

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
3														
4			**Year**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**
5			Units											
6		**NATURAL GAS**												
7		Incremental Cost of Gas (nominal)	$ Per GJ	$5.50	$6.17	$6.81	$7.35	$7.87	$8.26	$8.56	$8.78	$8.99	$9.19	$9.40
8	1		*Year*	*0*	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*
9		carbon tax	$ per GJ	*0.75*	*1.00*	*1.25*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*
10		Distribution adder	$ per GJ	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*
11		Total incremental cost of gas including carbon		*6.40*	*7.31*	*8.20*	*9.00*	*9.51*	*9.91*	*10.21*	*10.42*	*10.63*	*10.84*	*11.04*
12	2	GDP Deflator		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
13	3	Incremental Cost of Gas (Real)		$6.40	$7.31	$8.20	$9.00	$9.51	$9.91	$10.21	$10.42	$10.63	$10.84	$11.04
14	4	Net Present Value -2010			$12.39	$19.11	$26.01	$32.83	$39.48	$45.90	$52.02	$57.87	$63.45	$68.76
15	5	Net Present Value -2011				$14.03	$21.40	$28.69	$35.80	$42.65	$49.20	$55.45	$61.41	$67.09
16	6	Net Present Value -2012					$15.55	$23.35	$30.94	$38.27	$45.26	$51.94	$58.31	$64.39
17														
18														
19		**ELECTRICITY**												
20		Incremental Cost of Elec	$ Per kWh	$0.12										
21		Incremental Cost of E Capacity	$ Per kW/a	$170.00										
22														
23														
24														
25	**RETAIL**													
26				Rate	Customers		789,928	Total Customers in BC		80,000	Total Residential and Commercial Customers on VI			
27		Residential Retail			*000's*									
28		**TGI**	$ Per MJ	$0.0100	640		712,304	Total Residential Customers in BC						
29		**TGVI**	$ Per MJ	$0.0143	72									
30		**Electricity**	$ Per MJ	$0.0230										
31		**Electricity**	$ per kWh	$0.0827	1,511		1,511,435	Total BCH Residential Customers in BC				89%		
32		**Electricity**	$ per kW per year											
33		Commercial Retail												
34		**TGI**	$ Per MJ	$0.0094	78		77,624	Total Commercial Customers in BC						
35		**TGVI**	$ Per MJ	$0.0169	8									
36		**Electricity**	$ Per MJ	$0.0214										
37		**Electricity**	$ per kWh	$0.0769	190		189,764	Total Light Industrial and Commercial Customers in BC						
38		**Electricity**	$ per kW per year	$52.0000	15									
39														
40	**TAX**													
41			**Year**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
42	1		*Year*		*0*	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*
43	2	Carbon	$ Per tonne		$20.00	$25.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00
44	3	Carbon	$ Per GJ		$0.9976	$1.2470	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964
45	4	GDP Deflator			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
46	5	Carbon (Real)			$1.00	$1.25	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50
47	6	Net Present Value -2008				$2.03	$3.25	$4.40	$5.47	$6.48	$7.42	$8.30	$9.12	$9.89
48	7	Net Present Value -2009					$2.48	$3.70	$4.85	$5.92	$6.93	$7.87	$8.75	$9.57
49	8	Net Present Value -2010						$2.71	$3.94	$5.08	$6.16	$7.16	$8.10	$8.98
50														
51		**Discount Rate (real)[1]**												
52		**TERASEN GAS**												
53		**Rate of Inflation**	1.90%											
54		**TGI**	7.38%											
55		**TGVI**	6.87%											
56		**BC HYDRO**												
57		**Rate of Inflation**	2.00%											
58		**BC Hydro**	6.00%											
59		**Customer**	6.00%											
60		*Footnote 1: Source LR 070531*												
61														
62				**SHEET LABELS**										
63	**New Construction**													
64		New Construction		**BASEBOARD**										
65		Efficient Boiler Program		**HEATPUMP**										

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Measure Data for Efficient Boiler Program

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 9,652			
Total Incentive	$ 5,770		$ 5,770	$ -
Participant	$ 3,882			

Annual Impact Per Measure

Energy Savings per installation	125.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	18%	0.82		Net-to-Gross
Alternate Energy Impact	3	GJ	833	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	20	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0	0	Estimated Participation
Impact						
Gross Energy Savings (GJ)	116	125	125	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	95	103	103	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	786	833	833	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$110.02	$114.54	$118.53	
Energy Purchases	$ 11,277	$ 11,277	$ 11,277	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 5,770	$ 5,770	$ -	$ -	
Administration		$ 655	$ 655	$ -	$ -	
Subtotal	$ 5,983	$ 6,425	$ 6,425	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 3,183	$ 3,183	$ -	$ -	
Subtotal	$ 2,964	$ 3,183	$ 3,183	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ 941	$ 941	$ -	$ -	$1.376 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ 941	$ 941	$ 941	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 3,270		$ 2,609	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 9.1**		**$ 9.1**	**$ -**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Light Comm. ENERGY STAR® Boiler Program

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ -			
Total Incentive	$ -		$ -	$ -
Participant	$ -			

Annual Impact Per Measure

nergy Savings per installation	0.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	20	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	0	0	0	0	0	Estimated Participation
Impact						
Gross Energy Savings (GJ)	0	0	0	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	0	0	0	0	0	Gross Energy Savings less Free Riders
nergy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
acity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$110.02	$114.54	$118.53	
Energy Purchas	$ -	$ -	$ -	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.376 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (C	$ -		$ -	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (L	**$ -**		**$ -**	**$ -**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Efficient Commercial Water Heater

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ -			
Total Incentive	$ -		$ -	$ -
Participant	$ -			

Annual Impact Per Measure

Energy Savings per installation	0.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	0	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	0	0	0	0	0	Estimated Participation
Impact						
Gross Energy Savings (GJ)	0	0	0	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	0	0	0	0	0	Gross Energy Savings less Free Riders
Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$0.00	$0.00	$0.00	
Energy Purchas	$ -	$ -	$ -	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$0.000 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (C	$ -		$ -	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (L	**$ -**		**$ -**	**$ -**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Efficient Boiler Program

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 34,787			
Total Incentive	$ 12,176		$ 12,176	$ -
Participant	$ 22,611			

Annual Impact Per Measure

Energy Savings per installation	445.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	18%	0.82		Net-to-Gross
Alternate Energy Impact	3	GJ	833	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	18	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	7	8	8	0	0	Estimated Participation
Impact						
Gross Energy Savings (GJ)	3,315	3,560	3,560	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	2,719	2,919	2,919	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	6,289	6,667	6,667	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$103.26	$107.66	$111.51	
Energy Purchases	$ 301,442	$ 301,442	$ 301,442	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 97,408	$ 97,408	$ -	$ -	
Administration		$ 5,244	$ 5,244	$ -	$ -	
Subtotal	$ 95,597	$ 102,652	$ 102,652	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 148,328	$ 148,328	$ -	$ -	
Subtotal	$ 138,134	$ 148,328	$ 148,328	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ 7,103	$ 7,103	$ -	$ -	$1.299 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ 7,103	$ 7,103	$ 7,103	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 74,814		$ 57,565	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 8.8**		**$ 8.8**	**$ -**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Light Comm. ENERGY STAR® Boiler Program

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 17,833			
Total Incentive	$ 2,905		$ 2,905	$ -
Participant	$ 14,928			

Annual Impact Per Measure

nergy Savings per installation	197.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	18%	0.82		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	20	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	4	4	4	0	0	Estimated Participation
Impact						
Gross Energy Savings (GJ)	734	788	788	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	602	646	646	0	0	Gross Energy Savings less Free Riders
nergy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
acity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$110.02	$114.54	$118.53	
Energy Purchas	$ 71,091	$ 71,091	$ 71,091	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 11,620	$ 11,620	$ -	$ -	
Administration		$ 1,210	$ 1,210	$ -	$ -	
Subtotal	$ 11,948	$ 12,830	$ 12,830	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 48,964	$ 48,964	$ -	$ -	
Subtotal	$ 45,599	$ 48,964	$ 48,964	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.376 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (C	$ 13,544		$ 9,297	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (L	**$ 9.3**		**$ 9.3**	**$ -**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Retrofit Efficient Commercial Water Heater Program

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 6,023			
Total Incentive	$ 1,493		$ 1,493	$ -
Participant	$ 4,530			

Annual Impact Per Measure

nergy Savings per installation	76.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	5%	0.95		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	12	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	2	2	2	0	0	Estimated Participation
Impact						
Gross Energy Savings (GJ)	142	152	152	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	134	144	144	0	0	Gross Energy Savings less Free Riders
nergy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
acity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$78.66	$82.59	$85.96	
Energy Purchas	$ 11,359	$ 11,359	$ 11,359	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 2,986	$ 2,986	$ -	$ -	
Administration		$ 765	$ 765	$ -	$ -	
Subtotal	$ 3,493	$ 3,751	$ 3,751	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 8,607	$ 8,607	$ -	$ -	
Subtotal	$ 8,015	$ 8,607	$ 8,607	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.006 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (C	$ (150)		$ (999)	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (L	**$ 11.0**		**$ 11.0**	**$ -**	**$ -**	Informational (for comparison with supply options)

FORTIS BC

only enter in boxes marked in blue

NEW

Measure Data for Retrofit Energy Assessment Program

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 1,200			
Total Incentive	$ 1,200		$ 1,200	$ -
Participant	$ -			

Annual Impact Per Measure

Energy Savings per installation	488.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	35%	0.65		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	1	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	12	13	13	0	0	Estimated Participation
Impact						
Gross Energy Savings (GJ)	5,908	6,344	6,344	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	3,840	4,124	4,124	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$12.39	$14.03	$15.55	
Energy Purchases	$ 51,091	$ 51,091	$ 51,091	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 15,600	$ 15,600	$ -	$ -	
Administration		$ 1,898	$ 1,898	$ -	$ -	
Subtotal	$ 16,295	$ 17,498	$ 17,498	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$0.113 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 34,795		$ 33,593	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 4.6**		**$ 4.6**	**$ -**	**$ -**	Informational (for comparison with supply options)

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only enter in boxes marked in blue

NEW

Measure Data for Spray N'Save

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 63			
Total Incentive	$ 63		$ 63	$ -
Participant	$ -			

Annual Impact Per Measure

nergy Savings per installation	9.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	12%	0.88		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	5	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	181	194	194	0	0	Estimated Participation
Impact						
Gross Energy Savings (GJ)	1,626	1,746	1,746	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	1,431	1,536	1,536	0	0	Gross Energy Savings less Free Riders
nergy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
acity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$39.48	$42.65	$45.26	
Energy Purchas	$ 60,665	$ 60,665	$ 60,665	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 12,144	$ 12,144	$ -	$ -	
Administration		$ 3,545	$ 3,545	$ -	$ -	
Subtotal	$ 14,611	$ 15,690	$ 15,690	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$0.505 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (C	$ 46,054		$ 44,976	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (L	**$ 2.5**		**$ 2.5**	**$ -**	**$ -**	Informational (for comparison with supply options)

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	PROGRAM														ALTERNATE		NET PRESENT VALUE									BENEFIT/COST						PARAMETERS												
	COSTS ($000)											SAVINGS (GJ)			LIFE	Impact		Levelized Cost	Utility Benefits (Costs)		Participant Benefits (Costs)			Program Net Savings			Natural Gas	Participant			Natural Gas		SCT Net Benefits	UTILITY				PARTICIPANT								
	Utility			Partners																																								
	Incentives	Administration	Total	Incentives	Administration	Total	Participant	Total	% Utility	% Partner	% Participant	Gross	Net-to-Gross	Net	Years	Energy	Capacity	($/GJ)	Program	Alternate	Program	Carbon Tax	Alternate	Natural Gas	Alternate Energy	Alternate Capacity	Natural Gas	Total Costs	Total Benefits	Benefit/Cost	Natural Gas	SCT	($'000s)	Natural Gas Utility Discount Rate	Natural Gas Supply	Alternate Discount Rate	Alternate Supply	Discount Rate	Natural Gas NPV	Carbon Tax NPV	Alternate Energy NPV	Alternate Capacity NPV	Natural Gas Tariff	Energy Tariff	Capacity Tariff
																MWh	kW		($'000s)	($'000s)	($'000s)	($'000s)	($'000s)	(GJ)	(MWh)	(kW)	Utility	($'000s)	($'000s)		Rate Impact	SCT	($'000s)		$/GJ		$/kWh		$/GJ	$/GJ	$/kWh	$/kW/a	$/GJ	$/kWh	$/kW/a
Label	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR	AS	AT
Source Sheet or Calculation	Program	Program	B+C	Program	Program	E+F	Program	D+G+H	D/I	G/I	H/I	Program	Program	MxN	Program	Program	Program	D/Y	OxAJ	Q x N x AL	M x N x AN	M x N x AO	N x (QxAP + RxAQ)	PV(AI,P,-O)	PV(AK,P,-Q*N)	PV(AK,P,-R)	T/O	H>0, (V+W)=O	H=0, (V+W)=0, X	AD/AC	T/(V+O)	(T+U)/I	(T+U)-I	Input	Program	Input	Input	Input	PV(AM,P,-InputD25)	Input	PV(AM,P,-InputD28)	PV(AM,P,-InputD29)	Input	Input	Input
2010																																												
RESIDENTIAL:																																												
363	27	0	27	0	0	0	18	45	60%	0%	40%	955	100%	955	15	68	-	2	183	97	193	17	67	11,401	812	-	6.8	18	278	15.5	0.83	6.2	236	3.00%	191.93	3%	1.43	3.0%	202.23	18.08	0.99	0.00	9.999	0.083	-
364	13	0	13	0	0	0	14	27	48%	0%	52%	452	100%	452	15	8	-	2	87	12	91	8	8	5,396	96	-	6.7	14	108	7.6	0.83	3.6	71	3.00%	191.93	3%	1.43	3.0%	202.23	18.08	0.99	0.00	9.999	0.083	-
365	5	0	5	0	0	0	16	21	24%	0%	76%	169	100%	169	15	26	-	2	32	38	34	3	26	2,018	315	-	6.5	16	63	3.9	0.83	3.3	49	3.00%	191.93	3%	1.43	3.0%	202.23	18.08	0.99	0.00	9.999	0.083	-
366	5	0	5	0	0	0	14	19	26%	0%	74%	162	100%	162	15	9	-	2	31	13	33	3	9	1,934	109	-	6.5	14	45	3.2	0.83	2.4	25	3.00%	191.93	3%	1.43	3.0%	202.23	18.08	0.99	0.00	9.999	0.083	-
367	5	0	5	0	0	0	13	19	28%	0%	72%	179	100%	179	15	21	-	2	34	30	36	3	21	2,137	252	-	6.5	13	60	4.5	0.83	3.4	46	3.00%	191.93	3%	1.43	3.0%	202.23	18.08	0.99	0.00	9.999	0.083	-
368	4	0	4	0	0	0	16	20	19%	0%	81%	130	100%	130	15	13	-	3	25	19	26	2	13	1,552	156	$0.00	6.4	16	42	2.5	0.83	2.2	23	3.00%	191.93	3%	1.43	3.0%	202.23	18.08	0.99	0.00	9.999	0.083	-
369	13	0	13	0	0	0	13	26	50%	0%	50%	459	100%	459	15	71	-	2	88	101	93	8	70	5,480	846	-	6.7	13	171	13.1	0.83	7.3	163	3.00%	191.93	3%	1.43	3.0%	202.23	18.08	0.99	0.00	9.999	0.083	-
384.3	2	0	2	0	0	0	4	6	34%	0%	66%	93	100%	93	10	0	-	3	13	N/A	13	1	N/A	793	0	-	6.1	4	15	3.5	0.84	2.1	7	3.00%	141.38	3%	1.02	3.0%	144.50	13.13	0.71	0.00	9.999	0.083	-
384.5	9	0	10	0	0	0	0	10	100%	0%	0%	372	100%	372	15	0	-	2	71	N/A	75	7	N/A	4,441	0	-	7.4	-	82	N/A	0.84	7.4	62	3.00%	191.93	3%	1.43	3.0%	202.23	18.08	0.99	0.00	9.999	0.083	-
384.7	20	0	20	0	0	0	21	40	49%	0%	51%	970	100%	970	10	0	-	2	137	N/A	140	13	N/A	8,274	0	-	6.9	21	153	7.5	0.86	3.4	97	3.00%	141.38	3%	1.02	3.0%	144.50	13.13	0.71	0.00	9.999	0.083	-
384.9	20	0	20	0	0	0	0	20	100%	0%	0%	680	100%	680	20	0	-	2	160	N/A	171	15	N/A	10,117	0	-	7.9	-	187	N/A	0.84	7.9	140	3.00%	235.54	3%	1.79	3.0%	252.02	22.35	1.23	0.00	9.999	0.083	-
385.2	13	0	14	0	0	0	13	27	52%	0%	48%	389	100%	389	20	0	-	2	92	N/A	98	9	N/A	5,787	0	-	6.7	13	107	8.3	0.82	3.5	65	3.00%	235.54	3%	1.79	3.0%	252.02	22.35	1.23	0.00	9.999	0.083	-
385.4	14	0	15	0	0	0	1	15	96%	0%	4%	515	100%	515	15	1	-	2	99	1	104	9	1	6,148	10	-	6.7	1	114	202.3	0.83	6.6	85	3.00%	191.93	3%	1.43	3.0%	202.23	18.08	0.99	0.00	9.999	0.083	-
385.6	22	0	22	0	0	0	14	36	61%	0%	39%	680	100%	680	18	0	-	2	149	N/A	158	14	N/A	9,352	0	-	6.7	14	173	12.0	0.82	4.1	112	3.00%	218.87	3%	1.65	3.0%	232.98	20.71	1.14	0.00	9.999	0.083	-
385.8	7	0	7	0	0	0	1	8	82%	0%	18%	232	100%	232	15	0	-	2	45	N/A	47	4	N/A	2,770	0	-	6.6	1	51	34.2	0.83	5.4	36	3.00%	191.93	3%	1.43	3.0%	202.23	18.08	0.99	0.00	9.999	0.083	-
385.9	3	0	3	0	0	0	0	3	100%	0%	0%	401	100%	401	15	0	-	1	77	N/A	81	7	N/A	4,787	0	-	22.3	-	88	N/A	0.91	22.3	74	3.00%	191.93	3%	1.43	3.0%	202.23	18.08	0.99	0.00	9.999	0.083	-
425.1	7	0	7	0	0	0	0	7	100%	0%	0%	719	100%	719	20	0	-	1	169	N/A	181	16	N/A	10,697	0	-	23.4	-	197	N/A	0.90	23.4	162	3.00%	235.54	3%	1.79	3.0%	252.02	22.35	1.23	0.00	9.999	0.083	-
425.5	19	0	19	0	0	0	34	53	36%	0%	64%	662	100%	662	15	0	-	2	127	N/A	134	12	N/A	7,903	0	-	6.8	34	146	4.3	0.83	2.4	74	3.00%	191.93	3%	1.43	3.0%	202.23	18.08	0.99	0.00	9.999	0.083	-
438.1	9	0	9	0	0	0	28	38	25%	0%	75%	267	100%	267	20	3	-	2	63	5	67	6	3	3,972	41	-	6.6	28	77	2.7	0.82	1.8	30	3.00%	235.54	3%	1.79	3.0%	252.02	22.35	1.23	0.00	9.999	0.083	-
438.2	65	0	65	0	0	0	163	228	29%	0%	71%	2,326	100%	2,326	15	0	-	2	446	N/A	470	42	N/A	27,768	0	-	6.8	163	512	3.1	0.83	2.0	218	3.00%	191.93	3%	1.43	3.0%	202.23	18.08	0.99	0.00	9.999	0.083	-
444.2	1	0	1	0	0	0	0	1	100%	0%	0%	197	100%	197	15	4	-	1	38	6	40	4	4	2,352	46	-	30.2	-	47	N/A	0.92	34.7	42	3.00%	191.93	3%	1.43	3.0%	202.23	18.08	0.99	0.00	9.999	0.083	-
444.3	1	0	1	0	0	0	0	1	100%	0%	0%	122	100%	122	15	1	-	1	23	1	25	2	1	1,450	10	-	18.7	-	28	N/A	0.90	19.6	23	3.00%	191.93	3%	1.43	3.0%	202.23	18.08	0.99	0.00	9.999	0.083	-
458.1	6	0	6	0	0	0	20	26	23%	0%	77%	267	100%	267	11	13	-	2	41	14	42	4	10	2,470	121	-	6.6	20	56	2.8	0.85	2.1	29	3.00%	152.10	3%	1.11	3.0%	156.74	14.18	0.77	0.00	9.999	0.083	-
458.2	1	0	1	0	0	0	0	1	100%	0%	0%	68	100%	68	10	0	-	2	10	N/A	10	1	N/A	580	0	-	7.7	-	11	N/A	0.87	7.7	8	3.00%	141.38	3%	1.02	3.0%	144.50	13.13	0.71	0.00	9.999	0.083	-
458.5	1	0	1	0	0	0	4	5	20%	0%	80%	40	100%	40	10	36	-	3	6	37	6	1	25	341	308	-	5.3	4	32	7.6	0.83	8.1	37	3.00%	141.38	3%	1.02	3.0%	144.50	13.13	0.71	0.00	9.999	0.083	-
458.7	1	0	1	0	0	0	5	6	21%	0%	79%	200	100%	200	10	0	-	1	28	N/A	29	3	N/A	1,706	0	-	21.3	5	32	6.4	0.94	4.5	22	3.00%	141.38	3%	1.02	3.0%	144.50	13.13	0.71	0.00	9.999	0.083	-
Total Commercial	291	6	298	0	0	0	414	711	42%	0%	58%	11,706		11,706		274	0	2	2,957	487	2,399	214	258	141,626	3,123	0	9.9	414	2,872	6.9	1.10	4.8	2,733												

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ
1	UTILITY		FORTIS BC																																	
2																																				
3																																				
4			Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	
5			Units																																	
6		NATURAL GAS																																		
7		Incremental Cost of Gas (nominal)	$ Per GJ	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.43
8	1		Year	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
9		carbon tax	$ per GJ	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
10		Total incremental cost of gas including carbon		15.28	15.28	15.28	15.28	15.28	15.28	15.28	15.28	15.28	15.28	15.28	15.28	15.28	15.28	15.28	15.28	15.28	15.28	15.28	15.28	15.28	15.28	15.28	15.28	15.28	15.28	15.28	15.28	15.28	15.28	15.28	15.28	
11	2	GDP Deflator		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
12	3	Incremental Cost of Gas (Real)		$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	
13	4	Net Present Value -2010			$29.24	$43.22	$56.80	$69.98	$82.77	$95.20	$107.26	$118.97	$130.34	$141.38	$152.10	$162.50	$172.60	$182.41	$191.93	$201.18	$210.15	$218.87	$227.33	$235.54	$243.52	$251.26	$258.78	$266.07	$273.16	$280.04	$286.72	$293.20	$299.49	$305.61	$311.54	
14	5	Net Present Value -2011				$29.24	$43.22	$56.80	$69.98	$82.77	$95.20	$107.26	$118.97	$130.34	$141.38	$152.10	$162.50	$172.60	$182.41	$191.93	$201.18	$210.15	$218.87	$227.33	$235.54	$243.52	$251.26	$258.78	$266.07	$273.16	$280.04	$286.72	$293.20	$299.49	$305.61	
15	6	Net Present Value -2012					$29.24	$43.22	$56.80	$69.98	$82.77	$95.20	$107.26	$118.97	$130.34	$141.38	$152.10	$162.50	$172.60	$182.41	$191.93	$201.18	$210.15	$218.87	$227.33	$235.54	$243.52	$251.26	$258.78	$266.07	$273.16	$280.04	$286.72	$293.20	$299.49	

	A	B	C	D	E	F	G	H	I	J	K	L
16												
17												
18		ELECTRICITY										
19		Incremental Cost of Elec	$ Per kWh	$0.12								
20		Incremental Cost of E Capacity	$ Per kW/a	$170.00								
21												
22												
23												
24	RETAIL											
25				Rate	Customers		789,928	Total Customers in BC		80,000	Total Residential and Commercial Customers on VI	
26		Residential Retail			000's							
27		TGI	$ Per MJ	$0.0100	640		712,304	Total Residential Customers in BC				
28		TGVI	$ Per MJ	$0.0143	72							
29		Electricity	$ Per MJ	$0.0230								
30		Electricity	$ per kWh	$0.0827	1,511		1,511,435	Total BCH Residential Customers in BC				89%
31		Electricity	$ per kW per year									
32		Commercial Retail										
33		TGI	$ Per MJ	$0.0094	78		77,624	Total Commercial Customers in BC				
34		TGVI	$ Per MJ	$0.0169	8							
35		Electricity	$ Per MJ	$0.0214								
36		Electricity	$ per kWh	$0.0769	190		189,764	Total Light Industrial and Commercial Customers in BC				
37		Electricity	$ per kW per year	$52.0000	15							
38												

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI
39	TAX																																		
40			Year	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
41	1		Year		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
42	2	Carbon	$ Per tonne		$20.00	$25.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00
43	3	Carbon	$ Per GJ		$0.9976	$1.2470	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964
44	4	GDP Deflator			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
45	5	Carbon (Real)			$1.00	$1.25	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50
46	6	Net Present Value -2008				$2.14	$3.51	$4.84	$6.13	$7.39	$8.60	$9.78	$10.93	$12.05	$13.13	$14.18	$15.19	$16.18	$17.14	$18.08	$18.98	$19.86	$20.71	$21.54	$22.35	$23.13	$23.89	$24.62	$25.34	$26.03	$26.71	$27.36	$27.99	$28.61	$29.21
47	7	Net Present Value -2009					$2.62	$3.99	$5.32	$6.61	$7.86	$9.08	$10.26	$11.41	$12.52	$13.60	$14.65	$15.67	$16.66	$17.62	$18.55	$19.46	$20.34	$21.19	$22.02	$22.82	$23.61	$24.36	$25.10	$25.81	$26.51	$27.18	$27.84	$28.47	$29.09
48	8	Net Present Value -2010						$2.86	$4.23	$5.56	$6.85	$8.11	$9.32	$10.50	$11.65	$12.76	$13.85	$14.90	$15.91	$16.90	$17.86	$18.80	$19.70	$20.58	$21.43	$22.26	$23.07	$23.85	$24.61	$25.34	$26.06	$26.75	$27.42	$28.08	$28.71

	A	B	C	D
49				
50		Discount Rate (real)[1]		
51		TERASEN GAS		
52		Rate of Inflation	1.90%	
53		TGI	7.38%	
54		TGVI	3.00%	
55		BC HYDRO		
56		Rate of Inflation	2.00%	
57		BC Hydro	3.00%	
58		Customer	3.00%	
59		Footnote 1: Source LR 070531		
60				
61				SHEET LABELS
62	New Construction			
63		363		BASEBOARD
64		364		HEATPUMP

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NEW

Measure Data for 363

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 44,713			
Total Incentive	$ 26,770		$ 26,770	$ -
Participant	$ 17,943			

Annual Impact Per Measure

Energy Savings per installation	955.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	245	GJ	68,056	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	15	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0	0	Estimated Participation
Impact						
Gross Energy Savings (GJ)	889	955	955	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	889	955	955	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	66,073	68,056	68,056	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$191.93	$191.93	$191.93	
Energy Purchases	$ 183,297	$ 183,297	$ 183,297	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 26,770	$ 26,770	$ -	$ -	
Administration		$ 250	$ 250	$ -	$ -	
Subtotal	$ 25,163	$ 27,020	$ 27,020	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 17,943	$ 17,943	$ -	$ -	
Subtotal	$ 16,710	$ 17,943	$ 17,943	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ 97,493	$ 97,493	$ -	$ -	$1.433 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ 97,493	$ 97,493	$ 97,493	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 238,917		$ 235,827	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 5.3**		**$ 5.3**	**$ -**	**$ -**	Informational (for comparison with supply options)

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NEW

Measure Data for 364

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 26,902			
Total Incentive	$ 12,670		$ 12,670	$ -
Participant	$ 14,232			

Annual Impact Per Measure

nergy Savings per installation	452.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	29	GJ	8,056	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	15	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0	0	Estimated Participation
Impact						
Gross Energy Savings (GJ)	421	452	452	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	421	452	452	0	0	Gross Energy Savings less Free Riders
nergy Impact (Increase) (kWh)	7,821	8,056	8,056	0	0	Other Utility Billed energy impact
acity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$191.93	$191.93	$191.93	
Energy Purchas	$ 86,754	$ 86,754	$ 86,754	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 12,670	$ 12,670	$ -	$ -	
Administration		$ 250	$ 250	$ -	$ -	
Subtotal	$ 12,032	$ 12,920	$ 12,920	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 14,232	$ 14,232	$ -	$ -	
Subtotal	$ 13,254	$ 14,232	$ 14,232	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ 11,540	$ 11,540	$ -	$ -	$1.433 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ 11,540	$ 11,540	$ 11,540	$ -	$ -	
Total Resource Net Benefit (C	$ 73,008		$ 71,142	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (L	**$ 6.8**		**$ 6.8**	**$ -**	**$ -**	Informational (for comparison with supply options)

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NEW

Measure Data for 365

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 20,770			
Total Incentive	$ 4,740		$ 4,740	$ -
Participant	$ 16,030			

Annual Impact Per Measure

Energy Savings per installation	169.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	95	GJ	26,389	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	15	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0	0	Estimated Participation
Impact						
Gross Energy Savings (GJ)	157	169	169	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	157	169	169	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	25,620	26,389	26,389	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$191.93	$191.93	$191.93	
Energy Purchases	$ 32,437	$ 32,437	$ 32,437	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 4,740	$ 4,740	$ -	$ -	
Administration		$ 250	$ 250	$ -	$ -	
Subtotal	$ 4,647	$ 4,990	$ 4,990	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 16,030	$ 16,030	$ -	$ -	
Subtotal	$ 14,928	$ 16,030	$ 16,030	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ 37,803	$ 37,803	$ -	$ -	$1.433 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ 37,803	$ 37,803	$ 37,803	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 50,665		$ 49,220	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 14.0**		**$ 14.0**	**$ -**	**$ -**	Informational (for comparison with supply options)

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NEW

Measure Data for 366

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 18,496			
Total Incentive	$ 4,540		$ 4,540	$ -
Participant	$ 13,956			

Annual Impact Per Measure

Energy Savings per installation	162.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	33	GJ	9,167 kWh	
Alternate Capacity Impact		kW/a		
Measure Lifetime	15	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0	0	Estimated Participation
Impact						
Gross Energy Savings (GJ)	151	162	162	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	151	162	162	0	0	Gross Energy Savings less Free Riders
ırnate Energy Impact (Increase) (kWh)	8,900	9,167	9,167	0	0	Other Utility Billed energy impact
ate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$191.93	$191.93	$191.93	
Energy Purchases	$ 31,093	$ 31,093	$ 31,093	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 4,540	$ 4,540	$ -	$ -	
Administration		$ 250	$ 250	$ -	$ -	
Subtotal	$ 4,461	$ 4,790	$ 4,790	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 13,956	$ 13,956	$ -	$ -	
Subtotal	$ 12,997	$ 13,956	$ 13,956	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ 13,132	$ 13,132	$ -	$ -	$1.433 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ 13,132	$ 13,132	$ 13,132	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 26,767		$ 25,479	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime	**$ 13.0**		**$ 13.0**	**$ -**	**$ -**	Informational (for comparison with supply options)

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NEW

Measure Data for 367

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 18,496			
Total Incentive	$ 5,020		$ 5,020	$ -
Participant	$ 13,476			

Annual Impact Per Measure

Energy Savings per installation	179.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	76	GJ	21,111 kWh	
Alternate Capacity Impact		kW/a		
Measure Lifetime	15	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0	0	Estimated Participation
Impact						
Gross Energy Savings (GJ)	167	179	179	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	167	179	179	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	20,496	21,111	21,111	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$191.93	$191.93	$191.93	
Energy Purchases	$ 34,356	$ 34,356	$ 34,356	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 5,020	$ 5,020	$ -	$ -	
Administration		$ 250	$ 250	$ -	$ -	
Subtotal	$ 4,908	$ 5,270	$ 5,270	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 13,476	$ 13,476	$ -	$ -	
Subtotal	$ 12,550	$ 13,476	$ 13,476	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ 30,243	$ 30,243	$ -	$ -	$1.433 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ 30,243	$ 30,243	$ 30,243	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 47,141		$ 45,853	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 11.8**		**$ 11.8**	**$ -**	**$ -**	Informational (for comparison with supply options)

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NEW

Measure Data for 368

PER MEASURE		Utility Incentive to the participant	partner incentive
Incremental Cost	$ 20,011		
Total Incentive	$ 3,645	$ 3,645	$ -
Participant	$ 16,366		

Annual Impact Per Measure

Energy Savings per installation	130.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	47	GJ	13,056	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	15	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0	0	Estimated Participation
Impact						
Gross Energy Savings (GJ)	121	130	130	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	121	130	130	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	12,675	13,056	13,056	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$191.93	$191.93	$191.93	
Energy Purchases	$ 24,951	$ 24,951	$ 24,951	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 3,645	$ 3,645	$ -	$ -	
Administration		$ 250	$ 250	$ -	$ -	
Subtotal	$ 3,627	$ 3,895	$ 3,895	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 16,366	$ 16,366	$ -	$ -	
Subtotal	$ 15,241	$ 16,366	$ 16,366	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ 18,703	$ 18,703	$ -	$ -	$1.433 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ 18,703	$ 18,703	$ 18,703	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 24,786		$ 23,393	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 17.5**		**$ 17.5**	**$ -**	**$ -**	Informational (for comparison with supply options)

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NEW

Measure Data for 369

PER MEASURE		Utility Incentive to the participant	partner incentive
Incremental Cost	$ 25,885		
Total Incentive	$ 12,865	$ 12,865	$ -
Participant	$ 13,020		

Annual Impact Per Measure

Energy Savings per installation	459.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	255	GJ	70,833	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	15	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0	0	Estimated Participation
Impact						
Gross Energy Savings (GJ)	427	459	459	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	427	459	459	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	68,770	70,833	70,833	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$191.93	$191.93	$191.93	
Energy Purchases	$ 88,098	$ 88,098	$ 88,098	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 12,865	$ 12,865	$ -	$ -	
Administration		$ 250	$ 250	$ -	$ -	
Subtotal	$ 12,214	$ 13,115	$ 13,115	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 13,020	$ 13,020	$ -	$ -	
Subtotal	$ 12,125	$ 13,020	$ 13,020	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ 101,472	$ 101,472	$ -	$ -	$1.433 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ 101,472	$ 101,472	$ 101,472	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 165,231		$ 163,435	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 6.4**		**$ 6.4**	**$ -**	**$ -**	Informational (for comparison with supply options)

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NEW

Measure Data for 384.3

PER MEASURE		Utility Incentive to the participant	partner incentive
Incremental Cost	$ 6,050		
Total Incentive	$ 1,890	$ 1,890	$ -
Participant	$ 4,160		

Annual Impact Per Measure

Energy Savings per installation	93.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	10	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0	0	Estimated Participation
Impact						
Gross Energy Savings (GJ)	87	93	93	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	87	93	93	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$141.38	$141.38	$141.38	
Energy Purchases	$ 13,148	$ 13,148	$ 13,148	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 1,890	$ 1,890	$ -	$ -	
Administration		$ 250	$ 250	$ -	$ -	
Subtotal	$ 1,993	$ 2,140	$ 2,140	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 4,160	$ 4,160	$ -	$ -	
Subtotal	$ 3,874	$ 4,160	$ 4,160	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.024 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 7,281		$ 6,848	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 9.8**		**$ 9.8**	**$ -**	**$ -**	Informational (for comparison with supply options)

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NEW

Measure Data for 384.5

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 9,450			
Total Incentive	$ 9,450		$ 9,450	$ -
Participant	$ -			

Annual Impact Per Measure

Energy Savings per installation	372.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	15	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0	0	Estimated Participation
Impact						
Gross Energy Savings (GJ)	346	372	372	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	346	372	372	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$191.93	$191.93	$191.93	
Energy Purchases	$ 71,399	$ 71,399	$ 71,399	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 9,450	$ 9,450	$ -	$ -	
Administration		$ 250	$ 250	$ -	$ -	
Subtotal	$ 9,033	$ 9,700	$ 9,700	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.433 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 62,366		$ 61,699	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 2.9**		**$ 2.9**	**$ -**	**$ -**	Informational (for comparison with supply options)

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NEW

Measure Data for 384.7

PER MEASURE		Utility Incentive to the participant	partner incentive
Incremental Cost	$ 40,200		
Total Incentive	$ 19,685	$ 19,685	$ -
Participant	$ 20,515		

Annual Impact Per Measure

Energy Savings per installation	970.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	10	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0	0	Estimated Participation
Impact						
Gross Energy Savings (GJ)	903	970	970	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	903	970	970	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$141.38	$141.38	$141.38	
Energy Purchases	$ 137,139	$ 137,139	$ 137,139	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 19,685	$ 19,685	$ -	$ -	
Administration		$ 250	$ 250	$ -	$ -	
Subtotal	$ 18,565	$ 19,935	$ 19,935	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 20,515	$ 20,515	$ -	$ -	
Subtotal	$ 19,105	$ 20,515	$ 20,515	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.024 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 99,469		$ 96,689	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 6.0**		**$ 6.0**	**$ -**	**$ -**	Informational (for comparison with supply options)

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NEW

Measure Data for 384.9

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 20,000			
Total Incentive	$ 20,000		$ 20,000	$ -
Participant	$ -			

Annual Impact Per Measure

Energy Savings per installation	680.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	20	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0	0	Estimated Participation
Impact						
Gross Energy Savings (GJ)	633	680	680	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	633	680	680	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$235.54	$235.54	$235.54	
Energy Purchases	$ 160,168	$ 160,168	$ 160,168	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 20,000	$ 20,000	$ -	$ -	
Administration		$ 250	$ 250	$ -	$ -	
Subtotal	$ 18,858	$ 20,250	$ 20,250	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.785 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 141,310		$ 139,918	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 2.9**		**$ 2.9**	**$ -**	**$ -**	Informational (for comparison with supply options)

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NEW

Measure Data for 385.2

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 26,300			
Total Incentive	$ 13,425		$ 13,425	$ -
Participant	$ 12,875			

Annual Impact Per Measure

Energy Savings per installation	389.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	20	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0	0	Estimated Participation
Impact						
Gross Energy Savings (GJ)	362	389	389	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	362	389	389	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$235.54	$235.54	$235.54	
Energy Purchases	$ 91,626	$ 91,626	$ 91,626	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 13,425	$ 13,425	$ -	$ -	
Administration		$ 250	$ 250	$ -	$ -	
Subtotal	$ 12,735	$ 13,675	$ 13,675	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 12,875	$ 12,875	$ -	$ -	
Subtotal	$ 11,990	$ 12,875	$ 12,875	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.785 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 66,900		$ 65,076	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 6.6**		**$ 6.6**	**$ -**	**$ -**	Informational (for comparison with supply options)

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NEW

Measure Data for 385.4

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 15,000			
Total Incentive	$ 14,435		$ 14,435	$ -
Participant	$ 565			

Annual Impact Per Measure

Energy Savings per installation	515.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	3	GJ	833	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	15	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0	0	Estimated Participation
Impact						
Gross Energy Savings (GJ)	480	515	515	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	480	515	515	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	809	833	833	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$191.93	$191.93	$191.93	
Energy Purchases	$ 98,846	$ 98,846	$ 98,846	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 14,435	$ 14,435	$ -	$ -	
Administration		$ 250	$ 250	$ -	$ -	
Subtotal	$ 13,676	$ 14,685	$ 14,685	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 565	$ 565	$ -	$ -	
Subtotal	$ 526	$ 565	$ 565	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ 1,194	$ 1,194	$ -	$ -	$1.433 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ 1,194	$ 1,194	$ 1,194	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 85,838		$ 84,790	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 3.3**		**$ 3.3**	**$ -**	**$ -**	Informational (for comparison with supply options)

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NEW

Measure Data for 385.5

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 100			
Total Incentive	$ 100		$ 100	$ -
Participant	$ -			

Annual Impact Per Measure

Energy Savings per installation	30.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	10	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0	0	Estimated Participation
Impact						
Gross Energy Savings (GJ)	28	30	30	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	28	30	30	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$141.38	$141.38	$141.38	
Energy Purchases	$ 4,241	$ 4,241	$ 4,241	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 100	$ 100	$ -	$ -	
Administration		$ 250	$ 250	$ -	$ -	
Subtotal	$ 326	$ 350	$ 350	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.024 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 3,915		$ 3,891	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 1.7**		**$ 1.7**	**$ -**	**$ -**	Informational (for comparison with supply options)

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NEW

Measure Data for 385.6

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 36,200			
Total Incentive	$ 21,830		$ 21,830	$ -
Participant	$ 14,370			

Annual Impact Per Measure

Energy Savings per installation	680.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	18	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0	0	Estimated Participation
Impact						
Gross Energy Savings (GJ)	633	680	680	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	633	680	680	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$218.87	$218.87	$218.87	
Energy Purchases	$ 148,830	$ 148,830	$ 148,830	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 21,830	$ 21,830	$ -	$ -	
Administration		$ 250	$ 250	$ -	$ -	
Subtotal	$ 20,562	$ 22,080	$ 22,080	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 14,370	$ 14,370	$ -	$ -	
Subtotal	$ 13,382	$ 14,370	$ 14,370	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.650 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 114,885		$ 112,380	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 5.5**		**$ 5.5**	**$ -**	**$ -**	Informational (for comparison with supply options)

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NEW

Measure Data for 385.8

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 8,000			
Total Incentive	$ 6,505		$ 6,505	$ -
Participant	$ 1,495			

Annual Impact Per Measure

Energy Savings per installation	232.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	15	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0	0	Estimated Participation
Impact						
Gross Energy Savings (GJ)	216	232	232	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	216	232	232	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$191.93	$191.93	$191.93	
Energy Purchases	$ 44,529	$ 44,529	$ 44,529	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 6,505	$ 6,505	$ -	$ -	
Administration		$ 250	$ 250	$ -	$ -	
Subtotal	$ 6,291	$ 6,755	$ 6,755	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 1,495	$ 1,495	$ -	$ -	
Subtotal	$ 1,392	$ 1,495	$ 1,495	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.433 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 36,846		$ 36,279	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 4.0**		**$ 4.0**	**$ -**	**$ -**	Informational (for comparison with supply options)

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NEW

Measure Data for 385.9

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 3,200			
Total Incentive	$ 3,200		$ 3,200	$ -
Participant	$ -			

Annual Impact Per Measure

Energy Savings per installation	401.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	15	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0	0	Estimated Participation
Impact						
Gross Energy Savings (GJ)	373	401	401	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	373	401	401	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$191.93	$191.93	$191.93	
Energy Purchases	$ 76,965	$ 76,965	$ 76,965	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 3,200	$ 3,200	$ -	$ -	
Administration		$ 250	$ 250	$ -	$ -	
Subtotal	$ 3,213	$ 3,450	$ 3,450	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.433 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 73,753		$ 73,515	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 1.0**		**$ 1.0**	**$ -**	**$ -**	Informational (for comparison with supply options)

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NEW

Measure Data for 425.1

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$	7,000		
Total Incentive	$	7,000	$ 7,000	$ -
Participant	$	-		

Annual Impact Per Measure

Energy Savings per installation	719.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	20	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0	0	Estimated Participation
Impact						
Gross Energy Savings (GJ)	670	719	719	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	670	719	719	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$235.54	$235.54	$235.54	
Energy Purchases	$ 169,354	$ 169,354	$ 169,354	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 7,000	$ 7,000	$ -	$ -	
Administration		$ 250	$ 250	$ -	$ -	
Subtotal	$ 6,752	$ 7,250	$ 7,250	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.785 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 162,603		$ 162,104	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 1.0**		**$ 1.0**	**$ -**	**$ -**	Informational (for comparison with supply options)

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NEW

Measure Data for 425.5

PER MEASURE		Utility Incentive to the participant	partner incentive
Incremental Cost	$ 52,500		
Total Incentive	$ 18,560	$ 18,560	$ -
Participant	$ 33,940		

Annual Impact Per Measure

Energy Savings per installation	662.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	15	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0	0	Estimated Participation
Impact						
Gross Energy Savings (GJ)	617	662	662	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	617	662	662	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$191.93	$191.93	$191.93	
Energy Purchases	$ 127,060	$ 127,060	$ 127,060	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 18,560	$ 18,560	$ -	$ -	
Administration		$ 250	$ 250	$ -	$ -	
Subtotal	$ 17,517	$ 18,810	$ 18,810	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 33,940	$ 33,940	$ -	$ -	
Subtotal	$ 31,607	$ 33,940	$ 33,940	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.433 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 77,935		$ 74,310	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 9.0**		**$ 9.0**	**$ -**	**$ -**	Informational (for comparison with supply options)

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NEW

Measure Data for 438.1

PER MEASURE		Utility Incentive to the participant	partner incentive
Incremental Cost	$ 37,400		
Total Incentive	$ 9,215	$ 9,215	$ -
Participant	$ 28,185		

Annual Impact Per Measure

Energy Savings per installation	267.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	10	GJ	2,778	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	20	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0	0	Estimated Participation
Impact						
Gross Energy Savings (GJ)	249	267	267	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	249	267	267	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	2,697	2,778	2,778	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$235.54	$235.54	$235.54	
Energy Purchases	$ 62,890	$ 62,890	$ 62,890	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 9,215	$ 9,215	$ -	$ -	
Administration		$ 250	$ 250	$ -	$ -	
Subtotal	$ 8,814	$ 9,465	$ 9,465	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 28,185	$ 28,185	$ -	$ -	
Subtotal	$ 26,248	$ 28,185	$ 28,185	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ 4,959	$ 4,959	$ -	$ -	$1.785 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ 4,959	$ 4,959	$ 4,959	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 32,786		$ 30,199	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 13.7**		**$ 13.7**	**$ -**	**$ -**	Informational (for comparison with supply options)

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NEW

Measure Data for 438.2

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 228,386			
Total Incentive	$ 65,205		$ 65,205	$ -
Participant	$ 163,181			

Annual Impact Per Measure

Energy Savings per installation	2326.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	15	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0	0	Estimated Participation
Impact						
Gross Energy Savings (GJ)	2,166	2,326	2,326	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	2,166	2,326	2,326	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$191.93	$191.93	$191.93	
Energy Purchases	$ 446,438	$ 446,438	$ 446,438	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 65,205	$ 65,205	$ -	$ -	
Administration		$ 1	$ 1	$ -	$ -	
Subtotal	$ 60,725	$ 65,206	$ 65,206	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 163,181	$ 163,181	$ -	$ -	
Subtotal	$ 151,966	$ 163,181	$ 163,181	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.433 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 233,747		$ 218,051	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 11.0**		**$ 11.0**	**$ -**	**$ -**	Informational (for comparison with supply options)

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NEW

Measure Data for 438.4

PER MEASURE		Utility Incentive to the participant	partner incentive
Incremental Cost	$ 30,000		
Total Incentive	$ -	$ -	$ -
Participant	$ 30,000		

Annual Impact Per Measure

Energy Savings per installation	631.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	373	GJ	103,611	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	5	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0	0	Estimated Participation
Impact						
Gross Energy Savings (GJ)	588	631	631	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	588	631	631	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	100,593	103,611	103,611	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$82.77	$82.77	$82.77	
Energy Purchases	$ 52,231	$ 52,231	$ 52,231	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ 250	$ 250	$ -	$ -	
Subtotal	$ 233	$ 250	$ 250	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 30,000	$ 30,000	$ -	$ -	
Subtotal	$ 27,938	$ 30,000	$ 30,000	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ 56,941	$ 56,941	$ -	$ -	$0.550 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ 56,941	$ 56,941	$ 56,941	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 81,001		$ 78,922	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 11.8**		**$ 11.8**	**$ -**	**$ -**	Informational (for comparison with supply options)

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NEW

Measure Data for 444.2

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 1,000			
Total Incentive	$ 1,000		$ 1,000	$ -
Participant	$ -			

Annual Impact Per Measure

Energy Savings per installation	197.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	14	GJ	3,889	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	15	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0	0	Estimated Participation
Impact						
Gross Energy Savings (GJ)	183	197	197	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	183	197	197	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	3,776	3,889	3,889	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$191.93	$191.93	$191.93	
Energy Purchases	$ 37,811	$ 37,811	$ 37,811	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 1,000	$ 1,000	$ -	$ -	
Administration		$ 250	$ 250	$ -	$ -	
Subtotal	$ 1,164	$ 1,250	$ 1,250	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ 5,571	$ 5,571	$ -	$ -	$1.433 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ 5,571	$ 5,571	$ 5,571	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 42,218		$ 42,132	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 0.7**		**$ 0.7**	**$ -**	**$ -**	Informational (for comparison with supply options)

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NEW

Measure Data for 444.3

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 1,000			
Total Incentive	$ 1,000		$ 1,000	$ -
Participant	$ -			

Annual Impact Per Measure

Energy Savings per installation	121.5	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	3	GJ	833	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	15	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0	0	Estimated Participation
Impact						
Gross Energy Savings (GJ)	113	122	122	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	113	122	122	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	809	833	833	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$191.93	$191.93	$191.93	
Energy Purchases	$ 23,320	$ 23,320	$ 23,320	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 1,000	$ 1,000	$ -	$ -	
Administration		$ 250	$ 250	$ -	$ -	
Subtotal	$ 1,164	$ 1,250	$ 1,250	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ 1,194	$ 1,194	$ -	$ -	$1.433 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ 1,194	$ 1,194	$ 1,194	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 23,350		$ 23,264	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 1.2**		**$ 1.2**	**$ -**	**$ -**	Informational (for comparison with supply options)

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NEW

Measure Data for 458.1

PER MEASURE		Utility Incentive to the participant	partner incentive
Incremental Cost	$ 26,000		
Total Incentive	$ 5,860	$ 5,860	$ -
Participant	$ 20,140		

Annual Impact Per Measure

Energy Savings per installation	267.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	47	GJ	13,056	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	11	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0	0	Estimated Participation
Impact						
Gross Energy Savings (GJ)	249	267	267	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	249	267	267	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	12,675	13,056	13,056	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$152.10	$152.10	$152.10	
Energy Purchases	$ 40,610	$ 40,610	$ 40,610	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 5,860	$ 5,860	$ -	$ -	
Administration		$ 250	$ 250	$ -	$ -	
Subtotal	$ 5,690	$ 6,110	$ 6,110	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 20,140	$ 20,140	$ -	$ -	
Subtotal	$ 18,756	$ 20,140	$ 20,140	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ 14,496	$ 14,496	$ -	$ -	$1.110 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ 14,496	$ 14,496	$ 14,496	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 30,660		$ 28,856	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 13.4**		**$ 13.4**	**$ -**	**$ -**	Informational (for comparison with supply options)

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NEW

Measure Data for 458.2

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 1,000			
Total Incentive	$ 1,000		$ 1,000	$ -
Participant	$ -			

Annual Impact Per Measure

Energy Savings per installation	68.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	10	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0	0	Estimated Participation
Impact						
Gross Energy Savings (GJ)	63	68	68	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	63	68	68	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$141.38	$141.38	$141.38	
Energy Purchases	$ 9,614	$ 9,614	$ 9,614	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 1,000	$ 1,000	$ -	$ -	
Administration		$ 250	$ 250	$ -	$ -	
Subtotal	$ 1,164	$ 1,250	$ 1,250	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.024 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 8,450		$ 8,364	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 2.7**		**$ 2.7**	**$ -**	**$ -**	Informational (for comparison with supply options)

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NEW

Measure Data for 458.5

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$	5,000		
Total Incentive	$	810	$ 810	$ -
Participant	$	4,190		

Annual Impact Per Measure

Energy Savings per installation	40.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	130	GJ	36,111 kWh	
Alternate Capacity Impact		kW/a		
Measure Lifetime	10	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0	0	Estimated Participation
Impact						
Gross Energy Savings (GJ)	37	40	40	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	37	40	40	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	35,059	36,111	36,111	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$141.38	$141.38	$141.38	
Energy Purchases	$ 5,655	$ 5,655	$ 5,655	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 810	$ 810	$ -	$ -	
Administration		$ 250	$ 250	$ -	$ -	
Subtotal	$ 987	$ 1,060	$ 1,060	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 4,190	$ 4,190	$ -	$ -	
Subtotal	$ 3,902	$ 4,190	$ 4,190	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ 36,964	$ 36,964	$ -	$ -	$1.024 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ 36,964	$ 36,964	$ 36,964	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 37,730		$ 37,369	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 19.0**		**$ 19.0**	**$ -**	**$ -**	Informational (for comparison with supply options)

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NEW

Measure Data for 458.6

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 2,000			
Total Incentive	$ 205		$ 205	$ -
Participant	$ 1,795			

Annual Impact Per Measure

Energy Savings per installation	10.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	32	GJ	8,889 kWh	
Alternate Capacity Impact		kW/a		
Measure Lifetime	10	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0	0	Estimated Participation
Impact						
Gross Energy Savings (GJ)	9	10	10	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	9	10	10	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	8,630	8,889	8,889	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$141.38	$141.38	$141.38	
Energy Purchases	$ 1,414	$ 1,414	$ 1,414	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 205	$ 205	$ -	$ -	
Administration		$ 250	$ 250	$ -	$ -	
Subtotal	$ 424	$ 455	$ 455	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 1,795	$ 1,795	$ -	$ -	
Subtotal	$ 1,672	$ 1,795	$ 1,795	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ 9,099	$ 9,099	$ -	$ -	$1.024 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ 9,099	$ 9,099	$ 9,099	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 8,417		$ 8,263	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 32.6**		**$ 32.6**	**$ -**	**$ -**	Informational (for comparison with supply options)

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only enter in boxes marked in blue

NEW

Measure Data for 458.7

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$	6,000		
Total Incentive	$	1,075	$ 1,075	$ -
Participant	$	4,925		

Annual Impact Per Measure

Energy Savings per installation	200.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	10	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0	0	Estimated Participation
Impact						
Gross Energy Savings (GJ)	186	200	200	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	186	200	200	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$141.38	$141.38	$141.38	
Energy Purchases	$ 28,276	$ 28,276	$ 28,276	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 1,075	$ 1,075	$ -	$ -	
Administration		$ 250	$ 250	$ -	$ -	
Subtotal	$ 1,234	$ 1,325	$ 1,325	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 4,925	$ 4,925	$ -	$ -	
Subtotal	$ 4,587	$ 4,925	$ 4,925	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.024 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 22,456		$ 22,026	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 4.5**		**$ 4.5**	**$ -**	**$ -**	Informational (for comparison with supply options)

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	PROGRAM														ALTERNATE		NET PRESENT VALUE									BENEFIT/COST							PARAMETERS														
	COSTS ($000)											SAVINGS (GJ)			LIFE	Impact		Levelized Cost	Utility Benefits (Costs)		Participant Benefits (Costs)			Program Net Savings			Natural Gas	Participant				Natural Gas		TRC Net Benefits	UTILITY				PARTICIPANT									
	Utility			Partners																																											
	Incentives	Administration	Total	Incentives	Administration	Total	Participant	Total	% Utility	% Partner	% Participant	Gross	Net-to-Gross	Net	Years	Energy	Capacity	($/GJ)	Program	Alternate	Program	Carbon Tax	Alternate	Natural Gas	Alternate Energy	Alternate Capacity	Utility	Total Costs	Total Benefits	Benefit/Cost	Rate Impact	Total Resource	($'000s)	Natural Gas Utility Discount Rate	Natural Gas Supply $/GJ	Alternate Discount Rate	Alternate Supply $/kWh	Discount Rate	Natural Gas NPV $/GJ	Carbon Tax NPV $/GJ	Alternate Energy NPV $/kWh	Alternate Capacity NPV $/kW/a	Natural Gas Tariff $/GJ	Energy Tariff $/kWh	Capacity Tariff $/kW/a
																MWh	kW		($'000s)	($'000s)	($'000s)	($'000s)	($'000s)	(GJ)	(MWh)	(kW)		($'000s)	($'000s)																		
Label	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR	AS	AT
Source Sheet or Calculation	Program	Program	B+C	Program	Program	E+F	Program	D+G+H	D/I	G/I	H/I	Program	Program	M-N	Program	Program	Program	D/Y	OxAJ	Q x N x AL	M x N x AN	M x N x AO	N x (QxAP + RxAQ)	PV(AI,P,-O)	PV(AK,P,-Q*N)	PV(AK,P,-R)	T/O	H>0, (V+W)<0	H=0, (V+W)>0, X	AD/AC	T/(V+O)	(T+U)/I	(T+U)-J	Input	Program	Input	Input	Input	PV(AM,P,-InputD25)	Input	PV(AM,P,-InputD28)	PV(AM,P,-InputD29)	Input	Input	Input
2010																																														
Commercial																																														
363	27	0	27	0	0	0	18	45	60%	0%	40%	955	100%	955	15	68	-	3	86	79	157	13	55	8,770	661	-	3.2	18	225	12.5	0.47	3.7	121	6.87%	90.41	6%	1.17	6.0%	164.53	13.57	0.80	0.00	9.999	0.083	-
364	13	0	13	0	0	0	14	27	48%	0%	52%	452	100%	452	15	8	-	3	41	9	74	6	6	4,151	78	-	3.2	14	87	6.1	0.47	1.9	23	6.87%	90.41	6%	1.17	6.0%	164.53	13.57	0.80	0.00	9.999	0.083	-
365	5	0	5	0	0	0	16	21	24%	0%	76%	169	100%	169	15	26	-	3	15	31	28	2	21	1,552	256	-	3.1	16	51	3.2	0.47	2.2	25	6.87%	90.41	6%	1.17	6.0%	164.53	13.57	0.80	0.00	9.999	0.083	-
366	5	0	5	0	0	0	14	19	26%	0%	74%	162	100%	162	15	9	-	3	15	11	27	2	7	1,488	89	-	3.1	14	36	2.6	0.47	1.4	7	6.87%	90.41	6%	1.17	6.0%	164.53	13.57	0.80	0.00	9.999	0.083	-
367	5	0	5	0	0	0	13	19	28%	0%	72%	179	100%	179	15	21	-	3	16	25	29	2	17	1,644	205	-	3.1	13	49	3.6	0.47	2.2	22	6.87%	90.41	6%	1.17	6.0%	164.53	13.57	0.80	0.00	9.999	0.083	-
368	4	0	4	0	0	0	16	20	19%	0%	81%	130	100%	130	15	13	-	3	12	15	21	2	10	1,194	127	$0.00	3.0	16	34	2.1	0.46	1.3	7	6.87%	90.41	6%	1.17	6.0%	164.53	13.57	0.80	0.00	9.999	0.083	-
369	13	0	13	0	0	0	13	26	50%	0%	50%	459	100%	459	15	71	-	3	41	83	76	6	57	4,215	688	-	3.2	13	139	10.6	0.47	4.7	98	6.87%	90.41	6%	1.17	6.0%	164.53	13.57	0.80	0.00	9.999	0.083	-
384.3	2	0	2	0	0	0	4	6	34%	0%	66%	93	100%	93	10	0	-	3	6	N/A	12	1	N/A	657	0	-	2.9	4	13	3.0	0.46	1.0	(0)	6.87%	67.63	6%	0.88	6.0%	124.68	10.61	0.61	0.00	9.999	0.083	-
384.5	9	0	10	0	0	0	0	10	100%	0%	0%	372	100%	372	15	0	-	3	34	N/A	61	5	N/A	3,416	0	-	3.5	-	66	N/A	0.47	3.5	24	6.87%	90.41	6%	1.17	6.0%	164.53	13.57	0.80	0.00	9.999	0.083	-
384.7	20	0	20	0	0	0	21	40	49%	0%	51%	970	100%	970	10	0	-	3	66	N/A	121	10	N/A	6,854	0	-	3.3	21	131	6.4	0.47	1.6	25	6.87%	67.63	6%	0.88	6.0%	124.68	10.61	0.61	0.00	9.999	0.083	-
384.9	20	0	20	0	0	0	0	20	100%	0%	0%	680	100%	680	20	0	-	3	74	N/A	132	11	N/A	7,277	0	-	3.6	-	143	N/A	0.48	3.6	53	6.87%	108.38	6%	1.38	6.0%	194.30	15.70	0.95	0.00	9.999	0.083	-
385.2	13	0	14	0	0	0	13	27	52%	0%	48%	389	100%	389	20	0	-	3	42	N/A	76	6	N/A	4,163	0	-	3.1	13	82	6.3	0.47	1.6	16	6.87%	108.38	6%	1.38	6.0%	194.30	15.70	0.95	0.00	9.999	0.083	-
385.4	14	0	15	0	0	0	1	15	96%	0%	4%	515	100%	515	15	1	-	3	47	1	85	7	1	4,729	8	-	3.2	1	92	163.5	0.47	3.1	32	6.87%	90.41	6%	1.17	6.0%	164.53	13.57	0.80	0.00	9.999	0.083	-
385.6	22	0	22	0	0	0	14	36	61%	0%	39%	680	100%	680	18	0	-	3	69	N/A	125	10	N/A	6,905	0	-	3.1	14	135	9.4	0.47	1.9	33	6.87%	101.70	6%	1.30	6.0%	183.42	14.93	0.90	0.00	9.999	0.083	-
385.8	7	0	7	0	0	0	1	8	82%	0%	18%	232	100%	232	15	0	-	3	21	N/A	38	3	N/A	2,130	0	-	3.1	1	41	27.6	0.47	2.5	13	6.87%	90.41	6%	1.17	6.0%	164.53	13.57	0.80	0.00	9.999	0.083	-
385.9	3	0	3	0	0	0	0	3	100%	0%	0%	401	100%	401	15	0	-	1	36	N/A	66	5	N/A	3,682	0	-	10.5	-	71	N/A	0.52	10.5	33	6.87%	90.41	6%	1.17	6.0%	164.53	13.57	0.80	0.00	9.999	0.083	-
425.1	7	0	7	0	0	0	0	7	100%	0%	0%	719	100%	719	20	0	-	1	78	N/A	140	11	N/A	7,695	0	-	10.7	-	151	N/A	0.53	10.7	71	6.87%	108.38	6%	1.38	6.0%	194.30	15.70	0.95	0.00	9.999	0.083	-
425.5	19	0	19	0	0	0	34	53	36%	0%	64%	662	100%	662	15	0	-	3	60	N/A	109	9	N/A	6,079	0	-	3.2	34	118	3.5	0.47	1.1	7	6.87%	90.41	6%	1.17	6.0%	164.53	13.57	0.80	0.00	9.999	0.083	-
438.1	9	0	9	0	0	0	28	38	25%	0%	75%	267	100%	267	20	3	-	3	29	4	52	4	3	2,857	32	-	3.1	28	59	2.1	0.47	0.9	(5)	6.87%	108.38	6%	1.38	6.0%	194.30	15.70	0.95	0.00	9.999	0.083	-
438.2	65	0	65	0	0	0	163	228	29%	0%	71%	2,326	100%	2,326	15	0	-	3	210	N/A	383	32	N/A	21,360	0	-	3.2	163	414	2.5	0.47	0.9	(18)	6.87%	90.41	6%	1.17	6.0%	164.53	13.57	0.80	0.00	9.999	0.083	-
444.2	1	0	1	0	0	0	0	1	100%	0%	0%	197	100%	197	15	4	-	1	18	5	32	3	3	1,809	38	-	14.2	-	38	N/A	0.53	17.9	21	6.87%	90.41	6%	1.17	6.0%	164.53	13.57	0.80	0.00	9.999	0.083	-
444.3	1	0	1	0	0	0	0	1	100%	0%	0%	122	100%	122	15	1	-	1	11	1	20	2	1	1,116	8	-	8.8	-	22	N/A	0.52	9.6	11	6.87%	90.41	6%	1.17	6.0%	164.53	13.57	0.80	0.00	9.999	0.083	-
458.1	6	0	6	0	0	0	20	26	23%	0%	77%	267	100%	267	11	13	-	3	19	12	36	3	9	2,015	103	-	3.2	20	47	2.3	0.46	1.2	5	6.87%	72.63	6%	0.95	6.0%	133.60	11.28	0.65	0.00	9.999	0.083	-
458.2	1	0	1	0	0	0	0	1	100%	0%	0%	68	100%	68	10	0	-	3	5	N/A	8	1	N/A	480	0	-	3.7	-	9	N/A	0.47	3.7	3	6.87%	67.63	6%	0.88	6.0%	124.68	10.61	0.61	0.00	9.999	0.083	-
458.5	1	0	1	0	0	0	4	5	20%	0%	80%	40	100%	40	10	36	-	4	3	32	5	0	22	283	266	-	2.6	4	27	6.5	0.45	6.6	29	6.87%	67.63	6%	0.88	6.0%	124.68	10.61	0.61	0.00	9.999	0.083	-
458.7	1	0	1	0	0	0	5	6	21%	0%	79%	200	100%	200	10	0	-	1	14	N/A	25	2	N/A	1,413	0	-	10.2	5	27	5.5	0.52	2.2	7	6.87%	67.63	6%	0.88	6.0%	124.68	10.61	0.61	0.00	9.999	0.083	-
Total Commercial	291	6	298	0	0	0	414	711	42%	0%	58%	11,706		11,706		274	0	3	1,067	307	1,937	160	212	107,935	2,559	0	3.6	414	2,308	5.6	0.48	1.9	663												

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	UTILITY		FORTIS BC												
2															
3															
4			Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
5			Units												
6		NATURAL GAS													
7		Incremental Cost of Gas (nominal)	$ Per GJ	$5.50	$6.17	$6.81	$7.35	$7.87	$8.26	$8.56	$8.78	$8.99	$9.19	$9.40	$9.60
8	1		Year	0	1	2	3	4	5	6	7	8	9	10	11
9		carbon tax	$ per GJ	0.75	1.00	1.25	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
10		Total incremental cost of gas including carbon		6.25	7.16	8.05	8.85	9.36	9.76	10.06	10.27	10.48	10.69	10.89	11.10
11	2	GDP Deflator		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
12	3	Incremental Cost of Gas (Real)		$6.25	$7.16	$8.05	$8.85	$9.36	$9.76	$10.06	$10.27	$10.48	$10.69	$10.89	$11.10
13	4	Net Present Value -2010			$12.12	$18.72	$25.50	$32.21	$38.77	$45.08	$51.12	$56.89	$62.39	$67.63	$72.63
14	5	Net Present Value -2011				$13.75	$21.00	$28.18	$35.18	$41.93	$48.39	$54.55	$60.43	$66.03	$71.38
15	6	Net Present Value -2012					$15.28	$22.95	$30.43	$37.65	$44.55	$51.13	$57.41	$63.40	$69.11
16															
17															
18		ELECTRICITY													
19		Incremental Cost of Elec	$ Per kWh	$0.12											
20		Incremental Cost of E Capacity	$ Per kW/a	$170.00											
21															
22															
23															
24	RETAIL														
25				Rate	Customers		789,928	Total Customers in BC		80,000	Total Residential and Commercial Customers on VI				
26		Residential Retail			000's										
27		TGI	$ Per MJ	$0.0100	640		712,304	Total Residential Customers in BC							
28		TGVI	$ Per MJ	$0.0143	72										
29		Electricity	$ Per MJ	$0.0230											
30		Electricity	$ per kWh	$0.0827	1,511		1,511,435	Total BCH Residential Customers in BC				89%			
31		Electricity	$ per kW per year												
32		Commercial Retail													
33		TGI	$ Per MJ	$0.0094	78		77,624	Total Commercial Customers in BC							
34		TGVI	$ Per MJ	$0.0169	8										
35		Electricity	$ Per MJ	$0.0214											
36		Electricity	$ per kWh	$0.0769	190		189,764	Total Light Industrial and Commercial Customers in BC							
37		Electricity	$ per kW per year	$52.0000	15										
38															
39	TAX														
40			Year	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
41	1		Year		0	1	2	3	4	5	6	7	8	9	10
42	2	Carbon	$ Per tonne		$20.00	$25.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00
43	3	Carbon	$ Per GJ		$0.9976	$1.2470	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964
44	4	GDP Deflator			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
45	5	Carbon (Real)			$1.00	$1.25	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50
46	6	Net Present Value -2008				$2.03	$3.25	$4.40	$5.47	$6.48	$7.42	$8.30	$9.12	$9.89	$10.61
47	7	Net Present Value -2009					$2.48	$3.70	$4.85	$5.92	$6.93	$7.87	$8.75	$9.57	$10.34
48	8	Net Present Value -2010						$2.71	$3.94	$5.08	$6.16	$7.16	$8.10	$8.98	$9.80
49															
50		Discount Rate (real)[1]													
51		TERASEN GAS													
52		Rate of Inflation	1.90%												
53		TGI	7.38%												
54		TGVI	6.87%												
55		BC HYDRO													
56		Rate of Inflation	2.00%												
57		BC Hydro	6.00%												
58		Customer	6.00%												
59		Footnote 1: Source LR 070531													
60															
61				SHEET LABELS											
62	New Construction														
63		363		BASEBOARD											
64		364		HEATPUMP											

	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ
4	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	
7	$9.81	$10.03	$10.25	$10.47	$10.70	$10.93	$11.17	$11.42	$11.67	$11.92	$12.19	$12.45	$12.73	$13.01	$13.29	$13.58	$13.88	$14.19	$14.50	$14.82	$15.14
8	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
9	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	
10	11.31	11.52	11.74	11.97	12.19	12.43	12.67	12.91	13.16	13.42	13.68	13.95	14.22	14.50	14.79	15.08	15.38	15.68	15.99	16.31	
11	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
12	$11.31	$11.52	$11.74	$11.97	$12.19	$12.43	$12.67	$12.91	$13.16	$13.42	$13.68	$13.95	$14.22	$14.50	$14.79	$15.08	$15.38	$15.68	$15.99	$16.31	
13	$77.40	$81.94	$86.28	$90.41	$94.35	$98.11	$101.70	$105.12	$108.38	$111.49	$114.46	$117.29	$119.99	$122.57	$125.03	$127.37	$129.61	$131.75	$133.79	$135.73	
14	$76.47	$81.33	$85.96	$90.38	$94.59	$98.60	$102.44	$106.09	$109.58	$112.90	$116.07	$119.10	$121.99	$124.74	$127.37	$129.88	$132.27	$134.55	$136.73	$138.81	
15	$74.56	$79.75	$84.70	$89.42	$93.92	$98.21	$102.31	$106.21	$109.94	$113.49	$116.88	$120.12	$123.20	$126.15	$128.96	$131.64	$134.19	$136.63	$138.96	$141.18	
40	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	
41	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
42	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	
43	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	
44	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
45	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	
46	$11.28	$11.91	$12.50	$13.06	$13.57	$14.06	$14.51	$14.93	$15.33	$15.70	$16.05	$16.37	$16.68	$16.96	$17.23	$17.47	$17.71	$17.93	$18.13	$18.32	
47	$11.06	$11.73	$12.37	$12.96	$13.51	$14.03	$14.51	$14.96	$15.38	$15.78	$16.15	$16.50	$16.82	$17.13	$17.41	$17.68	$17.93	$18.16	$18.38	$18.58	
48	$10.57	$11.29	$11.97	$12.60	$13.19	$13.74	$14.26	$14.74	$15.19	$15.62	$16.01	$16.39	$16.73	$17.06	$17.36	$17.64	$17.91	$18.16	$18.39	$18.61	

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NEW

Measure Data for 363

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 44,713			
Total Incentive	$ 26,770		$ 26,770	$ -
Participant	$ 17,943			

Annual Impact Per Measure

Energy Savings per installation	955.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	245	GJ	68,056	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	15	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0	0	Estimated Participation
Impact						
Gross Energy Savings (GJ)	889	955	955	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	889	955	955	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	64,203	68,056	68,056	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$90.41	$94.59	$98.21	
Energy Purchases	$ 86,343	$ 86,343	$ 86,343	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 26,770	$ 26,770	$ -	$ -	
Administration		$ 250	$ 250	$ -	$ -	
Subtotal	$ 25,163	$ 27,020	$ 27,020	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 17,943	$ 17,943	$ -	$ -	
Subtotal	$ 16,710	$ 17,943	$ 17,943	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ 79,317	$ 79,317	$ -	$ -	$1.165 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ 79,317	$ 79,317	$ 79,317	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 123,787		$ 120,697	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 5.3**		**$ 5.3**	**$ -**	**$ -**	Informational (for comparison with supply options)

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NEW

Measure Data for 364

PER MEASURE		Utility Incentive to the participant	partner incentive
Incremental Cost	$ 26,902		
Total Incentive	$ 12,670	$ 12,670	$ -
Participant	$ 14,232		

Annual Impact Per Measure

Energy Savings per installation	452.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	29	GJ	8,056	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	15	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0	0	Estimated Participation
Impact						
Gross Energy Savings (GJ)	421	452	452	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	421	452	452	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	7,600	8,056	8,056	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$90.41	$94.59	$98.21	
Energy Purchases	$ 40,866	$ 40,866	$ 40,866	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 12,670	$ 12,670	$ -	$ -	
Administration		$ 250	$ 250	$ -	$ -	
Subtotal	$ 12,032	$ 12,920	$ 12,920	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 14,232	$ 14,232	$ -	$ -	
Subtotal	$ 13,254	$ 14,232	$ 14,232	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ 9,389	$ 9,389	$ -	$ -	$1.165 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ 9,389	$ 9,389	$ 9,389	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 24,969		$ 23,102	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 6.8**		**$ 6.8**	**$ -**	**$ -**	Informational (for comparison with supply options)

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NEW

Measure Data for 365

PER MEASURE		Utility Incentive to the participant	partner incentive
Incremental Cost	$ 20,770		
Total Incentive	$ 4,740	$ 4,740	$ -
Participant	$ 16,030		

Annual Impact Per Measure

Energy Savings per installation	169.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	95	GJ	26,389 kWh	
Alternate Capacity Impact		kW/a		
Measure Lifetime	15	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0	0	Estimated Participation
Impact						
Gross Energy Savings (GJ)	157	169	169	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	157	169	169	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	24,895	26,389	26,389	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$90.41	$94.59	$98.21	
Energy Purchases	$ 15,280	$ 15,280	$ 15,280	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 4,740	$ 4,740	$ -	$ -	
Administration		$ 250	$ 250	$ -	$ -	
Subtotal	$ 4,647	$ 4,990	$ 4,990	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 16,030	$ 16,030	$ -	$ -	
Subtotal	$ 14,928	$ 16,030	$ 16,030	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ 30,755	$ 30,755	$ -	$ -	$1.165 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ 30,755	$ 30,755	$ 30,755	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 26,460		$ 25,015	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 14.0**		**$ 14.0**	**$ -**	**$ -**	Informational (for comparison with supply options)

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NEW

Measure Data for 366

PER MEASURE		Utility Incentive to the participant	partner incentive
Incremental Cost	$ 18,496		
Total Incentive	$ 4,540	$ 4,540	$ -
Participant	$ 13,956		

Annual Impact Per Measure

Energy Savings per installation	162.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	33	GJ	9,167	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	15	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0	0	Estimated Participation
Impact						
Gross Energy Savings (GJ)	151	162	162	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	151	162	162	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	8,648	9,167	9,167	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$90.41	$94.59	$98.21	
Energy Purchases	$ 14,647	$ 14,647	$ 14,647	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 4,540	$ 4,540	$ -	$ -	
Administration		$ 250	$ 250	$ -	$ -	
Subtotal	$ 4,461	$ 4,790	$ 4,790	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 13,956	$ 13,956	$ -	$ -	
Subtotal	$ 12,997	$ 13,956	$ 13,956	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ 10,683	$ 10,683	$ -	$ -	$1.165 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ 10,683	$ 10,683	$ 10,683	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 7,873		$ 6,584	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 13.0**		**$ 13.0**	**$ -**	**$ -**	Informational (for comparison with supply options)

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NEW

Measure Data for 367

PER MEASURE		Utility Incentive to the participant	partner incentive
Incremental Cost	$ 18,496		
Total Incentive	$ 5,020	$ 5,020	$ -
Participant	$ 13,476		

Annual Impact Per Measure

Energy Savings per installation	179.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	76	GJ	21,111	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	15	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0	0	Estimated Participation
Impact						
Gross Energy Savings (GJ)	167	179	179	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	167	179	179	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	19,916	21,111	21,111	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$90.41	$94.59	$98.21	
Energy Purchases	$ 16,184	$ 16,184	$ 16,184	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 5,020	$ 5,020	$ -	$ -	
Administration		$ 250	$ 250	$ -	$ -	
Subtotal	$ 4,908	$ 5,270	$ 5,270	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 13,476	$ 13,476	$ -	$ -	
Subtotal	$ 12,550	$ 13,476	$ 13,476	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ 24,604	$ 24,604	$ -	$ -	$1.165 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ 24,604	$ 24,604	$ 24,604	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 23,330		$ 22,042	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 11.8**		**$ 11.8**	**$ -**	**$ -**	Informational (for comparison with supply options)

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NEW

Measure Data for 368

PER MEASURE		Utility Incentive to the participant	partner incentive
Incremental Cost	$ 20,011		
Total Incentive	$ 3,645	$ 3,645	$ -
Participant	$ 16,366		

Annual Impact Per Measure

Energy Savings per installation	130.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	47	GJ	13,056	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	15	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0	0	Estimated Participation
Impact						
Gross Energy Savings (GJ)	121	130	130	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	121	130	130	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	12,317	13,056	13,056	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$90.41	$94.59	$98.21	
Energy Purchases	$ 11,753	$ 11,753	$ 11,753	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 3,645	$ 3,645	$ -	$ -	
Administration		$ 250	$ 250	$ -	$ -	
Subtotal	$ 3,627	$ 3,895	$ 3,895	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 16,366	$ 16,366	$ -	$ -	
Subtotal	$ 15,241	$ 16,366	$ 16,366	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ 15,216	$ 15,216	$ -	$ -	$1.165 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ 15,216	$ 15,216	$ 15,216	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 8,101		$ 6,708	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 17.5**		**$ 17.5**	**$ -**	**$ -**	Informational (for comparison with supply options)

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NEW

Measure Data for 369

PER MEASURE		Utility Incentive to the participant	partner incentive
Incremental Cost	$ 25,885		
Total Incentive	$ 12,865	$ 12,865	$ -
Participant	$ 13,020		

Annual Impact Per Measure

Energy Savings per installation	459.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	255	GJ	70,833 kWh	
Alternate Capacity Impact		kW/a		
Measure Lifetime	15	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0	0	Estimated Participation
Impact						
Gross Energy Savings (GJ)	427	459	459	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	427	459	459	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	66,824	70,833	70,833	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$90.41	$94.59	$98.21	
Energy Purchases	$ 41,499	$ 41,499	$ 41,499	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 12,865	$ 12,865	$ -	$ -	
Administration		$ 250	$ 250	$ -	$ -	
Subtotal	$ 12,214	$ 13,115	$ 13,115	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 13,020	$ 13,020	$ -	$ -	
Subtotal	$ 12,125	$ 13,020	$ 13,020	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ 82,554	$ 82,554	$ -	$ -	$1.165 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ 82,554	$ 82,554	$ 82,554	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 99,714		$ 97,918	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 6.4**		**$ 6.4**	**$ -**	**$ -**	Informational (for comparison with supply options)

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NEW

Measure Data for 384.3

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 6,050			
Total Incentive	$ 1,890		$ 1,890	$ -
Participant	$ 4,160			

Annual Impact Per Measure

Energy Savings per installation	93.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	10	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0	0	Estimated Participation
Impact						
Gross Energy Savings (GJ)	87	93	93	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	87	93	93	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$67.63	$71.38	$74.56	
Energy Purchases	$ 6,290	$ 6,290	$ 6,290	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 1,890	$ 1,890	$ -	$ -	
Administration		$ 250	$ 250	$ -	$ -	
Subtotal	$ 1,993	$ 2,140	$ 2,140	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 4,160	$ 4,160	$ -	$ -	
Subtotal	$ 3,874	$ 4,160	$ 4,160	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$0.883 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 423		$ (10)	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 9.8**		**$ 9.8**	**$ -**	**$ -**	Informational (for comparison with supply options)

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NEW

Measure Data for 384.5

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 9,450			
Total Incentive	$ 9,450		$ 9,450	$ -
Participant	$ -			

Annual Impact Per Measure

Energy Savings per installation	372.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	15	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0	0	Estimated Participation
Impact						
Gross Energy Savings (GJ)	346	372	372	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	346	372	372	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$90.41	$94.59	$98.21	
Energy Purchases	$ 33,633	$ 33,633	$ 33,633	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 9,450	$ 9,450	$ -	$ -	
Administration		$ 250	$ 250	$ -	$ -	
Subtotal	$ 9,033	$ 9,700	$ 9,700	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.165 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 24,600		$ 23,933	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 2.9**		**$ 2.9**	**$ -**	**$ -**	Informational (for comparison with supply options)

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NEW

Measure Data for 384.7

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 40,200			
Total Incentive	$ 19,685		$ 19,685	$ -
Participant	$ 20,515			

Annual Impact Per Measure

Energy Savings per installation	970.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	10	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0	0	Estimated Participation
Impact						
Gross Energy Savings (GJ)	903	970	970	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	903	970	970	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$67.63	$71.38	$74.56	
Energy Purchases	$ 65,603	$ 65,603	$ 65,603	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 19,685	$ 19,685	$ -	$ -	
Administration		$ 250	$ 250	$ -	$ -	
Subtotal	$ 18,565	$ 19,935	$ 19,935	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 20,515	$ 20,515	$ -	$ -	
Subtotal	$ 19,105	$ 20,515	$ 20,515	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$0.883 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 27,933		$ 25,153	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 6.0**		**$ 6.0**	**$ -**	**$ -**	Informational (for comparison with supply options)

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NEW

Measure Data for 384.9

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 20,000			
Total Incentive	$ 20,000		$ 20,000	$ -
Participant	$ -			

Annual Impact Per Measure

Energy Savings per installation	680.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	20	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0	0	Estimated Participation
Impact						
Gross Energy Savings (GJ)	633	680	680	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	633	680	680	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$108.38	$112.90	$116.88	
Energy Purchases	$ 73,697	$ 73,697	$ 73,697	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 20,000	$ 20,000	$ -	$ -	
Administration		$ 250	$ 250	$ -	$ -	
Subtotal	$ 18,858	$ 20,250	$ 20,250	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.376 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 54,838		$ 53,447	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 2.9**		**$ 2.9**	**$ -**	**$ -**	Informational (for comparison with supply options)

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NEW

Measure Data for 385.2

PER MEASURE		Utility Incentive to the participant	partner incentive
Incremental Cost	$ 26,300		
Total Incentive	$ 13,425	$ 13,425	$ -
Participant	$ 12,875		

Annual Impact Per Measure

Energy Savings per installation	389.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	20	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0	0	Estimated Participation
Impact						
Gross Energy Savings (GJ)	362	389	389	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	362	389	389	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$108.38	$112.90	$116.88	
Energy Purchases	$ 42,159	$ 42,159	$ 42,159	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 13,425	$ 13,425	$ -	$ -	
Administration		$ 250	$ 250	$ -	$ -	
Subtotal	$ 12,735	$ 13,675	$ 13,675	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 12,875	$ 12,875	$ -	$ -	
Subtotal	$ 11,990	$ 12,875	$ 12,875	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.376 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 17,434		$ 15,609	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 6.6**		**$ 6.6**	**$ -**	**$ -**	Informational (for comparison with supply options)

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NEW

Measure Data for 385.4

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 15,000			
Total Incentive	$ 14,435		$ 14,435	$ -
Participant	$ 565			

Annual Impact Per Measure

Energy Savings per installation	515.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	3	GJ	833	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	15	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0	0	Estimated Participation
Impact						
Gross Energy Savings (GJ)	480	515	515	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	480	515	515	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	786	833	833	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$90.41	$94.59	$98.21	
Energy Purchases	$ 46,562	$ 46,562	$ 46,562	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 14,435	$ 14,435	$ -	$ -	
Administration		$ 250	$ 250	$ -	$ -	
Subtotal	$ 13,676	$ 14,685	$ 14,685	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 565	$ 565	$ -	$ -	
Subtotal	$ 526	$ 565	$ 565	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ 971	$ 971	$ -	$ -	$1.165 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ 971	$ 971	$ 971	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 33,331		$ 32,283	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 3.3**		**$ 3.3**	**$ -**	**$ -**	Informational (for comparison with supply options)

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NEW

Measure Data for 385.5

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 100			
Total Incentive	$ 100		$ 100	$ -
Participant	$ -			

Annual Impact Per Measure

Energy Savings per installation	30.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	10	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0	0	Estimated Participation
Impact						
Gross Energy Savings (GJ)	28	30	30	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	28	30	30	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$67.63	$71.38	$74.56	
Energy Purchases	$ 2,029	$ 2,029	$ 2,029	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 100	$ 100	$ -	$ -	
Administration		$ 250	$ 250	$ -	$ -	
Subtotal	$ 326	$ 350	$ 350	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$0.883 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 1,703		$ 1,679	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 1.7**		**$ 1.7**	**$ -**	**$ -**	Informational (for comparison with supply options)

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NEW

Measure Data for 385.6

PER MEASURE		Utility Incentive to the participant	partner incentive
Incremental Cost	$ 36,200		
Total Incentive	$ 21,830	$ 21,830	$ -
Participant	$ 14,370		

Annual Impact Per Measure

Energy Savings per installation	680.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	18	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0	0	Estimated Participation
Impact						
Gross Energy Savings (GJ)	633	680	680	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	633	680	680	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$101.70	$106.09	$109.94	
Energy Purchases	$ 69,154	$ 69,154	$ 69,154	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 21,830	$ 21,830	$ -	$ -	
Administration		$ 250	$ 250	$ -	$ -	
Subtotal	$ 20,562	$ 22,080	$ 22,080	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 14,370	$ 14,370	$ -	$ -	
Subtotal	$ 13,382	$ 14,370	$ 14,370	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.299 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 35,209		$ 32,704	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 5.5**		**$ 5.5**	**$ -**	**$ -**	Informational (for comparison with supply options)

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NEW

Measure Data for 385.8

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 8,000			
Total Incentive	$ 6,505		$ 6,505	$ -
Participant	$ 1,495			

Annual Impact Per Measure

Energy Savings per installation	232.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	15	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0	0	Estimated Participation
Impact						
Gross Energy Savings (GJ)	216	232	232	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	216	232	232	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$90.41	$94.59	$98.21	
Energy Purchases	$ 20,975	$ 20,975	$ 20,975	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 6,505	$ 6,505	$ -	$ -	
Administration		$ 250	$ 250	$ -	$ -	
Subtotal	$ 6,291	$ 6,755	$ 6,755	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 1,495	$ 1,495	$ -	$ -	
Subtotal	$ 1,392	$ 1,495	$ 1,495	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.165 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 13,292		$ 12,725	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 4.0**		**$ 4.0**	**$ -**	**$ -**	Informational (for comparison with supply options)

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NEW

Measure Data for 385.9

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 3,200			
Total Incentive	$ 3,200		$ 3,200	$ -
Participant	$ -			

Annual Impact Per Measure

Energy Savings per installation	401.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	15	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0	0	Estimated Participation
Impact						
Gross Energy Savings (GJ)	373	401	401	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	373	401	401	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$90.41	$94.59	$98.21	
Energy Purchases	$ 36,255	$ 36,255	$ 36,255	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 3,200	$ 3,200	$ -	$ -	
Administration		$ 250	$ 250	$ -	$ -	
Subtotal	$ 3,213	$ 3,450	$ 3,450	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.165 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 33,042		$ 32,805	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 1.0**		**$ 1.0**	**$ -**	**$ -**	Informational (for comparison with supply options)

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NEW

Measure Data for 425.1

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 7,000			
Total Incentive	$ 7,000		$ 7,000	$ -
Participant	$ -			

Annual Impact Per Measure

Energy Savings per installation	719.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	20	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0	0	Estimated Participation
Impact						
Gross Energy Savings (GJ)	670	719	719	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	670	719	719	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$108.38	$112.90	$116.88	
Energy Purchases	$ 77,923	$ 77,923	$ 77,923	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 7,000	$ 7,000	$ -	$ -	
Administration		$ 250	$ 250	$ -	$ -	
Subtotal	$ 6,752	$ 7,250	$ 7,250	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.376 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 71,172		$ 70,673	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 1.0**		**$ 1.0**	**$ -**	**$ -**	Informational (for comparison with supply options)

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NEW

Measure Data for 425.5

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 52,500			
Total Incentive	$ 18,560		$ 18,560	$ -
Participant	$ 33,940			

Annual Impact Per Measure

Energy Savings per installation	662.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	15	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0	0	Estimated Participation
Impact						
Gross Energy Savings (GJ)	617	662	662	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	617	662	662	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$90.41	$94.59	$98.21	
Energy Purchases	$ 59,852	$ 59,852	$ 59,852	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 18,560	$ 18,560	$ -	$ -	
Administration		$ 250	$ 250	$ -	$ -	
Subtotal	$ 17,517	$ 18,810	$ 18,810	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 33,940	$ 33,940	$ -	$ -	
Subtotal	$ 31,607	$ 33,940	$ 33,940	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.165 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 10,728		$ 7,102	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 9.0**		**$ 9.0**	**$ -**	**$ -**	Informational (for comparison with supply options)

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NEW

Measure Data for 438.1

PER MEASURE		Utility Incentive to the participant	partner incentive
Incremental Cost	$ 37,400		
Total Incentive	$ 9,215	$ 9,215	$ -
Participant	$ 28,185		

Annual Impact Per Measure

Energy Savings per installation	267.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	10	GJ	2,778	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	20	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0	0	Estimated Participation
Impact						
Gross Energy Savings (GJ)	249	267	267	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	249	267	267	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	2,621	2,778	2,778	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$108.38	$112.90	$116.88	
Energy Purchases	$ 28,937	$ 28,937	$ 28,937	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 9,215	$ 9,215	$ -	$ -	
Administration		$ 250	$ 250	$ -	$ -	
Subtotal	$ 8,814	$ 9,465	$ 9,465	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 28,185	$ 28,185	$ -	$ -	
Subtotal	$ 26,248	$ 28,185	$ 28,185	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ 3,823	$ 3,823	$ -	$ -	$1.376 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ 3,823	$ 3,823	$ 3,823	$ -	$ -	
Total Resource Net Benefit (Cost)	$ (2,302)		$ (4,890)	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 13.7**		**$ 13.7**	**$ -**	**$ -**	Informational (for comparison with supply options)

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NEW

Measure Data for 438.2

PER MEASURE		Utility Incentive to the participant	partner incentive
Incremental Cost	$ 228,386		
Total Incentive	$ 65,205	$ 65,205	$ -
Participant	$ 163,181		

Annual Impact Per Measure

Energy Savings per installation	2326.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	15	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0	0	Estimated Participation
Impact						
Gross Energy Savings (GJ)	2,166	2,326	2,326	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	2,166	2,326	2,326	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$90.41	$94.59	$98.21	
Energy Purchases	$ 210,297	$ 210,297	$ 210,297	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 65,205	$ 65,205	$ -	$ -	
Administration		$ 1	$ 1	$ -	$ -	
Subtotal	$ 60,725	$ 65,206	$ 65,206	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 163,181	$ 163,181	$ -	$ -	
Subtotal	$ 151,966	$ 163,181	$ 163,181	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.165 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ (2,393)		$ (18,090)	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 11.0**		**$ 11.0**	**$ -**	**$ -**	Informational (for comparison with supply options)

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NEW

Measure Data for 438.4

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 30,000			
Total Incentive	$ -		$ -	$ -
Participant	$ 30,000			

Annual Impact Per Measure

Energy Savings per installation	631.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	373	GJ	103,611	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	5	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0	0	Estimated Participation
Impact						
Gross Energy Savings (GJ)	588	631	631	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	588	631	631	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	97,746	103,611	103,611	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$38.77	$41.93	$44.55	
Energy Purchases	$ 24,461	$ 24,461	$ 24,461	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ 250	$ 250	$ -	$ -	
Subtotal	$ 233	$ 250	$ 250	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 30,000	$ 30,000	$ -	$ -	
Subtotal	$ 27,938	$ 30,000	$ 30,000	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ 52,374	$ 52,374	$ -	$ -	$0.505 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ 52,374	$ 52,374	$ 52,374	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 48,664		$ 46,585	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 11.8**		**$ 11.8**	**$ -**	**$ -**	Informational (for comparison with supply options)

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NEW

Measure Data for 444.2

PER MEASURE		Utility Incentive to the participant	partner incentive
Incremental Cost	$ 1,000		
Total Incentive	$ 1,000	$ 1,000	$ -
Participant	$ -		

Annual Impact Per Measure

Energy Savings per installation	197.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	14	GJ	3,889	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	15	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0	0	Estimated Participation
Impact						
Gross Energy Savings (GJ)	183	197	197	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	183	197	197	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	3,669	3,889	3,889	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$90.41	$94.59	$98.21	
Energy Purchases	$ 17,811	$ 17,811	$ 17,811	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 1,000	$ 1,000	$ -	$ -	
Administration		$ 250	$ 250	$ -	$ -	
Subtotal	$ 1,164	$ 1,250	$ 1,250	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ 4,532	$ 4,532	$ -	$ -	$1.165 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ 4,532	$ 4,532	$ 4,532	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 21,179		$ 21,093	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 0.7**		**$ 0.7**	**$ -**	**$ -**	Informational (for comparison with supply options)

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NEW

Measure Data for 444.3

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 1,000			
Total Incentive	$ 1,000		$ 1,000	$ -
Participant	$ -			

Annual Impact Per Measure

Energy Savings per installation	121.5	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	3	GJ	833	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	15	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0	0	Estimated Participation
Impact						
Gross Energy Savings (GJ)	113	122	122	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	113	122	122	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	786	833	833	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$90.41	$94.59	$98.21	
Energy Purchases	$ 10,985	$ 10,985	$ 10,985	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 1,000	$ 1,000	$ -	$ -	
Administration		$ 250	$ 250	$ -	$ -	
Subtotal	$ 1,164	$ 1,250	$ 1,250	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ 971	$ 971	$ -	$ -	$1.165 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ 971	$ 971	$ 971	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 10,792		$ 10,706	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 1.2**		**$ 1.2**	**$ -**	**$ -**	Informational (for comparison with supply options)

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NEW

Measure Data for 458.1

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 26,000			
Total Incentive	$ 5,860		$ 5,860	$ -
Participant	$ 20,140			

Annual Impact Per Measure

Energy Savings per installation	267.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	47	GJ	13,056	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	11	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0	0	Estimated Participation
Impact						
Gross Energy Savings (GJ)	249	267	267	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	249	267	267	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	12,317	13,056	13,056	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$72.63	$76.47	$79.75	
Energy Purchases	$ 19,393	$ 19,393	$ 19,393	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 5,860	$ 5,860	$ -	$ -	
Administration		$ 250	$ 250	$ -	$ -	
Subtotal	$ 5,690	$ 6,110	$ 6,110	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 20,140	$ 20,140	$ -	$ -	
Subtotal	$ 18,756	$ 20,140	$ 20,140	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ 12,356	$ 12,356	$ -	$ -	$0.946 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ 12,356	$ 12,356	$ 12,356	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 7,303		$ 5,499	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 13.4**		**$ 13.4**	**$ -**	**$ -**	Informational (for comparison with supply options)

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NEW

Measure Data for 458.2

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 1,000			
Total Incentive	$ 1,000		$ 1,000	$ -
Participant	$ -			

Annual Impact Per Measure

Energy Savings per installation	68.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	10	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0	0	Estimated Participation
Impact						
Gross Energy Savings (GJ)	63	68	68	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	63	68	68	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$67.63	$71.38	$74.56	
Energy Purchases	$ 4,599	$ 4,599	$ 4,599	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 1,000	$ 1,000	$ -	$ -	
Administration		$ 250	$ 250	$ -	$ -	
Subtotal	$ 1,164	$ 1,250	$ 1,250	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$0.883 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 3,435		$ 3,349	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 2.7**		**$ 2.7**	**$ -**	**$ -**	Informational (for comparison with supply options)

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NEW

Measure Data for 458.5

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$	5,000		
Total Incentive	$	810	$ 810	$ -
Participant	$	4,190		

Annual Impact Per Measure

Energy Savings per installation	40.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	130	GJ	36,111	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	10	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0	0	Estimated Participation
Impact						
Gross Energy Savings (GJ)	37	40	40	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	37	40	40	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	34,067	36,111	36,111	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$67.63	$71.38	$74.56	
Energy Purchases	$ 2,705	$ 2,705	$ 2,705	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 810	$ 810	$ -	$ -	
Administration		$ 250	$ 250	$ -	$ -	
Subtotal	$ 987	$ 1,060	$ 1,060	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 4,190	$ 4,190	$ -	$ -	
Subtotal	$ 3,902	$ 4,190	$ 4,190	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ 31,894	$ 31,894	$ -	$ -	$0.883 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ 31,894	$ 31,894	$ 31,894	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 29,710		$ 29,349	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 19.0**		**$ 19.0**	**$ -**	**$ -**	Informational (for comparison with supply options)

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NEW

Measure Data for 458.6

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 2,000			
Total Incentive	$ 205		$ 205	$ -
Participant	$ 1,795			

Annual Impact Per Measure

Energy Savings per installation	10.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	32	GJ	8,889	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	10	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0	0	Estimated Participation
Impact						
Gross Energy Savings (GJ)	9	10	10	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	9	10	10	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	8,386	8,889	8,889	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$67.63	$71.38	$74.56	
Energy Purchases	$ 676	$ 676	$ 676	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 205	$ 205	$ -	$ -	
Administration		$ 250	$ 250	$ -	$ -	
Subtotal	$ 424	$ 455	$ 455	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 1,795	$ 1,795	$ -	$ -	
Subtotal	$ 1,672	$ 1,795	$ 1,795	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ 7,851	$ 7,851	$ -	$ -	$0.883 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ 7,851	$ 7,851	$ 7,851	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 6,432		$ 6,277	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 32.6**		**$ 32.6**	**$ -**	**$ -**	Informational (for comparison with supply options)

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Measure Data for 458.7

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$	6,000		
Total Incentive	$	1,075	$ 1,075	$ -
Participant	$	4,925		

Annual Impact Per Measure

Energy Savings per installation	200.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	10	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0	0	Estimated Participation
Impact						
Gross Energy Savings (GJ)	186	200	200	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	186	200	200	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$67.63	$71.38	$74.56	
Energy Purchases	$ 13,526	$ 13,526	$ 13,526	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 1,075	$ 1,075	$ -	$ -	
Administration		$ 250	$ 250	$ -	$ -	
Subtotal	$ 1,234	$ 1,325	$ 1,325	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 4,925	$ 4,925	$ -	$ -	
Subtotal	$ 4,587	$ 4,925	$ 4,925	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$0.883 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 7,706		$ 7,276	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 4.5**		**$ 4.5**	**$ -**	**$ -**	Informational (for comparison with supply options)

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2010 Joint Initiatives Programs	PROGRAM															ALTERNATE		NET PRESENT VALUE									BENEFIT/COST						PARAMETERS											
	COSTS ($000)											SAVINGS (GJ)			LIFE	Impact		Levelized Cost	Utility Benefits (Costs)		Participant Benefits (Costs)			Program Net Savings				Participant						UTILITY				PARTICIPANT							
FEI	Utility			Partners														($/GJ)																											
	Incentives	Administration	Total	Incentives	Administration	Total	Participant	Total	% Utility	% Partner	% Participant	Gross	Net-to-Gross	Net	Years	Energy	Capacity		Program	Alternate	Program	Carbon Tax	Alternate	Natural Gas	Alternate Energy	Alternate Capacity	Natural Gas	Total Costs	Total Benefits	Benefit/Cost	Natural Gas	Societal Cost Test	SCT Net Benefits	Natural Gas Utility Discount	Natural Gas Supply	Alternate Discount Rate	Alternate Supply	Discount Rate	Natural Gas NPV	Carbon Tax NPV	Alternate Energy NPV	Alternate Capacity NPV	Natural Gas Tariff	Energy Tariff	Capacity Tariff
																MWh	kW		($'000s)	($'000s)	($'000s)	($'000s)	($'000s)	(GJ)	(MWh)	(kW)	Utility	($'000s)	($'000s)		Rate Impact		($'000s)		$/GJ	$/GJ	$/kWh		$/GJ	$/GJ	$/kWh	$/kW/a	$/GJ	$/kWh	$/kW/a
Label	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR	AS	AT
Source Sheet or Calculation	Program	Program	B+C	Program	Program	E+F	Program	D+G+H	D/I	G/I	H/I	Program	Program	M+N	Program	Program	Program	D/Y	OxAJ	Q x N x AL	M x N x AN	M x N x AO	N x (QxAP + RxAQ)	PV(AI,P,-Q)	PV(AK,P,-Q*%)	PV(AK,P,-R)	T/D	H>0, (V+W)>0	H>0, (V+W)>0, X	AD/AC	T/(V+O)	(T+U)/I	(T+U)-I	Input	Program	Input	Input	Input	PV(AM,P,-InputD25)	Input	PV(AM,P,-InputD28)	PV(AM,P,-InputD29)	Input	Input	Input
2010																																												
RESIDENTIAL:																																												
Tier 3 ENERGY STAR Washer / Dryer Rebates	7	0	7	0	0	0	29	36	18%	0%	82%	364	90%	328	14	0	-	2	78	N/A	37	6	N/A	3,701	0	-	12.1	29	43	1.5	1.8	2.2	43	3.00%	184.32	3%	1.36	3.0%	112.95	17.14	0.93	0.00	9.999	0.083	-
Water Savers Pilot	8	7	14	0	0	0	0	14	100%	0%	0%	500	84%	420	10	0	-	4	78	N/A	36	6	N/A	3,583	0	-	5.6	-	41	N/A	1.6	5.6	64	3.00%	142.86	3%	1.02	3.0%	85.29	13.13	0.71	0.00	9.999	0.083	-
EcoEnergy Audits		349	349					349																																				
City of Vancouver Weatherization		15	15					15																																				
Total Residential	14	371	385	-	-	-	29	414	93%	-	7%	864		748		0	-	53	157	0	73	11	0	7,283	0	0	0.4	29	84	2.9	0.3	0.4	(257)												

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ
1	UTILITY		FORTIS BC																																	
2																																				
3																																				
4			Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	
5			Units																																	
6		NATURAL GAS																																		
7		Incremental Cost of Gas (nominal)	$ Per GJ	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.43
8	1		Year	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
9		carbon tax	$ per GJ	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
10		Distribution adder	$ per GJ	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16		
11		Total incremental cost of gas including carbon		15.44	15.44	15.44	15.44	15.44	15.44	15.44	15.44	15.44	15.44	15.44	15.44	15.44	15.44	15.44	15.44	15.44	15.44	15.44	15.44	15.44	15.44	15.44	15.44	15.44	15.44	15.44	15.44	15.44	15.44	15.44	15.28	
12	2	GDP Deflator		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
13	3	Incremental Cost of Gas (Real)		$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.28	
14	4	Net Present Value -2010			$29.54	$43.67	$57.39	$70.71	$83.64	$96.20	$108.38	$120.22	$131.71	$142.86	$153.69	$164.20	$174.41	$184.32	$193.94	$203.28	$212.35	$221.16	$229.71	$238.01	$246.07	$253.89	$261.48	$268.86	$276.02	$282.97	$289.72	$296.27	$302.63	$308.81	$314.74	
15	5	Net Present Value -2011				$29.54	$43.67	$57.39	$70.71	$83.64	$96.20	$108.38	$120.22	$131.71	$142.86	$153.69	$164.20	$174.41	$184.32	$193.94	$203.28	$212.35	$221.16	$229.71	$238.01	$246.07	$253.89	$261.48	$268.86	$276.02	$282.97	$289.72	$296.27	$302.63	$308.74	
16	6	Net Present Value -2012					$29.54	$43.67	$57.39	$70.71	$83.64	$96.20	$108.38	$120.22	$131.71	$142.86	$153.69	$164.20	$174.41	$184.32	$193.94	$203.28	$212.35	$221.16	$229.71	$238.01	$246.07	$253.89	$261.48	$268.86	$276.02	$282.97	$289.72	$296.27	$302.56	
17																																				
18																																				
19		ELECTRICITY																																		
20		Incremental Cost of Elec	$ Per kWh	$0.12																																
21		Incremental Cost of E Capacity	$ Per kW/a	$170.00																																
22																																				
23																																				
24																																				
25	RETAIL																																			
26				Rate	Customers		789,928	Total Customers in BC		80,000	Total Residential and Commercial Customers on VI																									
27		Residential Retail			000's																															
28		TGI	$ Per MJ	$0.0100	640		712,304	Total Residential Customers in BC																												
29		TGVI	$ Per MJ	$0.0143	72																															
30		Electricity	$ Per MJ	$0.0230																																
31		Electricity	$ per kWh	$0.0827	1,511		1,511,435	Total BCH Residential Customers in BC				89%																								
32		Electricity	$ per kW per year																																	
33		Commercial Retail																																		
34		TGI	$ Per MJ	$0.0094	78		77,624	Total Commercial Customers in BC																												
35		TGVI	$ Per MJ	$0.0169	8																															
36		Electricity	$ Per MJ	$0.0214																																
37		Electricity	$ per kWh	$0.0769	190		189,764	Total Light Industrial and Commercial Customers in BC																												
38		Electricity	$ per kW per year	$52.0000	15																															
39																																				
40	TAX																																			
41			Year	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	
42	1		Year		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
43	2	Carbon	$ Per tonne		$20.00	$25.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	
44	3	Carbon	$ Per GJ		$0.9976	$1.2470	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	
45	4	GDP Deflator			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
46	5	Carbon (Real)			$1.00	$1.25	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	
47	6	Net Present Value -2010				$2.14	$3.51	$4.84	$6.13	$7.39	$8.60	$9.78	$10.93	$12.05	$13.13	$14.18	$15.19	$16.18	$17.14	$18.08	$18.98	$19.86	$20.71	$21.54	$22.35	$23.13	$23.89	$24.62	$25.34	$26.03	$26.71	$27.36	$27.99	$28.61	$29.21	
48	7	Net Present Value -2011					$2.62	$3.99	$5.32	$6.61	$7.86	$9.08	$10.26	$11.41	$12.52	$13.60	$14.65	$15.67	$16.66	$17.62	$18.55	$19.46	$20.34	$21.19	$22.02	$22.82	$23.61	$24.36	$25.10	$25.81	$26.51	$27.18	$27.84	$28.47	$29.09	
49	8	Net Present Value -2012						$2.86	$4.23	$5.56	$6.85	$8.11	$9.32	$10.50	$11.65	$12.76	$13.85	$14.90	$15.91	$16.90	$17.86	$18.80	$19.70	$20.58	$21.43	$22.26	$23.07	$23.85	$24.61	$25.34	$26.06	$26.75	$27.42	$28.08	$28.71	
50																																				
51		Discount Rate (real)[1]																																		
52		TERASEN GAS																																		
53		Rate of Inflation	1.90%																																	
54		TGI	3.00%																																	
55		TGVI	3.00%																																	
56		BC HYDRO																																		
57		Rate of Inflation	2.00%																																	
58		BC Hydro	3.00%																																	
59		Customer	3.00%																																	
60		Footnote 1: Source LR 070531																																		
61																																				
62				SHEET LABELS																																
63	New Construction																																			
64		#REF!		BASEBOARD																																
65		Tier 3 ENERGY STAR Washer / Dryer Rebates		HEATPUMP																																

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Measure Data for Tier 3 ENERGY STAR Washer / Dryer Rebates

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 300			
Total Incentive	$ 50		$ 50	$ -
Participant	$ 250			
Annual Impact Per Measure				
Energy Savings per installation	2.8	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	10%	0.90		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	14	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	126	130	130	0		Estimated Participation
Impact						
Gross Energy Savings (GJ)	353	364	364	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	318	328	328	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$184.32	$184.32	$184.32	
Energy Purchases	$ 60,384	$ 60,384	$ 60,384	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 6,500	$ 6,500	$ -	$ -	
Administration		$ -				
Subtotal	$ 6,311	$ 6,500	$ 6,500	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 29,250	$ 29,250	$ -	$ -	
Subtotal	$ 28,398	$ 29,250	$ 29,250	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.356 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 25,675		$ 24,634	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 9.7**		**$ 9.7**	**$ -**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Water Savers Pilot

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$	7		
Total Incentive	$	15	$ 15	$ -
Participant	$	-		

Annual Impact Per Measure

Energy Savings per installation	1.0	GJ	Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	16%	0.84	Net-to-Gross
Alternate Energy Impact	0	GJ	0 kWh
Alternate Capacity Impact		kW/a	
Measure Lifetime	10	Years	Estimated lifespan of measure

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	485	500	500	0		Estimated Participation
Impact						
Gross Energy Savings (GJ)	485	500	500	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	408	420	420	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$142.86	$142.86	$142.86	
Energy Purchases	$ 60,001	$ 60,001	$ 60,001	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 7,500	$ 7,500	$ -	$ -	
Administration		$ 6,500	$ 6,500			
Subtotal	$ 13,592	$ 14,000	$ 14,000	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.024 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 46,409		$ 46,001	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 3.9**		**$ 3.9**	**$ -**	**$ -**	Informational (for comparison with supply options)

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2010 Joint Initiatives Programs	PROGRAM															ALTERNATE		NET PRESENT VALUE									BENEFIT/COST						PARAMETERS														
	COSTS ($000)											SAVINGS (GJ)			LIFE	Impact		Levelized Cost	Utility Benefits (Costs)		Participant Benefits (Costs)			Program Net Savings				Participant						UTILITY				PARTICIPANT									
FEI	Utility			Partners											Years	Energy	Capacity	($/GJ)	Program	Alternate	Program	Carbon Tax	Alternate	Natural Gas	Alternate Energy	Alternate Capacity	Natural Gas	Total Costs	Total Benefits	Benefit/Cost	Natural Gas	Total Resource	TRC Net Benefits	Natural Gas Utility Discount	Natural Gas Supply	Alternate Discount Rate	Alternate Supply	Discount Rate	Natural Gas NPV	Carbon Tax NPV	Alternate Energy NPV	Alternate Capacity NPV	Natural Gas Tariff	Energy Tariff	Capacity Tariff
	Incentives	Administration	Total	Incentives	Administration	Total	Participant	Total	% Utility	% Partner	% Participant	Gross	Net-to-Gross	Net		MWh	kW		($'000s)	($'000s)	($'000s)	($'000s)	($'000s)	(GJ)	(MWh)	(kW)	Utility	($'000s)	($'000s)		Rate Impact		($'000s)		$/GJ	$/GJ	$/kWh	$/kW/a		$/GJ	$/GJ	$/kWh	$/kW/a	$/GJ	$/kWh	$/kW/a
Label	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR	AS	AT
Source Sheet or Calculation	Program	Program	B+C	Program	Program	E+F	Program	D+G+H	D/I	G/I	H/I	Program	Program	M+N	Program	Program	Program	D/Y	OxAJ	Q x N x AL	M x N x AN	M x N x AO	N x (QxAP + RxAQ)	PV(AI,P,-Q)	PV(AK,P,-Q*%)	PV(AK,P,-R)	T/D	H>0, (V+W)>0	H>0, (V+W)>0, X	AD/AC	T/(V+O)	(T+U)/I	(T+U)-I	Input	Program	Input	Input	Input	PV(AM,P,-InputD25)	Input	PV(AM,P,-InputD28)	PV(AM,P,-InputD29)	Input	Input	Input
2010																																														
RESIDENTIAL:																																														
Tier 3 ENERGY STAR Washer / Dryer Rebates	7	0	7	0	0	0	29	36	18%	0%	82%	364	90%	328	14	0	-	2	28	N/A	30	4	N/A	2,801	0	-	4.3	29	35	1.2	0.8	0.8	(8)	7.38%	84.70	6%	1.12	6.0%	92.94	12.63	0.77	0.00	9.999	0.083	-
Water Savers Pilot	8	7	14	0	0	0	0	14	100%	0%	0%	500	84%	420	10	0	-	5	28	N/A	31	4	N/A	2,899	0	-	2.0	-	35	N/A	0.6	2.0	14	7.38%	66.96	6%	0.88	6.0%	73.59	10.33	0.61	0.00	9.999	0.083	-
EcoEnergy Audits		349	349					349																																					
City of Vancouver Weatherization		15	15					15																																					
Total Residential	14	371	385	-	-	-	29	414	93%	-	7%	864		748		0	-	67	56	0	61	8	0	5,700	0	0	0.1	29	70	2.4	0.1	0.1	(358)												

Row	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	UTILITY		FORTIS BC											
2														
3														
4			Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
5			Units											
6		NATURAL GAS												
7		Incremental Cost of Gas (nominal)	$ Per GJ	$5.50	$6.17	$6.81	$7.35	$7.87	$8.26	$8.56	$8.78	$8.99	$9.19	$9.40
8	1		Year	0	1	2	3	4	5	6	7	8	9	10
9		carbon tax	$ per GJ	0.75	1.00	1.25	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
10		Distribution adder	$ per GJ	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16
11		Total incremental cost of gas including carbon		6.41	7.32	8.21	9.01	9.52	9.92	10.22	10.43	10.64	10.85	11.05
12	2	GDP Deflator		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
13	3	Incremental Cost of Gas (Real)		$6.41	$7.32	$8.21	$9.01	$9.52	$9.92	$10.22	$10.43	$10.64	$10.85	$11.05
14	4	Net Present Value -2010			$12.32	$18.95	$25.73	$32.40	$38.87	$45.08	$50.98	$56.59	$61.91	$66.96
15	5	Net Present Value -2011				$13.94	$21.22	$28.38	$35.33	$42.00	$48.33	$54.36	$60.07	$65.50
16	6	Net Present Value -2012					$15.46	$23.15	$30.61	$37.77	$44.58	$51.04	$57.18	$63.00
17														
18														
19		ELECTRICITY												
20		Incremental Cost of Elec	$ Per kWh	$0.12										
21		Incremental Cost of E Capacity	$ Per kW/a	$170.00										
22														
23														
24														
25	RETAIL													
26				Rate	Customers		789,928	Total Customers in BC		80,000	Total Residential and Commercial Customers on VI			
27		Residential Retail			000's									
28		TGI	$ Per MJ	$0.0100	640		712,304	Total Residential Customers in BC						
29		TGVI	$ Per MJ	$0.0143	72									
30		Electricity	$ Per MJ	$0.0230										
31		Electricity	$ per kWh	$0.0827	1,511		1,511,435	Total BCH Residential Customers in BC				89%		
32		Electricity	$ per kW per year											
33		Commercial Retail												
34		TGI	$ Per MJ	$0.0094	78		77,624	Total Commercial Customers in BC						
35		TGVI	$ Per MJ	$0.0169	8									
36		Electricity	$ Per MJ	$0.0214										
37		Electricity	$ per kWh	$0.0769	190		189,764	Total Light Industrial and Commercial Customers in BC						
38		Electricity	$ per kW per year	$52.0000	15									
39														
40	TAX													
41			Year	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
42	1		Year		0	1	2	3	4	5	6	7	8	9
43	2	Carbon	$ Per tonne		$20.00	$25.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00
44	3	Carbon	$ Per GJ		$0.9976	$1.2470	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964
45	4	GDP Deflator			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
46	5	Carbon (Real)			$1.00	$1.25	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50
47	6	Net Present Value -2010				$2.01	$3.22	$4.34	$5.39	$6.37	$7.28	$8.12	$8.91	$9.65
48	7	Net Present Value -2011					$2.46	$3.67	$4.79	$5.84	$6.82	$7.73	$8.57	$9.36
49	8	Net Present Value -2012						$2.69	$3.90	$5.03	$6.07	$7.05	$7.96	$8.81
50														
51		Discount Rate (real)[1]												
52		TERASEN GAS												
53		Rate of Inflation	1.90%											
54		TGI	7.38%											
55		TGVI	6.87%											
56		BC HYDRO												
57		Rate of Inflation	2.00%											
58		BC Hydro	6.00%											
59		Customer	6.00%											
60		Footnote 1: Source LR 070531												
61														
62				SHEET LABELS										
63	New Construction													
64		#REF!		BASEBOARD										
65		Tier 3 ENERGY STAR Washer / Dryer Rebates		HEATPUMP										

Row	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ
4	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	
7	$9.60	$9.81	$10.03	$10.25	$10.47	$10.70	$10.93	$11.17	$11.42	$11.67	$11.92	$12.19	$12.45	$12.73	$13.01	$13.29	$13.58	$13.88	$14.19	$14.50	$14.82	$15.14
8	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
9	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	
10	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16		
11	11.26	11.47	11.68	11.90	12.13	12.35	12.59	12.83	13.07	13.32	13.58	13.84	14.11	14.38	14.66	14.95	15.24	15.54	15.84	16.15	16.31	
12	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
13	$11.26	$11.47	$11.68	$11.90	$12.13	$12.35	$12.59	$12.83	$13.07	$13.32	$13.58	$13.84	$14.11	$14.38	$14.66	$14.95	$15.24	$15.54	$15.84	$16.15	$16.31	
14	$71.75	$76.30	$80.61	$84.70	$88.58	$92.26	$95.75	$99.07	$102.22	$105.21	$108.04	$110.73	$113.29	$115.71	$118.02	$120.20	$122.28	$124.25	$126.12	$127.90	$129.57	
15	$70.64	$75.52	$80.15	$84.54	$88.71	$92.66	$96.41	$99.98	$103.36	$106.56	$109.61	$112.50	$115.24	$117.85	$120.32	$122.67	$124.89	$127.01	$129.02	$130.93	$132.72	
16	$68.53	$73.77	$78.74	$83.46	$87.93	$92.18	$96.21	$100.03	$103.66	$107.10	$110.37	$113.48	$116.42	$119.22	$121.87	$124.39	$126.79	$129.06	$131.22	$133.27	$135.19	
41	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	
42	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
43	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	
44	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	
45	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
46	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	
47	$10.33	$10.97	$11.56	$12.11	$12.63	$13.11	$13.55	$13.97	$14.35	$14.71	$15.05	$15.36	$15.65	$15.92	$16.18	$16.41	$16.63	$16.83	$17.02	$17.20	$17.37	
48	$10.10	$10.78	$11.42	$12.01	$12.56	$13.08	$13.55	$14.00	$14.42	$14.80	$15.16	$15.50	$15.81	$16.10	$16.37	$16.63	$16.86	$17.08	$17.28	$17.47	$17.65	
49	$9.59	$10.33	$11.01	$11.65	$12.24	$12.79	$13.31	$13.79	$14.23	$14.65	$15.04	$15.40	$15.73	$16.04	$16.33	$16.61	$16.86	$17.09	$17.31	$17.51	$17.70	

FORTIS BC
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only enter in boxes marked in blue

Measure Data for Tier 3 ENERGY STAR Washer / Dryer Rebates

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 300			
Total Incentive	$ 50		$ 50	$ -
Participant	$ 250			
Annual Impact Per Measure				
Energy Savings per installation	2.8	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	10%	0.90		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	14	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	121	130	130	0		Estimated Participation
Impact						
Gross Energy Savings (GJ)	339	364	364	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	305	328	328	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$84.70	$88.71	$92.18	
Energy Purchases	$ 27,747	$ 27,747	$ 27,747	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 6,500	$ 6,500	$ -	$ -	
Administration		$ -				
Subtotal	$ 6,053	$ 6,500	$ 6,500	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 29,250	$ 29,250	$ -	$ -	
Subtotal	$ 27,240	$ 29,250	$ 29,250	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.115 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ (5,546)		$ (8,003)	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 12.8**		**$ 12.8**	**$ -**	**$ -**	Informational (for comparison with supply options)

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only enter in boxes marked in blue

Measure Data for Water Savers Pilot

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 7			
Total Incentive	$ 15		$ 15	$ -
Participant	$ -			

Annual Impact Per Measure

Energy Savings per installation	1.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	16%	0.84		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	10	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	466	500	500	0		Estimated Participation
Impact						
Gross Energy Savings (GJ)	466	500	500	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	391	420	420	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$66.96	$70.64	$73.77	
Energy Purchases	$ 28,123	$ 28,123	$ 28,123	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 7,500	$ 7,500	$ -	$ -	
Administration		$ 6,500	$ 6,500			
Subtotal	$ 13,038	$ 14,000	$ 14,000	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$0.883 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 15,086		$ 14,123	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 4.8**		**$ 4.8**	**$ -**	**$ -**	Informational (for comparison with supply options)

FORTIS BC

	PROGRAM															ALTERNATE		NET PRESENT VALUE									BENEFIT/COST						PARAMETERS														
2010 Joint Initiatives Programs	COSTS ($000)											SAVINGS (GJ)			LIFE	Impact		Levelized Cost	Utility Benefits (Costs)		Participant Benefits (Costs)			Program Net Savings			Participant						UTILITY				PARTICIPANT										
FEVI	Utility			Partners											Years	Energy	Capacity	($/GJ)	Program	Alternate	Program	Carbon Tax	Alternate	Natural Gas	Alternate Energy	Alternate Capacity	Natural Gas	Total Costs	Total Benefits	Benefit/Cost	Natural Gas	SCT	SCT Net Benefits	Natural Gas Utility Discount	Natural Gas Supply	Alternate Discount Rate	Alternate Supply	Discount Rate	Natural Gas NPV	Carbon Tax NPV	Alternate Energy NPV	Alternate Capacity NPV	Natural Gas Tariff	Energy Tariff	Capacity Tariff
	Incentives	Administration	Total	Incentives	Administration	Total	Participant	Total	% Utility	% Partner	% Participant	Gross	Net-to-Gross	Net		MWh	kW		($'000s)	($'000s)	($'000s)	($'000s)	($'000s)	(GJ)	(MWh)	(kW)	Utility	($'000s)	($'000s)		Rate Impact	SCT	($'000s)		$/GJ		$/kWh		$/GJ	$/GJ	$/kWh	$/kW/a	$/GJ	$/kWh	$/kW/a
Label	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR	AS	AT
Source Sheet or Calculation	Program	Program	B+C	Program	Program	E+F	Program	D+G+H	D/I	G/I	H/I	Program	Program	M+N	Program	Program	Program	D/Y	O+AJ	Q x N x AL	M x N x AN	M x N x AO	N x (QxAP + RxAQ)	PV(AI,P,-O)	PV(AK,P,-Q*N)	PV(AK,P,-R)	T/D	R+O, (V+W)+O	R+O, (V+W)+O, X	AD/AC	T/(V+O)	(T+U)/I	(T+U)-I	Input	Program	Input	Input	Input	PV(AM,P,-Input!D25)	Input	PV(AM,P,-Input!D28)	PV(AM,P,-Input!D29)	Input	Input	Input
2010																																														
RESIDENTIAL:																																														
Ecoenergy D-Visit Rebates	15	1	16	0	0	0	0	16	100%	0%	0%	0	100%	0	0	0	-	LB	LB	N/A	N/A	N/A	N/A	-	0	-	LB	-	-	N/A	N/A	LB	LB	3.00%	0.00	3%	0.00	3.0%	0.00	0.00	0.00	0.00	9.999	0.083	-
Total Residential	15	1	16	0	0	0	0	16	100%	-	0%	0		0		0	-	LB	0	0	0	0	0	-	-	-	LB	-	-	N/A	N/A	LB	LB													

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ
1	**UTILITY**		**FORTIS BC**																																	
2																																				
3																																				
4			**Year**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	
5			Units																																	
6		**NATURAL GAS**																																		
7		Incremental Cost of Gas (nominal)	$ Per GJ	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.43
8	1		*Year*	*0*	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*	*16*	*17*	*18*	*19*	*20*	*21*	*22*	*23*	*24*	*25*	*26*	*27*	*28*	*29*	*30*		
9		carbon tax	$ per GJ	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*		
10		Distribution adder	$ per GJ	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*		
11		Total incremental cost of gas including carbon		*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*		
12	2	GDP Deflator		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
13	3	Incremental Cost of Gas (Real)		$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43		
14	4	Net Present Value -2010			$29.52	$43.65	$57.35	$70.66	$83.59	$96.13	$108.31	$120.14	$131.62	$142.77	$153.59	$164.10	$174.30	$184.20	$193.82	$203.15	$212.22	$221.02	$229.56	$237.85	$245.91	$253.72	$261.32	$268.68	$275.84	$282.79	$289.53	$296.08	$302.43	$308.61			
15	5	Net Present Value -2011			$29.52	$43.65	$57.35	$70.66	$83.59	$96.13	$108.31	$120.14	$131.62	$142.77	$153.59	$164.10	$174.30	$184.20	$193.82	$203.15	$212.22	$221.02	$229.56	$237.85	$245.91	$253.72	$261.32	$268.68	$275.84	$282.79	$289.53	$296.08	$302.43				
16	6	Net Present Value -2012			$29.52	$43.65	$57.35	$70.66	$83.59	$96.13	$108.31	$120.14	$131.62	$142.77	$153.59	$164.10	$174.30	$184.20	$193.82	$203.15	$212.22	$221.02	$229.56	$237.85	$245.91	$253.72	$261.32	$268.68	$275.84	$282.79	$289.53	$296.08					
17																																				
18																																				
19		**ELECTRICITY**																																		
20		Incremental Cost of Elec	$ Per kWh	$0.10																																
21		Incremental Cost of E Capacity	$ Per kW/a	$170.00																																
22																																				
23																																				
24																																				
25	**RETAIL**																																			
26				Rate	Customers																																
27		Residential Retail			1,000																																
28		**TGI**	$ Per MJ	$0.0100	1,000																																
29		**TGVI**	$ Per MJ	$0.0143	1,000																																
30		**Electricity**	$ Per MJ	$0.0230																																
31		**Electricity**	$ per kWh	$0.0829	1,000																																
32		**Electricity**	$ per kW per year		1,000																																
33		Commercial Retail																																		
34		**TGI**	$ Per MJ	$0.0094	50																																
35		**TGVI**	$ Per MJ	$0.0160	50																																
36		**Electricity**	$ Per MJ	$0.0214																																
37		**Electricity**	$ per kWh	$0.0749	744																																
38		**Electricity**	$ per kW per year	$52.0000	1																																
39																																				
40	**TAX**																																			
41			**Year**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**		
42	1		*Year*		*0*	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*	*16*	*17*	*18*	*19*	*20*	*21*	*22*	*23*	*24*	*25*	*26*	*27*	*28*	*29*	*30*		
43	2	Carbon	$ Per tonne		$20.00	$25.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00		
44	3	Carbon	$ Per GJ		$0.9976	$1.2470	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964		
45	4	GDP Deflator			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
46	5	Carbon (Real)			$1.00	$1.25	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50		
47	6	Net Present Value -2010			$2.14	$3.51	$4.84	$6.13	$7.38	$8.60	$9.78	$10.93	$12.05	$13.13	$14.18	$15.19	$16.18	$17.14	$18.08	$18.98	$19.86	$20.71	$21.54	$22.35	$23.13	$23.89	$24.62	$25.34	$26.03	$26.71	$27.38	$27.99	$28.61	$29.21			
48	7	Net Present Value -2011				$2.62	$3.99	$5.32	$6.61	$7.86	$9.08	$10.26	$11.41	$12.52	$13.60	$14.65	$15.67	$16.66	$17.62	$18.55	$19.46	$20.34	$21.19	$22.02	$22.82	$23.61	$24.36	$25.10	$25.81	$26.51	$27.18	$27.84	$28.47	$29.09				
49	8	Net Present Value -2012					$2.86	$4.23	$5.56	$6.85	$8.11	$9.32	$10.50	$11.65	$12.76	$13.85	$14.90	$15.91	$16.90	$17.86	$18.80	$19.70	$20.58	$21.43	$22.26	$23.07	$23.85	$24.61	$25.34	$26.06	$26.75	$27.42	$28.08	$28.71			
50																																				
51		**Discount Rate (real)**[1]																																		
52		**TERASEN GAS**																																		
53		**Rate of Inflation**	1.90%																																	
54		**TGI**	3.00%																																	
55		**TGVI**	3.00%																																	
56		**BC HYDRO**																																		
57		**Rate of Inflation**	2.00%																																	
58		**BC Hydro**	3.00%																																	
59		**Customer**	3.00%																																	
60		*Footnote 1: Source LR 07/0531*																																		
61																																				
62				**SHEET LABELS**																																
63	**New Construction**																																			
64		EcoEnergy D-Visit Rebates		**BASEBOARD**																																
65		#REF!		**HEATPUMP**																																

FORTIS BC
RESIDENTIAL
NEW

only enter in boxes marked in blue

Measure Data for EcoEnergy D-Visit Rebates

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 75			
Total Incentive	$ 75		$ 75	$ -
Participant	$ -			

Annual Impact Per Measure

Energy Savings per installation	0.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	0	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	189	195	195	0	0	Estimated Participation
Impact						
Gross Energy Savings (GJ)	0	0	0	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	0	0	0	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$0.00	$0.00	$0.00	
Energy Purchases	$ -	$ -	$ -	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 14,625	$ 14,625	$ -	$ -	
Administration		$ 1,486	$ 1,486	$ -	$ -	
Subtotal	$ 15,642	$ 16,111	$ 16,111	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$0.000 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ (15,642)		$ (16,111)	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	$ -		$ -	$ -	$ -	Informational (for comparison with supply options)

FORTIS BC

	PROGRAM															ALTERNATE		NET PRESENT VALUE									BENEFIT/COST						PARAMETERS														
2010 Joint Initiatives Programs	COSTS ($000)											SAVINGS (GJ)			LIFE	Impact		Levelized Cost	Utility Benefits (Costs)		Participant Benefits (Costs)			Program Net Savings			Participant						UTILITY				PARTICIPANT										
FEVI	Utility			Partners											Years	Energy	Capacity	($/GJ)	Program	Alternate	Program	Carbon Tax	Alternate	Natural Gas	Alternate Energy	Alternate Capacity	Natural Gas	Total Costs	Total Benefits	Benefit/Cost	Natural Gas	Total Revenue	TRC Net Benefits	Natural Gas Utility Discount	Natural Gas Supply	Alternate Discount Rate	Alternate Supply	Discount Rate	Natural Gas NPV	Carbon Tax NPV	Alternate Energy NPV	Alternate Capacity NPV	Natural Gas Tariff	Energy Tariff	Capacity Tariff
	Incentives	Administration	Total	Incentives	Administration	Total	Participant	Total	% Utility	% Partner	% Participant	Gross	Net-to-Gross	Net		MWh	kW		($'000s)	($'000s)	($'000s)	($'000s)	($'000s)	(GJ)	(MWh)	(kW)	Utility	($'000s)	($'000s)		Rate Impact				$/GJ		$/kWh		$/GJ	$/GJ	$/kWh	$/kW/a	$/GJ	$/kWh	$/kW/a
Label	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR	AS	AT
Source Sheet or Calculation	Program	Program	B+C	Program	Program	E+F	Program	D+G+H	D/I	G/I	H/I	Program	Program	M+N	Program	Program	Program	D/Y	OxAJ	Q x N x AL	M x N x AN	M x N x AO	N x (QxAP + RxAQ)	PV(AJ,P,-O)	PV(AK,P,-Q*N)	PV(AK,P,-R)	T/D	H>0, (V-W)>0	H>0, (V+W)>0, X	AD/AC	T/(V+O)	(T+U)/I	(T+U)-I	Input	Program	Input	Input	Input	PV(AM,P,-InputD25)	Input	PV(AM,P,-InputD28)	PV(AM,P,-InputD29)	Input	Input	Input
2010																																														
RESIDENTIAL:																																														
EcoEnergy D-Visit Rebates	15	1	16	0	0	0	0	16	100%	0%	0%	0	100%	0	0	0	-	LB	LB	N/A	N/A	N/A	N/A	-	0	-	LB	-	-	N/A	N/A	LB	LB	6.87%	0.00	6%	0.00	6.0%	0.00	0.00	0.00	0.00	9.999	0.083	-
Total Residential	15	1	16	0	0	0	0	16	100%	-	0%	0		0		0	-	LB	0	0	0	0	0	-	-	-	LB	-	-	N/A	N/A	LB	LB													

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ
1	**UTILITY**		**FORTIS BC**																																	
2																																				
3																																				
4			**Year**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	
5			Units																																	
6		**NATURAL GAS**																																		
7		Incremental Cost of Gas (nominal)	$ Per GJ	$5.50	$6.17	$6.81	$7.35	$7.87	$8.26	$8.56	$8.78	$8.99	$9.19	$9.40	$9.60	$9.81	$10.03	$10.25	$10.47	$10.70	$10.93	$11.17	$11.42	$11.67	$11.92	$12.19	$12.45	$12.73	$13.01	$13.29	$13.58	$13.88	$14.19	$14.50	$14.82		
8	1		*Year*	*0*	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*	*16*	*17*	*18*	*19*	*20*	*21*	*22*	*23*	*24*	*25*	*26*	*27*	*28*	*29*	*30*			
9		carbon tax	$ per GJ	*0.75*	*1.00*	*1.25*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*			
10		Distribution adder	$ per GJ	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*			
11		Total incremental cost of gas including carbon		*6.40*	*7.31*	*8.20*	*9.00*	*9.51*	*9.91*	*10.21*	*10.42*	*10.63*	*10.84*	*11.04*	*11.25*	*11.46*	*11.67*	*11.89*	*12.12*	*12.34*	*12.58*	*12.82*	*13.06*	*13.31*	*13.57*	*13.83*	*14.10*	*14.37*	*14.65*	*14.94*	*15.23*	*15.53*	*15.83*	*16.14*			
12	2	GDP Deflator		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
13	3	Incremental Cost of Gas (Real)		$6.40	$7.31	$8.20	$9.00	$9.51	$9.91	$10.21	$10.42	$10.63	$10.84	$11.04	$11.25	$11.46	$11.67	$11.89	$12.12	$12.34	$12.58	$12.82	$13.06	$13.31	$13.57	$13.83	$14.10	$14.37	$14.65	$14.94	$15.23	$15.53	$15.83	$16.14			
14	4	Net Present Value -2010			$12.39	$19.11	$26.48	$32.83	$39.48	$45.90	$52.02	$57.87	$63.45	$68.76	$73.83	$78.66	$83.27	$87.66	$91.84	$95.83	$99.63	$103.26	$106.72	$110.02	$113.17	$116.17	$119.03	$121.76	$124.36	$126.85	$129.22	$131.48	$133.64	$135.69			
15	5	Net Present Value -2011			$14.03	$21.40	$28.69	$35.80	$42.65	$49.28	$55.45	$61.41	$67.08	$72.51	$77.67	$82.58	$87.28	$91.75	$96.02	$100.08	$103.96	$107.66	$111.18	$114.54	$117.75	$120.81	$123.73	$126.51	$129.16	$131.70	$134.11	$136.42	$138.62				
16	6	Net Present Value -2012				$15.53	$23.35	$30.94	$38.27	$45.26	$51.94	$58.31	$64.38	$70.17	$75.69	$80.95	$85.96	$90.74	$95.30	$99.64	$103.79	$107.74	$111.51	$115.10	$118.53	$121.79	$124.98	$127.89	$130.72	$133.43	$136.01	$138.48	$140.83					
17																																				
18																																				
19		**ELECTRICITY**																																		
20		Incremental Cost of Elec	$ Per kWh	$0.10																																
21		Incremental Cost of E Capacity	$ Per kW/a	$170.00																																
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35		**TGVI**	$ Per MJ	$0.0160	50																																
36		**Electricity**	$ Per MJ	$0.0214																																
37		**Electricity**	$ per kWh	$0.0749	1,000																																
38		**Electricity**	$ per kW per year	$52.0000	1,000																																
39																																				
40	**TAX**																																			
41			**Year**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**		
42			*Year*	*0*	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*	*16*	*17*	*18*	*19*	*20*	*21*	*22*	*23*	*24*	*25*	*26*	*27*	*28*	*29*	*30*			
43	2	Carbon	$ Per tonne		$20.00	$25.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00			
44	3	Carbon	$ Per GJ		$0.9976	$1.2470	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964			
45	4	GDP Deflator			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
46	5	Carbon (Real)			$1.00	$1.25	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50			
47	6	Net Present Value -2010			$2.03	$3.25	$4.40	$5.47	$6.48	$7.42	$8.30	$9.12	$9.89	$10.61	$11.28	$11.91	$12.50	$13.06	$13.57	$14.06	$14.51	$14.93	$15.33	$15.70	$16.05	$16.37	$16.68	$16.96	$17.23	$17.47	$17.71	$17.93	$18.13	$18.32			
48	7	Net Present Value -2011				$2.48	$3.70	$4.85	$5.92	$6.93	$7.87	$8.75	$9.57	$10.34	$11.06	$11.73	$12.37	$12.96	$13.51	$14.03	$14.51	$14.96	$15.38	$15.78	$16.15	$16.50	$16.82	$17.13	$17.41	$17.68	$17.93	$18.16	$18.38	$18.58			
49	8	Net Present Value -2012					$2.71	$3.94	$5.08	$6.16	$7.16	$8.10	$8.98	$9.80	$10.57	$11.28	$11.97	$12.60	$13.19	$13.74	$14.26	$14.74	$15.19	$15.62	$16.01	$16.39	$16.73	$17.06	$17.36	$17.64	$17.91	$18.16	$18.39	$18.61			
50																																				
51		**Discount Rate (real)**[1]																																		
52		**TERASEN GAS**																																		
53		**Rate of Inflation**	1.90%																																	
54		**TGI**	7.38%																																	
55		**TGVI**	6.87%																																	
56		**BC HYDRO**																																		
57		**Rate of Inflation**	2.00%																																	
58		**BC Hydro**	6.00%																																	
59		**Customer**	6.00%																																	
60		*Footnote 1: Source LR 07/0531*																																		
61																																				
62				**SHEET LABELS**																																
63	**New Construction**																																			
64		EcoEnergy D-Visit Rebates		**BASEBOARD**																																
65		#REF!		**HEATPUMP**																																

FORTIS BC
RESIDENTIAL
NEW

only enter in boxes marked in blue

Measure Data for EcoEnergy D-Visit Rebates

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 75			
Total Incentive	$ 75		$ 75	$ -
Participant	$ -			

Annual Impact Per Measure

Energy Savings per installation	0.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	0	Years	Estimated lifespan of measure	

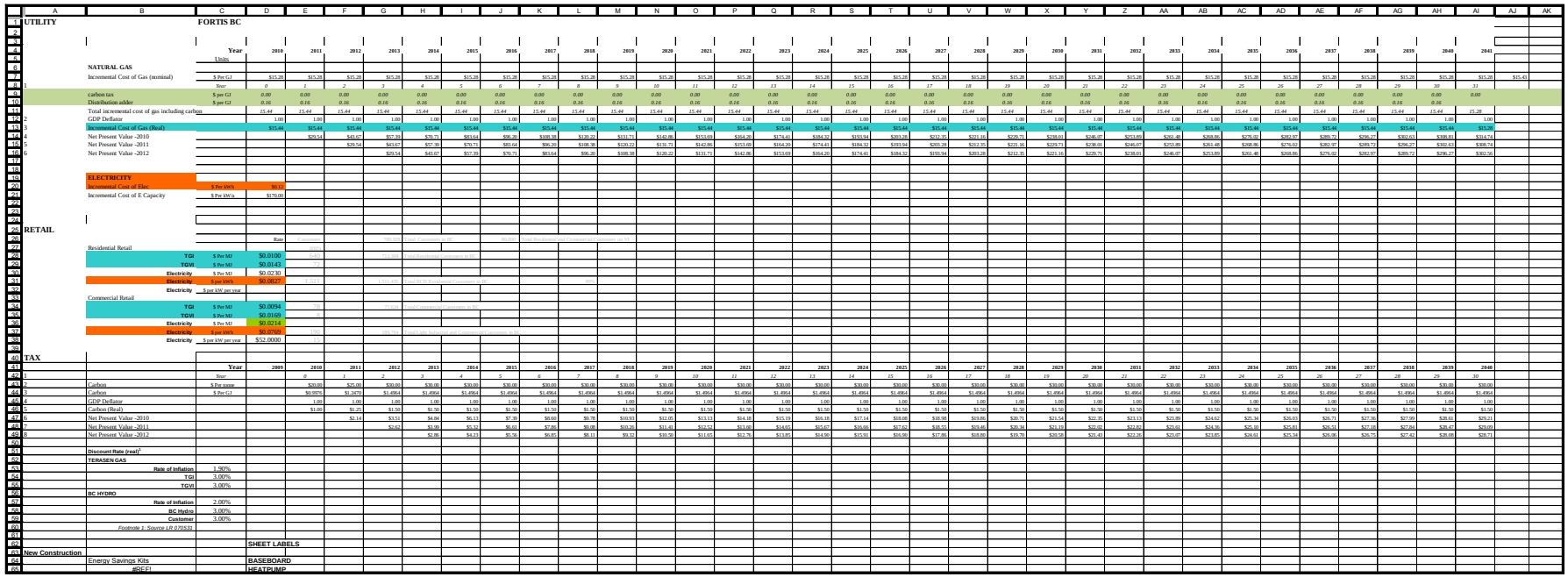
ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	182	195	195	0	0	Estimated Participation
Impact						
Gross Energy Savings (GJ)	0	0	0	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	0	0	0	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$0.00	$0.00	$0.00	
Energy Purchases	$ -	$ -	$ -	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 14,625	$ 14,625	$ -	$ -	
Administration		$ 1,486	$ 1,486	$ -	$ -	
Subtotal	$ 15,004	$ 16,111	$ 16,111	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$0.000 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ (15,004)		$ (16,111)	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	$ -		$ -	$ -	$ -	Informational (for comparison with supply options)

FORTIS BC

2010 Conservation for Affordable Housing Programs	PROGRAM														ALTERNATE		NET PRESENT VALUE									BENEFIT/COST						PARAMETERS											
	COSTS ($000)											SAVINGS (GJ)			LIFE	Impact		Levelized Cost	Utility Benefits (Costs)		Participant Benefits (Costs)			Program Net Savings			Natural Gas	Participant			Natural Gas		SCT Net Benefits	UTILITY				PARTICIPANT								
FEI	Utility			Partners			Participant	Total	% Utility	% Partner	% Participant	Gross	Net-to-Gross	Net	Years	Energy	Capacity	($/GJ)	Program	Alternate	Program	Carbon Tax	Alternate	Natural Gas	Alternate Energy	Alternate Capacity	Utility	Total Costs	Total Benefits	Benefit/Cost	Rate Impact	Societal Cost Test	($'000s)	Natural Gas Utility Discount Rate	Natural Gas Supply $/GJ	Alternate Discount Rate	Alternate Supply $/kWh	Discount Rate	Natural Gas NPV $/GJ	Carbon Tax NPV $/GJ	Alternate Energy NPV $/kWh	Alternate Capacity NPV $/kW/a	Natural Gas Tariff $/GJ	Energy Tariff $/kWh	Capacity Tariff $/kW/a
	Incentives	Administration	Total	Incentives	Administration	Total										MWh	kW		($'000s)	($'000s)	($'000s)	($'000s)	($'000s)	(GJ)	(MWh)	(kW)		($'000s)	($'000s)																
Label	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR	AS	AT
Source Sheet or Calculation	Program	Program	B+C	Program	Program	E+F	Program	D+G+H	D/I	G/I	H/I	Program	Program	MxN	Program	Program	Program	D/Y	OxAJ	Q x N x AL	M x N x AN	M x N x AO	N x (QxAP + RxAQ)	PV(AI,P,-O)	PV(AK,P,-Q*N)	PV(AK,P,-R)	T/D	H=0, (V+W)>0	H=0, (V+W)=0, X	AD/AC	T/(V+D)	(T+U)/I	(T+U)-I	Input	Program	Input	Input	Input	PV(AM,P,-InputD25)	Input	PV(AM,P,-InputD28)	PV(AM,P,-InputD29)	Input	Input	Input
2010																																												
RESIDENTIAL:																																												
Energy Savings Kits	39	44	83	0	0	0	0	83	100%	0%	0%	3,613	73%	2,637	8	0	-	4	412	N/A	185	29	N/A	18,514	0	-	5.0	-	214	N/A	1.5	5.0	329	3.00%	120.22	3%	0.84	3.0%	70.19	10.93	0.58	0.00	9.999	0.083	-
RbtEW	0	148	148	0	0	0	0	148	100%	0%	0%	0	100%	0	0	0	-	LB	LB	N/A	N/A	N/A	N/A	-	0	-	LB	-	-	N/A	N/A	LB	LB	3.00%	0.00	3%	0.00	3.0%	0.00	0.00	0.00	0.00	9.999	0.083	-
SEMP Study	0	14	14	0	0	0	0	14	100%	0%	0%	0	100%	0	0	0	-	LB	LB	N/A	N/A	N/A	N/A	-	0	-	LB	-	-	N/A	N/A	LB	LB	3.00%	0.00	3%	0.00	3.0%	0.00	0.00	0.00	0.00	9.999	0.083	-
Mobile Homes Study	0	8	8	0	0	0	0	8	100%	0%	0%	0	100%	0	0	0	-	LB	LB	N/A	N/A	N/A	N/A	-	0	-	LB	-	-	N/A	N/A	LB	LB	3.00%	0.00	3%	0.00	3.0%	0.00	0.00	0.00	0.00	9.999	0.083	-
Total Residential	39	213	253	0	0	0	0	253	100%	-	0%	3,613		2,637		0	0	14	412	LB	185	29	LB	18,514	LB	LB	1.6	-	214	N/A	0.9	1.6	160	2.1	283										



	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK
1	**UTILITY**		**FORTIS BC**																																		
2																																					
3																																					
4			**Year**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**		
5			Units																																		
6		**NATURAL GAS**																																			
7		Incremental Cost of Gas (nominal)	$ Per GJ	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.45	
8	1		Year	*0*	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*	*16*	*17*	*18*	*19*	*20*	*21*	*22*	*23*	*24*	*25*	*26*	*27*	*28*	*29*	*30*	*31*			
9		carbon tax	$ per GJ	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*			
10		Distribution adder	$ per GJ	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*			
11		Total incremental cost of gas including carbon		*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.28*			
12	2	GDP Deflator		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
13	3	Incremental Cost of Gas (Real)		$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.28			
14	4	Net Present Value -2010			$29.54	$43.67	$57.39	$70.71	$83.64	$96.20	$108.38	$120.22	$131.71	$142.86	$153.69	$164.20	$174.41	$184.32	$193.94	$203.28	$212.35	$221.16	$229.71	$238.01	$246.07	$253.89	$261.48	$268.86	$276.02	$282.97	$289.72	$296.27	$302.63	$308.81	$314.74			
15	5	Net Present Value -2011				$29.54	$43.67	$57.39	$70.71	$83.64	$96.20	$108.38	$120.22	$131.71	$142.86	$153.69	$164.20	$174.41	$184.32	$193.94	$203.28	$212.35	$221.16	$229.71	$238.01	$246.07	$253.89	$261.48	$268.86	$276.02	$282.97	$289.72	$296.27	$302.63	$308.81	$308.74			
16	6	Net Present Value -2012					$29.54	$43.67	$57.39	$70.71	$83.64	$96.20	$108.38	$120.22	$131.71	$142.86	$153.69	$164.20	$174.41	$184.32	$193.94	$203.28	$212.35	$221.16	$229.71	$238.01	$246.07	$253.89	$261.48	$268.86	$276.02	$282.97	$289.72	$296.27	$302.64				
17																																					
18																																					
19		**ELECTRICITY**																																			
20		Incremental Cost of Elec	$ Per kWh	$0.00																																	
21		Incremental Cost of E Capacity	$ Per kW/a	$170.00																																	
22																																					
23																																					
24																																					
25	**RETAIL**																																				
26				Rate	Customers		2010 Total Consumption in PJ			2010 Total Residential and Commercial Customers in '000																												
27		Residential Retail																																			
28		**TGI**	$ Per MJ	$0.0100																																	
29		**TGVI**	$ Per MJ	$0.0143																																	
30		**Electricity**	$ Per MJ	$0.0230																																	
31		**Electricity**	$ per kWh	$0.0827																																	
32		**Electricity**	$ per kW per year																																		
33		Commercial Retail																																			
34		**TGI**	$ Per MJ	$0.0094																																	
35		**TGVI**	$ Per MJ	$0.0163																																	
36		**Electricity**	$ Per MJ	$0.0214																																	
37		**Electricity**	$ per kWh	$0.0769																																	
38		**Electricity**	$ per kW per year	$52.0000																																	
39																																					
40	**TAX**																																				
41			**Year**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**			
42	1		Year	*0*	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*	*16*	*17*	*18*	*19*	*20*	*21*	*22*	*23*	*24*	*25*	*26*	*27*	*28*	*29*	*30*				
43	2	Carbon	$ Per tonne	$20.00	$25.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00			
44	3	Carbon	$ Per GJ	$0.9976	$1.2470	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964			
45	4	GDP Deflator		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
46	5	Carbon (Real)		$1.00	$1.25	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50			
47	6	Net Present Value -2010			$2.14	$3.51	$4.84	$6.13	$7.39	$8.60	$9.78	$10.93	$12.05	$13.13	$14.18	$15.19	$16.18	$17.14	$18.08	$18.98	$19.86	$20.71	$21.54	$22.35	$23.13	$23.89	$24.62	$25.34	$26.03	$26.71	$27.36	$27.99	$28.61	$29.21				
48	7	Net Present Value -2011				$2.62	$3.99	$5.32	$6.61	$7.86	$9.08	$10.25	$11.41	$12.52	$13.60	$14.65	$15.67	$16.66	$17.62	$18.55	$19.46	$20.34	$21.19	$22.01	$22.82	$23.61	$24.38	$25.10	$25.81	$26.51	$27.18	$27.84	$28.47	$29.09				
49	8	Net Present Value -2012					$2.86	$4.23	$5.56	$6.85	$8.11	$9.32	$10.50	$11.65	$12.76	$13.85	$14.90	$15.91	$16.90	$17.86	$18.80	$19.70	$20.58	$21.43	$22.26	$23.07	$23.85	$24.61	$25.34	$26.06	$26.75	$27.42	$28.08	$28.71				
50																																					
51		**Discount Rate (real)**[1]																																			
52		**TERASEN GAS**																																			
53		**Rate of Inflation**	1.50%																																		
54		**TGI**	3.00%																																		
55		**TGVI**	3.00%																																		
56		**BC HYDRO**																																			
57		**Rate of Inflation**	2.00%																																		
58		**BC Hydro**	3.00%																																		
59		**Customer**	3.00%																																		
60		*Footnote 1: Source LR 070531*																																			
61																																					
62				**SHEET LABELS**																																	
63	**New Construction**																																				
64		Energy Savings Kits		**BASEBOARD**																																	
65		dSEFI		**HEATPUMP**																																	

FORTIS BC
RESIDENTIAL
NEW

only enter in boxes marked in blue

Measure Data for Energy Savings Kits

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 9.35			
Total Incentive	$ 9.35		$ 9.35	$ -
Participant	$ -			

Annual Impact Per Measure

Energy Savings per installation	0.9	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	27%	0.73		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	8	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	4,083	4,206	4,206			Estimated Participation
Impact						
Gross Energy Savings (GJ)	3,508	3,613	3,613	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	2,561	2,637	2,637	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$120.22	$120.22	$120.22	
Energy Purchases	$ 317,068	$ 317,068	$ 317,068	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 39,326	$ 39,326	$ -	$ -	
Administration		$ 43,934	$ 43,934			
Subtotal	$ 80,835	$ 83,260	$ 83,260	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$0.842 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 236,233		$ 233,808	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 4.5**		**$ 4.5**	**$ -**	**$ -**	Informational (for comparison with supply options)

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Measure Data for REnEW

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ -			
Total Incentive	$ -		$ -	$ -
Participant	$ -			

Annual Impact Per Measure

Energy Savings per installation	0.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	0	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	57	59	59	0		Estimated Participation
Impact						
Gross Energy Savings (GJ)	0	0	0	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	0	0	0	0	0	Gross Energy Savings less Free Riders
Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
pacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$0.00	$0.00	$0.00	
Energy Purchas	$ -	$ -	$ -	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ 147,691	$ 147,691			
Subtotal	$ 143,389	$ 147,691	$ 147,691	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$0.000 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Co	$ (143,389)		$ (147,691)	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (L	**$ -**		**$ -**	**$ -**	**$ -**	Informational (for comparison with supply options)

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only enter in boxes marked in blue

Measure Data for SEMP Study

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ -			
Total Incentive	$ -		$ -	$ -
Participant	$ -			

Annual Impact Per Measure

Energy Savings per installation	0.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	0	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	0	0		0		Estimated Participation
Impact						
Gross Energy Savings (GJ)	0	0	0	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	0	0	0	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$0.00	$0.00	$0.00	
Energy Purchases	$ -	$ -	$ -	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ 13,587	$ 13,587			
Subtotal	$ 13,191	$ 13,587	$ 13,587	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$0.000 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ (13,191)		$ (13,587)	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings

FORTIS BC
RESIDENTIAL
NEW

only enter in boxes marked in blue

Measure Data for Mobile Homes Study

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ -			
Total Incentive	$ -		$ -	$ -
Participant	$ -			

Annual Impact Per Measure

Energy Savings per installation	0.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	0	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	0	0	0	0		Estimated Participation
Impact						
Gross Energy Savings (GJ)	0	0	0	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	0	0	0	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
ernate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$0.00	$0.00	$0.00	
Energy Purchases	$ -	$ -	$ -	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ 8,000	$ 8,000			
Subtotal	$ 7,767	$ 8,000	$ 8,000	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$0.000 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ (7,767)		$ (8,000)	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	$ -		$ -	$ -	$ -	Informational (for comparison with supply options)

FORTIS BC

2010 Conservation for Affordable Housing Programs		SAVINGS (GJ)			LIFE	ALTERNATE Impact		Levelized Cost	NET PRESENT VALUE: Utility Benefits (Costs)		NET PRESENT VALUE: Participant Benefits (Costs)			NET PRESENT VALUE: Program Net Savings			BENEFIT/COST:	Participant						PARAMETERS: UTILITY				PARAMETERS: PARTICIPANT							
FEI	% Participant	Gross	Net-to-Gross	Net	Years	Energy MWh	Capacity kW	($/GJ)	Program ($'000s)	Alternate ($'000s)	Program ($'000s)	Carbon Tax ($'000s)	Alternate ($'000s)	Natural Gas (GJ)	Alternate Energy (MWh)	Alternate Capacity (kW)	Natural Gas Utility	Total Costs ($'000s)	Total Benefits ($'000s)	Benefit/Cost	Natural Gas Rate Impact	Total Resource	TRC Net Benefits ($'000s)	Natural Gas Utility Discount Rate	Natural Gas Supply $/GJ	Alternate Discount Rate	Alternate Supply $/kWh	Discount Rate	Natural Gas NPV $/GJ	Carbon Tax NPV $/GJ	Alternate Energy NPV $/kWh	Alternate Capacity NPV $/kW/a	Natural Gas Tariff $/GJ	Energy Tariff $/kWh	Capacity Tariff $/kW/a
Label	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR	AS	AT
Source Sheet or Calculation	H/I	Program	Program	MxN	Program	Program	Program	D/Y	OxAJ	Q x N x AL	M x N x AN	M x N x AO	N x (QxAP + RxAQ)	PV(AI,P,-O)	PV(AK,P,-Q*N)	PV(AK,P,-R)	T/D	H>0, (V+W)<0	H<0, (V+W)>0, X	AD/AC	T/(V+D)	(T+U)/I	(T+U)-I	Input	Program	Input	Input	Input	PV(AM,P,-InputD25)	Input	PV(AM,P,-InputD28)	PV(AM,P,-InputD29)	Input	Input	Input
2010																																			
RESIDENTIAL:																																			
Energy Savings Kits	0%	3,613	73%	2,637	8	0	-	5	194	N/A	164	24	N/A	15,520	0	-	2.3	-	187	N/A	0.8	2.3	111	7.38%	56.59	6%	0.75	6.0%	62.09	8.91	0.51	0.00	9.999	0.083	-
REnEW	0%	0	100%	0	0	0	-	LB	LB	N/A	N/A	N/A	N/A	-	0	-	LB	-	-	N/A	N/A	LB	LB	7.38%	0.00	6%	0.00	6.0%	0.00	0.00	0.00	0.00	9.999	0.083	-
SEMP Study	0%	0	100%	0	0	0	-	LB	LB	N/A	N/A	N/A	N/A	-	0	-	LB	-	-	N/A	N/A	LB	LB	7.38%	0.00	6%	0.00	6.0%	0.00	0.00	0.00	0.00	9.999	0.083	-
Mobile Homes Study	0%	0	100%	0	0	0	-	LB	LB	N/A	N/A	N/A	N/A	-	0	-	LB	-	-	N/A	N/A	LB	LB	7.38%	0.00	6%	0.00	6.0%	0.00	0.00	0.00	0.00	9.999	0.083	-
Total Residential	0%	3,613		2,637		0	0	16	194	LB	164	24	LB	15,520	LB	LB	0.8	-	187	N/A	0.5	0.8	(59)	1.0	(0)										

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
1	UTILITY		FORTIS BC														
2																	
3																	
4			Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
5			Units														
6		NATURAL GAS															
7		Incremental Cost of Gas (nominal)	$ Per GJ	$5.50	$6.17	$6.81	$7.35	$7.87	$8.26	$8.56	$8.78	$8.99	$9.19	$9.40	$9.60	$9.81	$10.03
8	1		Year	0	1	2	3	4	5	6	7	8	9	10	11	12	13
9		carbon tax	$ per GJ	0.75	1.00	1.25	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
10		Distribution adder	$ per GJ	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16
11		Total incremental cost of gas including carbon		6.41	7.32	8.21	9.01	9.52	9.92	10.22	10.43	10.64	10.85	11.05	11.26	11.47	11.68
12	2	GDP Deflator		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
13	3	Incremental Cost of Gas (Real)		$6.41	$7.32	$8.21	$9.01	$9.52	$9.92	$10.22	$10.43	$10.64	$10.85	$11.05	$11.26	$11.47	$11.68
14	4	Net Present Value -2010			$12.32	$18.95	$25.73	$32.40	$38.87	$45.08	$50.98	$56.59	$61.91	$66.96	$71.75	$76.30	$80.61
15	5	Net Present Value -2011				$13.94	$21.22	$28.38	$35.33	$42.00	$48.33	$54.36	$60.07	$65.50	$70.64	$75.52	$80.15
16	6	Net Present Value -2012					$15.46	$23.15	$30.61	$37.77	$44.58	$51.04	$57.18	$63.00	$68.53	$73.77	$78.74
17																	
18																	
19		ELECTRICITY															
20		Incremental Cost of Elec	$ Per kWh	$0.12													
21		Incremental Cost of E Capacity	$ Per kW/a	$170.00													
22																	
23																	
24																	

	B	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ
4	Year	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	
7	Incremental Cost of Gas (nominal)	$10.25	$10.47	$10.70	$10.93	$11.17	$11.42	$11.67	$11.92	$12.19	$12.45	$12.73	$13.01	$13.29	$13.58	$13.88	$14.19	$14.50	$14.82	$15.14
8	Year	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
9	carbon tax	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	
10	Distribution adder	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16		
11	Total incremental cost of gas including carbon	11.90	12.13	12.35	12.59	12.83	13.07	13.32	13.58	13.84	14.11	14.38	14.66	14.95	15.24	15.54	15.84	16.15	16.31	
12	GDP Deflator	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
13	Incremental Cost of Gas (Real)	$11.90	$12.13	$12.35	$12.59	$12.83	$13.07	$13.32	$13.58	$13.84	$14.11	$14.38	$14.66	$14.95	$15.24	$15.54	$15.84	$16.15	$16.31	
14	Net Present Value -2010	$84.70	$88.58	$92.26	$95.75	$99.07	$102.22	$105.21	$108.04	$110.73	$113.29	$115.71	$118.02	$120.20	$122.28	$124.25	$126.12	$127.90	$129.57	
15	Net Present Value -2011	$84.54	$88.71	$92.66	$96.41	$99.98	$103.36	$106.56	$109.61	$112.50	$115.24	$117.85	$120.32	$122.67	$124.89	$127.01	$129.02	$130.93	$132.72	
16	Net Present Value -2012	$83.46	$87.93	$92.18	$96.21	$100.03	$103.66	$107.10	$110.37	$113.48	$116.42	$119.22	$121.87	$124.39	$126.79	$129.06	$131.22	$133.27	$135.19	

	A	B	C	D	E	F	G	H	I	J	K	L
25	RETAIL											
26				Rate	Customers		789,928	Total Customers in BC		80,000	Total Residential and Commercial Customers on VI	
27		Residential Retail			000's							
28		TGI	$ Per MJ	$0.0100	640		712,304	Total Residential Customers in BC				
29		TGVI	$ Per MJ	$0.0143	72							
30		Electricity	$ Per MJ	$0.0230								
31		Electricity	$ per kWh	$0.0827	1,511		1,511,435	Total BCH Residential Customers in BC				89%
32		Electricity	$ per kW per year									
33		Commercial Retail										
34		TGI	$ Per MJ	$0.0094	78		77,624	Total Commercial Customers in BC				
35		TGVI	$ Per MJ	$0.0169	8							
36		Electricity	$ Per MJ	$0.0214								
37		Electricity	$ per kWh	$0.0769	190		189,764	Total Light Industrial and Commercial Customers in BC				
38		Electricity	$ per kW per year	$52.0000	15							
39												
40	TAX											

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
41			Year	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
42	1		Year		0	1	2	3	4	5	6	7	8	9	10	11	12
43	2	Carbon	$ Per tonne		$20.00	$25.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00
44	3	Carbon	$ Per GJ		$0.9976	$1.2470	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964
45	4	GDP Deflator			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
46	5	Carbon (Real)			$1.00	$1.25	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50
47	6	Net Present Value -2010				$2.01	$3.22	$4.34	$5.39	$6.37	$7.28	$8.12	$8.91	$9.65	$10.33	$10.97	$11.56
48	7	Net Present Value -2011					$2.46	$3.67	$4.79	$5.84	$6.82	$7.73	$8.57	$9.36	$10.10	$10.78	$11.42
49	8	Net Present Value -2012						$2.69	$3.90	$5.03	$6.07	$7.05	$7.96	$8.81	$9.59	$10.33	$11.01

	B	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI
41		2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
42		13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
43	Carbon	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00
44	Carbon	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964
45	GDP Deflator	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
46	Carbon (Real)	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50
47	Net Present Value -2010	$12.11	$12.63	$13.11	$13.55	$13.97	$14.35	$14.71	$15.05	$15.36	$15.65	$15.92	$16.18	$16.41	$16.63	$16.83	$17.02	$17.20	$17.37
48	Net Present Value -2011	$12.01	$12.56	$13.08	$13.55	$14.00	$14.42	$14.80	$15.16	$15.50	$15.81	$16.10	$16.37	$16.63	$16.86	$17.08	$17.28	$17.47	$17.65
49	Net Present Value -2012	$11.65	$12.24	$12.79	$13.31	$13.79	$14.23	$14.65	$15.04	$15.40	$15.73	$16.04	$16.33	$16.61	$16.86	$17.09	$17.31	$17.51	$17.70

	A	B	C	D
50				
51		Discount Rate (real)[1]		
52		TERASEN GAS		
53		Rate of Inflation	1.90%	
54		TGI	7.38%	
55		TGVI	6.87%	
56		BC HYDRO		
57		Rate of Inflation	2.00%	
58		BC Hydro	6.00%	
59		Customer	6.00%	
60		Footnote 1: Source LR 070531		
61				
62				SHEET LABELS
63	New Construction			
64		Energy Savings Kits		BASEBOARD
65		#REF!		HEATPUMP

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Measure Data for Energy Savings Kits

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 9.35			
Total Incentive	$ 9.35		$ 9.35	$ -
Participant	$ -			

Annual Impact Per Measure

Energy Savings per installation	0.9	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	27%	0.73		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	8	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
Number of FS Furnaces	3,917	4,206	4,206			Estimated Participation
Impact						
Gross Energy Savings (GJ)	3,365	3,613	3,613	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	2,456	2,637	2,637	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$56.59	$60.07	$63.00	
Energy Purchases	$ 149,244	$ 149,244	$ 149,244	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 39,326	$ 39,326	$ -	$ -	
Administration		$ 43,934	$ 43,934			
Subtotal	$ 77,538	$ 83,260	$ 83,260	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$0.745 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 71,706		$ 65,984	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 5.4**		**$ 5.4**	**$ -**	**$ -**	Informational (for comparison with supply options)

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Measure Data for REnEW

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ -			
Total Incentive	$ -		$ -	$ -
Participant	$ -			

Annual Impact Per Measure

Energy Savings per installation	0.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	0	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	55	59	59	0		Estimated Participation
Impact						
Gross Energy Savings (GJ)	0	0	0	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	0	0	0	0	0	Gross Energy Savings less Free Riders
Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$0.00	$0.00	$0.00	
Energy Purchas	$ -	$ -	$ -	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ 147,691	$ 147,691			
Subtotal	$ 137,541	$ 147,691	$ 147,691	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$0.000 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Co	$ (137,541)		$ (147,691)	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (L	$ -		$ -	$ -	$ -	Informational (for comparison with supply options)

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Measure Data for SEMP Study

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ -			
Total Incentive	$ -		$ -	$ -
Participant	$ -			

Annual Impact Per Measure

Energy Savings per installation	0.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	0	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	0	0		0		Estimated Participation
Impact						
Gross Energy Savings (GJ)	0	0	0	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	0	0	0	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$0.00	$0.00	$0.00	
Energy Purchases	$ -	$ -	$ -	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ 13,587	$ 13,587			
Subtotal	$ 12,653	$ 13,587	$ 13,587	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$0.000 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ (12,653)		$ (13,587)	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	$ -		$ -	$ -	$ -	Informational (for comparison with supply options)

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Measure Data for Mobile Homes Study

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ -			
Total Incentive	$ -		$ -	$ -
Participant	$ -			

Annual Impact Per Measure

Energy Savings per installation	0.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	0	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	0	0	0	0		Estimated Participation
Impact						
Gross Energy Savings (GJ)	0	0	0	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	0	0	0	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
ernate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$0.00	$0.00	$0.00	
Energy Purchases	$ -	$ -	$ -	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ 8,000	$ 8,000			
Subtotal	$ 7,450	$ 8,000	$ 8,000	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$0.000 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ (7,450)		$ (8,000)	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	$ -		$ -	$ -	$ -	Informational (for comparison with supply options)

FORTIS BC

	PROGRAM														ALTERNATE		NET PRESENT VALUE								BENEFIT/COST						PARAMETERS												
2010 Conservation for Affordable Housing Programs	COSTS ($000)										SAVINGS (GJ)			LIFE	Impact		Levelized Cost	Utility Benefits (Costs)		Participant Benefits (Costs)			Program Net Savings				Participant						UTILITY				PARTICIPANT								
FEVI	Utility			Partners			Participant	Total	% Utility	% Partner	% Participant	Gross	Net-to-Gross	Net	Years	Energy	Capacity	($/GJ)	Program	Alternate	Program	Carbon Tax	Alternate	Natural Gas	Alternate Energy	Alternate Capacity	Natural Gas	Total Costs	Total Benefits	Benefit/Cost	Natural Gas	Societal Cost Test	SCT Net Benefits	Natural Gas Utility Discount Rate	Natural Gas Supply	Alternate Discount Rate	Alternate Supply	Discount Rate	Natural Gas NPV	Carbon Tax NPV	Alternate Energy NPV	Alternate Capacity NPV	Natural Gas Tariff	Energy Tariff	Capacity Tariff
	Incentives	Administration	Total	Incentives	Administration	Total									MWh	kW		($'000s)	($'000s)	($'000s)	($'000s)	($'000s)	(GJ)	(MWh)	(kW)	Utility	($'000s)	($'000s)		Rate Impact	Test	($'000s)		$/GJ		$/kWh		$/GJ		$/kWh	$/kW/a	$/GJ	$/kWh	$/kW/a
Label	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR	AS	AT
Source Sheet or Calculation	Program	Program	B+C	Program	Program	E+F	Program	D+G+H	D/I	G/I	H/I	Program	Program	M+N	Program	Program	Program	D/Y	OxAJ	Q x N x AL	M x N x AN	M x N x AO	N x (QxAP + RxAQ)	PV(AI,P,-O)	PV(AK,P,-Q*N)	PV(AK,P,-R)	T/D	H>0, (V+W)=0	H>0, (V+W)>0, X	AD/AC	T/(V+D)	(T+U)/I	(T+U)-I	Input	Program	Input	Input	Input	PV(AM,P,-InputD25)	Input	PV(AM,P,-InputD28)	PV(AM,P,-InputD29)	Input	Input	Input
2010																																												
RESIDENTIAL:																																												
ESK	10	11	21	0	0	0	0	21	100%	0%	0%	904	73%	660	8	0	-	4	103	N/A	66	7	N/A	4,631	0	-	4.9	-	74	N/A	1.2	4.9	82	3.00%	120.14	3%	0.84	3.0%	100.56	10.93	0.58	0.00	9.990	0.083	-
Mobile Home Study	0	2	2	0	0	0	0	2	100%	0%	0%	0	100%	0	0	0	-	LB	LB	N/A	N/A	N/A	N/A	-	0	-	LB	-	-	N/A	N/A	LB	LB	3.00%	0.00	3%	0.00	3.0%	0.00	0.00	0.00	0.00	9.990	0.083	-
Strategic Energy Management Plan	0	3	3	0	0	0	0	3	100%	0%	0%	0	100%	0	0	0	-	LB	LB	N/A	N/A	N/A	N/A	-	0	-	LB	-	-	N/A	N/A	LB	LB	3.00%	0.00	3%	0.00	3.0%	0.00	0.00	0.00	0.00	9.990	0.083	-
Total Residential	10	16	26	0	0	0	0	26	100%	-	0%	904		660		0	0	6	103	N/A	66	7	N/A	4,631	N/A	N/A	3.9	-	74	N/A	1.1	3.9	77	5.1	108										

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ
1	**UTILITY**		**FORTIS BC**																																	
2																																				
3																																				
4			**Year**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	
5			Units																																	
6		**NATURAL GAS**																																		
7		Incremental Cost of Gas (nominal)	$ Per GJ	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.43
8	1		*Year*	*0*	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*	*16*	*17*	*18*	*19*	*20*	*21*	*22*	*23*	*24*	*25*	*26*	*27*	*28*	*29*	*30*		
9		carbon tax	$ per GJ	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*		
10		Distribution adder	$ per GJ	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*		
11		Total incremental cost of gas including carbon		*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*		
12	2	GDP Deflator		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
13	3	Incremental Cost of Gas (Real)		$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43		
14	4	Net Present Value -2010			$29.52	$43.65	$57.35	$70.66	$83.59	$96.13	$108.31	$120.14	$131.62	$142.77	$153.59	$164.10	$174.30	$184.20	$193.82	$203.15	$212.22	$221.02	$229.56	$237.85	$245.91	$253.72	$261.32	$268.68	$275.84	$282.79	$289.53	$296.08	$302.43	$308.61			
15	5	Net Present Value -2011			$29.52	$43.65	$57.35	$70.66	$83.59	$96.13	$108.31	$120.14	$131.62	$142.77	$153.59	$164.10	$174.30	$184.20	$193.82	$203.15	$212.22	$221.02	$229.56	$237.85	$245.91	$253.72	$261.32	$268.68	$275.84	$282.79	$289.53	$296.08	$302.43				
16	6	Net Present Value -2012			$29.52	$43.65	$57.35	$70.66	$83.59	$96.13	$108.31	$120.14	$131.62	$142.77	$153.59	$164.10	$174.30	$184.20	$193.82	$203.15	$212.22	$221.02	$229.56	$237.85	$245.91	$253.72	$261.32	$268.68	$275.84	$282.79	$289.53	$296.08					
17																																				
18																																				
19		**ELECTRICITY**																																		
20		Incremental Cost of Elec	$ Per kWh	$0.10																																
21		Incremental Cost of E Capacity	$ Per kW/a	$170.00																																
22																																				
23																																				
24																																				
25	**RETAIL**																																			
26				Rate	Customers																																
27		Residential Retail			1,000																																
28		**TGI**	$ Per MJ	$0.0100	1,000																																
29		**TGVI**	$ Per MJ	$0.0143	1,000																																
30		**Electricity**	$ Per MJ	$0.0230																																
31		**Electricity**	$ per kWh	$0.0829	1,000																																
32		**Electricity**	$ per kW per year		1,000																																
33		Commercial Retail																																		
34		**TGI**	$ Per MJ	$0.0094	50																																
35		**TGVI**	$ Per MJ	$0.0160	50																																
36		**Electricity**	$ Per MJ	$0.0214																																
37		**Electricity**	$ per kWh	$0.0749	1,000																																
38		**Electricity**	$ per kW per year	$52.0000	1,000																																
39																																				
40	**TAX**																																			
41			**Year**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**		
42	1		*Year*		*0*	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*	*16*	*17*	*18*	*19*	*20*	*21*	*22*	*23*	*24*	*25*	*26*	*27*	*28*	*29*	*30*		
43	2	Carbon	$ Per tonne		$20.00	$25.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00		
44	3	Carbon	$ Per GJ		$0.9576	$1.2470	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964		
45	4	GDP Deflator			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
46	5	Carbon (Real)			$1.00	$1.25	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50		
47	6	Net Present Value -2010			$2.14	$3.51	$4.84	$6.13	$7.38	$8.60	$9.78	$10.93	$12.05	$13.13	$14.18	$15.19	$16.18	$17.14	$18.08	$18.98	$19.86	$20.71	$21.54	$22.35	$23.13	$23.89	$24.62	$25.34	$26.03	$26.71	$27.38	$27.99	$28.61	$29.21			
48	7	Net Present Value -2011				$2.62	$3.99	$5.32	$6.61	$7.86	$9.08	$10.26	$11.41	$12.52	$13.60	$14.65	$15.67	$16.66	$17.62	$18.55	$19.46	$20.34	$21.19	$22.02	$22.82	$23.61	$24.36	$25.10	$25.81	$26.51	$27.18	$27.84	$28.47	$29.09				
49	8	Net Present Value -2012					$2.86	$4.23	$5.56	$6.85	$8.11	$9.32	$10.50	$11.65	$12.76	$13.85	$14.90	$15.91	$16.90	$17.86	$18.80	$19.70	$20.58	$21.43	$22.26	$23.07	$23.85	$24.61	$25.34	$26.06	$26.75	$27.42	$28.08	$28.71			
50																																				
51		**Discount Rate (real)**[1]																																		
52		**TERASEN GAS**																																		
53		**Rate of Inflation**	1.90%																																	
54		**TGI**	3.00%																																	
55		**TGVI**	3.00%																																	
56		**BC HYDRO**																																		
57		**Rate of Inflation**	2.00%																																	
58		**BC Hydro**	3.00%																																	
59		**Customer**	3.00%																																	
60		*Footnote 1: Source LR 670531*																																		
61																																				
62				**SHEET LABELS**																																
63	**New Construction**																																			
64		ESK		**BASEBOARD**																																
65		#REF!		**HEATPUMP**																																

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Measure Data for ESK

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 9.35			
Total Incentive	$ 9.35		$ 9.35	$ -
Participant	$ -			

Annual Impact Per Measure

Energy Savings per installation	0.9	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	27%	0.73		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	8	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1,021	1,052	1,052	0	0	Estimated Participation
Impact						
Gross Energy Savings (GJ)	877	904	904	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	640	660	660	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$120.14	$108.31	$108.31	
Energy Purchases	$ 79,253	$ 79,253	$ 79,253	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 9,836	$ 9,836	$ -	$ -	
Administration		$ 10,984	$ 10,984	$ -	$ -	
Subtotal	$ 20,214	$ 20,820	$ 20,820	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$0.842 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 59,040		$ 58,433	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 4.5**		**$ 4.5**	**$ -**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Mobile Home Study

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ -			
Total Incentive	$ -		$ -	$ -
Participant	$ -			

Annual Impact Per Measure

Energy Savings per installation	0.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	0	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	0	0	0	0	0	Estimated Participation
Impact						
Gross Energy Savings (GJ)	0	0	0	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	0	0	0	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$0.00	$0.00	$0.00	
Energy Purchases	$ -	$ -	$ -	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ 2,000	$ 2,000	$ -	$ -	
Subtotal	$ 1,942	$ 2,000	$ 2,000	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$0.000 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ (1,942)		$ (2,000)	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ -**		**$ -**	**$ -**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Strategic Energy Management Plan

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ -			
Total Incentive	$ -		$ -	$ -
Participant	$ -			

Annual Impact Per Measure

Energy Savings per installation	0.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	0	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	0	0	0	0	0	Estimated Participation
Impact						
Gross Energy Savings (GJ)	0	0	0	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	0	0	0	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$0.00	$0.00	$0.00	
Energy Purchases	$ -	$ -	$ -	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ 3,397	$ 3,397	$ -	$ -	
Subtotal	$ 3,298	$ 3,397	$ 3,397	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$0.000 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ (3,298)		$ (3,397)	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ -**		**$ -**	**$ -**	**$ -**	Informational (for comparison with supply options)

FORTIS BC

2010 Conservation for Affordable Housing Programs	PROGRAM														ALTERNATE		NET PRESENT VALUE									BENEFIT/COST						PARAMETERS													
	COSTS ($000)										SAVINGS (GJ)			LIFE	Impact		Levelized Cost	Utility Benefits (Costs)		Participant Benefits (Costs)			Program Net Savings				Participant						UTILITY				PARTICIPANT								
FEVI	Utility			Partners			Participant	Total	% Utility	% Partner	% Participant	Gross	Net-to-Gross	Net	Years	Energy	Capacity	($/GJ)	Program	Alternate	Program	Carbon Tax	Alternate	Natural Gas	Alternate Energy	Alternate Capacity	Natural Gas	Total Costs	Total Benefits	Benefit/Cost	Natural Gas	Total Resource	TRC Net Benefits	Natural Gas Utility Discount Rate	Natural Gas Supply	Alternate Discount Rate	Alternate Supply	Discount Rate	Natural Gas NPV	Carbon Tax NPV	Alternate Energy NPV	Alternate Capacity NPV	Natural Gas Tariff	Energy Tariff	Capacity Tariff
	Incentives	Administration	Total	Incentives	Administration	Total									MWh	kW		($'000s)	($'000s)	($'000s)	($'000s)	($'000s)	(GJ)	(MWh)	(kW)	Utility	($'000s)	($'000s)		Rate Impact		($'000s)		$/GJ		$/kWh		$/GJ	$/kWh	$/kW/a	$/GJ	$/kWh	$/kW/a
Label	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR	AS	AT
Source Sheet or Calculation	Program	Program	B+C	Program	Program	E+F	Program	D+G+H	D/I	G/I	H/I	Program	Program	M+N	Program	Program	Program	D/Y	O+AJ	Q x N x AL	M x N x AN	M x N x AO	N x (Q+AP + R+AQ)	PV(AI,P,-O)	PV(AK,P,-Q*N)	PV(AK,P,-R)	T/D	H>0, (V+W)=0	H=0, (V+W)>0, X	AD/AC	T/(V+D)	(T+U)/I	(T+U)-I	Input	Program	Input	Input	Input	PV(AM,P,-InputD25)	Input	PV(AM,P,-InputD28)	PV(AM,P,-InputD29)	Input	Input	Input
2010																																													
RESIDENTIAL:																																													
ESK	10	11	21	0	0	0	0	21	100%	0%	0%	904	73%	660	8	0	-	5	50	N/A	59	6	N/A	3,959	0	-	2.4	-	65	N/A	0.6	2.4	29	6.87%	57.87	6%	0.75	6.0%	88.96	9.12	0.51	0.00	9.990	0.083	-
Mobile Home Study	0	2	2	0	0	0	0	2	100%	0%	0%	0	100%	0	0	0	-	LB	LB	N/A	N/A	N/A	N/A	-	0	-	LB	-	-	N/A	N/A	LB	LB	6.87%	0.00	6%	0.00	6.0%	0.00	0.00	0.00	0.00	9.990	0.083	-
Strategic Energy Management Plan	0	3	3	0	0	0	0	3	100%	0%	0%	0	100%	0	0	0	-	LB	LB	N/A	N/A	N/A	N/A	-	0	-	LB	-	-	N/A	N/A	LB	LB	6.87%	0.00	6%	0.00	6.0%	0.00	0.00	0.00	0.00	9.990	0.083	-
Total Residential	10	16	26	0	0	0	0	26	100%	-	0%	904		660		0	0	7	50	N/A	59	6	N/A	3,959	N/A	N/A	1.9	-	65	N/A	0.6	1.9	23	2.5	38										

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	**UTILITY**		**FORTIS BC**										
2													
3													
4			**Year**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
5			Units										
6		**NATURAL GAS**											
7		Incremental Cost of Gas (nominal)	$ Per GJ	$5.50	$6.17	$6.81	$7.35	$7.87	$8.26	$8.56	$8.78	$8.99	$9.19
8	1		*Year*	*0*	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*
9		carbon tax	$ per GJ	*0.75*	*1.00*	*1.25*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*
10		Distribution adder	$ per GJ	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*
11		Total incremental cost of gas including carbon		*6.40*	*7.31*	*8.20*	*9.00*	*9.51*	*9.91*	*10.21*	*10.42*	*10.63*	*10.84*
12	2	GDP Deflator		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
13	3	Incremental Cost of Gas (Real)		$6.40	$7.31	$8.20	$9.00	$9.51	$9.91	$10.21	$10.42	$10.63	$10.84
14	4	Net Present Value -2010			$12.39	$19.11	$26.01	$32.83	$39.48	$45.90	$52.02	$57.87	$63.45
15	5	Net Present Value -2011				$14.03	$21.40	$28.69	$35.80	$42.65	$49.20	$55.45	$61.41
16	6	Net Present Value -2012					$15.55	$23.35	$30.94	$38.27	$45.26	$51.94	$58.31
17													
18													
19		**ELECTRICITY**											
20		Incremental Cost of Elec	$ Per kWh	$0.12									
21		Incremental Cost of E Capacity	$ Per kW/a	$170.00									
22													
23													
24													
25	**RETAIL**												
26				Rate	Customers		789,928	Total Customers in BC		80,000	Total Residential and Commercial Customers on VI		
27		Residential Retail			*000's*								
28		**TGI**	$ Per MJ	$0.0100	640		712,304	Total Residential Customers in BC					
29		**TGVI**	$ Per MJ	$0.0143	72								
30		**Electricity**	$ Per MJ	$0.0230									
31		**Electricity**	$ per kWh	$0.0827	1,511		1,511,435	Total BCH Residential Customers in BC				89%	
32		**Electricity**	$ per kW per year										
33		Commercial Retail											
34		**TGI**	$ Per MJ	$0.0094	78		77,624	Total Commercial Customers in BC					
35		**TGVI**	$ Per MJ	$0.0169	8								
36		**Electricity**	$ Per MJ	$0.0214									
37		**Electricity**	$ per kWh	$0.0769	190		189,764	Total Light Industrial and Commercial Customers in BC					
38		**Electricity**	$ per kW per year	$52.0000	15								
39													
40	**TAX**												
41			**Year**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**
42	1		*Year*		*0*	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*
43	2	Carbon	$ Per tonne		$20.00	$25.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00
44	3	Carbon	$ Per GJ		$0.9976	$1.2470	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964
45	4	GDP Deflator			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
46	5	Carbon (Real)			$1.00	$1.25	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50
47	6	Net Present Value -2010				$2.03	$3.25	$4.40	$5.47	$6.48	$7.42	$8.30	$9.12
48	7	Net Present Value -2011					$2.48	$3.70	$4.85	$5.92	$6.93	$7.87	$8.75
49	8	Net Present Value -2012						$2.71	$3.94	$5.08	$6.16	$7.16	$8.10
50													
51		**Discount Rate (real)[1]**											
52		**TERASEN GAS**											
53		**Rate of Inflation**	1.90%										
54		**TGI**	7.38%										
55		**TGVI**	6.87%										
56		**BC HYDRO**											
57		**Rate of Inflation**	2.00%										
58		**BC Hydro**	6.00%										
59		**Customer**	6.00%										
60		*Footnote 1: Source LR 070531*											
61													
62				**SHEET LABELS**									
63	**New Construction**												
64		ESK		**BASEBOARD**									
65		#REF!		**HEATPUMP**									

	N	O	P	Q	R	S	T	U	V	W	X	Y
4	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**
7	$9.40	$9.60	$9.81	$10.03	$10.25	$10.47	$10.70	$10.93	$11.17	$11.42	$11.67	$11.92
8	*10*	*11*	*12*	*13*	*14*	*15*	*16*	*17*	*18*	*19*	*20*	*21*
9	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*
10	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*
11	*11.04*	*11.25*	*11.46*	*11.67*	*11.89*	*12.12*	*12.34*	*12.58*	*12.82*	*13.06*	*13.31*	*13.57*
12	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
13	$11.04	$11.25	$11.46	$11.67	$11.89	$12.12	$12.34	$12.58	$12.82	$13.06	$13.31	$13.57
14	$68.76	$73.83	$78.66	$83.27	$87.66	$91.84	$95.83	$99.63	$103.26	$106.72	$110.02	$113.17
15	$67.09	$72.51	$77.67	$82.59	$87.28	$91.75	$96.02	$100.08	$103.96	$107.66	$111.18	$114.54
16	$64.39	$70.17	$75.69	$80.95	$85.96	$90.74	$95.30	$99.64	$103.79	$107.74	$111.51	$115.10
41	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**
42	*9*	*10*	*11*	*12*	*13*	*14*	*15*	*16*	*17*	*18*	*19*	*20*
43	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00
44	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964
45	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
46	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50
47	$9.89	$10.61	$11.28	$11.91	$12.50	$13.06	$13.57	$14.06	$14.51	$14.93	$15.33	$15.70
48	$9.57	$10.34	$11.06	$11.73	$12.37	$12.96	$13.51	$14.03	$14.51	$14.96	$15.38	$15.78
49	$8.98	$9.80	$10.57	$11.29	$11.97	$12.60	$13.19	$13.74	$14.26	$14.74	$15.19	$15.62

	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ
4	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	
7	$12.19	$12.45	$12.73	$13.01	$13.29	$13.58	$13.88	$14.19	$14.50	$14.82	$15.14
8	*22*	*23*	*24*	*25*	*26*	*27*	*28*	*29*	*30*		
9	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*		
10	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*		
11	*13.83*	*14.10*	*14.37*	*14.65*	*14.94*	*15.23*	*15.53*	*15.83*	*16.14*		
12	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
13	$13.83	$14.10	$14.37	$14.65	$14.94	$15.23	$15.53	$15.83	$16.14		
14	$116.17	$119.03	$121.76	$124.36	$126.85	$129.22	$131.48	$133.64	$135.69		
15	$117.75	$120.81	$123.73	$126.51	$129.16	$131.70	$134.11	$136.42	$138.62		
16	$118.53	$121.79	$124.91	$127.89	$130.72	$133.43	$136.01	$138.48	$140.83		
41	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	
42	*21*	*22*	*23*	*24*	*25*	*26*	*27*	*28*	*29*	*30*	
43	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	
44	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	
45	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
46	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	
47	$16.05	$16.37	$16.68	$16.96	$17.23	$17.47	$17.71	$17.93	$18.13	$18.32	
48	$16.15	$16.50	$16.82	$17.13	$17.41	$17.68	$17.93	$18.16	$18.38	$18.58	
49	$16.01	$16.39	$16.73	$17.06	$17.36	$17.64	$17.91	$18.16	$18.39	$18.61	

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Measure Data for ESK

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 9.35			
Total Incentive	$ 9.35		$ 9.35	$ -
Participant	$ -			

Annual Impact Per Measure

Energy Savings per installation	0.9	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	27%	0.73		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	8	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	980	1,052	1,052	0	0	Estimated Participation
Impact						
Gross Energy Savings (GJ)	842	904	904	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	614	660	660	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$57.87	$61.41	$64.39	
Energy Purchases	$ 38,175	$ 38,175	$ 38,175	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 9,836	$ 9,836	$ -	$ -	
Administration		$ 10,984	$ 10,984	$ -	$ -	
Subtotal	$ 19,389	$ 20,820	$ 20,820	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$0.745 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 18,786		$ 17,355	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 5.4**		**$ 5.4**	**$ -**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Mobile Home Study

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ -			
Total Incentive	$ -		$ -	$ -
Participant	$ -			

Annual Impact Per Measure

Energy Savings per installation	0.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	0	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	0	0	0	0	0	Estimated Participation
Impact						
Gross Energy Savings (GJ)	0	0	0	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	0	0	0	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$0.00	$0.00	$0.00	
Energy Purchases	$ -	$ -	$ -	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ 2,000	$ 2,000	$ -	$ -	
Subtotal	$ 1,863	$ 2,000	$ 2,000	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$0.000 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ (1,863)		$ (2,000)	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	$ -		$ -	$ -	$ -	Informational (for comparison with supply options)

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Measure Data for Strategic Energy Management Plan

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ -			
Total Incentive	$ -		$ -	$ -
Participant	$ -			

Annual Impact Per Measure

Energy Savings per installation	0.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	0	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	0	0	0	0	0	Estimated Participation
Impact						
Gross Energy Savings (GJ)	0	0	0	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	0	0	0	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$0.00	$0.00	$0.00	
Energy Purchases	$ -	$ -	$ -	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ 3,397	$ 3,397	$ -	$ -	
Subtotal	$ 3,164	$ 3,397	$ 3,397	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$0.000 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ (3,164)		$ (3,397)	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ -**		**$ -**	**$ -**	**$ -**	Informational (for comparison with supply options)

FORTIS BC

	PROGRAM														ALTERNATE		NET PRESENT VALUE								BENEFIT/COST						PARAMETERS											
2010 Innovative Technology	COSTS ($000)										SAVINGS (GJ)			LIFE	Impact		Levelized Cost	Utility Benefits (Costs)		Participant Benefits (Costs)			Program Net Savings			Natural Gas	Participant			Natural Gas		SCT Net Benefits	UTILITY				PARTICIPANT								
FEI	Utility			Partners			Participant	Total	% Utility	% Partner	% Participant	Gross	Net-to-Gross	Net	Years	Energy	Capacity	($/GJ)	Program	Alternate	Program	Carbon Tax	Alternate	Natural Gas	Alternate Energy	Alternate Capacity	Utility	Total Costs	Total Benefits	Benefit/Cost	Rate Impact	Societal Cost Test	($'000s)	Natural Gas Utility Discount	Natural Gas Supply	Alternate Discount Rate	Alternate Supply	Discount Rate	Natural Gas NPV	Carbon Tax NPV	Alternate Energy NPV	Alternate Capacity NPV	Natural Gas Tariff	Energy Tariff	Capacity Tariff
	Incentives	Administration	Total	Incentives	Administration	Total																																					
Label	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR	AS	AT
Source Sheet or Calculation	Program	Program	B+C	Program	Program	E+F	Program	D+G+H	D/I	G/I	H/I	Program	Program	M+N	Program	Program	Program	D/Y	O+A+J	Q x N x AL	M x N x AN	M x N x AO	N x (Q+AP + R+AQ)	PV(AL,P,-O)	PV(AK,P,-Q*N)	PV(AK,P,-R)	T/D	H=D, (V+W)=O	H=D, (V+W)=O, X	AD/AC	T/(V+D)	(T+U)/I	(T+U)-I	Input	Program	Input	Input	Input	PV(AM,P,-Input!D25)	Input	PV(AM,P,-Input!D28)	PV(AM,P,-Input!D29)	Input	Input	Input
2010																																												
Innovative Technologies																																												
NGV Vehicles (Kelowna School Bus)	363	1	364	-	-	-	-	364	100%	-	0%	(4,312)	100%	(4,312)	15	95	-	FS	(1,087)	1,333	(514)	(78)	1,025	(51,476)	1,139	-	FS	592	1,025	1.7	0.4	0.9	(118)	3.00%	193.94	3%	10.74	3.0%	119.26	$18.08	10.74	0.00	9.990	0.083	-
NGV Vehicles (Surrey)	27	1	27	-	-	-	-	27	100%	-	0%	(1,538)	100%	(1,538)	8	34	-	FS	(240)	279	(108)	(17)	215	(10,796)	239	-	FS	125	215	1.7	0.4	1.0	12	3.00%	120.22	3%	6.32	3.0%	70.13	$10.93	6.32	0.00	9.990	0.083	-
NGV Vehicles (Waste Management Inc.)	804	1	804	-	-	-	-	804	100%	-	0%	(21,140)	100%	(21,140)	10	468	-	FS	(3,926)	4,671	(1,801)	(277)	3,593	(180,328)	3,992	-	FS	2,079	3,593	1.7	0.4	1.0	(59)	3.00%	142.86	3%	7.68	3.0%	85.22	$13.13	7.68	0.00	9.990	0.083	-
Solar Water heating PSECA Program	229	-	229	264	-	264	958	1,451	16%	0	66%	2,579	100%	2,579	25	-	-	5	925	-	449	67	-	44,909	-	-	4.0	958	516	0.5	1.4	0.6	(526)	3.00%	276.02	3%	15.67	3.0%	173.96	$26.03	15.67	0.00	9.990	0.083	-
LNG (Vedder)	4,393	1	4,394	-	-	-	-	4,394	100%	-	0%	(138,500)	100%	(138,500)	5	3,583	-	FS	(15,060)	19,198	(6,337)	(1,023)	14,768	(634,289)	16,408	-	FS	7,360	14,768	2.0	0.3	1.0	(256)	3.00%	83.64	3%	4.12	3.0%	45.75	$7.39	4.12	0.00	9.990	0.083	-
Total	5,816	2	5,818	264	-	264	958	7,040		0	14%	(162,911)		(162,911)		4,180	-	FS	(19,388)	25,481	(8,312)	(1,328)	19,601	(831,982)	21,779	-	FS	10,597	19,601	1.8	0.3	1.0	(947)													

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
1	**UTILITY**		**FORTIS BC**													
2																
3																
4			**Year**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**
5			Units													
6		**NATURAL GAS**														
7		Incremental Cost of Gas (nominal)	$ Per GJ	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28
8	1		*Year*	*0*	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*
9		carbon tax	$ per GJ	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
10		TGI Dist adder		*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*
11		Total incremental cost of gas including carbon		*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*
12	2	GDP Deflator		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
13	3	Incremental Cost of Gas (Real)		$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44
14	4	Net Present Value -2010			$29.54	$43.67	$57.39	$70.71	$83.64	$96.20	$108.38	$120.22	$131.71	$142.86	$153.69	$164.20
15	5	Net Present Value -2011				$29.54	$43.67	$57.39	$70.71	$83.64	$96.20	$108.38	$120.22	$131.71	$142.86	$153.69
16	6	Net Present Value -2012					$29.54	$43.67	$57.39	$70.71	$83.64	$96.20	$108.38	$120.22	$131.71	$142.86
17																
18																
19		**ELECTRICITY**														
20		Incremental Cost of Elec	$ Per kWh	$0.12												
21		Incremental Cost of E Capacity	$ Per kW	$170.00												
22		COST OF Diesel	$per L	$0.90												
23		Cost of Oil	$ Per GJ	$22.01												
24		Cost of Oil	$ Per KWH	$0.08												
25	**RETAIL**															
26				Rate	Customers		789,928	Total Customers in BC		80,000	Total Residential and Commercial Customers on VI					
27		Residential Retail			*000's*											
28		**TGI**	$ Per MJ	$0.0100	640		712,304	Total Residential Customers in BC								
29		**TGVI**	$ Per MJ	$0.0143	72											
30		**Diesel**	$ Per L	$0.9000												
31		**Electricity**	$ per kWh	$0.0827	1,511		1,511,435	Total BCH Residential Customers in BC				89%				
32		**Electricity**	$ per kW per year													
33		Commercial Retail														
34		**TGI**	$ Per MJ	$0.0094	78		77,624	Total Commercial Customers in BC								
35		**TGVI**	$ Per MJ	$0.0169	8											
36		**Electricity**	$ Per MJ	$0.0155												
37		**Electricity**	$ per kWh	$0.0558	190		189,764	Total Light Industrial and Commercial Customers in BC								
38		**Electricity**	$ per kW per year	$52	15											
39																
40	**TAX**															
41			**Year**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**
42	1		*Year*		*0*	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*
43	2	Carbon	$ Per tonne		$20.00	$25.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00
44	3	Carbon	$ Per GJ		$0.9976	$1.2470	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964
45	4	GDP Deflator			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
46	5	Carbon (Real)			$1.00	$1.25	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50
47	6	Net Present Value -2010				$2.14	$3.51	$4.84	$6.13	$7.39	$8.60	$9.78	$10.93	$12.05	$13.13	$14.18
48	7	Net Present Value -2011					$2.62	$3.99	$5.32	$6.61	$7.86	$9.08	$10.26	$11.41	$12.52	$13.60
49	8	Net Present Value -2012						$2.86	$4.23	$5.56	$6.85	$8.11	$9.32	$10.50	$11.65	$12.76
50																
51		**Discount Rate (real)[1]**														
52		**TERASEN GAS**														
53		**Rate of Inflation**	1.90%													
54		**TGI**	3.00%													
55		**TGVI**	3.00%													
56		**BC HYDRO**														
57		**Rate of Inflation**	2.00%													
58		**BC Hydro**	3.00%													
59		**Customer**	3.00%													

	B	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI
4		**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**
7	Incremental Cost of Gas (nominal)	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.43
8		*13*	*14*	*15*	*16*	*17*	*18*	*19*	*20*	*21*	*22*	*23*	*24*	*25*	*26*	*27*	*28*	*29*	*30*	*31*
9	carbon tax	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
10	TGI Dist adder	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*
11	Total incremental cost of gas including carbon	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.59*
12	GDP Deflator	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
13	Incremental Cost of Gas (Real)	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.59
14	Net Present Value -2010	$174.41	$184.32	$193.94	$203.28	$212.35	$221.16	$229.71	$238.01	$246.07	$253.89	$261.48	$268.86	$276.02	$282.97	$289.72	$296.27	$302.63	$308.81	$314.86
15	Net Present Value -2011	$164.20	$174.41	$184.32	$193.94	$203.28	$212.35	$221.16	$229.71	$238.01	$246.07	$253.89	$261.48	$268.86	$276.02	$282.97	$289.72	$296.27	$302.63	$308.87
16	Net Present Value -2012	$153.69	$164.20	$174.41	$184.32	$193.94	$203.28	$212.35	$221.16	$229.71	$238.01	$246.07	$253.89	$261.48	$268.86	$276.02	$282.97	$289.72	$296.27	$302.69
41		**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**
42		*12*	*13*	*14*	*15*	*16*	*17*	*18*	*19*	*20*	*21*	*22*	*23*	*24*	*25*	*26*	*27*	*28*	*29*	*30*
43	Carbon	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00
44	Carbon	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964
45	GDP Deflator	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
46	Carbon (Real)	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50
47	Net Present Value -2010	$15.19	$16.18	$17.14	$18.08	$18.98	$19.86	$20.71	$21.54	$22.35	$23.13	$23.89	$24.62	$25.34	$26.03	$26.71	$27.36	$27.99	$28.61	$29.21
48	Net Present Value -2011	$14.65	$15.67	$16.66	$17.62	$18.55	$19.46	$20.34	$21.19	$22.02	$22.82	$23.61	$24.36	$25.10	$25.81	$26.51	$27.18	$27.84	$28.47	$29.09
49	Net Present Value -2012	$13.85	$14.90	$15.91	$16.90	$17.86	$18.80	$19.70	$20.58	$21.43	$22.26	$23.07	$23.85	$24.61	$25.34	$26.06	$26.75	$27.42	$28.08	$28.71

FORTIS BC

Innovative Technology

Measure Data for NGV Vehicles (Kelowna School Bus)

PER MEASURE

Implementation Lag

Total Cost	$ 33,026			
Total Incentive	$ 33,026			
Utility Incentive	***$ 33,026***	*No lag*	*Present Value accounts for any implementation lag*	
Partner Incentive	***$ -***	*No lag*	*Present Value accounts for any implementation lag*	
Participant Cost				

Annual Impact Per Measure

Time lag to implementation	-	Years	
Energy Cons per installation	**-392.0**	GJ	Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	**0%**	100%	Net-to-Gross
Alternate Energy Impact	**8676.0**	L	
Alternate Capacity Impact		kW/a	
Measure Lifetime	**15**	Years	Estimated lifespan of measure

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	11	11	**11**			Estimated Participation
Impact						
Gross Energy Savings (GJ)	(4,186)	(4,312)	(4,312)	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	(4,186)	(4,312)	(4,312)	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (Litres)	92,656	95,436	95,436	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Cost Benefit Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Additional NG Costs						
PV $ per GJ			$193.94	$193.94	$193.94	
Energy Purchases	$ (836,284)	$ (836,284)	$ (836,284)	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 363,286	$ 363,286	$ -	$ -	Including Implementation Lag
Administration		$ 500	**$ 500**			
Subtotal	$ 353,190	$ 363,786	$ 363,786	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	Including Implementation Lag
Administration		$ -	**$ -**	**$ -**	**$ -**	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Avoided Diesel costs						
Energy (Purchases)		$ 1,025,378	$ 1,025,378	$ -	$ -	$10.744 PV $ per L
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ 1,025,378	$ 1,025,378	$ 1,025,378	$ -	$ -	
Total Resource Net Benefit (Cost)	$ (164,096)		$ (174,692)	$ -	$ -	Avoided Revenue Requirement less Utility less Partners
						less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ -**		**$ -**	**$ -**	**$ -**	Informational (for comparison with supply options)

FORTIS BC

Innovative Technology

Measure Data for NGV Vehicles (Surrey)

PER MEASURE			Implementation Lag	
Total Cost	$ 26,700			
Total Incentive	$ 26,700			
Utility Incentive	***$ 26,700***		*No lag*	*Present Value accounts for any implementation lag*
Partner Incentive	***$ -***		*No lag*	*Present Value accounts for any implementation lag*
Participant Cost				

Annual Impact Per Measure

Time lag to implementation	-	Years	
Energy Cons per installation	-1538.0	GJ	Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	100%	Net-to-Gross
Alternate Energy Impact	34000.0	L	
Alternate Capacity Impact		kW/a	
Measure Lifetime	8	Years	Estimated lifespan of measure

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1			Estimated Participation
Impact						
Gross Energy Savings (GJ)	(1,493)	(1,538)	(1,538)	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	(1,493)	(1,538)	(1,538)	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (Litres)	33,010	34,000	34,000	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Cost Benefit Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Additional NG Costs						
PV $ per GJ			$120.22	$120.22	$120.22	
Energy Purchases	$ (184,895)	$ (184,895)	$ (184,895)	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 26,700	$ 26,700	$ -	$ -	Including Implementation Lag
Administration		$ 500	$ 500			
Subtotal	$ 26,408	$ 27,200	$ 27,200	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	Including Implementation Lag
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Avoided Diesel costs						
Energy (Purchases)		$ 214,803	$ 214,803	$ -	$ -	$6.318 PV $ per L
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ 214,803	$ 214,803	$ 214,803	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 3,500		$ 2,708	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ -**		**$ -**	**$ -**	**$ -**	Informational (for comparison with supply options)

FORTIS BC

Innovative Technology

Measure Data for NGV Vehicles (Waste Management Inc.)

PER MEASURE			Implementation Lag	
Total Cost	$	40,178		
Total Incentive	$	40,178		
Utility Incentive	***$***	***40,178***	*No lag*	*Present Value accounts for any implementation lag*
Partner Incentive	***$***	***-***	*No lag*	*Present Value accounts for any implementation lag*
Participant Cost				

Annual Impact Per Measure

Time lag to implementation	-	Years	
Energy Cons per installation	**-1057.0**	GJ	Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	**0%**	100%	Net-to-Gross
Alternate Energy Impact	**23400.0**	L	
Alternate Capacity Impact		kW/a	
Measure Lifetime	**10**	Years	Estimated lifespan of measure

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	19	20	**20**			Estimated Participation
Impact						
Gross Energy Savings (GJ)	(20,524)	(21,140)	(21,140)	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	(20,524)	(21,140)	(21,140)	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (Litres)	454,369	468,000	468,000	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Cost Benefit Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Additional NG Costs						
PV $ per GJ			$142.86	$142.86	$142.86	
Energy Purchases	$ (3,020,071)	$ (3,020,071)	$ (3,020,071)	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 803,560	$ 803,560	$ -	$ -	Including Implementation Lag
Administration		$ 500	**$ 500**			
Subtotal	$ 780,641	$ 804,060	$ 804,060	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	Including Implementation Lag
Administration		$ -	**$ -**	**$ -**	**$ -**	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Avoided Diesel costs						
Energy (Purchases)		$ 3,592,921	$ 3,592,921	$ -	$ -	$7.677 PV $ per L
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ 3,592,921	$ 3,592,921	$ 3,592,921	$ -	$ -	
Total Resource Net Benefit (Cost)	$ (207,791)		$ (231,210)	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ -**		**$ -**	**$ -**	**$ -**	Informational (for comparison with supply options)

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only enter in boxes marked in blue

NEW

Measure Data for Solar Water heating PSECA Program

PER MEASURE		Utility Incentive to the participant	partner incentive
Total Incremental Cost	$ 1,451,361		
Total Incentive	$ 493,852	$ 229,374	$ 264,478
Incremental Participant cost	$ 957,509		

Annual Impact Per Measure

Energy Savings per installation	2579.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact		GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	25	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0		Estimated Participation
Impact						
Gross Energy Savings (GJ)	2,402	2,579	2,579	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	2,402	2,579	2,579	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$276.02	$282.97	$289.72	
Energy Purchases	$ 711,852	$ 711,852	$ 711,852	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 229,374	$ 229,374	$ -	$ -	
Administration		$ -	$ -	$ -		
Subtotal	$ 213,610	$ 229,374	$ 229,374	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ 264,478	$ 264,478	$ -	$ -	
Administration		$ -	$ -		$ -	
Subtotal	$ 246,301	$ 264,478	$ 264,478	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 957,509	$ 957,509	$ -	$ -	
Subtotal	$ 891,701	$ 957,509	$ 957,509	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.534 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ (393,459)		$ (739,509)	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 40.9**		**$ 40.9**	**$ -**	**$ -**	Informational (for comparison with supply options)

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only enter in boxes marked in blue

NEW

Measure Data for LNG (Vedder)

PER MEASURE		Utility Incentive to the participant	partner incentive
Total Incremental Cost	$ 87,866		
Total Incentive	$ 87,866	$ 87,866	$ -
Incremental Participant cost	$ -		

Annual Impact Per Measure

Energy Savings per installation	-2770.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	71657	L	19,904,724	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	5	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	47	50	50	0		Estimated Participation
Impact						
Gross Energy Savings (GJ)	(128,981)	(138,500)	(138,500)	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	(128,981)	(138,500)	(138,500)	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	3,380,047	3,582,850	3,582,850	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$83.64	$96.20	$96.20	
Energy Purchases	$ (11,584,339)	$ (11,584,339)	$ (11,584,339)	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 4,393,300	$ 4,393,300	$ -	$ -	
Administration		$ 500	$ 500	$ -		
Subtotal	$ 4,091,823	$ 4,393,800	$ 4,393,800	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -		$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ 13,583,041	$ 13,583,041	$ -	$ -	$3.791 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ 13,583,041	$ 13,583,041	$ 13,583,041	$ -	$ -	
Total Resource Net Benefit (Cost)	$ (2,093,121)		$ (2,395,098)	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	$ -		$ -	$ -	$ -	Informational (for comparison with supply options)

FORTIS BC

	PROGRAM														ALTERNATE		NET PRESENT VALUE									BENEFIT/COST							PARAMETERS														
2010 Innovative Technology	COSTS ($000)										SAVINGS (GJ)			LIFE	Impact		Levelized Cost	Utility Benefits (Costs)		Participant Benefits (Costs)			Program Net Savings				Participant						UTILITY				PARTICIPANT									
FEI	Utility			Partners										Years																																	
	Incentives	Administration	Total	Incentives	Administration	Total	Participant	Total	% Utility	% Partner	% Participant	Gross	Net-to-Gross	Net		Energy	Capacity	($/GJ)	Program	Alternate	Program	Carbon Tax	Alternate	Natural Gas	Alternate Energy	Alternate Capacity	Natural Gas	Total Costs	Total Benefits	Benefit/Cost	Natural Gas	Total Resource	TRC Net Benefits	Natural Gas Utility Discount	Natural Gas Supply	Alternate Discount Rate	Alternate Supply	Discount Rate	Natural Gas NPV	Carbon Tax NPV	Alternate Energy NPV	Alternate Capacity NPV	Natural Gas Tariff	Energy Tariff	Capacity Tariff
																		($'000s)	($'000s)	($'000s)	($'000s)	($'000s)	(GJ)	(MWh)	(kW)	Utility	($'000s)	($'000s)		Rate Impact		($'000s)		$/GJ		$/L		$/GJ	$/GJ	$/L	$/kW/a	$/GJ	$/kWh	$/kW/a
Label	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR	AS	AT
Source Sheet or Calculation	Program	Program	B+C	Program	Program	E+F	Program	D+G+H	D/I	G/I	H/I	Program	Program	M+N	Program	Program	Program	D/Y	O+A+J	Q x N x AL	M x N x AN	M x N x AO	N x (Q+AP + R+AQ)	PV(AI,P,-O)	PV(AK,P,-Q*N)	PV(AK,P,-R)	T/D	H=D, (V+W)=O	H=D, (V+W)=O, X	AD/AC	T/(V+D)	(T+U)/I	(T+U)-I	Input	Program	Input	Input	Input	PV(AM,P,-Input!D25)	Input	PV(AM,P,-Input!D28)	PV(AM,P,-Input!D29)	Input	Input	Input
2010																																														
Innovative Technologies																																														
NGV Vehicles (Kelowna School Bus)	363	1	364	-	-	-	-	364	100%	-	0%	(4,312)	100%	(4,312)	15	95	-	FS	(391)	834	(418)	(57)	834	(38,348)	927	-	FS	475	834	1.8	0.6	1.1	79	7.38%	90.75	6%	8.74	6.0%	97.03	$13.11	8.74	0.00	9.990	0.083	-
NGV Vehicles (Surrey)	27	1	27	-	-	-	-	27	100%	-	0%	(1,538)	100%	(1,538)	8	34	-	FS	(86)	190	(95)	(14)	190	(9,050)	211	-	FS	109	190	1.7	0.8	1.7	76	7.38%	56.21	6%	5.59	6.0%	62.04	$8.91	5.59	0.00	9.990	0.083	-
NGV Vehicles (Waste Management Inc.)	804	1	804	-	-	-	-	804	100%	-	0%	(21,140)	100%	(21,140)	10	468	-	FS	(1,404)	3,100	(1,554)	(218)	3,100	(145,905)	3,445	-	FS	1,773	3,100	1.7	0.7	1.4	892	7.38%	66.43	6%	6.62	6.0%	73.53	$10.33	6.62	0.00	9.990	0.083	-
Solar Water heating PSECA Program	229	-	229	264	-	264	958	1,451	16%	0	66%	2,579	100%	2,579	25	-	-	8	300	-	329	42	-	29,053	-	-	1.3	958	372	0.4	0.5	0.2	(1,152)	7.38%	116.20	6%	11.51	6.0%	127.71	$16.41	11.51	0.00	9.990	0.083	-
LNG (Vedder)	4,393	1	4,394	-	-	-	-	4,394	100%	-	0%	(138,500)	100%	(138,500)	5	3,583	-	FS	(5,369)	13,583	(5,828)	(882)	13,583	(562,146)	15,092	-	FS	6,710	13,583	2.0	0.6	1.4	3,820	7.38%	38.76	6%	3.79	6.0%	42.08	$6.37	3.79	0.00	9.990	0.083	-
Total	5,816	2	5,818	264	-	264	958	7,040		0	14%	(162,911)		(162,911)		4,180	-	FS	(6,951)	17,707	(7,567)	(1,128)	17,707	(726,396)	19,675	-	FS	9,653	17,707	1.8	0.6	1.3	3,716													

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ
1	**UTILITY**		**FORTIS BC**																																	
2																																				
3																																				
4			**Year**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**
5			Units																																	
6		**NATURAL GAS**																																		
7		Incremental Cost of Gas (nominal)	$ Per GJ	$5.50	$6.17	$6.81	$7.35	$7.87	$8.26	$8.56	$8.78	$8.99	$9.19	$9.40	$9.60	$9.81	$10.03	$10.25	$10.47	$10.70	$10.93	$11.17	$11.42	$11.67	$11.92	$12.19	$12.45	$12.73	$13.01	$13.29	$13.58	$13.88	$14.19	$14.50	$14.82	$15.14
8	1		*Year*	*0*	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*	*16*	*17*	*18*	*19*	*20*	*21*	*22*	*23*	*24*	*25*	*26*	*27*	*28*	*29*	*30*	*31*	
9		carbon tax	$ per GJ	*1.00*	*1.25*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*		*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	
10		TGI Dist adder																																		
11		Total incremental cost of gas including carbon		*6.50*	*7.41*	*8.30*	*8.85*	*9.36*	*9.76*	*10.06*	*10.27*	*10.48*	*10.69*	*10.89*	*9.60*	*11.31*	*11.52*	*11.74*	*11.97*	*12.19*	*12.43*	*12.67*	*12.92*	*13.16*	*13.42*	*13.68*	*13.95*	*14.22*	*14.50*	*14.79*	*15.08*	*15.38*	*15.68*	*15.99*	*16.31*	*16.64*	
12	2	GDP Deflator		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
13	3	Incremental Cost of Gas (Real)		$6.50	$7.41	$8.30	$8.85	$9.36	$9.76	$10.06	$10.27	$10.48	$10.69	$10.89	$9.60	$11.31	$11.52	$11.74	$11.97	$12.19	$12.43	$12.67	$12.92	$13.16	$13.42	$13.68	$13.95	$14.22	$14.50	$14.79	$15.08	$15.38	$15.68	$15.99	$16.31	$16.64	
14	4	Net Present Value -2010			$12.40	$19.18	$25.84	$32.40	$38.76	$44.88	$50.69	$56.21	$61.46	$66.43	$70.52	$75.00	$79.25	$83.29	$87.12	$90.75	$94.20	$97.48	$100.59	$103.54	$106.34	$109.00	$111.53	$113.92	$116.20	$118.36	$120.42	$122.37	$124.22	$125.98	$127.65	$129.24	
15	5	Net Present Value -2011			$14.18	$21.25	$28.29	$35.13	$41.69	$47.93	$53.86	$59.49	$64.84	$69.23	$74.04	$78.68	$82.94	$87.05	$90.95	$94.66	$98.17	$101.51	$104.68	$107.69	$110.55	$113.26	$115.83	$118.28	$120.60	$122.81	$124.90	$126.89	$128.78	$130.57	$132.28		
16	6	Net Present Value -2012				$15.40	$22.97	$30.31	$37.36	$44.06	$50.42	$56.47	$62.21	$66.92	$72.09	$76.98	$81.64	$86.06	$90.25	$94.23	$98.01	$101.59	$104.99	$108.22	$111.29	$114.20	$116.97	$119.60	$122.09	$124.46	$126.71	$128.84	$130.87	$132.80	$134.63			
17																																				
18																																				
19		**ELECTRICITY**																																		
20		Incremental Cost of Elec	$ Per kWh	$0.12																																
21		Incremental Cost of E Capacity	$ Per kW	$170.00																																
22		COST OF Diesel	$per L	$0.90																																
23		Cost of Oil	$ Per GJ	$22.01																																
24		Cost of Oil	$ Per KWH	$0.08																																
25	**RETAIL**																																			
26				Rate	Customers		789,928	Total Customers in BC		80,000	Total Residential and Commercial Customers on VI																										
27		Residential Retail			(000's)																																
28		**TGI**	$ Per MJ	$0.0100	640		712,304	Total Residential Customers in BC																													
29		**TGVI**	$ Per MJ	$0.0143	72																																
30		**Diesel**	$ Per L	$0.9000																																
31		**Electricity**	$ per kWh	$0.0827	1,511		1,511,435	Total BCH Residential Customers in BC				89%																										
32		**Electricity**	$ per kW per year																																	
33		Commercial Retail																																		
34		**TGI**	$ Per MJ	$0.0094	78		77,624	Total Commercial Customers in BC																													
35		**TGVI**	$ Per MJ	$0.0169	8																																
36		**Electricity**	$ Per MJ	$0.0155																																
37		**Electricity**	$ per kWh	$0.0558	190		189,764	Total Light Industrial and Commercial Customers in BC																													
38		**Electricity**	$ per kW per year	$52	15																																
39																																				
40	**TAX**																																			
41			**Year**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**		
42	1		Year		*0*	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*	*16*	*17*	*18*	*19*	*20*	*21*	*22*	*23*	*24*	*25*	*26*	*27*	*28*	*29*	*30*		
43	2	Carbon	$ Per tonne		$20.00	$25.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00		
44	3	Carbon	$ Per GJ		$0.957%	$1.2478%	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964		
45	4	GDP Deflator			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
46	5	Carbon (Real)			$1.00	$1.25	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50		
47	6	Net Present Value -2010				$2.01	$3.22	$4.34	$5.39	$6.37	$7.28	$8.12	$8.91	$9.65	$10.33	$10.97	$11.56	$12.11	$12.63	$13.11	$13.55	$13.97	$14.35	$14.71	$15.05	$15.36	$15.63	$15.92	$16.18	$16.41	$16.63	$16.83	$17.02	$17.20	$17.37			
48	7	Net Present Value -2011					$2.46	$3.67	$4.79	$5.84	$6.82	$7.73	$8.57	$9.36	$10.10	$10.78	$11.42	$12.01	$12.56	$13.08	$13.55	$14.00	$14.42	$14.80	$15.16	$15.50	$15.81	$16.10	$16.37	$16.63	$16.86	$17.08	$17.28	$17.47	$17.65			
49	8	Net Present Value -2012						$2.69	$3.98	$5.03	$6.07	$7.05	$7.96	$8.81	$9.59	$10.33	$11.01	$11.65	$12.24	$12.79	$13.31	$13.79	$14.23	$14.65	$15.04	$15.40	$15.73	$16.04	$16.33	$16.61	$16.86	$17.09	$17.31	$17.51	$17.70			
50																																				
51		**Discount Rate (real)[1]**																																		
52		**TERASEN GAS**																																		
53		**Rate of Inflation**	1.90%																																	
54		**TGI**	7.38%																																	
55		**TGVI**	6.87%																																	
56		**BC HYDRO**																																		
57		**Rate of Inflation**	2.00%																																	
58		**BC Hydro**	6.00%																																	
59		**Customer**	6.00%																																	

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Measure Data for NGV Vehicles (Kelowna School Bus)

PER MEASURE

Implementation Lag

Total Cost	$ 33,026			
Total Incentive	$ 33,026			
Utility Incentive	***$ 33,026***	*No lag*	*Present Value accounts for any implementation lag*	
Partner Incentive	***$ -***	*No lag*	*Present Value accounts for any implementation lag*	
Participant Cost				

Annual Impact Per Measure

Time lag to implementation	-	Years	
Energy Cons per installation	**-392.0**	GJ	Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	**0%**	100%	Net-to-Gross
Alternate Energy Impact	**8676.0**	L	
Alternate Capacity Impact		kW/a	
Measure Lifetime	**15**	Years	Estimated lifespan of measure

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
Number of NGV Vehicles (Kelowna School Bus)						
	10	11	**11**			Estimated Participation
Impact						
Gross Energy Savings (GJ)	(4,016)	(4,312)	(4,312)	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	(4,016)	(4,312)	(4,312)	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (Litres)	90,034	95,436	95,436	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Cost Benefit Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Additional NG Costs						
PV $ per GJ			$90.75	$94.66	$98.01	
Energy Purchases	$ (391,322)	$ (391,322)	$ (391,322)	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 363,286	$ 363,286	$ -	$ -	Including Implementation Lag
Administration		$ 500	**$ 500**			
Subtotal	$ 338,784	$ 363,786	$ 363,786	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	Including Implementation Lag
Administration		$ -	**$ -**	**$ -**	**$ -**	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Avoided Diesel costs						
Energy (Purchases)		$ 834,208	$ 834,208	$ -	$ -	$8.741 PV $ per L
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ 834,208	$ 834,208	$ 834,208	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 104,103		$ 79,100	$ -	$ -	Avoided Revenue Requirement less Utility less Partners
						less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ -**		**$ -**	**$ -**	**$ -**	Informational (for comparison with supply options)

FORTIS BC

Innovative Technology

Measure Data for NGV Vehicles (Surrey)

PER MEASURE			Implementation Lag	
Total Cost	$ 26,700			
Total Incentive	$ 26,700			
Utility Incentive	***$ 26,700***		*No lag*	*Present Value accounts for any implementation lag*
Partner Incentive	***$ -***		*No lag*	*Present Value accounts for any implementation lag*
Participant Cost				

Annual Impact Per Measure

Time lag to implementation	-	Years	
Energy Cons per installation	-1538.0	GJ	Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	100%	Net-to-Gross
Alternate Energy Impact	34000.0	L	
Alternate Capacity Impact		kW/a	
Measure Lifetime	8	Years	Estimated lifespan of measure

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
Number of NGV Vehicles (Surrey)						
	1	1	**1**			Estimated Participation
Impact						
Gross Energy Savings (GJ)	(1,432)	(1,538)	(1,538)	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	(1,432)	(1,538)	(1,538)	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (Litres)	32,075	34,000	34,000	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Cost Benefit Summary

	2009 NPV	$ Total	2010	2011	2012	
Additional NG Costs						
PV $ per GJ			$56.21	$59.49	$62.21	
Energy Purchases	$ (86,452)	$ (86,452)	$ (86,452)	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 26,700	$ 26,700	$ -	$ -	Including Implementation Lag
Administration		$ 500	**$ 500**			
Subtotal	$ 25,331	$ 27,200	$ 27,200	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	Including Implementation Lag
Administration		$ -	**$ -**	**$ -**	**$ -**	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Avoided Diesel costs						
Energy (Purchases)		$ 190,020	$ 190,020	$ -	$ -	$5.589 PV $ per L
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ 190,020	$ 190,020	$ 190,020	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 78,237		$ 76,368	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ -**		**$ -**	**$ -**	**$ -**	Informational (for comparison with supply options)

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Innovative Technology

Measure Data for NGV Vehicles (Waste Management Inc.)

PER MEASURE			Implementation Lag	
Total Cost	$	40,178		
Total Incentive	$	40,178		
Utility Incentive	***$***	***40,178***	*No lag*	*Present Value accounts for any implementation lag*
Partner Incentive	***$***	***-***	*No lag*	*Present Value accounts for any implementation lag*
Participant Cost				

Annual Impact Per Measure

Time lag to implementation	**-**	Years	
Energy Cons per installation	**-1057.0**	GJ	Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	**0%**	100%	Net-to-Gross
Alternate Energy Impact	**23400.0**	L	
Alternate Capacity Impact		kW/a	
Measure Lifetime	**10**	Years	Estimated lifespan of measure

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
Number of NGV Vehicles (Waste Management Inc.)						
	19	20	**20**			Estimated Participation
Impact						
Gross Energy Savings (GJ)	(19,687)	(21,140)	(21,140)	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	(19,687)	(21,140)	(21,140)	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (Litres)	441,509	468,000	468,000	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Cost Benefit Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Additional NG Costs						
PV $ per GJ			$66.43	$69.23	$76.99	
Energy Purchases	$ (1,404,398)	$ (1,404,398)	$ (1,404,398)	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 803,560	$ 803,560	$ -	$ -	Including Implementation Lag
Administration		$ 500	**$ 500**			
Subtotal	$ 748,799	$ 804,060	$ 804,060	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	Including Implementation Lag
Administration		$ -	**$ -**	**$ -**	**$ -**	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Avoided Diesel costs						
Energy (Purchases)		$ 3,100,069	$ 3,100,069	$ -	$ -	$6.624 PV $ per L
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ 3,100,069	$ 3,100,069	$ 3,100,069	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 946,872		$ 891,611	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ -**		**$ -**	**$ -**	**$ -**	Informational (for comparison with supply options)

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only enter in boxes marked in blue

NEW

Measure Data for Solar Water heating PSECA Program

PER MEASURE		Utility Incentive to the participant	partner incentive
Total Incremental Cost	$ 1,451,361		
Total Incentive	$ 493,852	$ 229,374	$ 264,478
Incremental Participant cost	$ 957,509		

Annual Impact Per Measure

Energy Savings per installation	2579.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact		GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	25	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0		Estimated Participation
Impact						
Gross Energy Savings (GJ)	2,402	2,579	2,579	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	2,402	2,579	2,579	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$116.20	$120.60	$124.46	
Energy Purchases	$ 299,683	$ 299,683	$ 299,683	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 229,374	$ 229,374	$ -	$ -	
Administration		$ -	$ -	$ -		
Subtotal	$ 213,610	$ 229,374	$ 229,374	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ 264,478	$ 264,478	$ -	$ -	
Administration		$ -	$ -		$ -	
Subtotal	$ 246,301	$ 264,478	$ 264,478	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 957,509	$ 957,509	$ -	$ -	
Subtotal	$ 891,701	$ 957,509	$ 957,509	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.534 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ (805,628)		$ (1,151,678)	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 40.9**		**$ 40.9**	**$ -**	**$ -**	Informational (for comparison with supply options)

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NEW

Measure Data for LNG (Vedder)

PER MEASURE			Utility Incentive to the participant	partner incentive
Total Incremental Cost	$ 87,866			
Total Incentive	$ 87,866		$ 87,866	$ -
Incremental Participant cost	$ -			

Annual Impact Per Measure

Energy Savings per installation	-2770.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	71657	L	19,904,724	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	5	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	47	50	50	0		Estimated Participation
Impact						
Gross Energy Savings (GJ)	(128,981)	(138,500)	(138,500)	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	(128,981)	(138,500)	(138,500)	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	3,380,047	3,582,850	3,582,850	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$38.76	$41.69	$44.06	
Energy Purchases	$ (5,368,839)	$ (5,368,839)	$ (5,368,839)	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 4,393,300	$ 4,393,300	$ -	$ -	
Administration		$ 500	$ 500	$ -		
Subtotal	$ 4,091,823	$ 4,393,800	$ 4,393,800	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -		$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ 13,583,041	$ 13,583,041	$ -	$ -	$3.791 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ 13,583,041	$ 13,583,041	$ 13,583,041	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 4,122,378		$ 3,820,402	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	$ -		$ -	$ -	$ -	Informational (for comparison with supply options)

FORTIS BC

	PROGRAM														ALTERNATE		NET PRESENT VALUE									BENEFIT/COST						PARAMETERS													
2010 Innovative Technology	COSTS ($000)										SAVINGS (GJ)			LIFE	Impact		Levelized Cost	Utility Benefits (Costs)		Participant Benefits (Costs)			Program Net Savings			Natural Gas	Participant			Natural Gas		SCT Net Benefits	UTILITY				PARTICIPANT									
FEI	Utility			Partners																																									
	Incentives	Administration	Total	Incentives	Administration	Total	Participant	Total	% Utility	% Partner	% Participant	Gross	Net-to-Gross	Net	Years	Energy	Capacity	($/GJ)	Program	Alternate	Program	Carbon Tax	Alternate	Natural Gas	Alternate Energy	Alternate Capacity	Utility	Total Costs	Total Benefits	Benefit/Cost	Rate Impact	SCT	($'000s)	Natural Gas Utility Discount	Natural Gas Supply	Alternate Discount Rate	Alternate Supply	Discount Rate	Natural Gas NPV	Carbon Tax NPV	Alternate Energy NPV	Alternate Capacity NPV	Natural Gas Tariff	Energy Tariff	Capacity Tariff
																		($'000s)	($'000s)	($'000s)	($'000s)	($'000s)	(GJ)	(MWh)	(kW)		($'000s)	($'000s)						$/GJ	$			$/GJ	$/GJ	$	$/kW/a	$/GJ	$/kWh	$/kW/a
Label	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR	AS	AT
Source Sheet or Calculation	Program	Program	B+C	Program	Program	E+F	Program	D+G+H	D/I	G/I	H/I	Program	Program	M+N	Program	Program	Program	D/Y	O+AJ	Q x N x AL	M x N x AN	M x N x AO	N x (Q+AP + RxAQ)	PV(AI,P,-O)	PV(AK,P,-Q*N)	PV(AK,P,-R)	T/D	H=D, (V+W)=O	H=D, (V+W)=O, X	AD/AC	T/(V+D)	(T+U)/I	(T+U)-I	Input	Program	Input	Input	Input	PV(AM,P,-Input!D25)	Input	PV(AM,P,-Input!D28)	PV(AM,P,-Input!D29)	Input	Input	Input
2010																																													
Innovative Technologies																																													
NGV Vehicles (Kelowna School Bus)	363	1	364	-	-	-	-	364	100%	-	0%	(4,312)	100%	(4,312)	15	95	-	FS	(1,087)	1,333	(514)	(78)	1,025	(51,476)	1,139	-	FS	592	1,025	1.7	0.4	0.9	(118)	3.00%	193.94	3%	10.74	3.0%	119.26	$18.08	10.74	0.00	9.990	0.083	-
NGV Vehicles (Surrey)	27	1	27	-	-	-	-	27	100%	-	0%	(1,538)	100%	(1,538)	8	34	-	FS	(240)	279	(108)	(17)	215	(10,796)	239	-	FS	125	215	1.7	0.4	1.0	12	3.00%	120.22	3%	6.32	3.0%	70.13	$10.93	6.32	0.00	9.990	0.083	-
NGV Vehicles (Waste Management Inc.)	804	1	804	-	-	-	-	804	100%	-	0%	(21,140)	100%	(21,140)	10	468	-	FS	(3,926)	4,671	(1,801)	(277)	3,593	(180,328)	3,992	-	FS	2,079	3,593	1.7	0.4	1.0	(59)	3.00%	142.86	3%	7.68	3.0%	85.22	$13.13	7.68	0.00	9.990	0.083	-
LNG (Vedder)	4,393	1	4,394	-	-	-	-	4,394	100%	-	0%	(138,500)	100%	(138,500)	5	3,583	-	FS	(15,060)	19,198	(6,337)	(1,023)	14,768	(634,289)	16,408	-	FS	7,360	14,768	2.0	0.3	1.0	(256)	3.00%	83.64	3%	4.12	3.0%	45.75	$7.39	4.12	0.00	9.990	0.083	-
Total	5,587	2	5,589	-	-	-	-	5,589		-	0%	(165,490)		(165,490)		4,180	-	FS	(20,313)	25,481	(8,760)	(1,395)	19,601	(876,891)	21,779	-	FS	10,155	19,601	1.9	0.3	1.0	(421)												

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI
1	**UTILITY**		**FORTIS BC**																																
2																																			
3																																			
4			Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041
5			Units																																
6		**NATURAL GAS**																																	
7		Incremental Cost of Gas (nominal)	$ Per GJ	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.43
8	1		Year	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
9		carbon tax	$ per GJ	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10		TGI Dist adder		0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16
11		Total incremental cost of gas including carbon		15.44	15.44	15.44	15.44	15.44	15.44	15.44	15.44	15.44	15.44	15.44	15.44	15.44	15.44	15.44	15.44	15.44	15.44	15.44	15.44	15.44	15.44	15.44	15.44	15.44	15.44	15.44	15.44	15.44	15.44	15.44	15.59
12	2	GDP Deflator		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
13	3	Incremental Cost of Gas (Real)		$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.59
14	4	Net Present Value -2010			$29.54	$43.67	$57.39	$70.71	$83.64	$96.20	$108.38	$120.22	$131.71	$142.86	$153.69	$164.20	$174.41	$184.32	$193.94	$203.28	$212.35	$221.16	$229.71	$238.01	$246.07	$253.89	$261.48	$268.86	$276.02	$282.97	$289.72	$296.27	$302.63	$308.81	$314.80
15	5	Net Present Value -2011				$29.54	$43.67	$57.39	$70.71	$83.64	$96.20	$108.38	$120.22	$131.71	$142.86	$153.69	$164.20	$174.41	$184.32	$193.94	$203.28	$212.35	$221.16	$229.71	$238.01	$246.07	$253.89	$261.48	$268.86	$276.02	$282.97	$289.72	$296.27	$302.63	$308.81	
16	6	Net Present Value -2012					$29.54	$43.67	$57.39	$70.71	$83.64	$96.20	$108.38	$120.22	$131.71	$142.86	$153.69	$164.20	$174.41	$184.32	$193.94	$203.28	$212.35	$221.16	$229.71	$238.01	$246.07	$253.89	$261.48	$268.86	$276.02	$282.97	$289.72	$296.27	$302.63		
17																																			
18																																			
19		**ELECTRICITY**																																	
20		Incremental Cost of Elec	$ Per kWh	$0.12																															
21		Incremental Cost of E Capacity	$ Per kW	$170.00																															
22		COST OF Diesel	$per L	$0.90																															
23		Cost of Oil	$ Per GJ	$23.01																															
24		Cost of Oil	$ Per kWH	$0.08																															
25	**RETAIL**																																		
26				Rate	Customers		789,038	Total Customers in BC		80,000	Total Residential and Commercial Customers on VI																									
27		Residential Retail			(000's)																														
28		TGI	$ Per MJ	$0.0100	640		712,304	Total Residential Customers in BC																												
29		TGVI	$ Per MJ	$0.0143	72																														
30		Diesel	$ Per L	$0.9000																															
31		Electricity	$ per kWh	$0.0827	1,511		1,511,435	Total BCH Residential Customers in BC				89%																								
32		Electricity	$ per kW per year																																
33		Commercial Retail																																	
34		TGI	$ Per MJ	$0.0094	78		77,624	Total Commercial Customers in BC																												
35		TGVI	$ Per MJ	$0.0169	8																														
36		Electricity	$ Per MJ	$0.0155																															
37		Electricity	$ per kWh	$0.0558	190		189,764	Total Light Industrial and Commercial Customers in BC																												
38		Electricity	$ per kW per year	$52	15																														
39																																			
40	**TAX**																																		
41			Year	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
42			Year		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
43	1	Carbon	$ Per tonne		$20.00	$25.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00
44	2	Carbon	$ Per GJ		$0.9976	$1.2470	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964
45	3	GDP Deflator			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
46	4	Carbon (Real)			$1.00	$1.25	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50
47	5	Net Present Value -2010				$2.14	$3.51	$4.84	$6.13	$7.39	$8.60	$9.78	$10.93	$12.05	$13.15	$14.18	$15.19	$16.18	$17.14	$18.08	$18.98	$19.86	$20.71	$21.54	$22.35	$23.13	$23.89	$24.62	$25.34	$26.01	$26.71	$27.36	$27.99	$28.61	$29.21	
48	6	Net Present Value -2011					$2.62	$3.99	$5.32	$6.61	$7.86	$9.08	$10.26	$11.41	$12.52	$13.60	$14.65	$15.67	$16.66	$17.62	$18.55	$19.46	$20.34	$21.19	$22.02	$22.82	$23.61	$24.36	$25.10	$25.81	$26.51	$27.18	$27.84	$28.47	$29.09		
49	7	Net Present Value -2012						$2.86	$4.23	$5.56	$6.85	$8.11	$9.32	$10.50	$11.65	$12.76	$13.85	$14.90	$15.91	$16.90	$17.86	$18.80	$19.70	$20.58	$21.43	$22.26	$23.07	$23.85	$24.61	$25.34	$26.06	$26.75	$27.42	$28.08	$28.71		
50																																			
51		**Discount Rate (real)[1]**																																	
52		**TERASEN GAS**																																	
53		Rate of Inflation	1.50%																																
54		TGI	3.00%																																
55		TGVI	3.00%																																
56		**BC HYDRO**																																	
57		Rate of Inflation	2.00%																																
58		BC Hydro	3.00%																																
59		Customer	3.00%																																
60																																			
61																				2010															

FORTIS BC

Innovative Technology

Measure Data for NGV Vehicles (Kelowna School Bus)

PER MEASURE

Implementation Lag

Total Cost	$ 33,026			
Total Incentive	$ 33,026			
Utility Incentive	***$ 33,026***	*No lag*	*Present Value accounts for any implementation lag*	
Partner Incentive	***$ -***	*No lag*	*Present Value accounts for any implementation lag*	
Participant Cost				

Annual Impact Per Measure

Time lag to implementation	-	Years	
Energy Cons per installation	**-392.0**	GJ	Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	**0%**	100%	Net-to-Gross
Alternate Energy Impact	**8676.0**	L	
Alternate Capacity Impact		kW/a	
Measure Lifetime	**15**	Years	Estimated lifespan of measure

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
Number of NGV Vehicles (Kelowna School Bus)						
	11	11	**11**			Estimated Participation
Impact						
Gross Energy Savings (GJ)	(4,186)	(4,312)	(4,312)	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	(4,186)	(4,312)	(4,312)	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (Litres)	92,656	95,436	95,436	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Cost Benefit Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Additional NG Costs						
PV $ per GJ			$193.94	$193.94	$193.94	
Energy Purchases	$ (836,284)	$ (836,284)	$ (836,284)	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 363,286	$ 363,286	$ -	$ -	Including Implementation Lag
Administration		$ 500	**$ 500**			
Subtotal	$ 353,190	$ 363,786	$ 363,786	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	Including Implementation Lag
Administration		$ -	**$ -**	**$ -**	**$ -**	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Avoided Diesel costs						
Energy (Purchases)		$ 1,025,378	$ 1,025,378	$ -	$ -	$10.744 PV $ per L
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ 1,025,378	$ 1,025,378	$ 1,025,378	$ -	$ -	
Total Resource Net Benefit (Cost)	$ (164,096)		$ (174,692)	$ -	$ -	Avoided Revenue Requirement less Utility less Partners
						less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ -**		**$ -**	**$ -**	**$ -**	Informational (for comparison with supply options)

FORTIS BC

Innovative Technology

Measure Data for NGV Vehicles (Surrey)

PER MEASURE			Implementation Lag	
Total Cost	$ 26,700			
Total Incentive	$ 26,700			
Utility Incentive	***$ 26,700***		*No lag*	*Present Value accounts for any implementation lag*
Partner Incentive	***$ -***		*No lag*	*Present Value accounts for any implementation lag*
Participant Cost				

Annual Impact Per Measure

Time lag to implementation	-	Years	
Energy Cons per installation	-1538.0	GJ	Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	100%	Net-to-Gross
Alternate Energy Impact	34000.0	L	
Alternate Capacity Impact		kW/a	
Measure Lifetime	8	Years	Estimated lifespan of measure

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
Number of NGV Vehicles (Surrey)						
	1	1	**1**			Estimated Participation
Impact						
Gross Energy Savings (GJ)	(1,493)	(1,538)	(1,538)	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	(1,493)	(1,538)	(1,538)	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (Litres)	33,010	34,000	34,000	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Cost Benefit Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Additional NG Costs						
PV $ per GJ			$120.22	$120.22	$120.22	
Energy Purchases	$ (184,895)	$ (184,895)	$ (184,895)	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 26,700	$ 26,700	$ -	$ -	Including Implementation Lag
Administration		$ 500	**$ 500**			
Subtotal	$ 26,408	$ 27,200	$ 27,200	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	Including Implementation Lag
Administration		$ -	**$ -**	**$ -**	**$ -**	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Avoided Diesel costs						
Energy (Purchases)		$ 214,803	$ 214,803	$ -	$ -	$6.318 PV $ per L
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ 214,803	$ 214,803	$ 214,803	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 3,500		$ 2,708	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ -**		**$ -**	**$ -**	**$ -**	Informational (for comparison with supply options)

FORTIS BC

Innovative Technology

Measure Data for NGV Vehicles (Waste Management Inc.)

PER MEASURE			Implementation Lag	
Total Cost	$	40,178		
Total Incentive	$	40,178		
Utility Incentive	*$*	*40,178*	*No lag*	*Present Value accounts for any implementation lag*
Partner Incentive	*$*	-	*No lag*	*Present Value accounts for any implementation lag*
Participant Cost				

Annual Impact Per Measure

Time lag to implementation	-	Years	
Energy Cons per installation	-1057.0	GJ	Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	100%	Net-to-Gross
Alternate Energy Impact	23400.0	L	
Alternate Capacity Impact		kW/a	
Measure Lifetime	10	Years	Estimated lifespan of measure

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
Number of NGV Vehicles (Waste Management Inc.)						
	19	20	20			Estimated Participation
Impact						
Gross Energy Savings (GJ)	(20,524)	(21,140)	(21,140)	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	(20,524)	(21,140)	(21,140)	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (Litres)	454,369	468,000	468,000	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Cost Benefit Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Additional NG Costs						
PV $ per GJ			$142.86	$142.86	$142.86	
Energy Purchases	$ (3,020,071)	$ (3,020,071)	$ (3,020,071)	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 803,560	$ 803,560	$ -	$ -	Including Implementation Lag
Administration		$ 500	$ 500			
Subtotal	$ 780,641	$ 804,060	$ 804,060	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	Including Implementation Lag
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Avoided Diesel costs						
Energy (Purchases)		$ 3,592,921	$ 3,592,921	$ -	$ -	$7.677 PV $ per L
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ 3,592,921	$ 3,592,921	$ 3,592,921	$ -	$ -	
Total Resource Net Benefit (Cost)	$ (207,791)		$ (231,210)	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	$ -		$ -	$ -	$ -	Informational (for comparison with supply options)

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only enter in boxes marked in blue

NEW

Measure Data for LNG (Vedder)

PER MEASURE			Utility Incentive to the participant	partner incentive
Total Incremental Cost	$ 87,866			
Total Incentive	$ 87,866		$ 87,866	$ -
Incremental Participant cost	$ -			

Annual Impact Per Measure

Energy Savings per installation	-2770.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	71657	L	19,904,724	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	5	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	47	50	50	0		Estimated Participation
Impact						
Gross Energy Savings (GJ)	(128,981)	(138,500)	(138,500)	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	(128,981)	(138,500)	(138,500)	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	3,380,047	3,582,850	3,582,850	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$83.64	$96.20	$96.20	
Energy Purchases	$ (11,584,339)	$ (11,584,339)	$ (11,584,339)	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 4,393,300	$ 4,393,300	$ -	$ -	
Administration		$ 500	$ 500	$ -		
Subtotal	$ 4,091,823	$ 4,393,800	$ 4,393,800	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -		$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ 13,583,041	$ 13,583,041	$ -	$ -	$3.791 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ 13,583,041	$ 13,583,041	$ 13,583,041	$ -	$ -	
Total Resource Net Benefit (Cost)	$ (2,093,121)		$ (2,395,098)	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	$ -		$ -	$ -	$ -	Informational (for comparison with supply options)

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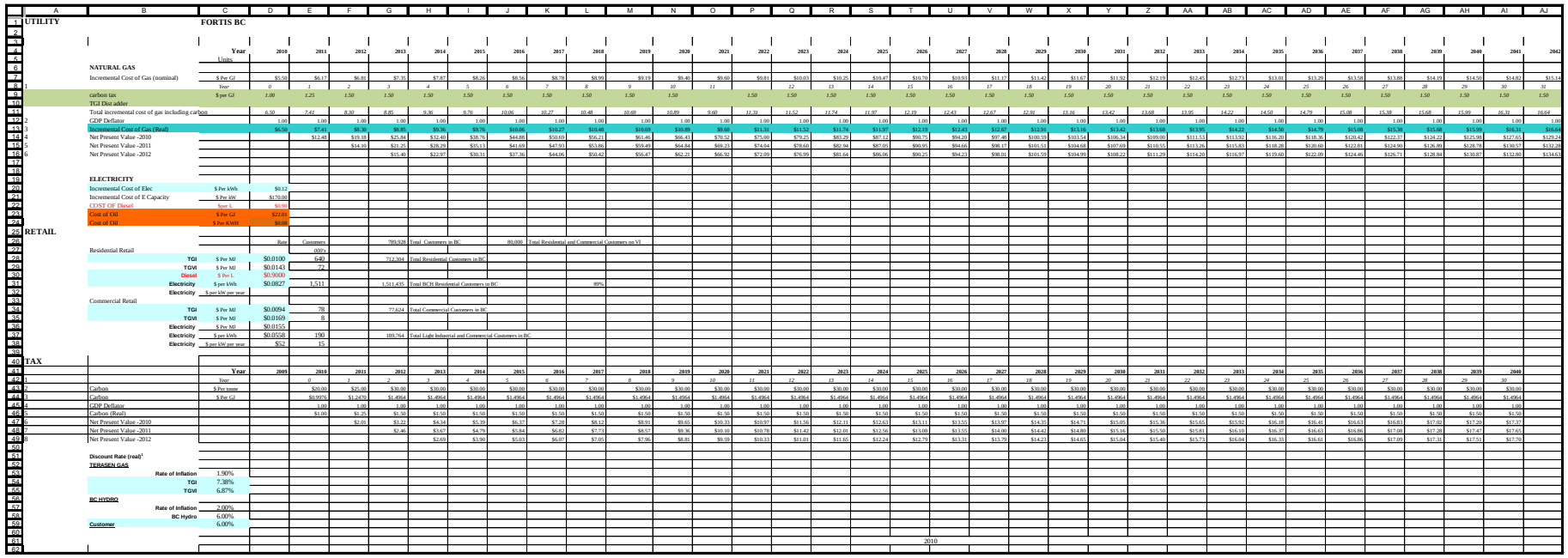
2010 Innovative Technology	PROGRAM														ALTERNATE		NET PRESENT VALUE								BENEFIT/COST							PARAMETERS														
	COSTS ($000)											SAVINGS (GJ)			LIFE	Impact		Levelized Cost	Utility Benefits (Costs)		Participant Benefits (Costs)			Program Net Savings			Natural Gas	Participant			Natural Gas		TRC Net Benefits	UTILITY				PARTICIPANT									
FEI	Utility			Partners																																											
	Incentives	Administration	Total	Incentives	Administration	Total	Participant	Total	% Utility	% Partner	% Participant	Gross	Net-to-Gross	Net	Years	Energy	Capacity	($/GJ)	Program	Alternate	Program	Carbon Tax	Alternate	Natural Gas	Alternate Energy	Alternate Capacity	Utility	Total Costs	Total Benefits	Benefit/Cost	Rate Impact	Total Resource	($'000s)	Natural Gas Utility Discount	Natural Gas Supply	Alternate Discount Rate	Alternate Supply	Discount Rate	Natural Gas NPV	Carbon Tax NPV	Alternate Energy NPV	Alternate Capacity NPV	Natural Gas Tariff	Energy Tariff	Capacity Tariff
																			($'000s)	($'000s)	($'000s)	($'000s)	($'000s)	(GJ)	(MWh)	(kW)		($'000s)	($'000s)						$/GJ		$/L		$/GJ	$/GJ	$/L	$/kW/a	$/GJ	$/kWh	$/kW/a
Label	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR	AS	AT
Source Sheet or Calculation	Program	Program	B+C	Program	Program	E+F	Program	D+G+H	D/I	G/I	H/I	Program	Program	MxN	Program	Program	Program	D/Y	OxAJ	Q x N x AL	M x N x AN	M x N x AO	N x (QxAP + RxAQ)	PV(AJ,P,-O)	PV(AK,P,-Q*N)	PV(AK,P,-R)	T/D	H=D, (V+W)=O	H=D, (V+W)=O, X	AD/AC	T/(V+D)	(T+U)/I	(T+U)-I	Input	Program	Input	Input	Input	PV(AM,P,-Input!D25)	Input	PV(AM,P,-Input!D28)	PV(AM,P,-Input!D29)	Input	Input	Input
2010																																														
Innovative Technologies																																														
NGV Vehicles (Kelowna School Bus)	363	1	364	-	-	-	-	364	100%	-	0%	(4,312)	100%	(4,312)	15	95	-	FS	(391)	834	(418)	(57)	834	(38,348)	927	-	FS	475	834	1.8	0.6	1.1	79	7.38%	90.75	6%	8.74	6.0%	97.03	$13.11	8.74	0.00	9.990	0.083	-
NGV Vehicles (Surrey)	27	1	27	-	-	-	-	27	100%	-	0%	(1,538)	100%	(1,538)	8	34	-	FS	(86)	190	(95)	(14)	190	(9,050)	211	-	FS	109	190	1.7	0.8	1.7	76	7.38%	56.21	6%	5.59	6.0%	62.04	$8.91	5.59	0.00	9.990	0.083	-
NGV Vehicles (Waste Management Inc.)	804	1	804	-	-	-	-	804	100%	-	0%	(21,140)	100%	(21,140)	10	468	-	FS	(1,404)	3,100	(1,554)	(218)	3,100	(145,905)	3,445	-	FS	1,773	3,100	1.7	0.7	1.4	892	7.38%	66.43	6%	6.62	6.0%	73.53	$10.33	6.62	0.00	9.990	0.083	-
LNG (Vedder)	4,393	1	4,394	-	-	-	-	4,394	100%	-	0%	(138,500)	100%	(138,500)	5	3,583	-	FS	(5,369)	13,583	(5,828)	(882)	13,583	(562,146)	15,092	-	FS	6,710	13,583	2.0	0.6	1.4	3,820	7.38%	38.76	6%	3.79	6.0%	42.08	$6.37	3.79	0.00	9.990	0.083	-
Total	5,587	2	5,589	-	-	-	-	5,589		-	0%	(165,490)		(165,490)		4,180	-	FS	(7,251)	17,707	(7,896)	(1,171)	17,707	(755,449)	19,675	-	FS	9,067	17,707	2.0	0.6	1.4	4,867													



	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ
1	**UTILITY**		**FORTIS BC**																																	
2																																				
3																																				
4			**Year**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**
5			Units																																	
6		**NATURAL GAS**																																		
7		Incremental Cost of Gas (nominal)	$ Per GJ	$5.50	$6.17	$6.81	$7.35	$7.87	$8.26	$8.56	$8.78	$8.99	$9.19	$9.40	$9.60	$9.81	$10.03	$10.25	$10.47	$10.70	$10.93	$11.17	$11.42	$11.67	$11.92	$12.19	$12.45	$12.73	$13.01	$13.29	$13.58	$13.88	$14.19	$14.50	$14.82	$15.14
8	1		Year	*0*	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*		*12*	*13*	*14*	*15*	*16*	*17*	*18*	*19*	*20*	*21*	*22*	*23*	*24*	*25*	*26*	*27*	*28*	*29*	*30*	*31*	
9		carbon tax	$ per GJ	*1.00*	*1.25*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*		*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	
10		TGI Dist adder																																		
11		Total incremental cost of gas including carbon		*6.50*	*7.41*	*8.30*	*8.85*	*9.36*	*9.76*	*10.06*	*10.27*	*10.48*	*10.69*	*10.89*	*9.60*	*11.31*	*11.52*	*11.74*	*11.97*	*12.19*	*12.43*	*12.67*	*12.92*	*13.16*	*13.42*	*13.68*	*13.95*	*14.22*	*14.50*	*14.79*	*15.08*	*15.38*	*15.68*	*15.99*	*16.31*	*16.64*	
12	2	GDP Deflator		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
13	3	Incremental Cost of Gas (Real)		$6.50	$7.41	$8.30	$8.85	$9.36	$9.76	$10.06	$10.27	$10.48	$10.69	$10.89	$9.60	$11.31	$11.52	$11.74	$11.97	$12.19	$12.43	$12.67	$12.92	$13.16	$13.42	$13.68	$13.95	$14.22	$14.50	$14.79	$15.08	$15.38	$15.68	$15.99	$16.31	$16.64	
14	4	Net Present Value -2010			$12.40	$19.18	$25.84	$32.40	$38.76	$44.88	$50.69	$56.21	$61.46	$66.43	$70.52	$75.00	$79.25	$83.29	$87.12	$90.75	$94.20	$97.48	$100.59	$103.54	$106.34	$109.00	$111.53	$113.92	$116.20	$118.36	$120.42	$122.37	$124.22	$125.98	$127.65	$129.24	
15	5	Net Present Value -2011			$14.18	$21.25	$28.29	$35.13	$41.69	$47.93	$53.86	$59.49	$64.84	$69.23	$74.04	$78.68	$82.94	$87.05	$90.95	$94.66	$98.17	$101.51	$104.68	$107.69	$110.55	$113.26	$115.83	$118.28	$120.60	$122.81	$124.90	$126.89	$128.78	$130.57	$132.28		
16	6	Net Present Value -2012				$15.40	$22.97	$30.31	$37.36	$44.06	$50.42	$56.47	$62.21	$66.92	$72.09	$76.98	$81.64	$86.06	$90.25	$94.23	$98.01	$101.59	$104.99	$108.22	$111.29	$114.20	$116.97	$119.60	$122.09	$124.46	$126.71	$128.84	$130.87	$132.80	$134.63			
17																																				
18																																				
19		**ELECTRICITY**																																		
20		Incremental Cost of Elec	$ Per kWh	$0.12																																
21		Incremental Cost of E Capacity	$ Per kW	$170.00																																
22		COST OF Diesel	$per L	$0.90																																
23		Cost of Oil	$ Per GJ	$22.01																																
24		Cost of Oil	$ Per KWH	$0.08																																
25	**RETAIL**																																			
26				Rate	Customers		789,928	Total Customers in BC		80.000	Total Residential and Commercial Customers on VI																										
27		Residential Retail			(000's)																																
28		**TGI**	$ Per MJ	$0.0100	640		712,304	Total Residential Customers in BC																													
29		**TGVI**	$ Per MJ	$0.0143	72																																
30		**Diesel**	$ Per L	$0.9000																																
31		**Electricity**	$ per kWh	$0.0827	1,511		1,511,435	Total BCH Residential Customers in BC				89%																										
32		**Electricity**	$ per kW per year																																	
33		Commercial Retail																																		
34		**TGI**	$ Per MJ	$0.0094	78		77,624	Total Commercial Customers in BC																													
35		**TGVI**	$ Per MJ	$0.0169	8																																
36		**Electricity**	$ Per MJ	$0.0155																																
37		**Electricity**	$ per kWh	$0.0558	190		189,764	Total Light Industrial and Commercial Customers in BC																													
38		**Electricity**	$ per kW per year	$52	15																																
39																																				
40	**TAX**																																			
41			**Year**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**		
42	1		Year		*0*	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*	*16*	*17*	*18*	*19*	*20*	*21*	*22*	*23*	*24*	*25*	*26*	*27*	*28*	*29*	*30*		
43	2	Carbon	$ Per tonne		$20.00	$25.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00		
44	3	Carbon	$ Per GJ		$0.957%	$1.2478	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964		
45	4	GDP Deflator			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
46	5	Carbon (Real)			$1.00	$1.25	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50		
47	6	Net Present Value -2010				$2.01	$3.22	$4.34	$5.39	$6.37	$7.28	$8.12	$8.91	$9.65	$10.33	$10.97	$11.56	$12.11	$12.63	$13.11	$13.55	$13.97	$14.35	$14.71	$15.05	$15.36	$15.63	$15.92	$16.18	$16.41	$16.63	$16.83	$17.02	$17.20	$17.37			
48	7	Net Present Value -2011					$2.46	$3.67	$4.79	$5.84	$6.82	$7.73	$8.57	$9.36	$10.10	$10.78	$11.42	$12.01	$12.56	$13.08	$13.55	$14.00	$14.42	$14.80	$15.16	$15.50	$15.81	$16.10	$16.37	$16.63	$16.86	$17.08	$17.28	$17.47	$17.65			
49	8	Net Present Value -2012						$2.69	$3.98	$5.03	$6.07	$7.05	$7.96	$8.81	$9.59	$10.33	$11.01	$11.65	$12.24	$12.79	$13.31	$13.79	$14.23	$14.65	$15.04	$15.40	$15.73	$16.04	$16.33	$16.61	$16.86	$17.09	$17.31	$17.51	$17.70			
50																																				
51		**Discount Rate (real)[1]**																																		
52		**TERASEN GAS**																																		
53		**Rate of Inflation**	1.90%																																	
54		**TGI**	7.38%																																	
55		**TGVI**	6.87%																																	
56		**BC HYDRO**																																		
57		**Rate of Inflation**	2.00%																																	
58		**BC Hydro**	6.00%																																	
59		**Customer**	6.00%																																	
60																																				
61																				2010																
62																																				

FORTIS BC

Innovative Technology

Measure Data for NGV Vehicles (Kelowna School Bus)

PER MEASURE

Implementation Lag

Total Cost	$ 33,026			
Total Incentive	$ 33,026			
Utility Incentive	***$ 33,026***	*No lag*	*Present Value accounts for any implementation lag*	
Partner Incentive	***$ -***	*No lag*	*Present Value accounts for any implementation lag*	
Participant Cost				

Annual Impact Per Measure

Time lag to implementation	-	Years	
Energy Cons per installation	**-392.0**	GJ	Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	**0%**	100%	Net-to-Gross
Alternate Energy Impact	**8676.0**	L	
Alternate Capacity Impact		kW/a	
Measure Lifetime	**15**	Years	Estimated lifespan of measure

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
Number of NGV Vehicles (Kelowna School Bus)						
	10	11	**11**			Estimated Participation
Impact						
Gross Energy Savings (GJ)	(4,016)	(4,312)	(4,312)	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	(4,016)	(4,312)	(4,312)	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (Litres)	90,034	95,436	95,436	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Cost Benefit Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Additional NG Costs						
PV $ per GJ			$90.75	$94.66	$98.01	
Energy Purchases	$ (391,322)	$ (391,322)	$ (391,322)	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 363,286	$ 363,286	$ -	$ -	Including Implementation Lag
Administration		$ 500	**$ 500**			
Subtotal	$ 338,784	$ 363,786	$ 363,786	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	Including Implementation Lag
Administration		$ -	**$ -**	**$ -**	**$ -**	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Avoided Diesel costs						
Energy (Purchases)		$ 834,208	$ 834,208	$ -	$ -	$8.741 PV $ per L
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ 834,208	$ 834,208	$ 834,208	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 104,103		$ 79,100	$ -	$ -	Avoided Revenue Requirement less Utility less Partners
						less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ -**		**$ -**	**$ -**	**$ -**	Informational (for comparison with supply options)

FORTIS BC

Innovative Technology

Measure Data for NGV Vehicles (Surrey)

PER MEASURE			Implementation Lag	
Total Cost	$ 26,700			
Total Incentive	$ 26,700			
Utility Incentive	***$ 26,700***		*No lag*	*Present Value accounts for any implementation lag*
Partner Incentive	***$ -***		*No lag*	*Present Value accounts for any implementation lag*
Participant Cost				

Annual Impact Per Measure

Time lag to implementation	-	Years	
Energy Cons per installation	-1538.0	GJ	Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	100%	Net-to-Gross
Alternate Energy Impact	34000.0	L	
Alternate Capacity Impact		kW/a	
Measure Lifetime	8	Years	Estimated lifespan of measure

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
Number of NGV Vehicles (Surrey)						
	1	1	**1**			Estimated Participation
Impact						
Gross Energy Savings (GJ)	(1,432)	(1,538)	(1,538)	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	(1,432)	(1,538)	(1,538)	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (Litres)	32,075	34,000	34,000	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Cost Benefit Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Additional NG Costs						
PV $ per GJ			$56.21	$59.49	$62.21	
Energy Purchases	$ (86,452)	$ (86,452)	$ (86,452)	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 26,700	$ 26,700	$ -	$ -	Including Implementation Lag
Administration		$ 500	**$ 500**			
Subtotal	$ 25,331	$ 27,200	$ 27,200	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	Including Implementation Lag
Administration		$ -	**$ -**	**$ -**	**$ -**	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Avoided Diesel costs						
Energy (Purchases)		$ 190,020	$ 190,020	$ -	$ -	$5.589 PV $ per L
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ 190,020	$ 190,020	$ 190,020	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 78,237		$ 76,368	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ -**		**$ -**	**$ -**	**$ -**	Informational (for comparison with supply options)

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Innovative Technology

Measure Data for NGV Vehicles (Waste Management Inc.)

PER MEASURE			Implementation Lag	
Total Cost	$	40,178		
Total Incentive	$	40,178		
Utility Incentive	*$*	*40,178*	*No lag*	*Present Value accounts for any implementation lag*
Partner Incentive	*$*	-	*No lag*	*Present Value accounts for any implementation lag*
Participant Cost				

Annual Impact Per Measure

Time lag to implementation	-	Years	
Energy Cons per installation	-1057.0	GJ	Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	100%	Net-to-Gross
Alternate Energy Impact	23400.0	L	
Alternate Capacity Impact		kW/a	
Measure Lifetime	10	Years	Estimated lifespan of measure

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
Number of NGV Vehicles (Waste Management Inc.)						
	19	20	20			Estimated Participation
Impact						
Gross Energy Savings (GJ)	(19,687)	(21,140)	(21,140)	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	(19,687)	(21,140)	(21,140)	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (Litres)	441,509	468,000	468,000	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Cost Benefit Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Additional NG Costs						
PV $ per GJ			$66.43	$69.23	$76.99	
Energy Purchases	$ (1,404,398)	$ (1,404,398)	$ (1,404,398)	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 803,560	$ 803,560	$ -	$ -	Including Implementation Lag
Administration		$ 500	$ 500			
Subtotal	$ 748,799	$ 804,060	$ 804,060	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	Including Implementation Lag
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Avoided Diesel costs						
Energy (Purchases)		$ 3,100,069	$ 3,100,069	$ -	$ -	$6.624 PV $ per L
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ 3,100,069	$ 3,100,069	$ 3,100,069	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 946,872		$ 891,611	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	$ -		$ -	$ -	$ -	Informational (for comparison with supply options)

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only enter in boxes marked in blue

NEW

Measure Data for LNG (Vedder)

PER MEASURE		Utility Incentive to the participant	partner incentive
Total Incremental Cost	$ 87,866		
Total Incentive	$ 87,866	$ 87,866	$ -
Incremental Participant cost	$ -		

Annual Impact Per Measure

Energy Savings per installation	-2770.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	71657	L	19,904,724	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	5	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	47	50	50	0		Estimated Participation
Impact						
Gross Energy Savings (GJ)	(128,981)	(138,500)	(138,500)	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	(128,981)	(138,500)	(138,500)	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	3,380,047	3,582,850	3,582,850	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$38.76	$41.69	$44.06	
Energy Purchases	$ (5,368,839)	$ (5,368,839)	$ (5,368,839)	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 4,393,300	$ 4,393,300	$ -	$ -	
Administration		$ 500	$ 500	$ -		
Subtotal	$ 4,091,823	$ 4,393,800	$ 4,393,800	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -		$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ 13,583,041	$ 13,583,041	$ -	$ -	$3.791 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ 13,583,041	$ 13,583,041	$ 13,583,041	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 4,122,378		$ 3,820,402	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	$ -		$ -	$ -	$ -	Informational (for comparison with supply options)

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	PROGRAM														ALTERNATE		NET PRESENT VALUE								BENEFIT/COST						PARAMETERS													
2010 Innovative Technologies Programs	COSTS ($000)											SAVINGS (GJ)			LIFE	Impact		Levelized Cost	Utility Benefits (Costs)		Participant Benefits (Costs)			Program Net Savings			Participant						UTILITY				PARTICIPANT								
FEVI	Utility			Partners			Participant	Total	% Utility	% Partner	% Participant	Gross	Net-to-Gross	Net	Years	Energy	Capacity	($/GJ)	Program	Alternate	Program	Carbon Tax	Alternate	Natural Gas	Alternate Energy	Alternate Capacity	Natural Gas	Total Costs	Total Benefits	Benefit/Cost	Natural Gas	Societal Cost Test	SCT Net Benefits	Natural Gas Utility Discount Rate	Natural Gas Supply	Alternate Discount Rate	Alternate Supply	Discount Rate	Natural Gas NPV	Carbon Tax NPV	Alternate Energy NPV	Alternate Capacity NPV	Natural Gas Tariff	Energy Tariff	Capacity Tariff
	Incentives	Administration	Total	Incentives	Administration	Total										MWh	kW	($'000s)	($'000s)	($'000s)	($'000s)	($'000s)	($'000s)	(GJ)	(MWh)	(kW)	Utility	($'000s)	($'000s)		Rate Impact			($'000s)	$/GJ		$/kWh		$/GJ	$/GJ	$/kWh	$/kW/a	$/GJ	$/kWh	$/kW/a
Label	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR	AS	AT
Source Sheet or Calculation	Program	Program	B+C	Program	Program	E+F	Program	D+G+H	D/I	G/I	H/I	Program	Program	MxN	Program	Program	Program	D/Y	OxAJ	Q x N x AL	M x N x AN	M x N x AO	N x [QxAP + RxAQ]	PV(AJ,P,-O)	PV(AK,P,-Q*N)	PV(AK,P,-R)	T/D	H=D, (V+W)=D	H=D, (V+W)=0, X	AD/AC	T/(V+D)	(T+U)/I	(T+U)-I	Input	Program	Input	Input	Input	PV(AM,P,-InputD25)	Input	PV(AM,P,-InputD28)	PV(AM,P,-InputD29)	Input	Input	Input
2010																																												
RESIDENTIAL:																																												
Solar Water heating PSECA Program TGVI	143	0	143	162	0	162	491	796	18%	20%	62%	1,683	100%	1,683	25	0	-	5	604	N/A	496	44	N/A	29,306	0	-	4.2	491	540	1.1	0.9	0.8	(193)	3.00%	275.84	3%	2.09	3.0%	294.98	26.03	1.44	0.00	9.999	0.083	-
Total Commercial	143	0	143	162	0	162	491	796	18%	0	62%	1,683		1,683		0	0	5	604	0	496	44	0	29,306	0	0	4.2	491	540	1.1	0.9	0.8	(193)	1.0	(12)										

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ
1	**UTILITY**		**FORTIS BC**																																	
2																																				
3																																				
4			**Year**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	
5			Units																																	
6		**NATURAL GAS**																																		
7		Incremental Cost of Gas (nominal)	$ Per GJ	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.43
8	1		*Year*	*0*	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*	*16*	*17*	*18*	*19*	*20*	*21*	*22*	*23*	*24*	*25*	*26*	*27*	*28*	*29*	*30*	*31*	
9		carbon tax	$ per GJ	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	
10		Distribution adder	$ per GJ	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	
11		Total incremental cost of gas including carbon		*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.28*	
12	2	GDP Deflator		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
13	3	Incremental Cost of Gas (Real)		$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.28	
14	4	Net Present Value -2010			$29.52	$43.65	$57.35	$70.66	$83.59	$96.13	$108.31	$120.14	$131.62	$142.77	$153.59	$164.10	$174.30	$184.20	$193.82	$203.15	$212.22	$221.02	$229.56	$237.85	$245.91	$253.72	$261.32	$268.68	$275.84	$282.79	$289.53	$296.08	$302.43	$308.61	$314.64		
15	5	Net Present Value -2011			$29.52	$43.65	$57.35	$70.66	$83.59	$96.13	$108.31	$120.14	$131.62	$142.77	$153.59	$164.10	$174.30	$184.20	$193.82	$203.15	$212.22	$221.02	$229.56	$237.85	$245.91	$253.72	$261.32	$268.68	$275.84	$282.79	$289.53	$296.08	$302.43	$308.56			
16	6	Net Present Value -2012				$29.52	$43.65	$57.35	$70.66	$83.59	$96.13	$108.31	$120.14	$131.62	$142.77	$153.59	$164.10	$174.30	$184.20	$193.82	$203.15	$212.22	$221.02	$229.56	$237.85	$245.91	$253.72	$261.32	$268.68	$275.84	$282.79	$289.53	$296.08	$302.37				
17																																				
18																																				
19		**ELECTRICITY**																																		
20		Incremental Cost of Elec	$ Per kWh	$0.10																																
21		Incremental Cost of E Capacity	$ Per kW/a	$170.00																																
22																																				
23																																				
24																																				
25	**RETAIL**																																			
26				Rate	Customers																															
27		Residential Retail			1,000																															
28		**TGI**	$ Per MJ	$0.0100	1,000																															
29		**TGVI**	$ Per MJ	$0.0143	1,000																															
30		**Electricity**	$ Per MJ	$0.0230																																
31		**Electricity**	$ per kWh	$0.0829	1,000																															
32		**Electricity**	$ per kW per year		1,000																															
33		Commercial Retail																																		
34		**TGI**	$ Per MJ	$0.0094	50																															
35		**TGVI**	$ Per MJ	$0.0160	50																															
36		**Electricity**	$ Per MJ	$0.0214																																
37		**Electricity**	$ per kWh	$0.0749	1,000																															
38		**Electricity**	$ per kW per year	$52.0000	1,000																															
39																																				
40	**TAX**																																			
41			**Year**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**		
42	1		*Year*	*0*	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*	*16*	*17*	*18*	*19*	*20*	*21*	*22*	*23*	*24*	*25*	*26*	*27*	*28*	*29*	*30*		
43	2	Carbon	$ Per tonne		$20.00	$25.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00		
44	3	Carbon	$ Per GJ		$0.9976	$1.2470	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964		
45	4	GDP Deflator			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
46	5	Carbon (Real)			$1.00	$1.25	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50		
47	6	Net Present Value -2008			$2.14	$3.51	$4.84	$6.13	$7.38	$8.60	$9.78	$10.93	$12.05	$13.13	$14.18	$15.19	$16.18	$17.14	$18.08	$18.98	$19.86	$20.71	$21.54	$22.35	$23.13	$23.89	$24.62	$25.34	$26.03	$26.71	$27.38	$27.99	$28.61	$29.21			
48	7	Net Present Value -2009				$2.62	$3.99	$5.32	$6.61	$7.86	$9.08	$10.26	$11.41	$12.52	$13.60	$14.65	$15.67	$16.66	$17.62	$18.55	$19.46	$20.34	$21.19	$22.02	$22.82	$23.61	$24.36	$25.10	$25.81	$26.51	$27.18	$27.84	$28.47	$29.09				
49	8	Net Present Value -2010					$2.86	$4.23	$5.56	$6.85	$8.11	$9.32	$10.50	$11.65	$12.76	$13.85	$14.90	$15.91	$16.90	$17.86	$18.80	$19.70	$20.58	$21.43	$22.26	$23.07	$23.85	$24.61	$25.34	$26.06	$26.75	$27.42	$28.08	$28.71			
50																																				
51		**Discount Rate (real)**[1]																																		
52		**TERASEN GAS**																																		
53		**Rate of Inflation**	1.90%																																	
54		**TGI**	3.00%																																	
55		**TGVI**	3.00%																																	
56		**BC HYDRO**																																		
57		**Rate of Inflation**	2.00%																																	
58		**BC Hydro**	3.00%																																	
59		**Customer**	3.00%																																	
60		*Footnote 1: Source LR 07/0531*																																		
61																																				
62				**SHEET LABELS**																																
63	**New Construction**																																			
64		Solar Water heating PSECA Program TGVI		**BASEBOARD**																																
65		#REF!		**HEATPUMP**																																
66																																				

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NEW

Measure Data for Solar Water heating PSECA Program TGVI

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 796,351			
Total Incentive	$ 305,177		$ 142,950	$ 162,227
Participant	$ 491,174			

Annual Impact Per Measure

Energy Savings per installation	1683.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	25	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0	0	Estimated Participation
Impact						
Gross Energy Savings (GJ)	1,634	1,683	1,683	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	1,634	1,683	1,683	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$275.84	$268.68	$268.68	
Energy Purchases	$ 464,238	$ 464,238	$ 464,238	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 142,950	$ 142,950	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ 138,786	$ 142,950	$ 142,950	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ 162,227	$ 162,227	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ 157,502	$ 162,227	$ 162,227	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 491,174	$ 491,174	$ -	$ -	
Subtotal	$ 476,868	$ 491,174	$ 491,174	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$2.090 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ (151,416)		$ (332,113)	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 21.6**		**$ 21.6**	**$ -**	**$ -**	Informational (for comparison with supply options)

FORTIS BC

	PROGRAM														ALTERNATE		NET PRESENT VALUE								BENEFIT/COST						PARAMETERS													
2010 Innovative Technologies Programs	COSTS ($000)											SAVINGS (GJ)			LIFE	Impact		Levelized Cost	Utility Benefits (Costs)		Participant Benefits (Costs)			Program Net Savings			Participant						UTILITY				PARTICIPANT								
FEVI	Utility			Partners			Participant	Total	% Utility	% Partner	% Participant	Gross	Net-to-Gross	Net	Years	Energy	Capacity	($/GJ)	Program	Alternate	Program	Carbon Tax	Alternate	Natural Gas	Alternate Energy	Alternate Capacity	Natural Gas	Total Costs	Total Benefits	Benefit/Cost	Natural Gas	Total Resource	TRC Net Benefits	Natural Gas Utility Discount Rate	Natural Gas Supply	Alternate Discount Rate	Alternate Supply	Discount Rate	Natural Gas NPV	Carbon Tax NPV	Alternate Energy NPV	Alternate Capacity NPV	Natural Gas Tariff	Energy Tariff	Capacity Tariff
	Incentives	Administration	Total	Incentives	Administration	Total										MWh	kW		($'000s)	($'000s)	($'000s)	($'000s)	($'000s)	(GJ)	(MWh)	(kW)	Utility	($'000s)	($'000s)		Rate Impact		($'000s)		$/GJ		$/kWh		$/GJ	$/kWh	$/kW/a			
Label	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR	AS	AT
Source Sheet or Calculation	Program	Program	B+C	Program	Program	E+F	Program	D+G+H	D/I	G/I	H/I	Program	Program	MxN	Program	Program	Program	D/Y	OxAJ	Q x N x AL	M x N x AN	M x N x AO	N x [QxAP + RxAQ]	PV(AJ,P,-O)	PV(AK,P,-Q*N)	PV(AK,P,-R)	T/D	H=0, (V+W)=D	H=D, (V+W)=0, X	AD/AC	T/(V+D)	(T+U)/I	(T+U)-I	Input	Program	Input	Input	Input	PV(AM,P,-InputD25)	Input	PV(AM,P,-InputD28)	PV(AM,P,-InputD29)	Input	Input	Input
2010																																												
RESIDENTIAL:																																												
Solar Water heating PSECA Program TGVI	143	0	143	162	0	162	491	796	18%	20%	62%	1,683	100%	1,683	25	0	-	7	209	N/A	364	29	N/A	19,845	0	-	1.5	491	393	0.8	0.4	0.3	(587)	6.87%	124.37	6%	1.53	6.0%	216.55	17.23	1.06	0.00	9.999	0.083	-
Total Commercial	143	0	143	162	0	162	491	796	18%	0	62%	1,683		1,683		0	0	7	209	0	364	29	0	19,845	0	0	1.5	491	393	0.8	0.4	0.3	(587)	0.3	(524)										

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI
1	UTILITY		FORTIS BC																																
2																																			
3																																			
4			Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041
5			Units																																
6		NATURAL GAS																																	
7		Incremental Cost of Gas (nominal)	$ Per GJ	$5.50	$6.17	$6.81	$7.35	$7.87	$8.26	$8.56	$8.78	$8.99	$9.19	$9.40	$9.60	$9.81	$10.03	$10.25	$10.47	$10.70	$10.93	$11.17	$11.42	$11.67	$11.92	$12.19	$12.45	$12.73	$13.01	$13.29	$13.58	$13.88	$14.19	$14.50	$14.82
8	1		Year	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
9		carbon tax	$ per GJ	0.75	1.00	1.25	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
10		Distribution adder	$ per GJ	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	
11		Total incremental cost of gas including carbon		6.40	7.32	8.21	9.00	9.52	9.91	10.21	10.43	10.64	10.84	11.05	11.25	11.46	11.68	11.90	12.12	12.35	12.58	12.82	13.07	13.32	13.57	13.84	14.10	14.38	14.66	14.94	15.23	15.53	15.84	16.15	16.32
12	2	GDP Deflator		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
13	3	Incremental Cost of Gas (Real)		$6.40	$7.32	$8.21	$9.00	$9.52	$9.91	$10.21	$10.43	$10.64	$10.84	$11.05	$11.25	$11.46	$11.68	$11.90	$12.12	$12.35	$12.58	$12.82	$13.07	$13.32	$13.57	$13.84	$14.10	$14.38	$14.66	$14.94	$15.23	$15.53	$15.84	$16.15	$16.32
14	4	Net Present Value -2010			$12.39	$19.12	$26.01	$32.84	$39.49	$45.90	$52.03	$57.88	$63.45	$68.77	$73.84	$78.67	$83.27	$87.67	$91.85	$95.84	$99.64	$103.27	$106.73	$110.03	$113.17	$116.18	$119.04	$121.77	$124.37	$126.86	$129.23	$131.49	$133.64	$135.70	$137.65
15	5	Net Present Value -2011				$14.03	$21.40	$28.70	$35.81	$42.66	$49.20	$55.46	$61.41	$67.10	$72.51	$77.68	$82.60	$87.29	$91.76	$96.03	$100.09	$103.97	$107.66	$111.19	$114.55	$117.76	$120.82	$123.74	$126.52	$129.17	$131.71	$134.12	$136.43	$138.63	$140.71
16	6	Net Present Value -2012					$15.56	$23.35	$30.95	$38.27	$45.27	$51.95	$58.32	$64.39	$70.18	$75.69	$80.95	$85.97	$90.75	$95.31	$99.65	$103.79	$107.74	$111.51	$115.10	$118.53	$121.80	$124.92	$127.89	$130.73	$133.44	$136.02	$138.48	$140.83	$143.06
17																																			
18																																			
19		ELECTRICITY																																	
20		Incremental Cost of Elec	$ Per kWh	$0.12																															
21		Incremental Cost of E Capacity	$ Per kW/a	$170.00																															
22																																			
23																																			
24																																			
25	RETAIL																																		
26				Rate	Customers		789,928	Total Customers in BC			80,000	Total Residential and Commercial Customers on VI																							
27		Residential Retail			000's																														
28		TGI	$ Per MJ	$0.0100	640		712,304	Total Residential Customers in BC																											
29		TGVI	$ Per MJ	$0.0143	72																														
30		Electricity	$ Per MJ	$0.0230																															
31		Electricity	$ per kWh	$0.0827	1,511		1,511,435	Total BCH Residential Customers in BC				89%																							
32		Electricity	$ per kW per year																																
33		Commercial Retail																																	
34		TGI	$ Per MJ	$0.0094	78		77,624	Total Commercial Customers in BC																											
35		TGVI	$ Per MJ	$0.0169	8																														
36		Electricity	$ Per MJ	$0.0214																															
37		Electricity	$ per kWh	$0.0769	190		189,764	Total Light Industrial and Commercial Customers in BC																											
38		Electricity	$ per kW per year	$52.0000	15																														
39																																			
40	TAX																																		
41			Year	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
42	1		Year		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
43	2	Carbon	$ Per tonne		$20.00	$25.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00
44	3	Carbon	$ Per GJ		$0.9976	$1.2470	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964
45	4	GDP Deflator			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
46	5	Carbon (Real)			$1.00	$1.25	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50
47	6	Net Present Value -2008				$2.03	$3.25	$4.40	$5.47	$6.48	$7.42	$8.30	$9.12	$9.89	$10.61	$11.28	$11.91	$12.50	$13.06	$13.57	$14.06	$14.51	$14.93	$15.33	$15.70	$16.05	$16.37	$16.68	$16.96	$17.23	$17.47	$17.71	$17.93	$18.13	$18.32
48	7	Net Present Value -2009					$2.48	$3.70	$4.85	$5.92	$6.93	$7.87	$8.75	$9.57	$10.34	$11.06	$11.73	$12.37	$12.96	$13.51	$14.03	$14.51	$14.96	$15.38	$15.78	$16.15	$16.50	$16.82	$17.13	$17.41	$17.68	$17.93	$18.16	$18.38	$18.58
49	8	Net Present Value -2010						$2.71	$3.94	$5.08	$6.16	$7.16	$8.10	$8.98	$9.80	$10.57	$11.29	$11.97	$12.60	$13.19	$13.74	$14.26	$14.74	$15.19	$15.62	$16.01	$16.39	$16.73	$17.06	$17.36	$17.64	$17.91	$18.16	$18.39	$18.61
50																																			
51		Discount Rate (real)[1]																																	
52		TERASEN GAS																																	
53		Rate of Inflation	1.90%																																
54		TGI	7.38%																																
55		TGVI	6.87%																																
56		BC HYDRO																																	
57		Rate of Inflation	2.00%																																
58		BC Hydro	6.00%																																
59		Customer	6.00%																																
60		Footnote 1: Source LR 070531																																	
61																																			
62				SHEET LABELS																															
63	New Construction																																		
64		Solar Water heating PSECA Program TGVI		BASEBOARD																															
65		#REF!		HEATPUMP																															

FORTIS BC

only enter in boxes marked in blue

NEW

Measure Data for Solar Water heating PSECA Program TGVI

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 796,351			
Total Incentive	$ 305,177		$ 142,950	$ 162,227
Participant	$ 491,174			

Annual Impact Per Measure

Energy Savings per installation	1683.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	25	Years	Estimated lifespan of measure	

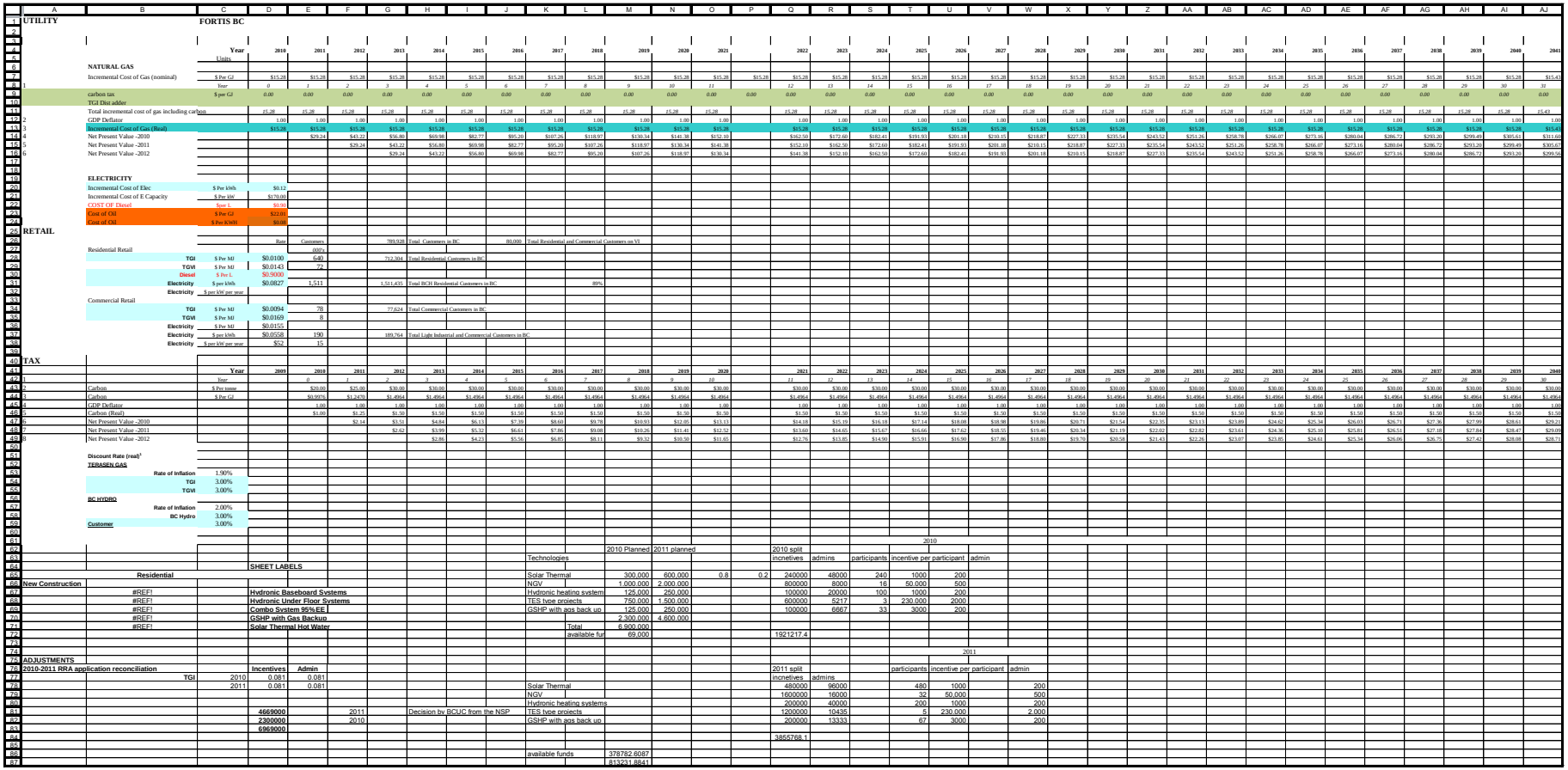
ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	1	0	0	Estimated Participation
Impact						
Gross Energy Savings (GJ)	1,567	1,683	1,683	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	1,567	1,683	1,683	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$124.37	$129.17	$133.44	
Energy Purchases	$ 209,320	$ 209,320	$ 209,320	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 142,950	$ 142,950	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ 133,125	$ 142,950	$ 142,950	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ 162,227	$ 162,227	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ 151,078	$ 162,227	$ 162,227	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 491,174	$ 491,174	$ -	$ -	
Subtotal	$ 457,416	$ 491,174	$ 491,174	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.534 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ (381,222)		$ (587,031)	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 33.4**		**$ 33.4**	**$ -**	**$ -**	Informational (for comparison with supply options)

FORTIS BC

	PROGRAM														ALTERNATE		NET PRESENT VALUE									BENEFIT/COST						PARAMETERS														
2010 High Carbon Fuel Switching Programs	COSTS ($000)										SAVINGS (GJ)			LIFE	Impact		Levelized Cost	Utility Benefits (Costs)		Participant Benefits (Costs)			Program Net Savings				Participant						UTILITY				PARTICIPANT									
FEI	Utility			Partners										Years	Energy	Capacity	($/GJ)	Program	Alternate	Program	Carbon Tax	Alternate	Natural Gas	Alternate Energy	Alternate Capacity	Natural Gas	Total Costs	Total Benefits	Benefit/Cost	Natural Gas	Societal Cost Test	SCT Net Benefits	Natural Gas Utility Discount	Natural Gas Supply	Alternate Discount Rate	Alternate Supply	Discount Rate	Natural Gas NPV	Carbon Tax NPV	Alternate Energy NPV	Alternate Capacity NPV	Natural Gas Tariff	Energy Tariff	Capacity Tariff
	Incentives	Administration	Total	Incentives	Administration	Total	Participant	Total	% Utility	% Partner	% Participant	Gross	Net-to-Gross	Net	L	kW		($'000s)	($'000s)	($'000s)	($'000s)	($'000s)	(GJ)	(MWh)	(kW)	Utility	($'000s)	($'000s)		Rate Impact			$/GJ	$/GJ	$/GJ	$/L	$/kW/a	$/GJ	$/kWh	$/kW/a
Label	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR	AS	AT
Source Sheet or Calculation	Program	Program	B+C	Program	Program	E+F	Program	D+G+H	D/I	G/I	H/I	Program	Program	M-N	Program	Program	Program	D/Y	O x AJ	Q x N x AL	M x N x AN	M x N x AO	N x (QxAP + RxAQ)	PV(AJ,P,-O)	PV(AK,P,-Q*N)	PV(AK,P,-R)	T/D	H=0, (V+W)=0	H=0, (V+W)=0, X	AD/AC	T/(V+D)	(T+U)/I	(T+U)-I	Input	Program	Input	Input	Input	PV(AM,P,-Input!D25)	Input	PV(AN,P,-Input!D28)	PV(AM,P,-Input!D29)	Input	Input	Input
2010																																													
Residential																																													
Switch 'N' Shrink High Carbon Fuel Switching	29	46	75	-	-	-	-	75	100%	-	0%	(1,247)	50%	(624)	18	1	-	FS	(177)	262	(86)	(13)	202	(8,575)	9	-	FS	99	202	2.0	0.3	1.0	10	3.00%	218.87	3%	302.71	3.0%	137.40	$20.71	302.71	0.00	9.990	0.083	-
Total Residential	29	46	75	-	-	-	-	75		-	0%	(1,247)		(624)		1	-	FS	(177)	262	(86)	(13)	202	(8,575)	9	-	FS	99	202	2.0	0.3	1.0	10												



	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ
1	**UTILITY**		**FORTIS BC**																																	
2																																				
3																																				
4			Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021		2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041
5			Units																																	
6		**NATURAL GAS**																																		
7		Incremental Cost of Gas (nominal)	$ Per GJ	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.43
8	1		Year	0	1	2	3	4	5	6	7	8	9	10	11		12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
9		carbon tax	$ per GJ	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
10		TGI Dist addor																																		
11		Total incremental cost of gas including carbon		15.28	15.28	15.28	15.28	15.28	15.28	15.28	15.28	15.28	15.28	15.28	15.28		15.28	15.28	15.28	15.28	15.28	15.28	15.28	15.28	15.28	15.28	15.28	15.28	15.28	15.28	15.28	15.28	15.28	15.28	15.28	15.43
12	2	GDP Deflator		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
13	3	Incremental Cost of Gas (Real)		$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28		$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.43
14	4	Net Present Value -2010			$29.24	$43.22	$56.80	$69.98	$82.77	$95.20	$107.26	$118.97	$130.34	$141.38	$152.10		$162.50	$172.60	$182.41	$191.93	$201.18	$210.15	$218.87	$227.33	$235.54	$243.52	$251.26	$258.78	$266.07	$273.16	$280.04	$286.72	$293.20	$299.49	$305.61	$311.60	
15	5	Net Present Value -2011			$29.24		$43.22	$56.80	$69.98	$82.77	$95.20	$107.26	$118.97	$130.34	$141.38		$152.10	$162.50	$172.60	$182.41	$191.93	$201.18	$210.15	$218.87	$227.33	$235.54	$243.52	$251.26	$258.78	$266.07	$273.16	$280.04	$286.72	$293.20	$299.49	$305.07	
16	6	Net Present Value -2012					$29.24	$43.22	$56.80	$69.98	$82.77	$95.20	$107.26	$118.97	$130.34		$141.38	$152.10	$162.50	$172.60	$182.41	$191.93	$201.18	$210.15	$218.87	$227.33	$235.54	$243.52	$251.26	$258.78	$266.07	$273.16	$280.04	$286.72	$293.20	$299.56	
17																																				
18																																				
19		**ELECTRICITY**																																		
20		Incremental Cost of Elec	$ Per kWh	$0.12																																
21		Incremental Cost of E Capacity	$ Per kW	$170.00																																
22		COST OF Diesel	$per L	$0.90																																
23		Cost of Oil	$ Per GJ	$22.01																																
24		Cost of Oil	$ Per KWH	$0.08																																
25	**RETAIL**																																			
26				Rate	Customers		789,928	Total Customers in BC		80,000	Total Residential and Commercial Customers on VI																										
27		Residential Retail			(000's)																																
28		**TGI**	$ Per MJ	$0.0100	640		712,304	Total Residential Customers in BC																													
29		**TGVI**	$ Per MJ	$0.0143	72																																
30		**Diesel**	$ Per L	$0.9000																																
31		**Electricity**	$ per kWh	$0.0827	1,511		1,511,435	Total BCH Residential Customers in BC				89%																									
32		**Electricity**	$ per kW per year																																	
33		Commercial Retail																																		
34		**TGI**	$ Per MJ	$0.0094	78		77,624	Total Commercial Customers in BC																													
35		**TGVI**	$ Per MJ	$0.0169	8																																
36		**Electricity**	$ Per MJ	$0.0155																																
37		**Electricity**	$ per kWh	$0.0558	190		189,764	Total Light Industrial and Commercial Customers in BC																													
38		**Electricity**	$ per kW per year	$52	15																																
39																																				
40	**TAX**																																			
41			**Year**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**		**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**
42	1		Year	0	1	2	3	4	5	6	7	8	9	10		11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
43	2	Carbon	$ Per tonne		$20.00	$25.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00		$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	
44	3	Carbon	$ Per GJ		$0.597%	$1.2478	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964		$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	
45	4	GDP Deflator			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
46	5	Carbon (Real)			$1.00	$1.25	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50		$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	
47	6	Net Present Value -2010				$2.14	$3.51	$4.84	$6.15	$7.39	$8.60	$9.78	$10.93	$12.05	$13.13		$14.18	$15.19	$16.18	$17.14	$18.08	$18.98	$19.86	$20.71	$21.54	$22.35	$23.13	$23.89	$24.62	$25.34	$26.03	$26.71	$27.36	$27.99	$28.61	$29.21	
48	7	Net Present Value -2011					$2.62	$3.99	$5.32	$6.61	$7.86	$9.08	$10.26	$11.41	$12.52		$13.60	$14.65	$15.67	$16.66	$17.62	$18.55	$19.46	$20.34	$21.19	$22.02	$22.82	$23.61	$24.36	$25.10	$25.81	$26.51	$27.18	$27.84	$28.47	$29.09	
49	8	Net Present Value -2012						$2.86	$4.23	$5.56	$6.85	$8.11	$9.32	$10.50	$11.65		$12.76	$13.85	$14.90	$15.91	$16.90	$17.86	$18.80	$19.70	$20.58	$21.43	$22.26	$23.07	$23.85	$24.61	$25.34	$26.04	$26.75	$27.42	$28.08	$28.71	
50																																				
51		**Discount Rate (real)[1]**																																		
52		**TERASEN GAS**																																		
53		**Rate of Inflation**	1.90%																																	
54		**TGI**	3.00%																																	
55		**TGVI**	3.00%																																	
56		**BC HYDRO**																																		
57		**Rate of Inflation**	2.00%																																	
58		**BC Hydro**	3.00%																																	
59		**Customer**	3.00%																																	
60																																				
61																					2010															
62													2010 Planned	2011 planned			2010 split																			
63											Technologies						incnetives	admins	participants	incentive per participant	admin															
64				**SHEET LABELS**																																	
65		**Residential**									Solar Thermal		300,000	600,000	0.8	0.2	240000	48000	240	1000	200															
66		**New Construction**									NGV		1,000,000	2,000,000			800000	8000	16	50,000	500															
67		#REF!		**Hydronic Baseboard Systems**							Hydronic heating systems		125,000	250,000			100000	20000	100	1000	200															
68		#REF!		**Hydronic Under Floor Systems**							TES type projects		750,000	1,500,000			600000	5217	3	230,000	2000															
69		#REF!		**Combo System 95%EE**							GSHP with gas back up		125,000	250,000			100000	6667	33	3000	200															
70		#REF!		**GSHP with Gas Backup**									2,300,000	4,600,000																						
71		#REF!		**Solar Thermal Hot Water**								Total	6,900,000																							
72												available fur	69,000				1921217.4																			
73																																				
74																						2011														
75	**ADJUSTMENTS**																																			
76	**2010-2011 RRA application reconciliation**			**Incentives**	**Admin**												2011 split			participants	incentive per participant	admin														
77		**TGI**	2010	0.081	0.081												incnetives	admins																		
78			2011	0.081	0.081						Solar Thermal						480000	96000		480	1000		200													
79											NGV						1600000	16000		32	50,000		500													
80											Hydronic heating systems						200000	40000		200	1000		200													
81				**4669000**		2011	Decision by BCUC from the NSP				TES type projects						1200000	10435		5	230,000		2,000													
82				**2300000**		2010					GSHP with gas back up						200000	13333		67	3000		200													
83				**6969000**																																
84																	3855768.1																		
85																																				
86											available funds		378782.6087																						
87													813231.8841																						

TERASEN GAS INC
RESIDENTIAL
NEW

only enter in boxes marked in blue

Measure Data for Switch 'N' Shrink High Carbon Fuel Switching

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 1,000			
Total Incentive	$ 1,000		$ 1,000	$ -
Participant	$ -			

Annual Impact Per Measure

Energy Savings per installation	-43.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	50%	0.50		Net-to-Gross
Alternate Energy Impact	46	GJ	12,778	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	18	Years	Estimated lifespan of measure	

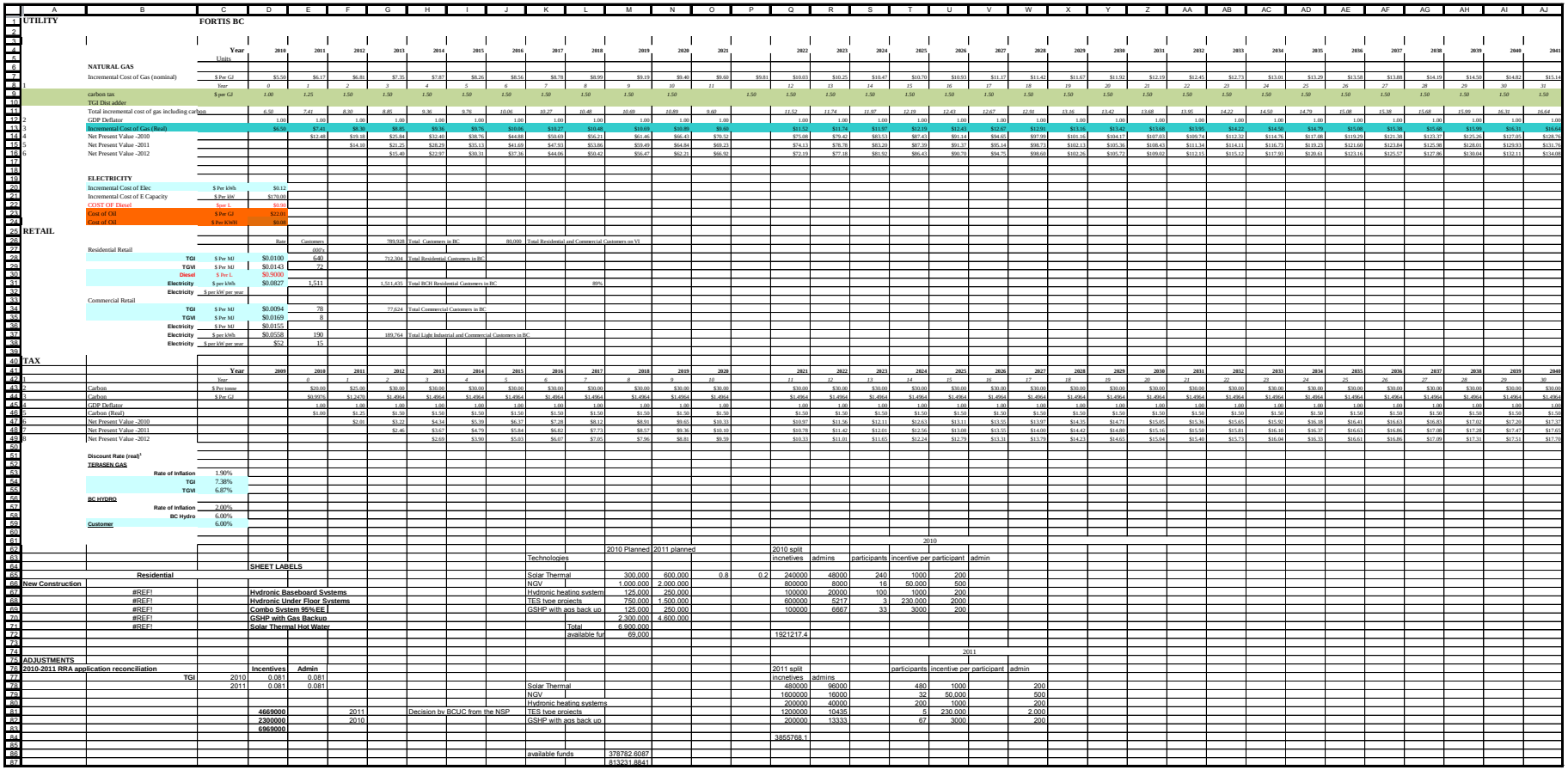
ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	27	29	29	0		Estimated Participation
Impact						
Gross Energy Savings (GJ)	(1,161)	(1,247)	(1,247)	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	(581)	(624)	(624)	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	1,258	1,334	1,334	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Additional NG Costs						
PV $ per GJ			$218.87	$103.36	$107.10	
Energy Purchases	$ (136,464)	$ (136,464)	$ (136,464)	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 29,000	$ 29,000	$ -	$ -	
Administration		$ 45,736	$ 45,736			
Subtotal	$ 69,600	$ 74,736	$ 74,736	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Avoided Oil Costs						
Energy (Purchases)		$ 201,911	$ 201,911	$ -	$ -	$302.715 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ 201,911	$ 201,911	$ 201,911	$ -	$ -	
Total Resource Net Benefit (Cost)	$ (4,153)		$ (9,289)	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	$ -		$ -	$ -	$ -	Informational (for comparison with supply options)

FORTIS BC

	PROGRAM														ALTERNATE		NET PRESENT VALUE									BENEFIT/COST						PARAMETERS														
2010 High Carbon Fuel Switching Programs	COSTS ($000)										SAVINGS (GJ)			LIFE	Impact		Levelized Cost	Utility Benefits (Costs)		Participant Benefits (Costs)			Program Net Savings			Natural Gas	Participant			Natural Gas		TRC Net Benefits	UTILITY				PARTICIPANT									
FEI	Utility			Partners										Years	Energy	Capacity	($/GJ)	Program	Alternate	Program	Carbon Tax	Alternate	Natural Gas	Alternate Energy	Alternate Capacity	Natural Gas	Total Costs	Total Benefits	Benefit/Cost	Natural Gas	Total Resource		Natural Gas Utility Discount	Natural Gas Supply	Alternate Discount Rate	Alternate Supply	Discount Rate	Natural Gas NPV	Carbon Tax NPV	Alternate Energy NPV	Alternate Capacity NPV	Natural Gas Tariff	Energy Tariff	Capacity Tariff
	Incentives	Administration	Total	Incentives	Administration	Total	Participant	Total	% Utility	% Partner	% Participant	Gross	Net-to-Gross	Net	L	kW		($'000s)	($'000s)	($'000s)	($'000s)	($'000s)	(GJ)	(MWh)	(kW)	Utility	($'000s)	($'000s)		Rate Impact		($'000s)		$/GJ	$/GJ	$/L	$/kW/a	$/GJ	$/kWh	$/kW/a
Label	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR	AS	AT
Source Sheet or Calculation	Program	Program	B+C	Program	Program	E+F	Program	D+G+H	D/I	G/I	H/I	Program	Program	M-N	Program	Program	Program	D/Y	O x AJ	Q x N x AL	M x N x AN	M x N x AO	N x (QxAP + RxAQ)	PV(AJ,P,-O)	PV(AK,P,-Q*N)	PV(AK,P,-R)	T/D	H=0, (V+W)=0	H=0, (V+W)=0, X	AD/AC	T/(V+D)	(T+U)/I	(T+U)-I	Input	Program	Input	Input	Input	PV(AM,P,-Input!D25)	Input	PV(AN,P,-Input!D28)	PV(AM,P,-Input!D29)	Input	Input	Input
2010																																													
Residential																																													
Switch 'N' Shrink High Carbon Fuel Switching	29	46	75	-	-	-	-	75	100%	-	0%	(1,247)	50%	(624)	18	1	-	FS	(61)	159	(67)	(9)	159	(6,103)	7	-	FS	76	159	2.1	0.5	1.2	23	7.38%	97.99	6%	238.32	6.0%	108.17	$14.35	238.32	0.00	9.990	0.083	-
Total Residential	29	46	75	-	-	-	-	75		-	0%	(1,247)		(624)		1	-	FS	(61)	159	(67)	(9)	159	(6,103)	7	-	FS	76	159	2.1	0.5	1.2	23												



UTILITY FORTIS BC

		Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041
		Units																																
	NATURAL GAS																																	
	Incremental Cost of Gas (nominal)	$ Per GJ	$5.50	$6.17	$6.81	$7.35	$7.87	$8.26	$8.56	$8.78	$8.99	$9.19	$9.40	$9.60	$9.81	$10.03	$10.25	$10.47	$10.70	$10.93	$11.17	$11.42	$11.67	$11.92	$12.19	$12.45	$12.73	$13.01	$13.29	$13.58	$13.88	$14.19	$14.50	$14.82	$15.14
1		Year	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
	carbon tax	$ per GJ	1.00	1.25	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50		1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
	TGI Dist adder																																	
	Total incremental cost of gas including carbon		6.50	7.41	8.30	8.85	9.36	9.76	10.06	10.27	10.48	10.69	10.89	9.60	11.52	11.74	11.97	12.19	12.43	12.67	12.91	13.16	13.42	13.68	13.95	14.22	14.50	14.79	15.08	15.38	15.68	15.99	16.31	16.64
2	GDP Deflator		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
3	Incremental Cost of Gas (Real)		$6.50	$7.41	$8.30	$8.85	$9.36	$9.76	$10.06	$10.27	$10.48	$10.69	$10.89	$9.60	$11.52	$11.74	$11.97	$12.19	$12.43	$12.67	$12.91	$13.16	$13.42	$13.68	$13.95	$14.22	$14.50	$14.79	$15.08	$15.38	$15.68	$15.99	$16.31	$16.64
4	Net Present Value -2010			$12.40	$19.18	$25.84	$32.40	$38.76	$44.88	$50.69	$56.21	$61.45	$66.43	$70.52	$75.08	$79.42	$83.53	$87.43	$91.14	$94.65	$97.99	$101.18	$104.17	$107.03	$109.74	$112.32	$114.76	$117.08	$119.29	$121.38	$123.37	$125.28	$127.05	$128.76
5	Net Present Value -2011			$14.18	$21.25	$28.29	$35.13	$41.69	$47.93	$53.86	$59.49	$64.84	$69.23		$74.13	$78.78	$83.20	$87.39	$91.37	$95.14	$98.73	$102.13	$105.36	$108.43	$111.34	$114.11	$116.73	$119.23	$121.60	$123.84	$125.98	$128.01	$129.93	$131.76
6	Net Present Value -2012				$15.40	$22.97	$30.31	$37.36	$44.06	$50.42	$56.47	$62.21	$66.92		$72.19	$77.18	$81.92	$86.43	$90.70	$94.75	$98.60	$102.26	$105.72	$109.02	$112.15	$115.12	$117.93	$120.61	$123.16	$125.57	$127.86	$130.04	$132.11	$134.08
	ELECTRICITY																																	
	Incremental Cost of Elec	$ Per kWh	$0.12																															
	Incremental Cost of E Capacity	$ Per kW	$170.00																															
	COST OF Diesel	$per L	$0.90																															
	Cost of Oil	$ Per GJ	$22.01																															
	Cost of Oil	$ Per KWH	$0.08																															
	RETAIL																																	
			Rate	Customers		789,928	Total Customers in BC		80,000	Total Residential and Commercial Customers on VI																									
	Residential Retail			(000's)																														
	TGI	$ Per MJ	$0.0100	640		712,304	Total Residential Customers in BC																											
	TGVI	$ Per MJ	$0.0143	72																														
	Diesel	$ Per L	$0.9000																															
	Electricity	$ per kWh	$0.0827	1,511		1,511,435	Total BCH Residential Customers in BC				89%																								
	Electricity	$ per kW per year																																
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	Electricity	$ Per MJ	$0.0155																															
	Electricity	$ per kWh	$0.0558	190		189,764	Total Light Industrial and Commercial Customers in BC																											
	Electricity	$ per kW per year	$52	15																														
	TAX																																	
		Year	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
1		Year	0	1	2	3	4	5	6	7	8	9	10		11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
2	Carbon	$ Per tonne		$20.00	$25.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00
3	Carbon	$ Per GJ		$0.957%	$1.2478%	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964
4	GDP Deflator			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
5	Carbon (Real)			$1.00	$1.25	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50
6	Net Present Value -2010				$2.01	$3.22	$4.34	$5.39	$6.37	$7.28	$8.12	$8.91	$9.65	$10.33	$10.97	$11.56	$12.11	$12.63	$13.11	$13.55	$13.97	$14.35	$14.71	$15.05	$15.36	$15.65	$15.92	$16.18	$16.41	$16.63	$16.83	$17.02	$17.20	$17.37
7	Net Present Value -2011					$2.46	$3.67	$4.79	$5.84	$6.82	$7.73	$8.57	$9.36	$10.10	$10.78	$11.42	$12.01	$12.56	$13.08	$13.55	$14.00	$14.42	$14.80	$15.16	$15.50	$15.81	$16.10	$16.37	$16.63	$16.86	$17.08	$17.28	$17.47	$17.63
8	Net Present Value -2012						$2.69	$3.90	$5.03	$6.07	$7.05	$7.96	$8.81	$9.59	$10.33	$11.01	$11.65	$12.24	$12.79	$13.31	$13.79	$14.23	$14.63	$15.04	$15.40	$15.73	$16.04	$16.33	$16.61	$16.86	$17.09	$17.31	$17.51	$17.70
	Discount Rate (real)[1]																																	
	TERASEN GAS																																	
	Rate of Inflation	1.90%																																
	TGI	7.38%																																
	TGVI	6.87%																																
	BC HYDRO																																	
	Rate of Inflation	2.00%																																
	BC Hydro	6.00%																																
	Customer	6.00%																																
																			2010															
											2010 Planned	2011 planned		2010 split																					
									Technologies					incnetives	admins	participants	incentive per participant	admin															
	SHEET LABELS																																	
	Residential								Solar Thermal		300,000	600,000	0.8	0.2	240000	48000	240	1000	200														
	New Construction								NGV		1,000,000	2,000,000			800000	8000	16	50,000	500														
#REF!	Hydronic Baseboard Systems								Hydronic heating systems		125,000	250,000			100000	20000	100	1000	200														
#REF!	Hydronic Under Floor Systems								TES type projects		750,000	1,500,000			600000	5217	3	230,000	2000														
#REF!	Combo System 95%EE								GSHP with gas back up		125,000	250,000			100000	6667	33	3000	200														
#REF!	GSHP with Gas Backup										2,300,000	4,600,000																					
#REF!	Solar Thermal Hot Water									Total	6,900,000																						
										available fur	69,000			1921217.4																				
	ADJUSTMENTS																																	
	2010-2011 RRA application reconciliation		Incentives	Admin																														
	TGI	2010	0.081	0.081											2011 split			participants	incentive per participant	admin														
		2011	0.081	0.081											incnetives	admins																		
									Solar Thermal						480000	96000		480	1000	200														
									NGV						1600000	16000		32	50,000	500														
									Hydronic heating systems						200000	40000		200	1000	200														
			4669000		2011		Decision by BCUC from the NSP		TES type projects						1200000	10435		5	230,000	2,000														
			2300000		2010				GSHP with gas back up						200000	13333		67	3000	200														
			6969000																															
															3855768.1																			
									available funds		378782.6087																								
											813231.8841																							

NEW

Measure Data for Switch 'N' Shrink High Carbon Fuel Switching

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 1,000			
Total Incentive	$ 1,000		$ 1,000	$ -
Participant	$ -			

Annual Impact Per Measure

Energy Savings per installation	-43.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	50%	0.50		Net-to-Gross
Alternate Energy Impact	46	GJ	12,778	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	18	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	27	29	29	0		Estimated Participation
Impact						
Gross Energy Savings (GJ)	(1,161)	(1,247)	(1,247)	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	(581)	(624)	(624)	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	1,258	1,334	1,334	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Additional NG Costs						
PV $ per GJ			$97.99	$103.36	$107.10	
Energy Purchases	$ (61,099)	$ (61,099)	$ (61,099)	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 29,000	$ 29,000	$ -	$ -	
Administration		$ 45,736	$ 45,736			
Subtotal	$ 69,600	$ 74,736	$ 74,736	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Avoided Oil Costs						
Energy (Purchases)		$ 158,956	$ 158,956	$ -	$ -	$238.316 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ 158,956	$ 158,956	$ 158,956	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 28,258		$ 23,122	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	$ -		$ -	$ -	$ -	Informational (for comparison with supply options)

FORTIS BC

	PROGRAM															ALTERNATE		NET PRESENT VALUE								BENEFIT/COST						PARAMETERS												
2010 High Carbon Fuel Switching	COSTS ($000)											SAVINGS (GJ)			LIFE	Impact		Levelized Cost	Utility Benefits (Costs)		Participant Benefits (Costs)			Program Net Savings			Participant						UTILITY				PARTICIPANT								
FEVI	Utility			Partners												Energy	Capacity	($/GJ)	Program	Alternate	Program	Carbon Tax	Alternate	Natural Gas	Alternate Energy	Alternate Capacity	Natural Gas	Total Costs	Total Benefits	Benefit/Cost	Natural Gas	Societal Cost Test	SCT Net Benefits	Natural Gas Utility Discount	Natural Gas Supply	Alternate Discount Rate	Alternate Supply	Discount Rate	Natural Gas NPV	Carbon Tax NPV	Alternate Energy NPV	Alternate Capacity NPV	Natural Gas Tariff	Energy Tariff	Capacity Tariff
	Incentives	Administration	Total	Incentives	Administration	Total	Participant	Total	% Utility	% Partner	% Participant	Gross	Net-to-Gross	Net	Years	MWh	kW	($'000s)	($'000s)	($'000s)	($'000s)	($'000s)	($'000s)	(GJ)	(MWh)	(kW)	Utility	($'000s)	($'000s)		Rate Impact		($'000s)	$/GJ	$/GJ	$/GJ	$/kWh		$/GJ	$/GJ	$/kWh	$/kW/a	$/GJ	$/kWh	$/kW/a
Label	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR	AS	AT
Source Sheet or Calculation	Program	Program	B+C	Program	Program	E+F	Program	D+G+H	D/I	G/I	H/I	Program	Program	M±N	Program	Program	Program	D/Y	O±AI	Q x N x AL	M x N x AN	M x N x AO	N x (QxAP + RxAQ)	PV(AI,P,-O)	PV(AK,P,-Q*N)	PV(AK,P,-R)	T/D	H>0, (V-W)>0	H>0, (V+W)>0, X	AD/AC	T/(V+O)	(T+U)/I	(T+U)-I	Input	Program	Input	Input	Input	PV(AM,P,-InputD25)	Input	PV(AM,P,-InputD28)	PV(AM,P,-InputD29)	Input	Input	Input
2010																																												
RESIDENTIAL:																																												
Switch 'N' Shrink High Carbon Fuel Switching	149	76	225	0	0	0	0	225	100%	0%	0%	(6,407)	50%	(3,204)	18	7	-	FS	(920)	1,349	(631)	(66)	1,037	(44,059)	47	-	FS	698	1,037	1.5	0.6	1.2	204	3.00%	221.02	3%	302.71	3.0%	197.02	20.71	302.71	0.00	9.999	0.083	-
Total Residential	149	76	225	-	-	-	0	225	100%	-	0%	(6,407)		(3,204)		7	-	FS	(920)	1,349	(631)	(66)	1,037	(44,059)	47	-	FS	698	1,037	1.5	0.6	1.2	204												

Row	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ
1	UTILITY		FORTIS BC																																	
2																																				
3																																				
4			Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	
5			Units																																	
6		NATURAL GAS																																		
7		Incremental Cost of Gas (nominal)	$ Per GJ	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.43
8	1		Year	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		
9		carbon tax	$ per GJ	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
10		Distribution adder	$ per GJ	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15		
11		Total incremental cost of gas including carbon		15.43	15.43	15.43	15.43	15.43	15.43	15.43	15.43	15.43	15.43	15.43	15.43	15.43	15.43	15.43	15.43	15.43	15.43	15.43	15.43	15.43	15.43	15.43	15.43	15.43	15.43	15.43	15.43	15.43	15.43	15.43		
12	2	GDP Deflator		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
13	3	Incremental Cost of Gas (Real)		$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43		
14	4	Net Present Value -2010			$29.52	$43.65	$57.35	$70.66	$83.59	$96.13	$108.31	$120.14	$131.62	$142.77	$153.59	$164.10	$174.30	$184.20	$193.82	$203.15	$212.22	$221.02	$229.56	$237.85	$245.91	$253.72	$261.32	$268.68	$275.84	$282.79	$289.53	$296.08	$302.43	$308.61		
15	5	Net Present Value -2011				$29.52	$43.65	$57.35	$70.66	$83.59	$96.13	$108.31	$120.14	$131.62	$142.77	$153.59	$164.10	$174.30	$184.20	$193.82	$203.15	$212.22	$221.02	$229.56	$237.85	$245.91	$253.72	$261.32	$268.68	$275.84	$282.79	$289.53	$296.08	$302.43		
16	6	Net Present Value -2012					$29.52	$43.65	$57.35	$70.66	$83.59	$96.13	$108.31	$120.14	$131.62	$142.77	$153.59	$164.10	$174.30	$184.20	$193.82	$203.15	$212.22	$221.02	$229.56	$237.85	$245.91	$253.72	$261.32	$268.68	$275.84	$282.79	$289.53	$296.08		
17																																				
18																																				
19		ELECTRICITY																																		
20		Incremental Cost of Elec	$ Per kWh	$0.12																																
21		Incremental Cost of E Capacity	$ Per kW/a	$170.00																																
22		Oil																																		
23		Cost of Oil	$ Per GJ	$22.01																																
24		Cost of Oil	$ Per KWH	$0.08																																
25	RETAIL																																			
26				Rate	Customers		789,928	Total Customers in BC		80,000	Total Residential and Commercial Customers on VI																									
27		Residential Retail			000's																															
28		TGI	$ Per MJ	$0.0100	640		712,304	Total Residential Customers in BC																												
29		TGVI	$ Per MJ	$0.0143	72																															
30		Electricity	$ Per MJ	$0.0230																																
31		Electricity	$ per kWh	$0.0827	1,511		1,511,435	Total BCH Residential Customers in BC				89%																								
32		Electricity	$ per kW per year																																	
33		Commercial Retail																																		
34		TGI	$ Per MJ	$0.0094	78		77,624	Total Commercial Customers in BC																												
35		TGVI	$ Per MJ	$0.0169	8																															
36		Electricity	$ Per MJ	$0.0214																																
37		Electricity	$ per kWh	$0.0769	190		189,764	Total Light Industrial and Commercial Customers in BC																												
38		Electricity	$ per kW per year	$52.0000	15																															
39																																				
40	TAX																																			
41			Year	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	
42	1		Year		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
43	2	Carbon	$ Per tonne		$20.00	$25.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	
44	3	Carbon	$ Per GJ		$0.9976	$1.2470	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	
45	4	GDP Deflator			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
46	5	Carbon (Real)			$1.00	$1.25	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	
47	6	Net Present Value -2010				$2.14	$3.51	$4.84	$6.13	$7.39	$8.60	$9.78	$10.93	$12.05	$13.13	$14.18	$15.19	$16.18	$17.14	$18.08	$18.98	$19.86	$20.71	$21.54	$22.35	$23.13	$23.89	$24.62	$25.34	$26.03	$26.71	$27.36	$27.99	$28.61	$29.21	
48	7	Net Present Value -2011					$2.62	$3.99	$5.32	$6.61	$7.86	$9.08	$10.26	$11.41	$12.52	$13.60	$14.65	$15.67	$16.66	$17.62	$18.55	$19.46	$20.34	$21.19	$22.02	$22.82	$23.61	$24.36	$25.10	$25.81	$26.51	$27.18	$27.84	$28.47	$29.09	
49	8	Net Present Value -2012						$2.86	$4.23	$5.56	$6.85	$8.11	$9.32	$10.50	$11.65	$12.76	$13.85	$14.90	$15.91	$16.90	$17.86	$18.80	$19.70	$20.58	$21.43	$22.26	$23.07	$23.85	$24.61	$25.34	$26.06	$26.75	$27.42	$28.08	$28.71	
50																																				
51		Discount Rate (real)[1]																																		
52		TERASEN GAS																																		
53		Rate of Inflation	1.90%																																	
54		TGI	3.00%																																	
55		TGVI	3.00%																																	
56		BC HYDRO																																		
57		Rate of Inflation	2.00%																																	
58		BC Hydro	3.00%																																	
59		Customer	3.00%																																	
60		*Footnote 1: Source LR 070531*																																		
61																																				
62				SHEET LABELS																																
63	New Construction																																			
64		#REF!		BASEBOARD																																
65		#REF!		HEATPUMP																																
66																																				
67																																				
68	Heating Oil vs Nat Ga	0.02	Year	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041
69	1	tonnes/GJ	Year	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
70	2	Carbon	$ Per tonne	$15.00	$20.00	$25.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00
71	3	Carbon	$ Per GJ	$0.30	$0.40	$0.50	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60
72	4	GDP Deflator		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00
73	5	Carbon (Real)		$0.30	$0.40	$0.50	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$1.20
74	6	Net Present Value -2009			$0.64	$1.05	$1.52	$1.96	$2.37	$2.76	$3.13	$3.47	$3.80	$4.10	$4.39	$4.66	$4.91	$5.15	$5.37	$5.58	$5.78	$5.96	$6.14	$6.30	$6.46	$6.60	$6.74	$6.87	$6.99	$7.10	$7.21	$7.31	$7.40	$7.49	$7.57	$7.65
75	7	Net Present Value -2010				$0.82	$1.32	$1.79	$2.23	$2.64	$3.03	$3.40	$3.74	$4.06	$4.37	$4.65	$4.92	$5.18	$5.41	$5.64	$5.85	$6.04	$6.23	$6.40	$6.57	$6.72	$6.87	$7.00	$7.13	$7.25	$7.36	$7.47	$7.57	$7.67	$7.75	$7.84
76	8	Net Present Value -2011					$1.00	$1.50	$1.97	$2.41	$2.82	$3.21	$3.58	$3.92	$4.25	$4.55	$4.84	$5.10	$5.36	$5.60	$5.82	$6.03	$6.23	$6.41	$6.59	$6.75	$6.90	$7.05	$7.19	$7.31	$7.43	$7.55	$7.65	$7.75	$7.85	$7.94

FORTIS BC
RESIDENTIAL
NEW

only enter in boxes marked in blue

Measure Data for Switch 'N' Shrink High Carbon Fuel Switching

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 1,000			
Total Incentive	$ 1,000		$ 1,000	$ -
Participant	$ -			

Annual Impact Per Measure

Energy Savings per installation	-43.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	50%	0.50		Net-to-Gross
Alternate Energy Impact	46	GJ	12,778	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	18	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	145	149	149	0	0	Estimated Participation
Impact						
Gross Energy Savings (GJ)	(6,220)	(6,407)	(6,407)	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	(3,110)	(3,204)	(3,204)	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	6,654	6,854	6,854	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$221.02	$221.02	$221.02	
Energy Purchases	$ (708,025)	$ (708,025)	$ (708,025)	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 149,000	$ 149,000	$ -	$ -	
Administration		$ 75,537	$ 75,537	$ -	$ -	
Subtotal	$ 217,997	$ 224,537	$ 224,537	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ 1,037,404	$ 1,037,404	$ -	$ -	$302.715 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ 1,037,404	$ 1,037,404	$ 1,037,404	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 111,381		$ 104,841	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ -**		**$ -**	**$ -**	**$ -**	Informational (for comparison with supply options)

FORTIS BC

2010 High Carbon Fuel Switching	PROGRAM															ALTERNATE		NET PRESENT VALUE									BENEFIT/COST						PARAMETERS														
	COSTS ($000)											SAVINGS (GJ)			LIFE	Impact		Levelized Cost	Utility Benefits (Costs)		Participant Benefits (Costs)			Program Net Savings			Participant						UTILITY				PARTICIPANT										
FEVI	Utility			Partners																																												
	Incentives	Administration	Total	Incentives	Administration	Total	Participant	Total	% Utility	% Partner	% Participant	Gross	Net-to-Gross	Net	Years	Energy	Capacity	($/GJ)	Program	Alternate	Program	Carbon Tax	Alternate	Natural Gas	Alternate Energy	Alternate Capacity	Natural Gas	Total Costs	Total Benefits	Benefit/Cost	Natural Gas	Total Revenue	TRC Net Benefits	Natural Gas Utility Discount	Natural Gas Supply	Alternate Discount Rate	Alternate Supply	Discount Rate	Natural Gas NPV	Carbon Tax NPV	Alternate Energy NPV	Alternate Capacity NPV	Natural Gas Tariff	Energy Tariff	Capacity Tariff
																MWh	kW		($'000s)	($'000s)	($'000s)	($'000s)	($'000s)	(GJ)	(MWh)	(kW)	Utility	($'000s)	($'000s)		Rate Impact			$/GJ		$/kWh		$/GJ	$/GJ	$/kWh	$/kW/a	$/GJ	$/kWh	$/kW/a
Label	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR	AS	AT
Source Sheet or Calculation	Program	Program	B+C	Program	Program	E+F	Program	D+G+H	D/I	G/I	H/I	Program	Program	M±N	Program	Program	Program	D/Y	O±AI	Q x N x AL	M x N x AN	M x N x AO	N x (QxAP + RxAQ)	PV(AI,P,-O)	PV(AK,P,-Q*N)	PV(AK,P,-R)	T/D	H>0, (V-W)>0	H>0, (V-W)>0, X	AD/AC	T/(V+O)	(T+U)/I	(T+U)-I	Input	Program	Input	Input	Input	PV(AM,P, InputD25)	Input	PV(AM,P, InputD28)	PV(AM,P, InputD29)	Input	Input	Input
2010																																														
RESIDENTIAL:																																														
Switch 'N' Shrink High Carbon Fuel Switching	149	76	225	0	0	0	0	225	100%	0%	0%	(6,407)	50%	(3,204)	18	7	-	FS	(337)	817	(497)	(48)	817	(32,529)	37	-	FS	545	817	1.5	0.9	1.5	255	6.87%	105.21	6%	238.32	6.0%	155.11	14.93	238.32	0.00	9.999	0.083	-
Total Residential	149	76	225	-	-	-	0	225	100%	-	0%	(6,407)		(3,204)		7	-	FS	(337)	817	(497)	(48)	817	(32,529)	37	-	FS	545	817	1.5	0.9	1.5	255												

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ
1	UTILITY		FORTIS BC
2
3
4			Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	
5			Units
6		NATURAL GAS
7		Incremental Cost of Gas (nominal)	$ Per GJ	$5.59	$5.88	$6.61	$7.32	$7.92	$8.41	$8.82	$9.14	$9.35	$9.57	$9.78	$9.99	$10.21	$10.43	$10.66	$10.89	$11.13	$11.37	$11.62	$11.87	$12.13	$12.40	$12.67	$12.94	$13.23	$13.52	$13.81	$14.12	$14.43	$14.74	$15.07		
8	1		*Year*	*0*	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*	*16*	*17*	*18*	*19*	*20*	*21*	*22*	*23*	*24*	*25*	*26*	*27*	*28*	*29*	*30*		
9		carbon tax	$ per GJ	*0.75*	*1.00*	*1.25*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*		
10		Distribution adder	$ per GJ	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*		
11		Total incremental cost of gas including carbon		*6.49*	*7.03*	*8.01*	*8.97*	*9.57*	*10.06*	*10.46*	*10.78*	*11.00*	*11.22*	*11.43*	*11.64*	*11.86*	*12.08*	*12.31*	*12.54*	*12.78*	*13.02*	*13.27*	*13.52*	*13.78*	*14.04*	*14.31*	*14.59*	*14.87*	*15.16*	*15.46*	*15.76*	*16.07*	*16.39*	*16.71*		
12	2	GDP Deflator		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
13	3	Incremental Cost of Gas (Real)		$6.49	$7.03	$8.01	$8.97	$9.57	$10.06	$10.46	$10.78	$11.00	$11.22	$11.43	$11.64	$11.86	$12.08	$12.31	$12.54	$12.78	$13.02	$13.27	$13.52	$13.78	$14.04	$14.31	$14.59	$14.87	$15.16	$15.46	$15.76	$16.07	$16.39	$16.71		
14	4	Net Present Value -2010			$12.22	$18.78	$25.66	$32.52	$39.27	$45.84	$52.18	$58.23	$64.00	$69.51	$74.75	$79.75	$84.51	$89.06	$93.39	$97.52	$101.45	$105.21	$108.79	$112.20	$115.46	$118.56	$121.52	$124.35	$127.04	$129.61	$132.07	$134.41	$136.64	$138.77		
15	5	Net Present Value -2011				$13.58	$20.93	$28.26	$35.48	$42.50	$49.28	$55.74	$61.91	$67.79	$73.40	$78.74	$83.83	$88.69	$93.31	$97.73	$101.93	$105.94	$109.77	$113.42	$116.90	$120.21	$123.38	$126.40	$129.28	$132.03	$134.65	$137.15	$139.54	$141.81		
16	6	Net Present Value -2012					$15.34	$23.18	$30.89	$38.40	$45.64	$52.54	$59.14	$65.42	$71.41	$77.12	$82.56	$87.75	$92.70	$97.41	$101.91	$106.20	$110.29	$114.18	$117.90	$121.45	$124.83	$128.06	$131.14	$134.07	$136.87	$139.55	$142.10	$144.53		
17
18
19		ELECTRICITY
20		Incremental Cost of Elec	$ Per kWh	$0.12
21		Incremental Cost of E Capacity	$ Per kW/a	$170.00
22		Oil
23		Cost of Oil	$ Per GJ	$22.01
24		Cost of Oil	$ Per KWH	$0.08
25	RETAIL
26				Rate	Customers		789,928	Total Customers in BC		80,000	Total Residential and Commercial Customers on VI
27		Residential Retail			*000's*
28		TGI	$ Per MJ	$0.0100	640		712,304	Total Residential Customers in BC
29		TGVI	$ Per MJ	$0.0143	72
30		Electricity	$ Per MJ	$0.0230
31		Electricity	$ per kWh	$0.0827	1,511		1,511,435	Total BCH Residential Customers in BC				89%
32		Electricity	$ per kW per year
33		Commercial Retail
34		TGI	$ Per MJ	$0.0094	78		77,624	Total Commercial Customers in BC
35		TGVI	$ Per MJ	$0.0169	8
36		Electricity	$ Per MJ	$0.0214
37		Electricity	$ per kWh	$0.0769	190		189,764	Total Light Industrial and Commercial Customers in BC
38		Electricity	$ per kW per year	$52.0000	15
39
40	TAX
41			Year	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	
42	1		*Year*		*0*	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*	*16*	*17*	*18*	*19*	*20*	*21*	*22*	*23*	*24*	*25*	*26*	*27*	*28*	*29*	*30*	
43	2	Carbon	$ Per tonne		$20.00	$25.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	
44	3	Carbon	$ Per GJ		$0.9976	$1.2470	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	
45	4	GDP Deflator			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
46	5	Carbon (Real)			$1.00	$1.25	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	
47	6	Net Present Value -2010				$2.03	$3.25	$4.40	$5.47	$6.48	$7.42	$8.30	$9.12	$9.89	$10.61	$11.28	$11.91	$12.50	$13.06	$13.57	$14.06	$14.51	$14.93	$15.33	$15.70	$16.05	$16.37	$16.68	$16.96	$17.23	$17.47	$17.71	$17.93	$18.13	$18.32	
48	7	Net Present Value -2011					$2.48	$3.70	$4.85	$5.92	$6.93	$7.87	$8.75	$9.57	$10.34	$11.06	$11.73	$12.37	$12.96	$13.51	$14.03	$14.51	$14.96	$15.38	$15.78	$16.15	$16.50	$16.82	$17.13	$17.41	$17.68	$17.93	$18.16	$18.38	$18.58	
49	8	Net Present Value -2012						$2.71	$3.94	$5.08	$6.16	$7.16	$8.10	$8.98	$9.80	$10.57	$11.29	$11.97	$12.60	$13.19	$13.74	$14.26	$14.74	$15.19	$15.62	$16.01	$16.39	$16.73	$17.06	$17.36	$17.64	$17.91	$18.16	$18.39	$18.61	
50
51		**Discount Rate (real)**[1]
52		**TERASEN GAS**
53		Rate of Inflation	1.90%
54		TGI	7.38%
55		TGVI	6.87%
56		**BC HYDRO**
57		Rate of Inflation	2.00%
58		BC Hydro	6.00%
59		Customer	6.00%
60		*Footnote 1: Source LR 070531*
61
62				SHEET LABELS
63	New Construction
64		#REF!		BASEBOARD
65		#REF!		HEATPUMP
66
67
68	Heating Oil vs Nat Ga	0.02	Year	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041
69	1	tonnes/GJ	*Year*	*0*	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*	*16*	*17*	*18*	*19*	*20*	*21*	*22*	*23*	*24*	*25*	*26*	*27*	*28*	*29*	*30*	*31*	*32*
70	2	Carbon	$ Per tonne	$15.00	$20.00	$25.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00
71	3	Carbon	$ Per GJ	$0.30	$0.40	$0.50	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60
72	4	GDP Deflator		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00
73	5	Carbon (Real)		$0.30	$0.40	$0.50	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$1.20
74	6	Net Present Value -2009			$0.64	$1.05	$1.52	$1.96	$2.37	$2.76	$3.13	$3.47	$3.80	$4.10	$4.39	$4.66	$4.91	$5.15	$5.37	$5.58	$5.78	$5.96	$6.14	$6.30	$6.46	$6.60	$6.74	$6.87	$6.99	$7.10	$7.21	$7.31	$7.40	$7.49	$7.57	$7.65
75	7	Net Present Value -2010				$0.82	$1.32	$1.79	$2.23	$2.64	$3.03	$3.40	$3.74	$4.06	$4.37	$4.65	$4.92	$5.18	$5.41	$5.64	$5.85	$6.04	$6.23	$6.40	$6.57	$6.72	$6.87	$7.00	$7.13	$7.25	$7.36	$7.47	$7.57	$7.67	$7.75	$7.84
76	8	Net Present Value -2011					$1.00	$1.50	$1.97	$2.41	$2.82	$3.21	$3.58	$3.92	$4.25	$4.55	$4.84	$5.10	$5.36	$5.60	$5.82	$6.03	$6.23	$6.41	$6.59	$6.75	$6.90	$7.05	$7.19	$7.31	$7.43	$7.55	$7.65	$7.75	$7.85	$7.94

FORTIS BC
RESIDENTIAL
NEW

only enter in boxes marked in blue

Measure Data for Switch 'N' Shrink High Carbon Fuel Switching

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 1,000			
Total Incentive	$ 1,000		$ 1,000	$ -
Participant	$ -			

Annual Impact Per Measure

Energy Savings per installation	-43.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	50%	0.50		Net-to-Gross
Alternate Energy Impact	46	GJ	12,778	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	18	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	139	149	149	0	0	Estimated Participation
Impact						
Gross Energy Savings (GJ)	(5,967)	(6,407)	(6,407)	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	(2,983)	(3,204)	(3,204)	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	6,466	6,854	6,854	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$105.21	$109.77	$114.18	
Energy Purchases	$ (337,029)	$ (337,029)	$ (337,029)	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 149,000	$ 149,000	$ -	$ -	
Administration		$ 75,537	$ 75,537	$ -	$ -	
Subtotal	$ 209,105	$ 224,537	$ 224,537	$ -	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ 738,365	$ 738,365	$ -	$ -	$215.455 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ 738,365	$ 738,365	$ 738,365	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 192,231		$ 176,799	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ -**		**$ -**	**$ -**	**$ -**	Informational (for comparison with supply options)

2010 DSM Actuals

	PROGRAM									ALTERNATE		NET PRESENT VALUE										Benefits/cost test						
	COSTS ($000)							SAVINGS (GJ)		Impact		Levelized Cost	Utility Benefits (Costs)		Participant Benefits (Costs)			Program Net Savings						Participant				
	Utility																											
	Incentives	Administration	Total	Participant	Total	% Utility	% Participant	Gross	Net	Energy MWh	Capacity kW	($/GJ)	Program ($'000s)	Alternate ($'000s)	Program ($'000s)	Carbon Tax ($'000s)	Alternate ($'000s)	Natural Gas (GJ)	Alternate Energy (MWh)	Alternate Capacity (kW)	Natural Gas Utility	Total Costs ($'000s)	Total Benefits ($'000s)	Benefit/	Natural Gas Rate Impact	Total Resource	SCT Net Benefits ($'000s)
2010 Actuals																												
Residential Energy Efficiency Programs																												
2010 Residential Total	2,803	440	3,242	3,302	6,544	50%	50%	108,346	62,036	2	-	4	17,790	2	8,630	1,282	1	850,903	16	-	5.5	3,302	9,913	3.0	1.5	2.7	11,249
Commercial Energy Efficiency Programs																												
2010 Commercial Total	2,401	170	2,570	3,655	6,225	41%	59%	126,585	103,856	2,049	-	2	24,104	3,799	12,178	1,725	1,891	1,134,681	24,352	-	9.4	3,655	15,794	4.3	1.6	4.5	21,678
Joint Initiatives																												
2010 Joint Initiatives Total	29	429	458	0	487	94%	0%	864	748	0	-	63	157	0	73	11	0	7,283	-	-	0.3	-	84	N/A	0.3	0.3	(330)
Conservation for Affordable Housing Programs																												
2010 Affordable Housing Total	49	275	324	0	324	100%	0%	4,517	3,297	0	-	16	298	0	230	31	0	20,150	-	-	0.9	-	261	N/A	0.5	0.9	(27)
Innovative Technology																												
2010 Innovative Technology Total																												
High carbon fuel switching																												
2010 High Carbon Fuel Switching Total	178	123	301	0	301	100%	0%	(7,654)	(3,827)	8	-	FS	(1,098)	1,611	(717)	(79)	1,239	(52,635)	56	-	FS	796	1,239	1.6	0.5	1.2	213
Portfolio Level Expenditure																												
2010 Portfolio Level Total		**4,842**										- -																
2010 TOTAL	**5,460**	**6,278**	**11,738**	**6,957**	**18,723**	**63%**	**37%**	**232,657**	**166,110**	**2,059**	**0**	6	**41,251**	**5,412**	**20,394**	**2,969**	**3,132**	**1,960,383**	**24,424**	**0**	**3.5**	**6,957**	**26,495**	**3.8**	**1.3**	**2.4**	**27,940**

Notes:

The Utility incentive for Affordable housing includes partner incentive
The Utility benefits for affordable housing includes the 30% adder

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2010 DSM Actuals

2010 FEI Programs Actuals	PROGRAM									ALTERNATE		NET PRESENT VALUE									Benefit/cost test						
	COSTS ($000)							SAVINGS (GJ)		Impact		Levelized Cost	Utility Benefits (Costs)		Participant Benefits (Costs)			Program Net Savings			Participant						
	Utility			Participant	Total	% Utility	% Participant	Gross	Net	Energy	Capacity	($/GJ)	Program	Alternate	Program	Carbon Tax	Alternate	Natural Gas	Alternate Energy	Alternate Capacity	Natural Gas	Total Costs	Total Benefits	Benefit/Cost	Natural Gas	SCT	SCT Net Benefits
	Incentives	Administration	Total							MWh	kW		($'000s)	($'000s)	($'000s)	($'000s)	($'000s)	(GJ)	(MWh)	(kW)	Utility	($'000s)	($'000s)		Rate Impact		($'000s)
2010																											
Residential Energy Efficiency Programs																											
Energy Efficiency Program	2,686	254	2,940	3,199	6,139	48%	52%	104,795	59,965	0	-	4	17,203	0	8,227	1,239	0	822,792	-		5.9	3,199	9,466	3.0	1.5	2.8	11,063
Non Program Specific Admin Cost		74																	-	-							
2010 Residential Total	**2,686**	**328**	**3,014**	**3,199**	**6,213**	**48%**	**52%**	**104,795**	**59,965**	**0**	**-**	**3**	**17,203**	**0**	**8,227**	**1,239**	**0**	**822,792**	**0**	**0**	**5.7**	**3,199**	**9,466**	**3.0**	**1.5**	**2.8**	**10,989**
Commercial Energy Efficiency Programs																											
Energy Efficiency Program	1,964	81	2,045	3,032	5,078	40%	60%	102,164	82,678	1,768	-	2	19,721	3,298	8,699	1,411	1,626	929,290	21,144	-	9.6	3,032	11,736	3.9	1.8	4.5	17,941
Non Program Specific Admin Cost		39																									
2010 Commercial Total	**1,964**	**120**	**2,084**	**3,032**	**5,116**	**44%**	**59%**	**102,164**	**82,678**	**1,768**	**-**	**3**	**19,721**	**3,298**	**8,699**	**1,411**	**1,626**	**929,290**	**21,144**	**-**	**9.5**	**3,032**	**11,736**	**3.9**	**1.8**	**4.5**	**17,903**
Joint Initiatives																											
Energy Efficiency Program	14	371	385	0	414	93%	7%	864	748	0	0	53	157	0	73	11	0	7,283	0	0	0.4	29	84	2.9	0	0.4	(257)
Non Program Specific Admin Cost		48																									
2010 Joint Initiatives Total	**14**	**419**	**433**	**0**	**462**	**93%**	**7%**	**864**	**748**	**0**	**-**	**53**	**157**	**0**	**73**	**11**	**0**	**7,283**	**0**	**0**	**0.4**	**-**	**84**	**N/A**	**0.3**	**0.3**	**(305)**
Conservation for Affordable Housing Programs*																											
Energy Efficiency Program	39	213	253	0	253	100%	0%	3,613	2,637	0	0	14	194	0	164	24	0	15,520	0	0	1.6	0.0	187	0.0	0.5	1.6	160
Non Program Specific Admin Cost		43																									
2010 Affordable Housing Total	**39**	**256**	**296**	**0**	**296**	**100%**	**0%**	**3,613**	**2,637**	**0**	**0**	**14**	**194**	**0**	**164**	**24**	**0**	**15,520**	**0**	**0**	**0.7**	**-**	**187**	**N/A**	**0.4**	**0.7**	**(102)**
Innovative Technology																											
Energy Efficiency Program																											
Non Program Specific Admin Cost																											
2010 Innovative Technology Total																											
High Carbon Fuel Switching																											
High Carbon Fuel Switching Program	29	46	75	0	75	100%	0%	(1,247)	(624)	1	0	FS	(177)	262	(86)	(13)	202	(8,575)	9	0	FS	98.6	202	2.0	0.3	1.0	10
Non Program Specific Admin Cost		1																									
2010 High Carbon Fuel Switching Total	**29**	**47**	**76**	**0**	**76**	**100%**	**0%**	**(1,247)**	**(624)**	**1**	**0**	**FS**	**(177)**	**262**	**(86)**	**(13)**	**202**	**(8,575)**	**9**	**0**	**FS**	**98.6**	**202**	**2.0**	**0.3**	**1.0**	**10**
Portfolio Level Expenditure																											
Conservation Education & Outreach		1,415																									
Enabling Activities		70																									
Non Program Specific Portfolio Level Cost		1,289																									
Industrial Program Costs		4																									
Labor Costs		1,307																									
2010 FEI Portfolio Level Total		**4,085**																									
2010 Total	**4,732**	**5,256**	**9,988**	**6,232**	**16,249**	**61%**	**38%**	**210,189**	**145,404**	**1,769**	**0**	**5.7**	**37,096**	**3,561**	**17,077**	**2,672**	**1,828**	**1,766,309**	**21,153**	**0**	**3.7**	**6,232**	**21,577**	**3.5**	**1.4**	**2.5**	**24,409**

Notes
*Affordable Housing
Utility benefits includes 30% adder

FORTIS BC VANCOUVER ISLAND

2010 DSM Actuals

2010 FEVI Programs Actuals	PROGRAM									ALTERNATE		NET PRESENT VALUE									BENEFIT/COST						
	COSTS ($000)							SAVINGS (GJ)		Impact		Levelized Cost	Utility Benefits (Costs)		Participant Benefits (Costs)			Program Net Savings				Participant					
	Utility																										
	Incentives	Administration	Total	Participant	Total	% Utility	% Participant	Gross	Net	Energy MWh	Capacity kW	($/GJ)	Program ($'000s)	Alternate ($'000s)	Program ($'000s)	Carbon Tax ($'000s)	Alternate ($'000s)	Natural Gas (GJ)	Alternate Energy (MWh)	Alternate Capacity (kW)	Natural Gas Utility	Total Costs ($'000s)	Total Benefits ($'000s)	Benefit/ Cost	Natural Gas Rate Impact	SCT	SCT Net Benefits ($'000s)
2010																											
Residential Energy Efficiency Programs:																											
Energy Efficiency Program	117	76	193	103	296	65%	35%	3,551	2,072	2	-	7	588	2	403	42	1	28,112	16	-	3.0	103	446	4.3	1.0	2.0	295
Non Program Specific Admin Cost		35																									
2010 Residential Total	**117**	**111**	**228**	**103**	**331**	**65%**	**35%**	**3,551**	**2,072**	**2**	**0**	**7**	**588**	**2**	**403**	**42**	**1**	**28,112**	**16**	**0**	**2.6**	**103**	**446**	**4.3**	**0.9**	**1.8**	**260**
Commercial Energy Efficiency Programs:																											
Energy Efficiency Program	437	20	456	623	1,079	42%	58%	24,421	21,178	282	-	2	4,383	501	3,479	314	265	205,391	3,208	-	9.6	623	4,059	6.5	1.1	4.5	3,805
Non Program Specific Admin Cost		30																									
2010 Commercial Total	**437**	**49**	**486**	**623**	**1,109**	**44%**	**56%**	**24,421**	**21,178**	**282**	**-**	2	4,383	501	3,479	314	265	205,391	3,208	-	**9.0**	**623**	**4,059**	**6.5**	**1.1**	**4.4**	**3,775**
Joint Initiatives																											
Energy Efficiency Program	15	1	16	0	16	100%	0%	0	**0**	-	-	LB	-	-	-	-	-	-	-	-	**LB**	-	-	**N/A**	**N/A**	**LB**	**LB**
Non Program Specific Admin Cost		9																									
2010 Joint Initiatives Total	**15**	**10**	**25**	**0**	**25**	**100%**	0%	**0**	**0**	-	-	**LB**	-	-	-	-	-	-	-	-	**LB**	-	-	**N/A**	**N/A**	**LB**	**LB**
Conservation for Affordable Housing Programs*																											
Energy Efficiency Program	**10**	**16**	**26**	**0**	**26**	**100%**	0%	**904**	**660**	-	-	**6**	**103**	-	**66**	**7**	-	**4,631**	-	-	**3.9**	-	**74**	**N/A**	**1.1**	**3.9**	**77**
Non Program Specific Admin Cost		2																									
2010 Affordable Housing Total	**10**	**19**	**28**	**0**	**28**	**100%**	**0%**	**904**	**660**	-	-	**6**	**104**	-	**66**	**7**	-	**4,631**	-	-	**3.6**	-	**74**	**N/A**	**1.1**	**3.6**	**75**
Innovative Technology																											
Energy Efficiency Program																											
Non Program Specific Admin Cost																											
2010 Innovative Technology Total																											
High Carbon Fuel Switching																											
High Carbon Fuel Switching Program	149	76	225	-	225	100%	0%	(6,407)	(3,204)	7	-	FS	(920)	1,349	(631)	(66)	1,037	(44,059)	47	-	FS	698	1,037	1.5	0.6	1.2	204
Non Program Specific Admin Cost		0																									
2010 High Carbon Fuel Switching Total	**149**	**76**	**225**	**0**	**225**	**100%**	**0**	(6,407)	(3,204)	**7**	**0**	**FS**	**-920**	**1349**	**-631**	**-66**	**1037**	(44,059)	**47**	**0**	**FS**	**698**	**1037**	**1.5**	**0.6**	**1.2**	**204**
Portfolio Level Expenditure																											
Conservation Education & Outreach		201																									
Enabling Activities		41																									
Non Program Specific Portfolio Level Cost		232																									
Industrial Program Costs		0																									
Labor Costs		282																									
FEVI Portfolio level total		**756**																									
2010 Total	**727**	**1,022**	**1,749**	**725**	**2,474**	**71%**	**29%**	**22,468**	**20,706**	**290**	**0**	**9**	**4,154**	**1,852**	**3,317**	**297**	**1,304**	**194,074**	**3,271**	**0**	**2.4**	**725**	**4,918**	**6.8**	**0.8**	**2.0**	**3,532**

2010 DSM Actuals

	PROGRAM									ALTERNATE		NET PRESENT VALUE										Benefits/cost test						
	COSTS ($000)							SAVINGS (GJ)		Impact		Levelized Cost	Utility Benefits (Costs)		Participant Benefits (Costs)			Program Net Savings						Participant				
	Utility																											
	Incentives	Administration	Total	Participant	Total	% Utility	% Participant	Gross	Net	Energy MWh	Capacity kW	($/GJ)	Program ($'000s)	Alternate ($'000s)	Program ($'000s)	Carbon Tax ($'000s)	Alternate ($'000s)	Natural Gas (GJ)	Alternate Energy (MWh)	Alternate Capacity (kW)	Natural Gas Utility	Total Costs ($'000s)	Total Benefits ($'000s)	Benefit/	Natural Gas Rate Impact	Total Resource	TRC Net Benefits ($'000s)
2010 Actuals																												
Residential Energy Efficiency Programs																												
2010 Residential Total	2,803	440	3,242	3,302	6,544	50%	50%	108,346	62,036	2	-	5	6,141	2	6,798	890	1	606,851	13	-	1.9	3,302	7,689	2.3	0.6	0.9	(402)
Commercial Energy Efficiency Programs																												
2010 Commercial Total	2,401	170	2,570	3,655	6,225	41%	59%	126,585	103,856	2,049	-	3	8,313	2,376	9,634	1,211	1,538	815,113	19,803	-	3.2	3,655	12,383	3.4	0.7	1.7	4,464
Joint Initiatives																												
2010 Joint Initiatives Total	29	429	458	0	487	94%	0%	864	748	0	-	80	56	0	61	8	0	5,700	-	-	0.1	-	70	N/A	0.1	0.1	(431)
Conservation for Affordable Housing Programs																												
2010 Affordable Housing Total	49	275	324	0	324	100%	0%	4,517	3,297	0	-	17	244	0	222	30	0	19,479	-	-	0.8	-	252	N/A	0.4	0.8	(80)
Innovative Technology																												
2010 Innovative Technology Total	0	0	0	0	0	-	-	0	0	0	-	-	0	0	0	0	0	-	-	-	N/A	-	-	N/A	N/A	N/A	N/A
High carbon fuel switching																												
2010 High Carbon Fuel Switching Total	178	123	301	0	301	100%	0%	(7,654)	(3,827)	8	-	FS	(398)	976	(564)	(57)	976	(38,632)	44	-	FS	621	976	1.6	0.8	1.4	277
Portfolio Level Expenditure																												
2010 Portfolio Level Total		**4,842**										-																
												-																
2010 TOTAL	**5,460**	**6,278**	**11,738**	**6,957**	**18,723**	**63%**	**37%**	**232,657**	**166,110**	**2,059**	**0**	8	**14,356**	**3,354**	**16,152**	**2,082**	**2,515**	**1,408,510**	**19,860**	**0**	**1.2**	**6,957**	**20,749**	**3.0**	**0.5**	**0.9**	**(1,013)**

Notes:

The Utility incentive for Affordable housing includes partner incentive
The Utility benefits for affordable housing includes the 30% adder

FORTIS BC

2010 DSM Actuals

	PROGRAM									ALTERNATE		NET PRESENT VALUE										Benefit/cost test						
	COSTS ($000)							SAVINGS (GJ)		Impact		Levelized Cost	Utility Benefits (Costs)		Participant Benefits (Costs)			Program Net Savings				Participant						
	Utility																											
2010 FEI Programs Actuals	Incentives	Administration	Total	Participant	Total	% Utility	% Participant	Gross	Net	Energy MWh	Capacity kW	($/GJ)	Program ($'000s)	Alternate ($'000s)	Program ($'000s)	Carbon Tax ($'000s)	Alternate ($'000s)	Natural Gas (GJ)	Alternate Energy (MWh)	Alternate Capacity (kW)	Natural Gas Utility	Total Costs ($'000s)	Total Benefits ($'000s)	Benefit/Cost	Natural Gas Rate Impact	Total Resource	TRC Net Benefits ($'000s)
2010																												
Residential Energy Efficiency Programs																												
Energy Efficiency Program	2,686	254	2,940	3,199	6,139	48%	52%	104,795	59,965	0	-	5	5,929	0	6,480	859	0	586,021	-		2.0	3,199	7,339	2.3	0.6	1.0	(210)
Non Program Specific Admin Cost		74																	-	-							
2010 Residential Total	**2,686**	**328**	**3,014**	**3,199**	**6,213**	**48%**	**52%**	**104,795**	**59,965**	**0**	**-**	**3**	**5,929**	**0**	**6,480**	**859**	**0**	**586,021**	**0**	**0**	**2.0**	**3,199**	**7,339**	**2.3**	**0.6**	**1.0**	**(284)**
Commercial Energy Efficiency Programs																												
Energy Efficiency Program	1,964	81	2,045	3,032	5,078	40%	60%	102,164	82,678	1,768	-	3	6,739	2,061	6,820	976	1,321	658,188	17,177	-	3.3	3,032	9,117	3.0	0.8	1.7	3,723
Non Program Specific Admin Cost		39																									
2010 Commercial Total	**1,964**	**120**	**2,084**	**3,032**	**5,116**	**44%**	**59%**	**102,164**	**82,678**	**1,768**	**-**	**3**	**6,739**	**2,061**	**6,820**	**976**	**1,321**	**658,188**	**17,177**	**-**	**3.2**	**3,032**	**9,117**	**3.0**	**0.8**	**1.7**	**3,684**
Joint Initiatives																												
Energy Efficiency Program	14	371	385	0	414	93%	7%	864	748	0	0	67	56	0	61	8	0	5,700	0	0	0.1	29	70	2.4	0	0.1	(358)
Non Program Specific Admin Cost		48																									
2010 Joint Initiatives Total	**14**	**419**	**433**	**0**	**462**	**93%**	**7%**	**864**	**748**	**0**	**-**	**67**	**56**	**0**	**61**	**8**	**0**	**5,700**	**0**	**0**	**0.1**	**-**	**70**	**N/A**	**0.1**	**0.1**	**(406)**
Conservation for Affordable Housing Programs*																												
Energy Efficiency Program	39	213	253	0	253	100%	0%	3,613	2,637	0	0	16	194	0	164	24	0	15,520	0	0	0.8	0.0	187	0.0	0.5	0.8	(59)
Non Program Specific Admin Cost		43																									
2010 Affordable Housing Total	**39**	**256**	**296**	**0**	**296**	**100%**	**0%**	**3,613**	**2,637**	**0**	**0**	**16**	**194**	**0**	**164**	**24**	**0**	**15,520**	**0**	**0**	**0.7**	**-**	**187**	**N/A**	**0.4**	**0.7**	**(102)**
Innovative Technology																												
Energy Efficiency Program																												
Non Program Specific Admin Cost																												
2010 Innovative Technology Total																												
High Carbon Fuel Switching																												
High Carbon Fuel Switching Program	29	46	75	0	75	100%	0%	(1,247)	(624)	1	0	FS	(61)	159	(67)	(9)	159	(6,103)	7	0	FS	76.4	159	2.1	0.5	1.2	23
Non Program Specific Admin Cost		1																									
2010 High Carbon Fuel Switching Total	**29**	**47**	**76**	**0**	**76**	**100%**	**0%**	**(1,247)**	**(624)**	**1**	**0**	**FS**	**(61)**	**159**	**(67)**	**(9)**	**159**	**(6,103)**	**7**	**0**	**FS**	**76.4**	**159**	**2.1**	**0.5**	**1.2**	**23**
Portfolio Level Expenditure																												
Conservation Education & Outreach		1,415																									
Enabling Activities		70																									
Non Program Specific Portfolio Level Cost		1,289																									
Industrial Program Costs		4																									
Labor Costs		1,307																									
2010 FEI Portfolio Level Total		**4,085**																									
2010 Total	**4,732**	**5,256**	**9,988**	**6,232**	**16,249**	**61%**	**38%**	**210,189**	**145,404**	**1,769**	**0**	**7.9**	**12,857**	**2,220**	**13,458**	**1,859**	**1,480**	**1,259,325**	**17,184**	**0**	**1.3**	**6,232**	**16,796**	**2.7**	**0.5**	**0.9**	**(1,171)**

Notes
*Affordable Housing
Utility benefits includes 30% adder

FORTIS BC VANCOUVER ISLAND

2010 DSM Actuals

2010 FEVI Programs Actuals	PROGRAM									ALTERNATE		NET PRESENT VALUE									BENEFIT/COST						
	COSTS ($000)							SAVINGS (GJ)		Impact		Levelized Cost	Utility Benefits (Costs)		Participant Benefits (Costs)			Program Net Savings				Participant					
	Utility																										
	Incentives	Administration	Total	Participant	Total	% Utility	% Participant	Gross	Net	Energy MWh	Capacity kW	($/GJ)	Program ($'000s)	Alternate ($'000s)	Program ($'000s)	Carbon Tax ($'000s)	Alternate ($'000s)	Natural Gas (GJ)	Alternate Energy (MWh)	Alternate Capacity (kW)	Natural Gas Utility	Total Costs ($'000s)	Total Benefits ($'000s)	Benefit/ Cost	Natural Gas Rate Impact	Total Resource	TRC Net Benefits ($'000s)
2010																											
Residential Energy Efficiency Programs:																											
Energy Efficiency Program	117	76	193	103	296	65%	35%	3,551	2,072	2	-	9	212	2	318	31	1	20,830	13	-	1.1	103	350	3.4	0.4	0.7	(83)
Non Program Specific Admin Cost		35																									
2010 Residential Total	**117**	**111**	**228**	**103**	**331**	**65%**	**35%**	**3,551**	**2,072**	**2**	**0**	**9**	**212**	**2**	**318**	**31**	**1**	**20,830**	**13**	**0**	**0.9**	**103**	**350**	**3.4**	**0.4**	**0.6**	**(118)**
Commercial Energy Efficiency Programs:																											
Energy Efficiency Program	437	20	456	623	1,079	42%	58%	24,421	21,178	282	-	3	1,574	315	2,814	235	217	156,925	2,626	-	3.4	623	3,266	5.2	0.5	1.8	810
Non Program Specific Admin Cost		30																									
2010 Commercial Total	**437**	**49**	**486**	**623**	**1,109**	**44%**	**56%**	**24,421**	**21,178**	**282**	**-**	3	1,574	315	2,814	235	217	156,925	2,626	-	**3.2**	**623**	**3,266**	**5.2**	**0.5**	**1.7**	**780**
Joint Initiatives																											
Energy Efficiency Program	15	1	16	0	16	100%	0%	0	**0**	-	-	LB	-	-	-	-	-	-	-	-	**LB**	-	-	**N/A**	**N/A**	**LB**	**LB**
Non Program Specific Admin Cost		9																									
2010 Joint Initiatives Total	**15**	**10**	**25**	**0**	**25**	**100%**	0%	**0**	**0**	-	-	**LB**	-	-	-	-	-	-	-	-	**LB**	-	-	**N/A**	**N/A**	**LB**	**LB**
Conservation for Affordable Housing Programs																											
Energy Efficiency Program	**10**	**16**	**26**	**0**	**26**	**100%**	0%	**904**	**660**	-	-	**7**	**50**	-	**59**	**6**	-	**3,959**	-	-	**1.9**	-	**65**	**N/A**	**0.6**	**1.9**	**23**
Non Program Specific Admin Cost		2																									
2010 Affordable Housing Total	**10**	**19**	**28**	**0**	**28**	**100%**	**0%**	**904**	**660**	-	-	**7**	**50**	-	**59**	**6**	-	**3,959**	-	-	**1.8**	-	**65**	**N/A**	**0.6**	**1.8**	**22**
Innovative Technology																											
Energy Efficiency Program																											
Non Program Specific Admin Cost																											
2010 Innovative Technology Total																											
High Carbon Fuel Switching																											
High Carbon Fuel Switching Program	149	76	225	-	225	100%	0%	(6,407)	(3,204)	7	-	FS	(337)	817	(497)	(48)	817	(32,529)	37	-	FS	545	817	1.5	0.9	1.5	255
Non Program Specific Admin Cost		0																									
2010 High Carbon Fuel Switching Total	**149**	**76**	**225**	**0**	**225**	**100%**	**0**	(6,407)	(3,204)	**7**	**0**	**FS**	**-337**	**817**	**-497**	**-48**	**817**	(32,529)	**37**	**0**	**FS**	**545**	**817**	**1.5**	**0.9**	**1.5**	**255**
Portfolio Level Expenditure																											
Conservation Education & Outreach		201																									
Enabling Activities		41																									
Non Program Specific Portfolio Level Cost		232																									
Industrial Program Costs		0																									
Labor Costs		282																									
FEVI Portfolio level total		**756**																									
2010 Total	**727**	**1,022**	**1,749**	**725**	**2,474**	**71%**	**29%**	**22,468**	**20,706**	**290**	**0**	**12**	**1,498**	**1,133**	**2,694**	**224**	**1,035**	**149,185**	**2,676**	**0**	**0.9**	**725**	**3,952**	**5.4**	**0.3**	**1.1**	**158**

2010 DSM Actuals

	PROGRAM									ALTERNATE		NET PRESENT VALUE										Benefits/cost test						
	COSTS ($000)							SAVINGS (GJ)		Impact		Levelized Cost	Utility Benefits (Costs)		Participant Benefits (Costs)			Program Net Savings						Participant				
	Utility																											
	Incentives	Administration	Total	Participant	Total	% Utility	% Participant	Gross	Net	Energy MWh	Capacity kW	($/GJ)	Program ($'000s)	Alternate ($'000s)	Program ($'000s)	Carbon Tax ($'000s)	Alternate ($'000s)	Natural Gas (GJ)	Alternate Energy (MWh)	Alternate Capacity (kW)	Natural Gas Utility	Total Costs ($'000s)	Total Benefits ($'000s)	Benefit/	Natural Gas Rate Impact	Total Resource	SCT Net Benefits ($'000s)
2010 Actuals																												
Residential Energy Efficiency Programs																												
2010 Residential Total	2,803	440	3,242	3,302	6,544	50%	50%	108,346	62,036	2	-	4	17,790	2	8,630	1,282	1	850,903	16	-	5.5	3,302	9,913	3.0	1.5	2.7	11,249
Commercial Energy Efficiency Programs																												
2010 Commercial Total	2,401	170	2,570	3,655	6,225	41%	59%	126,585	103,856	2,049	-	2	24,104	3,799	12,178	1,725	1,891	1,134,681	24,352	-	9.4	3,655	15,794	4.3	1.6	4.5	21,678
Joint Initiatives																												
2010 Joint Initiatives Total	29	429	458	0	487	94%	0%	864	748	0	-	63	157	0	73	11	0	7,283	-	-	0.3	-	84	N/A	0.3	0.3	(330)
Conservation for Affordable Housing Programs																												
2010 Affordable Housing Total	49	275	324	0	324	100%	0%	4,517	3,297	0	-	16	298	0	230	31	0	20,150	-	-	0.9	-	261	N/A	0.5	0.9	(27)
Innovative Technology																												
2010 Innovative Technology Total	5,959	5	5,964	1,449	7,840	76%	18%	(161,228)	(161,228)	4,180	-	FS	(18,784)	25,481	(7,815)	(1,284)	19,601	(802,676)	21,779	-	FS	10,548	19,601	1.9	0.3	1.0	(1,143)
High carbon fuel switching																												
2010 High Carbon Fuel Switching Total	178	123	301	0	301	100%	0%	(7,654)	(3,827)	8	-	FS	(1,098)	1,611	(717)	(79)	1,239	(52,635)	56	-	FS	796	1,239	1.6	0.5	1.2	213
Portfolio Level Expenditure																												
2010 Portfolio Level Total		**4,842**										-																
												-																
2010 TOTAL	**11,419**	**6,283**	**17,702**	**8,406**	**26,562**	**67%**	**32%**	**71,429**	**4,882**	**6,239**	**0**	15	**22,466**	**30,893**	**12,579**	**1,685**	**22,733**	**1,157,707**	**46,203**	**0**	**1.3**	**8,406**	**36,996**	**4.4**	**0.7**	**1.6**	**26,797**

Notes:

The Utility incentive for Affordable housing includes partner incentive
The Utility benefits for affordable housing includes the 30% adder

FORTIS BC

2010 DSM Actuals

2010 FEI Programs Actuals	PROGRAM									ALTERNATE		NET PRESENT VALUE										Benefit/cost test						
	COSTS ($000)							SAVINGS (GJ)		Impact		Levelized Cost	Utility Benefits (Costs)		Participant Benefits (Costs)			Program Net Savings				Participant						
	Utility																											
	Incentives	Administration	Total	Participant	Total	% Utility	% Participant	Gross	Net	Energy MWh	Capacity kW	($/GJ)	Program ($'000s)	Alternate ($'000s)	Program ($'000s)	Carbon Tax ($'000s)	Alternate ($'000s)	Natural Gas (GJ)	Alternate Energy (MWh)	Alternate Capacity (kW)	Natural Gas Utility	Total Costs ($'000s)	Total Benefits ($'000s)	Benefit/Cost	Natural Gas Rate Impact	SCT	SCT Net Benefits ($'000s)
2010																												
Residential Energy Efficiency Programs																												
Energy Efficiency Program	2,686	254	2,940	3,199	6,139	48%	52%	104,795	59,965	0	-	4	17,203	0	8,227	1,239	0	822,792	-		5.9	3,199	9,466	3.0	1.5	2.8	11,063
Non Program Specific Admin Cost		74																	-	-							
2010 Residential Total	**2,686**	**328**	**3,014**	**3,199**	**6,213**	**48%**	**52%**	**104,795**	**59,965**	**0**	**-**	**3**	**17,203**	**0**	**8,227**	**1,239**	**0**	**822,792**	**0**	**0**	**5.7**	**3,199**	**9,466**	**3.0**	**1.5**	**2.8**	**10,989**
Commercial Energy Efficiency Programs																												
Energy Efficiency Program	1,964	81	2,045	3,032	5,078	40%	60%	102,164	82,678	1,768	-	2	19,721	3,298	8,699	1,411	1,626	929,290	21,144	-	9.6	3,032	11,736	3.9	1.8	4.5	17,941
Non Program Specific Admin Cost		39																									
2010 Commercial Total	**1,964**	**120**	**2,084**	**3,032**	**5,116**	**44%**	**59%**	**102,164**	**82,678**	**1,768**	**-**	**3**	**19,721**	**3,298**	**8,699**	**1,411**	**1,626**	**929,290**	**21,144**	**-**	**9.5**	**3,032**	**11,736**	**3.9**	**1.8**	**4.5**	**17,903**
Joint Initiatives																												
Energy Efficiency Program	14	371	385	0	414	93%	7%	864	748	0	0	53	157	0	73	11	0	7,283	0	0	0.4	29	84	2.9	0	0.4	(257)
Non Program Specific Admin Cost		48																									
2010 Joint Initiatives Total	**14**	**419**	**433**	**0**	**462**	**93%**	**7%**	**864**	**748**	**0**	**-**	**53**	**157**	**0**	**73**	**11**	**0**	**7,283**	**0**	**0**	**0.4**	**-**	**84**	**N/A**	**0.3**	**0.3**	**(305)**
Conservation for Affordable Housing Programs*																												
Energy Efficiency Program	39	213	253	0	253	100%	0%	3,613	2,637	0	0	14	194	0	164	24	0	15,520	0	0	1.6	0.0	187	0.0	0.5	1.6	160
Non Program Specific Admin Cost		43																									
2010 Affordable Housing Total	**39**	**256**	**296**	**0**	**296**	**100%**	**0%**	**3,613**	**2,637**	**0**	**0**	**14**	**194**	**0**	**164**	**24**	**0**	**15,520**	**0**	**0**	**0.7**	**-**	**187**	**N/A**	**0.4**	**0.7**	**(102)**
Innovative Technology																												
Energy Efficiency Program	5,816	2	5,818	958	7,040	83%	14%	(162,911)	(162,911)	4,180	0	FS	(19,388)	25,481	(8,312)	(1,328)	19,601	(831,982)	21,779	0	FS	10,597	19,601	1.8	0.3	1.0	(947)
Non Program Specific Admin Cost		3																									
2010 Innovative Technology Total	**5,816**	**5**	**5,821**	**958**	**7,043**	**83%**	**14%**	**(162,911)**	**(162,911)**	**4,180**	**0**	**FS**	**(19,388)**	**25,481**	**(8,312)**	**(1,328)**	**19,601**	**(831,982)**	**21,779**	**0**	**FS**	**10,597**	**19,601**	**1.8**	**0.3**	**1.0**	**(950)**
High Carbon Fuel Switching																												
High Carbon Fuel Switching Program	29	46	75	0	75	100%	0%	(1,247)	(624)	1	0	FS	(177)	262	(86)	(13)	202	(8,575)	9	0	FS	98.6	202	2.0	0.3	1.0	10
Non Program Specific Admin Cost		1																									
2010 High Carbon Fuel Switching Total	**29**	**47**	**76**	**0**	**76**	**100%**	**0%**	**(1,247)**	**(624)**	**1**	**0**	**FS**	**(177)**	**262**	**(86)**	**(13)**	**202**	**(8,575)**	**9**	**0**	**FS**	**98.6**	**202**	**2.0**	**0.3**	**1.0**	**10**
Portfolio Level Expenditure																												
Conservation Education & Outreach		1,415																									
Enabling Activities		70																									
Non Program Specific Portfolio Level Cost		1,289																									
Industrial Program Costs		4																									
Labor Costs		1,307																									
2010 FEI Portfolio Level Total		**4,085**																									
2010 Total	**10,548**	**5,261**	**15,809**	**7,189**	**23,292**	**68%**	**31%**	**47,278**	**(17,507)**	**5,949**	**0**	**16.9**	**17,708**	**29,042**	**8,766**	**1,344**	**21,429**	**934,327**	**42,931**	**0**	**1.1**	**7,189**	**31,538**	**4.4**	**0.7**	**1.5**	**23,458**

Notes

*Affordable Housing

Utility benefits includes 30% adder

FORTIS BC VANCOUVER ISLAND

2010 DSM Actuals

2010 FEVI Programs Actuals	PROGRAM									ALTERNATE		NET PRESENT VALUE									BENEFIT/COST						
	COSTS ($000)							SAVINGS (GJ)		Impact		Levelized Cost	Utility Benefits (Costs)		Participant Benefits (Costs)			Program Net Savings				Participant					
	Utility																										
	Incentives	Administration	Total	Participant	Total	% Utility	% Participant	Gross	Net	Energy MWh	Capacity kW	($/GJ)	Program ($'000s)	Alternate ($'000s)	Program ($'000s)	Carbon Tax ($'000s)	Alternate ($'000s)	Natural Gas (GJ)	Alternate Energy (MWh)	Alternate Capacity (kW)	Natural Gas Utility	Total Costs ($'000s)	Total Benefits ($'000s)	Benefit/ Cost	Natural Gas Rate Impact	SCT	SCT Net Benefits ($'000s)
2010																											
Residential Energy Efficiency Programs:																											
Energy Efficiency Program	117	76	193	103	296	65%	35%	3,551	2,072	2	-	7	588	2	403	42	1	28,112	16	-	3.0	103	446	4.3	1.0	2.0	295
Non Program Specific Admin Cost		35																									
2010 Residential Total	**117**	**111**	**228**	**103**	**331**	**65%**	**35%**	**3,551**	**2,072**	**2**	**0**	**7**	**588**	**2**	**403**	**42**	**1**	**28,112**	**16**	**0**	**2.6**	**103**	**446**	**4.3**	**0.9**	**1.8**	**260**
Commercial Energy Efficiency Programs:																											
Energy Efficiency Program	437	20	456	623	1,079	42%	58%	24,421	21,178	282	-	2	4,383	501	3,479	314	265	205,391	3,208	-	9.6	623	4,059	6.5	1.1	4.5	3,805
Non Program Specific Admin Cost		30																									
2010 Commercial Total	**437**	**49**	**486**	**623**	**1,109**	**44%**	**56%**	**24,421**	**21,178**	**282**	**-**	2	4,383	501	3,479	314	265	205,391	3,208	-	**9.0**	**623**	**4,059**	**6.5**	**1.1**	**4.4**	**3,775**
Joint Initiatives																											
Energy Efficiency Program	15	1	16	0	16	100%	0%	0	**0**	-	-	LB	-	-	-	-	-	-	-	-	**LB**	-	-	**N/A**	**N/A**	**LB**	**LB**
Non Program Specific Admin Cost		9																									
2010 Joint Initiatives Total	**15**	**10**	**25**	**0**	**25**	**100%**	0%	**0**	**0**	-	-	**LB**	-	-	-	-	-	-	-	-	**LB**	-	-	**N/A**	**N/A**	**LB**	**LB**
Conservation for Affordable Housing Programs*																											
Energy Efficiency Program	**10**	**16**	**26**	**0**	**26**	**100%**	0%	**904**	**660**	-	-	**6**	**103**	-	**66**	**7**	-	**4,631**	-	-	**3.9**	-	**74**	**N/A**	**1.1**	**3.9**	**77**
Non Program Specific Admin Cost		2																									
2010 Affordable Housing Total	**10**	**19**	**28**	**0**	**28**	**100%**	**0%**	**904**	**660**	-	-	**6**	**104**	-	**66**	**7**	-	**4,631**	-	-	**3.6**	-	**74**	**N/A**	**1.1**	**3.6**	**75**
Innovative Technology																											
Energy Efficiency Program	143	0	143	491	796	18%	62%	1,683	1,683	0	-	5	604	0	496	44	0	29,306	-	-	4.2	491	540	1.1	0.9	0.8	**(193)**
Non Program Specific Admin Cost		0																									
2010 Innovative Technology Total	**143**	**0**	**143**	**491**	**796**	**18%**	**62%**	**1,683**	**1,683**	**0**	**-**	**5**	**604**	**0**	**496**	**44**	**0**	**29,306**	**-**	**-**	**4.2**	**491**	**540**	**1.1**	**0.9**	**0.8**	**(193)**
High Carbon Fuel Switching																											
High Carbon Fuel Switching Program	149	76	225	-	225	100%	0%	(6,407)	(3,204)	7	-	FS	(920)	1,349	(631)	(66)	1,037	(44,059)	47	-	FS	698	1,037	1.5	0.6	1.2	204
Non Program Specific Admin Cost		0																									
2010 High Carbon Fuel Switching Total	**149**	**76**	**225**	**0**	**225**	**100%**	**0**	(6,407)	(3,204)	**7**	**0**	**FS**	**-920**	**1349**	**-631**	**-66**	**1037**	(44,059)	**47**	**0**	**FS**	**698**	**1037**	**1.5**	**0.6**	**1.2**	**204**
Portfolio Level Expenditure																											
Conservation Education & Outreach		201																									
Enabling Activities		41																									
Non Program Specific Portfolio Level Cost		232																									
Industrial Program Costs		0																									
Labor Costs		282																									
FEVI Portfolio level total		**756**																									
2010 Total	**870**	**1,022**	**1,892**	**1,217**	**3,271**	**58%**	**37%**	**24,151**	**22,389**	**290**	**0**	**8**	**4,758**	**1,852**	**3,814**	**341**	**1,304**	**223,380**	**3,271**	**0**	**2.5**	**1,217**	**5,459**	**4.5**	**0.8**	**1.9**	**3,339**

2010 DSM Actuals

	PROGRAM									ALTERNATE		NET PRESENT VALUE										Benefits/cost test						
	COSTS ($000)							SAVINGS (GJ)		Impact		Levelized Cost	Utility Benefits (Costs)		Participant Benefits (Costs)			Program Net Savings						Participant				
	Utility																											
	Incentives	Administration	Total	Participant	Total	% Utility	% Participant	Gross	Net	Energy MWh	Capacity kW	($/GJ)	Program ($'000s)	Alternate ($'000s)	Program ($'000s)	Carbon Tax ($'000s)	Alternate ($'000s)	Natural Gas (GJ)	Alternate Energy (MWh)	Alternate Capacity (kW)	Natural Gas Utility	Total Costs ($'000s)	Total Benefits ($'000s)	Benefit/	Natural Gas Rate Impact	Total Resource	TRC Net Benefits ($'000s)
2010 Actuals																												
Residential Energy Efficiency Programs																												
2010 Residential Total	2,803	440	3,242	3,302	6,544	50%	50%	108,346	62,036	2	-	5	6,141	2	6,798	890	1	606,851	13	-	1.9	3,302	7,689	2.3	0.6	0.9	(402)
Commercial Energy Efficiency Programs																												
2010 Commercial Total	2,401	170	2,570	3,655	6,225	41%	59%	126,585	103,856	2,049	-	3	8,313	2,376	9,634	1,211	1,538	815,113	19,803	-	3.2	3,655	12,383	3.4	0.7	1.7	4,464
Joint Initiatives																												
2010 Joint Initiatives Total	29	429	458	0	487	94%	0%	864	748	0	-	80	56	0	61	8	0	5,700	-	-	0.1	-	70	N/A	0.1	0.1	(431)
Conservation for Affordable Housing Programs																												
2010 Affordable Housing Total	49	275	324	0	324	100%	0%	4,517	3,297	0	-	17	244	0	222	30	0	19,479	-	-	0.8	-	252	N/A	0.4	0.8	(80)
Innovative Technology																												
2010 Innovative Technology Total	5,959	5	5,964	1,449	7,840	76%	18%	(161,228)	(161,228)	4,180	-	FS	(6,728)	17,707	(7,203)	(1,099)	17,707	(706,551)	19,675	-	FS	9,751	17,707	1.8	0.6	1.2	3,140
High carbon fuel switching																												
2010 High Carbon Fuel Switching Total	178	123	301	0	301	100%	0%	(7,654)	(3,827)	8	-	FS	(398)	976	(564)	(57)	976	(38,632)	44	-	FS	621	976	1.6	0.8	1.4	277
Portfolio Level Expenditure												-																
2010 Portfolio Level Total		**4,842**										-																
2010 TOTAL	**11,419**	**6,283**	**17,702**	**8,406**	**26,562**	**67%**	**32%**	**71,429**	**4,882**	**6,239**	**0**	25	**7,628**	**21,061**	**8,949**	**983**	**20,222**	**701,959**	**39,535**	**0**	**0.4**	**8,406**	**30,154**	**3.6**	**0.3**	**1.1**	**2,127**

Notes:

The Utility incentive for Affordable housing includes partner incentive
The Utility benefits for affordable housing includes the 30% adder

FORTIS BC

2010 DSM Actuals

2010 FEI Programs Actuals	PROGRAM									ALTERNATE		NET PRESENT VALUE									Benefit/cost test						
	COSTS ($000)							SAVINGS (GJ)		Impact		Levelized Cost	Utility Benefits (Costs)		Participant Benefits (Costs)			Program Net Savings			Participant						
	Utility			Participant	Total	% Utility	% Participant	Gross	Net	Energy	Capacity	($/GJ)	Program	Alternate	Program	Carbon Tax	Alternate	Natural Gas	Alternate Energy	Alternate Capacity	Natural Gas	Total Costs	Total Benefits	Benefit/Cost	Natural Gas		TRC Net Benefits
	Incentives	Administration	Total							MWh	kW		($'000s)	($'000s)	($'000s)	($'000s)	($'000s)	(GJ)	(MWh)	(kW)	Utility	($'000s)	($'000s)		Rate Impact	Total Resource	($'000s)
2010																											
Residential Energy Efficiency Programs																											
Energy Efficiency Program	2,686	254	2,940	3,199	6,139	48%	52%	104,795	59,965	0	-	5	5,929	0	6,480	859	0	586,021	-		2.0	3,199	7,339	2.3	0.6	1.0	(210)
Non Program Specific Admin Cost		74																	-	-							
2010 Residential Total	**2,686**	**328**	**3,014**	**3,199**	**6,213**	**48%**	**52%**	**104,795**	**59,965**	**0**	**-**	**3**	**5,929**	**0**	**6,480**	**859**	**0**	**586,021**	**0**	**0**	**2.0**	**3,199**	**7,339**	**2.3**	**0.6**	**1.0**	**(284)**
Commercial Energy Efficiency Programs																											
Energy Efficiency Program	1,964	81	2,045	3,032	5,078	40%	60%	102,164	82,678	1,768	-	3	6,739	2,061	6,820	976	1,321	658,188	17,177	-	3.3	3,032	9,117	3.0	0.8	1.7	3,723
Non Program Specific Admin Cost		39																									
2010 Commercial Total	**1,964**	**120**	**2,084**	**3,032**	**5,116**	**44%**	**59%**	**102,164**	**82,678**	**1,768**	**-**	**3**	**6,739**	**2,061**	**6,820**	**976**	**1,321**	**658,188**	**17,177**	**-**	**3.2**	**3,032**	**9,117**	**3.0**	**0.8**	**1.7**	**3,684**
Joint Initiatives																											
Energy Efficiency Program	14	371	385	0	414	93%	7%	864	748	0	0	67	56	0	61	8	0	5,700	0	0	0.1	29	70	2.4	0	0.1	(358)
Non Program Specific Admin Cost		48																									
2010 Joint Initiatives Total	**14**	**419**	**433**	**0**	**462**	**93%**	**7%**	**864**	**748**	**0**	**-**	**67**	**56**	**0**	**61**	**8**	**0**	**5,700**	**0**	**0**	**0.1**	**-**	**70**	**N/A**	**0.1**	**0.1**	**(406)**
Conservation for Affordable Housing Programs*																											
Energy Efficiency Program	39	213	253	0	253	100%	0%	3,613	2,637	0	0	16	194	0	164	24	0	15,520	0	0	0.8	0.0	187	0.0	0.5	0.8	(59)
Non Program Specific Admin Cost		43																									
2010 Affordable Housing Total	**39**	**256**	**296**	**0**	**296**	**100%**	**0%**	**3,613**	**2,637**	**0**	**0**	**16**	**194**	**0**	**164**	**24**	**0**	**15,520**	**0**	**0**	**0.7**	**-**	**187**	**N/A**	**0.4**	**0.7**	**(102)**
Innovative Technology																											
Energy Efficiency Program	5,816	2	5,818	958	7,040	83%	14%	(162,911)	(162,911)	4,180	0	FS	(6,937)	17,707	(7,567)	(1,128)	17,707	(726,396)	19,675	0	FS	9,653	17,707	1.8	0.6	1.3	3,730
Non Program Specific Admin Cost		3																									
2010 Innovative Technology Total	**5,816**	**5**	**5,821**	**958**	**7,043**	**83%**	**14%**	**(162,911)**	**(162,911)**	**4,180**	**0**	**FS**	**(6,937)**	**17,707**	**(7,567)**	**(1,128)**	**17,707**	**(726,396)**	**19,675**	**0**	**FS**	**9,653**	**17,707**	**1.8**	**0.6**	**1.3**	**3,727**
High Carbon Fuel Switching																											
High Carbon Fuel Switching Program	29	46	75	0	75	100%	0%	(1,247)	(624)	1	0	FS	(61)	159	(67)	(9)	159	(6,103)	7	0	FS	76.4	159	2.1	0.5	1.2	23
Non Program Specific Admin Cost		1																									
2010 High Carbon Fuel Switching Total	**29**	**47**	**76**	**0**	**76**	**100%**	**0%**	**(1,247)**	**(624)**	**1**	**0**	**FS**	**(61)**	**159**	**(67)**	**(9)**	**159**	**(6,103)**	**7**	**0**	**FS**	**76.4**	**159**	**2.1**	**0.5**	**1.2**	**23**
Portfolio Level Expenditure																											
Conservation Education & Outreach		1,415																									
Enabling Activities		70																									
Non Program Specific Portfolio Level Cost		1,289																									
Industrial Program Costs		4																									
Labor Costs		1,307																									
2010 FEI Portfolio Level Total		**4,085**																									
2010 Total	**10,548**	**5,261**	**15,809**	**7,189**	**23,292**	**68%**	**31%**	**47,278**	**(17,507)**	**5,949**	**0**	**29.7**	**5,920**	**19,928**	**5,891**	**730**	**19,187**	**532,929**	**36,859**	**0**	**0.4**	**7,189**	**25,808**	**3.6**	**0.3**	**1.1**	**2,556**

Notes
*Affordable Housing
Utility benefits includes 30% adder

FORTIS BC VANCOUVER ISLAND

2010 DSM Actuals

2010 FEVI Programs Actuals	PROGRAM									ALTERNATE		NET PRESENT VALUE									BENEFIT/COST						
	COSTS ($000)							SAVINGS (GJ)		Impact		Levelized Cost	Utility Benefits (Costs)		Participant Benefits (Costs)			Program Net Savings				Participant					
	Utility																										
	Incentives	Administration	Total	Participant	Total	% Utility	% Participant	Gross	Net	Energy MWh	Capacity kW	($/GJ)	Program ($'000s)	Alternate ($'000s)	Program ($'000s)	Carbon Tax ($'000s)	Alternate ($'000s)	Natural Gas (GJ)	Alternate Energy (MWh)	Alternate Capacity (kW)	Natural Gas Utility	Total Costs ($'000s)	Total Benefits ($'000s)	Benefit/ Cost	Natural Gas Rate Impact	Total Resource	TRC Net Benefits ($'000s)
2010																											
Residential Energy Efficiency Programs:																											
Energy Efficiency Program	117	76	193	103	296	65%	35%	3,551	2,072	2	-	9	212	2	318	31	1	20,830	13	-	1.1	103	350	3.4	0.4	0.7	(83)
Non Program Specific Admin Cost		35																									
2010 Residential Total	**117**	**111**	**228**	**103**	**331**	**65%**	**35%**	**3,551**	**2,072**	**2**	**0**	**9**	**212**	**2**	**318**	**31**	**1**	**20,830**	**13**	**0**	**0.9**	**103**	**350**	**3.4**	**0.4**	**0.6**	**(118)**
Commercial Energy Efficiency Programs:																											
Energy Efficiency Program	437	20	456	623	1,079	42%	58%	24,421	21,178	282	-	3	1,574	315	2,814	235	217	156,925	2,626	-	3.4	623	3,266	5.2	0.5	1.8	810
Non Program Specific Admin Cost		30																									
2010 Commercial Total	**437**	**49**	**486**	**623**	**1,109**	**44%**	**56%**	**24,421**	**21,178**	**282**	**-**	3	1,574	315	2,814	235	217	156,925	2,626	-	**3.2**	**623**	**3,266**	**5.2**	**0.5**	**1.7**	**780**
Joint Initiatives																											
Energy Efficiency Program	15	1	16	0	16	100%	0%	0	**0**	-	-	LB	-	-	-	-	-	-	-	-	**LB**	-	-	**N/A**	**N/A**	**LB**	**LB**
Non Program Specific Admin Cost		9																									
2010 Joint Initiatives Total	**15**	**10**	**25**	**0**	**25**	**100%**	0%	**0**	**0**	-	-	**LB**	-	-	-	-	-	-	-	-	**LB**	-	-	**N/A**	**N/A**	**LB**	**LB**
Conservation for Affordable Housing Programs*																											
Energy Efficiency Program	**10**	**16**	**26**	**0**	**26**	**100%**	0%	**904**	**660**	-	-	**7**	**50**	-	**59**	**6**	-	**3,959**	-	-	**1.9**	-	**65**	**N/A**	**0.6**	**1.9**	**23**
Non Program Specific Admin Cost		2																									
2010 Affordable Housing Total	**10**	**19**	**28**	**0**	**28**	**100%**	**0%**	**904**	**660**	-	-	**7**	**50**	-	**59**	**6**	-	**3,959**	-	-	**1.8**	-	**65**	**N/A**	**0.6**	**1.8**	**22**
Innovative Technology																											
Energy Efficiency Program	143	0	143	491	796	18%	62%	1,683	1,683	0	-	7	209	0	364	29	0	19,845	-	-	1.5	1	393	0.8	0.4	0.3	**(587)**
Non Program Specific Admin Cost		0																									
2010 Innovative Technology Total	**143**	**0**	**143**	**491**	**796**	**18%**	**62%**	**1,683**	**1,683**	**0**	**-**	**7**	**209**	**0**	**364**	**29**	**0**	**19,845**	**-**	**-**	**1.5**	**491**	**393**	**0.8**	**0.4**	**0.3**	**(587)**
High Carbon Fuel Switching																											
High Carbon Fuel Switching Program	149	76	225	-	225	100%	0%	(6,407)	(3,204)	7	-	FS	(337)	817	(497)	(48)	817	(32,529)	37	-	FS	545	817	1.5	0.9	1.5	255
Non Program Specific Admin Cost		0																									
2010 High Carbon Fuel Switching Total	**149**	**76**	**225**	**0**	**225**	**100%**	**0**	(6,407)	(3,204)	**7**	**0**	**FS**	**-337**	**817**	**-497**	**-48**	**817**	(32,529)	**37**	**0**	**FS**	**545**	**817**	**1.5**	**0.9**	**1.5**	**255**
Portfolio Level Expenditure																											
Conservation Education & Outreach		201																									
Enabling Activities		41																									
Non Program Specific Portfolio Level Cost		232																									
Industrial Program Costs		0																									
Labor Costs		282																									
FEVI Portfolio level total		**756**																									
2010 Total	**870**	**1,022**	**1,892**	**1,217**	**3,271**	**58%**	**37%**	**24,151**	**22,389**	**290**	**0**	**11**	**1,708**	**1,133**	**3,058**	**253**	**1,035**	**169,030**	**2,676**	**0**	**0.9**	**1,217**	**4,346**	**3.6**	**0.3**	**0.9**	**(429)**

FORTIS BC

2011 Residential Planned	PROGRAM															ALTERNATE		NET PRESENT VALUE									BENEFIT/COST						PARAMETERS														
	COSTS ($000)											SAVINGS (GJ)			LIFE	Impact		Levelized Cost	Utility Benefits (Costs)		Participant Benefits (Costs)			Program Net Savings				Participant						UTILITY				PARTICIPANT									
FEI	Utility			Partners																																											
	Incentives	Administration	Total	Incentives	Administration	Total	Participant	Total	% Utility	% Partner	% Participant	Gross	Net-to-Gross	Net	Years	Energy	Capacity	($/GJ)	Program	Alternate	Program	Carbon Tax	Alternate	Natural Gas	Alternate Energy	Alternate Capacity	Natural Gas	Total Costs	Total Benefits	Benefit/Cost	Natural Gas		SCT	SCT Net Benefits	Natural Gas Utility Discount	Natural Gas Supply	Alternate Discount Rate	Alternate Supply	Discount Rate	Natural Gas NPV	Carbon Tax NPV	Alternate Energy NPV	Alternate Capacity NPV	Natural Gas Tariff	Energy Tariff	Capacity Tariff
																MWh	kW														Rate Impact				$/GJ		$/GJ	$/kWh	$/kW/a	$/GJ	$/kWh	$/kW/a
Label	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF		AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR	AS	AT
Source Sheet or Calculation	Program	Program	B+C	Program	Program	E+F	Program	D+G+H	D/I	G/I	H/I	Program	Program	MxN	Program	Program	Program	D/Y	OxAJ	Q x N x AL	M x N x AN	M x N x AO	N x (OxAP x RxAQ)	PV(AI,P,-C)	PV(AK,P,-Q*N)	PV(AK,P,-R)	T/O	H>0, (V+W)>O	H>0, (V+W)>O, X	AD/AC	T/(V+O)		(T+U)/I	(T+U)-I	Input	Program	Input	Input	Input	PV(AM,P,-Input!D25)	Input	PV(AM,P,-Input!D28)	PV(AM,P,-Input!D29)	Input	Input	Input
2011																																														
RESIDENTIAL:																																														
EnerChoice Fireplaces (Retrofit)	576	117	693	0	0	0	(219)	474	146%	0%	-46%	14,880	76%	11,309	15	0	-	5	2,851	N/A	1,350	204	N/A	135,004	0	-	4.1	-	1,773	N/A	1.4		6.0	2,377	3.00%	193.94	3%	1.43	3.0%	119.37	18.08	0.99	0.00	9.999	0.083	-
ENERGY STAR Hot Water Heaters (Retrofit)	429	138	567	0	0	0	195	762	74%	0%	26%	7,152	80%	5,722	13	0	-	9	1,297	N/A	608	93	N/A	60,849	0	-	2.3	195	701	3.6	1.1		1.7	535	3.00%	174.41	3%	1.28	3.0%	106.34	16.18	0.88	0.00	9.999	0.083	-
TLC campaign	368	120	488	0	0	0	0	488	100%	0%	0%	0	100%	0	1	0	-	LB	LB	N/A	N/A	N/A	N/A	-	0	-	LB	-	-	N/A	N/A		LB	LB	3.00%	29.54	3%	0.12	3.0%	9.71	2.14	0.08	0.00	9.999	0.083	-
Total Residential	1,373	375	1,748	-	-	-	(23)	1,724	101%	-	-1%	22,032		17,030		0	-	9	4,149	0	1,958	297	0	195,853	-	-	2.4	N/A	2,279	N/A	1.1		2.4	2,424												

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	UTILITY		FORTIS BC										
2													
3													
4			Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
5			Units										
6		NATURAL GAS											
7		Incremental Cost of Gas (nominal)	$ Per GJ	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28
8	1		Year	0	1	2	3	4	5	6	7	8	9
9		carbon tax	$ per GJ	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10		Distribution adder	$ per GJ	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16
11		Total incremental cost of gas including carbon		15.44	15.44	15.44	15.44	15.44	15.44	15.44	15.44	15.44	15.44
12	2	GDP Deflator		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
13	3	Incremental Cost of Gas (Real)		$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44
14	4	Net Present Value -2010			$29.54	$43.67	$57.39	$70.71	$83.64	$96.20	$108.38	$120.22	$131.71
15	5	Net Present Value -2011				$29.54	$43.67	$57.39	$70.71	$83.64	$96.20	$108.38	$120.22
16	6	Net Present Value -2012					$29.54	$43.67	$57.39	$70.71	$83.64	$96.20	$108.38
17													
18													
19		ELECTRICITY											
20		Incremental Cost of Elec	$ Per kWh	$0.12									
21		Incremental Cost of E Capacity	$ Per kW/a	$170.00									
22													
23													
24													
25	RETAIL												
26				Rate	Customers		789,928	Total Customers in BC		80,000	Total Residential and Commercial Customers on VI		
27		Residential Retail			000's								
28		TGI	$ Per MJ	$0.0100	640		712,304	Total Residential Customers in BC					
29		TGVI	$ Per MJ	$0.0143	72								
30		Electricity	$ Per MJ	$0.0230									
31		Electricity	$ per kWh	$0.0827	1,511		1,511,435	Total BCH Residential Customers in BC				89%	
32		Electricity	$ per kW per year										
33		Commercial Retail											
34		TGI	$ Per MJ	$0.0094	78		77,624	Total Commercial Customers in BC					
35		TGVI	$ Per MJ	$0.0169	8								
36		Electricity	$ Per MJ	$0.0214									
37		Electricity	$ per kWh	$0.0769	190		189,764	Total Light Industrial and Commercial Customers in BC					
38		Electricity	$ per kW per year	$52.0000	15								
39													
40	TAX												
41			Year	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
42	1		Year		0	1	2	3	4	5	6	7	8
43	2	Carbon	$ Per tonne		$20.00	$25.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00
44	3	Carbon	$ Per GJ		$0.9976	$1.2470	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964
45	4	GDP Deflator			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
46	5	Carbon (Real)			$1.00	$1.25	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50
47	6	Net Present Value -2010				$2.14	$3.51	$4.84	$6.13	$7.39	$8.60	$9.78	$10.93
48	7	Net Present Value -2011					$2.62	$3.99	$5.32	$6.61	$7.86	$9.08	$10.26
49	8	Net Present Value -2012						$2.86	$4.23	$5.56	$6.85	$8.11	$9.32
50													
51		Discount Rate (real)[1]											
52		TERASEN GAS											
53		Rate of Inflation	1.90%										
54		TGI	3.00%										
55		TGVI	3.00%										
56		BC HYDRO											
57		Rate of Inflation	2.00%										
58		BC Hydro	3.00%										
59		Customer	3.00%										
60		Footnote 1: Source LR 070531											
61													
62				SHEET LABELS									
63	New Construction												
64		#REF!		BASEBOARD									
65		#REF!		HEATPUMP									

	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
4	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
7	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28
8	10	11	12	13	14	15	16	17	18	19	20	21	22
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16
11	15.44	15.44	15.44	15.44	15.44	15.44	15.44	15.44	15.44	15.44	15.44	15.44	15.44
12	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
13	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44
14	$142.86	$153.69	$164.20	$174.41	$184.32	$193.94	$203.28	$212.35	$221.16	$229.71	$238.01	$246.07	$253.89
15	$131.71	$142.86	$153.69	$164.20	$174.41	$184.32	$193.94	$203.28	$212.35	$221.16	$229.71	$238.01	$246.07
16	$120.22	$131.71	$142.86	$153.69	$164.20	$174.41	$184.32	$193.94	$203.28	$212.35	$221.16	$229.71	$238.01
41	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
42	9	10	11	12	13	14	15	16	17	18	19	20	21
43	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00
44	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964
45	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
46	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50
47	$12.05	$13.13	$14.18	$15.19	$16.18	$17.14	$18.08	$18.98	$19.86	$20.71	$21.54	$22.35	$23.13
48	$11.41	$12.52	$13.60	$14.65	$15.67	$16.66	$17.62	$18.55	$19.46	$20.34	$21.19	$22.02	$22.82
49	$10.50	$11.65	$12.76	$13.85	$14.90	$15.91	$16.90	$17.86	$18.80	$19.70	$20.58	$21.43	$22.26

	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ
4	2033	2034	2035	2036	2037	2038	2039	2040	2041	
7	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.43
8	23	24	25	26	27	28	29	30	31	
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
10	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16		
11	15.44	15.44	15.44	15.44	15.44	15.44	15.44	15.44	15.28	
12	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
13	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.28	
14	$261.48	$268.86	$276.02	$282.97	$289.72	$296.27	$302.63	$308.81	$314.74	
15	$253.89	$261.48	$268.86	$276.02	$282.97	$289.72	$296.27	$302.63	$308.74	
16	$246.07	$253.89	$261.48	$268.86	$276.02	$282.97	$289.72	$296.27	$302.56	
41	2032	2033	2034	2035	2036	2037	2038	2039	2040	
42	22	23	24	25	26	27	28	29	30	
43	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	
44	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	
45	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
46	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	
47	$23.89	$24.62	$25.34	$26.03	$26.71	$27.36	$27.99	$28.61	$29.21	
48	$23.61	$24.36	$25.10	$25.81	$26.51	$27.18	$27.84	$28.47	$29.09	
49	$23.07	$23.85	$24.61	$25.34	$26.06	$26.75	$27.42	$28.08	$28.71	

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Measure Data for EnerChoice Fireplaces (Retrofit)

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 150			
Total Incentive	$ 300		$ 300	$ -
Participant	$ (150)			

Annual Impact Per Measure

Energy Savings per installation	7.8	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	24%	0.76		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	15	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1,810	1,920	0	1,920		Estimated Participation
Impact						
Gross Energy Savings (GJ)	14,026	14,880	0	14,880	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	10,660	11,309	0	11,309	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$193.94	$193.94	$193.94	
Energy Purchases	$ 2,193,267	$2,193,267	$ -	$ 2,193,267	$ -	
Utility Program Costs						
DSM Incentives		$ 576,000	$ -	$ 576,000	$ -	
Administration		$ 116,800	$ -	$ 116,800		
Subtotal	$ 653,030	$ 692,800	$ -	$ 692,800	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ (218,880)	$ -	$ (218,880)	$ -	
Subtotal	$ (206,315)	$ (218,880)	$ -	$ (218,880)	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.433 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 1,746,552		$ -	$ 1,719,347	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 3.5**		**$ -**	**$ 3.5**	**$ -**	Informational (for comparison with supply options)

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Measure Data for ENERGY STAR Hot Water Heaters (Retrofit)

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 226			
Total Incentive	$ 144		$ 144	$ -
Participant	$ 82			

Annual Impact Per Measure

Energy Savings per installation	2.4	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	20%	0.80		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	13	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	2,809	2,980	0	2,980		Estimated Participation
Impact						
Gross Energy Savings (GJ)	6,741	7,152	0	7,152	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	5,393	5,722	0	5,722	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$174.41	$174.41	$174.41	
Energy Purchases	$ 997,912	$ 997,912	$ -	$ 997,912	$ -	
Utility Program Costs						
DSM Incentives		$ 429,120	$ -	$ 429,120	$ -	
Administration		$ 137,720	$ -	$ 137,720		
Subtotal	$ 534,301	$ 566,840	$ -	$ 566,840	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 195,488	$ -	$ 195,488	$ -	
Subtotal	$ 184,266	$ 195,488	$ -	$ 195,488	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.276 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 279,345		$ -	$ 235,584	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 12.5**		**$ -**	**$ 12.5**	**$ -**	Informational (for comparison with supply options)

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Measure Data for TLC campaign

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 23			
Total Incentive	$ 23		$ 23	$ -
Participant				

Annual Impact Per Measure

Energy Savings per installation	0.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	1	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	15,082	16,000	0	16,000		Estimated Participation
Impact						
Gross Energy Savings (GJ)	0	0	0	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	0	0	0	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$29.54	$29.54	$29.54	
Energy Purchases	$ -	$ -	$ -	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 368,000	$ -	$ 368,000	$ -	
Administration		$ 120,000	$ -	$ 120,000		
Subtotal	$ 459,987	$ 488,000	$ -	$ 488,000	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$0.117 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ (459,987)		$ -	$ (488,000)	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	$ -		$ -	$ -	$ -	Informational (for comparison with supply options)

FORTIS BC

2011 Residential Planned	PROGRAM															ALTERNATE		NET PRESENT VALUE									BENEFIT/COST						PARAMETERS													
	COSTS ($000)											SAVINGS (GJ)			LIFE	Impact		Levelized Cost	Utility Benefits (Costs)		Participant Benefits (Costs)			Program Net Savings			Natural Gas	Participant			Natural Gas	Total Resource	TRC Net Benefits	UTILITY				PARTICIPANT									
FEI	Utility			Partners			Participant	Total	% Utility	% Partner	% Participant	Gross	Net-to-Gross	Net	Years	Energy	Capacity	($/GJ)	Program	Alternate	Program	Carbon Tax	Alternate	Natural Gas	Alternate Energy	Alternate Capacity		Total Costs	Total Benefits	Benefit/Cost				Natural Gas Utility Discount	Natural Gas Supply	Alternate Discount Rate	Alternate Supply	Discount Rate	Natural Gas NPV	Carbon Tax NPV	Alternate Energy NPV	Alternate Capacity NPV	Natural Gas Tariff	Energy Tariff	Capacity Tariff
	Incentives	Administration	Total	Incentives	Administration	Total										MWh	kW		($'000s)	($'000s)	($'000s)	($'000s)	($'000s)	(GJ)	(MWh)	(kW)	Utility	($'000s)	($'000s)		Rate Impact			$/GJ	$/GJ	$/kWh	$/kWh		$/GJ	$/GJ	$/kWh	$/kW/a	$/GJ	$/kWh	$/kW/a
Label	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR	AS	AT
Source Sheet or Calculation	Program	Program	B+C	Program	Program	E+F	Program	D+G+H	D/I	G/I	H/I	Program	Program	M+N	Program	Program	Program	D/Y	OxAJ	Q x N x AL	M x N x AN	M x N x AO	N x (QxAP + RxAQ)	PV(AI,P,-Q)	PV(AK,P,-Q*%)	PV(AK,P,-R)	T/D	H>0, (V+W)>0	H>0, (V+W)>0, X	AD/AC	T/(V+D)	(T+U)/I	(T+U)-I	Input	Program	Input	Input	Input	PV(AM,P,-InputD25)	Input	PV(AM,P,-InputD28)	PV(AM,P,-InputD29)	Input	Input	Input
2011																																													
RESIDENTIAL:																																													
EnerChoice Fireplaces (Retrofit)	576	117	693	0	0	0	(219)	474	146%	0%	-46%	14,880	76%	11,309	15	0	-	7	1,065	N/A	1,098	151	N/A	102,031	0	-	1.5	-	1,468	N/A	0.6	2.2	591	7.15%	94.20	6%	1.17	6.0%	97.11	13.31	0.80	0.00	9.999	0.083	-
ENERGY STAR Hot Water Heaters (Retrofit)	429	138	567	0	0	0	195	762	74%	0%	26%	7,152	80%	5,722	13	0	-	12	491	N/A	506	70	N/A	47,415	0	-	0.9	195	577	3.0	0.5	0.6	(271)	7.15%	85.80	6%	1.06	6.0%	88.52	12.29	0.73	0.00	9.999	0.083	-
TLC campaign	368	120	488	0	0	0	0	488	100%	0%	0%	0	100%	0	1	0	-	LB	LB	N/A	N/A	N/A	N/A	-	0	-	LB	-	-	N/A	N/A	LB	LB	7.15%	13.99	6%	0.11	6.0%	9.43	2.02	0.08	0.00	9.999	0.083	-
Total Residential	1,373	375	1,748	-	-	-	(23)	1,724	101%	-	-1%	22,032		17,030		0	-	12	1,556	0	1,605	221	0	149,446	-	-	0.9	N/A	1,849	N/A	0.5	0.9	(168)												

Row	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ
1	**UTILITY**		**FORTIS BC**																																	
2																																				
3																																				
4			**Year**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	
5			Units																																	
6		**NATURAL GAS**																																		
7		Incremental Cost of Gas (nominal)	$ Per GJ	$5.50	$6.17	$6.81	$7.35	$7.87	$8.26	$8.56	$8.78	$8.99	$9.19	$9.40	$9.60	$9.81	$10.03	$10.25	$10.47	$10.70	$10.93	$11.17	$11.42	$11.67	$11.92	$12.19	$12.45	$12.73	$13.01	$13.29	$13.58	$13.88	$14.19	$14.50	$14.82	$15.14
8	1		*Year*	*0*	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*	*16*	*17*	*18*	*19*	*20*	*21*	*22*	*23*	*24*	*25*	*26*	*27*	*28*	*29*	*30*	*31*	
9		carbon tax	$ per GJ	*0.75*	*1.00*	*1.25*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	
10		Distribution adder	$ per GJ	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*		
11		Total incremental cost of gas including carbon		*6.41*	*7.32*	*8.21*	*9.01*	*9.52*	*9.92*	*10.22*	*10.43*	*10.64*	*10.85*	*11.05*	*11.26*	*11.47*	*11.68*	*11.90*	*12.13*	*12.35*	*12.59*	*12.83*	*13.07*	*13.32*	*13.58*	*13.84*	*14.11*	*14.38*	*14.66*	*14.95*	*15.24*	*15.54*	*15.84*	*16.15*	*16.31*	
12	2	GDP Deflator		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
13	3	Incremental Cost of Gas (Real)		$6.41	$7.32	$8.21	$9.01	$9.52	$9.92	$10.22	$10.43	$10.64	$10.85	$11.05	$11.26	$11.47	$11.68	$11.90	$12.13	$12.35	$12.59	$12.83	$13.07	$13.32	$13.58	$13.84	$14.11	$14.38	$14.66	$14.95	$15.24	$15.54	$15.84	$16.15	$16.31	
14	4	Net Present Value -2010			$12.36	$19.03	$25.87	$32.61	$39.16	$45.47	$51.47	$57.19	$62.63	$67.80	$72.71	$77.39	$81.83	$86.05	$90.07	$93.89	$97.52	$100.98	$104.26	$107.39	$110.36	$113.19	$115.88	$118.43	$120.87	$123.18	$125.39	$127.49	$129.48	$131.38	$133.17	
15	5	Net Present Value -2011				$13.99	$21.31	$28.54	$35.56	$42.31	$48.75	$54.87	$60.70	$66.24	$71.51	$76.51	$81.27	$85.80	$90.10	$94.20	$98.09	$101.79	$105.31	$108.66	$111.84	$114.87	$117.75	$120.49	$123.10	$125.59	$127.95	$130.19	$132.33	$134.37	$136.28	
16	6	Net Present Value -2012					$15.51	$23.25	$30.78	$38.01	$44.91	$51.47	$57.71	$63.65	$69.29	$74.66	$79.76	$84.61	$89.22	$93.61	$97.78	$101.74	$105.51	$109.10	$112.51	$115.76	$118.85	$121.79	$124.58	$127.24	$129.77	$132.18	$134.47	$136.65	$138.70	

Row	A	B	C	D	E	F	G	H	I	J	K	L
17												
18												
19		**ELECTRICITY**										
20		Incremental Cost of Elec	$ Per kWh	$0.12								
21		Incremental Cost of E Capacity	$ Per kW/a	$170.00								
22												
23												
24												
25	**RETAIL**											
26				Rate	Customers		789,928	Total Customers in BC		80,000	Total Residential and Commercial Customers on VI	
27		Residential Retail			*000's*							
28		**TGI**	$ Per MJ	$0.0100	640		712,304	Total Residential Customers in BC				
29		**TGVI**	$ Per MJ	$0.0143	72							
30		**Electricity**	$ Per MJ	$0.0230								
31		**Electricity**	$ per kWh	$0.0827	1,511		1,511,435	Total BCH Residential Customers in BC				89%
32		**Electricity**	$ per kW per year									
33		Commercial Retail										
34		**TGI**	$ Per MJ	$0.0094	78		77,624	Total Commercial Customers in BC				
35		**TGVI**	$ Per MJ	$0.0169	8							
36		**Electricity**	$ Per MJ	$0.0214								
37		**Electricity**	$ per kWh	$0.0769	190		189,764	Total Light Industrial and Commercial Customers in BC				
38		**Electricity**	$ per kW per year	$52.0000	15							
39												

Row	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ
40	**TAX**																																			
41			**Year**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	
42	1		*Year*		*0*	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*	*16*	*17*	*18*	*19*	*20*	*21*	*22*	*23*	*24*	*25*	*26*	*27*	*28*	*29*	*30*	
43	2	Carbon	$ Per tonne		$20.00	$25.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	
44	3	Carbon	$ Per GJ		$0.9976	$1.2470	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	
45	4	GDP Deflator			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
46	5	Carbon (Real)			$1.00	$1.25	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	
47	6	Net Present Value -2010				$2.02	$3.23	$4.37	$5.43	$6.42	$7.34	$8.20	$9.00	$9.75	$10.45	$11.11	$11.72	$12.29	$12.82	$13.31	$13.78	$14.21	$14.61	$14.99	$15.34	$15.67	$15.97	$16.26	$16.52	$16.77	$17.00	$17.22	$17.42	$17.61	$17.79	
48	7	Net Present Value -2011					$2.47	$3.68	$4.82	$5.88	$6.87	$7.79	$8.65	$9.45	$10.20	$10.90	$11.56	$12.17	$12.74	$13.27	$13.76	$14.23	$14.66	$15.06	$15.44	$15.79	$16.12	$16.42	$16.71	$16.97	$17.22	$17.45	$17.67	$17.87	$18.06	
49	8	Net Present Value -2012						$2.70	$3.92	$5.05	$6.11	$7.10	$8.02	$8.88	$9.69	$10.44	$11.14	$11.79	$12.40	$12.97	$13.50	$14.00	$14.46	$14.89	$15.29	$15.67	$16.02	$16.35	$16.65	$16.94	$17.21	$17.45	$17.69	$17.90	$18.10	

Row	A	B	C	D
50				
51		**Discount Rate (real)[1]**		
52		**TERASEN GAS**		
53		**Rate of Inflation**	1.90%	
54		**TGI**	7.15%	
55		**TGVI**	6.87%	
56		**BC HYDRO**		
57		**Rate of Inflation**	2.00%	
58		**BC Hydro**	6.00%	
59		**Customer**	6.00%	
60		*Footnote 1: Source LR 070531*		
61				
62				**SHEET LABELS**
63	**New Construction**			
64		#REF!		**BASEBOARD**
65		#REF!		**HEATPUMP**

FORTIS BC

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Measure Data for EnerChoice Fireplaces (Retrofit)

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$	150		
Total Incentive	$	300	$ 300	$ -
Participant	$	(150)		

Annual Impact Per Measure

Energy Savings per installation	7.8	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	24%	0.76		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	15	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1,672	1,920	0	1,920		Estimated Participation
Impact						
Gross Energy Savings (GJ)	12,960	14,880	0	14,880	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	9,850	11,309	0	11,309	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$90.07	$94.20	$97.78	
Energy Purchases	$ 1,065,234	$1,065,234	$ -	$ 1,065,234	$ -	
Utility Program Costs						
DSM Incentives		$ 576,000	$ -	$ 576,000	$ -	
Administration		$ 116,800	$ -	$ 116,800		
Subtotal	$ 603,425	$ 692,800	$ -	$ 692,800	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ (218,880)	$ -	$ (218,880)	$ -	
Subtotal	$ (190,643)	$ (218,880)	$ -	$ (218,880)	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.165 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 652,452		$ -	$ 591,314	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 4.6**		**$ -**	**$ 4.6**	**$ -**	Informational (for comparison with supply options)

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Measure Data for ENERGY STAR Hot Water Heaters (Retrofit)

PER MEASURE		Utility Incentive to the participant	partner incentive
Incremental Cost	$ 226		
Total Incentive	$ 144	$ 144	$ -
Participant	$ 82		

Annual Impact Per Measure

Energy Savings per installation	2.4	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	20%	0.80		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	13	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	2,596	2,980	0	2,980		Estimated Participation
Impact						
Gross Energy Savings (GJ)	6,229	7,152	0	7,152	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	4,983	5,722	0	5,722	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$81.83	$85.80	$89.22	
Energy Purchases	$ 490,910	$ 490,910	$ -	$ 490,910	$ -	
Utility Program Costs						
DSM Incentives		$ 429,120	$ -	$ 429,120	$ -	
Administration		$ 137,720	$ -	$ 137,720		
Subtotal	$ 493,715	$ 566,840	$ -	$ 566,840	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 195,488	$ -	$ 195,488	$ -	
Subtotal	$ 170,269	$ 195,488	$ -	$ 195,488	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.062 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ (173,074)		$ -	$ (271,418)	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 16.1**		**$ -**	**$ 16.1**	**$ -**	Informational (for comparison with supply options)

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Measure Data for TLC campaign

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 23			
Total Incentive	$ 23		$ 23	$ -
Participant				

Annual Impact Per Measure

Energy Savings per installation	0.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	1	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	13,936	16,000	0	16,000		Estimated Participation
Impact						
Gross Energy Savings (GJ)	0	0	0	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	0	0	0	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$12.36	$13.99	$15.51	
Energy Purchases	$ -	$ -	$ -	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 368,000	$ -	$ 368,000	$ -	
Administration		$ 120,000	$ -	$ 120,000		
Subtotal	$ 425,046	$ 488,000	$ -	$ 488,000	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$0.113 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ (425,046)		$ -	$ (488,000)	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ -**		**$ -**	**$ -**	**$ -**	Informational (for comparison with supply options)

FORTIS BC

	PROGRAM															ALTERNATE		NET PRESENT VALUE									BENEFIT/COST						PARAMETERS														
	COSTS ($000)											SAVINGS (GJ)			LIFE	Impact		Levelized Cost	Utility Benefits (Costs)		Participant Benefits (Costs)			Program Net Savings				Participant						UTILITY				PARTICIPANT									
	Utility			Partners																																											
	Incentives	Administration	Total	Incentives	Administration	Total	Participant	Total	% Utility	% Partner	% Participant	Gross	Net-to-Gross	Net	Years	Energy	Capacity	($/GJ)	Program	Alternate	Program	Carbon Tax	Alternate	Natural Gas	Alternate Energy	Alternate Capacity	Natural Gas	Total Costs	Total Benefits	Benefit/Cost	Natural Gas		SCT Net Benefits	Natural Gas Utility Discount	Natural Gas Supply	Alternate Discount Rate	Alternate Supply	Discount Rate	Natural Gas NPV	Carbon Tax NPV	Alternate Energy NPV	Alternate Capacity NPV	Natural Gas Tariff	Energy Tariff	Capacity Tariff
																MWh	kW		($'000s)	($'000s)	($'000s)	($'000s)	($'000s)	(GJ)	(MWh)	(kW)	Utility	($'000s)	($'000s)		Rate Impact	SCT	($'000s)	$/GJ	$/GJ		$/kWh		$/GJ	$/GJ	$/kWh	$/kW/a	$/GJ	$/kWh	$/kW/a
Label	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR	AS	AT
Source Sheet or Calculation	Program	Program	B+C	Program	Program	E+F	Program	D+G+H	D/I	G/I	H/I	Program	Program	MxN	Program	Program	Program	D/Y	OxAJ	Q x N x AL	M x N x AN	M x N x AO	N x (QxAP + RxAQ)	PV(AX,P,-O)	PV(AX,P,-Q*N)	PV(AX,P,-R)	T/D	R>0, (V>W)>0	R>0, (V>W)>0, X	AD/AC	T/(V>0)	(T>U)/I	(T>U)-I	Input	Program	Input	Input	Input	PV(AM,P,-Input!D25)	Input	PV(AM,P,-Input!D28)	PV(AM,P,-Input!D29)	Input	Input	Input
2011																																														
RESIDENTIAL:																																														
ENERGY STAR Domestic Hot Water Heaters (Retrofit)	101	40	141	0	0	0	81	222	64%	0%	36%	1,788	80%	1,430	13	0	-	9	324	N/A	218	23	N/A	15,212	0	-	2.3	81	241	3.0	0.9	1.5	102	3.00%	174.30	3%	1.28	3.0%	152.35	16.18	0.88	0.00	9.990	0.083	-
EnerChoice Fireplaces (Retrofit)	144	29	173	0	0	0	(55)	118	146%	0%	-46%	3,720	76%	2,827	15	0	-	5	712	N/A	483	51	N/A	33,751	0	-	4.1	-	589	N/A	1.1	6.0	594	3.00%	193.82	3%	1.43	3.0%	171.01	18.08	0.99	0.00	9.990	0.083	-
TLC	92	26	118	0	0	0	0	118	100%	0%	0%	0	100%	0	1	0	-	LB	LB	N/A	N/A	N/A	N/A	-	0	-	LB	-	-	N/A	N/A	LB	LB	3.00%	29.52	3%	0.12	3.0%	13.91	2.14	0.08	0.00	9.990	0.083	-
2010																																														
Total Residential	337	96	433	-	-	-	26	459	94%	-	6%	5.508		4.258		0	-	9	1.036	0	701	74	0	48.963	-	-	2.4	26	776	29.5	0.9	2.3	577													

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ
1	**UTILITY**		**FORTIS BC**																																	
2																																				
3																																				
4			**Year**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	
5			Units																																	
6		**NATURAL GAS**																																		
7		Incremental Cost of Gas (nominal)	$ Per GJ	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.43
8	1		*Year*	*0*	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*	*16*	*17*	*18*	*19*	*20*	*21*	*22*	*23*	*24*	*25*	*26*	*27*	*28*	*29*	*30*		
9		carbon tax	$ per GJ	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*		
10		Distribution adder	$ per GJ	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*		
11		Total incremental cost of gas including carbon		*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*		
12	2	GDP Deflator		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
13	3	Incremental Cost of Gas (Real)		$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43		
14	4	Net Present Value -2010			$29.52	$43.65	$57.35	$70.66	$83.59	$96.13	$108.31	$120.14	$131.62	$142.77	$153.59	$164.10	$174.30	$184.20	$193.82	$203.15	$212.22	$221.02	$229.56	$237.85	$245.91	$253.72	$261.32	$268.68	$275.84	$282.79	$289.53	$296.08	$302.43	$308.61			
15	5	Net Present Value -2011			$29.52	$43.65	$57.35	$70.66	$83.59	$96.13	$108.31	$120.14	$131.62	$142.77	$153.59	$164.10	$174.30	$184.20	$193.82	$203.15	$212.22	$221.02	$229.56	$237.85	$245.91	$253.72	$261.32	$268.68	$275.84	$282.79	$289.53	$296.08	$302.43				
16	6	Net Present Value -2012			$29.52	$43.65	$57.35	$70.66	$83.59	$96.13	$108.31	$120.14	$131.62	$142.77	$153.59	$164.10	$174.30	$184.20	$193.82	$203.15	$212.22	$221.02	$229.56	$237.85	$245.91	$253.72	$261.32	$268.68	$275.84	$282.79	$289.53	$296.08					
17																																				
18																																				
19		**ELECTRICITY**																																		
20		Incremental Cost of Elec	$ Per kWh	$0.10																																
21		Incremental Cost of E Capacity	$ Per kW/a	$170.00																																
22																																				
23																																				
24																																				
25	**RETAIL**																																			
26				Rate	Customers																																
27		Residential Retail			1,000																																
28		**TGI**	$ Per MJ	$0.0100	1,000																																
29		**TGVI**	$ Per MJ	$0.0143	1,000																																
30		**Electricity**	$ Per MJ	$0.0230																																
31		**Electricity**	$ per kWh	$0.0829	1,000																																
32		**Electricity**	$ per kW per year		1,000																																
33		Commercial Retail																																		
34		**TGI**	$ Per MJ	$0.0094	50																																
35		**TGVI**	$ Per MJ	$0.0160	50																																
36		**Electricity**	$ Per MJ	$0.0214																																
37		**Electricity**	$ per kWh	$0.0749	1,000																																
38		**Electricity**	$ per kW per year	$52.0000	1,000																																
39																																				
40	**TAX**																																			
41			**Year**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**		
42	1		*Year*		*0*	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*	*16*	*17*	*18*	*19*	*20*	*21*	*22*	*23*	*24*	*25*	*26*	*27*	*28*	*29*	*30*		
43	2	Carbon	$ Per tonne		$20.00	$25.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00		
44	3	Carbon	$ Per GJ		$0.9576	$1.2470	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964		
45	4	GDP Deflator			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
46	5	Carbon (Real)			$1.00	$1.25	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50		
47	6	Net Present Value -2010			$2.14	$3.51	$4.84	$6.13	$7.38	$8.60	$9.78	$10.93	$12.05	$13.13	$14.18	$15.19	$16.18	$17.14	$18.08	$18.98	$19.86	$20.71	$21.54	$22.35	$23.13	$23.89	$24.62	$25.34	$26.03	$26.71	$27.38	$27.99	$28.61	$29.21			
48	7	Net Present Value -2011				$2.62	$3.99	$5.32	$6.61	$7.86	$9.08	$10.26	$11.41	$12.52	$13.60	$14.65	$15.67	$16.66	$17.62	$18.55	$19.46	$20.34	$21.19	$22.02	$22.82	$23.61	$24.36	$25.10	$25.81	$26.51	$27.18	$27.84	$28.47	$29.09				
49	8	Net Present Value -2012					$2.86	$4.23	$5.56	$6.85	$8.11	$9.32	$10.50	$11.65	$12.76	$13.85	$14.90	$15.91	$16.90	$17.86	$18.80	$19.70	$20.58	$21.43	$22.26	$23.07	$23.85	$24.61	$25.34	$26.06	$26.75	$27.42	$28.08	$28.71			
50																																				
51		**Discount Rate (real)**[1]																																		
52		**TERASEN GAS**																																		
53		**Rate of Inflation**	1.90%																																	
54		**TGI**	3.00%																																	
55		**TGVI**	3.00%																																	
56		**BC HYDRO**																																		
57		**Rate of Inflation**	2.00%																																	
58		**BC Hydro**	3.00%																																	
59		**Customer**	3.00%																																	
60		*Footnote 1: Source LR 07/0531*																																		
61																																				
62				**SHEET LABELS**																																
63	**New Construction**																																			
64		ENERGY STAR Domestic Hot Water Heaters (Retro		**BASEBOARD**																																
65		EnerChoice Fireplaces (Retrofit)		**HEATPUMP**																																

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Measure Data for ENERGY STAR Domestic Hot Water Heaters (Retrofit)

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 280			
Total Incentive	$ 144		$ 136	$ -
Participant	$ 136			

Annual Impact Per Measure

Energy Savings per installation	2.4	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	20%	0.80		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	13	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	702	745	0	745	0	Estimated Participation
Impact						
Gross Energy Savings (GJ)	1,685	1,788	0	1,788	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	1,348	1,430	0	1,430	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$174.30	$174.30	$174.30	
Energy Purchases	$ 249,316	$ 249,316	$ -	$ 249,316	$ -	
Utility Program Costs						
DSM Incentives		$ 101,320	$ -	$ 101,320	$ -	
Administration		$ 40,000	$ -	$ 40,000	$ -	
Subtotal	$ 133,208	$ 141,320	$ -	$ 141,320	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 81,056	$ -	$ 81,056	$ -	
Subtotal	$ 76,403	$ 81,056	$ -	$ 81,056	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.276 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 39,706		$ -	$ 26,940	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 14.6**		**$ -**	**$ 14.6**	**$ -**	Informational (for comparison with supply options)

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Measure Data for EnerChoice Fireplaces (Retrofit)

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 150			
Total Incentive	$ 300		$ 300	$ -
Participant	$ (150)			

Annual Impact Per Measure

Energy Savings per installation	7.8	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	24%	0.76		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	15	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	452	480	0	480	0	Estimated Participation
Impact						
Gross Energy Savings (GJ)	3,506	3,720	0	3,720	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	2,665	2,827	0	2,827	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$193.82	$193.82	$193.82	
Energy Purchases	$ 547,962	$ 547,962	$ -	$ 547,962	$ -	
Utility Program Costs						
DSM Incentives		$ 144,000	$ -	$ 144,000	$ -	
Administration		$ 29,200	$ -	$ 29,200	$ -	
Subtotal	$ 163,258	$ 173,200	$ -	$ 173,200	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ (54,720)	$ -	$ (54,720)	$ -	
Subtotal	$ (51,579)	$ (54,720)	$ -	$ (54,720)	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.433 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 436,283		$ -	$ 429,482	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 3.5**		**$ -**	**$ 3.5**	**$ -**	Informational (for comparison with supply options)

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Measure Data for TLC

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$	23		
Total Incentive	$	23	$ 23	$ -
Participant	$	-		

Annual Impact Per Measure

Energy Savings per installation	0.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	1	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	3,770	4,000	0	4,000	0	Estimated Participation
Impact						
Gross Energy Savings (GJ)	0	0	0	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	0	0	0	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$29.52	$29.52	$29.52	
Energy Purchases	$ -	$ -	$ -	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 92,000	$ -	$ 92,000	$ -	
Administration		$ 26,400	$ -	$ 26,400	$ -	
Subtotal	$ -	$ 118,400	$ -		$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$0.117 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ -		$ -	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ -**		**$ -**	**$ -**	**$ -**	Informational (for comparison with supply options)

FORTIS BC

	PROGRAM															ALTERNATE		NET PRESENT VALUE									BENEFIT/COST						PARAMETERS													
	COSTS ($000)											SAVINGS (GJ)			LIFE	Impact		Levelized Cost	Utility Benefits (Costs)		Participant Benefits (Costs)			Program Net Savings				Participant						UTILITY				PARTICIPANT								
	Utility			Partners																																										
	Incentives	Administration	Total	Incentives	Administration	Total	Participant	Total	% Utility	% Partner	% Participant	Gross	Net-to-Gross	Net	Years	Energy	Capacity	($/GJ)	Program	Alternate	Program	Carbon Tax	Alternate	Natural Gas	Alternate Energy	Alternate Capacity	Natural Gas	Total Costs	Total Benefits	Benefit/Cost	Natural Gas	Total Resource	TRC Net Benefits	Natural Gas Utility Discount	Natural Gas Supply	Alternate Discount Rate	Alternate Supply	Discount Rate	Natural Gas NPV	Carbon Tax NPV	Alternate Energy NPV	Alternate Capacity NPV	Natural Gas Tariff	Energy Tariff	Capacity Tariff
	MWh	kW	($/GJ)	($'000s)	($'000s)	($'000s)	($'000s)	($'000s)	Utility	($'000s)	($'000s)	($'000s)	($'000s)																																		
Label	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR	AS	AT
Source Sheet or Calculation	Program	Program	B+C	Program	Program	E+F	Program	D+G+H	D/I	G/I	H/I	Program	Program	M+N	Program	Program	Program	D/Y	OxAJ	Q x N x AL	M x N x AN	M x N x AO	N x (QxAP + RxAQ)	PV(AI,P_O)	PV(AM,P_Q*N)	PV(AK,P_R)	T/D	H>0, (V-W)>0	H>0, (V-W)>0, X	AD/AC	Y/(V+D)	(T+U)/I	(T+U)-I	Input	Program	Input	Input	Input	PV(AM,P_InputD23)	Input	PV(AM,P_InputD28)	PV(AM,P_InputD29)	Input	Input	Input
2011																																													
RESIDENTIAL:																																													
ENERGY STAR Domestic Hot Water Heaters (Retrofit)	101	40	141	0	0	0	81	222	64%	0%	36%	1,788	80%	1,430	13	0	-	12	125	N/A	181	18	N/A	12,030	0	-	0.9	81	199	2.5	0.4	0.6	(98)	6.89%	87.17	6%	1.06	6.0%	126.81	12.49	0.73	0.00	9.990	0.083	-
EnerChoice Fireplaces (Retrofit)	144	29	173	0	0	0	(55)	118	146%	0%	-46%	3,720	76%	2,827	15	0	-	7	271	N/A	393	38	N/A	25,930	0	-	1.6	-	486	N/A	0.5	2.3	153	6.89%	95.88	6%	1.17	6.0%	139.13	13.55	0.80	0.00	9.990	0.083	-
TLC	92	26	118	0	0	0	0	118	100%	0%	0%	0	100%	0	1	0	-	LB	LB	N/A	N/A	N/A	N/A	-	0	-	LB	-	-	N/A	N/A	LB	LB	6.89%	14.02	6%	0.11	6.0%	13.51	2.02	0.08	0.00	9.990	0.083	-
2010																																												
Total Residential	337	96	433	-	-	-	26	459	94%	-	6%	5.508		4.258		0	-	11	396	0	575	56	0	37.959	-	-	0.9	26	631	24.0	0.4	0.9	(64)												

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ
1	UTILITY		FORTIS BC																																	
2																																				
3																																				
4			Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	
5			Units																																	
6		NATURAL GAS																																		
7		Incremental Cost of Gas (nominal)	$ Per GJ	$5.50	$6.17	$6.81	$7.35	$7.87	$8.26	$8.56	$8.78	$8.99	$9.19	$9.40	$9.60	$9.81	$10.03	$10.25	$10.47	$10.70	$10.93	$11.17	$11.42	$11.67	$11.92	$12.19	$12.45	$12.73	$13.01	$13.29	$13.58	$13.88	$14.19	$14.50	$14.82	$15.14
8	1		Year	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		
9		carbon tax	$ per GJ	0.75	1.00	1.25	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50		
10		Distribution adder	$ per GJ	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15		
11		Total incremental cost of gas including carbon		6.40	7.31	8.20	9.00	9.51	9.91	10.21	10.42	10.63	10.84	11.04	11.25	11.46	11.67	11.89	12.12	12.34	12.58	12.82	13.06	13.31	13.57	13.83	14.10	14.37	14.65	14.94	15.23	15.53	15.83	16.14		
12	2	GDP Deflator		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
13	3	Incremental Cost of Gas (Real)		$6.40	$7.31	$8.20	$9.00	$9.51	$9.91	$10.21	$10.42	$10.63	$10.84	$11.04	$11.25	$11.46	$11.67	$11.89	$12.12	$12.34	$12.58	$12.82	$13.06	$13.31	$13.57	$13.83	$14.10	$14.37	$14.65	$14.94	$15.23	$15.53	$15.83	$16.14		
14	4	Net Present Value -2010			$12.39	$19.10	$26.00	$32.81	$39.46	$45.86	$51.98	$57.82	$63.38	$68.69	$73.75	$78.56	$83.16	$87.53	$91.71	$95.68	$99.47	$103.09	$106.53	$109.82	$112.95	$115.94	$118.79	$121.51	$124.10	$126.57	$128.93	$131.18	$133.32	$135.37		
15	5	Net Present Value -2011				$14.02	$21.39	$28.68	$35.78	$42.62	$49.16	$55.40	$61.35	$67.02	$72.43	$77.58	$82.49	$87.17	$91.63	$95.88	$99.93	$103.79	$107.48	$110.99	$114.34	$117.53	$120.58	$123.48	$126.25	$128.90	$131.42	$133.82	$136.11	$138.30		
16	6	Net Present Value -2012					$15.55	$23.34	$30.93	$38.25	$45.24	$51.90	$58.27	$64.33	$70.11	$75.61	$80.86	$85.86	$90.63	$95.17	$99.50	$103.63	$107.57	$111.32	$114.90	$118.32	$121.57	$124.68	$127.64	$130.46	$133.16	$135.72	$138.18	$140.51		
17																																				
18																																				
19		ELECTRICITY																																		
20		Incremental Cost of Elec	$ Per kWh	$0.12																																
21		Incremental Cost of E Capacity	$ Per kW/a	$170.00																																
22																																				
23																																				
24																																				
25	RETAIL																																			
26				Rate	Customers		789,928	Total Customers in BC		80,000	Total Residential and Commercial Customers on VI																									
27		Residential Retail			000's																															
28		TGI	$ Per MJ	$0.0100	640		712,304	Total Residential Customers in BC																												
29		TGVI	$ Per MJ	$0.0143	72																															
30		Electricity	$ Per MJ	$0.0230																																
31		Electricity	$ per kWh	$0.0827	1,511		1,511,435	Total BCH Residential Customers in BC				89%																								
32		Electricity	$ per kW per year																																	
33		Commercial Retail																																		
34		TGI	$ Per MJ	$0.0094	78		77,624	Total Commercial Customers in BC																												
35		TGVI	$ Per MJ	$0.0169	8																															
36		Electricity	$ Per MJ	$0.0214																																
37		Electricity	$ per kWh	$0.0769	190		189,764	Total Light Industrial and Commercial Customers in BC																												
38		Electricity	$ per kW per year	$52.0000	15																															
39																																				
40	TAX																																			
41			Year	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	
42	1		Year		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
43	2	Carbon	$ Per tonne		$20.00	$25.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	
44	3	Carbon	$ Per GJ		$0.9976	$1.2470	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	
45	4	GDP Deflator			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
46	5	Carbon (Real)			$1.00	$1.25	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	
47	6	Net Present Value -2010				$2.02	$3.25	$4.40	$5.47	$6.47	$7.41	$8.29	$9.11	$9.88	$10.60	$11.27	$11.90	$12.49	$13.04	$13.55	$14.04	$14.49	$14.91	$15.30	$15.67	$16.02	$16.34	$16.64	$16.93	$17.19	$17.44	$17.67	$17.89	$18.09	$18.28	
48	7	Net Present Value -2011					$2.48	$3.70	$4.85	$5.92	$6.92	$7.86	$8.74	$9.56	$10.33	$11.05	$11.72	$12.35	$12.94	$13.49	$14.01	$14.49	$14.94	$15.36	$15.76	$16.13	$16.47	$16.79	$17.10	$17.38	$17.64	$17.89	$18.12	$18.34	$18.54	
49	8	Net Present Value -2012						$2.71	$3.93	$5.08	$6.15	$7.16	$8.10	$8.97	$9.80	$10.56	$11.28	$11.96	$12.58	$13.17	$13.72	$14.24	$14.72	$15.17	$15.59	$15.99	$16.36	$16.70	$17.03	$17.33	$17.61	$17.88	$18.12	$18.36	$18.57	
50																																				
51		Discount Rate (real)[1]																																		
52		TERASEN GAS																																		
53		Rate of Inflation	1.90%																																	
54		TGI	7.15%																																	
55		TGVI	6.89%																																	
56		BC HYDRO																																		
57		Rate of Inflation	2.00%																																	
58		BC Hydro	6.00%																																	
59		Customer	6.00%																																	
60		Footnote 1: Source LR 070531																																		
61																																				
62				SHEET LABELS																																
63	New Construction																																			
64		ENERGY STAR Domestic Hot Water Heaters (Retro		BASEBOARD																																
65		EnerChoice Fireplaces (Retrofit)		HEATPUMP																																

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Measure Data for ENERGY STAR Domestic Hot Water Heaters (Retrofit)

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 280			
Total Incentive	$ 144		$ 136	$ -
Participant	$ 136			

Annual Impact Per Measure

Energy Savings per installation	2.4	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	20%	0.80		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	13	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	649	745	0	745	0	Estimated Participation
Impact						
Gross Energy Savings (GJ)	1,557	1,788	0	1,788	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	1,246	1,430	0	1,430	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$83.16	$87.17	$90.63	
Energy Purchases	$ 124,685	$ 124,685	$ -	$ 124,685	$ -	
Utility Program Costs						
DSM Incentives		$ 101,320	$ -	$ 101,320	$ -	
Administration		$ 40,000	$ -	$ 40,000	$ -	
Subtotal	$ 123,089	$ 141,320	$ -	$ 141,320	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 81,056	$ -	$ 81,056	$ -	
Subtotal	$ 70,599	$ 81,056	$ -	$ 81,056	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.062 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ (69,004)		$ -	$ (97,691)	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 18.8**		**$ -**	**$ 18.8**	**$ -**	Informational (for comparison with supply options)

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Measure Data for EnerChoice Fireplaces (Retrofit)

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 150			
Total Incentive	$ 300		$ 300	$ -
Participant	$ (150)			

Annual Impact Per Measure

Energy Savings per installation	7.8	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	24%	0.76		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	15	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	418	480	0	480	0	Estimated Participation
Impact						
Gross Energy Savings (GJ)	3,240	3,720	0	3,720	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	2,462	2,827	0	2,827	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$91.71	$95.88	$99.50	
Energy Purchases	$ 271,067	$ 271,067	$ -	$ 271,067	$ -	
Utility Program Costs						
DSM Incentives		$ 144,000	$ -	$ 144,000	$ -	
Administration		$ 29,200	$ -	$ 29,200	$ -	
Subtotal	$ 150,856	$ 173,200	$ -	$ 173,200	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ (54,720)	$ -	$ (54,720)	$ -	
Subtotal	$ (47,661)	$ (54,720)	$ -	$ (54,720)	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.165 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 167,871		$ -	$ 152,587	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 4.6**		**$ -**	**$ 4.6**	**$ -**	Informational (for comparison with supply options)

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Measure Data for TLC

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$	23		
Total Incentive	$	23	$ 23	$ -
Participant	$	-		

Annual Impact Per Measure

Energy Savings per installation	0.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	1	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	3,484	4,000	0	4,000	0	Estimated Participation
Impact						
Gross Energy Savings (GJ)	0	0	0	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	0	0	0	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$12.39	$14.02	$15.55	
Energy Purchases	$ -	$ -	$ -	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 92,000	$ -	$ 92,000	$ -	
Administration		$ 26,400	$ -	$ 26,400	$ -	
Subtotal	$ -	$ 118,400	$ -		$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$0.113 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ -		$ -	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ -**		**$ -**	**$ -**	**$ -**	Informational (for comparison with supply options)

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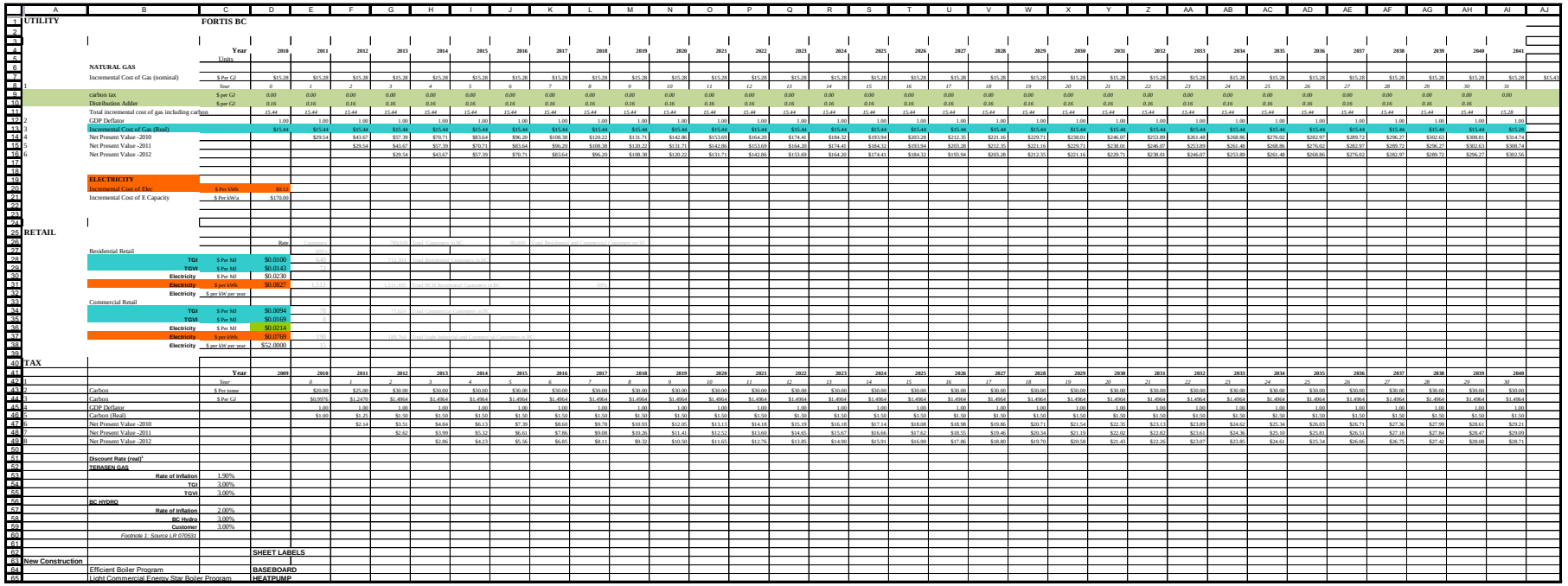
2011 Commercial Programs Planned	PROGRAM														ALTERNATE		NET PRESENT VALUE									BENEFIT/COST							PARAMETERS														
	COSTS ($000)										SAVINGS (GJ)			LIFE	Impact		Levelized Cost	Utility Benefits (Costs)		Participant Benefits (Costs)			Program Net Savings			Natural Gas	Participant			Natural Gas			SCT Net Benefits	UTILITY				PARTICIPANT									
FEI	Utility			Partners																																											
	Incentives	Administration	Total	Incentives	Administration	Total	Participant	Total	% Utility	% Partner	% Participant	Gross	Net-to-Gross	Net	Years	Energy	Capacity	($/GJ)	Program	Alternate	Program	Carbon Tax	Alternate	Natural Gas	Alternate Energy	Alternate Capacity	Natural Gas	Total Costs	Total Benefits	Benefit/Cost	Natural Gas				Natural Gas Utility Discount	Natural Gas Supply	Alternate Discount Rate	Alternate Supply	Discount Rate	Natural Gas NPV	Carbon Tax NPV	Alternate Energy NPV	Alternate Capacity NPV	Natural Gas Tariff	Energy Tariff	Capacity Tariff
															MWh	kW		($'000s)	($'000s)	($'000s)	($'000s)	($'000s)	(GJ)	(MWh)	(kW)	Utility	($'000s)	($'000s)		Rate Impact	SCT	($'000s)				$/GJ	$/GJ	$/kWh	$/kWh		$/GJ	$/GJ	$/kWh	$/kW/a	$/GJ	$/kWh	$/kW/a
Label	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR	AS	AT
Source Sheet or Calculation	Program	Program	B+C	Program	Program	E+F	Program	D+G+H	D/I	G/I	H/I	Program	Program	MxN	Program	Program	Program	D/Y	OxAJ	Q x N x AL	M x N x AN	M x N x AO	N x (QxAP + RxAQ)	PV(A,P,-O)	PV(AK,P,-Q*N)	PV(AK,P,-R)	T/D	H=0, (V=W)=0	H=0, (V=W)=0, X	AD/AC	T/(V+D)	(T+U)/I	(T+U)-I	Input	Program	Input	Input	Input	PV(AM,P,-InputD33)	Input	PV(AM,P,-InputD28)	PV(AM,P,-InputD29)	Input	Input	Input
2011																																														
Commercial Energy Efficiency Programs																																														
New Construction																																														
Efficient Boiler Program	197	2	200	0	0	0	269	469	43%	0%	57%	8,552	82%	7,013	20	0	-	2	2,170	N/A	977	157	N/A	104,330	0	-	10.9	269	1,133	4.2	1.8	4.6	1,701	3.00%	238.01	3%	1.79	3.0%	139.27	22.35	1.14	0.00	9.999	0.083	-
Light Commercial Energy Star Boiler Program	14	1	15	0	0	0	50	65	23%	0%	77%	1,184	82%	971	20	0	-	1	300	N/A	135	22	N/A	14,444	0	-	20.5	50	157	3.1	2.0	4.7	236	3.00%	238.01	3%	1.79	3.0%	139.27	22.35	1.14	0.00	9.999	0.083	-
Efficient Water Heater	7	2	8	0	0	0	9	17	47%	0%	53%	267	95%	254	20	0	-	2	54	N/A	35	6	N/A	3,774	0	-	6.7	9	41	4.5	1.2	3.2	37	3.00%	164.20	3%	1.79	3.0%	139.27	22.35	1.14	0.00	9.999	0.083	-
Spray Valve	0	0	0	0	0	0	0	0	100%	0%	0%	36	88%	32	5	0	-	3	3	N/A	1	0	N/A	145	0	-	9.0	-	2	N/A	2.0	9.0	3	3.00%	83.64	3%	0.55	3.0%	42.87	7.39	0.35	0.00	9.999	0.083	-
Retrofit																																														
Retrofit Efficient Boiler Program	1,311	25	1,337	0	0	0	1,775	3,112	43%	0%	57%	49,470	82%	40,565	20	0	-	2	12,551	N/A	5,649	907	N/A	603,511	0	-	9.4	1,775	6,556	3.7	1.8	4.0	9,440	3.00%	238.01	3%	1.79	3.0%	139.27	22.35	1.14	0.00	9.999	0.083	-
Light Energy Star Commercial Boiler Program	156	9	165	0	0	0	562	727	23%	0%	77%	13,320	82%	10,922	20	0	-	1	3,380	N/A	1,521	244	N/A	162,498	0	-	20.5	562	1,765	3.1	2.0	4.7	2,653	3.00%	238.01	3%	1.79	3.0%	139.27	22.35	1.14	0.00	9.999	0.083	-
Retrofit Efficient Water Heater Program	99	9	108	0	0	0	136	244	44%	0%	56%	4,005	95%	3,805	20	0	-	2	812	N/A	530	85	N/A	56,605	0	-	7.5	136	615	4.5	1.3	3.3	568	3.00%	164.20	3%	1.79	3.0%	139.27	22.35	1.14	0.00	9.999	0.083	-
Energy Assessment Program	73	27	100	0	0	0	0	100	100%	0%	0%	29,768	65%	19,349	1	0	-	5	743	N/A	176	41	N/A	18,786	0	-	7.4	-	217	N/A	2.7	7.4	643	3.00%	29.54	3%	0.12	3.0%	9.09	2.14	0.07	0.00	9.999	0.083	-
Fireplace Timer	20	0	20	0	0	0	0	20	100%	0%	0%	1,200	100%	1,200	5	0	-	4	130	N/A	51	9	N/A	5,496	0	-	6.5	-	60	N/A	1.8	6.5	110	3.00%	83.64	3%	0.55	3.0%	42.87	7.39	0.35	0.00	9.999	0.083	-
Retrofit Spray Valve	20	3	23	11	0	11	0	33	68%	32%	0%	2,115	88%	1,861	5	0	-	3	202	N/A	80	14	N/A	8,524	0	-	9.0	-	94	N/A	2.0	6.1	169	3.00%	83.64	3%	0.55	3.0%	42.87	7.39	0.35	0.00	9.999	0.083	-
Radiant Tube Heater Pilot Program	3	7	10	0	0	0	11	21	46%	0%	54%	275	100%	275	20	0	-	2	85	N/A	38	6	N/A	4,091	0	-	8.9	11	44	3.9	1.8	4.1	64	3.00%	238.01	3%	1.79	3.0%	139.27	22.35	1.14	0.00	9.999	0.083	-
PSECA	800	24	824	0	0	0	1,759	2,583	32%	0%	68%	30,830	100%	30,830	20	(1,281)	-	2	7,338	(2,974)	4,294	689	(1,466)	458,673	(19,064)	-	8.9	1,759	3,517	2.0	1.4	1.7	1,780	3.00%	238.01	3%	1.79	3.0%	139.27	22.35	1.14	0.00	9.999	0.083	-
Total Commercial	2,701	108	2,809	11	-	11	4,572	7,391	38%	0	62%	141,022		117,077		(1,281)	-	2	27,770	(2,974)	13,488	2,179	(1,466)	1,440,876	(19,064)	-	9.9	4,572	14,201	3.1	1.7	2.7	17,405													



	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ
1	**UTILITY**		**FORTIS BC**																																	
2																																				
3																																				
4			**Year**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	
5			Units																																	
6		**NATURAL GAS**																																		
7		Incremental Cost of Gas (nominal)	$ Per GJ	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.43
8	1		*Year*	*0*	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*	*16*	*17*	*18*	*19*	*20*	*21*	*22*	*23*	*24*	*25*	*26*	*27*	*28*	*29*	*30*	*31*	
9		carbon tax	$ per GJ	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	
10		Distribution Adder	$ per GJ	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	
11		Total incremental cost of gas including carbon		*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.28*	
12	2	GDP Deflator		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
13	3	Incremental Cost of Gas (Real)		$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.28	
14	4	Net Present Value -2010			$29.54	$43.67	$57.39	$70.71	$83.64	$96.20	$108.38	$120.22	$131.71	$142.86	$153.69	$164.20	$174.41	$184.32	$193.94	$203.28	$212.35	$221.16	$229.71	$238.01	$246.07	$253.89	$261.48	$268.86	$276.02	$282.97	$289.72	$296.27	$302.63	$308.81	$314.74		
15	5	Net Present Value -2011			$29.54	$43.67	$57.39	$70.71	$83.64	$96.20	$108.38	$120.22	$131.71	$142.86	$153.69	$164.20	$174.41	$184.32	$193.94	$203.28	$212.35	$221.16	$229.71	$238.01	$246.07	$253.89	$261.48	$268.86	$276.02	$282.97	$289.72	$296.27	$302.63	$308.74			
16	6	Net Present Value -2012				$29.54	$43.67	$57.39	$70.71	$83.64	$96.20	$108.38	$120.22	$131.71	$142.86	$153.69	$164.20	$174.41	$184.32	$193.94	$203.28	$212.35	$221.16	$229.71	$238.01	$246.07	$253.89	$261.48	$268.86	$276.02	$282.97	$289.72	$296.27	$302.56				
17																																				
18																																				
19		**ELECTRICITY**																																		
20		Incremental Cost of Elec	$ Per kWh	$0.10																																
21		Incremental Cost of E Capacity	$ Per kW/a	$170.00																																
22																																				
23																																				
24																																				
25	**RETAIL**																																			
26				Rate	Customers																															
27		Residential Retail			1,000																															
28		**TGI**	$ Per MJ	$0.0100	1,000																															
29		**TGVI**	$ Per MJ	$0.0143	1,000																															
30		**Electricity**	$ Per MJ	$0.0230																																
31		**Electricity**	$ per kWh	$0.0829	1,000																															
32		**Electricity**	$ per kW per year		1,000																															
33		Commercial Retail																																		
34		**TGI**	$ Per MJ	$0.0094	50																															
35		**TGVI**	$ Per MJ	$0.0160	50																															
36		**Electricity**	$ Per MJ	$0.0214																																
37		**Electricity**	$ per kWh	$0.0749	744																															
38		**Electricity**	$ per kW per year	$52.0000	1																															
39																																				
40	**TAX**																																			
41			**Year**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**		
42			*Year*	*0*	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*	*16*	*17*	*18*	*19*	*20*	*21*	*22*	*23*	*24*	*25*	*26*	*27*	*28*	*29*	*30*		
43	2	Carbon	$ Per tonne		$20.00	$25.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00		
44	3	Carbon	$ Per GJ		$0.9576	$1.2470	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964		
45	4	GDP Deflator			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
46	5	Carbon (Real)			$1.00	$1.25	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50		
47	6	Net Present Value -2010			$2.14	$3.51	$4.84	$6.13	$7.38	$8.60	$9.78	$10.93	$12.05	$13.13	$14.18	$15.19	$16.18	$17.14	$18.08	$18.98	$19.86	$20.71	$21.54	$22.35	$23.13	$23.89	$24.62	$25.34	$26.03	$26.71	$27.36	$27.99	$28.61	$29.21			
48	7	Net Present Value -2011				$2.62	$3.99	$5.32	$6.61	$7.86	$9.08	$10.26	$11.41	$12.52	$13.60	$14.65	$15.67	$16.66	$17.62	$18.55	$19.46	$20.34	$21.19	$22.02	$22.82	$23.61	$24.36	$25.10	$25.81	$26.51	$27.18	$27.84	$28.47	$29.09			
49	8	Net Present Value -2012					$2.86	$4.23	$5.56	$6.85	$8.11	$9.32	$10.50	$11.65	$12.76	$13.85	$14.90	$15.91	$16.90	$17.86	$18.80	$19.70	$20.58	$21.43	$22.26	$23.07	$23.85	$24.61	$25.34	$26.06	$26.75	$27.42	$28.08	$28.71			
50																																				
51		**Discount Rate (real)**[1]																																		
52		**TERASEN GAS**																																		
53		**Rate of Inflation**	1.90%																																	
54		**TGI**	3.00%																																	
55		**TGVI**	3.00%																																	
56		**BC HYDRO**																																		
57		**Rate of Inflation**	2.00%																																	
58		**BC Hydro**	3.00%																																	
59		**Customer**	3.00%																																	
60		*Footnote 1: Source LR 070531*																																		
61																																				
62				**SHEET LABELS**																																
63	**New Construction**																																			
64		Efficient Boiler Program		**BASEBOARD**																																
65		Light Commercial Energy Star Boiler Program		**HEATPUMP**																																

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Measure Data for Efficient Boiler Program

PER MEASURE			Utility Incentive to the participant	partner incentive
Total Incremental Cost	$ 65,711			
Utility Incentive	$ 24,687		$ 24,687	$ -
Incremental Participant cost	$ 41,024			

Annual Impact Per Measure

Energy Savings per installation	1069.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	18%	0.82		Net-to-Gross
Alternate Energy Impact		GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	20	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	8	8		8		Estimated Participation
Impact						
Gross Energy Savings (GJ)	8,061	8,552	0	8,552	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	6,610	7,013	0	7,013	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$238.01	$238.01	$238.01	
Energy Purchases	$ 1,669,064	$ 1,669,064	$ -	$ 1,669,064	$ -	
Utility Program Costs						
DSM Incentives		$ 197,496	$ -	$ 197,496	$ -	
Administration		$ 2,100		$ 2,100		
Subtotal	$ 188,138	$ 199,596	$ -	$ 199,596	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -		$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 269,117	$ -	$ 269,117	$ -	
Subtotal	$ 253,669	$ 269,117	$ -	$ 269,117	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.785 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 1,227,257		$ -	$ 1,200,351	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 4.5**		**$ -**	**$ 4.5**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Light Commercial Energy Star Boiler Program

PER MEASURE		Utility Incentive to the participant	partner incentive
Total Incremental Cost	$ 18,695		
Utility Incentive	$ 3,462	$ 3,462	$ -
Incremental Participant cost	$ 15,233		

Annual Impact Per Measure

Energy Savings per installation	296.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	18%	0.82		Net-to-Gross
Alternate Energy Impact		GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	20	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	4	4		4		Estimated Participation
Impact						
Gross Energy Savings (GJ)	1,116	1,184	0	1,184	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	915	971	0	971	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$238.01	$238.01	$238.01	
Energy Purchases	$ 231,077	$ 231,077	$ -	$ 231,077	$ -	
Utility Program Costs						
DSM Incentives		$ 13,848	$ -	$ 13,848	$ -	
Administration		$ 781		$ 781		
Subtotal	$ 13,789	$ 14,629	$ -	$ 14,629	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -		$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 49,964	$ -	$ 49,964	$ -	
Subtotal	$ 47,096	$ 49,964	$ -	$ 49,964	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.785 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 170,192		$ -	$ 166,484	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 4.5**		**$ -**	**$ 4.5**	**$ -**	Informational (for comparison with supply options)

Total Resource Net Benefit (Cost)	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ -**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Efficient Water Heater

PER MEASURE			Utility Incentive to the participant	partner incentive
Total Incremental Cost	$ 5,378			
Utility Incentive	$ 2,206		$ 2,206	$ -
Incremental Participant cost	$ 3,172			

Annual Impact Per Measure

Energy Savings per installation	89.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	5%	0.95		Net-to-Gross
Alternate Energy Impact		GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	12	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	3	3		3		Estimated Participation
Impact						
Gross Energy Savings (GJ)	252	267	0	267	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	239	254	0	254	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$164.20	$164.20	$164.20	
Energy Purchases	$ 41,650	$ 41,650	$ -	$ 41,650	$ -	
Utility Program Costs						
DSM Incentives		$ 6,618	$ -	$ 6,618	$ -	
Administration		$ 1,500		$ 1,500		
Subtotal	$ 7,652	$ 8,118	$ -	$ 8,118	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -		$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 9,040	$ -	$ 9,040	$ -	
Subtotal	$ 8,521	$ 9,040	$ -	$ 9,040	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.194 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 25,477		$ -	$ 24,492	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 6.8**		**$ -**	**$ 6.8**	**$ -**	Informational (for comparison with supply options)

Total Resource Net Benefit (Cost)	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ -**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Spray Valve

PER MEASURE			Utility Incentive to the participant	partner incentive
Total Incremental Cost	$ 85			
Utility Incentive	$ 85		$ 85	$ -
Incremental Participant cost	$ -			

Annual Impact Per Measure

Energy Savings per installation	9.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	12%	0.88		Net-to-Gross
Alternate Energy Impact		GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	5	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	4	4		4		Estimated Participation
Impact						
Gross Energy Savings (GJ)	34	36	0	36	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	30	32	0	32	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$83.64	$83.64	$83.64	
Energy Purchases	$ 2,650	$ 2,650	$ -	$ 2,650	$ -	
Utility Program Costs						
DSM Incentives		$ 340	$ -	$ 340	$ -	
Administration		$ 44		$ 44		
Subtotal	$ 362	$ 384	$ -	$ 384	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -		$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$0.550 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 2,288		$ -	$ 2,266	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 2.6**		**$ -**	**$ 2.6**	**$ -**	Informational (for comparison with supply options)

Total Resource Net Benefit (Cost)	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ -**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Retrofit Efficient Boiler Program

PER MEASURE			Utility Incentive to the participant	partner incentive
Total Incremental Cost	$	35,834		
Utility Incentive	$	13,517	$ 13,517	$ -
Incremental Participant cost	$	22,317		

Annual Impact Per Measure

Energy Savings per installation	510.0	GJ	Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	18%	0.82	Net-to-Gross
Alternate Energy Impact	0	GJ 0	kWh
Alternate Capacity Impact	0.000	kW/a	
Measure Lifetime	20	Years	Estimated lifespan of measure

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	94	97		97		Estimated Participation
Impact						
Gross Energy Savings (GJ)	46,630	49,470	0	49,470	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	38,237	40,565	0	40,565	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$238.01	$238.01	$238.01	
Energy Purchases	$ 9,654,889	$9,654,889	$ -	$9,654,889	$ -	
Utility Program Costs						
DSM Incentives		$1,311,149	$ -	$1,311,149	$ -	
Administration		$ 25,405		$ 25,405		
Subtotal	$ 1,259,830	$1,336,554	$ -	$1,336,554	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -		$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$1,775,094	$ -	$1,775,094	$ -	
Subtotal	$ 1,673,197	$1,775,094	$ -	$1,775,094	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.785 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 6,721,862		$ -	$ 6,543,240	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 5.2**		**$ -**	**$ 5.2**	**$ -**	Informational (for comparison with supply options)

Total Resource Net Benefit (Cost)	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ -**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Light Energy Star Commercial Boiler Program

PER MEASURE			Utility Incentive to the participant	partner incentive
Total Incremental Cost	$ 18,695			
Utility Incentive	$ 3,462		$ 3,462	$ -
Incremental Participant cost	$ 15,233			

Annual Impact Per Measure

Energy Savings per installation	296.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	18%	0.82		Net-to-Gross
Alternate Energy Impact		GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	20	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	44	45		45		Estimated Participation
Impact						
Gross Energy Savings (GJ)	12,555	13,320	0	13,320	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	10,295	10,922	0	10,922	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$238.01	$238.01	$238.01	
Energy Purchases	$ 2,599,618	$2,599,618	$ -	$2,599,618	$ -	
Utility Program Costs						
DSM Incentives		$ 155,790	$ -	$ 155,790	$ -	
Administration		$ 8,792		$ 8,792		
Subtotal	$ 155,134	$ 164,582	$ -	$ 164,582	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -		$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 562,098	$ -	$ 562,098	$ -	
Subtotal	$ 529,831	$ 562,098	$ -	$ 562,098	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.785 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 1,914,653		$ -	$ 1,872,939	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 4.5**		**$ -**	**$ 4.5**	**$ -**	Informational (for comparison with supply options)

Total Resource Net Benefit (Cost)	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ -**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Retrofit Efficient Water Heater Program

PER MEASURE			Utility Incentive to the participant	partner incentive
Total Incremental Cost	$ 5,378			
Utility Incentive	$ 2,206		$ 2,206	$ -
Incremental Participant cost	$ 3,172			

Annual Impact Per Measure

Energy Savings per installation	89.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	5%	0.95		Net-to-Gross
Alternate Energy Impact		GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	12	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	44	45		45		Estimated Participation
Impact						
Gross Energy Savings (GJ)	3,775	4,005	0	4,005	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	3,586	3,805	0	3,805	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$164.20	$164.20	$164.20	
Energy Purchases	$ 624,754	$ 624,754	$ -	$ 624,754	$ -	
Utility Program Costs						
DSM Incentives		$ 99,270	$ -	$ 99,270	$ -	
Administration		$ 9,000		$ 9,000		
Subtotal	$ 102,055	$ 108,270	$ -	$ 108,270	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -		$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 135,603	$ -	$ 135,603	$ -	
Subtotal	$ 127,819	$ 135,603	$ -	$ 135,603	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.194 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 394,880		$ -	$ 380,881	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 6.4**		**$ -**	**$ 6.4**	**$ -**	Informational (for comparison with supply options)

Total Resource Net Benefit (Cost)	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ -**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Fireplace Timer

PER MEASURE			Utility Incentive to the participant	partner incentive
Total Incremental Cost	$ 50			
Utility Incentive	$ 50		$ 50	$ -
Incremental Participant cost	$ -			

Annual Impact Per Measure

Energy Savings per installation	3.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact	0.000	kW/a		
Measure Lifetime	5	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	388	400		400		Estimated Participation
Impact						
Gross Energy Savings (GJ)	1,131	1,200	0	1,200	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	1,131	1,200	0	1,200	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$83.64	$83.64	$83.64	
Energy Purchases	$ 100,370	$ 100,370	$ -	$ 100,370	$ -	
Utility Program Costs						
DSM Incentives		$ 20,000	$ -	$ 20,000	$ -	
Administration		$ 180		$ 180		
Subtotal	$ 19,022	$ 20,180	$ -	$ 20,180	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -		$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$0.550 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 81,348		$ -	$ 80,190	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 3.7**		**$ -**	**$ 3.7**	**$ -**	Informational (for comparison with supply options)

Total Resource Net Benefit (Cost)	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ -**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Energy Assessment Program

PER MEASURE			Utility Incentive to the participant	partner incentive
Total Incremental Cost	$ 1,200			
Utility Incentive	$ 1,200		$ 1,200	$ -
Incremental Participant cost	$ -			

Annual Impact Per Measure

Energy Savings per installation	488.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	35%	0.65		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact	0.000	kW/a		
Measure Lifetime	1	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	59	61		61		Estimated Participation
Impact						
Gross Energy Savings (GJ)	28,059	29,768	0	29,768	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	18,238	19,349	0	19,349	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$29.54	$29.54	$29.54	
Energy Purchases	$ 571,652	$ 571,652	$ -	$ 571,652	$ -	
Utility Program Costs						
DSM Incentives		$ 73,200	$ -	$ 73,200	$ -	
Administration		$ 26,975		$ 26,975		
Subtotal	$ 94,425	$ 100,175	$ -	$ 100,175	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -		$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$0.117 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 477,228		$ -	$ 471,477	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 5.3**		**$ -**	**$ 5.3**	**$ -**	Informational (for comparison with supply options)

Total Resource Net Benefit (Cost)	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ -**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Retrofit Spray Valve

PER MEASURE			Utility Incentive to the participant	partner incentive
Total Incremental Cost	$ 130			
Utility Incentive	$ 130		$ 85	$ 45
Incremental Participant cost	$ -			

Annual Impact Per Measure

Energy Savings per installation	9.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	12%	0.88		Net-to-Gross
Alternate Energy Impact		GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	5	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	228	235		235		Estimated Participation
Impact						
Gross Energy Savings (GJ)	1,994	2,115	0	2,115	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	1,754	1,861	0	1,861	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$83.64	$83.64	$83.64	
Energy Purchases	$ 155,673	$ 155,673	$ -	$ 155,673	$ -	
Utility Program Costs						
DSM Incentives		$ 19,975	$ -	$ 19,975	$ -	
Administration		$ 2,597		$ 2,597		
Subtotal	$ 21,276	$ 22,572	$ -	$ 22,572	$ -	
Partner Program Costs						
DSM Incentives		$ 10,575	$ -	$ 10,575	$ -	
Administration		$ -	$ -		$ -	
Subtotal	$ 9,968	$ 10,575	$ -	$ 10,575	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$0.550 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 134,397		$ -	$ 122,526	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 2.6**		**$ -**	**$ 2.6**	**$ -**	Informational (for comparison with supply options)

Total Resource Net Benefit (Cost)	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ -**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Radiant Tube Heater Pilot Program

PER MEASURE			Utility Incentive to the participant	partner incentive
Total Incremental Cost	$ 14,448			
Utility Incentive	$ 3,058		$ 3,058	$ -
Incremental Participant cost	$ 11,390			

Annual Impact Per Measure

Energy Savings per installation	275.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact		GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	20	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1		1		Estimated Participation
Impact						
Gross Energy Savings (GJ)	259	275	0	275	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	259	275	0	275	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$238.01	$238.01	$238.01	
Energy Purchases	$ 65,452	$ 65,452	$ -	$ 65,452	$ -	
Utility Program Costs						
DSM Incentives		$ 3,058	$ -	$ 3,058	$ -	
Administration		$ 6,500		$ 6,500		
Subtotal	$ 9,009	$ 9,558	$ -	$ 9,558	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -		$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 11,390	$ -	$ 11,390	$ -	
Subtotal	$ 10,736	$ 11,390	$ -	$ 11,390	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.785 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 45,707		$ -	$ 44,505	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 5.1**		**$ -**	**$ 5.1**	**$ -**	Informational (for comparison with supply options)

Total Resource Net Benefit (Cost)	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ -**	**$ -**	Informational (for comparison with supply options)

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Measure Data for PSECA

PER MEASURE			Utility Incentive to the participant	partner incentive
Total Incremental Cost	$ 2,559,434			
Utility Incentive	$ 800,000		$ 800,000	
Incremental Participant cost	$ 1,759,434			

Annual Impact Per Measure

Energy Savings per installation	30830.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	-4613	GJ	-1,281,389	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	20	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1		1		Estimated Participation
Impact						
Gross Energy Savings (GJ)	29,060	30,830	0	30,830	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	29,060	30,830	0	30,830	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	(1,207,832)	(1,281,389)	0	(1,281,389)	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$238.01	$238.01	$238.01	
Energy Purchases	$ 7,337,786	$ 7,337,786	$ -	$ 7,337,786	$ -	
Utility Program Costs						
DSM Incentives		$ 800,000	$ -	$ 800,000	$ -	
Administration		$ 24,000		$ 24,000		
Subtotal	$ 776,699	$ 824,000	$ -	$ 824,000	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -		$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 1,759,434	$ -	$ 1,759,434	$ -	
Subtotal	$ 1,658,435	$ 1,759,434	$ -	$ 1,759,434	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ (2,287,660)	$ -	$ (2,287,660)	$ -	$1.785 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ (2,287,660)	$ (2,287,660)	$ -	$ (2,287,660)	$ -	
Total Resource Net Benefit (Cost)	$ 2,614,992		$ -	$ 2,466,692	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 5.6**		**$ -**	**$ 5.6**	**$ -**	Informational (for comparison with supply options)

Total Resource Net Benefit (Cost)	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ -**	**$ -**	Informational (for comparison with supply options)

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2011 Commercial Programs Planned	PROGRAM														ALTERNATE		NET PRESENT VALUE								BENEFIT/COST								PARAMETERS												
	COSTS ($000)											SAVINGS (GJ)			LIFE	Impact		Levelized Cost	Utility Benefits (Costs)		Participant Benefits (Costs)			Program Net Savings			Natural Gas	Participant				Natural Gas		TRC Net Benefits	UTILITY				PARTICIPANT										
FEI	Utility			Partners																																											
	Incentives	Administration	Total	Incentives	Administration	Total	Participant	Total	% Utility	% Partner	% Participant	Gross	Net-to-Gross	Net	Years	Energy	Capacity	($/GJ)	Program	Alternate	Program	Carbon Tax	Alternate	Natural Gas	Alternate Energy	Alternate Capacity	Natural Gas	Total Costs	Total Benefits	Benefit/Cost	Natural Gas	Total Resource	($'000s)	Natural Gas Utility Discount	Natural Gas Supply	Alternate Discount Rate	Alternate Supply	Discount Rate	Natural Gas NPV	Carbon Tax NPV	Alternate Energy NPV	Alternate Capacity NPV	Natural Gas Tariff	Energy Tariff	Capacity Tariff
																MWh	kW		($'000s)	($'000s)	($'000s)	($'000s)	($'000s)	(GJ)	(MWh)	(kW)	Utility	($'000s)	($'000s)		Rate Impact				$/GJ		$/kWh		$/GJ	$/GJ	$/kWh	$/kW/a	$/GJ	$/kWh	$/kW/a
Label	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR	AS	AT
Source Sheet or Calculation	Program	Program	B+C	Program	Program	E+F	Program	D+G+H	D/I	G/I	H/I	Program	Program	MxN	Program	Program	Program	D/Y	OxAJ	Q x N x AL	M x N x AN	M x N x AO	N x (QxAP + RxAQ)	PV(AJ,P,-O)	PV(AK,P,-Q*N)	PV(AK,P,-R)	T/D	H=0, (V+W)=0	H=0, (V+W)=0, X	AD/AC	T/(V+D)	(T+U)/I	(T+U)-I	Input	Program	Input	Input	Input	PV(AM,P,-Input!D33)	Input	PV(AM,P,-Input!D24)	PV(AM,P,-Input!D29)	Input	Input	Input
2011																																														
Commercial Energy Efficiency Programs																																														
New Construction																																														
Efficient Boiler Program	197	2	200	0	0	0	269	469	43%	0%	57%	8,552	82%	7,013	20	0	-	3	784	N/A	753	108	N/A	73,434	0	-	3.9	269	861	3.2	0.8	1.7	316	7.15%	111.84	6%	1.38	6.0%	107.37	15.34	0.88	0.00	9.999	0.083	-
Light Commercial Energy Star Boiler Program	14	1	15	0	0	0	50	65	23%	0%	77%	1,184	82%	971	20	0	-	1	109	N/A	104	15	N/A	10,167	0	-	7.4	50	119	2.4	0.9	1.7	44	7.15%	111.84	6%	1.38	6.0%	107.37	15.34	0.88	0.00	9.999	0.083	-
Efficient Water Heater	7	2	8	0	0	0	9	17	47%	0%	53%	267	95%	254	20	0	-	3	21	N/A	27	4	N/A	2,656	0	-	2.5	9	31	3.4	0.6	1.2	3	7.15%	81.27	6%	1.38	6.0%	107.37	15.34	0.88	0.00	9.999	0.083	-
Spray Valve	0	0	0	0	0	0	0	0	100%	0%	0%	36	88%	32	5	0	-	3	1	N/A	1	0	N/A	129	0	-	3.5	-	1	N/A	0.8	3.5	1	7.15%	42.31	6%	0.51	6.0%	39.43	6.42	0.32	0.00	9.999	0.083	-
Retrofit																																														
Retrofit Efficient Boiler Program	1,311	25	1,337	0	0	0	1,775	3,112	43%	0%	57%	49,470	82%	40,565	20	0	-	3	4,537	N/A	4,356	622	N/A	424,785	0	-	3.4	1,775	4,978	2.8	0.8	1.5	1,425	7.15%	111.84	6%	1.38	6.0%	107.37	15.34	0.88	0.00	9.999	0.083	-
Light Energy Star Commercial Boiler Program	156	9	165	0	0	0	562	727	23%	0%	77%	13,320	82%	10,922	20	0	-	1	1,222	N/A	1,173	168	N/A	114,375	0	-	7.4	562	1,340	2.4	0.9	1.7	495	7.15%	111.84	6%	1.38	6.0%	107.37	15.34	0.88	0.00	9.999	0.083	-
Retrofit Efficient Water Heater Program	99	9	108	0	0	0	136	244	44%	0%	56%	4,005	95%	3,805	20	0	-	3	309	N/A	409	58	N/A	39,842	0	-	2.9	136	467	3.4	0.6	1.3	65	7.15%	81.27	6%	1.38	6.0%	107.37	15.34	0.88	0.00	9.999	0.083	-
Energy Assessment Program	73	27	100	0	0	0	0	100	100%	0%	0%	29,768	65%	19,349	1	0	-	6	271	N/A	171	39	N/A	18,058	0	-	2.7	-	210	N/A	1.0	2.7	170	7.15%	13.99	6%	0.11	6.0%	8.83	2.02	0.07	0.00	9.999	0.083	-
Fireplace Timer	20	0	20	0	0	0	0	20	100%	0%	0%	1,200	100%	1,200	5	0	-	4	51	N/A	47	8	N/A	4,901	0	-	2.5	-	55	N/A	0.8	2.5	31	7.15%	42.31	6%	0.51	6.0%	39.43	6.42	0.32	0.00	9.999	0.083	-
Retrofit Spray Valve	20	3	23	11	0	11	0	33	68%	32%	0%	2,115	88%	1,861	5	0	-	3	79	N/A	73	12	N/A	7,601	0	-	3.5	-	85	N/A	0.8	2.4	46	7.15%	42.31	6%	0.51	6.0%	39.43	6.42	0.32	0.00	9.999	0.083	-
Radiant Tube Heater Pilot Program	3	7	10	0	0	0	11	21	46%	0%	54%	275	100%	275	20	0	-	3	31	N/A	30	4	N/A	2,880	0	-	3.2	11	34	3.0	0.8	1.5	10	7.15%	111.84	6%	1.38	6.0%	107.37	15.34	0.88	0.00	9.999	0.083	-
PSECA	800	24	824	0	0	0	1,759	2,583	32%	0%	68%	30,830	100%	30,830	20	(1,281)	-	3	3,448	(1,764)	3,310	473	(1,130)	322,840	(14,697)	-	4.2	1,759	2,653	1.5	0.8	0.7	(899)	7.15%	111.84	6%	1.38	6.0%	107.37	15.34	0.88	0.00	9.999	0.083	-
Total Commercial	2,701	108	2,809	11	-	11	4,572	7,391	38%	0	62%	141,022		117,077		(1,281)	-	3	10,862	(1,764)	10,454	1,510	(1,130)	1,021,668	(14,697)	-	3.9	4,572	10,834	2.4	0.8	1.2	1,707												

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ
1	**UTILITY**		**FORTIS BC**																																	
2																																				
3																																				
4			**Year**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	
5			Units																																	
6		**NATURAL GAS**																																		
7		Incremental Cost of Gas (nominal)	$ Per GJ	$5.58	$6.17	$6.81	$7.35	$7.87	$8.26	$8.56	$8.78	$8.99	$9.19	$9.40	$9.60	$9.81	$10.03	$10.25	$10.47	$10.70	$10.93	$11.17	$11.42	$11.67	$11.92	$12.19	$12.45	$12.73	$13.01	$13.29	$13.58	$13.88	$14.19	$14.50	$14.82	$15.18	
8	1		*Year*	*0*	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*	*16*	*17*	*18*	*19*	*20*	*21*	*22*	*23*	*24*	*25*	*26*	*27*	*28*	*29*	*30*	*31*		
9		carbon tax	$ per GJ	*0.75*	*1.00*	*1.25*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*		
10		Distribution Adder	$ per GJ	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*		
11		Total incremental cost of gas including carbon		*6.41*	*7.32*	*8.21*	*9.01*	*9.52*	*9.92*	*10.22*	*10.43*	*10.64*	*10.85*	*11.05*	*11.26*	*11.47*	*11.68*	*11.90*	*12.13*	*12.35*	*12.59*	*12.83*	*13.07*	*13.32*	*13.58*	*13.84*	*14.11*	*14.38*	*14.66*	*14.95*	*15.24*	*15.54*	*15.84*	*16.15*	*16.31*		
12	2	GDP Deflator		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
13	3	Incremental Cost of Gas (Real)		$6.41	$7.32	$8.21	$9.01	$9.52	$9.92	$10.22	$10.43	$10.64	$10.85	$11.05	$11.26	$11.47	$11.68	$11.90	$12.13	$12.35	$12.59	$12.83	$13.07	$13.32	$13.58	$13.84	$14.11	$14.38	$14.66	$14.95	$15.24	$15.54	$15.84	$16.15	$16.47		
14	4	Net Present Value -2010			$12.36	$19.03	$25.47	$32.63	$39.16	$45.47	$51.47	$57.19	$62.63	$67.80	$72.73	$77.39	$81.83	$86.05	$90.07	$93.89	$97.52	$100.98	$104.26	$107.39	$110.36	$113.19	$115.88	$118.43	$120.87	$123.18	$125.39	$127.49	$129.48	$131.38	$133.17		
15	5	Net Present Value -2011			$13.99	$21.31	$28.54	$35.56	$42.31	$48.75	$54.87	$60.70	$66.24	$71.51	$76.51	$81.27	$85.80	$90.10	$94.20	$98.09	$101.79	$105.31	$108.66	$111.84	$114.87	$117.75	$120.49	$123.10	$125.59	$127.95	$130.19	$132.33	$134.37	$136.28			
16	6	Net Present Value -2012				$15.51	$23.23	$30.78	$38.01	$44.91	$51.47	$57.71	$63.65	$69.29	$74.66	$79.76	$84.61	$89.22	$93.61	$97.78	$101.74	$105.51	$109.10	$112.51	$115.76	$118.85	$121.79	$124.58	$127.24	$129.77	$132.18	$134.47	$136.65	$138.70				
17																																				
18																																				
19		**ELECTRICITY**																																		
20		Incremental Cost of Elec	$ Per kWh	$0.10																																
21		Incremental Cost of E Capacity	$ Per kW/a	$170.00																																
22																																				
23																																				
24																																				
25	**RETAIL**																																			
26				Rate	Customers																																
27		Residential Retail			1,000																																
28		**TGI**	$ Per MJ	$0.0100	1,000																																
29		**TGVI**	$ Per MJ	$0.0143	1,000																																
30		**Electricity**	$ Per MJ	$0.0230																																
31		**Electricity**	$ per kWh	$0.0829	1,000																																
32		**Electricity**	$ per kW per year		1,000																																
33		Commercial Retail																																		
34		**TGI**	$ Per MJ	$0.0094	50																																
35		**TGVI**	$ Per MJ	$0.0160	50																																
36		**Electricity**	$ Per MJ	$0.0214																																
37		**Electricity**	$ per kWh	$0.0709	1,000																																
38		**Electricity**	$ per kW per year	$52.0000	1,000																																
39																																				
40	**TAX**																																			
41			**Year**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**		
42	1		*Year*		*0*	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*	*16*	*17*	*18*	*19*	*20*	*21*	*22*	*23*	*24*	*25*	*26*	*27*	*28*	*29*	*30*		
43	2	Carbon	$ Per tonne		$20.00	$25.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00		
44	3	Carbon	$ Per GJ		$0.9976	$1.2470	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964		
45	4	GDP Deflator			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
46	5	Carbon (Real)			$1.00	$1.25	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50		
47	6	Net Present Value -2010			$2.02	$3.23	$4.37	$5.43	$6.42	$7.34	$8.20	$9.00	$9.75	$10.45	$11.11	$11.72	$12.29	$12.82	$13.31	$13.78	$14.21	$14.61	$14.99	$15.34	$15.67	$15.97	$16.26	$16.52	$16.77	$17.00	$17.22	$17.42	$17.61	$17.79			
48	7	Net Present Value -2011				$2.47	$3.68	$4.82	$5.88	$6.87	$7.79	$8.65	$9.45	$10.20	$10.90	$11.56	$12.17	$12.74	$13.27	$13.76	$14.23	$14.66	$15.06	$15.44	$15.79	$16.12	$16.42	$16.71	$16.97	$17.22	$17.45	$17.67	$17.87	$18.06				
49	8	Net Present Value -2012					$2.70	$3.92	$5.05	$6.11	$7.10	$8.02	$8.88	$9.69	$10.44	$11.14	$11.79	$12.40	$12.97	$13.50	$14.00	$14.46	$14.89	$15.29	$15.67	$16.02	$16.35	$16.65	$16.94	$17.21	$17.45	$17.69	$17.90	$18.10			
50																																				
51		**Discount Rate (real)**[1]																																		
52		**TERASEN GAS**																																		
53		**Rate of Inflation**	1.90%																																	
54		**TGI**	7.15%																																	
55		**TGVI**	6.89%																																	
56		**BC HYDRO**																																		
57		**Rate of Inflation**	2.00%																																	
58		**BC Hydro**	6.00%																																	
59		**Customer**	6.00%																																	
60		*Footnote 1: Source LR 070531*																																		
61																																				
62				**SHEET LABELS**																																
63	**New Construction**																																			
64		Efficient Boiler Program		**BASEBOARD**																																
65		Light Commercial Energy Star Boiler Program		**HEATPUMP**																																

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Measure Data for Efficient Boiler Program

PER MEASURE			Utility Incentive to the participant	partner incentive
Total Incremental Cost	$ 65,711			
Utility Incentive	$ 24,687		$ 24,687	$ -
Incremental Participant cost	$ 41,024			

Annual Impact Per Measure

Energy Savings per installation	1069.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	18%	0.82		Net-to-Gross
Alternate Energy Impact		GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	20	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	7	8		8		Estimated Participation
Impact						
Gross Energy Savings (GJ)	7,449	8,552	0	8,552	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	6,108	7,013	0	7,013	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$107.39	$111.84	$115.76	
Energy Purchases	$ 784,303	$ 784,303	$ -	$ 784,303	$ -	
Utility Program Costs						
DSM Incentives		$ 197,496	$ -	$ 197,496	$ -	
Administration		$ 2,100		$ 2,100		
Subtotal	$ 173,847	$ 199,596	$ -	$ 199,596	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -		$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 269,117	$ -	$ 269,117	$ -	
Subtotal	$ 234,400	$ 269,117	$ -	$ 269,117	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.376 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 376,056		$ -	$ 315,590	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 6.4**		**$ -**	**$ 6.4**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Light Commercial Energy Star Boiler Program

PER MEASURE			Utility Incentive to the participant	partner incentive
Total Incremental Cost	$ 18,695			
Utility Incentive	$ 3,462		$ 3,462	$ -
Incremental Participant cost	$ 15,233			

Annual Impact Per Measure

Energy Savings per installation	296.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	18%	0.82		Net-to-Gross
Alternate Energy Impact		GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	20	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	4	4		4		Estimated Participation
Impact						
Gross Energy Savings (GJ)	1,031	1,184	0	1,184	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	846	971	0	971	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$107.39	$111.84	$115.76	
Energy Purchases	$ 108,585	$ 108,585	$ -	$ 108,585	$ -	
Utility Program Costs						
DSM Incentives		$ 13,848	$ -	$ 13,848	$ -	
Administration		$ 781		$ 781		
Subtotal	$ 12,742	$ 14,629	$ -	$ 14,629	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -		$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 49,964	$ -	$ 49,964	$ -	
Subtotal	$ 43,519	$ 49,964	$ -	$ 49,964	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.376 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 52,324		$ -	$ 43,991	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 6.4**		**$ -**	**$ 6.4**	**$ -**	Informational (for comparison with supply options)

Total Resource Net Benefit (Cost)	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ -**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Efficient Water Heater

PER MEASURE			Utility Incentive to the participant	partner incentive
Total Incremental Cost	$ 5,378			
Utility Incentive	$ 2,206		$ 2,206	$ -
Incremental Participant cost	$ 3,172			

Annual Impact Per Measure

Energy Savings per installation	89.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	5%	0.95		Net-to-Gross
Alternate Energy Impact		GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	12	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	3	3		3		Estimated Participation
Impact						
Gross Energy Savings (GJ)	233	267	0	267	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	221	254	0	254	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$77.39	$81.27	$84.61	
Energy Purchases	$ 20,615	$ 20,615	$ -	$ 20,615	$ -	
Utility Program Costs						
DSM Incentives		$ 6,618	$ -	$ 6,618	$ -	
Administration		$ 1,500		$ 1,500		
Subtotal	$ 7,071	$ 8,118	$ -	$ 8,118	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -		$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 9,040	$ -	$ 9,040	$ -	
Subtotal	$ 7,874	$ 9,040	$ -	$ 9,040	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.006 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 5,670		$ -	$ 3,457	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 8.6**		**$ -**	**$ 8.6**	**$ -**	Informational (for comparison with supply options)

Total Resource Net Benefit (Cost)	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ -**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Spray Valve

PER MEASURE			Utility Incentive to the participant	partner incentive
Total Incremental Cost	$ 85			
Utility Incentive	$ 85		$ 85	$ -
Incremental Participant cost	$ -			

Annual Impact Per Measure

Energy Savings per installation	9.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	12%	0.88		Net-to-Gross
Alternate Energy Impact		GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	5	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	4	4		4		Estimated Participation
Impact						
Gross Energy Savings (GJ)	31	36	0	36	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	28	32	0	32	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$39.16	$42.31	$44.91	
Energy Purchases	$ 1,340	$ 1,340	$ -	$ 1,340	$ -	
Utility Program Costs						
DSM Incentives		$ 340	$ -	$ 340	$ -	
Administration		$ 44		$ 44		
Subtotal	$ 334	$ 384	$ -	$ 384	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -		$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$0.505 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 1,006		$ -	$ 956	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 3.0**		**$ -**	**$ 3.0**	**$ -**	Informational (for comparison with supply options)

Total Resource Net Benefit (Cost)	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ -**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Retrofit Efficient Boiler Program

PER MEASURE			Utility Incentive to the participant	partner incentive
Total Incremental Cost	$ 35,834			
Utility Incentive	$ 13,517		$ 13,517	$ -
Incremental Participant cost	$ 22,317			

Annual Impact Per Measure

Energy Savings per installation	510.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	18%	0.82		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact	0.000	kW/a		
Measure Lifetime	20	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	91	97		97		Estimated Participation
Impact						
Gross Energy Savings (GJ)	43,088	49,470	0	49,470	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	35,332	40,565	0	40,565	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$107.39	$111.84	$115.76	
Energy Purchases	$ 4,536,890	$4,536,890	$ -	$4,536,890	$ -	
Utility Program Costs						
DSM Incentives		$1,311,149	$ -	$1,311,149	$ -	
Administration		$ 25,405		$ 25,405		
Subtotal	$ 1,164,132	$1,336,554	$ -	$1,336,554	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -		$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$1,775,094	$ -	$1,775,094	$ -	
Subtotal	$ 1,546,098	$1,775,094	$ -	$1,775,094	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.376 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 1,826,660		$ -	$ 1,425,242	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 7.3**		**$ -**	**$ 7.3**	**$ -**	Informational (for comparison with supply options)

Total Resource Net Benefit (Cost)	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ -**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Light Energy Star Commercial Boiler Program

PER MEASURE			Utility Incentive to the participant	partner incentive
Total Incremental Cost	$ 18,695			
Utility Incentive	$ 3,462		$ 3,462	$ -
Incremental Participant cost	$ 15,233			

Annual Impact Per Measure

Energy Savings per installation	296.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	18%	0.82		Net-to-Gross
Alternate Energy Impact		GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	20	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	42	45		45		Estimated Participation
Impact						
Gross Energy Savings (GJ)	11,602	13,320	0	13,320	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	9,513	10,922	0	10,922	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$107.39	$111.84	$115.76	
Energy Purchases	$ 1,221,576	$1,221,576	$ -	$1,221,576	$ -	
Utility Program Costs						
DSM Incentives		$ 155,790	$ -	$ 155,790	$ -	
Administration		$ 8,792		$ 8,792		
Subtotal	$ 143,350	$ 164,582	$ -	$ 164,582	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -		$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 562,098	$ -	$ 562,098	$ -	
Subtotal	$ 489,584	$ 562,098	$ -	$ 562,098	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.376 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 588,642		$ -	$ 494,897	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 6.4**		**$ -**	**$ 6.4**	**$ -**	Informational (for comparison with supply options)

Total Resource Net Benefit (Cost)	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ -**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Retrofit Efficient Water Heater Program

PER MEASURE			Utility Incentive to the participant	partner incentive
Total Incremental Cost	$ 5,378			
Utility Incentive	$ 2,206		$ 2,206	$ -
Incremental Participant cost	$ 3,172			

Annual Impact Per Measure

Energy Savings per installation	89.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	5%	0.95		Net-to-Gross
Alternate Energy Impact		GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	12	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	42	45		45		Estimated Participation
Impact						
Gross Energy Savings (GJ)	3,488	4,005	0	4,005	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	3,314	3,805	0	3,805	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$77.39	$81.27	$84.61	
Energy Purchases	$ 309,225	$ 309,225	$ -	$ 309,225	$ -	
Utility Program Costs						
DSM Incentives		$ 99,270	$ -	$ 99,270	$ -	
Administration		$ 9,000		$ 9,000		
Subtotal	$ 94,303	$ 108,270	$ -	$ 108,270	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -		$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 135,603	$ -	$ 135,603	$ -	
Subtotal	$ 118,110	$ 135,603	$ -	$ 135,603	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.006 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 96,813		$ -	$ 65,352	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 8.1**		**$ -**	**$ 8.1**	**$ -**	Informational (for comparison with supply options)

Total Resource Net Benefit (Cost)	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ -**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Fireplace Timer

PER MEASURE			Utility Incentive to the participant	partner incentive
Total Incremental Cost	$ 50			
Utility Incentive	$ 50		$ 50	$ -
Incremental Participant cost	$ -			

Annual Impact Per Measure

Energy Savings per installation	3.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact	0.000	kW/a		
Measure Lifetime	5	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	373	400		400		Estimated Participation
Impact						
Gross Energy Savings (GJ)	1,045	1,200	0	1,200	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	1,045	1,200	0	1,200	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$39.16	$42.31	$44.91	
Energy Purchases	$ 50,775	$ 50,775	$ -	$ 50,775	$ -	
Utility Program Costs						
DSM Incentives		$ 20,000	$ -	$ 20,000	$ -	
Administration		$ 180		$ 180		
Subtotal	$ 17,577	$ 20,180	$ -	$ 20,180	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -		$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$0.505 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 33,198		$ -	$ 30,595	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 4.1**		**$ -**	**$ 4.1**	**$ -**	Informational (for comparison with supply options)

Total Resource Net Benefit (Cost)	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ -**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Energy Assessment Program

PER MEASURE			Utility Incentive to the participant	partner incentive
Total Incremental Cost	$ 1,200			
Utility Incentive	$ 1,200		$ 1,200	$ -
Incremental Participant cost	$ -			

Annual Impact Per Measure

Energy Savings per installation	488.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	35%	0.65		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact	0.000	kW/a		
Measure Lifetime	1	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	57	61		61		Estimated Participation
Impact						
Gross Energy Savings (GJ)	25,928	29,768	0	29,768	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	16,853	19,349	0	19,349	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$12.36	$13.99	$15.51	
Energy Purchases	$ 270,669	$ 270,669	$ -	$ 270,669	$ -	
Utility Program Costs						
DSM Incentives		$ 73,200	$ -	$ 73,200	$ -	
Administration		$ 26,975		$ 26,975		
Subtotal	$ 87,252	$ 100,175	$ -	$ 100,175	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -		$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$0.113 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 183,418		$ -	$ 170,494	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 5.5**		**$ -**	**$ 5.5**	**$ -**	Informational (for comparison with supply options)

Total Resource Net Benefit (Cost)	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ -**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Retrofit Spray Valve

PER MEASURE			Utility Incentive to the participant	partner incentive
Total Incremental Cost	$ 130			
Utility Incentive	$ 130		$ 85	$ 45
Incremental Participant cost	$ -			

Annual Impact Per Measure

Energy Savings per installation	9.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	12%	0.88		Net-to-Gross
Alternate Energy Impact		GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	5	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	219	235		235		Estimated Participation
Impact						
Gross Energy Savings (GJ)	1,842	2,115	0	2,115	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	1,621	1,861	0	1,861	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$39.16	$42.31	$44.91	
Energy Purchases	$ 78,751	$ 78,751	$ -	$ 78,751	$ -	
Utility Program Costs						
DSM Incentives		$ 19,975	$ -	$ 19,975	$ -	
Administration		$ 2,597		$ 2,597		
Subtotal	$ 19,660	$ 22,572	$ -	$ 22,572	$ -	
Partner Program Costs						
DSM Incentives		$ 10,575	$ -	$ 10,575	$ -	
Administration		$ -	$ -		$ -	
Subtotal	$ 9,211	$ 10,575	$ -	$ 10,575	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$0.505 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 59,091		$ -	$ 45,604	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 3.0**		**$ -**	**$ 3.0**	**$ -**	Informational (for comparison with supply options)

Total Resource Net Benefit (Cost)	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ -**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Radiant Tube Heater Pilot Program

PER MEASURE		Utility Incentive to the participant	partner incentive
Total Incremental Cost	$ 14,448		
Utility Incentive	$ 3,058	$ 3,058	$ -
Incremental Participant cost	$ 11,390		

Annual Impact Per Measure

Energy Savings per installation	275.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact		GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	20	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1		1		Estimated Participation
Impact						
Gross Energy Savings (GJ)	240	275	0	275	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	240	275	0	275	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$107.39	$111.84	$115.76	
Energy Purchases	$ 30,756	$ 30,756	$ -	$ 30,756	$ -	
Utility Program Costs						
DSM Incentives		$ 3,058	$ -	$ 3,058	$ -	
Administration		$ 6,500		$ 6,500		
Subtotal	$ 8,325	$ 9,558	$ -	$ 9,558	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -		$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 11,390	$ -	$ 11,390	$ -	
Subtotal	$ 9,921	$ 11,390	$ -	$ 11,390	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.376 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 12,511		$ -	$ 9,809	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 7.3**		**$ -**	**$ 7.3**	**$ -**	Informational (for comparison with supply options)

Total Resource Net Benefit (Cost)	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ -**	**$ -**	Informational (for comparison with supply options)

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Measure Data for PSECA

PER MEASURE			Utility Incentive to the participant	partner incentive
Total Incremental Cost	$	2,559,434		
Utility Incentive	$	800,000	$ 800,000	
Incremental Participant cost	$	1,759,434		

Annual Impact Per Measure

Energy Savings per installation	30830.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	-4613	GJ	-1,281,389	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	20	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1		1		Estimated Participation
Impact						
Gross Energy Savings (GJ)	26,853	30,830	0	30,830	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	26,853	30,830	0	30,830	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	(1,140,432)	(1,281,389)	0	(1,281,389)	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$107.39	$111.84	$115.76	
Energy Purchases	$ 3,448,070	$ 3,448,070	$ -	$ 3,448,070	$ -	
Utility Program Costs						
DSM Incentives		$ 800,000	$ -	$ 800,000	$ -	
Administration		$ 24,000		$ 24,000		
Subtotal	$ 717,700	$ 824,000	$ -	$ 824,000	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -		$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 1,759,434	$ -	$ 1,759,434	$ -	
Subtotal	$ 1,532,458	$ 1,759,434	$ -	$ 1,759,434	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ (1,763,692)	$ -	$ (1,763,692)	$ -	$1.376 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ (1,763,692)	$ (1,763,692)	$ -	$ (1,763,692)	$ -	
Total Resource Net Benefit (Cost)	$ (565,780)		$ -	$ (899,056)	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 8.0**		**$ -**	**$ 8.0**	**$ -**	Informational (for comparison with supply options)

Total Resource Net Benefit (Cost)	$ -	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ -**	**$ -**	Informational (for comparison with supply options)

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	PROGRAM														ALTERNATE		NET PRESENT VALUE									BENEFIT/COST							PARAMETERS														
	COSTS ($000)										SAVINGS (GJ)			LIFE	Impact		Levelized Cost	Utility Benefits (Costs)		Participant Benefits (Costs)			Program Net Savings			Natural Gas	Participant			Natural Gas	SCT	SCT Net Benefits	UTILITY				PARAMETERS												
	Utility			Partners																																											
	Incentives	Administration	Total	Incentives	Administration	Total	Participant	Total	% Utility	% Partner	% Participant	Gross	Net-to-Gross	Net	Years	Energy	Capacity	($/GJ)	Program	Alternate	Program	Carbon Tax	Alternate	Natural Gas	Alternate Energy	Alternate Capacity	Natural Gas	Total Costs	Total Benefits	Benefit/Cost	Natural Gas			Natural Gas Utility Discount Rate	Natural Gas Supply	Alternate Discount Rate	Alternate Supply	Discount Rate	Natural Gas NPV	Carbon Tax NPV	Alternate Energy NPV	Alternate Capacity NPV	Natural Gas Tariff	Energy Tariff	Capacity Tariff			
Label	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR	AS	AT			
Source Sheet or Calculation	Program	Program	B+C	Program	Program	E+F	Program	D+G+H	D/I	G/I	H/I	Program	Program	M+N	Program	Program	Program	D/Y	O+J	Q x N x AL	M x N x AN	M x N x AO	N x (QxAP + RxAQ)	PV(AI,P,-Q)	PV(AK,P,-Q*N)	PV(AX,P,-R)	T/D	H=0, (V+W)=0	H=0, (V+W)=0, X	AD/AC	T/(V+D)	(T+U)/I	(T+U)-I	Input	Program	Input	Input	Input	PV(AM,P,-Input!D25)	Input	PV(AM,P,-Input!D28)	PV(AM,P,-Input!D29)	Input	Input	Input			
2010																																															
Commercial Energy Efficiency Programs																																														
New Construction																																														
Efficient Boiler Program	12	1	13	0	0	0	6	19	67%	0%	33%	250	82%	205	20	0	-	4	63	N/A	52	5	N/A	3,050	0	-	4.9	6	56	8.8	1.0	3.3	44	3.00%	237.85	3%	1.79	3.0%	252.02	22.35	1.23	0.00	9.999	0.083	-			
Efficient Commercial Water Heater	2	0	3	0	0	0	3	6	46%	0%	54%	89	95%	85	12	0	-	3	18	N/A	14	1	N/A	842	0	-	7.0	3	16	5.2	1.1	3.2	12	3.00%	164.10	3%	1.19	3.0%	168.62	15.19	0.82	0.00	9.999	0.083	1			
Retrofit																																														
Efficient Boiler Program	110	6	115	0	0	0	167	282	41%	0%	59%	4,005	82%	3,284	20	0	-	2	1,015	N/A	828	73	N/A	48,859	0	-	8.8	167	901	5.4	1.1	3.6	733	3.00%	237.85	3%	1.79	3.0%	252.02	22.35	1.23	0.00	9.999	0.083	-			
Light Comm. ENERGY STAR® Boiler Program	29	3	32	0	0	0	122	154	21%	0%	79%	1,970	82%	1,615	20	0	-	1	499	N/A	407	36	N/A	24,033	0	-	15.6	122	443	3.6	1.1	3.2	345	3.00%	237.85	3%	1.79	3.0%	252.02	22.35	1.23	0.00	9.999	0.083	-			
Retrofit Efficiecnt Commercial Water Heater Program	7	2	9	0	0	0	22	31	30%	0%	70%	380	95%	361	12	0	-	3	77	N/A	61	5	N/A	3,593	0	-	8.2	22	66	3.1	1.1	2.5	46	3.00%	164.10	3%	1.19	3.0%	168.62	15.19	0.82	0.00	9.999	0.083	-			
Retrofit Energy Assessment Program	17	2	19	0	0	0	0	19	100%	0%	0%	6,832	65%	4,441	1	0	-	4	170	N/A	73	10	N/A	4,311	0	-	9.0	-	83	N/A	1.9	9.0	152	3.00%	29.52	3%	0.12	3.0%	16.45	2.14	0.08	0.00	9.999	0.083	-			
Fireplace timer	2	0	2	0	0	0	0	2	100%	0%	0%	90	100%	90	5	0	-	5	10	N/A	7	1	N/A	412	0	-	5.1	-	8	N/A	1.1	5.1	8	3.00%	83.59	3%	0.55	3.0%	77.58	7.39	0.38	0.00	9.999	0.083	-			
Spray Valve Program	5	1	5	2	0	2	0	8	68%	32%	0%	495	88%	436	5	0	-	3	47	N/A	34	3	N/A	1,995	0	-	9.0	-	37	N/A	1.2	6.1	40	3.00%	83.59	3%	0.55	3.0%	77.58	7.39	0.38	0.00	9.999	0.083	-			
PSECA	208	9	216	0	0	0	526	742	29%	0%	71%	5,497		5,497		0	-	3	1,754	N/A	1,383	123	N/A	81,629	0	-	8.1	526	1,505	2.9	1.1	2.4	1,012	3.00%	237.85	3%	0.00	3.0%	0.00	0.00	0.00	0.00	9.999	0.083	-			
Total Commercial	391	24	415	2	-	2	846	1,263	33%	0%	67%	19,608		16,013		0	-	2	3,655	0	2,858	257	0	168,724	0	0	8.8	846	3,115	3.7	1.1	2.9	2,392															

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ
1	**UTILITY**		**FORTIS BC**																																	
2																																				
3																																				
4			**Year**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	
5			Units																																	
6		**NATURAL GAS**																																		
7		Incremental Cost of Gas (nominal)	$ Per GJ	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.43
8	1		*Year*	*0*	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*	*16*	*17*	*18*	*19*	*20*	*21*	*22*	*23*	*24*	*25*	*26*	*27*	*28*	*29*	*30*	*31*	
9		carbon tax	$ per GJ	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	
10		Distribution adder	$ per GJ	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	
11		Total incremental cost of gas including carbon		*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.28*	
12	2	GDP Deflator		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
13	3	Incremental Cost of Gas (Real)		$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.28	
14	4	Net Present Value -2010			$29.52	$43.65	$57.35	$70.66	$83.59	$96.13	$108.31	$120.14	$131.62	$142.77	$153.59	$164.10	$174.30	$184.20	$193.82	$203.15	$212.22	$221.02	$229.56	$237.85	$245.91	$253.72	$261.32	$268.68	$275.84	$282.79	$289.53	$296.08	$302.43	$308.61	$314.64		
15	5	Net Present Value -2011			$29.52	$43.65	$57.35	$70.66	$83.59	$96.13	$108.31	$120.14	$131.62	$142.77	$153.59	$164.10	$174.30	$184.20	$193.82	$203.15	$212.22	$221.02	$229.56	$237.85	$245.91	$253.72	$261.32	$268.68	$275.84	$282.79	$289.53	$296.08	$302.43	$308.56			
16	6	Net Present Value -2012				$29.52	$43.65	$57.35	$70.66	$83.59	$96.13	$108.31	$120.14	$131.62	$142.77	$153.59	$164.10	$174.30	$184.20	$193.82	$203.15	$212.22	$221.02	$229.56	$237.85	$245.91	$253.72	$261.32	$268.68	$275.84	$282.79	$289.53	$296.08	$302.37				
17																																				
18																																				
19		**ELECTRICITY**																																		
20		Incremental Cost of Elec	$ Per kWh	$0.10																																
21		Incremental Cost of E Capacity	$ Per kW/a	$170.00																																
22																																				
23																																				
24																																				
25	**RETAIL**																																			
26				Rate	Customers																															
27		Residential Retail			1,000																															
28		**TGI**	$ Per MJ	$0.0100	1,000																															
29		**TGVI**	$ Per MJ	$0.0143	1,000																															
30		**Electricity**	$ Per MJ	$0.0230																																
31		**Electricity**	$ per kWh	$0.0829	1,000																															
32		**Electricity**	$ per kW per year		1,000																															
33		Commercial Retail																																		
34		**TGI**	$ Per MJ	$0.0094	50																															
35		**TGVI**	$ Per MJ	$0.0160	50																															
36		**Electricity**	$ Per MJ	$0.0214																																
37		**Electricity**	$ per kWh	$0.0749	750																															
38		**Electricity**	$ per kW per year	$52.0000	50																															
39																																				
40	**TAX**																																			
41			**Year**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**		
42	1		*Year*		*0*	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*	*16*	*17*	*18*	*19*	*20*	*21*	*22*	*23*	*24*	*25*	*26*	*27*	*28*	*29*	*30*	
43	2	Carbon	$ Per tonne		$20.00	$25.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	
44	3	Carbon	$ Per GJ		$0.9576	$1.2470	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	
45	4	GDP Deflator			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
46	5	Carbon (Real)			$1.00	$1.25	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	
47	6	Net Present Value -2008			$2.14	$3.51	$4.84	$6.13	$7.38	$8.60	$9.78	$10.93	$12.05	$13.13	$14.18	$15.19	$16.18	$17.14	$18.08	$18.98	$19.86	$20.71	$21.54	$22.35	$23.13	$23.89	$24.62	$25.34	$26.03	$26.71	$27.38	$27.99	$28.61	$29.21			
48	7	Net Present Value -2009				$2.62	$3.99	$5.32	$6.61	$7.86	$9.08	$10.26	$11.41	$12.52	$13.60	$14.65	$15.67	$16.66	$17.62	$18.55	$19.46	$20.34	$21.19	$22.02	$22.82	$23.61	$24.36	$25.10	$25.81	$26.51	$27.18	$27.84	$28.47	$29.09				
49	8	Net Present Value -2010					$2.86	$4.23	$5.56	$6.85	$8.11	$9.32	$10.50	$11.65	$12.76	$13.85	$14.90	$15.91	$16.90	$17.86	$18.80	$19.70	$20.58	$21.43	$22.26	$23.07	$23.85	$24.61	$25.34	$26.06	$26.75	$27.42	$28.08	$28.71			
50																																				
51		**Discount Rate (real)**[1]																																		
52		**TERASEN GAS**																																		
53		**Rate of Inflation**	1.90%																																	
54		**TGI**	3.00%																																	
55		**TGVI**	3.00%																																	
56		**BC HYDRO**																																		
57		**Rate of Inflation**	2.00%																																	
58		**BC Hydro**	3.00%																																	
59		**Customer**	3.00%																																	
60		*Footnote 1: Source LR 670531*																																		
61																																				
62				**SHEET LABELS**																																
63	**New Construction**																																			
64		New Construction		**BASEBOARD**																																
65		Efficient Boiler Program		**HEATPUMP**																																

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Measure Data for Efficient Boiler Program

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 9,652			
Total Incentive	$ 5,770		$ 5,770	$ -
Participant	$ 3,882			

Annual Impact Per Measure

Energy Savings per installation	125.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	18%	0.82		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	20	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	2	2	0	2	0	Estimated Participation
Impact						
Gross Energy Savings (GJ)	236	250	0	250	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	193	205	0	205	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$237.85	$237.85	$237.85	
Energy Purchases	$ 48,760	$ 48,760	$ -	$ 48,760	$ -	
Utility Program Costs						
DSM Incentives		$ 11,540	$ -	$ 11,540	$ -	
Administration		$ 1,311	$ -	$ 1,311	$ -	
Subtotal	$ 12,113	$ 12,851	$ -	$ 12,851	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 6,366	$ -	$ 6,366	$ -	
Subtotal	$ 6,001	$ 6,366	$ -	$ 6,366	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.785 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 30,646		$ -	$ 29,543	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 6.3**		**$ -**	**$ 6.3**	**$ -**	Informational (for comparison with supply options)

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NEW

Measure Data for Efficient Commercial Water Heater

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 5,378			
Total Incentive	$ 2,206		$ 2,206	$ -
Participant	$ 3,172			

Annual Impact Per Measure

Energy Savings per installation	89.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	5%	0.95		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact	0.000	kW/a		
Measure Lifetime	12	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	0	1	0	Estimated Participation
Impact						
Gross Energy Savings (GJ)	84	89	0	89	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	80	85	0	85	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$164.10	$164.10	$164.10	
Energy Purchases	$ 13,874	$ 13,874	$ -	$ 13,874	$ -	
Utility Program Costs						
DSM Incentives		$ 2,206	$ -	$ 2,206	$ -	
Administration		$ 383	$ -	$ 383	$ -	
Subtotal	$ 2,440	$ 2,589	$ -	$ 2,589	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 3,013	$ -	$ 3,013	$ -	
Subtotal	$ 2,840	$ 3,013	$ -	$ 3,013	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.194 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 8,594		$ -	$ 8,272	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 6.7**		**$ -**	**$ 6.7**	**$ -**	Informational (for comparison with supply options)

NEW

Measure Data for Efficient Boiler Program

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 34,787			
Total Incentive	$ 12,176		$ 12,176	$ -
Participant	$ 22,611			

Annual Impact Per Measure

Energy Savings per installation	445.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	18%	0.82		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	20	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	8	9	0	9	0	Estimated Participation
Impact						
Gross Energy Savings (GJ)	3,775	4,005	0	4,005	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	3,096	3,284	0	3,284	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$237.85	$237.85	$237.85	
Energy Purchases	$ 781,136	$ 781,136	$ -	$ 781,136	$ -	
Utility Program Costs						
DSM Incentives		$ 109,584	$ -	$ 109,584	$ -	
Administration		$ 5,768	$ -	$ 5,768	$ -	
Subtotal	$ 108,730	$ 115,352	$ -	$ 115,352	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 166,869	$ -	$ 166,869	$ -	
Subtotal	$ 157,290	$ 166,869	$ -	$ 166,869	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.785 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 515,115		$ -	$ 498,915	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 5.8**		**$ -**	**$ 5.8**	**$ -**	Informational (for comparison with supply options)

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NEW

Measure Data for Light Comm. ENERGY STAR® Boiler Program

PER MEASURE		Utility Incentive to the participant	partner incentive
Incremental Cost	$ 17,833		
Total Incentive	$ 2,905	$ 2,905	$ -
Participant	$ 14,928		

Annual Impact Per Measure

Energy Savings per installation	197.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	18%	0.82		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	20	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	9	10	0	10	0	Estimated Participation
Impact						
Gross Energy Savings (GJ)	1,857	1,970	0	1,970	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	1,523	1,615	0	1,615	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$237.85	$237.85	$237.85	
Energy Purchases	$ 384,229	$ 384,229	$ -	$ 384,229	$ -	
Utility Program Costs						
DSM Incentives		$ 29,050	$ -	$ 29,050	$ -	
Administration		$ 3,025	$ -	$ 3,025	$ -	
Subtotal	$ 30,234	$ 32,075	$ -	$ 32,075	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 122,410	$ -	$ 122,410	$ -	
Subtotal	$ 115,383	$ 122,410	$ -	$ 122,410	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.785 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 238,613		$ -	$ 229,744	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 6.4**		**$ -**	**$ 6.4**	**$ -**	Informational (for comparison with supply options)

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NEW

Measure Data for Retrofit Efficient Commercial Water Heater Program

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 6,023			
Total Incentive	$ 1,493		**$ 1,493**	**$ -**
Participant	**$ 4,530**			

Annual Impact Per Measure

Energy Savings per installation	**76.0**	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	**5%**	0.95		Net-to-Gross
Alternate Energy Impact	**0**	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	**12**	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	5	5	**0**	**5**	**0**	Estimated Participation
Impact						
Gross Energy Savings (GJ)	358	380	0	380	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	340	361	0	361	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$164.10	$164.10	$164.10	
Energy Purchases	$ 59,239	$ 59,239	$ -	$ 59,239	$ -	
Utility Program Costs						
DSM Incentives		$ 7,465	$ -	$ 7,465	$ -	
Administration		$ 1,913	**$ -**	**$ 1,913**	**$ -**	
Subtotal	$ 8,840	$ 9,378	$ -	$ 9,378	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	**$ -**	**$ -**	**$ -**	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 21,518	$ -	$ 21,518	$ -	
Subtotal	$ 20,282	$ 21,518	$ -	$ 21,518	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.194 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 30,117		$ -	$ 28,344	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 8.6**		**$ -**	**$ 8.6**	**$ -**	Informational (for comparison with supply options)

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NEW

Measure Data for Retrofit Energy Assessment Program

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 1,200			
Total Incentive	$ 1,200		$ 1,200	$ -
Participant	$ -			

Annual Impact Per Measure

Energy Savings per installation	488.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	35%	0.65		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	1	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	13	14	0	14	0	Estimated Participation
Impact						
Gross Energy Savings (GJ)	6,440	6,832	0	6,832	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	4,186	4,441	0	4,441	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$29.52	$29.52	$29.52	
Energy Purchases	$ 131,114	$ 131,114	$ -	$ 131,114	$ -	
Utility Program Costs						
DSM Incentives		$ 16,800	$ -	$ 16,800	$ -	
Administration		$ 2,088	$ -	$ 2,088	$ -	
Subtotal	$ 17,804	$ 18,888	$ -	$ 18,888	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$0.117 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 113,310		$ -	$ 112,226	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 4.4**		**$ -**	**$ 4.4**	**$ -**	Informational (for comparison with supply options)

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NEW

Measure Data for Fireplace timer

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$	50		
Total Incentive	$	50	$ 50	$ -
Participant	$	-		

Annual Impact Per Measure

Energy Savings per installation	3.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	5	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	28	30	0	30	0	Estimated Participation
Impact						
Gross Energy Savings (GJ)	85	90	0	90	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	85	90	0	90	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$83.59	$83.59	$83.59	
Energy Purchases	$ 7,523	$ 7,523	$ -	$ 7,523	$ -	
Utility Program Costs						
DSM Incentives		$ 1,500	$ -	$ 1,500	$ -	
Administration		$ 434	$ -	$ 434	$ -	
Subtotal	$ 1,823	$ 1,934	$ -	$ 1,934	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$0.550 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 5,700		$ -	$ 5,589	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 4.7**		**$ -**	**$ 4.7**	**$ -**	Informational (for comparison with supply options)

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NEW

Measure Data for Spray Valve Program

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 130			
Total Incentive	$ 130		$ 85	$ 45
Participant	$ -			

Annual Impact Per Measure

Energy Savings per installation	9.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	12%	0.88		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	5	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	52	55	0	55	0	Estimated Participation
Impact						
Gross Energy Savings (GJ)	467	495	0	495	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	411	436	0	436	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$83.59	$83.59	$83.59	
Energy Purchases	$ 36,411	$ 36,411	$ -	$ 36,411	$ -	
Utility Program Costs						
DSM Incentives		$ 4,675	$ -	$ 4,675	$ -	
Administration		$ 604	$ -	$ 604	$ -	
Subtotal	$ 4,976	$ 5,279	$ -	$ 5,279	$ -	
Partner Program Costs						
DSM Incentives		$ 2,475	$ -	$ 2,475	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ 2,333	$ 2,475	$ -	$ 2,475	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$0.550 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 31,435		$ -	$ 28,657	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 2.6**		**$ -**	**$ 2.6**	**$ -**	Informational (for comparison with supply options)

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	PROGRAM															ALTERNATE		NET PRESENT VALUE									BENEFIT/COST							PARAMETERS														
	COSTS ($000)											SAVINGS (GJ)			LIFE	Impact		Levelized Cost	Utility Benefits (Costs)		Participant Benefits (Costs)			Program Net Savings				Participant						UTILITY				PARTICIPANT											
	Utility			Partners																																													
	Incentives	Administration	Total	Incentives	Administration	Total	Participant	Total	% Utility	% Partner	% Participant	Gross	Net-to-Gross	Net	Years	Energy	Capacity		Program	Alternate	Program	Carbon Tax	Alternate	Natural Gas	Alternate Energy	Alternate Capacity	Natural Gas	Total Costs	Total Benefits	Benefit/Cost	Natural Gas	Total Resource	TRC Net Benefits	Natural Gas Utility Discount Rate	Natural Gas Supply	Alternate Discount Rate	Alternate Supply	Discount Rate	Natural Gas NPV	Carbon Tax NPV	Alternate Energy NPV	Alternate Capacity NPV	Natural Gas Tariff	Energy Tariff	Capacity Tariff
																			($/GJ)	($'000s)	($'000s)	($'000s)	($'000s)	($'000s)	(GJ)	(MWh)	(kW)	Utility	($'000s)	($'000s)		Rate Impact		($'000s)		$/GJ		$/kWh		$/GJ	$/kWh	$/kW/a	$/kW/a	$/GJ	$/kWh	$/kW/a
Label	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR	AS	AT
Source Sheet or Calculation	Program	Program	B+C	Program	Program	E+F	Program	D+G+H	D/I	G/I	H/I	Program	Program	M x N	Program	Program	Program	D/Y	O x AJ	Q x N x AL	M x N x AN	M x N x AO	N x (Q x AP + R x AQ)	PV(AI,P,-Q)	PV(AK,P,-Q*%)	PV(AA,P,-R)	T/D	H=D, (V+W)=E	H=D, (V+W)=D, X	AD/AC	T/(V+D)	(T+U)/I	(T+U)/-I	Input	Program	Input	Input	Input	PV(AM,P,-InputD25)	Input	PV(AM,P,-InputD28)	PV(AM,P,-InputD29)	Input	Input	Input
2010																																														
Commercial Energy Efficiency Programs																																													
New Construction																																													
Efficient Boiler Program	12	1	13	0	0	0	6	19	67%	0%	33%	250	82%	205	20	0	-	6	23	N/A	40	3	N/A	2,190	0	-	1.8	6	43	6.8	0.4	1.2	4	6.89%	114.34	6%	1.38	6.0%	194.30	15.67	0.95	0.00	9.999	0.083	-
Efficient Commercial Water Heater	2	0	3	0	0	0	3	6	46%	0%	54%	89	95%	85	12	0	-	4	7	N/A	12	1	N/A	676	0	-	2.7	3	13	4.3	0.5	1.2	1	6.89%	82.49	6%	1.01	6.0%	142.02	11.90	0.69	0.00	9.999	0.083	1
Retrofit																																													
Efficient Boiler Program	110	6	115	0	0	0	167	282	41%	0%	59%	4,005	82%	3,284	20	0	-	3	376	N/A	638	51	N/A	35,091	0	-	3.3	167	690	4.1	0.5	1.3	93	6.89%	114.34	6%	1.38	6.0%	194.30	15.67	0.95	0.00	9.999	0.083	-
Light Comm. ENERGY STAR® Boiler Program	29	3	32	0	0	0	122	154	21%	0%	79%	1,970	82%	1,615	20	0	-	2	185	N/A	314	25	N/A	17,261	0	-	5.8	122	339	2.8	0.5	1.2	30	6.89%	114.34	6%	1.38	6.0%	194.30	15.67	0.95	0.00	9.999	0.083	-
Retrofit Efficient Commercial Water Heater Program	7	2	9	0	0	0	22	31	30%	0%	70%	380	95%	361	12	0	-	3	30	N/A	51	4	N/A	2,884	0	-	3.2	22	56	2.6	0.5	1.0	(1)	6.89%	82.49	6%	1.01	6.0%	142.02	11.90	0.69	0.00	9.999	0.083	-
Retrofit Energy Assessment Program	17	2	19	0	0	0	0	19	100%	0%	0%	6,832	65%	4,441	1	0	-	5	62	N/A	71	9	N/A	4,155	0	-	3.3	-	80	N/A	0.7	3.3	43	6.89%	14.02	6%	0.11	6.0%	15.98	2.02	0.08	0.00	9.999	0.083	-
Fireplace timer	2	0	2	0	0	0	0	2	100%	0%	0%	90	100%	90	5	0	-	5	4	N/A	6	1	N/A	370	0	-	2.0	-	7	N/A	0.5	2.0	2	6.89%	42.62	6%	0.51	6.0%	71.36	6.47	0.35	0.00	9.999	0.083	-
Spray Valve Program	5	1	5	2	0	2	0	8	68%	32%	0%	495	88%	436	5	0	-	3	19	N/A	31	3	N/A	1,791	0	-	3.5	-	34	N/A	0.5	2.4	11	6.89%	42.62	6%	0.51	6.0%	71.36	6.47	0.35	0.00	9.999	0.083	-
PSECA	208	9	216	0	0	0	526	742	29%	0%	71%	5,497		5,497		0	-	4	751	N/A	1,066	86	N/A	58,745	0	-	3.5	526	1,153	2.2	0.6	1.0	9	6.89%	114.34	6%	0.00	6.0%	0.00	0.00	0.00	0.00	9.999	0.083	-
Total Commercial	391	24	415	2	-	2	846	1,263	33%	0%	67%	19,608		16,013		0	-	3	1,456	0	2,230	184	0	123,163	0	0	3.5	846	2,414	2.9	0.6	1.2	193												

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
1	UTILITY		FORTIS BC														
2																	
3																	
4			Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
5			Units														
6		NATURAL GAS															
7		Incremental Cost of Gas (nominal)	$ Per GJ	$5.50	$6.17	$6.81	$7.35	$7.87	$8.26	$8.56	$8.78	$8.99	$9.19	$9.40	$9.60	$9.81	$10.03
8	1		Year	0	1	2	3	4	5	6	7	8	9	10	11	12	13
9		carbon tax	$ per GJ	0.75	1.00	1.25	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
10		Distribution adder	$ per GJ	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
11		Total incremental cost of gas including carbon		6.40	7.31	8.20	9.00	9.51	9.91	10.21	10.42	10.63	10.84	11.04	11.25	11.46	11.67
12	2	GDP Deflator		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
13	3	Incremental Cost of Gas (Real)		$6.40	$7.31	$8.20	$9.00	$9.51	$9.91	$10.21	$10.42	$10.63	$10.84	$11.04	$11.25	$11.46	$11.67
14	4	Net Present Value -2010			$12.39	$19.10	$26.00	$32.81	$39.46	$45.86	$51.98	$57.82	$63.38	$68.69	$73.75	$78.56	$83.16
15	5	Net Present Value -2011				$14.02	$21.39	$28.68	$35.78	$42.62	$49.16	$55.40	$61.35	$67.02	$72.43	$77.58	$82.49
16	6	Net Present Value -2012					$15.55	$23.34	$30.93	$38.25	$45.24	$51.90	$58.27	$64.33	$70.11	$75.61	$80.86
17																	
18																	
19		ELECTRICITY															
20		Incremental Cost of Elec	$ Per kWh	$0.12													
21		Incremental Cost of E Capacity	$ Per kW/a	$170.00													
22																	
23																	
24																	
25	RETAIL																
26				Rate	Customers		789,928	Total Customers in BC		80,000	Total Residential and Commercial Customers on VI						
27		Residential Retail			000's												
28		TGI	$ Per MJ	$0.0100	640		712,304	Total Residential Customers in BC									
29		TGVI	$ Per MJ	$0.0143	72												
30		Electricity	$ Per MJ	$0.0230													
31		Electricity	$ per kWh	$0.0827	1,511		1,511,435	Total BCH Residential Customers in BC				89%					
32		Electricity	$ per kW per year														
33		Commercial Retail															
34		TGI	$ Per MJ	$0.0094	78		77,624	Total Commercial Customers in BC									
35		TGVI	$ Per MJ	$0.0169	8												
36		Electricity	$ Per MJ	$0.0214													
37		Electricity	$ per kWh	$0.0769	190		189,764	Total Light Industrial and Commercial Customers in BC									
38		Electricity	$ per kW per year	$52.0000	15												
39																	

	B	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ
4		2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	
7	Incremental Cost of Gas (nominal)	$10.25	$10.47	$10.70	$10.93	$11.17	$11.42	$11.67	$11.92	$12.19	$12.45	$12.73	$13.01	$13.29	$13.58	$13.88	$14.19	$14.50	$14.82	$15.14
8		14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
9	carbon tax	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	
10	Distribution adder	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15		
11	Total incremental cost of gas including carbon	11.89	12.12	12.34	12.58	12.82	13.06	13.31	13.57	13.83	14.10	14.37	14.65	14.94	15.23	15.53	15.83	16.14	16.31	
12	GDP Deflator	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
13	Incremental Cost of Gas (Real)	$11.89	$12.12	$12.34	$12.58	$12.82	$13.06	$13.31	$13.57	$13.83	$14.10	$14.37	$14.65	$14.94	$15.23	$15.53	$15.83	$16.14	$16.31	
14	Net Present Value -2010	$87.53	$91.71	$95.68	$99.47	$103.09	$106.53	$109.82	$112.95	$115.94	$118.79	$121.51	$124.10	$126.57	$128.93	$131.18	$133.32	$135.37	$137.30	
15	Net Present Value -2011	$87.17	$91.63	$95.88	$99.93	$103.79	$107.48	$110.99	$114.34	$117.53	$120.58	$123.48	$126.25	$128.90	$131.42	$133.82	$136.11	$138.30	$140.37	
16	Net Present Value -2012	$85.86	$90.63	$95.17	$99.50	$103.63	$107.57	$111.32	$114.90	$118.32	$121.57	$124.68	$127.64	$130.46	$133.16	$135.72	$138.18	$140.51	$142.72	

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
40	TAX																
41			Year	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
42	1		Year		0	1	2	3	4	5	6	7	8	9	10	11	12
43	2	Carbon	$ Per tonne		$20.00	$25.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00
44	3	Carbon	$ Per GJ		$0.9976	$1.2470	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964
45	4	GDP Deflator			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
46	5	Carbon (Real)			$1.00	$1.25	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50
47	6	Net Present Value -2008				$2.02	$3.25	$4.40	$5.47	$6.47	$7.41	$8.29	$9.11	$9.88	$10.60	$11.27	$11.90
48	7	Net Present Value -2009					$2.48	$3.70	$4.85	$5.92	$6.92	$7.86	$8.74	$9.56	$10.33	$11.05	$11.72
49	8	Net Present Value -2010						$2.71	$3.93	$5.08	$6.15	$7.16	$8.10	$8.97	$9.80	$10.56	$11.28

	B	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI
41		2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
42		13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
43	Carbon	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00
44	Carbon	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964
45	GDP Deflator	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
46	Carbon (Real)	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50
47	Net Present Value -2008	$12.49	$13.04	$13.55	$14.04	$14.49	$14.91	$15.30	$15.67	$16.02	$16.34	$16.64	$16.93	$17.19	$17.44	$17.67	$17.89	$18.09	$18.28
48	Net Present Value -2009	$12.35	$12.94	$13.49	$14.01	$14.49	$14.94	$15.36	$15.76	$16.13	$16.47	$16.79	$17.10	$17.38	$17.64	$17.89	$18.12	$18.34	$18.54
49	Net Present Value -2010	$11.96	$12.58	$13.17	$13.72	$14.24	$14.72	$15.17	$15.59	$15.99	$16.36	$16.70	$17.03	$17.33	$17.61	$17.88	$18.12	$18.36	$18.57

	A	B	C	D
50				
51		Discount Rate (real)[1]		
52		TERASEN GAS		
53		Rate of Inflation	1.90%	
54		TGI	7.15%	
55		TGVI	6.89%	
56		BC HYDRO		
57		Rate of Inflation	2.00%	
58		BC Hydro	6.00%	
59		Customer	6.00%	
60		Footnote 1: Source LR 070531		
61				
62				SHEET LABELS
63	New Construction			
64		New Construction		BASEBOARD
65		Efficient Boiler Program		HEATPUMP

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Measure Data for Efficient Boiler Program

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 9,652			
Total Incentive	$ 5,770		$ 5,770	$ -
Participant	$ 3,882			

Annual Impact Per Measure

Energy Savings per installation	125.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	18%	0.82		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	20	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	2	2	0	2	0	Estimated Participation
Impact						
Gross Energy Savings (GJ)	218	250	0	250	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	179	205	0	205	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$109.82	$114.34	$118.32	
Energy Purchases	$ 23,440	$ 23,440	$ -	$ 23,440	$ -	
Utility Program Costs						
DSM Incentives		$ 11,540	$ -	$ 11,540	$ -	
Administration		$ 1,311	$ -	$ 1,311	$ -	
Subtotal	$ 11,193	$ 12,851	$ -	$ 12,851	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 6,366	$ -	$ 6,366	$ -	
Subtotal	$ 5,545	$ 6,366	$ -	$ 6,366	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.376 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 6,701		$ -	$ 4,222	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 9.0**		**$ -**	**$ 9.0**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Efficient Commercial Water Heater

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 5,378			
Total Incentive	$ 2,206		$ 2,206	$ -
Participant	$ 3,172			

Annual Impact Per Measure

Energy Savings per installation	89.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	5%	0.95		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact	0.000	kW/a		
Measure Lifetime	12	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	0	1	0	Estimated Participation
Impact						
Gross Energy Savings (GJ)	78	89	0	89	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	74	85	0	85	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$78.56	$82.49	$85.86	
Energy Purchases	$ 6,974	$ 6,974	$ -	$ 6,974	$ -	
Utility Program Costs						
DSM Incentives		$ 2,206	$ -	$ 2,206	$ -	
Administration		$ 383	$ -	$ 383	$ -	
Subtotal	$ 2,255	$ 2,589	$ -	$ 2,589	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 3,013	$ -	$ 3,013	$ -	
Subtotal	$ 2,625	$ 3,013	$ -	$ 3,013	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.006 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 2,095		$ -	$ 1,372	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 8.4**		**$ -**	**$ 8.4**	**$ -**	Informational (for comparison with supply options)

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NEW

Measure Data for Efficient Boiler Program

PER MEASURE		Utility Incentive to the participant	partner incentive
Incremental Cost	$ 34,787		
Total Incentive	$ 12,176	$ 12,176	$ -
Participant	$ 22,611		

Annual Impact Per Measure

Energy Savings per installation	445.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	18%	0.82		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	20	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	8	9	0	9	0	Estimated Participation
Impact						
Gross Energy Savings (GJ)	3,488	4,005	0	4,005	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	2,860	3,284	0	3,284	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$109.82	$114.34	$118.32	
Energy Purchases	$ 375,503	$ 375,503	$ -	$ 375,503	$ -	
Utility Program Costs						
DSM Incentives		$ 109,584	$ -	$ 109,584	$ -	
Administration		$ 5,768	$ -	$ 5,768	$ -	
Subtotal	$ 100,471	$ 115,352	$ -	$ 115,352	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 166,869	$ -	$ 166,869	$ -	
Subtotal	$ 145,342	$ 166,869	$ -	$ 166,869	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.376 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 129,689		$ -	$ 93,281	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 8.2**		**$ -**	**$ 8.2**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Light Comm. ENERGY STAR® Boiler Program

PER MEASURE		Utility Incentive to the participant	partner incentive
Incremental Cost	$ 17,833		
Total Incentive	$ 2,905	$ 2,905	$ -
Participant	$ 14,928		

Annual Impact Per Measure

Energy Savings per installation	197.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	18%	0.82		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	20	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	9	10	0	10	0	Estimated Participation
Impact						
Gross Energy Savings (GJ)	1,716	1,970	0	1,970	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	1,407	1,615	0	1,615	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$109.82	$114.34	$118.32	
Energy Purchases	$ 184,704	$ 184,704	$ -	$ 184,704	$ -	
Utility Program Costs						
DSM Incentives		$ 29,050	$ -	$ 29,050	$ -	
Administration		$ 3,025	$ -	$ 3,025	$ -	
Subtotal	$ 27,937	$ 32,075	$ -	$ 32,075	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 122,410	$ -	$ 122,410	$ -	
Subtotal	$ 106,618	$ 122,410	$ -	$ 122,410	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.376 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 50,149		$ -	$ 30,220	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 9.1**		**$ -**	**$ 9.1**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Retrofit Efficient Commercial Water Heater Program

PER MEASURE		Utility Incentive to the participant	partner incentive
Incremental Cost	$ 6,023		
Total Incentive	$ 1,493	$ 1,493	$ -
Participant	$ 4,530		

Annual Impact Per Measure

Energy Savings per installation	76.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	5%	0.95		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	12	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	4	5	0	5	0	Estimated Participation
Impact						
Gross Energy Savings (GJ)	331	380	0	380	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	314	361	0	361	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$78.56	$82.49	$85.86	
Energy Purchases	$ 29,779	$ 29,779	$ -	$ 29,779	$ -	
Utility Program Costs						
DSM Incentives		$ 7,465	$ -	$ 7,465	$ -	
Administration		$ 1,913	$ -	$ 1,913	$ -	
Subtotal	$ 8,168	$ 9,378	$ -	$ 9,378	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 21,518	$ -	$ 21,518	$ -	
Subtotal	$ 18,742	$ 21,518	$ -	$ 21,518	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.006 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 2,869		$ -	$ (1,117)	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 10.9**		**$ -**	**$ 10.9**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Retrofit Energy Assessment Program

PER MEASURE		Utility Incentive to the participant	partner incentive
Incremental Cost	$ 1,200		
Total Incentive	$ 1,200	$ 1,200	$ -
Participant	$ -		

Annual Impact Per Measure

Energy Savings per installation	488.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	35%	0.65		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	1	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	12	14	0	14	0	Estimated Participation
Impact						
Gross Energy Savings (GJ)	5,951	6,832	0	6,832	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	3,868	4,441	0	4,441	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$12.39	$14.02	$15.55	
Energy Purchases	$ 62,269	$ 62,269	$ -	$ 62,269	$ -	
Utility Program Costs						
DSM Incentives		$ 16,800	$ -	$ 16,800	$ -	
Administration		$ 2,088	$ -	$ 2,088	$ -	
Subtotal	$ 16,451	$ 18,888	$ -	$ 18,888	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$0.113 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 45,818		$ -	$ 43,381	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 4.6**		**$ -**	**$ 4.6**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Fireplace timer

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$	50		
Total Incentive	$	50	$ 50	$ -
Participant	$	-		

Annual Impact Per Measure

Energy Savings per installation	3.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	5	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	26	30	0	30	0	Estimated Participation
Impact						
Gross Energy Savings (GJ)	78	90	0	90	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	78	90	0	90	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$39.46	$42.62	$45.24	
Energy Purchases	$ 3,836	$ 3,836	$ -	$ 3,836	$ -	
Utility Program Costs						
DSM Incentives		$ 1,500	$ -	$ 1,500	$ -	
Administration		$ 434	$ -	$ 434	$ -	
Subtotal	$ 1,685	$ 1,934	$ -	$ 1,934	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$0.505 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 2,152		$ -	$ 1,902	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 5.3**		**$ -**	**$ 5.3**	**$ -**	Informational (for comparison with supply options)

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only enter in boxes marked in blue

NEW

Measure Data for Spray Valve Program

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$	130		
Total Incentive	$	130	$ 85	$ 45
Participant	$	-		

Annual Impact Per Measure

Energy Savings per installation	9.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	12%	0.88		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	5	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	48	55	0	55	0	Estimated Participation
Impact						
Gross Energy Savings (GJ)	431	495	0	495	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	379	436	0	436	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$39.46	$42.62	$45.24	
Energy Purchases	$ 18,567	$ 18,567	$ -	$ 18,567	$ -	
Utility Program Costs						
DSM Incentives		$ 4,675	$ -	$ 4,675	$ -	
Administration		$ 604	$ -	$ 604	$ -	
Subtotal	$ 4,598	$ 5,279	$ -	$ 5,279	$ -	
Partner Program Costs						
DSM Incentives		$ 2,475	$ -	$ 2,475	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ 2,156	$ 2,475	$ -	$ 2,475	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$0.505 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 13,969		$ -	$ 10,813	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 3.0**		**$ -**	**$ 3.0**	**$ -**	Informational (for comparison with supply options)

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	PROGRAM															ALTERNATE		NET PRESENT VALUE								BENEFIT/COST						PARAMETERS											
	COSTS ($000)											SAVINGS (GJ)			LIFE	Impact		Levelized Cost	Utility Benefits (Costs)		Participant Benefits (Costs)			Program Net Savings			Natural Gas	Participant						SCT Net Benefits	UTILITY				PARTICIPANT								
	Utility			Partners																																								
	Incentives	Administration	Total	Incentives	Administration	Total	Participant	Total	% Utility	% Partner	% Participant	Gross	Net-to-Gross	Net	Years	Energy	Capacity	($/GJ)	Program	Alternate	Program	Carbon Tax	Alternate	Natural Gas	Alternate Energy	Alternate Capacity	Natural Gas	Total Costs	Total Benefits	Benefit/Cost	Natural Gas	SCT		Natural Gas Utility Discount	Natural Gas Supply	Alternate Discount Rate	Alternate Supply	Discount Rate	Natural Gas NPV	Carbon Tax NPV	Alternate Energy NPV	Alternate Capacity NPV	Natural Gas Tariff	Energy Tariff	Capacity Tariff
																MWh	kW		($'000s)	($'000s)	($'000s)	($'000s)	($'000s)	(GJ)	(MWh)	(kW)		($'000s)	($'000s)		Rate Impact		($'000s)		$/GJ		$/kWh		$/GJ	$/GJ	$/kWh	$/kW/a	$/GJ	$/kWh	$/kW/a
Label	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR	AS	AT
Source Sheet or Calculation	Program	Program	B+C	Program	Program	E+F	Program	D+G+H	D/I	G/I	H/I	Program	Program	M+N	Program	Program	Program	D/Y	O+AJ	Q x N x AL	M x N x AN	M x N x AO	N x (QxAP + RxAQ)	PV(AJ,P,-O)	PV(AK,P,-Q*N)	PV(AK,P,-R)	T/O	H=O, (V=W)=0	H=O, (V=W)=O, X	AD/AC	T/(V=O)	(T+U)/I	(T+U)-I	Input	Program	Input	Input	Input	PV(AM,P,-Input!D23)	Input	PV(AN,P,-Input!D23)	PV(AM,P,-Input!D29)	Input	Input	Input
2010																																												
Commercial Energy Efficiency Programs																																											
High Efficiency Boilers	53	2	55	0	0	0	103	158	35%	0%	65%	1,510	100%	1,510	20	0	-	2	483	N/A	381	34	N/A	22,465	0	-	8.8	103	414	4.0	1.1	3.1	325	3.00%	245.91	3%	1.79	3.0%	252.02	22.35	1.23	0.00	9.999	0.083	-
Central Air to Water Heat Pump	135	7	141	0	0	0	354	495	29%	0%	71%	3,812	100%	3,812	20	0	-	2	1,219	N/A	961	85	N/A	56,713	0	-	8.6	354	1,046	3.0	1.1	2.5	724	3.00%	245.91	3%	1.79	3.0%	252.02	22.35	1.23	0.00	9.999	0.083	-
High Efficient Boilers	18	0	18	0	0	0	59	77	24%	0%	76%	144	100%	144	20	0	-	9	46	N/A	36	3	N/A	2,142	0	-	2.5	59	40	0.7	0.8	0.6	(31)	3.00%	245.91	3%	1.79	3.0%	252.02	22.35	1.23	0.00	9.999	0.083	-
High Efficiency Water Heaters	2	0	2	0	0	0	11	13	14%	0%	86%	31	100%	31	12	0	-	6	7	N/A	5	0	N/A	309	0	-	4.0	11	6	0.5	1.0	0.6	(6)	3.00%	174.30	3%	1.19	3.0%	168.62	15.19	0.82	0.00	9.999	0.083	-
Total Commercial	208	9	216	-	-	-	526	742	29%	0%	71%	5,497		5,497		0	-	3	1,754	0	1,383	123	0	81,629	0	0	8.1	526	1,505	2.9	1.1	2.4	1,012												

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ
1	**UTILITY**		**FORTIS BC**																																	
2																																				
3																																				
4			**Year**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	
5			Units																																	
6		**NATURAL GAS**																																		
7		Incremental Cost of Gas (nominal)	$ Per GJ	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.43
8	1		*Year*	*0*	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*	*16*	*17*	*18*	*19*	*20*	*21*	*22*	*23*	*24*	*25*	*26*	*27*	*28*	*29*	*30*	*31*	
9		carbon tax	$ per GJ	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	
10		Distribution adder	$ per GJ	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	
11		Total incremental cost of gas including carbon		*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.28*	
12	2	GDP Deflator		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
13	3	Incremental Cost of Gas (Real)		$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.28	
14	4	Net Present Value -2010			$29.52	$43.65	$57.35	$70.66	$83.59	$96.13	$108.31	$120.14	$131.62	$142.77	$153.59	$164.10	$174.30	$184.20	$193.82	$203.15	$212.22	$221.02	$229.56	$237.85	$245.91	$253.72	$261.32	$268.68	$275.84	$282.79	$289.53	$296.08	$302.43	$308.61	$314.64		
15	5	Net Present Value -2011			$29.52	$43.65	$57.35	$70.66	$83.59	$96.13	$108.31	$120.14	$131.62	$142.77	$153.59	$164.10	$174.30	$184.20	$193.82	$203.15	$212.22	$221.02	$229.56	$237.85	$245.91	$253.72	$261.32	$268.68	$275.84	$282.79	$289.53	$296.08	$302.43	$308.56			
16	6	Net Present Value -2012				$29.52	$43.65	$57.35	$70.66	$83.59	$96.13	$108.31	$120.14	$131.62	$142.77	$153.59	$164.10	$174.30	$184.20	$193.82	$203.15	$212.22	$221.02	$229.56	$237.85	$245.91	$253.72	$261.32	$268.68	$275.84	$282.79	$289.53	$296.08	$302.37				
17																																				
18																																				
19		**ELECTRICITY**																																		
20		Incremental Cost of Elec	$ Per kWh	$0.10																																
21		Incremental Cost of E Capacity	$ Per kW/a	$170.00																																
22																																				
23																																				
24																																				
25	**RETAIL**																																			
26				Rate	Customers																															
27		Residential Retail			1,000																															
28		**TGI**	$ Per MJ	$0.0100	1,000																															
29		**TGVI**	$ Per MJ	$0.0143	1,000																															
30		**Electricity**	$ Per MJ	$0.0230																																
31		**Electricity**	$ per kWh	$0.0829	1,000																															
32		**Electricity**	$ per kW per year		1,000																															
33		Commercial Retail																																		
34		**TGI**	$ Per MJ	$0.0094	50																															
35		**TGVI**	$ Per MJ	$0.0160	50																															
36		**Electricity**	$ Per MJ	$0.0214																																
37		**Electricity**	$ per kWh	$0.0749	1,000																															
38		**Electricity**	$ per kW per year	$52.0000	1,000																															
39																																				
40	**TAX**																																			
41			**Year**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**		
42	1		*Year*		*0*	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*	*16*	*17*	*18*	*19*	*20*	*21*	*22*	*23*	*24*	*25*	*26*	*27*	*28*	*29*	*30*	
43	2	Carbon	$ Per tonne		$20.00	$25.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	
44	3	Carbon	$ Per GJ		$0.9576	$1.2470	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	
45	4	GDP Deflator			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
46	5	Carbon (Real)			$1.00	$1.25	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	
47	6	Net Present Value -2008			$2.14	$3.51	$4.84	$6.13	$7.38	$8.60	$9.78	$10.93	$12.05	$13.13	$14.18	$15.19	$16.18	$17.14	$18.08	$18.98	$19.86	$20.71	$21.54	$22.35	$23.13	$23.89	$24.62	$25.34	$26.03	$26.71	$27.38	$27.99	$28.61	$29.21			
48	7	Net Present Value -2009				$2.62	$3.99	$5.32	$6.61	$7.86	$9.08	$10.26	$11.41	$12.52	$13.60	$14.65	$15.67	$16.66	$17.62	$18.55	$19.46	$20.34	$21.19	$22.02	$22.82	$23.61	$24.36	$25.10	$25.81	$26.51	$27.18	$27.84	$28.47	$29.09				
49	8	Net Present Value -2010					$2.86	$4.23	$5.56	$6.85	$8.11	$9.32	$10.50	$11.65	$12.76	$13.85	$14.90	$15.91	$16.90	$17.86	$18.80	$19.70	$20.58	$21.43	$22.26	$23.07	$23.85	$24.61	$25.34	$26.06	$26.75	$27.42	$28.08	$28.71			
50																																				
51		**Discount Rate (real)**[1]																																		
52		**TERASEN GAS**																																		
53		**Rate of Inflation**	1.90%																																	
54		**TGI**	3.00%																																	
55		**TGVI**	3.00%																																	
56		**BC HYDRO**																																		
57		**Rate of Inflation**	2.00%																																	
58		**BC Hydro**	3.00%																																	
59		**Customer**	3.00%																																	
60		*Footnote 1: Source LR 670531*																																		
61																																				
62				**SHEET LABELS**																																
63	**New Construction**																																			
64		#REF!		**BASEBOARD**																																
65		#REF!		**HEATPUMP**																																

FortisBC
Commercial
RETROFIT

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Measure Data for High Efficiency Boilers

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 156,000			
Total Incentive	$ 53,350		$ 53,350	$ -
Participant	$ 102,650			

Annual Impact Per Measure

Energy Savings per installation	1510.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	20	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	0	1	0	Estimated Participation
Impact						
Gross Energy Savings (GJ)	1,310	1,510	0	1,510	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	1,310	1,510	0	1,510	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$237.85	$245.91	$253.72	
Energy Purchases	$ 371,319	$ 371,319	$ -	$ 371,319	$ -	
Utility Program Costs						
DSM Incentives		$ 53,350	$ -	$ 53,350	$ -	
Administration		$ 1,500	$ -	$ 1,500	$ -	
Subtotal	$ 47,570	$ 54,850	$ -	$ 54,850	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 102,650	$ -	$ 102,650	$ -	
Subtotal	$ 89,025	$ 102,650	$ -	$ 102,650	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.376 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 234,724		$ -	$ 213,819	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 10.1**		**$ -**	**$ 10.1**	**$ -**	Informational (for comparison with supply options)

Max Utility Contribution to Incr. cost	Incremental Cost Max incentive
100.00%	$ 156,000.00
PV of GJ saved	**GJ Saved Incentive**
10,669.63	$ 53,348.17
Total Incentive	**$ 53,348.17**

FortisBC
Commercial
RETROFIT

only enter in boxes marked in blue

Measure Data for Central Air to Water Heat Pump

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 488,500			
Total Incentive	$ 134,680		$ 134,680	$ -
Participant	$ 353,820			

Annual Impact Per Measure

Energy Savings per installation	3812.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	20	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	0	1	0	Estimated Participation
Impact						
Gross Energy Savings (GJ)	3,306	3,812	0	3,812	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	3,306	3,812	0	3,812	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$237.85	$245.91	$253.72	
Energy Purchases	$ 937,396	$ 937,396	$ -	$ 937,396	$ -	
Utility Program Costs						
DSM Incentives		$ 134,680	$ -	$ 134,680	$ -	
Administration		$ 6,500	$ -	$ 6,500	$ -	
Subtotal	$ 122,441	$ 141,180	$ -	$ 141,180	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 353,820	$ -	$ 353,820	$ -	
Subtotal	$ 306,857	$ 353,820	$ -	$ 353,820	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.376 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 508,099		$ -	$ 442,396	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 12.6**		**$ -**	**$ 12.6**	**$ -**	Informational (for comparison with supply options)

Max Utility Contribution to Incr. cost	Incremental Cost Max incentive
100.00%	$ 488,500.00
PV of GJ saved	**GJ Saved Incentive**
26,935.53	$ 134,677.64
Total Incentive	**$ 134,677.64**

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Measure Data for High Efficient Boilers

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$	76,800		
Total Incentive	$	18,200	$ 18,200	$ -
Participant	$	58,600		

Annual Impact Per Measure

Energy Savings per installation	144.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	20	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	0	1	0	Estimated Participation
Impact						
Gross Energy Savings (GJ)	125	144	0	144	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	125	144	0	144	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$237.85	$245.91	$245.91	
Energy Purchases	$ 35,411	$ 35,411	$ -	$ 35,411	$ -	
Utility Program Costs						
DSM Incentives		$ 18,200	$ -	$ 18,200	$ -	
Administration		$ 250	$ -	$ 250	$ -	
Subtotal	$ 16,001	$ 18,450	$ -	$ 18,450	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 58,600	$ -	$ 58,600	$ -	
Subtotal	$ 50,822	$ 58,600	$ -	$ 58,600	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.376 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ (31,412)		$ -	$ (41,639)	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 52.0**		**$ -**	**$ 52.0**	**$ -**	Informational (for comparison with supply options)

Max Utility Contribution to Incr. cost	Incremental Cost Max incentive
100.00%	$ 76,800.00
PV of GJ saved	**GJ Saved Incentive**
1,017.50	$ 5,087.51
Total Incentive	**$ -**

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Measure Data for High Efficiency Water Heaters

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$	12,462		
Total Incentive	$	1,500	$ 1,500	$ -
Participant	$	10,962		

Annual Impact Per Measure

Energy Savings per installation	31.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	12	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	0	1	0	Estimated Participation
Impact						
Gross Energy Savings (GJ)	27	31	0	31	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	27	31	0	31	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$164.10	$174.30	$184.20	
Energy Purchases	$ 5,403	$ 5,403	$ -	$ 5,403	$ -	
Utility Program Costs						
DSM Incentives		$ 1,500	$ -	$ 1,500	$ -	
Administration		$ 250	$ -	$ 250	$ -	
Subtotal	$ 1,518	$ 1,750	$ -	$ 1,750	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 10,962	$ -	$ 10,962	$ -	
Subtotal	$ 9,507	$ 10,962	$ -	$ 10,962	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.006 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ (5,621)		$ -	$ (7,309)	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 52.7**		**$ -**	**$ 52.7**	**$ -**	Informational (for comparison with supply options)

Max Utility Contribution to Incr. cost	Incremental Cost Max incentive
100.00%	$ 12,462.00
PV of GJ saved	**GJ Saved Incentive**
148.36	$ 741.79
Total Incenti	**$ -**

FORTIS BC

	PROGRAM														ALTERNATE		NET PRESENT VALUE								BENEFIT/COST						PARAMETERS													
	COSTS ($000)											SAVINGS (GJ)			LIFE	Impact		Levelized Cost	Utility Benefits (Costs)		Participant Benefits (Costs)			Program Net Savings			Natural Gas	Participant			Natural Gas		TRC Net Benefits	UTILITY				PARTICIPANT								
	Utility			Partners																																									
	Incentives	Administration	Total	Incentives	Administration	Total	Participant	Total	% Utility	% Partner	% Participant	Gross	Net-to-Gross	Net	Years	Energy	Capacity	($/GJ)	Program	Alternate	Program	Carbon Tax	Alternate	Natural Gas	Alternate Energy	Alternate Capacity	Natural Gas	Total Costs	Total Benefits	Benefit/Cost	Natural Gas	Total Resource	($'000s)	Natural Gas Utility Discount	Natural Gas Supply	Alternate Discount Rate	Alternate Supply	Discount Rate	Natural Gas NPV	Carbon Tax NPV	Alternate Energy NPV	Alternate Capacity NPV	Natural Gas Tariff	Energy Tariff	Capacity Tariff
																MWh	kW		($'000s)	($'000s)	($'000s)	($'000s)	($'000s)	(GJ)	(MWh)	(kW)	Utility	($'000s)	($'000s)		Rate Impact			$/GJ		$/kWh		$/GJ	$/GJ	$/kWh	$/kW/a	$/GJ	$/kWh	$/kW/a
Label	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR	AS	AT
Source Sheet or Calculation	Program	Program	B+C	Program	Program	E+F	Program	D+G+H	D/I	G/I	H/I	Program	Program	MxN	Program	Program	Program	D/Y	OxAJ	Q x N x AL	M x N x AN	M x N x AO	N x (QxAP + RxAQ)	PV(AJ,P,-O)	PV(AK,P,-Q*%)	PV(AK,P,-R)	T/D	H=0, (V+W)=0	H=Q, (V+W)=Q, X	AD/AC	T/(V+D)	(T+U)/I	(T+U)-I	Input	Program	Input	Input	Input	PV(AM,P,-Input!D28)	Input	PV(AM,P,-Input!D29)	Input	Input	Input
2010																																												
Commercial Energy Efficiency Programs																																											
High Efficiency Boilers	53	2	55	0	0	0	103	158	35%	0%	65%	1,510	100%	1,510	20	0	-	3	207	N/A	293	24	N/A	16,160	0	-	3.8	103	317	3.1	0.6	1.3	49	6.87%	136.83	6%	1.38	6.0%	194.30	15.70	0.95	0.00	9.999	0.083	-
Central Air to Water Heat Pump	135	7	141	0	0	0	354	495	29%	0%	71%	3,812	100%	3,812	20	0	-	3	522	N/A	741	60	N/A	40,796	0	-	3.7	354	801	2.3	0.6	1.1	27	6.87%	136.83	6%	1.38	6.0%	194.30	15.70	0.95	0.00	9.999	0.083	-
High Efficient Boilers	18	0	18	0	0	0	59	77	24%	0%	76%	144	100%	144	20	0	-	12	20	N/A	28	2	N/A	1,541	0	-	1.1	59	30	0.5	0.4	0.3	(57)	6.87%	136.83	6%	1.38	6.0%	194.30	15.70	0.95	0.00	9.999	0.083	-
High Efficiency Water Heaters	2	0	2	0	0	0	11	13	14%	0%	86%	31	100%	31	12	0	-	7	3	N/A	4	0	N/A	248	0	-	1.8	11	5	0.4	0.5	0.2	(10)	6.87%	99.28	6%	1.01	6.0%	142.02	11.91	0.69	0.00	9.999	0.083	-
Total Commercial	208	9	216	-	-	-	526	742	29%	0%	71%	5,497		5,497		0	-	4	751	0	1,066	86	0	58,745	0	0	3.5	526	1,153	2.2	0.6	1.0	9												

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
1	UTILITY		FORTIS BC														
4			Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
5			Units														
6		NATURAL GAS															
7		Incremental Cost of Gas (nominal)	$ Per GJ	$5.50	$6.17	$6.81	$7.35	$7.87	$8.26	$8.56	$8.78	$8.99	$9.19	$9.40	$9.60	$9.81	$10.03
8	1		*Year*	*0*	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*
9		carbon tax	$ per GJ	*0.75*	*1.00*	*1.25*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*
10		Distribution adder	$ per GJ	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*
11		Total incremental cost of gas including carbon		*6.40*	*7.31*	*8.20*	*9.00*	*9.51*	*9.91*	*10.21*	*10.42*	*10.63*	*10.84*	*11.04*	*11.25*	*11.46*	*11.67*
12	2	GDP Deflator		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
13	3	Incremental Cost of Gas (Real)		$6.40	$7.31	$8.20	$9.00	$9.51	$9.91	$10.21	$10.42	$10.63	$10.84	$11.04	$11.25	$11.46	$11.67
14	4	Net Present Value -2010			$12.39	$19.11	$26.01	$32.83	$39.48	$45.90	$52.02	$57.87	$63.45	$68.76	$73.83	$78.66	$83.27
15	5	Net Present Value -2011				$14.03	$21.40	$28.69	$35.80	$42.65	$49.20	$55.45	$61.41	$67.09	$72.51	$77.67	$82.59
16	6	Net Present Value -2012					$15.55	$23.35	$30.94	$38.27	$45.26	$51.94	$58.31	$64.39	$70.17	$75.69	$80.95
19		ELECTRICITY															
20		Incremental Cost of Elec	$ Per kWh	$0.12													
21		Incremental Cost of E Capacity	$ Per kW/a	$170.00													

	B	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ
4		2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	
7	Incremental Cost of Gas (nominal)	$10.25	$10.47	$10.70	$10.93	$11.17	$11.42	$11.67	$11.92	$12.19	$12.45	$12.73	$13.01	$13.29	$13.58	$13.88	$14.19	$14.50	$14.82	$15.14
8		*14*	*15*	*16*	*17*	*18*	*19*	*20*	*21*	*22*	*23*	*24*	*25*	*26*	*27*	*28*	*29*	*30*	*31*	
9	carbon tax	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	
10	Distribution adder	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*		
11	Total incremental cost of gas including carbon	*11.89*	*12.12*	*12.34*	*12.58*	*12.82*	*13.06*	*13.31*	*13.57*	*13.83*	*14.10*	*14.37*	*14.65*	*14.94*	*15.23*	*15.53*	*15.83*	*16.14*	*16.31*	
12	GDP Deflator	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
13	Incremental Cost of Gas (Real)	$11.89	$12.12	$12.34	$12.58	$12.82	$13.06	$13.31	$13.57	$13.83	$14.10	$14.37	$14.65	$14.94	$15.23	$15.53	$15.83	$16.14	$16.31	
14	Net Present Value -2010	$87.66	$91.84	$95.83	$99.63	$103.26	$106.72	$110.02	$113.17	$116.17	$119.03	$121.76	$124.36	$126.85	$129.22	$131.48	$133.64	$135.69	$137.64	
15	Net Present Value -2011	$87.28	$91.75	$96.02	$100.08	$103.96	$107.66	$111.18	$114.54	$117.75	$120.81	$123.73	$126.51	$129.16	$131.70	$134.11	$136.42	$138.62	$140.70	
16	Net Present Value -2012	$85.96	$90.74	$95.30	$99.64	$103.79	$107.74	$111.51	$115.10	$118.53	$121.79	$124.91	$127.89	$130.72	$133.43	$136.01	$138.48	$140.83	$143.05	

	A	B	C	D	E	F	G	H	I	J	K	L
25	RETAIL											
26				Rate	Customers		789,928	Total Customers in BC		80,000	Total Residential and Commercial Customers on VI	
27		Residential Retail			*000's*							
28		TGI	$ Per MJ	$0.0100	640		712,304	Total Residential Customers in BC				
29		TGVI	$ Per MJ	$0.0143	72							
30		Electricity	$ Per MJ	$0.0230								
31		Electricity	$ per kWh	$0.0827	1,511		1,511,435	Total BCH Residential Customers in BC				89%
32		Electricity	$ per kW per year									
33		Commercial Retail										
34		TGI	$ Per MJ	$0.0094	78		77,624	Total Commercial Customers in BC				
35		TGVI	$ Per MJ	$0.0169	8							
36		Electricity	$ Per MJ	$0.0214								
37		Electricity	$ per kWh	$0.0769	190		189,764	Total Light Industrial and Commercial Customers in BC				
38		Electricity	$ per kW per year	$52.0000	15							

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
40	TAX																	
41			Year	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
42	1		*Year*		*0*	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*
43	2	Carbon	$ Per tonne		$20.00	$25.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00
44	3	Carbon	$ Per GJ		$0.9976	$1.2470	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964
45	4	GDP Deflator			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
46	5	Carbon (Real)			$1.00	$1.25	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50
47	6	Net Present Value -2008				$2.03	$3.25	$4.40	$5.47	$6.48	$7.42	$8.30	$9.12	$9.89	$10.61	$11.28	$11.91	$12.50
48	7	Net Present Value -2009					$2.48	$3.70	$4.85	$5.92	$6.93	$7.87	$8.75	$9.57	$10.34	$11.06	$11.73	$12.37
49	8	Net Present Value -2010						$2.71	$3.94	$5.08	$6.16	$7.16	$8.10	$8.98	$9.80	$10.57	$11.29	$11.97
51		Discount Rate (real)[1]																
52		TERASEN GAS																
53		Rate of Inflation	1.90%															
54		TGI	7.15%															
55		TGVI	6.87%															
56		BC HYDRO																
57		Rate of Inflation	2.00%															
58		BC Hydro	6.00%															
59		Customer	6.00%															
60		*Footnote 1: Source LR 070531*																
62				SHEET LABELS														
63	New Construction																	
64		#REF!		BASEBOARD														
65		#REF!		HEATPUMP														

	B	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI
41		2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
42		*14*	*15*	*16*	*17*	*18*	*19*	*20*	*21*	*22*	*23*	*24*	*25*	*26*	*27*	*28*	*29*	*30*
43	Carbon	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00
44	Carbon	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964
45	GDP Deflator	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
46	Carbon (Real)	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50
47	Net Present Value -2008	$13.06	$13.57	$14.06	$14.51	$14.93	$15.33	$15.70	$16.05	$16.37	$16.68	$16.96	$17.23	$17.47	$17.71	$17.93	$18.13	$18.32
48	Net Present Value -2009	$12.96	$13.51	$14.03	$14.51	$14.96	$15.38	$15.78	$16.15	$16.50	$16.82	$17.13	$17.41	$17.68	$17.93	$18.16	$18.38	$18.58
49	Net Present Value -2010	$12.60	$13.19	$13.74	$14.26	$14.74	$15.19	$15.62	$16.01	$16.39	$16.73	$17.06	$17.36	$17.64	$17.91	$18.16	$18.39	$18.61

Fortis BC
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RETROFIT

only enter in boxes marked in blue

Measure Data for High Efficiency Boilers

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 156,000			
Total Incentive	$ 53,350		$ 53,350	$ -
Participant	$ 102,650			

Annual Impact Per Measure

Energy Savings per installation	1510.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	20	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	0	1	0	Estimated Participation
Impact						
Gross Energy Savings (GJ)	1,310	1,510	0	1,510	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	1,310	1,510	0	1,510	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$132.39	$136.83	$140.65	
Energy Purchases	$ 206,613	$ 206,613	$ -	$ 206,613	$ -	
Utility Program Costs						
DSM Incentives		$ 53,350	$ -	$ 53,350	$ -	
Administration		$ 1,500	$ -	$ 1,500	$ -	
Subtotal	$ 47,570	$ 54,850	$ -	$ 54,850	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 102,650	$ -	$ 102,650	$ -	
Subtotal	$ 89,025	$ 102,650	$ -	$ 102,650	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.376 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 70,018		$ -	$ 49,113	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 10.1**		**$ -**	**$ 10.1**	**$ -**	Informational (for comparison with supply options)

Max Utility Contribution to Incr. cost	Incremental Cost Max incentive
100.00%	$ 156,000.00
PV of GJ saved	**GJ Saved Incentive**
10,669.63	$ 53,348.17
Total Incentive	**$ 53,348.17**

Fortis BC
Commercial
RETROFIT

only enter in boxes marked in blue

Measure Data for Central Air to Water Heat Pump

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 488,500			
Total Incentive	$ 134,680		$ 134,680	$ -
Participant	$ 353,820			

Annual Impact Per Measure

Energy Savings per installation	3812.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	20	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	0	1	0	Estimated Participation
Impact						
Gross Energy Savings (GJ)	3,306	3,812	0	3,812	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	3,306	3,812	0	3,812	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$132.39	$136.83	$140.65	
Energy Purchases	$ 521,595	$ 521,595	$ -	$ 521,595	$ -	
Utility Program Costs						
DSM Incentives		$ 134,680	$ -	$ 134,680	$ -	
Administration		$ 6,500	$ -	$ 6,500	$ -	
Subtotal	$ 122,441	$ 141,180	$ -	$ 141,180	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 353,820	$ -	$ 353,820	$ -	
Subtotal	$ 306,857	$ 353,820	$ -	$ 353,820	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.376 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 92,298		$ -	$ 26,595	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 12.6**		**$ -**	**$ 12.6**	**$ -**	Informational (for comparison with supply options)

Max Utility Contribution to Incr. cost	Incremental Cost Max incentive
100.00%	$ 488,500.00
PV of GJ saved	**GJ Saved Incentive**
26,935.53	$ 134,677.64
Total Incentive	**$ 134,677.64**

Fortis BC
Commercial
RETROFIT

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Measure Data for High Efficient Boilers

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 76,800			
Total Incentive	$ 18,200		$ 18,200	$ -
Participant	$ 58,600			

Annual Impact Per Measure

Energy Savings per installation	144.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	20	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	0	1	0	Estimated Participation
Impact						
Gross Energy Savings (GJ)	125	144	0	144	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	125	144	0	144	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$132.39	$136.83	$140.65	
Energy Purchases	$ 19,703	$ 19,703	$ -	$ 19,703	$ -	
Utility Program Costs						
DSM Incentives		$ 18,200	$ -	$ 18,200	$ -	
Administration		$ 250	$ -	$ 250	$ -	
Subtotal	$ 16,001	$ 18,450	$ -	$ 18,450	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 58,600	$ -	$ 58,600	$ -	
Subtotal	$ 50,822	$ 58,600	$ -	$ 58,600	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.376 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ (47,119)		$ -	$ (57,347)	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 52.0**		**$ -**	**$ 52.0**	**$ -**	Informational (for comparison with supply options)

Max Utility Contribution to Incr. cost	Incremental Cost Max incentive
100.00%	$ 76,800.00
PV of GJ saved	**GJ Saved Incentive**
1,017.50	$ 5,087.51
Total Incentive	**$ -**

Fortis BC
Commercial
RETROFIT

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Measure Data for High Efficiency Water Heaters

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$	12,462		
Total Incentive	$	1,500	$ 1,500	$ -
Participant	$	10,962		

Annual Impact Per Measure

Energy Savings per installation	31.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	12	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	0	1	0	Estimated Participation
Impact						
Gross Energy Savings (GJ)	27	31	0	31	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	27	31	0	31	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$95.53	$99.28	$102.38	
Energy Purchases	$ 3,078	$ 3,078	$ -	$ 3,078	$ -	
Utility Program Costs						
DSM Incentives		$ 1,500	$ -	$ 1,500	$ -	
Administration		$ 250	$ -	$ 250	$ -	
Subtotal	$ 1,518	$ 1,750	$ -	$ 1,750	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 10,962	$ -	$ 10,962	$ -	
Subtotal	$ 9,507	$ 10,962	$ -	$ 10,962	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.006 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ (7,947)		$ -	$ (9,634)	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 52.7**		**$ -**	**$ 52.7**	**$ -**	Informational (for comparison with supply options)

Max Utility Contribution to Incr. cost	Incremental Cost Max incentive
100.00%	$ 12,462.00
PV of GJ saved	**GJ Saved Incentive**
148.36	$ 741.79
Total Incentive	**$ -**

FORTIS BC

2011 Joint Initiatives Planned	PROGRAM															ALTERNATE		NET PRESENT VALUE									BENEFIT/COST						PARAMETERS											
	COSTS ($000)											SAVINGS (GJ)			LIFE	Impact		Levelized Cost	Utility Benefits (Costs)		Participant Benefits (Costs)			Program Net Savings			Natural Gas	Participant			Natural Gas		SCT Net Benefits	UTILITY				PARTICIPANT								
FEI	Utility			Partners												Energy	Capacity	($/GJ)	Program	Alternate	Program	Carbon Tax	Alternate	Natural Gas	Alternate Energy	Alternate Capacity	Utility	Total Costs	Total Benefits	Benefit/Cost	Rate Impact	SCT	($'000s)	Natural Gas Utility Discount	Natural Gas Supply	Alternate Discount Rate	Alternate Supply	Discount Rate	Natural Gas NPV	Carbon Tax NPV	Alternate Energy NPV	Alternate Capacity NPV	Natural Gas Tariff	Energy Tariff	Capacity Tariff
	Incentives	Administration	Total	Incentives	Administration	Total	Participant	Total	% Utility	% Partner	% Participant	Gross	Net-to-Gross	Net	Years	MWh	kW		($'000s)	($'000s)	($'000s)	($'000s)	($'000s)	(GJ)	(MWh)	(kW)	$/GJ	($'000s)	($'000s)					$/GJ	$/GJ	$/kWh	$/kWh		$/GJ	$/GJ	$/kWh	$/kW/a	$/GJ	$/kWh	$/kW/a
Label	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR	AS	AT
Source Sheet or Calculation	Program	Program	B+C	Program	Program	E+F	Program	D+G+H	D/I	G/I	H/I	Program	Program	M+N	Program	Program	Program	D/Y	OxAJ	Q x N x AL	M x N x AN	M x N x AO	N x (OxAP x RxAQ)	PV(AI,P,-C)	PV(AK,P,-Q*N)	PV(AK,P,-R)	T/O	H>0, (V+W)>0	H>0, (V+W)>0, X	AD/AC	T/(V+O)	(T+U)/I	(T+U)-I	Input	Program	Input	Input	Input	PV(AM,P,-Input!D25)	Input	PV(AM,P,-Input!D28)	PV(AM,P,-Input!D29)	Input	Input	Input
2011																																												
RESIDENTIAL:																																												
Washing Machine Rebate	302	57	359	0	0	0	1,721	2,080	17%	0%	83%	18,120	95%	17,214	14	0	-	2	4,125	N/A	1,944	295	N/A	194,451	0	-	11.5	1,721	2,239	1.3	1.8	2.0	2,044	3.00%	184.32	3%	1.36	3.0%	112.95	17.14	0.93	0.00	9.999	0.083	-
Live Smart BC 2010-2011	531	85	616	-	-	-	1,768	2,384	26%	-	74%	24,390	88%	21,463		0	-	2	7,129	0	3,443	516	0	344,370	-	-	11.6	1768	3959	2.2	1.8	3.0	4745	3.00%		3%									
Live Smart BC 2011-2012	1,596	162	1,758	-	-	-	2,865	4,622	38%	-	62%	46,026	88%	40,503		0	-	3	13,017	0	6,274	941	0	627,453	-	-	7.4	2865	7215	2.5	1.6	2.8	8394												
Home Efficiency Web Portal	0	50	50	0	0	0	0	50	100%	0%	0%	0	100%	0	14	0	-	LB	LB	N/A	N/A	N/A	N/A	-	0	-	LB	-	-	N/A	N/A	LB	LB	3.00%	184.32	3%	1.36	3.0%	112.95	17.14	0.93	0.00	9.999	0.083	-
Total Residential	2,428	354	2,732	-	-	-	6,354	9,137	30%	-	70%	88,536		79,180		0	-	2	24,271	0	11,662	1,752	0	1,166,273	-	-	8.9	6,354	13,414	2.1	1.7	2.7	15,134												

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
1	UTILITY		FORTIS BC														
4			Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
5			Units														
6		NATURAL GAS															
7		Incremental Cost of Gas (nominal)	$ Per GJ	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28
8	1		Year	0	1	2	3	4	5	6	7	8	9	10	11	12	13
9		carbon tax	$ per GJ	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10		Distribution adder	$ per GJ	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16
11		Total incremental cost of gas including carbon		15.44	15.44	15.44	15.44	15.44	15.44	15.44	15.44	15.44	15.44	15.44	15.44	15.44	15.44
12	2	GDP Deflator		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
13	3	Incremental Cost of Gas (Real)		$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44
14	4	Net Present Value -2010			$29.54	$43.67	$57.39	$70.71	$83.64	$96.20	$108.38	$120.22	$131.71	$142.86	$153.69	$164.20	$174.41
15	5	Net Present Value -2011				$29.54	$43.67	$57.39	$70.71	$83.64	$96.20	$108.38	$120.22	$131.71	$142.86	$153.69	$164.20
16	6	Net Present Value -2012					$29.54	$43.67	$57.39	$70.71	$83.64	$96.20	$108.38	$120.22	$131.71	$142.86	$153.69
19		ELECTRICITY															
20		Incremental Cost of Elec	$ Per kWh	$0.12													
21		Incremental Cost of E Capacity	$ Per kW/a	$170.00													
25	RETAIL																
26				Rate	Customers		789,928	Total Customers in BC		80,000	Total Residential and Commercial Customers on VI						
27		Residential Retail			000's												
28		TGI	$ Per MJ	$0.0100	640		712,304	Total Residential Customers in BC									
29		TGVI	$ Per MJ	$0.0143	72												
30		Electricity	$ Per MJ	$0.0230													
31		Electricity	$ per kWh	$0.0827	1,511		1,511,435	Total BCH Residential Customers in BC				89%					
32		Electricity	$ per kW per year														
33		Commercial Retail															
34		TGI	$ Per MJ	$0.0094	78		77,624	Total Commercial Customers in BC									
35		TGVI	$ Per MJ	$0.0169	8												
36		Electricity	$ Per MJ	$0.0214													
37		Electricity	$ per kWh	$0.0769	190		189,764	Total Light Industrial and Commercial Customers in BC									
38		Electricity	$ per kW per year	$52.0000	15												
40	TAX																
41			Year	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
42	1		Year		0	1	2	3	4	5	6	7	8	9	10	11	12
43	2	Carbon	$ Per tonne		$20.00	$25.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00
44	3	Carbon	$ Per GJ		$0.9976	$1.2470	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964
45	4	GDP Deflator			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
46	5	Carbon (Real)			$1.00	$1.25	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50
47	6	Net Present Value -2010				$2.14	$3.51	$4.84	$6.13	$7.39	$8.60	$9.78	$10.93	$12.05	$13.13	$14.18	$15.19
48	7	Net Present Value -2011					$2.62	$3.99	$5.32	$6.61	$7.86	$9.08	$10.26	$11.41	$12.52	$13.60	$14.65
49	8	Net Present Value -2012						$2.86	$4.23	$5.56	$6.85	$8.11	$9.32	$10.50	$11.65	$12.76	$13.85
51		Discount Rate (real)[1]															
52		TERASEN GAS															
53		Rate of Inflation	1.90%														
54		TGI	3.00%														
55		TGVI	3.00%														
56		BC HYDRO															
57		Rate of Inflation	2.00%														
58		BC Hydro	3.00%														
59		Customer	3.00%														
60		Footnote 1: Source LR 070531															
62				SHEET LABELS													
63	New Construction																
64		#REF!		BASEBOARD													
65		Washing Machine Rebate		HEATPUMP													

	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ
4	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	
7	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.43
8	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
10	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16		
11	15.44	15.44	15.44	15.44	15.44	15.44	15.44	15.44	15.44	15.44	15.44	15.44	15.44	15.44	15.44	15.44	15.44	15.28	
12	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
13	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.28	
14	$184.32	$193.94	$203.28	$212.35	$221.16	$229.71	$238.01	$246.07	$253.89	$261.48	$268.86	$276.02	$282.97	$289.72	$296.27	$302.63	$308.81	$314.74	
15	$174.41	$184.32	$193.94	$203.28	$212.35	$221.16	$229.71	$238.01	$246.07	$253.89	$261.48	$268.86	$276.02	$282.97	$289.72	$296.27	$302.63	$308.74	
16	$164.20	$174.41	$184.32	$193.94	$203.28	$212.35	$221.16	$229.71	$238.01	$246.07	$253.89	$261.48	$268.86	$276.02	$282.97	$289.72	$296.27	$302.56	
41	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	
42	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
43	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	
44	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	
45	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
46	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	
47	$16.18	$17.14	$18.08	$18.98	$19.86	$20.71	$21.54	$22.35	$23.13	$23.89	$24.62	$25.34	$26.03	$26.71	$27.36	$27.99	$28.61	$29.21	
48	$15.67	$16.66	$17.62	$18.55	$19.46	$20.34	$21.19	$22.02	$22.82	$23.61	$24.36	$25.10	$25.81	$26.51	$27.18	$27.84	$28.47	$29.09	
49	$14.90	$15.91	$16.90	$17.86	$18.80	$19.70	$20.58	$21.43	$22.26	$23.07	$23.85	$24.61	$25.34	$26.06	$26.75	$27.42	$28.08	$28.71	

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Measure Data for Washing Machine Rebate

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 350			
Total Incentive	$ 50		$ 50	$ -
Participant	$ 300			

Annual Impact Per Measure

Energy Savings per installation	3.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	5%	0.95		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	14	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	5,693	6,040	0	6,040		Estimated Participation
Impact						
Gross Energy Savings (GJ)	17,080	18,120	0	18,120	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	16,226	17,214	0	17,214	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$184.32	$184.32	$184.32	
Energy Purchases	$ 3,172,914	$ 3,172,914	$ -	$ 3,172,914	$ -	
Utility Program Costs						
DSM Incentives		$ 302,000	$ -	$ 302,000	$ -	
Administration		$ 57,000	$ -	$ 57,000		
Subtotal	$ 338,392	$ 359,000	$ -	$ 359,000	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 1,721,400	$ -	$ 1,721,400	$ -	
Subtotal	$ 1,622,585	$ 1,721,400	$ -	$ 1,721,400	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.356 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 1,211,938		$ -	$ 1,092,514	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 10.7**		**$ -**	**$ 10.7**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Home Efficiency Web Portal

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ -			
Total Incentive	$ -		$ -	$ -
Participant	$ -			

Annual Impact Per Measure

nergy Savings per installation	0.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	14	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	0	0	0	0		Estimated Participation
Impact						
Gross Energy Savings (GJ)	0	0	0	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	0	0	0	0	0	Gross Energy Savings less Free Riders
nergy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
acity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$184.32	$184.32	$184.32	
Energy Purchas	$ -	$ -	$ -	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ 50,000	$ -	$ 50,000		
Subtotal	$ 47,130	$ 50,000	$ -	$ 50,000	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.356 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (C	$ (47,130)		$ -	$ (50,000)	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (L	**$ -**		**$ -**	**$ -**	**$ -**	Informational (for comparison with supply options)

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2011 Joint Initiatives Planned	PROGRAM															ALTERNATE		NET PRESENT VALUE									BENEFIT/COST						PARAMETERS												
	COSTS ($000)											SAVINGS (GJ)			LIFE	Impact		Levelized Cost	Utility Benefits (Costs)		Participant Benefits (Costs)			Program Net Savings			Natural Gas	Participant			Natural Gas	Total Resource	TRC Net Benefits	UTILITY				PARTICIPANT								
FEI	Utility			Partners			Participant	Total	% Utility	% Partner	% Participant	Gross	Net-to-Gross	Net	Years	Energy	Capacity	($/GJ)	Program	Alternate	Program	Carbon Tax	Alternate	Natural Gas	Alternate Energy	Alternate Capacity	Utility	Total Costs	Total Benefits	Benefit/Cost	Rate Impact		($'000s)	Natural Gas Utility Discount	Natural Gas Supply $/GJ	Alternate Discount Rate	Alternate Supply $/kWh	Discount Rate	Natural Gas NPV $/GJ	Carbon Tax NPV $/GJ	Alternate Energy NPV $/kWh	Alternate Capacity NPV $/kW/a	Natural Gas Tariff $/GJ	Energy Tariff $/kWh	Capacity Tariff $/kW/a
	Incentives	Administration	Total	Incentives	Administration	Total										MWh	kW		($'000s)	($'000s)	($'000s)	($'000s)	($'000s)	(GJ)	(MWh)	(kW)		($'000s)	($'000s)																	
Label	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR	AS	AT
Source Sheet or Calculation	Program	Program	B+C	Program	Program	E+F	Program	D+G+H	D/I	G/I	H/I	Program	Program	M+N	Program	Program	Program	D/Y	OxAJ	Q x N x AL	M x N x AN	M x N x AO	N x (QxAP + RxAQ)	PV(AI,P,-Q)	PV(AK,P,-Q*%)	PV(AK,P,-R)	T/D	H>0, (V+W)>0	H>0, (V+W)>0, X	AD/AC	T/(V>0)	(T+U)/I	(T+U)-I	Input	Program	Input	Input	Input	PV(AM,P,-Input!D25)	Input	PV(AM,P,-Input!D28)	PV(AM,P,-Input!D29)	Input	Input	Input
2011																																													
RESIDENTIAL:																																													
Washing Machine Rebate	302	57	359	0	0	0	1,721	2,080	17%	0%	83%	18,120	95%	17,214	14	0	-	2	1,551	N/A	1,600	221	N/A	149,200	0	-	4.3	1,721	1,821	1.1	0.8	0.7	(529)	7.15%	90.10	6%	1.12	6.0%	92.94	12.82	0.77	0.00	9.999	0.083	-
Live Smart BC 2010-2011	531	85	616	-	-	-	1,768	2,384	26%	-	74%	24,390	88%	21,463		0	-	3	2,532	0	2,586	342	0	234,273	-	-	4.1	1768	2928	1.7	0.8	1.1	148	7.15%		6%									
Live Smart BC 2011-2012	1,596	162	1,758	-	-	-	2,865	4,622	38%	-	62%	46,026	88%	40,503		0	-	4	4,646	0	4,748	631	0	431,354	-	-	2.6	2865	5380	1.9	0.7	1.0	23												
Home Efficiency Web Portal	0	50	50	0	0	0	0	50	100%	0%	0%	0	100%	0	14	0	-	LB	LB	N/A	N/A	N/A	N/A	-	0	-	LB	-	-	N/A	N/A	LB	LB	7.15%	90.10	6%	1.12	6.0%	92.94	12.82	0.77	0.00	9.999	0.083	-
Total Residential	2,428	354	2,732	-	-	-	6,354	9,137	30%	-	70%	88,536		79,180		0	-	3	8,729	0	8,934	1,194	0	814,827	-	-	3.2	6,354	10,128	1.6	0.7	1.0	(407)												

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ
1	**UTILITY**		**FORTIS BC**																																	
2																																				
3																																				
4			**Year**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	
5			Units																																	
6		**NATURAL GAS**																																		
7		Incremental Cost of Gas (nominal)	$ Per GJ	$5.58	$6.17	$6.81	$7.35	$7.87	$8.26	$8.56	$8.78	$8.99	$9.19	$9.40	$9.60	$9.81	$10.03	$10.25	$10.47	$10.70	$10.93	$11.17	$11.42	$11.67	$11.92	$12.19	$12.45	$12.73	$13.01	$13.29	$13.58	$13.88	$14.19	$14.50	$14.82	$15.18
8	1		*Year*	*0*	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*	*16*	*17*	*18*	*19*	*20*	*21*	*22*	*23*	*24*	*25*	*26*	*27*	*28*	*29*	*30*	*31*	
9		carbon tax	$ per GJ	*0.75*	*1.00*	*1.25*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	
10		Distribution adder	$ per GJ	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	
11		Total incremental cost of gas including carbon		*6.41*	*7.32*	*8.21*	*9.01*	*9.52*	*9.92*	*10.22*	*10.43*	*10.64*	*10.85*	*11.05*	*11.26*	*11.47*	*11.68*	*11.90*	*12.13*	*12.35*	*12.59*	*12.83*	*13.07*	*13.32*	*13.58*	*13.84*	*14.11*	*14.38*	*14.66*	*14.95*	*15.24*	*15.54*	*15.84*	*16.15*	*16.31*	
12	2	GDP Deflator		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
13	3	Incremental Cost of Gas (Real)		$6.41	$7.32	$8.21	$9.01	$9.52	$9.92	$10.22	$10.43	$10.64	$10.85	$11.05	$11.26	$11.47	$11.68	$11.90	$12.13	$12.35	$12.59	$12.83	$13.07	$13.32	$13.58	$13.84	$14.11	$14.38	$14.66	$14.95	$15.24	$15.54	$15.84	$16.15	$16.31	
14	4	Net Present Value -2010			$12.36	$19.03	$25.47	$32.61	$39.16	$45.47	$51.47	$57.19	$62.63	$67.80	$72.73	$77.39	$81.83	$86.05	$90.07	$93.89	$97.52	$100.98	$104.26	$107.39	$110.36	$113.19	$115.88	$118.43	$120.87	$123.18	$125.39	$127.49	$129.48	$131.38	$133.17	
15	5	Net Present Value -2011			$13.99	$21.31	$28.54	$35.56	$42.31	$48.75	$54.87	$60.70	$66.24	$71.51	$76.51	$81.27	$85.80	$90.10	$94.20	$98.09	$101.79	$105.31	$108.66	$111.84	$114.87	$117.75	$120.49	$123.10	$125.59	$127.95	$130.19	$132.33	$134.37	$136.28		
16	6	Net Present Value -2012				$15.51	$23.23	$30.78	$38.01	$44.91	$51.47	$57.71	$63.65	$69.29	$74.66	$79.76	$84.61	$89.22	$93.61	$97.78	$101.74	$105.51	$109.10	$112.51	$115.76	$118.85	$121.79	$124.58	$127.24	$129.77	$132.18	$134.47	$136.65	$138.70			
17																																				
18																																				
19		**ELECTRICITY**																																		
20		Incremental Cost of Elec	$ Per kWh	$0.10																																
21		Incremental Cost of E Capacity	$ Per kW/a	$170.00																																
22																																				
23																																				
24																																				
25	**RETAIL**																																			
26				Rate	Customers																																
27		Residential Retail			Fuel																																
28		**TGI**	$ Per MJ	$0.0100	Fuel																																
29		**TGVI**	$ Per MJ	$0.0143	Fuel																																
30		**Electricity**	$ Per MJ	$0.0230																																
31		**Electricity**	$ per kWh	$0.0829	T1R																																
32		**Electricity**	$ per kW per year		T1R																																
33		Commercial Retail																																		
34		**TGI**	$ Per MJ	$0.0094	Fuel																																
35		**TGVI**	$ Per MJ	$0.0160	Fuel																																
36		**Electricity**	$ Per MJ	$0.0214																																
37		**Electricity**	$ per kWh	$0.0749	T3R																																
38		**Electricity**	$ per kW per year	$52.0000	T3R																																
39																																				
40	**TAX**																																			
41			**Year**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	
42			*Year*	*0*	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*	*16*	*17*	*18*	*19*	*20*	*21*	*22*	*23*	*24*	*25*	*26*	*27*	*28*	*29*	*30*	
43	2	Carbon	$ Per tonne		$20.00	$25.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	
44	3	Carbon	$ Per GJ		$0.9976	$1.2470	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	
45	4	GDP Deflator			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
46	5	Carbon (Real)			$1.00	$1.25	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	
47	6	Net Present Value -2010			$2.02	$3.23	$4.37	$5.43	$6.42	$7.34	$8.20	$9.00	$9.75	$10.45	$11.11	$11.72	$12.29	$12.82	$13.31	$13.78	$14.21	$14.61	$14.99	$15.34	$15.67	$15.97	$16.26	$16.52	$16.77	$17.00	$17.22	$17.42	$17.61	$17.79		
48	7	Net Present Value -2011				$2.47	$3.68	$4.82	$5.88	$6.87	$7.79	$8.65	$9.45	$10.20	$10.90	$11.56	$12.17	$12.74	$13.27	$13.76	$14.23	$14.66	$15.06	$15.44	$15.79	$16.12	$16.42	$16.71	$16.97	$17.22	$17.45	$17.67	$17.87	$18.06			
49	8	Net Present Value -2012					$2.70	$3.92	$5.05	$6.11	$7.10	$8.02	$8.88	$9.69	$10.44	$11.14	$11.79	$12.40	$12.97	$13.50	$14.00	$14.46	$14.89	$15.29	$15.67	$16.02	$16.35	$16.65	$16.94	$17.21	$17.45	$17.69	$17.90	$18.10		
50																																				
51		**Discount Rate (real)**[1]																																		
52		**TERASEN GAS**																																		
53		**Rate of Inflation**	1.90%																																	
54		**TGI**	7.15%																																	
55		**TGVI**	6.89%																																	
56		**BC HYDRO**																																		
57		**Rate of Inflation**	2.00%																																	
58		**BC Hydro**	6.00%																																	
59		**Customer**	6.00%																																	
60		*Footnote 1: Source LR 670531*																																		
61																																				
62				**SHEET LABELS**																																
63	**New Construction**																																			
64		#REF!		**BASEBOARD**																																
65		Washing Machine Rebate		**HEATPUMP**																																

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Measure Data for Washing Machine Rebate

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 350			
Total Incentive	$ 50		$ 50	$ -
Participant	$ 300			

Annual Impact Per Measure

Energy Savings per installation	3.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	5%	0.95		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	14	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	5,261	6,040	0	6,040		Estimated Participation
Impact						
Gross Energy Savings (GJ)	15,782	18,120	0	18,120	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	14,993	17,214	0	17,214	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$86.05	$90.10	$93.61	
Energy Purchases	$ 1,551,031	$ 1,551,031	$ -	$ 1,551,031	$ -	
Utility Program Costs						
DSM Incentives		$ 302,000	$ -	$ 302,000	$ -	
Administration		$ 57,000	$ -	$ 57,000		
Subtotal	$ 312,687	$ 359,000	$ -	$ 359,000	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 1,721,400	$ -	$ 1,721,400	$ -	
Subtotal	$ 1,499,331	$ 1,721,400	$ -	$ 1,721,400	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.115 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ (260,987)		$ -	$ (529,369)	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 13.9**		**$ -**	**$ 13.9**	**$ -**	Informational (for comparison with supply options)

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only enter in boxes marked in blue

Measure Data for Home Efficiency Web Portal

PER MEASURE			**Utility Incentive to the participant**	**partner incentive**
Incremental Cost	$ -			
Total Incentive	$ -		**$ -**	**$ -**
Participant	**$ -**			

Annual Impact Per Measure

Energy Savings per installation	**0.0**	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	**0%**	1.00		Net-to-Gross
Alternate Energy Impact	**0**	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	**14**	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	0	0	**0**	**0**		Estimated Participation
Impact						
Gross Energy Savings (GJ)	0	0	0	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	0	0	0	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$86.05	$90.10	$93.61	
Energy Purchases	$ -	$ -	$ -	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ 50,000	**$ -**	**$ 50,000**		
Subtotal	$ 43,550	$ 50,000	$ -	$ 50,000	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	**$ -**	**$ -**	**$ -**	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.115 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ (43,550)		$ -	$ (50,000)	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ -**		**$ -**	**$ -**	**$ -**	Informational (for comparison with supply options)

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	PROGRAM															ALTERNATE		NET PRESENT VALUE									BENEFIT/COST						PARAMETERS														
	COSTS ($000)											SAVINGS (GJ)			LIFE	Impact		Levelized Cost	Utility Benefits (Costs)		Participant Benefits (Costs)			Program Net Savings			Natural Gas	Participant			Natural Gas		SCT Net Benefits	UTILITY				PARTICIPANT									
	Utility			Partners																																											
	Incentives	Administration	Total	Incentives	Administration	Total	Participant	Total	% Utility	% Partner	% Participant	Gross	Net-to-Gross	Net	Years	Energy	Capacity	($/GJ)	Program	Alternate	Program	Carbon Tax	Alternate	Natural Gas	Alternate Energy	Alternate Capacity	Natural Gas	Total Costs	Total Benefits	Benefit/Cost	Natural Gas	SCT	($'000s)	Natural Gas Utility Discount	Natural Gas Supply	Alternate Discount Rate	Alternate Supply	Discount Rate	Natural Gas NPV	Carbon Tax NPV	Alternate Energy NPV	Alternate Capacity NPV	Natural Gas Tariff	Energy Tariff	Capacity Tariff
																MWh	kW		($'000s)	($'000s)	($'000s)	($'000s)	($'000s)	(GJ)	(MWh)	(kW)	Utility	($'000s)	($'000s)		Rate Impact			$/GJ		$/kWh		$/GJ	$/GJ	$/kWh	$/kW/a	$/GJ	$/kWh	$/kW/a
Label	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR	AS	AT
Source Sheet or Calculation	Program	Program	B+C	Program	Program	E+F	Program	D+G+H	D/I	G/I	H/I	Program	Program	M+N	Program	Program	Program	D/Y	OxAJ	Q x N x AL	M x N x AN	M x N x AO	N x (QxAP x RxAQ)	PV(AI,P,-C)	PV(AK,P,-Q*N)	PV(AK,P,-R)	T/D	H>0, (V+W)>0	H>0, (V+W)>0, X	AD/AC	T/(V+D)	(T+U)/I	(T+U)+I	Input	Program	Input	Input	Input	PV(AM,P,-Input!D25)	Input	PV(AM,P,-Input!D28)	PV(AM,P,-Input!D29)	Input	Input	Input
2011 - 2010 program completion																																														
RESIDENTIAL:																																														
Air Tightness	97	0	97	0	0	0	157	254	38%	0%	62%	2,705	88%	2,380	15	0	-	3	462	N/A	284	43	N/A	28,415	0	-	4.8	157	327	2.1	1.2	1.8	208	3.00%	193.94	3%	1.43	3.0%	119.37	18.08	0.99	0.00	9.999	0.083	-
Attic Insulation	44	0	44	0	0	0	493	537	8%	0%	92%	4,416	88%	3,886	25	0	-	1	1,073	N/A	677	101	N/A	67,669	0	-	24.3	493	778	1.6	1.5	2.0	536	3.00%	276.02	3%	2.09	3.0%	174.11	26.03	1.44	0.00	9.999	0.083	-
Wall Insulation	17	0	17	0	0	0	306	322	5%	0%	95%	3,817	88%	3,359	25	0	-	0	927	N/A	585	87	N/A	58,487	0	-	55.7	306	672	2.2	1.5	2.9	605	3.00%	276.02	3%	2.09	3.0%	174.11	26.03	1.44	0.00	9.999	0.083	-
Basement Insulation	44	0	44	0	0	0	330	373	12%	0%	88%	6,132	88%	5,396	25	0	-	0	1,489	N/A	940	140	N/A	93,964	0	-	34.0	330	1,080	3.3	1.5	4.0	1,116	3.00%	276.02	3%	2.09	3.0%	174.11	26.03	1.44	0.00	9.999	0.083	-
Windows & Doors	329	85	414	0	0	0	483	898	46%	0%	54%	7,320	88%	6,442	20	0	-	4	1,533	N/A	958	144	N/A	95,835	0	-	3.7	483	1,102	2.3	1.1	1.7	636	3.00%	238.01	3%	1.79	3.0%	148.76	22.35	1.23	0.00	9.999	0.083	-
2011 Total Residential	531	85	616	-	-	-	1,768	2,384	26%	-	74%	24,390		21,463		0	-	2	7,129	0	3,443	516	0	344,370	-	-	11.6	1,768	3,959	2.2	1.8	3.0	4,745													

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ
1	**UTILITY**		**FORTIS BC**																																	
2																																				
3																																				
4			**Year**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	
5			Units																																	
6		**NATURAL GAS**																																		
7		Incremental Cost of Gas (nominal)	$ Per GJ	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.43
8	1		*Year*	*0*	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*	*16*	*17*	*18*	*19*	*20*	*21*	*22*	*23*	*24*	*25*	*26*	*27*	*28*	*29*	*30*	*31*	
9		carbon tax	$ per GJ	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	
10		Distribution adder	$ per GJ	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	
11		Total incremental cost of gas including carbon		*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.28*	
12	2	GDP Deflator		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
13	3	Incremental Cost of Gas (Real)		$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.28	
14	4	Net Present Value -2010			$29.54	$43.67	$57.39	$70.71	$83.64	$96.20	$108.38	$120.22	$131.71	$142.86	$153.69	$164.20	$174.41	$184.32	$193.94	$203.28	$212.35	$221.16	$229.71	$238.01	$246.07	$253.89	$261.48	$268.86	$276.02	$282.97	$289.72	$296.27	$302.63	$308.81	$314.74		
15	5	Net Present Value -2011			$29.54	$43.67	$57.39	$70.71	$83.64	$96.20	$108.38	$120.22	$131.71	$142.86	$153.69	$164.20	$174.41	$184.32	$193.94	$203.28	$212.35	$221.16	$229.71	$238.01	$246.07	$253.89	$261.48	$268.86	$276.02	$282.97	$289.72	$296.27	$302.63	$308.74			
16	6	Net Present Value -2012				$29.54	$43.67	$57.39	$70.71	$83.64	$96.20	$108.38	$120.22	$131.71	$142.86	$153.69	$164.20	$174.41	$184.32	$193.94	$203.28	$212.35	$221.16	$229.71	$238.01	$246.07	$253.89	$261.48	$268.86	$276.02	$282.97	$289.72	$296.27	$302.56				
17																																				
18																																				
19		**ELECTRICITY**																																		
20		Incremental Cost of Elec	$ Per kWh	$0.10																																
21		Incremental Cost of E Capacity	$ Per kW/a	$170.00																																
22																																				
23																																				
24																																				
25	**RETAIL**																																			
26																																				
27				Rate	Customers																															
28		Residential Retail			1,000																															
29		**TGI**	$ Per MJ	$0.0100	1,000																															
30		**TGVI**	$ Per MJ	$0.0143	1,000																															
31		**Electricity**	$ Per MJ	$0.0230																																
32		**Electricity**	$ per kWh	$0.0829	1,000																															
33		**Electricity**	$ per kW per year		1,000																															
34		Commercial Retail																																		
35		**TGI**	$ Per MJ	$0.0094	50																															
36		**TGVI**	$ Per MJ	$0.0160	50																															
37		**Electricity**	$ Per MJ	$0.0214																																
38		**Electricity**	$ per kWh	$0.0749	750																															
39		**Electricity**	$ per kW per year	$52.0000	50																															
40																																				
41	**TAX**		**Year**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	
42			*Year*		*0*	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*	*16*	*17*	*18*	*19*	*20*	*21*	*22*	*23*	*24*	*25*	*26*	*27*	*28*	*29*	*30*	
43	2	Carbon	$ Per tonne		$20.00	$25.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	
44	3	Carbon	$ Per GJ		$0.9576	$1.2470	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	
45	4	GDP Deflator			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
46	5	Carbon (Real)			$1.00	$1.25	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	
47	6	Net Present Value -2010			$2.14	$3.51	$4.84	$6.13	$7.38	$8.60	$9.78	$10.93	$12.05	$13.13	$14.18	$15.19	$16.18	$17.14	$18.08	$18.98	$19.86	$20.71	$21.54	$22.35	$23.13	$23.89	$24.62	$25.34	$26.03	$26.71	$27.36	$27.99	$28.61	$29.21			
48	7	Net Present Value -2011				$2.62	$3.99	$5.32	$6.61	$7.86	$9.08	$10.26	$11.41	$12.52	$13.60	$14.65	$15.67	$16.66	$17.62	$18.55	$19.46	$20.34	$21.19	$22.02	$22.82	$23.61	$24.36	$25.10	$25.81	$26.51	$27.18	$27.84	$28.47	$29.09				
49	8	Net Present Value -2012					$2.86	$4.23	$5.56	$6.85	$8.11	$9.32	$10.50	$11.65	$12.76	$13.85	$14.90	$15.91	$16.90	$17.86	$18.80	$19.70	$20.58	$21.43	$22.26	$23.07	$23.85	$24.61	$25.34	$26.06	$26.75	$27.42	$28.08	$28.71			
50																																				
51		**Discount Rate (real)**[1]																																		
52		**TERASEN GAS**																																		
53		**Rate of Inflation**	1.90%																																	
54		**TGI**	3.00%																																	
55		**TGVI**	3.00%																																	
56		**BC HYDRO**																																		
57		**Rate of Inflation**	2.00%																																	
58		**BC Hydro**	3.00%																																	
59		**Customer**	3.00%																																	
60		*Footnote 1: Source LR 670531*																																		
61																																				
62				**SHEET LABELS**																																
63	**New Construction**																																			
64		#REF!		**BASEBOARD**																																
65		#REF!		**HEATPUMP**																																

FORTIS BC

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only enter in boxes marked in blue

Measure Data for Air Tightness

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 427			
Total Incentive	$ 150		$ 150	$ -
Participant	$ 277			

Annual Impact Per Measure

Energy Savings per installation	4.2	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	12%	0.88		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	15	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	625	644		644		Estimated Participation
Impact						
Gross Energy Savings (GJ)	2,550	2,705	0	2,705	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	2,244	2,380	0	2,380	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$193.94	$193.94	$193.94	
Energy Purchases	$ 461,629	$ 461,629	$ -	$ 461,629	$ -	
Utility Program Costs						
DSM Incentives		$ 96,600	$ -	$ 96,600	$ -	
Administration		$ -	$ -			
Subtotal	$ 91,055	$ 96,600	$ -	$ 96,600	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 156,981	$ -	$ 156,981	$ -	
Subtotal	$ 147,970	$ 156,981	$ -	$ 156,981	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.433 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 222,604		$ -	$ 208,047	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 8.9**		**$ -**	**$ 8.9**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Attic Insulation

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 1,573			
Total Incentive	$ 115		$ 115	$ -
Participant	$ 1,458			

Annual Impact Per Measure

Energy Savings per installation	11.5	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	12%	0.88		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	25	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	373	384		384		Estimated Participation
Impact						
Gross Energy Savings (GJ)	4,163	4,416	0	4,416	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	3,663	3,886	0	3,886	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$276.02	$276.02	$276.02	
Energy Purchases	$ 1,072,630	$1,072,630	$ -	$1,072,630	$ -	
Utility Program Costs						
DSM Incentives		$ 44,160	$ -	$ 44,160	$ -	
Administration		$ -	$ -			
Subtotal	$ 41,625	$ 44,160	$ -	$ 44,160	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 492,687	$ -	$ 492,687	$ -	
Subtotal	$ 464,405	$ 492,687	$ -	$ 492,687	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$2.090 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 566,600		$ -	$ 535,782	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 7.9**		**$ -**	**$ 7.9**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Wall Insulation

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 3,500			
Total Incentive	$ 160		$ 160	$ -
Participant	$ 3,340			

Annual Impact Per Measure

Energy Savings per installation	36.7	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	12%	0.88		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	25	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	101	104		104		Estimated Participation
Impact						
Gross Energy Savings (GJ)	3,598	3,817	0	3,817	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	3,166	3,359	0	3,359	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$276.02	$276.02	$276.02	
Energy Purchases	$ 927,086	$ 927,086	$ -	$ 927,086	$ -	
Utility Program Costs						
DSM Incentives		$ 16,640	$ -	$ 16,640	$ -	
Administration		$ -	$ -			
Subtotal	$ 15,685	$ 16,640	$ -	$ 16,640	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 305,677	$ -	$ 305,677	$ -	
Subtotal	$ 288,130	$ 305,677	$ -	$ 305,677	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$2.090 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 623,272		$ -	$ 604,770	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 5.5**		**$ -**	**$ 5.5**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Basement Insulation

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 1,433			
Total Incentive	$ 150		$ 150	$ -
Participant	$ 1,283			

Annual Impact Per Measure

Energy Savings per installation	21.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	12%	0.88		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	25	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	275	292	0	292		Estimated Participation
Impact						
Gross Energy Savings (GJ)	5,780	6,132	0	6,132	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	5,086	5,396	0	5,396	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$276.02	$276.02	$276.02	
Energy Purchases	$ 1,489,440	$1,489,440	$ -	$1,489,440	$ -	
Utility Program Costs						
DSM Incentives		$ 43,800	$ -	$ 43,800	$ -	
Administration		$ -	$ -			
Subtotal	$ 41,286	$ 43,800	$ -	$ 43,800	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 329,680	$ -	$ 329,680	$ -	
Subtotal	$ 310,755	$ 329,680	$ -	$ 329,680	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$2.090 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 1,137,399		$ -	$ 1,115,960	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 4.0**		**$ -**	**$ 4.0**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Windows & Doors

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 1,200			
Total Incentive	$ 450		$ 450	$ -
Participant	$ 750			

Annual Impact Per Measure

Energy Savings per installation	10.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	12%	0.88		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	20	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	711	732		732		Estimated Participation
Impact						
Gross Energy Savings (GJ)	6,900	7,320	0	7,320	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	6,072	6,442	0	6,442	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$238.01	$238.01	$238.01	
Energy Purchases	$ 1,533,152	$1,533,152	$ -	$1,533,152	$ -	
Utility Program Costs						
DSM Incentives		$ 329,400	$ -	$ 329,400	$ -	
Administration		$ 85,000	$ -	$ 85,000		
Subtotal	$ 390,612	$ 414,400	$ -	$ 414,400	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -		$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 483,120	$ -	$ 483,120	$ -	
Subtotal	$ 455,387	$ 483,120	$ -	$ 483,120	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.785 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 687,153		$ -	$ 635,632	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 9.4**		**$ -**	**$ 9.4**	**$ -**	Informational (for comparison with supply options)

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	PROGRAM															ALTERNATE		NET PRESENT VALUE									BENEFIT/COST						PARAMETERS														
	COSTS ($000)											SAVINGS (GJ)			LIFE	Impact		Levelized Cost	Utility Benefits (Costs)		Participant Benefits (Costs)			Program Net Savings			Natural Gas	Participant			Natural Gas	Total Resource	TRC Net Benefits	UTILITY				PARTICIPANT										
	Utility			Partners																																											
	Incentives	Administration	Total	Incentives	Administration	Total	Participant	Total	% Utility	% Partner	% Participant	Gross	Net-to-Gross	Net	Years	Energy	Capacity	($/GJ)	Program	Alternate	Program	Carbon Tax	Alternate	Natural Gas	Alternate Energy	Alternate Capacity	Natural Gas	Total Costs	Total Benefits	Benefit/Cost	Natural Gas		($'000s)	Natural Gas Utility Discount	Natural Gas Supply	Alternate Discount Rate	Alternate Supply	Discount Rate	Natural Gas NPV	Carbon Tax NPV	Alternate Energy NPV	Alternate Capacity NPV	Natural Gas Tariff	Energy Tariff	Capacity Tariff
																MWh	kW		($'000s)	($'000s)	($'000s)	($'000s)	($'000s)	(GJ)	(MWh)	(kW)	Utility	($'000s)	($'000s)		Rate Impact			$/GJ		$/kWh		$/GJ	$/GJ	$/kWh	$/kW/a	$/GJ	$/kWh	$/kW/a
Label	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR	AS	AT
Source Sheet or Calculation	Program	Program	B+C	Program	Program	E+F	Program	D+G+H	D/I	G/I	H/I	Program	Program	M+N	Program	Program	Program	D/Y	OxAJ	Q x N x AL	M x N x AN	M x N x AO	N x (QxAP + RxAQ)	PV(AI,P,-Q)	PV(AI,P,-Q*%)	PV(AK,P,-R)	T/D	H>0, (V+W)>0	H>0, (V+W)>0, X	AD/AC	T/(V+O)	(T+U)/I	(T+U)-I	Input	Program	Input	Input	Input	PV(AM,P,-Input!D25)	Input	PV(AM,P,-Input!D28)	PV(AM,P,-Input!D29)	Input	Input	Input
2011 - 2010 program completion																																														
RESIDENTIAL:																																														
Air Tightness	97	0	97	0	0	0	157	254	38%	0%	62%	2,705	88%	2,380	15	0	-	4	224	N/A	231	32	N/A	21,475	0	-	2.3	157	263	1.7	0.7	0.9	(29)	7.15%	94.20	6%	1.17	6.0%	97.11	13.31	0.80	0.00	9.999	0.083	-
Attic Insulation	44	0	44	0	0	0	493	537	8%	0%	92%	4,416	88%	3,886	25	0	-	1	488	N/A	497	65	N/A	44,681	0	-	11.1	493	562	1.1	0.9	0.9	(49)	7.15%	125.59	6%	1.53	6.0%	127.82	16.77	1.06	0.00	9.999	0.083	-
Wall Insulation	17	0	17	0	0	0	306	322	5%	0%	95%	3,817	88%	3,359	25	0	-	0	422	N/A	429	56	N/A	38,619	0	-	25.3	306	486	1.6	0.9	1.3	99	7.15%	125.59	6%	1.53	6.0%	127.82	16.77	1.06	0.00	9.999	0.083	-
Basement Insulation	44	0	44	0	0	0	330	373	12%	0%	88%	6,132	88%	5,396	25	0	-	1	678	N/A	690	90	N/A	62,044	0	-	15.5	330	780	2.4	0.9	1.8	304	7.15%	125.59	6%	1.53	6.0%	127.82	16.77	1.06	0.00	9.999	0.083	-
Windows & Doors	329	85	414	0	0	0	483	898	46%	0%	54%	7,320	88%	6,442	20	0	-	6	720	N/A	739	99	N/A	67,454	0	-	1.7	483	838	1.7	0.6	0.8	(177)	7.15%	111.84	6%	1.38	6.0%	114.69	15.34	0.95	0.00	9.999	0.083	-
2011 **Total Residential**	531	85	616	-	-	-	1,768	2,384	26%	-	74%	24,390		21,463		0	-	3	2,532	0	2,586	342	0	234,273	-	-	4.1	1,768	2,928	1.7	0.8	1.1	148													

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ
1	**UTILITY**		**FORTIS BC**																																	
2																																				
3																																				
4			**Year**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	
5			Units																																	
6		**NATURAL GAS**																																		
7		Incremental Cost of Gas (nominal)	$ Per GJ	$5.58	$6.17	$6.81	$7.35	$7.87	$8.26	$8.56	$8.78	$8.99	$9.19	$9.40	$9.60	$9.81	$10.03	$10.25	$10.47	$10.70	$10.93	$11.17	$11.42	$11.67	$11.92	$12.19	$12.45	$12.73	$13.01	$13.29	$13.58	$13.88	$14.19	$14.50	$14.82	$15.15	
8	1		*Year*	*0*	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*	*16*	*17*	*18*	*19*	*20*	*21*	*22*	*23*	*24*	*25*	*26*	*27*	*28*	*29*	*30*	*31*		
9		carbon tax	$ per GJ	*0.75*	*1.00*	*1.25*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*		
10		Distribution adder	$ per GJ	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*		
11		Total incremental cost of gas including carbon		*6.41*	*7.32*	*8.21*	*9.01*	*9.52*	*9.92*	*10.22*	*10.43*	*10.64*	*10.85*	*11.05*	*11.26*	*11.47*	*11.68*	*11.90*	*12.13*	*12.35*	*12.59*	*12.83*	*13.07*	*13.32*	*13.58*	*13.84*	*14.11*	*14.38*	*14.66*	*14.95*	*15.24*	*15.54*	*15.84*	*16.15*	*16.31*		
12	2	GDP Deflator		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
13	3	Incremental Cost of Gas (Real)		$6.41	$7.32	$8.21	$9.01	$9.52	$9.92	$10.22	$10.43	$10.64	$10.85	$11.05	$11.26	$11.47	$11.68	$11.90	$12.13	$12.35	$12.59	$12.83	$13.07	$13.32	$13.58	$13.84	$14.11	$14.38	$14.66	$14.95	$15.24	$15.54	$15.84	$16.15	$16.47		
14	4	Net Present Value -2010			$12.36	$19.03	$25.47	$32.61	$39.16	$45.47	$51.47	$57.19	$62.63	$67.80	$72.73	$77.39	$81.83	$86.05	$90.07	$93.89	$97.52	$100.98	$104.26	$107.39	$110.36	$113.19	$115.88	$118.43	$120.87	$123.18	$125.39	$127.49	$129.48	$131.38	$133.17		
15	5	Net Present Value -2011			$13.99	$21.31	$28.54	$35.56	$42.31	$48.75	$54.87	$60.70	$66.24	$71.51	$76.51	$81.27	$85.80	$90.10	$94.20	$98.09	$101.79	$105.31	$108.66	$111.84	$114.87	$117.75	$120.49	$123.10	$125.59	$127.95	$130.19	$132.33	$134.37	$136.28			
16	6	Net Present Value -2012				$15.51	$23.23	$30.78	$38.01	$44.91	$51.47	$57.71	$63.65	$69.29	$74.66	$79.76	$84.61	$89.22	$93.61	$97.78	$101.74	$105.51	$109.10	$112.51	$115.76	$118.85	$121.79	$124.58	$127.24	$129.77	$132.18	$134.47	$136.65	$138.70				
17																																				
18																																				
19		**ELECTRICITY**																																		
20		Incremental Cost of Elec	$ Per kWh	$0.10																																
21		Incremental Cost of E Capacity	$ Per kW/a	$170.00																																
22																																				
23																																				
24																																				
25	**RETAIL**																																			
26				Rate	Customers																																
27		Residential Retail			1,000																																
28		**TGI**	$ Per MJ	$0.0100	1,000																																
29		**TGVI**	$ Per MJ	$0.0143	1,000																																
30		**Electricity**	$ Per MJ	$0.0230																																	
31		**Electricity**	$ per kWh	$0.0829	1,000																																
32		**Electricity**	$ per kW per year		1,000																																
33		Commercial Retail																																		
34		**TGI**	$ Per MJ	$0.0094	50																																
35		**TGVI**	$ Per MJ	$0.0160	50																																
36		**Electricity**	$ Per MJ	$0.0214																																	
37		**Electricity**	$ per kWh	$0.0749	1,000																																
38		**Electricity**	$ per kW per year	$52.0000	1,000																																
39																																				
40	**TAX**																																			
41			**Year**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**		
42			*Year*	*-1*	*0*	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*	*16*	*17*	*18*	*19*	*20*	*21*	*22*	*23*	*24*	*25*	*26*	*27*	*28*	*29*	*30*		
43	2	Carbon	$ Per tonne		$20.00	$25.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00		
44	3	Carbon	$ Per GJ		$0.9976	$1.2470	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964		
45	4	GDP Deflator			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
46	5	Carbon (Real)			$1.00	$1.25	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50		
47	6	Net Present Value -2010			$2.02	$3.23	$4.37	$5.43	$6.42	$7.34	$8.20	$9.00	$9.75	$10.45	$11.11	$11.72	$12.29	$12.82	$13.31	$13.78	$14.21	$14.61	$14.99	$15.34	$15.67	$15.97	$16.26	$16.52	$16.77	$17.00	$17.22	$17.42	$17.61	$17.79			
48	7	Net Present Value -2011				$2.47	$3.68	$4.82	$5.88	$6.87	$7.79	$8.65	$9.45	$10.20	$10.90	$11.56	$12.17	$12.74	$13.27	$13.76	$14.23	$14.66	$15.06	$15.44	$15.79	$16.12	$16.42	$16.71	$16.97	$17.22	$17.45	$17.67	$17.87	$18.06				
49	8	Net Present Value -2012					$2.70	$3.92	$5.05	$6.11	$7.10	$8.02	$8.88	$9.69	$10.44	$11.14	$11.79	$12.40	$12.97	$13.50	$14.00	$14.46	$14.89	$15.29	$15.67	$16.02	$16.35	$16.65	$16.94	$17.21	$17.45	$17.69	$17.90	$18.10			
50																																				
51		**Discount Rate (real)**[1]																																		
52		**TERASEN GAS**																																		
53		**Rate of Inflation**	1.90%																																	
54		**TGI**	7.15%																																	
55		**TGVI**	6.89%																																	
56		**BC HYDRO**																																		
57		**Rate of Inflation**	2.00%																																	
58		**BC Hydro**	6.00%																																	
59		**Customer**	6.00%																																	
60		*Footnote 1: Source LR 070531*																																		
61																																				
62				**SHEET LABELS**																																
63	**New Construction**																																			
64		#REF!		**BASEBOARD**																																
65		#REF!		**HEATPUMP**																																

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Measure Data for Air Tightness

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 427			
Total Incentive	$ 150		$ 150	$ -
Participant	$ 277			

Annual Impact Per Measure

Energy Savings per installation	4.2	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	12%	0.88		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	15	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	601	644		644		Estimated Participation
Impact						
Gross Energy Savings (GJ)	2,356	2,705	0	2,705	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	2,073	2,380	0	2,380	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$90.07	$94.20	$97.78	
Energy Purchases	$ 224,206	$ 224,206	$ -	$ 224,206	$ -	
Utility Program Costs						
DSM Incentives		$ 96,600	$ -	$ 96,600	$ -	
Administration		$ -	$ -			
Subtotal	$ 84,138	$ 96,600	$ -	$ 96,600	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 156,981	$ -	$ 156,981	$ -	
Subtotal	$ 136,730	$ 156,981	$ -	$ 156,981	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.165 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 3,337		$ -	$ (29,376)	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 11.8**		**$ -**	**$ 11.8**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Attic Insulation

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 1,573			
Total Incentive	$ 115		$ 115	$ -
Participant	$ 1,458			

Annual Impact Per Measure

Energy Savings per installation	11.5	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	12%	0.88		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	25	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	358	384		384		Estimated Participation
Impact						
Gross Energy Savings (GJ)	3,846	4,416	0	4,416	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	3,385	3,886	0	3,886	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$120.87	$125.59	$129.77	
Energy Purchases	$ 488,035	$ 488,035	$ -	$ 488,035	$ -	
Utility Program Costs						
DSM Incentives		$ 44,160	$ -	$ 44,160	$ -	
Administration		$ -	$ -			
Subtotal	$ 38,463	$ 44,160	$ -	$ 44,160	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 492,687	$ -	$ 492,687	$ -	
Subtotal	$ 429,128	$ 492,687	$ -	$ 492,687	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.534 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 20,444		$ -	$ (48,812)	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 12.0**		**$ -**	**$ 12.0**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Wall Insulation

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$	3,500		
Total Incentive	$	160	$ 160	$ -
Participant	$	3,340		

Annual Impact Per Measure

Energy Savings per installation	36.7	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	12%	0.88		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	25	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	97	104		104		Estimated Participation
Impact						
Gross Energy Savings (GJ)	3,324	3,817	0	3,817	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	2,925	3,359	0	3,359	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$120.87	$125.59	$129.77	
Energy Purchases	$ 421,815	$ 421,815	$ -	$ 421,815	$ -	
Utility Program Costs						
DSM Incentives		$ 16,640	$ -	$ 16,640	$ -	
Administration		$ -	$ -			
Subtotal	$ 14,493	$ 16,640	$ -	$ 16,640	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 305,677	$ -	$ 305,677	$ -	
Subtotal	$ 266,243	$ 305,677	$ -	$ 305,677	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.534 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 141,078		$ -	$ 99,498	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 8.3**		**$ -**	**$ 8.3**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Basement Insulation

PER MEASURE		Utility Incentive to the participant	partner incentive
Incremental Cost	$ 1,433		
Total Incentive	$ 150	$ 150	$ -
Participant	$ 1,283		

Annual Impact Per Measure

Energy Savings per installation	21.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	12%	0.88		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	25	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	254	292	0	292		Estimated Participation
Impact						
Gross Energy Savings (GJ)	5,341	6,132	0	6,132	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	4,700	5,396	0	5,396	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$120.87	$125.59	$129.77	
Energy Purchases	$ 677,679	$ 677,679	$ -	$ 677,679	$ -	
Utility Program Costs						
DSM Incentives		$ 43,800	$ -	$ 43,800	$ -	
Administration		$ -	$ -			
Subtotal	$ 38,150	$ 43,800	$ -	$ 43,800	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 329,680	$ -	$ 329,680	$ -	
Subtotal	$ 287,149	$ 329,680	$ -	$ 329,680	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.534 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 352,381		$ -	$ 304,200	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 6.0**		**$ -**	**$ 6.0**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Windows & Doors

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 1,200			
Total Incentive	$ 450		$ 450	$ -
Participant	$ 750			

Annual Impact Per Measure

Energy Savings per installation	10.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	12%	0.88		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	20	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	683	732		732		Estimated Participation
Impact						
Gross Energy Savings (GJ)	6,376	7,320	0	7,320	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	5,611	6,442	0	6,442	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$107.39	$111.84	$115.76	
Energy Purchases	$ 720,437	$ 720,437	$ -	$ 720,437	$ -	
Utility Program Costs						
DSM Incentives		$ 329,400	$ -	$ 329,400	$ -	
Administration		$ 85,000	$ -	$ 85,000		
Subtotal	$ 360,940	$ 414,400	$ -	$ 414,400	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -		$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 483,120	$ -	$ 483,120	$ -	
Subtotal	$ 420,795	$ 483,120	$ -	$ 483,120	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.376 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ (61,298)		$ -	$ (177,083)	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 13.3**		**$ -**	**$ 13.3**	**$ -**	Informational (for comparison with supply options)

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	PROGRAM															ALTERNATE		NET PRESENT VALUE									BENEFIT/COST							PARAMETERS															
	COSTS ($000)											SAVINGS (GJ)			LIFE	Impact		Levelized Cost	Utility Benefits (Costs)		Participant Benefits (Costs)			Program Net Savings				Participant							UTILITY				PARTICIPANT										
	Utility			Partners																																													
	Incentives	Administration	Total	Incentives	Administration	Total	Participant	Total	% Utility	% Partner	% Participant	Gross	Net-to-Gross	Net	Years	Energy	kW	($/GJ)	Program ($'000s)	Alternate ($'000s)	Program ($'000s)	Carbon Tax ($'000s)	Alternate ($'000s)	Natural Gas (GJ)	Alternate Energy (MWh)	Alternate Capacity (kW)	Natural Gas Utility	Total Costs ($'000s)	Total Benefits ($'000s)	Benefit/Cost	Natural Gas Rate Impact	SCT	SCT Net Benefits ($'000s)	Natural Gas Utility Discount	Natural Gas Supply $/GJ	Alternate Discount Rate	Alternate Supply $/kWh	Discount Rate	Natural Gas NPV $/GJ	Carbon Tax NPV $/GJ	Alternate Energy NPV $/kWh	Alternate Capacity NPV $/kW/a	Natural Gas Tariff $/GJ	Energy Tariff $/kWh	Capacity Tariff $/kW/a
Label	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR	AS	AT
Source Sheet or Calculation	Program	Program	B+C	Program	Program	E+F	Program	D+G+H	D/I	G/I	H/I	Program	Program	M/N	Program	Program	Program	D/Y	OxAJ	Q x N x AL	M x N x AN	M x N x AO	N x (QxAP x RxAQ)	PV(AJ,P,-C)	PV(AK,P,-Q*N)	PV(AK,P,-R)	T/D	H>0, (V+W)>0	H>0, (V+W)>0, X	AD/AC	T/(V+D)	(T+U)/I	(T+U)-I	Input	Program	Input	Input	Input	PV(AM,P,-Input!D25)	Input	PV(AM,P,-Input!D28)	PV(AM,P,-Input!D29)	Input	Input	Input
2011																																																
RESIDENTIAL:																																															
Air Tightness	881	0	881	0	0	0	338	1,219	72%	0%	28%	12,440	88%	10,948	15	0	-	7	2,123	N/A	1,307	198	N/A	130,691	0	-	2.4	338	1,505	4.5	1.0	1.7	904	3.00%	193.94	3%	1.43	3.0%	119.37	18.08	0.99	0.00	9.999	0.083	-
Attic Insulation	171	0	171	0	0	0	878	1,049	16%	0%	84%	8,545	88%	7,519	25	0	-	1	2,075	N/A	1,309	196	N/A	130,932	0	-	12.1	878	1,505	1.7	1.4	2.0	1,026	3.00%	276.02	3%	2.09	3.0%	174.11	26.03	1.44	0.00	9.999	0.083	-
Wall Insulation	94	0	94	0	0	0	826	920	10%	0%	90%	10,827	88%	9,527	25	0	-	1	2,630	N/A	1,659	248	N/A	165,901	0	-	27.9	826	1,907	2.3	1.5	2.9	1,710	3.00%	276.02	3%	2.09	3.0%	174.11	26.03	1.44	0.00	9.999	0.083	-
Basement Insulation	89	0	89	0	0	0	294	383	23%	0%	77%	6,195	88%	5,452	25	0	-	1	1,505	N/A	949	142	N/A	94,930	0	-	17.0	294	1,091	3.7	1.5	3.9	1,122	3.00%	276.02	3%	2.09	3.0%	174.11	26.03	1.44	0.00	9.999	0.083	-
Windows & Doors	361	162	523	0	0	0	529	1,052	50%	0%	50%	8,020	88%	7,058	20	0	-	5	1,680	N/A	1,050	158	N/A	104,999	0	-	3.2	529	1,208	2.3	1.1	1.6	628	3.00%	238.01	3%	1.79	3.0%	148.76	22.35	1.23	0.00	9.999	0.083	-
2011 Total Residential	1,596	162	1,758	-	-	-	2,865	4,622	38%	-	62%	46,026		40,503		0	-	3	13,017	0	6,274	941	0	627,453	-	-	7.4	2,865	7,215	2.5	1.6	2.8	8,394													

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ
1	**UTILITY**		**Terasen Gas Inc**																																		
2																																					
3																																					
4			**Year**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	
5			Units																																		
6		**NATURAL GAS**																																			
7		Incremental Cost of Gas (nominal)	$ Per GJ	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.43	
8	1		*Year*	*0*	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*	*16*	*17*	*18*	*19*	*20*	*21*	*22*	*23*	*24*	*25*	*26*	*27*	*28*	*29*	*30*	*31*		
9		carbon tax	$ per GJ	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*		
10		Distribution adder	$ per GJ	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*		
11		Total incremental cost of gas including carbon		*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.28*		
12	2	GDP Deflator		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
13	3	Incremental Cost of Gas (Real)		$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.28		
14	4	Net Present Value -2010			$29.54	$43.67	$57.39	$70.71	$83.64	$96.20	$108.38	$120.22	$131.71	$142.86	$153.69	$164.20	$174.41	$184.32	$193.94	$203.28	$212.35	$221.16	$229.71	$238.01	$246.07	$253.89	$261.48	$268.86	$276.02	$282.97	$289.72	$296.27	$302.63	$308.81	$314.74		
15	5	Net Present Value -2011			$29.54	$43.67	$57.39	$70.71	$83.64	$96.20	$108.38	$120.22	$131.71	$142.86	$153.69	$164.20	$174.41	$184.32	$193.94	$203.28	$212.35	$221.16	$229.71	$238.01	$246.07	$253.89	$261.48	$268.86	$276.02	$282.97	$289.72	$296.27	$302.63	$308.74			
16	6	Net Present Value -2012				$29.54	$43.67	$57.39	$70.71	$83.64	$96.20	$108.38	$120.22	$131.71	$142.86	$153.69	$164.20	$174.41	$184.32	$193.94	$203.28	$212.35	$221.16	$229.71	$238.01	$246.07	$253.89	$261.48	$268.86	$276.02	$282.97	$289.72	$296.27	$302.56				
17																																					
18																																					
19		**ELECTRICITY**																																			
20		Incremental Cost of Elec	$ Per kWh	$0.10																																	
21		Incremental Cost of E Capacity	$ Per kW/a	$170.00																																	
22																																					
23																																					
24																																					
25	**RETAIL**																																				
26																																					
27				Rate	Customers																																
28		Residential Retail			1,000																																
29		**TGI**	$ Per MJ	$0.0100	1,000																																
30		**TGVI**	$ Per MJ	$0.0143	1,000																																
31		**Electricity**	$ Per MJ	$0.0230																																	
32		**Electricity**	$ per kWh	$0.0829	1,000																																
33		**Electricity**	$ per kW per year		1,000																																
34		Commercial Retail																																			
35		**TGI**	$ Per MJ	$0.0094	50																																
36		**TGVI**	$ Per MJ	$0.0160	50																																
37		**Electricity**	$ Per MJ	$0.0214																																	
38		**Electricity**	$ per kWh	$0.0749	1,000																																
39		**Electricity**	$ per kW per year	$52.0000	1,000																																
40																																					
41	**TAX**																																				
42			**Year**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**		
43			*Year*		*0*	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*	*16*	*17*	*18*	*19*	*20*	*21*	*22*	*23*	*24*	*25*	*26*	*27*	*28*	*29*	*30*		
44	2	Carbon	$ Per tonne		$20.00	$25.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00		
45	3	Carbon	$ Per GJ		$0.9976	$1.2470	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964		
46	4	GDP Deflator			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
47	5	Carbon (Real)			$1.00	$1.25	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50		
48	6	Net Present Value -2010				$2.14	$3.51	$4.84	$6.13	$7.39	$8.60	$9.78	$10.93	$12.05	$13.13	$14.18	$15.19	$16.18	$17.14	$18.08	$18.98	$19.86	$20.71	$21.54	$22.35	$23.13	$23.89	$24.62	$25.34	$26.03	$26.71	$27.38	$27.99	$28.61	$29.21			
49	7	Net Present Value -2011					$2.62	$3.99	$5.32	$6.61	$7.86	$9.08	$10.26	$11.41	$12.52	$13.60	$14.65	$15.67	$16.66	$17.62	$18.55	$19.46	$20.34	$21.19	$22.02	$22.82	$23.61	$24.36	$25.10	$25.81	$26.51	$27.18	$27.84	$28.47	$29.09		
50	8	Net Present Value -2012						$2.86	$4.23	$5.56	$6.85	$8.11	$9.32	$10.50	$11.65	$12.76	$13.85	$14.90	$15.91	$16.90	$17.86	$18.80	$19.70	$20.58	$21.43	$22.26	$23.07	$23.85	$24.61	$25.34	$26.06	$26.75	$27.42	$28.08	$28.71		
51																																					
52		**Discount Rate (real)**[1]																																			
53		**TERASEN GAS**																																			
54		**Rate of Inflation**	1.90%																																		
55		**TGI**	3.00%																																		
56		**TGVI**	3.00%																																		
57		**BC HYDRO**																																			
58		**Rate of Inflation**	2.00%																																		
59		**BC Hydro**	3.00%																																		
60		**Customer**	3.00%																																		
61		*Footnote 1: Source LR 670531*																																			
62																																					
63				**SHEET LABELS**																																	
64	**New Construction**																																				
65		#REF!		**BASEBOARD**																																	
66		#REF!		**HEATPUMP**																																	

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Measure Data for Air Tightness

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 427			
Total Incentive	$ 297		$ 297	$ -
Participant	$ 130			

Annual Impact Per Measure

Energy Savings per installation	4.2	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	12%	0.88		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	15	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	6,406	6,911	0	2,962	3,949	Estimated Participation
Impact						
Gross Energy Savings (GJ)	26,905	29,026	0	12,440	16,586	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	23,676	25,543	0	10,948	14,596	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$193.94	$193.94	$193.94	
Energy Purchases	$ 4,953,908	$4,953,908	$ -	$ 2,123,206	$2,830,702	
Utility Program Costs						
DSM Incentives		$2,055,401	$ -	$ 880,928	$1,174,472	
Administration		$ -	$ -			
Subtotal	$1,905,168	$2,055,401	$ -	$ 880,928	$1,174,472	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 788,125	$ -	$ 337,784	$ 450,341	
Subtotal	$ 730,520	$ 788,125	$ -	$ 337,784	$ 450,341	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.433 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 2,318,220		$ -	$ 904,493	$ 1,205,889	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 9.3**		**$ -**	**$ 9.3**	**$ 9.3**	Informational (for comparison with supply options)

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Measure Data for Attic Insulation

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 1,573			
Total Incentive	$ 230		$ 230	$ -
Participant	$ 1,343			

Annual Impact Per Measure

Energy Savings per installation	11.5	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	12%	0.88		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	25	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1,606	1,733	0	743	990	Estimated Participation
Impact						
Gross Energy Savings (GJ)	18,473	19,930	0	8,545	11,385	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	16,256	17,538	0	7,519	10,019	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$276.02	$276.02	$276.02	
Energy Purchases	$ 4,840,800	$4,840,800	$ -	$2,075,427	$2,765,374	
Utility Program Costs						
DSM Incentives		$ 398,590	$ -	$ 170,890	$ 227,700	
Administration		$ -	$ -			
Subtotal	$ 369,458	$ 398,590	$ -	$ 170,890	$ 227,700	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$2,048,129	$ -	$ 878,107	$1,170,022	
Subtotal	$1,898,436	$2,048,129	$ -	$ 878,107	$1,170,022	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$2.090 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 2,572,907		$ -	$ 1,026,430	$ 1,367,652	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 8.0**		**$ -**	**$ 8.0**	**$ 8.0**	Informational (for comparison with supply options)

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Measure Data for Wall Insulation

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 3,500			
Total Incentive	$ 320		$ 320	$ -
Participant	$ 3,180			

Annual Impact Per Measure

Energy Savings per installation	36.7	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	12%	0.88		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	25	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	639	689	0	295	394	Estimated Participation
Impact						
Gross Energy Savings (GJ)	23,438	25,286	0	10,827	14,460	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	20,625	22,252	0	9,527	12,725	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$276.02	$276.02	$276.02	
Energy Purchases	$ 6,141,947	$6,141,947	$ -	$2,629,716	$3,512,231	
Utility Program Costs						
DSM Incentives		$ 220,480	$ -	$ 94,400	$ 126,080	
Administration		$ -	$ -			
Subtotal	$ 204,362	$ 220,480	$ -	$ 94,400	$ 126,080	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$1,928,098	$ -	$ 825,528	$1,102,570	
Subtotal	$1,787,147	$1,928,098	$ -	$ 825,528	$1,102,570	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$2.090 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 4,150,438		$ -	$ 1,709,788	$ 2,283,581	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 5.5**		**$ -**	**$ 5.5**	**$ 5.5**	Informational (for comparison with supply options)

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Measure Data for Basement Insulation

PER MEASURE		Utility Incentive to the participant	partner incentive
Incremental Cost	$ 1,433		
Total Incentive	$ 300	$ 300	$ -
Participant	$ 1,133		

Annual Impact Per Measure

Energy Savings per installation	21.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	12%	0.88		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	25	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	639	689	0	295	394	Estimated Participation
Impact						
Gross Energy Savings (GJ)	13,411	14,469	0	6,195	8,274	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	11,802	12,733	0	5,452	7,281	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$276.02	$276.02	$276.02	
Energy Purchases	$ 3,514,466	$3,514,466	$ -	$1,504,742	$2,009,723	
Utility Program Costs						
DSM Incentives		$ 206,700	$ -	$ 88,500	$ 118,200	
Administration		$ -	$ -			
Subtotal	$ 191,589	$ 206,700	$ -	$ 88,500	$ 118,200	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 686,961	$ -	$ 294,127	$ 392,834	
Subtotal	$ 636,741	$ 686,961	$ -	$ 294,127	$ 392,834	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$2.090 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 2,686,135		$ -	$ 1,122,115	$ 1,498,690	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 4.0**		**$ -**	**$ 4.0**	**$ 4.0**	Informational (for comparison with supply options)

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Measure Data for Windows & Doors

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 1,200			
Total Incentive	$ 450		$ 450	$ -
Participant	$ 750			

Annual Impact Per Measure

Energy Savings per installation	10.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	12%	0.88		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	20	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1,734	1,871	0	802	1,069	Estimated Participation
Impact						
Gross Energy Savings (GJ)	17,342	18,710	0	8,020	10,690	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	15,261	16,465	0	7,058	9,407	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$238.01	$238.01	$238.01	
Energy Purchases	$ 3,918,754	$3,918,754	$ -	$1,679,765	$2,238,989	
Utility Program Costs						
DSM Incentives		$ 841,950	$ -	$ 360,900	$ 481,050	
Administration		$ 324,000	$ -	$ 162,000	$ 162,000	
Subtotal	$1,081,365	$1,165,950	$ -	$ 522,900	$ 643,050	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$1,234,860	$ -	$ 529,320	$ 705,540	
Subtotal	$1,144,604	$1,234,860	$ -	$ 529,320	$ 705,540	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.785 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 1,692,785		$ -	$ 627,545	$ 890,399	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 9.8**		**$ -**	**$ 10.0**	**$ 9.6**	Informational (for comparison with supply options)

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	PROGRAM															ALTERNATE		NET PRESENT VALUE									BENEFIT/COST						PARAMETERS														
	COSTS ($000)											SAVINGS (GJ)			LIFE	Impact		Levelized Cost	Utility Benefits (Costs)		Participant Benefits (Costs)			Program Net Savings			Natural Gas	Participant			Natural Gas		TRC Net Benefits	UTILITY				PARTICIPANT									
	Utility			Partners																																											
	Incentives	Administration	Total	Incentives	Administration	Total	Participant	Total	% Utility	% Partner	% Participant	Gross	Net-to-Gross	Net	Years	Energy	Capacity	($/GJ)	Program	Alternate	Program	Carbon Tax	Alternate	Natural Gas	Alternate Energy	Alternate Capacity	Natural Gas	Total Costs	Total Benefits	Benefit/Cost	Natural Gas	Total Resource	($'000s)	Natural Gas Utility Discount	Natural Gas Supply	Alternate Discount Rate	Alternate Supply	Discount Rate	Natural Gas NPV	Carbon Tax NPV	Alternate Energy NPV	Alternate Capacity NPV	Natural Gas Tariff	Energy Tariff	Capacity Tariff			
																MWh	kW		($'000s)	($'000s)	($'000s)	($'000s)	($'000s)	(GJ)	(MWh)	(kW)	Utility	($'000s)	($'000s)		Rate Impact			$/GJ	$/GJ	$/kWh												
Label	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR	AS	AT			
Source Sheet or Calculation	Program	Program	B+C	Program	Program	E+F	Program	D+G+H	D/I	G/I	H/I	Program	Program	M+N	Program	Program	Program	D/Y	OxAJ	Q x N x AL	M x N x AN	M x N x AO	N x (QxAP + RxAQ)	PV(AI,P,-Q)	PV(AK,P,-Q*%)	PV(AK,P,-R)	T/D	H>0, (V+W)>0	H>0, (V+W)>0, X	AD/AC	T/(V+O)	(T+U)/I	(T+U)-I	Input	Program	Input	Input	Input	PV(AM,P,-Input!D25)	Input	PV(AM,P,-Input!D28)	PV(AM,P,-Input!D29)	Input	Input	Input			
2011																																															
RESIDENTIAL:																																															
Air Tightness	881	0	881	0	0	0	338	1,219	72%	0%	28%	12,440	88%	10,948	15	0	-	9	1,031	N/A	1,063	146	N/A	98,772	0	-	1.2	338	1,209	3.6	0.5	0.8	(188)	7.15%	94.20	6%	1.17	6.0%	97.11	13.31	0.80	0.00	9.999	0.083	-			
Attic Insulation	171	0	171	0	0	0	878	1,049	16%	0%	84%	8,545	88%	7,519	25	0	-	2	944	N/A	961	126	N/A	86,454	0	-	5.5	878	1,087	1.2	0.8	0.9	(105)	7.15%	125.59	6%	1.53	6.0%	127.82	16.77	1.06	0.00	9.999	0.083	-			
Wall Insulation	94	0	94	0	0	0	826	920	10%	0%	90%	10,827	88%	9,527	25	0	-	1	1,196	N/A	1,218	160	N/A	109,543	0	-	12.7	826	1,378	1.7	0.9	1.3	277	7.15%	125.59	6%	1.53	6.0%	127.82	16.77	1.06	0.00	9.999	0.083	-			
Basement Insulation	89	0	89	0	0	0	294	383	23%	0%	77%	6,195	88%	5,452	25	0	-	1	685	N/A	697	91	N/A	62,681	0	-	7.7	294	788	2.7	0.9	1.8	302	7.15%	125.59	6%	1.53	6.0%	127.82	16.77	1.06	0.00	9.999	0.083	-			
Windows & Doors	361	162	523	0	0	0	529	1,052	50%	0%	50%	8,020	88%	7,058	20	0	-	7	789	N/A	809	108	N/A	73,905	0	-	1.5	529	918	1.7	0.6	0.8	(263)	7.15%	111.84	6%	1.38	6.0%	114.69	15.34	0.95	0.00	9.999	0.083	-			
2011 Total Residential	1,596	162	1,758	-	-	-	2,865	4,622	38%	-	62%	46,026		40,503		0	-	4	4,646	0	4,748	631	0	431,354	-	-	2.6	2,865	5,380	1.9	0.7	1.0	23														

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ
1	**UTILITY**		**Terasen Gas Inc**																																	
2																																				
3																																				
4			**Year**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	
5			Units																																	
6		**NATURAL GAS**																																		
7		Incremental Cost of Gas (nominal)	$ Per GJ	$5.58	$6.17	$6.81	$7.35	$7.87	$8.26	$8.56	$8.78	$8.99	$9.19	$9.40	$9.66	$9.81	$10.03	$10.25	$10.47	$10.70	$10.93	$11.17	$11.42	$11.67	$11.92	$12.19	$12.45	$12.73	$13.01	$13.29	$13.58	$13.88	$14.19	$14.50	$14.82	$15.18	
8	1		*Year*	*0*	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*	*16*	*17*	*18*	*19*	*20*	*21*	*22*	*23*	*24*	*25*	*26*	*27*	*28*	*29*	*30*	*31*		
9		carbon tax	$ per GJ	*0.75*	*1.00*	*1.25*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*		
10		Distribution adder	$ per GJ	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*		
11		Total incremental cost of gas including carbon		*6.41*	*7.32*	*8.21*	*9.01*	*9.52*	*9.92*	*10.22*	*10.43*	*10.64*	*10.85*	*11.05*	*11.26*	*11.47*	*11.68*	*11.90*	*12.13*	*12.35*	*12.59*	*12.83*	*13.07*	*13.32*	*13.58*	*13.84*	*14.11*	*14.38*	*14.66*	*14.95*	*15.24*	*15.54*	*15.84*	*16.15*	*16.31*		
12	2	GDP Deflator		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
13	3	Incremental Cost of Gas (Real)		$6.41	$7.32	$8.21	$9.01	$9.52	$9.92	$10.22	$10.43	$10.64	$10.85	$11.05	$11.26	$11.47	$11.68	$11.90	$12.13	$12.35	$12.59	$12.83	$13.07	$13.32	$13.58	$13.84	$14.11	$14.38	$14.66	$14.95	$15.24	$15.54	$15.84	$16.15	$16.46		
14	4	Net Present Value -2010			$12.36	$19.03	$25.47	$32.61	$39.16	$45.47	$51.47	$57.19	$62.63	$67.80	$72.71	$77.39	$81.83	$86.05	$90.07	$93.89	$97.52	$100.98	$104.26	$107.39	$110.36	$113.19	$115.88	$118.43	$120.87	$123.18	$125.39	$127.49	$129.48	$131.38	$133.17		
15	5	Net Present Value -2011			$13.99	$21.31	$28.54	$35.56	$42.31	$48.75	$54.87	$60.70	$66.24	$71.51	$76.51	$81.27	$85.80	$90.10	$94.20	$98.09	$101.79	$105.31	$108.66	$111.84	$114.87	$117.75	$120.49	$123.10	$125.59	$127.95	$130.19	$132.33	$134.37	$136.28			
16	6	Net Present Value -2012			$15.51	$23.25	$30.78	$38.01	$44.91	$51.47	$57.71	$63.65	$69.29	$74.66	$79.76	$84.61	$89.22	$93.61	$97.78	$101.74	$105.51	$109.10	$112.51	$115.76	$118.85	$121.79	$124.58	$127.24	$129.77	$132.18	$134.47	$136.65	$138.70				
17																																				
18																																				
19		**ELECTRICITY**																																		
20		Incremental Cost of Elec	$ Per kWh	$0.10																																
21		Incremental Cost of E Capacity	$ Per kW/a	$170.00																																
22																																				
23																																				
24																																				
25	**RETAIL**																																			
26				Rate	Customers																																
27		Residential Retail			1,000																																
28		**TGI**	$ Per MJ	$0.0100	1,000																																
29		**TGVI**	$ Per MJ	$0.0143	1,000																																
30		**Electricity**	$ Per MJ	$0.0230																																
31		**Electricity**	$ per kWh	$0.0829	1,000																																
32		**Electricity**	$ per kW per year		1,000																																
33		Commercial Retail																																		
34		**TGI**	$ Per MJ	$0.0094	50																																
35		**TGVI**	$ Per MJ	$0.0160	50																																
36		**Electricity**	$ Per MJ	$0.0214																																
37		**Electricity**	$ per kWh	$0.0709	1,000																																
38		**Electricity**	$ per kW per year	$52.0000	1,000																																
39																																				
40	**TAX**																																			
41			**Year**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**		
42			*Year*	*-1*	*0*	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*	*16*	*17*	*18*	*19*	*20*	*21*	*22*	*23*	*24*	*25*	*26*	*27*	*28*	*29*	*30*		
43	2	Carbon	$ Per tonne		$20.00	$25.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00		
44	3	Carbon	$ Per GJ		$0.9976	$1.2470	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964		
45	4	GDP Deflator			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
46	5	Carbon (Real)			$1.00	$1.25	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50		
47	6	Net Present Value -2010			$2.02	$3.23	$4.37	$5.43	$6.42	$7.34	$8.20	$9.00	$9.75	$10.45	$11.11	$11.72	$12.29	$12.82	$13.31	$13.78	$14.21	$14.61	$14.99	$15.34	$15.67	$15.97	$16.26	$16.52	$16.77	$17.00	$17.22	$17.42	$17.61	$17.79			
48	7	Net Present Value -2011				$2.47	$3.68	$4.82	$5.88	$6.87	$7.79	$8.65	$9.45	$10.20	$10.90	$11.56	$12.17	$12.74	$13.27	$13.76	$14.23	$14.66	$15.06	$15.44	$15.79	$16.12	$16.42	$16.71	$16.97	$17.22	$17.45	$17.67	$17.87	$18.06				
49	8	Net Present Value -2012					$2.70	$3.92	$5.05	$6.11	$7.10	$8.02	$8.88	$9.69	$10.44	$11.14	$11.79	$12.40	$12.97	$13.50	$14.00	$14.46	$14.89	$15.29	$15.67	$16.02	$16.35	$16.65	$16.94	$17.21	$17.45	$17.69	$17.90	$18.10		
50																																				
51		**Discount Rate (real)**[1]																																		
52		**TERASEN GAS**																																		
53		**Rate of Inflation**	1.90%																																	
54		**TGI**	7.15%																																	
55		**TGVI**	6.89%																																	
56		**BC HYDRO**																																		
57		**Rate of Inflation**	2.00%																																	
58		**BC Hydro**	6.00%																																	
59		**Customer**	6.00%																																	
60		*Footnote 1: Source LR 670531*																																		
61																																				
62				**SHEET LABELS**																																
63	**New Construction**																																			
64		#REF!		**BASEBOARD**																																
65		#REF!		**HEATPUMP**																																

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Measure Data for Air Tightness

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 427			
Total Incentive	$ 297		$ 297	$ -
Participant	$ 130			

Annual Impact Per Measure

Energy Savings per installation	4.2	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	12%	0.88		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	15	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	5,790	6,911	0	2,962	3,949	Estimated Participation
Impact						
Gross Energy Savings (GJ)	24,318	29,026	0	12,440	16,586	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	21,400	25,543	0	10,948	14,596	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$90.07	$94.20	$97.78	
Energy Purchases	$ 2,458,295	$2,458,295	$ -	$ 1,031,206	$1,427,088	
Utility Program Costs						
DSM Incentives		$2,055,401	$ -	$ 880,928	$1,174,472	
Administration		$ -	$ -			
Subtotal	$1,721,983	$2,055,401	$ -	$ 880,928	$1,174,472	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 788,125	$ -	$ 337,784	$ 450,341	
Subtotal	$ 660,279	$ 788,125	$ -	$ 337,784	$ 450,341	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.165 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 76,033		$ -	$ (187,506)	$ (197,725)	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 12.3**		**$ -**	**$ 12.3**	**$ 12.3**	Informational (for comparison with supply options)

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Measure Data for Attic Insulation

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 1,573			
Total Incentive	$ 230		$ 230	$ -
Participant	$ 1,343			

Annual Impact Per Measure

Energy Savings per installation	11.5	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	12%	0.88		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	25	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1,452	1,733	0	743	990	Estimated Participation
Impact						
Gross Energy Savings (GJ)	16,697	19,930	0	8,545	11,385	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	14,693	17,538	0	7,519	10,019	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$120.87	$125.59	$129.77	
Energy Purchases	$ 2,244,447	$2,244,447	$ -	$ 944,297	$1,300,150	
Utility Program Costs						
DSM Incentives		$ 398,590	$ -	$ 170,890	$ 227,700	
Administration		$ -	$ -			
Subtotal	$ 333,936	$ 398,590	$ -	$ 170,890	$ 227,700	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$2,048,129	$ -	$ 878,107	$1,170,022	
Subtotal	$1,715,908	$2,048,129	$ -	$ 878,107	$1,170,022	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.534 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 194,604		$ -	$ (104,700)	$ (97,572)	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 12.1**		**$ -**	**$ 12.1**	**$ 12.1**	Informational (for comparison with supply options)

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Measure Data for Wall Insulation

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 3,500			
Total Incentive	$ 320		$ 320	$ -
Participant	$ 3,180			

Annual Impact Per Measure

Energy Savings per installation	36.7	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	12%	0.88		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	25	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	577	689	0	295	394	Estimated Participation
Impact						
Gross Energy Savings (GJ)	21,184	25,286	0	10,827	14,460	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	18,642	22,252	0	9,527	12,725	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$120.87	$125.59	$129.77	
Energy Purchases	$ 2,847,781	$2,847,781	$ -	$1,196,493	$1,651,287	
Utility Program Costs						
DSM Incentives		$ 220,480	$ -	$ 94,400	$ 126,080	
Administration		$ -	$ -			
Subtotal	$ 184,709	$ 220,480	$ -	$ 94,400	$ 126,080	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$1,928,098	$ -	$ 825,528	$1,102,570	
Subtotal	$1,615,281	$1,928,098	$ -	$ 825,528	$1,102,570	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.534 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 1,047,790		$ -	$ 276,565	$ 422,638	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 8.4**		**$ -**	**$ 8.4**	**$ 8.4**	Informational (for comparison with supply options)

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Measure Data for Basement Insulation

PER MEASURE		Utility Incentive to the participant	partner incentive
Incremental Cost	$ 1,433		
Total Incentive	$ 300	$ 300	$ -
Participant	$ 1,133		

Annual Impact Per Measure

Energy Savings per installation	21.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	12%	0.88		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	25	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	577	689	0	295	394	Estimated Participation
Impact						
Gross Energy Savings (GJ)	12,122	14,469	0	6,195	8,274	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	10,667	12,733	0	5,452	7,281	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$120.87	$125.59	$129.77	
Energy Purchases	$ 1,629,520	$1,629,520	$ -	$ 684,642	$ 944,878	
Utility Program Costs						
DSM Incentives		$ 206,700	$ -	$ 88,500	$ 118,200	
Administration		$ -	$ -			
Subtotal	$ 173,165	$ 206,700	$ -	$ 88,500	$ 118,200	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 686,961	$ -	$ 294,127	$ 392,834	
Subtotal	$ 575,507	$ 686,961	$ -	$ 294,127	$ 392,834	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.534 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 880,848		$ -	$ 302,015	$ 433,845	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 6.1**		**$ -**	**$ 6.1**	**$ 6.1**	Informational (for comparison with supply options)

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Measure Data for Windows & Doors

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 1,200			
Total Incentive	$ 450		$ 450	$ -
Participant	$ 750			

Annual Impact Per Measure

Energy Savings per installation	10.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	12%	0.88		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	20	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1,568	1,871	0	802	1,069	Estimated Participation
Impact						
Gross Energy Savings (GJ)	15,675	18,710	0	8,020	10,690	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	13,794	16,465	0	7,058	9,407	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$107.39	$111.84	$115.76	
Energy Purchases	$ 1,878,310	$1,878,310	$ -	$ 789,332	$1,088,979	
Utility Program Costs						
DSM Incentives		$ 841,950	$ -	$ 360,900	$ 481,050	
Administration		$ 324,000	$ -	$ 162,000	$ 162,000	
Subtotal	$ 978,162	$1,165,950	$ -	$ 522,900	$ 643,050	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$1,234,860	$ -	$ 529,320	$ 705,540	
Subtotal	$1,034,551	$1,234,860	$ -	$ 529,320	$ 705,540	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.376 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ (134,402)		$ -	$ (262,888)	$ (259,611)	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 13.9**		**$ -**	**$ 14.2**	**$ 13.7**	Informational (for comparison with supply options)

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2011 Joint Initiatives Programs Planned	PROGRAM															ALTERNATE		NET PRESENT VALUE									BENEFIT/COST						PARAMETERS											
	COSTS ($000)											SAVINGS (GJ)			LIFE	Impact		Levelized Cost	Utility Benefits (Costs)		Participant Benefits (Costs)			Program Net Savings			Participant						UTILITY				PARTICIPANT							
FEVI	Utility			Partners												Energy	Capacity	($/GJ)	Program	Alternate	Program	Carbon Tax	Alternate	Natural Gas	Alternate Energy	Alternate Capacity	Natural Gas	Total Costs	Total Benefits	Benefit/Cost	Natural Gas	SCT	SCT Net Benefits	Natural Gas Utility Discount	Natural Gas Supply	Alternate Discount Rate	Alternate Supply	Discount Rate	Natural Gas NPV	Carbon Tax NPV	Alternate Energy NPV	Alternate Capacity NPV	Natural Gas Tariff	Energy Tariff	Capacity Tariff
	Incentives	Administration	Total	Incentives	Administration	Total	Participant	Total	% Utility	% Partner	% Participant	Gross	Net-to-Gross	Net	Years	MWh	kW		($'000s)	($'000s)	($'000s)	($'000s)	($'000s)	(GJ)	(MWh)	(kW)	Utility	($'000s)	($'000s)		Rate Impact	SCT	($'000s)	$/GJ	$/GJ		$/kWh	$/GJ	$/GJ	$/GJ	$/kW/a	$/GJ	$/kWh	$/kW/a
Label	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR	AS	AT
Source Sheet or Calculation	Program	Program	B+C	Program	Program	E+F	Program	D+G+H	D/I	G/I	H/I	Program	Program	M+N	Program	Program	Program	D/Y	OxAJ	Q x N x AL	M x N x AN	M x N x AO	N x (QxAP + RxAQ)	PV(AJ,P,-O)	PV(AK,P,-Q*N)	PV(AK,P,-R)	T/D	H>0, (V+W)>0	H>0, (V+W)>0, X	AD/AC	T/(V+O)	(T+U)/I	(T+U)-I	Input	Program	Input	Input	Input	PV(AM,P,-Input!D25)	Input	PV(AM,P,-Input!D28)	PV(AM,P,-Input!D29)	Input	Input	Input
2011																																												
RESIDENTIAL:																																												
Washing Machine Rebate	63	8	71	0	0	0	359	430	17%	0%	83%	3,780	95%	3,591	14	0	-	2	860	N/A	581	62	N/A	40,564	0	-	12.1	359	643	1.8	1.3	2.0	430	3.00%	184.20	3%	1.36	3.0%	161.82	17.14	0.93	0.00	9.999	0.083	-
Live Smart BC 2010-2011	27	15	42	0	0	0	88	130	32%	-	68%	1,221	88%	1,075		0	-	2	357	N/A	172	26	N/A	17,243	0	-	8.6	88	198	2.2	1.7	2.7	227												
Live Smart BC 2011-2012	160	18	178	-	-	0	288	466	38%	0%	62%	4,625	88%	4,070		0	-	3	1,309	0	631	95	0	63,099	-	-	7.4	288	726	2.5	1.6	2.8	843												
Home Efficiency Web Portal	0	10	10	0	0	0	0	10	100%	0%	0%	0	100%	0	0	0	-	LB	LB	N/A	N/A	N/A	N/A	-	0	-	LB	-	-	N/A	N/A	LB	LB	3.00%	0.00	3%	0.00	3.0%	0.00	0.00	0.00	0.00	9.999	0.083	-
Total Residential	249	51	300	-	-	-	735	1,036	29%	-	71%	9,627		8,736		0	-	2	2,526	0	1,384	182	0	120,907	-	-	8.4	735	1,566	2.1	1.5	2.4	1,490												

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ
1	**UTILITY**		**FORTIS BC**																																	
2																																				
3																																				
4			**Year**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	
5			Units																																	
6		**NATURAL GAS**																																		
7		Incremental Cost of Gas (nominal)	$ Per GJ	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.43
8	1		*Year*	*0*	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*	*16*	*17*	*18*	*19*	*20*	*21*	*22*	*23*	*24*	*25*	*26*	*27*	*28*	*29*	*30*		
9		carbon tax	$ per GJ	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*		
10		Distribution adder	$ per GJ	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*		
11		Total incremental cost of gas including carbon		*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*		
12	2	GDP Deflator		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
13	3	Incremental Cost of Gas (Real)		$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43		
14	4	Net Present Value -2010			$29.52	$43.65	$57.35	$70.66	$83.59	$96.13	$108.31	$120.14	$131.62	$142.77	$153.59	$164.10	$174.30	$184.20	$193.82	$203.15	$212.22	$221.02	$229.56	$237.85	$245.91	$253.72	$261.32	$268.68	$275.84	$282.79	$289.53	$296.08	$302.43	$308.61			
15	5	Net Present Value -2011			$29.52	$43.65	$57.35	$70.66	$83.59	$96.13	$108.31	$120.14	$131.62	$142.77	$153.59	$164.10	$174.30	$184.20	$193.82	$203.15	$212.22	$221.02	$229.56	$237.85	$245.91	$253.72	$261.32	$268.68	$275.84	$282.79	$289.53	$296.08	$302.43				
16	6	Net Present Value -2012			$29.52	$43.65	$57.35	$70.66	$83.59	$96.13	$108.31	$120.14	$131.62	$142.77	$153.59	$164.10	$174.30	$184.20	$193.82	$203.15	$212.22	$221.02	$229.56	$237.85	$245.91	$253.72	$261.32	$268.68	$275.84	$282.79	$289.53	$296.08					
17																																				
18																																				
19		**ELECTRICITY**																																		
20		Incremental Cost of Elec	$ Per kWh	$0.10																																
21		Incremental Cost of E Capacity	$ Per kW/a	$170.00																																
22																																				
23																																				
24																																				
25	**RETAIL**																																			
26				Rate	Customers																																
27		Residential Retail			1,000																																
28		**TGI**	$ Per MJ	$0.0100	1,000																																
29		**TGVI**	$ Per MJ	$0.0143	1,000																																
30		**Electricity**	$ Per MJ	$0.0230																																
31		**Electricity**	$ per kWh	$0.0829	1,000																																
32		**Electricity**	$ per kW per year		1,000																																
33		Commercial Retail																																		
34		**TGI**	$ Per MJ	$0.0094	50																																
35		**TGVI**	$ Per MJ	$0.0160	50																																
36		**Electricity**	$ Per MJ	$0.0214																																
37		**Electricity**	$ per kWh	$0.0749	750																																
38		**Electricity**	$ per kW per year	$52.0000	50																																
39																																				
40	**TAX**																																			
41			**Year**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**		
42	1		*Year*	*-1*	*0*	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*	*16*	*17*	*18*	*19*	*20*	*21*	*22*	*23*	*24*	*25*	*26*	*27*	*28*	*29*	*30*	
43	2	Carbon	$ Per tonne		$20.00	$25.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00		
44	3	Carbon	$ Per GJ		$0.9976	$1.2470	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964		
45	4	GDP Deflator			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
46	5	Carbon (Real)			$1.00	$1.25	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50		
47	6	Net Present Value -2010			$2.14	$3.51	$4.84	$6.13	$7.38	$8.60	$9.78	$10.93	$12.05	$13.13	$14.18	$15.19	$16.18	$17.14	$18.08	$18.98	$19.86	$20.71	$21.54	$22.35	$23.13	$23.89	$24.62	$25.34	$26.03	$26.71	$27.38	$27.99	$28.61	$29.21			
48	7	Net Present Value -2011				$2.62	$3.99	$5.32	$6.61	$7.86	$9.08	$10.26	$11.41	$12.52	$13.60	$14.65	$15.67	$16.66	$17.62	$18.55	$19.46	$20.34	$21.19	$22.02	$22.82	$23.61	$24.36	$25.10	$25.81	$26.51	$27.18	$27.84	$28.47	$29.09				
49	8	Net Present Value -2012					$2.86	$4.23	$5.56	$6.85	$8.11	$9.32	$10.50	$11.65	$12.76	$13.85	$14.90	$15.91	$16.90	$17.86	$18.80	$19.70	$20.58	$21.43	$22.26	$23.07	$23.85	$24.61	$25.34	$26.06	$26.75	$27.42	$28.08	$28.71			
50																																				
51		**Discount Rate (real)**[1]																																		
52		**TERASEN GAS**																																		
53		**Rate of Inflation**	1.90%																																	
54		**TGI**	3.00%																																	
55		**TGVI**	3.00%																																	
56		**BC HYDRO**																																		
57		**Rate of Inflation**	2.00%																																	
58		**BC Hydro**	3.00%																																	
59		**Customer**	3.00%																																	
60		*Footnote 1: Source LR 670531*																																		
61																																				
62				**SHEET LABELS**																																
63	**New Construction**																																			
64		#REF!		**BASEBOARD**																																
65		#REF!		**HEATPUMP**																																

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Measure Data for Washing Machine Rebate

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 350			
Total Incentive	$ 50		$ 50	$ -
Participant	$ 300			

Annual Impact Per Measure

Energy Savings per installation	3.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	5%	0.95		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	14	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1,188	1,260	0	1,260	0	Estimated Participation
Impact						
Gross Energy Savings (GJ)	3,563	3,780	0	3,780	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	3,385	3,591	0	3,591	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$184.20	$184.20	$184.20	
Energy Purchases	$ 661,471	$ 661,471	$ -	$ 661,471	$ -	
Utility Program Costs						
DSM Incentives		$ 63,000	$ -	$ 63,000	$ -	
Administration		$ 8,000	$ -	$ 8,000	$ -	
Subtotal	$ 66,924	$ 71,000	$ -	$ 71,000	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 359,100	$ -	$ 359,100	$ -	
Subtotal	$ 338,486	$ 359,100	$ -	$ 359,100	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.356 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 256,060		$ -	$ 231,371	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 10.6**		**$ -**	**$ 10.6**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Home Efficiency Web Portal

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ -			
Total Incentive	$ -		$ -	$ -
Participant	$ -			

Annual Impact Per Measure

Energy Savings per installation	0.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	0	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	0	0	0	0	0	Estimated Participation
Impact						
Gross Energy Savings (GJ)	0	0	0	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	0	0	0	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$0.00	$0.00	$0.00	
Energy Purchases	$ -	$ -	$ -	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ 10,000	$ -	$ 10,000	$ -	
Subtotal	$ 9,426	$ 10,000	$ -	$ 10,000	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$0.000 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ (9,426)		$ -	$ (10,000)	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ -**		**$ -**	**$ -**	**$ -**	Informational (for comparison with supply options)

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2011 Joint Initiatives Programs Planned	PROGRAM															ALTERNATE		NET PRESENT VALUE									BENEFIT/COST						PARAMETERS														
	COSTS ($000)											SAVINGS (GJ)			LIFE	Impact		Levelized Cost	Utility Benefits (Costs)		Participant Benefits (Costs)			Program Net Savings			Participant						UTILITY				PARTICIPANT										
FEVI	Utility			Partners												Energy	Capacity		Program	Alternate	Program	Carbon Tax	Alternate	Natural Gas	Alternate Energy	Alternate Capacity	Natural Gas	Total Costs	Total Benefits	Benefit/Cost	Natural Gas	Total Revenue	TRC Net Benefits	Natural Gas Utility Discount	Natural Gas Supply	Alternate Discount Rate	Alternate Supply	Discount Rate	Natural Gas NPV	Carbon Tax NPV	Alternate Energy NPV	Alternate Capacity NPV	Natural Gas Tariff	Energy Tariff	Capacity Tariff			
	Incentives	Administration	Total	Incentives	Administration	Total	Participant	Total	% Utility	% Partner	% Participant	Gross	Net-to-Gross	Net	Years	MWh	kW	($/GJ)	($'000s)	($'000s)	($'000s)	($'000s)	($'000s)	(GJ)	(MWh)	(kW)	Utility	($'000s)	($'000s)	Rate Impact				$/GJ		$/GJ		$/kWh		$/GJ	$/kWh	$/kW/a	$/GJ	$/kWh	$/kW/a			
Label	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR	AS	AT			
Source Sheet or Calculation	Program	Program	B+C	Program	Program	E+F	Program	D+G+H	D/I	G/I	H/I	Program	Program	MxN	Program	Program	Program	D/Y	OxAJ	Q x N x AL	M x N x AN	M x N x AO	N x (QxAP + RxAQ)	PV(AI,P,-O)	PV(AK,P,-Q*N)	PV(AK,P,-R)	T/D	H>0, (V+W)>0	H>0, (V+W)>0, X	AD/AC	T/(V+O)	(T+U)/I	(T+U)-I	Input	Program	Input	Input	Input	PV(AM,P,-InputD25)	Input	PV(AM,P,-InputD28)	PV(AM,P,-InputD29)	Input	Input	Input			
2011																																																
RESIDENTIAL:																																															
Washing Machine Rebate	63	8	71	0	0	0	359	430	17%	0%	83%	3,780	95%	3,591	14	0	-	2	329	N/A	478	47	N/A	31,613	0	-	4.6	359	525	1.5	0.6	0.8	(101)	6.89%	91.63	6%	1.12	6.0%	133.15	13.04	0.77	0.00	9.999	0.083	-			
Live Smart BC 2010-2011	27	15	42	0	0	0	88	130	32%	-	68%	1,221	88%	1,075		0	-	4	127	N/A	129	17	N/A	11,731	0	-	3.0	88	147	1.7	0.7	1.0	(3)															
Live Smart BC 2011-2012	160	18	178	-	-	0	288	466	38%	0%	62%	4,625	88%	4,070		0	-	4	467	0	477	63	0	43,367	-	-	2.6	288	541	1.9	0.7	1.0	2															
Home Efficiency Web Portal	0	10	10	0	0	0	0	10	100%	0%	0%	0	100%	0	0	0	-	LB	LB	N/A	N/A	N/A	N/A	-	0	-	LB	-	-	N/A	N/A	LB	LB	6.89%	0.00	6%	0.00	6.0%	0.00	0.00	0.00	0.00	9.999	0.083	-			
Total Residential	249	51	300	-	-	-	735	1,036	29%	-	71%	9,627		8,736		0	-	3	923	0	1,085	127	0	86,712	-	-	3.1	735	1,212	1.6	0.7	0.9	(113)															

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ
1	UTILITY		FORTIS BC																																	
2																																				
3																																				
4			Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	
5			Units																																	
6		NATURAL GAS																																		
7		Incremental Cost of Gas (nominal)	$ Per GJ	$5.50	$6.17	$6.81	$7.35	$7.87	$8.26	$8.56	$8.78	$8.99	$9.19	$9.40	$9.60	$9.81	$10.03	$10.25	$10.47	$10.70	$10.93	$11.17	$11.42	$11.67	$11.92	$12.19	$12.45	$12.73	$13.01	$13.29	$13.58	$13.88	$14.19	$14.50	$14.82	$15.14
8	1		Year	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		
9		carbon tax	$ per GJ	0.75	1.00	1.25	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50		
10		Distribution adder	$ per GJ	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15		
11		Total incremental cost of gas including carbon		6.40	7.31	8.20	9.00	9.51	9.91	10.21	10.42	10.63	10.84	11.04	11.25	11.46	11.67	11.89	12.12	12.34	12.58	12.82	13.06	13.31	13.57	13.83	14.10	14.37	14.65	14.94	15.23	15.53	15.83	16.14		
12	2	GDP Deflator		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
13	3	Incremental Cost of Gas (Real)		$6.40	$7.31	$8.20	$9.00	$9.51	$9.91	$10.21	$10.42	$10.63	$10.84	$11.04	$11.25	$11.46	$11.67	$11.89	$12.12	$12.34	$12.58	$12.82	$13.06	$13.31	$13.57	$13.83	$14.10	$14.37	$14.65	$14.94	$15.23	$15.53	$15.83	$16.14		
14	4	Net Present Value -2010			$12.39	$19.10	$26.00	$32.81	$39.46	$45.86	$51.98	$57.82	$63.38	$68.69	$73.75	$78.56	$83.16	$87.53	$91.71	$95.68	$99.47	$103.09	$106.53	$109.82	$112.95	$115.94	$118.79	$121.51	$124.10	$126.57	$128.93	$131.18	$133.32	$135.37		
15	5	Net Present Value -2011				$14.02	$21.39	$28.68	$35.78	$42.62	$49.16	$55.40	$61.35	$67.02	$72.43	$77.58	$82.49	$87.17	$91.63	$95.88	$99.93	$103.79	$107.48	$110.99	$114.34	$117.53	$120.58	$123.48	$126.25	$128.90	$131.42	$133.82	$136.11	$138.30		
16	6	Net Present Value -2012					$15.55	$23.34	$30.93	$38.25	$45.24	$51.90	$58.27	$64.33	$70.11	$75.61	$80.86	$85.86	$90.63	$95.17	$99.50	$103.63	$107.57	$111.32	$114.90	$118.32	$121.57	$124.68	$127.64	$130.46	$133.16	$135.72	$138.18	$140.51		
17																																				
18																																				
19		ELECTRICITY																																		
20		Incremental Cost of Elec	$ Per kWh	$0.12																																
21		Incremental Cost of E Capacity	$ Per kW/a	$170.00																																
22																																				
23																																				
24																																				
25	RETAIL																																			
26				Rate	Customers		789,928	Total Customers in BC			80,000	Total Residential and Commercial Customers on VI																								
27		Residential Retail			000's																															
28		TGI	$ Per MJ	$0.0100	640		712,304	Total Residential Customers in BC																												
29		TGVI	$ Per MJ	$0.0143	72																															
30		Electricity	$ Per MJ	$0.0230																																
31		Electricity	$ per kWh	$0.0827	1,511		1,511,435	Total BCH Residential Customers in BC				89%																								
32		Electricity	$ per kW per year																																	
33		Commercial Retail																																		
34		TGI	$ Per MJ	$0.0094	78		77,624	Total Commercial Customers in BC																												
35		TGVI	$ Per MJ	$0.0169	8																															
36		Electricity	$ Per MJ	$0.0214																																
37		Electricity	$ per kWh	$0.0769	190		189,764	Total Light Industrial and Commercial Customers in BC																												
38		Electricity	$ per kW per year	$52.0000	15																															
39																																				
40	TAX																																			
41			Year	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	
42	1		Year		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
43	2	Carbon	$ Per tonne		$20.00	$25.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	
44	3	Carbon	$ Per GJ		$0.9976	$1.2470	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	
45	4	GDP Deflator			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
46	5	Carbon (Real)			$1.00	$1.25	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	
47	6	Net Present Value -2010				$2.02	$3.25	$4.40	$5.47	$6.47	$7.41	$8.29	$9.11	$9.88	$10.60	$11.27	$11.90	$12.49	$13.04	$13.55	$14.04	$14.49	$14.91	$15.30	$15.67	$16.02	$16.34	$16.64	$16.93	$17.19	$17.44	$17.67	$17.89	$18.09	$18.28	
48	7	Net Present Value -2011					$2.48	$3.70	$4.85	$5.92	$6.92	$7.86	$8.74	$9.56	$10.33	$11.05	$11.72	$12.35	$12.94	$13.49	$14.01	$14.49	$14.94	$15.36	$15.76	$16.13	$16.47	$16.79	$17.10	$17.38	$17.64	$17.89	$18.12	$18.34	$18.54	
49	8	Net Present Value -2012						$2.71	$3.93	$5.08	$6.15	$7.16	$8.10	$8.97	$9.80	$10.56	$11.28	$11.96	$12.58	$13.17	$13.72	$14.24	$14.72	$15.17	$15.59	$15.99	$16.36	$16.70	$17.03	$17.33	$17.61	$17.88	$18.12	$18.36	$18.57	
50																																				
51		Discount Rate (real)[1]																																		
52		TERASEN GAS																																		
53		Rate of Inflation	1.90%																																	
54		TGI	7.15%																																	
55		TGVI	6.89%																																	
56		BC HYDRO																																		
57		Rate of Inflation	2.00%																																	
58		BC Hydro	6.00%																																	
59		Customer	6.00%																																	
60		*Footnote 1: Source LR 070531*																																		
61																																				
62				SHEET LABELS																																
63	New Construction																																			
64		#REF!		BASEBOARD																																
65		#REF!		HEATPUMP																																

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Measure Data for Washing Machine Rebate

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 350			
Total Incentive	$ 50		$ 50	$ -
Participant	$ 300			

Annual Impact Per Measure

Energy Savings per installation	3.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	5%	0.95		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	14	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1,097	1,260	0	1,260	0	Estimated Participation
Impact						
Gross Energy Savings (GJ)	3,292	3,780	0	3,780	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	3,128	3,591	0	3,591	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$87.53	$91.63	$95.17	
Energy Purchases	$ 329,033	$ 329,033	$ -	$ 329,033	$ -	
Utility Program Costs						
DSM Incentives		$ 63,000	$ -	$ 63,000	$ -	
Administration		$ 8,000	$ -	$ 8,000	$ -	
Subtotal	$ 61,841	$ 71,000	$ -	$ 71,000	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 359,100	$ -	$ 359,100	$ -	
Subtotal	$ 312,774	$ 359,100	$ -	$ 359,100	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.115 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ (45,582)		$ -	$ (101,067)	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 13.8**		**$ -**	**$ 13.8**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Home Efficiency Web Portal

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ -			
Total Incentive	$ -		$ -	$ -
Participant	$ -			

Annual Impact Per Measure

Energy Savings per installation	0.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	0	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	0	0	0	0	0	Estimated Participation
Impact						
Gross Energy Savings (GJ)	0	0	0	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	0	0	0	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$0.00	$0.00	$0.00	
Energy Purchases	$ -	$ -	$ -	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ 10,000	$ -	$ 10,000	$ -	
Subtotal	$ 8,710	$ 10,000	$ -	$ 10,000	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$0.000 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ (8,710)		$ -	$ (10,000)	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	$ -		$ -	$ -	$ -	Informational (for comparison with supply options)

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	PROGRAM															ALTERNATE		NET PRESENT VALUE										BENEFIT/COST						
	COSTS ($000)											SAVINGS (GJ)			LIFE	Impact		Levelized Cost	Utility Benefits (Costs)		Participant Benefits (Costs)			Program Net Savings				Participant					
	Utility			Partners											Years	Energy	Capacity	($/GJ)	Program	Alternate	Program	Carbon Tax	Alternate	Natural Gas	Alternate Energy	Alternate Capacity	Natural Gas	Total Costs	Total Benefits	Benefit/Cost	Natural Gas	SCT	SCT Net Benefits
	Incentives	Administration	Total	Incentives	Administration	Total	Participant	Total	% Utility	% Partner	% Participant	Gross	Net-to-Gross	Net		MWh	kW		($'000s)	($'000s)	($'000s)	($'000s)	($'000s)	(GJ)	(MWh)	(kW)	Utility	($'000s)	($'000s)		Rate Impact		($'000s)
Label	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH
Source Sheet or Calculation	Program	Program	B+C	Program	Program	E+F	Program	D+G+H	D/I	G/I	H/I	Program	Program	MxN	Program	Program	Program	D/Y	OxAJ	Q x N x AL	M x N x AN	M x N x AO	N x (QxAP + RxAQ)	PV(AI,P,-O)	PV(AK,P,-Q*N)	PV(AK,P,-R)	T/D	H>0, (V+W)<0	H<0, (V+W)>0, X	AD/AC	T/(V+D)	(T+U)/I	(T+U)-I
2011 - 2010 program completion																																	
RESIDENTIAL:																																	
Air Tightness	5	0	5	0	0	0	8	13	38%	0%	62%	134	88%	118	15	0	-	3	23	N/A	14	2	N/A	1,412	0	-	4.8	8	16	2.1	1.2	1.8	10
Attic Insulation	2	0	2	0	0	0	24	27	8%	0%	92%	219	88%	192	25	0	-	1	53	N/A	33	5	N/A	3,348	0	-	24.3	24	38	1.6	1.5	2.0	27
Wall Insulation	1	0	1	0	0	0	15	15	5%	0%	95%	184	88%	161	25	0	-	0	45	N/A	28	4	N/A	2,812	0	-	55.7	15	32	2.2	1.5	2.9	29

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
3														
4			**Year**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**
5			Units											
6		**NATURAL GAS**												
7		Incremental Cost of Gas (nominal)	$ Per GJ	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28
8	1		*Year*	*0*	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*
9		carbon tax	$ per GJ	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
10		Distribution adder	$ per GJ	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*
11		Total incremental cost of gas including carbon		*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*
12	2	GDP Deflator		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
13	3	Incremental Cost of Gas (Real)		$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44
14	4	Net Present Value -2010			$29.54	$43.67	$57.39	$70.71	$83.64	$96.20	$108.38	$120.22	$131.71	$142.86
15	5	Net Present Value -2011				$29.54	$43.67	$57.39	$70.71	$83.64	$96.20	$108.38	$120.22	$131.71
16	6	Net Present Value -2012					$29.54	$43.67	$57.39	$70.71	$83.64	$96.20	$108.38	$120.22
17														
18														
19		**ELECTRICITY**												
20		Incremental Cost of Elec	$ Per kWh	$0.12										
21		Incremental Cost of E Capacity	$ Per kW/a	$170.00										
22														
23														
24														
25	**RETAIL**													
26				Rate	Customers		789,928	Total Customers in BC		80,000	Total Residential and Commercial Customers on VI			
27		Residential Retail			*000's*									
28		**TGI**	$ Per MJ	$0.0100	640		712,304	Total Residential Customers in BC						
29		**TGVI**	$ Per MJ	$0.0143	72									
30		**Electricity**	$ Per MJ	$0.0230										
31		**Electricity**	$ per kWh	$0.0827	1,511		1,511,435	Total BCH Residential Customers in BC				89%		
32		**Electricity**	$ per kW per year											
33		Commercial Retail												
34		**TGI**	$ Per MJ	$0.0094	78		77,624	Total Commercial Customers in BC						
35		**TGVI**	$ Per MJ	$0.0169	8									
36		**Electricity**	$ Per MJ	$0.0214										
37		**Electricity**	$ per kWh	$0.0769	190		189,764	Total Light Industrial and Commercial Customers in BC						
38		**Electricity**	$ per kW per year	$52.0000	15									
39														
40	**TAX**													
41			**Year**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
42	1		*Year*		*0*	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*
43	2	Carbon	$ Per tonne		$20.00	$25.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00
44	3	Carbon	$ Per GJ		$0.9976	$1.2470	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964
45	4	GDP Deflator			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
46	5	Carbon (Real)			$1.00	$1.25	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50
47	6	Net Present Value -2010				$2.14	$3.51	$4.84	$6.13	$7.39	$8.60	$9.78	$10.93	$12.05
48	7	Net Present Value -2011					$2.62	$3.99	$5.32	$6.61	$7.86	$9.08	$10.26	$11.41
49	8	Net Present Value -2012						$2.86	$4.23	$5.56	$6.85	$8.11	$9.32	$10.50
50														
51		**Discount Rate (real)[1]**												
52		**TERASEN GAS**												
53		**Rate of Inflation**	1.90%											
54		**TGI**	3.00%											
55		**TGVI**	3.00%											
56		**BC HYDRO**												
57		**Rate of Inflation**	2.00%											
58		**BC Hydro**	3.00%											
59		**Customer**	3.00%											
60		*Footnote 1: Source LR 070531*												
61														
62				**SHEET LABELS**										
63	**New Construction**													
64		#REF!		**BASEBOARD**										
65		#REF!		**HEATPUMP**										

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Measure Data for Air Tightness

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$	427		
Total Incentive	$	150	$ 150	$ -
Participant	$	277		

Annual Impact Per Measure

Energy Savings per installation	4.2	GJ	Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	12%	0.88	Net-to-Gross
Alternate Energy Impact	0	GJ 0	kWh
Alternate Capacity Impact		kW/a	
Measure Lifetime	15	Years	Estimated lifespan of measure

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	31	32		32		Estimated Participation
Impact						
Gross Energy Savings (GJ)	127	134	0	134	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	111	118	0	118	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$193.94	$193.94	$193.94	
Energy Purchases	$ 22,938	$ 22,938	$ -	$ 22,938	$ -	
Utility Program Costs						
DSM Incentives		$ 4,800	$ -	$ 4,800	$ -	
Administration		$ -	$ -			
Subtotal	$ 4,524	$ 4,800	$ -	$ 4,800	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 7,800	$ -	$ 7,800	$ -	
Subtotal	$ 7,353	$ 7,800	$ -	$ 7,800	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.433 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 11,061		$ -	$ 10,338	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 8.9**		**$ -**	**$ 8.9**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Attic Insulation

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$	1,573		
Total Incentive	$	115	$ 115	$ -
Participant	$	1,458		

Annual Impact Per Measure

Energy Savings per installation	11.5	GJ	Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	12%	0.88	Net-to-Gross
Alternate Energy Impact	0	GJ 0	kWh
Alternate Capacity Impact		kW/a	
Measure Lifetime	25	Years	Estimated lifespan of measure

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	18	19		19		Estimated Participation
Impact						
Gross Energy Savings (GJ)	206	219	0	219	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	181	192	0	192	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$276.02	$276.02	$276.02	
Energy Purchases	$ 53,073	$ 53,073	$ -	$ 53,073	$ -	
Utility Program Costs						
DSM Incentives		$ 2,185	$ -	$ 2,185	$ -	
Administration		$ -	$ -			
Subtotal	$ 2,060	$ 2,185	$ -	$ 2,185	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 24,378	$ -	$ 24,378	$ -	
Subtotal	$ 22,978	$ 24,378	$ -	$ 24,378	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$2.090 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 28,035		$ -	$ 26,510	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 7.9**		**$ -**	**$ 7.9**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Wall Insulation

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$	3,500		
Total Incentive	$	160	$ 160	$ -
Participant	$	3,340		

Annual Impact Per Measure

Energy Savings per installation	36.7	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	12%	0.88		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	25	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	5	5		5		Estimated Participation
Impact						
Gross Energy Savings (GJ)	173	184	0	184	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	152	161	0	161	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$276.02	$276.02	$276.02	
Energy Purchases	$ 44,571	$ 44,571	$ -	$ 44,571	$ -	
Utility Program Costs						
DSM Incentives		$ 800	$ -	$ 800	$ -	
Administration		$ -	$ -			
Subtotal	$ 754	$ 800	$ -	$ 800	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 14,696	$ -	$ 14,696	$ -	
Subtotal	$ 13,852	$ 14,696	$ -	$ 14,696	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$2.090 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 29,965		$ -	$ 29,075	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 5.5**		**$ -**	**$ 5.5**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Basement Insulation

PER MEASURE		Utility Incentive to the participant	partner incentive
Incremental Cost	$ 1,433		
Total Incentive	$ 150	$ 150	$ -
Participant	$ 1,283		

Annual Impact Per Measure

Energy Savings per installation	21.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	12%	0.88		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	25	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	14	15	0	15		Estimated Participation
Impact						
Gross Energy Savings (GJ)	297	315	0	315	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	261	277	0	277	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$276.02	$276.02	$276.02	
Energy Purchases	$ 76,512	$ 76,512	$ -	$ 76,512	$ -	
Utility Program Costs						
DSM Incentives		$ 2,250	$ -	$ 2,250	$ -	
Administration		$ -	$ -			
Subtotal	$ 2,121	$ 2,250	$ -	$ 2,250	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 16,936	$ -	$ 16,936	$ -	
Subtotal	$ 15,963	$ 16,936	$ -	$ 16,936	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$2.090 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 58,428		$ -	$ 57,327	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 4.0**		**$ -**	**$ 4.0**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Windows & Doors

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 1,200			
Total Incentive	$ 450		$ 450	$ -
Participant	$ 750			

Annual Impact Per Measure

Energy Savings per installation	10.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	12%	0.88		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	20	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	36	37		37		Estimated Participation
Impact						
Gross Energy Savings (GJ)	349	370	0	370	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	307	326	0	326	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$238.01	$238.01	$238.01	
Energy Purchases	$ 77,495	$ 77,495	$ -	$ 77,495	$ -	
Utility Program Costs						
DSM Incentives		$ 16,650	$ -	$ 16,650	$ -	
Administration		$ 15,000	$ -	$ 15,000		
Subtotal	$ 29,833	$ 31,650	$ -	$ 31,650	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ 150,000	$ -		$ 150,000	
Subtotal	$ 137,271	$ 150,000	$ -	$ -	$ 150,000	
Participants' Net Costs						
Incremental Cost		$ 24,420	$ -	$ 24,420	$ -	
Subtotal	$ 23,018	$ 24,420	$ -	$ 24,420	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.785 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 24,644		$ -	$ 21,425	$ (150,000)	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 11.6**		**$ -**	**$ 11.6**	**$ -**	Informational (for comparison with supply options)

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	PROGRAM															ALTERNATE		NET PRESENT VALUE									BENEFIT/COST						PARAMETERS														
	COSTS ($000)											SAVINGS (GJ)			LIFE	Impact		Levelized Cost	Utility Benefits (Costs)		Participant Benefits (Costs)			Program Net Savings			Participant						UTILITY				PARTICIPANT										
	Utility			Partners																																											
	Incentives	Administration	Total	Incentives	Administration	Total	Participant	Total	% Utility	% Partner	% Participant	Gross	Net-to-Gross	Net	Years	Energy	Capacity	($/GJ)	Program	Alternate	Program	Carbon Tax	Alternate	Natural Gas	Alternate Energy	Alternate Capacity	Natural Gas	Total Costs	Total Benefits	Benefit/Cost	Natural Gas	Total Resource	TRC Net Benefits	Natural Gas Utility Discount	Natural Gas Supply	Alternate Discount Rate	Alternate Supply	Discount Rate	Natural Gas NPV	Carbon Tax NPV	Alternate Energy NPV	Alternate Capacity NPV	Natural Gas Tariff	Energy Tariff	Capacity Tariff
																MWh	kW		($'000s)	($'000s)	($'000s)	($'000s)	($'000s)	(GJ)	(MWh)	(kW)	Utility	($'000s)	($'000s)		Rate Impact			$/GJ		$/kWh		$/GJ	$/GJ	$/kWh	$/kW/a	$/GJ	$/kWh	$/kW/a
Label	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR	AS	AT
Source Sheet or Calculation	Program	Program	B+C	Program	Program	E+F	Program	D+G+H	D/I	G/I	H/I	Program	Program	M+N	Program	Program	Program	D/Y	OxAJ	Q x N x AL	M x N x AN	M x N x AO	N x (QxAP + RxAQ)	PV(AI,P,-Q)	PV(AK,P,-Q*%)	PV(AK,P,-R)	T/D	H>0, (V+W)>0	H>0, (V+W)>0, X	AD/AC	T/(V+O)	(T+U)/I	(T+U)-I	Input	Program	Input	Input	Input	PV(AM,P,-Input!D25)	Input	PV(AM,P,-Input!D28)	PV(AM,P,-Input!D29)	Input	Input	Input
2011 - 2010 program completion																																														
RESIDENTIAL:																																														
Air Tightness	5	0	5	0	0	0	8	13	38%	0%	62%	134	88%	118	15	0	-	4	11	N/A	11	2	N/A	1,067	0	-	2.3	8	13	1.7	0.7	0.9	(1)	7.15%	94.20	6%	1.17	6.0%	97.11	13.31	0.80	0.00	9.999	0.083	-
Attic Insulation	2	0	2	0	0	0	24	27	8%	0%	92%	219	88%	192	25	0	-	1	24	N/A	25	3	N/A	2,211	0	-	11.1	24	28	1.1	0.9	0.9	(2)	7.15%	125.59	6%	1.53	6.0%	127.82	16.77	1.06	0.00	9.999	0.083	-
Wall Insulation	1	0	1	0	0	0	15	15	5%	0%	95%	184	88%	161	25	0	-	0	20	N/A	21	3	N/A	1,857	0	-	25.3	15	23	1.6	0.9	1.3	5	7.15%	125.59	6%	1.53	6.0%	127.82	16.77	1.06	0.00	9.999	0.083	-
Basement Insulation	2	0	2	0	0	0	17	19	12%	0%	88%	315	88%	277	25	0	-	1	35	N/A	35	5	N/A	3,187	0	-	15.5	17	40	2.4	0.9	1.8	16	7.15%	125.59	6%	1.53	6.0%	127.82	16.77	1.06	0.00	9.999	0.083	-
Windows & Doors	17	15	32	0	0	0	24	56	56%	0%	44%	370	88%	326	20	0	-	9	36	N/A	37	5	N/A	3,410	0	-	1.2	24	42	1.7	0.5	0.6	(20)	7.15%	111.84	6%	1.38	6.0%	114.69	15.34	0.95	0.00	9.999	0.083	-
2011 Total Residential	27	15	42	-	-	-	88	130	32%	-	68%	1,221		1,075		0	-	4	127	0	129	17	0	11,731	-	-	3.0	88	147	1.7	0.7	1.0	(3)													

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ
1	UTILITY		FORTIS BC																																	
2																																				
3																																				
4			Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	
5			Units																																	
6		NATURAL GAS																																		
7		Incremental Cost of Gas (nominal)	$ Per GJ	$5.50	$6.17	$6.81	$7.35	$7.87	$8.26	$8.56	$8.78	$8.99	$9.19	$9.40	$9.60	$9.81	$10.03	$10.25	$10.47	$10.70	$10.93	$11.17	$11.42	$11.67	$11.92	$12.19	$12.45	$12.73	$13.01	$13.29	$13.58	$13.88	$14.19	$14.50	$14.82	$15.14
8	1		Year	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
9		carbon tax	$ per GJ	0.75	1.00	1.25	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	
10		Distribution adder	$ per GJ	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16		
11		Total incremental cost of gas including carbon		6.41	7.32	8.21	9.01	9.52	9.92	10.22	10.43	10.64	10.85	11.05	11.26	11.47	11.68	11.90	12.13	12.35	12.59	12.83	13.07	13.32	13.58	13.84	14.11	14.38	14.66	14.95	15.24	15.54	15.84	16.15	16.31	
12	2	GDP Deflator		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
13	3	Incremental Cost of Gas (Real)		$6.41	$7.32	$8.21	$9.01	$9.52	$9.92	$10.22	$10.43	$10.64	$10.85	$11.05	$11.26	$11.47	$11.68	$11.90	$12.13	$12.35	$12.59	$12.83	$13.07	$13.32	$13.58	$13.84	$14.11	$14.38	$14.66	$14.95	$15.24	$15.54	$15.84	$16.15	$16.31	
14	4	Net Present Value -2010			$12.36	$19.03	$25.87	$32.61	$39.16	$45.47	$51.47	$57.19	$62.63	$67.80	$72.71	$77.39	$81.83	$86.05	$90.07	$93.89	$97.52	$100.98	$104.26	$107.39	$110.36	$113.19	$115.88	$118.43	$120.87	$123.18	$125.39	$127.49	$129.48	$131.38	$133.17	
15	5	Net Present Value -2011				$13.99	$21.31	$28.54	$35.56	$42.31	$48.75	$54.87	$60.70	$66.24	$71.51	$76.51	$81.27	$85.80	$90.10	$94.20	$98.09	$101.79	$105.31	$108.66	$111.84	$114.87	$117.75	$120.49	$123.10	$125.59	$127.95	$130.19	$132.33	$134.37	$136.28	
16	6	Net Present Value -2012					$15.51	$23.25	$30.78	$38.01	$44.91	$51.47	$57.71	$63.65	$69.29	$74.66	$79.76	$84.61	$89.22	$93.61	$97.78	$101.74	$105.51	$109.10	$112.51	$115.76	$118.85	$121.79	$124.58	$127.24	$129.77	$132.18	$134.47	$136.65	$138.70	
17																																				
18																																				
19		ELECTRICITY																																		
20		Incremental Cost of Elec	$ Per kWh	$0.12																																
21		Incremental Cost of E Capacity	$ Per kW/a	$170.00																																
22																																				
23																																				
24																																				
25	RETAIL																																			
26				Rate	Customers		789,928	Total Customers in BC		80,000	Total Residential and Commercial Customers on VI																									
27		Residential Retail			000's																															
28		TGI	$ Per MJ	$0.0100	640		712,304	Total Residential Customers in BC																												
29		TGVI	$ Per MJ	$0.0143	72																															
30		Electricity	$ Per MJ	$0.0230																																
31		Electricity	$ per kWh	$0.0827	1,511		1,511,435	Total BCH Residential Customers in BC				89%																								
32		Electricity	$ per kW per year																																	
33		Commercial Retail																																		
34		TGI	$ Per MJ	$0.0094	78		77,624	Total Commercial Customers in BC																												
35		TGVI	$ Per MJ	$0.0169	8																															
36		Electricity	$ Per MJ	$0.0214																																
37		Electricity	$ per kWh	$0.0769	190		189,764	Total Light Industrial and Commercial Customers in BC																												
38		Electricity	$ per kW per year	$52.0000	15																															
39																																				
40	TAX																																			
41			Year	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	
42	1		Year		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
43	2	Carbon	$ Per tonne		$20.00	$25.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	
44	3	Carbon	$ Per GJ		$0.9976	$1.2470	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	
45	4	GDP Deflator			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
46	5	Carbon (Real)			$1.00	$1.25	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	
47	6	Net Present Value -2010				$2.02	$3.23	$4.37	$5.43	$6.42	$7.34	$8.20	$9.00	$9.75	$10.45	$11.11	$11.72	$12.29	$12.82	$13.31	$13.78	$14.21	$14.61	$14.99	$15.34	$15.67	$15.97	$16.26	$16.52	$16.77	$17.00	$17.22	$17.42	$17.61	$17.79	
48	7	Net Present Value -2011					$2.47	$3.68	$4.82	$5.88	$6.87	$7.79	$8.65	$9.45	$10.20	$10.90	$11.56	$12.17	$12.74	$13.27	$13.76	$14.23	$14.66	$15.06	$15.44	$15.79	$16.12	$16.42	$16.71	$16.97	$17.22	$17.45	$17.67	$17.87	$18.06	
49	8	Net Present Value -2012						$2.70	$3.92	$5.05	$6.11	$7.10	$8.02	$8.88	$9.69	$10.44	$11.14	$11.79	$12.40	$12.97	$13.50	$14.00	$14.46	$14.89	$15.29	$15.67	$16.02	$16.35	$16.65	$16.94	$17.21	$17.45	$17.69	$17.90	$18.10	
50																																				
51		Discount Rate (real)[1]																																		
52		TERASEN GAS																																		
53		Rate of Inflation	1.90%																																	
54		TGI	7.15%																																	
55		TGVI	6.89%																																	
56		BC HYDRO																																		
57		Rate of Inflation	2.00%																																	
58		BC Hydro	6.00%																																	
59		Customer	6.00%																																	
60		Footnote 1: Source LR 070531																																		
61																																				
62				SHEET LABELS																																
63	New Construction																																			
64		#REF!		BASEBOARD																																
65		#REF!		HEATPUMP																																

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Measure Data for Air Tightness

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 427			
Total Incentive	$ 150		$ 150	$ -
Participant	$ 277			

Annual Impact Per Measure

Energy Savings per installation	4.2	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	12%	0.88		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	15	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	30	32		32		Estimated Participation
Impact						
Gross Energy Savings (GJ)	117	134	0	134	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	103	118	0	118	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$90.07	$94.20	$97.78	
Energy Purchases	$ 11,141	$ 11,141	$ -	$ 11,141	$ -	
Utility Program Costs						
DSM Incentives		$ 4,800	$ -	$ 4,800	$ -	
Administration		$ -	$ -			
Subtotal	$ 4,181	$ 4,800	$ -	$ 4,800	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 7,800	$ -	$ 7,800	$ -	
Subtotal	$ 6,794	$ 7,800	$ -	$ 7,800	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.165 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 166		$ -	$ (1,460)	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 11.8**		**$ -**	**$ 11.8**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Attic Insulation

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 1,573			
Total Incentive	$ 115		$ 115	$ -
Participant	$ 1,458			

Annual Impact Per Measure

Energy Savings per installation	11.5	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	12%	0.88		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	25	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	18	19		19		Estimated Participation
Impact						
Gross Energy Savings (GJ)	190	219	0	219	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	167	192	0	192	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$120.87	$125.59	$129.77	
Energy Purchases	$ 24,148	$ 24,148	$ -	$ 24,148	$ -	
Utility Program Costs						
DSM Incentives		$ 2,185	$ -	$ 2,185	$ -	
Administration		$ -	$ -			
Subtotal	$ 1,903	$ 2,185	$ -	$ 2,185	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 24,378	$ -	$ 24,378	$ -	
Subtotal	$ 21,233	$ 24,378	$ -	$ 24,378	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.534 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 1,012		$ -	$ (2,415)	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 12.0**		**$ -**	**$ 12.0**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Wall Insulation

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 3,500			
Total Incentive	$ 160		$ 160	$ -
Participant	$ 3,340			

Annual Impact Per Measure

Energy Savings per installation	36.7	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	12%	0.88		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	25	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	5	5		5		Estimated Participation
Impact						
Gross Energy Savings (GJ)	160	184	0	184	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	141	161	0	161	0	Gross Energy Savings less Free Riders
Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$120.87	$125.59	$129.77	
Energy Purchas	$ 20,280	$ 20,280	$ -	$ 20,280	$ -	
Utility Program Costs						
DSM Incentives		$ 800	$ -	$ 800	$ -	
Administration		$ -	$ -			
Subtotal	$ 697	$ 800	$ -	$ 800	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 14,696	$ -	$ 14,696	$ -	
Subtotal	$ 12,800	$ 14,696	$ -	$ 14,696	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.534 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (C	$ 6,783		$ -	$ 4,784	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (L	**$ 8.3**		**$ -**	**$ 8.3**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Basement Insulation

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 1,433			
Total Incentive	$ 150		$ 150	$ -
Participant	$ 1,283			

Annual Impact Per Measure

Energy Savings per installation	21.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	12%	0.88		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	25	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	13	15	0	15		Estimated Participation
Impact						
Gross Energy Savings (GJ)	274	315	0	315	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	241	277	0	277	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$120.87	$125.59	$129.77	
Energy Purchases	$ 34,812	$ 34,812	$ -	$ 34,812	$ -	
Utility Program Costs						
DSM Incentives		$ 2,250	$ -	$ 2,250	$ -	
Administration		$ -	$ -			
Subtotal	$ 1,960	$ 2,250	$ -	$ 2,250	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 16,936	$ -	$ 16,936	$ -	
Subtotal	$ 14,751	$ 16,936	$ -	$ 16,936	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.534 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 18,102		$ -	$ 15,627	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 6.0**		**$ -**	**$ 6.0**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Windows & Doors

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 1,200			
Total Incentive	$ 450		$ 450	$ -
Participant	$ 750			

Annual Impact Per Measure

Energy Savings per installation	10.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	12%	0.88		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	20	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	35	37		37		Estimated Participation
Impact						
Gross Energy Savings (GJ)	322	370	0	370	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	284	326	0	326	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$107.39	$111.84	$115.76	
Energy Purchases	$ 36,416	$ 36,416	$ -	$ 36,416	$ -	
Utility Program Costs						
DSM Incentives		$ 16,650	$ -	$ 16,650	$ -	
Administration		$ 15,000	$ -	$ 15,000		
Subtotal	$ 27,567	$ 31,650	$ -	$ 31,650	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ 150,000	$ -		$ 150,000	
Subtotal	$ 121,931	$ 150,000	$ -	$ -	$ 150,000	
Participants' Net Costs						
Incremental Cost		$ 24,420	$ -	$ 24,420	$ -	
Subtotal	$ 21,270	$ 24,420	$ -	$ 24,420	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.376 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ (12,421)		$ -	$ (19,654)	$ (150,000)	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 16.4**		**$ -**	**$ 16.4**	**$ -**	Informational (for comparison with supply options)

FORTIS BC

	PROGRAM															ALTERNATE		NET PRESENT VALUE									BENEFIT/COST						PARAMETERS														
	COSTS ($000)											SAVINGS (GJ)			LIFE	Impact		Levelized Cost	Utility Benefits (Costs)		Participant Benefits (Costs)			Program Net Savings				Participant						UTILITY				PARTICIPANT								
	Utility			Partners																																											
	Incentives	Administration	Total	Incentives	Administration	Total	Participant	Total	% Utility	% Partner	% Participant	Gross	Net-to-Gross	Net	Years	Energy	Capacity	($/GJ)	Program	Alternate	Program	Carbon Tax	Alternate	Natural Gas	Alternate Energy	Alternate Capacity	Natural Gas	Total Costs	Total Benefits	Benefit/Cost	Natural Gas		SCT	SCT Net Benefits	Natural Gas Utility Discount	Natural Gas Supply	Alternate Discount Rate	Alternate Supply	Discount Rate	Natural Gas NPV	Carbon Tax NPV	Alternate Energy NPV	Alternate Capacity NPV	Natural Gas Tariff	Energy Tariff	Capacity Tariff
																MWh	kW		($'000s)	($'000s)	($'000s)	($'000s)	($'000s)	(GJ)	(MWh)	(kW)	Utility	($'000s)	($'000s)		Rate Impact				$/GJ		$/kWh		$/GJ	$/GJ	$/kWh	$/kW/a	$/GJ	$/kWh	$/kW/a
Label	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF		AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR	AS	AT
Source Sheet or Calculation	Program	Program	B+C	Program	Program	E+F	Program	D+G+H	D/I	G/I	H/I	Program	Program	M+N	Program	Program	Program	D/Y	OxAJ	Q x N x AL	M x N x AN	M x N x AO	N x (QxAP x RxAQ)	PV(AA;P;-C)	PV(AA;P;-Q*N)	PV(AA;P;-R)	T/D	H>0, (V+W)>0	H>0, (V+W)>0, X	AD/AC	T/(V+D)		(T+U)/I	(T+U)-I	Input	Program	Input	Input	Input	PV(AM;P;-Input!D25)	Input	PV(AM;P;-Input!D28)	PV(AM;P;-Input!D29)	Input	Input	Input
2011																																														
RESIDENTIAL:																																														
Air Tightness	88	0	88	0	0	0	34	122	72%	0%	28%	1,243	88%	1,094	15	0	-	7	212	N/A	131	20	N/A	13,060	0	-	2.4	34	150	4.5	1.0	1.7	90	3.00%	193.94	3%	1.43	3.0%	119.37	18.08	0.99	0.00	9.999	0.083	-
Attic Insulation	17	0	17	0	0	0	87	104	16%	0%	84%	851	88%	749	25	0	-	1	207	N/A	130	19	N/A	13,040	0	-	12.1	87	150	1.7	1.4	2.0	102	3.00%	276.02	3%	2.09	3.0%	174.11	26.03	1.44	0.00	9.999	0.083	-
Wall Insulation	10	0	10	0	0	0	84	94	10%	0%	90%	1,101	88%	969	25	0	-	1	267	N/A	169	25	N/A	16,871	0	-	27.9	84	194	2.3	1.5	2.9	174	3.00%	276.02	3%	2.09	3.0%	174.11	26.03	1.44	0.00	9.999	0.083	-
Basement Insulation	9	0	9	0	0	0	30	39	23%	0%	77%	630	88%	554	25	0	-	1	153	N/A	97	14	N/A	9,654	0	-	17.0	30	111	3.7	1.5	3.9	114	3.00%	276.02	3%	2.09	3.0%	174.11	26.03	1.44	0.00	9.999	0.083	-
Windows & Doors	36	18	54	0	0	0	53	107	51%	0%	49%	800	88%	704	20	0	-	5	168	N/A	105	16	N/A	10,474	0	-	3.1	53	120	2.3	1.1	1.6	61	3.00%	238.01	3%	1.79	3.0%	148.76	22.35	1.23	0.00	9.999	0.083	-
2011 Total Residential	160	18	178	-	-	-	288	466	38%	-	62%	4,625		4,070		0	-	3	1,309	0	631	95	0	63,099	-	-	7.4	288	726	2.5	1.6	2.8	843												

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ
1	**UTILITY**		**FORTIS BC**																																	
2																																				
3																																				
4			**Year**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	
5			Units																																	
6		**NATURAL GAS**																																		
7		Incremental Cost of Gas (nominal)	$ Per GJ	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.43
8	1		*Year*	*0*	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*	*16*	*17*	*18*	*19*	*20*	*21*	*22*	*23*	*24*	*25*	*26*	*27*	*28*	*29*	*30*	*31*	
9		carbon tax	$ per GJ	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	
10		Distribution adder	$ per GJ	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	
11		Total incremental cost of gas including carbon		*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.28*	
12	2	GDP Deflator		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
13	3	Incremental Cost of Gas (Real)		$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.28	
14	4	Net Present Value -2010			$29.54	$43.67	$57.39	$70.71	$83.64	$96.20	$108.38	$120.22	$131.71	$142.86	$153.69	$164.20	$174.41	$184.32	$193.94	$203.28	$212.35	$221.16	$229.71	$238.01	$246.07	$253.89	$261.48	$268.86	$276.02	$282.97	$289.72	$296.27	$302.63	$308.81	$314.74		
15	5	Net Present Value -2011			$29.54	$43.67	$57.39	$70.71	$83.64	$96.20	$108.38	$120.22	$131.71	$142.86	$153.69	$164.20	$174.41	$184.32	$193.94	$203.28	$212.35	$221.16	$229.71	$238.01	$246.07	$253.89	$261.48	$268.86	$276.02	$282.97	$289.72	$296.27	$302.63	$308.74			
16	6	Net Present Value -2012				$29.54	$43.67	$57.39	$70.71	$83.64	$96.20	$108.38	$120.22	$131.71	$142.86	$153.69	$164.20	$174.41	$184.32	$193.94	$203.28	$212.35	$221.16	$229.71	$238.01	$246.07	$253.89	$261.48	$268.86	$276.02	$282.97	$289.72	$296.27	$302.56				
17																																				
18																																				
19		**ELECTRICITY**																																		
20		Incremental Cost of Elec	$ Per kWh	$0.10																																
21		Incremental Cost of E Capacity	$ Per kW/a	$170.00																																
22																																				
23																																				
24																																				
25	**RETAIL**																																			
26				Rate	Customers																															
27		Residential Retail			1,000																															
28		**TGI**	$ Per MJ	$0.0100	1,000																															
29		**TGVI**	$ Per MJ	$0.0143	1,000																															
30		**Electricity**	$ Per MJ	$0.0230																																
31		**Electricity**	$ per kWh	$0.0829	1,000																															
32		**Electricity**	$ per kW per year		1,000																															
33		Commercial Retail																																		
34		**TGI**	$ Per MJ	$0.0094	50																															
35		**TGVI**	$ Per MJ	$0.0160	50																															
36		**Electricity**	$ Per MJ	$0.0214																																
37		**Electricity**	$ per kWh	$0.0749	1,000																															
38		**Electricity**	$ per kW per year	$52.0000	1,000																															
39																																				
40	**TAX**																																			
41			**Year**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**		
42	1		*Year*		*0*	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*	*16*	*17*	*18*	*19*	*20*	*21*	*22*	*23*	*24*	*25*	*26*	*27*	*28*	*29*	*30*	
43	2	Carbon	$ Per tonne		$20.00	$25.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	
44	3	Carbon	$ Per GJ		$0.9576	$1.2470	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	
45	4	GDP Deflator			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
46	5	Carbon (Real)			$1.00	$1.25	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	
47	6	Net Present Value -2010			$2.14	$3.51	$4.84	$6.13	$7.38	$8.60	$9.78	$10.93	$12.05	$13.13	$14.18	$15.19	$16.18	$17.14	$18.08	$18.98	$19.86	$20.71	$21.54	$22.35	$23.13	$23.89	$24.62	$25.34	$26.03	$26.71	$27.38	$27.99	$28.61	$29.21			
48	7	Net Present Value -2011				$2.62	$3.99	$5.32	$6.61	$7.86	$9.08	$10.26	$11.41	$12.52	$13.60	$14.65	$15.67	$16.66	$17.62	$18.55	$19.46	$20.34	$21.19	$22.02	$22.82	$23.61	$24.36	$25.10	$25.81	$26.51	$27.18	$27.84	$28.47	$29.09				
49	8	Net Present Value -2012					$2.86	$4.23	$5.56	$6.85	$8.11	$9.32	$10.50	$11.65	$12.76	$13.85	$14.90	$15.91	$16.90	$17.86	$18.80	$19.70	$20.58	$21.43	$22.26	$23.07	$23.85	$24.61	$25.34	$26.06	$26.75	$27.42	$28.08	$28.71			
50																																				
51		**Discount Rate (real)**[1]																																		
52		**TERASEN GAS**																																		
53		**Rate of Inflation**	1.90%																																	
54		**TGI**	3.00%																																	
55		**TGVI**	3.00%																																	
56		**BC HYDRO**																																		
57		**Rate of Inflation**	2.00%																																	
58		**BC Hydro**	3.00%																																	
59		**Customer**	3.00%																																	
60		*Footnote 1: Source LR 670531*																																		
61																																				
62				**SHEET LABELS**																																
63	**New Construction**																																			
64		#REF!		**BASEBOARD**																																
65		#REF!		**HEATPUMP**																																

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Measure Data for Air Tightness

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 427			
Total Incentive	$ 297		$ 297	$ -
Participant	$ 130			

Annual Impact Per Measure

Energy Savings per installation	4.2	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	12%	0.88		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	15	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	3,893	4,245	0	296	3,949	Estimated Participation
Impact						
Gross Energy Savings (GJ)	16,350	17,829	0	1,243	16,586	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	14,388	15,690	0	1,094	14,596	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$193.94	$193.94	$193.94	
Energy Purchases	$ 3,042,879	$3,042,879	$ -	$ 212,177	$2,830,702	
Utility Program Costs						
DSM Incentives		$1,262,505	$ -	$ 88,033	$1,174,472	
Administration		$ -	$ -			
Subtotal	$1,157,788	$1,262,505	$ -	$ 88,033	$1,174,472	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 484,096	$ -	$ 33,756	$ 450,341	
Subtotal	$ 443,944	$ 484,096	$ -	$ 33,756	$ 450,341	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.433 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 1,441,147		$ -	$ 90,388	$ 1,205,889	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 9.3**		**$ -**	**$ 9.3**	**$ 9.3**	Informational (for comparison with supply options)

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Measure Data for Attic Insulation

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 1,573			
Total Incentive	$ 230		$ 230	$ -
Participant	$ 1,343			

Annual Impact Per Measure

Energy Savings per installation	11.5	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	12%	0.88		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	25	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	976	1,064	0	74	990	Estimated Participation
Impact						
Gross Energy Savings (GJ)	11,221	12,236	0	851	11,385	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	9,875	10,768	0	749	10,019	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$276.02	$276.02	$276.02	
Energy Purchases	$ 2,972,078	$2,972,078	$ -	$ 206,705	$2,765,374	
Utility Program Costs						
DSM Incentives		$ 244,720	$ -	$ 17,020	$ 227,700	
Administration		$ -	$ -			
Subtotal	$ 224,421	$ 244,720	$ -	$ 17,020	$ 227,700	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$1,257,478	$ -	$ 87,456	$1,170,022	
Subtotal	$1,153,171	$1,257,478	$ -	$ 87,456	$1,170,022	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$2.090 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 1,594,486		$ -	$ 102,229	$ 1,367,652	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 8.0**		**$ -**	**$ 8.0**	**$ 8.0**	Informational (for comparison with supply options)

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Measure Data for Wall Insulation

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 3,500			
Total Incentive	$ 320		$ 320	$ -
Participant	$ 3,180			

Annual Impact Per Measure

Energy Savings per installation	36.7	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	12%	0.88		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	25	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	389	424	0	30	394	Estimated Participation
Impact						
Gross Energy Savings (GJ)	14,271	15,561	0	1,101	14,460	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	12,558	13,694	0	969	12,725	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$276.02	$276.02	$276.02	
Energy Purchases	$ 3,779,660	$3,779,660	$ -	$ 267,429	$3,512,231	
Utility Program Costs						
DSM Incentives		$ 135,680	$ -	$ 9,600	$ 126,080	
Administration		$ -	$ -			
Subtotal	$ 124,430	$ 135,680	$ -	$ 9,600	$ 126,080	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$1,186,522	$ -	$ 83,952	$1,102,570	
Subtotal	$1,088,140	$1,186,522	$ -	$ 83,952	$1,102,570	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$2.090 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 2,567,090		$ -	$ 173,877	$ 2,283,581	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 5.5**		**$ -**	**$ 5.5**	**$ 5.5**	Informational (for comparison with supply options)

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Measure Data for Basement Insulation

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 1,433			
Total Incentive	$ 300		$ 300	$ -
Participant	$ 1,133			

Annual Impact Per Measure

Energy Savings per installation	21.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	12%	0.88		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	25	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	389	424	0	30	394	Estimated Participation
Impact						
Gross Energy Savings (GJ)	8,166	8,904	0	630	8,274	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	7,186	7,836	0	554	7,281	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$276.02	$276.02	$276.02	
Energy Purchases	$ 2,162,748	$2,162,748	$ -	$ 153,025	$2,009,723	
Utility Program Costs						
DSM Incentives		$ 127,200	$ -	$ 9,000	$ 118,200	
Administration		$ -	$ -			
Subtotal	$ 116,653	$ 127,200	$ -	$ 9,000	$ 118,200	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 422,745	$ -	$ 29,911	$ 392,834	
Subtotal	$ 387,693	$ 422,745	$ -	$ 29,911	$ 392,834	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$2.090 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 1,658,402		$ -	$ 114,113	$ 1,498,690	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 4.0**		**$ -**	**$ 4.0**	**$ 4.0**	Informational (for comparison with supply options)

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Measure Data for Windows & Doors

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 1,200			
Total Incentive	$ 450		$ 450	$ -
Participant	$ 750			
Annual Impact Per Measure				
Energy Savings per installation	10.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	12%	0.88		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	20	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1,054	1,149	0	80	1,069	Estimated Participation
Impact						
Gross Energy Savings (GJ)	10,537	11,490	0	800	10,690	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	9,273	10,111	0	704	9,407	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$238.01	$238.01	$238.01	
Energy Purchases	$ 2,406,546	$2,406,546	$ -	$ 167,558	$ 2,238,989	
Utility Program Costs						
DSM Incentives		$ 517,050	$ -	$ 36,000	$ 481,050	
Administration		$ 36,000	$ -	$ 18,000	$ 18,000	
Subtotal	$ 507,602	$ 553,050	$ -	$ 54,000	$ 499,050	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -			
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 758,340	$ -	$ 52,800	$ 705,540	
Subtotal	$ 695,438	$ 758,340	$ -	$ 52,800	$ 705,540	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.785 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 1,203,506		$ -	$ 60,758	$ 1,034,399	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 8.7**		**$ -**	**$ 10.2**	**$ 8.6**	Informational (for comparison with supply options)

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	PROGRAM															ALTERNATE		NET PRESENT VALUE									BENEFIT/COST						PARAMETERS														
	COSTS ($000)											SAVINGS (GJ)			LIFE	Impact		Levelized Cost	Utility Benefits (Costs)		Participant Benefits (Costs)			Program Net Savings			Natural Gas	Participant			Natural Gas	Total Resource	TRC Net Benefits	UTILITY				PARTICIPANT										
	Utility			Partners																																											
	Incentives	Administration	Total	Incentives	Administration	Total	Participant	Total	% Utility	% Partner	% Participant	Gross	Net-to-Gross	Net	Years	Energy	Capacity	($/GJ)	Program	Alternate	Program	Carbon Tax	Alternate	Natural Gas	Alternate Energy	Alternate Capacity	Natural Gas	Total Costs	Total Benefits	Benefit/Cost	Natural Gas		($'000s)	Natural Gas Utility Discount	Natural Gas Supply	Alternate Discount Rate	Alternate Supply	Discount Rate	Natural Gas NPV	Carbon Tax NPV	Alternate Energy NPV	Alternate Capacity NPV	Natural Gas Tariff	Energy Tariff	Capacity Tariff
	MWh	kW		($'000s)	($'000s)																										Rate Impact			$/GJ		$/GJ	$/GJ	$/kWh	$/kW/a	$/GJ	$/kWh	$/kW/a
Label	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR	AS	AT
Source Sheet or Calculation	Program	Program	B+C	Program	Program	E+F	Program	D+G+H	D/I	G/I	H/I	Program	Program	M+N	Program	Program	Program	D/Y	OxAJ	Q x N x AL	M x N x AN	M x N x AO	N x (QxAP + RxAQ)	PV(AI,P,-Q)	PV(AK,P,-Q*%)	PV(AK,P,-R)	T/D	H>0, (V+W)>0	H>0, (V+W)>0, X	AD/AC	T/(V+O)	(T+U)/I	(T+U)-I	Input	Program	Input	Input	Input	PV(AM,P,-Input!D25)	Input	PV(AM,P,-Input!D28)	PV(AM,P,-Input!D29)	Input	Input	Input
2011																																														
RESIDENTIAL:																																														
Air Tightness	88	0	88	0	0	0	34	122	72%	0%	28%	1,243	88%	1,094	15	0	-	9	103	N/A	106	15	N/A	9,870	0	-	1.2	34	121	3.6	0.5	0.8	(19)	7.15%	94.20	6%	1.17	6.0%	97.11	13.31	0.80	0.00	9.999	0.083	-
Attic Insulation	17	0	17	0	0	0	87	104	16%	0%	84%	851	88%	749	25	0	-	2	94	N/A	96	13	N/A	8,610	0	-	5.5	87	108	1.2	0.8	0.9	(10)	7.15%	125.59	6%	1.53	6.0%	127.82	16.77	1.06	0.00	9.999	0.083	-
Wall Insulation	10	0	10	0	0	0	84	94	10%	0%	90%	1,101	88%	969	25	0	-	1	122	N/A	124	16	N/A	11,140	0	-	12.7	84	140	1.7	0.9	1.3	28	7.15%	125.59	6%	1.53	6.0%	127.82	16.77	1.06	0.00	9.999	0.083	-
Basement Insulation	9	0	9	0	0	0	30	39	23%	0%	77%	630	88%	554	25	0	-	1	70	N/A	71	9	N/A	6,374	0	-	7.7	30	80	2.7	0.9	1.8	31	7.15%	125.59	6%	1.53	6.0%	127.82	16.77	1.06	0.00	9.999	0.083	-
Windows & Doors	36	18	54	0	0	0	53	107	51%	0%	49%	800	88%	704	20	0	-	7	79	N/A	81	11	N/A	7,372	0	-	1.5	53	92	1.7	0.6	0.7	(28)	7.15%	111.84	6%	1.38	6.0%	114.69	15.34	0.95	0.00	9.999	0.083	-
2011 Total Residential	160	18	178	-	-	-	288	466	38%	-	62%	4,625		4,070		0	-	4	467	0	477	63	0	43,367	-	-	2.6	288	541	1.9	0.7	1.0	2													

UTILITY — **FORTIS BC**

		Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041
		Units																																
	NATURAL GAS																																	
	Incremental Cost of Gas (nominal)	$ Per GJ	$5.58	$6.17	$6.81	$7.35	$7.87	$8.26	$8.56	$8.78	$8.99	$9.19	$9.40	$9.60	$9.81	$10.03	$10.25	$10.47	$10.70	$10.93	$11.17	$11.42	$11.67	$11.92	$12.19	$12.45	$12.73	$13.01	$13.29	$13.58	$13.88	$14.19	$14.50	$14.82	$15.18
1		*Year*	*0*	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*	*16*	*17*	*18*	*19*	*20*	*21*	*22*	*23*	*24*	*25*	*26*	*27*	*28*	*29*	*30*	*31*	
	carbon tax	$ per GJ	*0.75*	*1.00*	*1.25*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	
	Distribution adder	$ per GJ	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*		
11		Total incremental cost of gas including carbon		*6.41*	*7.32*	*8.21*	*9.01*	*9.52*	*9.92*	*10.22*	*10.43*	*10.64*	*10.85*	*11.05*	*11.26*	*11.47*	*11.68*	*11.90*	*12.13*	*12.35*	*12.59*	*12.83*	*13.07*	*13.32*	*13.58*	*13.84*	*14.11*	*14.38*	*14.66*	*14.95*	*15.24*	*15.54*	*15.84*	*16.15*	*16.31*	
12	2	GDP Deflator		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
13	3	Incremental Cost of Gas (Real)		$6.41	$7.32	$8.21	$9.01	$9.52	$9.92	$10.22	$10.43	$10.64	$10.85	$11.05	$11.26	$11.47	$11.68	$11.90	$12.13	$12.35	$12.59	$12.83	$13.07	$13.32	$13.58	$13.84	$14.11	$14.38	$14.66	$14.95	$15.24	$15.54	$15.84	$16.15	$16.47	
14	4	Net Present Value -2010			$12.36	$19.03	$25.47	$32.61	$39.16	$45.47	$51.47	$57.19	$62.63	$67.80	$72.73	$77.39	$81.83	$86.05	$90.07	$93.89	$97.52	$100.98	$104.26	$107.39	$110.36	$113.19	$115.88	$118.43	$120.87	$123.18	$125.39	$127.49	$129.48	$131.38	$133.17	
15	5	Net Present Value -2011			$13.99	$21.31	$28.54	$35.56	$42.31	$48.75	$54.87	$60.70	$66.24	$71.51	$76.51	$81.27	$85.80	$90.10	$94.20	$98.09	$101.79	$105.31	$108.66	$111.84	$114.87	$117.75	$120.49	$123.10	$125.59	$127.95	$130.19	$132.33	$134.37	$136.28		
16	6	Net Present Value -2012			$15.51	$23.25	$30.78	$38.01	$44.91	$51.47	$57.71	$63.65	$69.29	$74.66	$79.76	$84.61	$89.22	$93.61	$97.78	$101.74	$105.51	$109.10	$112.51	$115.76	$118.85	$121.79	$124.58	$127.24	$129.77	$132.18	$134.47	$136.65	$138.70			
17																																		
18																																		
19		**ELECTRICITY**																																
20		Incremental Cost of Elec	$ Per kWh	$0.10																														
21		Incremental Cost of E Capacity	$ Per kW/a	$170.00																														
22																																		
23																																		
24																																		
25		**RETAIL**																																
26				Rate	Customers																													
27		Residential Retail			1,000																													
28		TGI	$ Per MJ	$0.0100	1,000																													
29		TGVI	$ Per MJ	$0.0143	1,000																													
30		Electricity	$ Per MJ	$0.0230																														
31		Electricity	$ per kWh	$0.0829	1,000																													
32		Electricity	$ per kW per year		1,000																													
33		Commercial Retail																																
34		TGI	$ Per MJ	$0.0094	50																													
35		TGVI	$ Per MJ	$0.0160	50																													
36		Electricity	$ Per MJ	$0.0214																														
37		Electricity	$ per kWh	$0.0709	1,000																													
38		Electricity	$ per kW per year	$52.0000	50																													
39																																		
40		**TAX**																																
41			Year	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	
42	1		*Year*		*0*	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*	*16*	*17*	*18*	*19*	*20*	*21*	*22*	*23*	*24*	*25*	*26*	*27*	*28*	*29*	*30*	
43	2	Carbon	$ Per tonne		$20.00	$25.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	
44	3	Carbon	$ Per GJ		$0.9576	$1.2470	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	
45	4	GDP Deflator			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
46	5	Carbon (Real)			$1.00	$1.25	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	
47	6	Net Present Value -2010			$2.02	$3.23	$4.37	$5.43	$6.42	$7.34	$8.20	$9.00	$9.75	$10.45	$11.11	$11.72	$12.29	$12.82	$13.31	$13.78	$14.21	$14.61	$14.99	$15.34	$15.67	$15.97	$16.26	$16.52	$16.77	$17.00	$17.22	$17.42	$17.61	$17.79			
48	7	Net Present Value -2011				$2.47	$3.68	$4.82	$5.88	$6.87	$7.79	$8.65	$9.45	$10.20	$10.90	$11.56	$12.17	$12.74	$13.27	$13.76	$14.23	$14.66	$15.06	$15.44	$15.79	$16.12	$16.42	$16.71	$16.97	$17.22	$17.45	$17.67	$17.87	$18.06				
49	8	Net Present Value -2012					$2.70	$3.92	$5.05	$6.11	$7.10	$8.02	$8.88	$9.69	$10.44	$11.14	$11.79	$12.40	$12.97	$13.50	$14.00	$14.46	$14.89	$15.29	$15.67	$16.02	$16.35	$16.65	$16.94	$17.21	$17.45	$17.69	$17.90	$18.10			
50																																		
51		**Discount Rate (real)**[1]																																
52		**TERASEN GAS**																																
53		**Rate of Inflation**	1.90%																															
54		**TGI**	7.15%																															
55		**TGVI**	6.87%																															
56		**BC HYDRO**																																
57		**Rate of Inflation**	2.00%																															
58		**BC Hydro**	6.00%																															
59		**Customer**	6.00%																															
60		*Footnote 1: Source LR 670531*																																
61																																		
62				**SHEET LABELS**																														
63	**New Construction**																																	
64		#REF!		**BASEBOARD**																														
65		#REF!		**HEATPUMP**																														

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Measure Data for Air Tightness

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 427			
Total Incentive	$ 297		$ 297	$ -
Participant	$ 130			

Annual Impact Per Measure

Energy Savings per installation	4.2	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	12%	0.88		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	15	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	3,468	4,245	0	296	3,949	Estimated Participation
Impact						
Gross Energy Savings (GJ)	14,565	17,829	0	1,243	16,586	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	12,817	15,690	0	1,094	14,596	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$90.07	$94.20	$97.78	
Energy Purchases	$ 1,530,139	$1,530,139	$ -	$ 103,051	$1,427,088	
Utility Program Costs						
DSM Incentives		$1,262,505	$ -	$ 88,033	$1,174,472	
Administration		$ -	$ -			
Subtotal	$1,031,375	$1,262,505	$ -	$ 88,033	$1,174,472	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 484,096	$ -	$ 33,756	$ 450,341	
Subtotal	$ 395,471	$ 484,096	$ -	$ 33,756	$ 450,341	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.165 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 103,293		$ -	$ (18,738)	$ (197,725)	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 12.3**		**$ -**	**$ 12.3**	**$ 12.3**	Informational (for comparison with supply options)

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Measure Data for Attic Insulation

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 1,573			
Total Incentive	$ 230		$ 230	$ -
Participant	$ 1,343			

Annual Impact Per Measure

Energy Savings per installation	11.5	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	12%	0.88		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	25	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	869	1,064	0	74	990	Estimated Participation
Impact						
Gross Energy Savings (GJ)	9,996	12,236	0	851	11,385	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	8,796	10,768	0	749	10,019	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$120.87	$125.59	$129.77	
Energy Purchases	$ 1,394,198	$1,394,198	$ -	$ 94,048	$1,300,150	
Utility Program Costs						
DSM Incentives		$ 244,720	$ -	$ 17,020	$ 227,700	
Administration		$ -	$ -			
Subtotal	$ 199,916	$ 244,720	$ -	$ 17,020	$ 227,700	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$1,257,478	$ -	$ 87,456	$1,170,022	
Subtotal	$1,027,255	$1,257,478	$ -	$ 87,456	$1,170,022	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.534 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 167,028		$ -	$ (10,428)	$ (97,572)	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 12.1**		**$ -**	**$ 12.1**	**$ 12.1**	Informational (for comparison with supply options)

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Measure Data for Wall Insulation

PER MEASURE		Utility Incentive to the participant	partner incentive
Incremental Cost	$ 3,500		
Total Incentive	$ 320	$ 320	$ -
Participant	$ 3,180		

Annual Impact Per Measure

Energy Savings per installation	36.7	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	12%	0.88		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	25	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	346	424	0	30	394	Estimated Participation
Impact						
Gross Energy Savings (GJ)	12,713	15,561	0	1,101	14,460	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	11,187	13,694	0	969	12,725	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$120.87	$125.59	$129.77	
Energy Purchases	$ 1,772,965	$1,772,965	$ -	$ 121,677	$1,651,287	
Utility Program Costs						
DSM Incentives		$ 135,680	$ -	$ 9,600	$ 126,080	
Administration		$ -	$ -			
Subtotal	$ 110,849	$ 135,680	$ -	$ 9,600	$ 126,080	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$1,186,522	$ -	$ 83,952	$1,102,570	
Subtotal	$ 969,372	$1,186,522	$ -	$ 83,952	$1,102,570	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.534 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 692,744		$ -	$ 28,125	$ 422,638	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 8.4**		**$ -**	**$ 8.4**	**$ 8.4**	Informational (for comparison with supply options)

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Measure Data for Basement Insulation

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 1,433			
Total Incentive	$ 300		$ 300	$ -
Participant	$ 1,133			

Annual Impact Per Measure

Energy Savings per installation	21.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	12%	0.88		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	25	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	346	424	0	30	394	Estimated Participation
Impact						
Gross Energy Savings (GJ)	7,274	8,904	0	630	8,274	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	6,402	7,836	0	554	7,281	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$120.87	$125.59	$129.77	
Energy Purchases	$ 1,014,503	$1,014,503	$ -	$ 69,625	$ 944,878	
Utility Program Costs						
DSM Incentives		$ 127,200	$ -	$ 9,000	$ 118,200	
Administration		$ -	$ -			
Subtotal	$ 103,921	$ 127,200	$ -	$ 9,000	$ 118,200	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 422,745	$ -	$ 29,911	$ 392,834	
Subtotal	$ 345,377	$ 422,745	$ -	$ 29,911	$ 392,834	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.534 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 565,205		$ -	$ 30,713	$ 433,845	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 6.1**		**$ -**	**$ 6.1**	**$ 6.1**	Informational (for comparison with supply options)

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Measure Data for Windows & Doors

PER MEASURE				Utility Incentive to the participant	partner incentive
Incremental Cost	$	1,200			
Total Incentive	$	450		$ 450	$ -
Participant	$	750			

Annual Impact Per Measure

Energy Savings per installation	10.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	12%	0.88		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	20	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	939	1,149	0	80	1,069	Estimated Participation
Impact						
Gross Energy Savings (GJ)	9,386	11,490	0	800	10,690	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	8,260	10,111	0	704	9,407	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$107.39	$111.84	$115.76	
Energy Purchases	$ 1,167,715	$ 1,167,715	$ -	$ 78,736	$ 1,088,979	
Utility Program Costs						
DSM Incentives		$ 517,050	$ -	$ 36,000	$ 481,050	
Administration		$ 36,000	$ -	$ 18,000	$ 18,000	
Subtotal	$ 452,699	$ 553,050	$ -	$ 54,000	$ 499,050	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -			
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ 758,340	$ -	$ 52,800	$ 705,540	
Subtotal	$ 619,504	$ 758,340	$ -	$ 52,800	$ 705,540	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.376 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 95,512		$ -	$ (28,064)	$ (115,611)	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 12.4**		**$ -**	**$ 14.5**	**$ 12.2**	Informational (for comparison with supply options)

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2011 Conservation for Affordable Housing Programs	PROGRAM														ALTERNATE		NET PRESENT VALUE									BENEFIT/COST							PARAMETERS													
	COSTS ($000)											SAVINGS (GJ)			LIFE	Impact		Levelized Cost	Utility Benefits (Costs)		Participant Benefits (Costs)			Program Net Savings			Natural Gas	Participant			Natural Gas		SCT Net Benefits	UTILITY				PARTICIPANT								
FEI	Utility			Partners																																										
	Incentives	Administration	Total	Incentives	Administration	Total	Participant	Total	% Utility	% Partner	% Participant	Gross	Net-to-Gross	Net	Years	Energy	Capacity	($/GJ)	Program	Alternate	Program	Carbon Tax	Alternate	Natural Gas	Alternate Energy	Alternate Capacity	Utility	Total Costs	Total Benefits	Benefit/Cost	Rate Impact	SCT	($'000s)	Natural Gas Utility Discount Rate	Natural Gas Supply $/GJ	Alternate Discount Rate	Alternate Supply $/kWh	Discount Rate	Natural Gas NPV $/GJ	Carbon Tax NPV $/GJ	Alternate Energy NPV $/kWh	Alternate Capacity NPV $/kW/a	Natural Gas Tariff $/GJ	Energy Tariff $/kWh	Capacity Tariff $/kW/a
Label	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR	AS	AT
Source Sheet or Calculation	Program	Program	B+C	Program	Program	E+F	Program	D+G+H	D/I	G/I	H/I	Program	Program	MxN	Program	Program	Program	D/Y	OxAJ	Q x N x AL	M x N x AN	M x N x AO	N x (QxAP + RxAQ)	PV(AI,P,-D)	PV(AK,P,-Q*N)	PV(AK,P,-R)	T/D	H>0, (V+W)<0	H<0, (V+W)>0, X	AD/AC	T/(V+D)	(T+U)/I	(T+U)-I	Input	Program	Input	Input	Input	PV(AM,P,-InputD25)	Input	PV(AM,P,-InputD28)	PV(AM,P,-InputD29)	Input	Input	Input
2011																																													
RESIDENTIAL:																																													
Energy Savings Kits	88	98	186	0	0	0	0	186	100%	0%	0%	7,216	73%	5,267	8	0	-	5	823	N/A	370	58	N/A	36,975	0	-	4.4	-	427	N/A	1.5	4.4	637	3.00%	120.22	3%	0.84	3.0%	70.19	10.93	0.58	0.00	9.999	0.083	-
Mobile Homes Study	0	8	8	0	0	0	0	8	100%	0%	0%	0	0%	0	0	0	-	LB	LB	N/A	N/A	N/A	N/A	-	0	-	LB	-	-	N/A	N/A	LB	LB	3.00%	0.00	3%	0.00	3.0%	0.00	0.00	0.00	0.00	9.999	0.083	-
CHF CO-Ops Study	0	12	12	0	0	0	0	12	100%	0%	0%	0	0%	0	0	0	-	LB	LB	N/A	N/A	N/A	N/A	-	0	-	LB	-	-	N/A	N/A	LB	LB	3.00%	0.00	3%	0.00	3.0%	0.00	0.00	0.00	0.00	9.999	0.083	-
REnEW	0	150	150	0	0	0	0	150	100%	0%	0%	0	0%	0	0	0	-	LB	LB	N/A	N/A	N/A	N/A	-	0	-	LB	-	-	N/A	N/A	LB	LB	3.00%	0.00	3%	0.00	3.0%	0.00	0.00	0.00	0.00	9.999	0.083	-
ECAP	1,082	613	1,694	0	0	0	0	1,694	100%	0%	0%	5,654	98%	5,548		185	-	23	1,455	312	581	115	166	74,626	2,003	-	0.9	-	861	N/A	0.6	1.0	74	3.00%	0.00	3%	0.00	3.0%	0.00	0.00	0.00	0.00	9.999	0.083	1
Total Residential	1,170	881	2,051	0	0	0	0	2,051	100%	-	0%	12,870		10,816		185	0	18	2,279	312	950	173	166	111,601	2,003	N/A	1.1	-	1,289	N/A	0.8	1.3	541	1.6	1,318										

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ
1	**UTILITY**		**FORTIS BC**																																	
2																																				
3																																				
4			**Year**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	
5			Units																																	
6		**NATURAL GAS**																																		
7		Incremental Cost of Gas (nominal)	$ Per GJ	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.43
8	1		*Year*	*0*	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*	*16*	*17*	*18*	*19*	*20*	*21*	*22*	*23*	*24*	*25*	*26*	*27*	*28*	*29*	*30*	*31*	
9		carbon tax	$ per GJ	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	
10		Distribution adder	$ per GJ	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	
11		Total incremental cost of gas including carbon		*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.28*	
12	2	GDP Deflator		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
13	3	Incremental Cost of Gas (Real)		$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.28	
14	4	Net Present Value -2010			$29.54	$43.67	$57.39	$70.71	$83.64	$96.20	$108.38	$120.22	$131.71	$142.86	$153.69	$164.20	$174.41	$184.32	$193.94	$203.28	$212.35	$221.16	$229.71	$238.01	$246.07	$253.89	$261.48	$268.86	$276.02	$282.97	$289.72	$296.27	$302.63	$308.81	$314.74		
15	5	Net Present Value -2011			$29.54	$43.67	$57.39	$70.71	$83.64	$96.20	$108.38	$120.22	$131.71	$142.86	$153.69	$164.20	$174.41	$184.32	$193.94	$203.28	$212.35	$221.16	$229.71	$238.01	$246.07	$253.89	$261.48	$268.86	$276.02	$282.97	$289.72	$296.27	$302.63	$308.74			
16	6	Net Present Value -2012				$29.54	$43.67	$57.39	$70.71	$83.64	$96.20	$108.38	$120.22	$131.71	$142.86	$153.69	$164.20	$174.41	$184.32	$193.94	$203.28	$212.35	$221.16	$229.71	$238.01	$246.07	$253.89	$261.48	$268.86	$276.02	$282.97	$289.72	$296.27	$302.56				
17																																				
18																																				
19		**ELECTRICITY**																																		
20		Incremental Cost of Elec	$ Per kWh	$0.10																																
21		Incremental Cost of E Capacity	$ Per kW/a	$170.00																																
22																																				
23																																				
24																																				
25	**RETAIL**																																			
26				Rate	Customers																															
27		Residential Retail			1,000																															
28		**TGI**	$ Per MJ	$0.0100	1,000																															
29		**TGVI**	$ Per MJ	$0.0143	1,000																															
30		**Electricity**	$ Per MJ	$0.0230																																
31		**Electricity**	$ per kWh	$0.0829	1,000																															
32		**Electricity**	$ per kW per year		1,000																															
33		Commercial Retail																																		
34		**TGI**	$ Per MJ	$0.0094	50																															
35		**TGVI**	$ Per MJ	$0.0160	50																															
36		**Electricity**	$ Per MJ	$0.0214																																
37		**Electricity**	$ per kWh	$0.0749	1,000																															
38		**Electricity**	$ per kW per year	$52.0000	1,000																															
39																																				
40	**TAX**																																			
41			**Year**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**		
42	1		*Year*	*0*	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*	*16*	*17*	*18*	*19*	*20*	*21*	*22*	*23*	*24*	*25*	*26*	*27*	*28*	*29*	*30*		
43	2	Carbon	$ Per tonne		$20.00	$25.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00		
44	3	Carbon	$ Per GJ		$0.9976	$1.2470	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	
45	4	GDP Deflator			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
46	5	Carbon (Real)			$1.00	$1.25	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50		
47	6	Net Present Value -2010			$2.14	$3.51	$4.84	$6.13	$7.38	$8.60	$9.78	$10.93	$12.05	$13.13	$14.18	$15.19	$16.18	$17.14	$18.08	$18.98	$19.86	$20.71	$21.54	$22.35	$23.13	$23.89	$24.62	$25.34	$26.03	$26.71	$27.38	$27.99	$28.61	$29.21			
48	7	Net Present Value -2011				$2.62	$3.99	$5.32	$6.61	$7.86	$9.08	$10.26	$11.41	$12.52	$13.60	$14.65	$15.67	$16.66	$17.62	$18.55	$19.46	$20.34	$21.19	$22.02	$22.82	$23.61	$24.36	$25.10	$25.81	$26.51	$27.18	$27.84	$28.47	$29.09				
49	8	Net Present Value -2012					$2.86	$4.23	$5.56	$6.85	$8.11	$9.32	$10.50	$11.65	$12.76	$13.85	$14.90	$15.91	$16.90	$17.86	$18.80	$19.70	$20.58	$21.43	$22.26	$23.07	$23.85	$24.61	$25.34	$26.06	$26.75	$27.42	$28.08	$28.71			
50																																				
51		**Discount Rate (real)**[1]																																		
52		**TERASEN GAS**																																		
53		**Rate of Inflation**	1.90%																																	
54		**TGI**	3.00%																																	
55		**TGVI**	3.00%																																	
56		**BC HYDRO**																																		
57		**Rate of Inflation**	2.00%																																	
58		**BC Hydro**	3.00%																																	
59		**Customer**	3.00%																																	
60		*Footnote 1: Source LR 070531*																																		
61																																				
62				**SHEET LABELS**																																
63	**New Construction**																																			
64		Energy Savings Kits		**BASEBOARD**																																
65		Mobile Homes Study		**HEATPUMP**																																

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Measure Data for Energy Savings Kits

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 10.47			
Total Incentive	$ 10.47		$ 10.47	$ -
Participant				

Annual Impact Per Measure

Energy Savings per installation	0.9	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	27%	0.73		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	8	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	7,918	8,400	0	8,400		Estimated Participation
Impact						
Gross Energy Savings (GJ)	6,801	7,216	0	7,216	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	4,965	5,267	0	5,267	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$120.22	$120.22	$120.22	
Energy Purchases	$ 633,232	$ 633,232	$ -	$ 633,232	$ -	
Utility Program Costs						
DSM Incentives		$ 87,948	$ -	$ 87,948	$ -	
Administration		$ 98,280	$ -	$ 98,280		
Subtotal	$ 175,538	$ 186,228	$ -	$ 186,228	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$0.842 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 457,695		$ -	$ 447,004	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 5.0**		**$ -**	**$ 5.0**	**$ -**	Informational (for comparison with supply options)

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Measure Data for CHF CO-Ops Study

PER MEASURE		Utility Incentive to the participant	partner incentive
Incremental Cost	$ -		
Total Incentive	$ -	$ -	$ -
Participant			

Annual Impact Per Measure

Energy Savings per installation	0.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact		GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	0	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	0	0	0	0		Estimated Participation
Impact						
Gross Energy Savings (GJ)	0	0	0	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	0	0	0	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$0.00	$0.00	$0.00	
Energy Purchases	$ -	$ -	$ -	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ 12,000	$ -	$ 12,000		
Subtotal	$ 11,311	$ 12,000	$ -	$ 12,000	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$0.000 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ (11,311)		$ -	$ (12,000)	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ -**		**$ -**	**$ -**	**$ -**	Informational (for comparison with supply options)

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Measure Data for REnEW

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ -			
Total Incentive	$ -		$ -	$ -
Participant				

Annual Impact Per Measure

Energy Savings per installation	0.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact		GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	0	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	0	0	0	0		Estimated Participation
Impact						
Gross Energy Savings (GJ)	0	0	0	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	0	0	0	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$0.00	$0.00	$0.00	
Energy Purchases	$ -	$ -	$ -	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ 150,000	$ -	$ 150,000		
Subtotal	$ 141,389	$ 150,000	$ -	$ 150,000	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$0.000 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ (141,389)		$ -	$ (150,000)	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ -**		**$ -**	**$ -**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Mobile Homes Study

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ -			
Total Incentive	$ -		$ -	$ -
Participant				

Annual Impact Per Measure

Energy Savings per installation	0.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact		GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	0	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	0	0	0	0		Estimated Participation
Impact						
Gross Energy Savings (GJ)	0	0	0	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	0	0	0	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$0.00	$0.00	$0.00	
Energy Purchases	$ -	$ -	$ -	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ 8,000	$ -	$ 8,000		
Subtotal	$ 7,541	$ 8,000	$ -	$ 8,000	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$0.000 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ (7,541)		$ -	$ (8,000)	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ -**		**$ -**	**$ -**	**$ -**	Informational (for comparison with supply options)

FORTIS BC

2011 Conservation for Affordable Housing Programs	PROGRAM														ALTERNATE		NET PRESENT VALUE									BENEFIT/COST						PARAMETERS													
	COSTS ($000)											SAVINGS (GJ)			LIFE	Impact		Levelized Cost	Utility Benefits (Costs)		Participant Benefits (Costs)			Program Net Savings			Natural Gas	Participant			Natural Gas	Total Resource	TRC Net Benefits	UTILITY				PARTICIPANT								
FEI	Utility			Partners			Participant	Total	% Utility	% Partner	% Participant	Gross	Net-to-Gross	Net	Years	Energy	Capacity	($/GJ)	Program	Alternate	Program	Carbon Tax	Alternate	Natural Gas	Alternate Energy	Alternate Capacity	Utility	Total Costs	Total Benefits	Benefit/Cost	Rate Impact			Natural Gas Utility Discount Rate	Natural Gas Supply	Alternate Discount Rate	Alternate Supply	Discount Rate	Natural Gas NPV	Carbon Tax NPV	Alternate Energy NPV	Alternate Capacity NPV	Natural Gas Tariff	Energy Tariff	Capacity Tariff
	Incentives	Administration	Total	Incentives	Administration	Total										MWh	kW		($'000s)	($'000s)	($'000s)	($'000s)	($'000s)	(GJ)	(MWh)	(kW)		($'000s)	($'000s)						$/GJ		$/kWh		$/GJ	$/GJ	$/kWh	$/kW/a	$/GJ	$/kWh	$/kW/a
Label	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR	AS	AT
Source Sheet or Calculation	Program	Program	B+C	Program	Program	E+F	Program	D+G+H	D/I	G/I	H/I	Program	Program	MxN	Program	Program	Program	D/Y	OxAJ	Q x N x AL	M x N x AN	M x N x AO	N x (QxAP + RxAQ)	PV(AI,P,-O)	PV(AK,P,-Q*N)	PV(AK,P,-R)	T/D	H>0, (V+W)>0	H>0, (V+W)>0, X	AD/AC	T/(V+D)	(T+U)/I	(T+U)-I	Input	Program	Input	Input	Input	PV(AM,P,-InputD25)	Input	PV(AM,P,-InputD28)	PV(AM,P,-InputD29)	Input	Input	Input
2011																																													
RESIDENTIAL:																																													
Energy Savings Kits	88	98	186	0	0	0	0	186	100%	0%	0%	7,216	73%	5,267	8	0	-	6	416	N/A	327	47	N/A	31,271	0	-	2.2	-	374	N/A	0.8	2.2	229	7.15%	60.70	6%	0.75	6.0%	62.09	9.00	0.51	0.00	9.999	0.083	-
Mobile Homes Study	0	8	8	0	0	0	0	8	100%	0%	0%	0	0%	0	0	0	-	LB	LB	N/A	N/A	N/A	N/A	-	0	-	LB	-	-	N/A	N/A	LB	LB	7.15%	0.00	6%	0.00	6.0%	0.00	0.00	0.00	0.00	9.999	0.083	-
CHF CO-Ops Study	0	12	12	0	0	0	0	12	100%	0%	0%	0	0%	0	0	0	-	LB	LB	N/A	N/A	N/A	N/A	-	0	-	LB	-	-	N/A	N/A	LB	LB	7.15%	0.00	6%	0.00	6.0%	0.00	0.00	0.00	0.00	9.999	0.083	-
REnEW	0	150	150	0	0	0	0	150	100%	0%	0%	0	0%	0	0	0	-	LB	LB	N/A	N/A	N/A	N/A	-	0	-	LB	-	-	N/A	N/A	LB	LB	7.15%	0.00	6%	0.00	6.0%	0.00	0.00	0.00	0.00	9.999	0.083	-
ECAP	1,082	613	1,694	0	0	0	0	1,694	100%	0%	0%	5,654	98%	5,548		185	-	32	691	312	581	81	166	53,242	2,003	-	0.4	-	827	N/A	0.3	0.6	(691)	7.15%	0.00	6%	0.00	6.0%	0.00	0.00	0.00	0.00	9.999	0.083	1
Total Residential	1,170	881	2,051	0	0	0	0	2,051	100%	-	0%	12,870		10,816		185	0	24	1,107	312	908	128	166	84,514	2,003	N/A	0.5	-	1,202	N/A	0.4	0.7	(631)	0.9	(205)										

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	**UTILITY**		**FORTIS BC**											
4			**Year**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**
5			Units											
6		**NATURAL GAS**												
7		Incremental Cost of Gas (nominal)	$ Per GJ	$5.50	$6.17	$6.81	$7.35	$7.87	$8.26	$8.56	$8.78	$8.99	$9.19	$9.40
8	1		*Year*	*0*	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*
9		carbon tax	$ per GJ	*0.75*	*1.00*	*1.25*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*
10		Distribution adder	$ per GJ	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*
11		Total incremental cost of gas including carbon		*6.41*	*7.33*	*8.22*	*9.01*	*9.53*	*9.92*	*10.22*	*10.44*	*10.65*	*10.85*	*11.06*
12	2	GDP Deflator		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
13	3	Incremental Cost of Gas (Real)		$6.41	$7.33	$8.22	$9.01	$9.53	$9.92	$10.22	$10.44	$10.65	$10.85	$11.06
14	4	Net Present Value -2010			$12.36	$19.04	$25.87	$32.62	$39.17	$45.47	$51.48	$57.20	$62.63	$67.81
15	5	Net Present Value -2011				$14.00	$21.32	$28.54	$35.56	$42.32	$48.75	$54.88	$60.70	$66.25
16	6	Net Present Value -2012					$15.51	$23.26	$30.78	$38.01	$44.91	$51.47	$57.72	$63.66
19		**ELECTRICITY**												
20		Incremental Cost of Elec	$ Per kWh	$0.12										
21		Incremental Cost of E Capacity	$ Per kW/a	$170.00										
25	**RETAIL**													
26				Rate	Customers		789,928	Total Customers in BC		80,000	Total Residential and Commercial Customers on VI			
27		Residential Retail			*000's*									
28		**TGI**	$ Per MJ	$0.0100	640		712,304	Total Residential Customers in BC						
29		**TGVI**	$ Per MJ	$0.0143	72									
30		**Electricity**	$ Per MJ	$0.0230										
31		**Electricity**	$ per kWh	$0.0827	1,511		1,511,435	Total BCH Residential Customers in BC				89%		
32		**Electricity**	$ per kW per year											
33		Commercial Retail												
34		**TGI**	$ Per MJ	$0.0094	78		77,624	Total Commercial Customers in BC						
35		**TGVI**	$ Per MJ	$0.0169	8									
36		**Electricity**	$ Per MJ	$0.0214										
37		**Electricity**	$ per kWh	$0.0769	190		189,764	Total Light Industrial and Commercial Customers in BC						
38		**Electricity**	$ per kW per year	$52.0000	15									
40	**TAX**													
41			**Year**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
42	1		*Year*		*0*	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*
43	2	Carbon	$ Per tonne		$20.00	$25.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00
44	3	Carbon	$ Per GJ		$0.9976	$1.2470	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964
45	4	GDP Deflator			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
46	5	Carbon (Real)			$1.00	$1.25	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50
47	6	Net Present Value -2010				$2.02	$3.23	$4.37	$5.43	$6.42	$7.34	$8.20	$9.00	$9.75
48	7	Net Present Value -2011					$2.47	$3.68	$4.82	$5.88	$6.87	$7.79	$8.65	$9.45
49	8	Net Present Value -2012						$2.70	$3.92	$5.05	$6.11	$7.10	$8.02	$8.88
51		**Discount Rate (real)[1]**												
52		**TERASEN GAS**												
53		**Rate of Inflation**	1.90%											
54		**TGI**	7.15%											
55		**TGVI**	6.89%											
56		**BC HYDRO**												
57		**Rate of Inflation**	2.00%											
58		**BC Hydro**	6.00%											
59		**Customer**	6.00%											
60		*Footnote 1: Source LR 070531*												
62				**SHEET LABELS**										
63	**New Construction**													
64		Energy Savings Kits		**BASEBOARD**										
65		Mobile Homes Study		**HEATPUMP**										

	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI
4	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**
7	$9.60	$9.81	$10.03	$10.25	$10.47	$10.70	$10.93	$11.17	$11.42	$11.67	$11.92	$12.19	$12.45	$12.73	$13.01	$13.29	$13.58	$13.88	$14.19	$14.50	$14.82
8	*11*	*12*	*13*	*14*	*15*	*16*	*17*	*18*	*19*	*20*	*21*	*22*	*23*	*24*	*25*	*26*	*27*	*28*	*29*	*30*	*31*
9	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*
10	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	
11	*11.26*	*11.47*	*11.69*	*11.91*	*12.13*	*12.36*	*12.59*	*12.83*	*13.08*	*13.33*	*13.58*	*13.85*	*14.11*	*14.39*	*14.67*	*14.95*	*15.24*	*15.54*	*15.85*	*16.16*	*16.32*
12	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
13	$11.26	$11.47	$11.69	$11.91	$12.13	$12.36	$12.59	$12.83	$13.08	$13.33	$13.58	$13.85	$14.11	$14.39	$14.67	$14.95	$15.24	$15.54	$15.85	$16.16	$16.32
14	$72.72	$77.39	$81.84	$86.06	$90.08	$93.90	$97.53	$100.98	$104.27	$107.40	$110.37	$113.19	$115.88	$118.44	$120.88	$123.19	$125.40	$127.49	$129.49	$131.39	$133.18
15	$71.51	$76.52	$81.28	$85.81	$90.11	$94.21	$98.10	$101.80	$105.32	$108.67	$111.85	$114.88	$117.76	$120.50	$123.11	$125.59	$127.96	$130.20	$132.34	$134.38	$136.29
16	$69.30	$74.66	$79.76	$84.62	$89.23	$93.61	$97.78	$101.75	$105.52	$109.11	$112.52	$115.77	$118.85	$121.79	$124.59	$127.25	$129.78	$132.18	$134.48	$136.66	$138.71
41	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**
42	*10*	*11*	*12*	*13*	*14*	*15*	*16*	*17*	*18*	*19*	*20*	*21*	*22*	*23*	*24*	*25*	*26*	*27*	*28*	*29*	*30*
43	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00
44	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964
45	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
46	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50
47	$10.45	$11.11	$11.72	$12.29	$12.82	$13.31	$13.78	$14.21	$14.61	$14.99	$15.34	$15.67	$15.97	$16.26	$16.52	$16.77	$17.00	$17.22	$17.42	$17.61	$17.79
48	$10.20	$10.90	$11.56	$12.17	$12.74	$13.27	$13.76	$14.23	$14.66	$15.06	$15.44	$15.79	$16.12	$16.42	$16.71	$16.97	$17.22	$17.45	$17.67	$17.87	$18.06
49	$9.69	$10.44	$11.14	$11.79	$12.40	$12.97	$13.50	$14.00	$14.46	$14.89	$15.29	$15.67	$16.02	$16.35	$16.65	$16.94	$17.21	$17.45	$17.69	$17.90	$18.10

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Measure Data for Energy Savings Kits

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 10.47			
Total Incentive	$ 10.47		$ 10.47	$ -
Participant				

Annual Impact Per Measure

Energy Savings per installation	0.9	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	27%	0.73		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	8	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	7,316	8,400	0	8,400		Estimated Participation
Impact						
Gross Energy Savings (GJ)	6,285	7,216	0	7,216	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	4,588	5,267	0	5,267	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$57.20	$60.70	$63.66	
Energy Purchases	$ 319,752	$ 319,752	$ -	$ 319,752	$ -	
Utility Program Costs						
DSM Incentives		$ 87,948	$ -	$ 87,948	$ -	
Administration		$ 98,280	$ -	$ 98,280		
Subtotal	$ 162,204	$ 186,228	$ -	$ 186,228	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$0.745 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 157,549		$ -	$ 133,524	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 6.0**		**$ -**	**$ 6.0**	**$ -**	Informational (for comparison with supply options)

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Measure Data for CHF CO-Ops Study

PER MEASURE		Utility Incentive to the participant	partner incentive
Incremental Cost	$ -		
Total Incentive	$ -	$ -	$ -
Participant			

Annual Impact Per Measure

Energy Savings per installation	0.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact		GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	0	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	0	0	0	0		Estimated Participation
Impact						
Gross Energy Savings (GJ)	0	0	0	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	0	0	0	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$0.00	$0.00	$0.00	
Energy Purchases	$ -	$ -	$ -	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ 12,000	$ -	$ 12,000		
Subtotal	$ 10,452	$ 12,000	$ -	$ 12,000	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$0.000 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ (10,452)		$ -	$ (12,000)	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ -**		**$ -**	**$ -**	**$ -**	Informational (for comparison with supply options)

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Measure Data for REnEW

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ -			
Total Incentive	$ -		$ -	$ -
Participant				

Annual Impact Per Measure

Energy Savings per installation	0.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact		GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	0	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	0	0	0	0		Estimated Participation
Impact						
Gross Energy Savings (GJ)	0	0	0	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	0	0	0	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$0.00	$0.00	$0.00	
Energy Purchases	$ -	$ -	$ -	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ 150,000	$ -	$ 150,000		
Subtotal	$ 130,649	$ 150,000	$ -	$ 150,000	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$0.000 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ (130,649)		$ -	$ (150,000)	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	$ -		$ -	$ -	$ -	Informational (for comparison with supply options)

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Measure Data for Mobile Homes Study

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ -			
Total Incentive	$ -		$ -	$ -
Participant				

Annual Impact Per Measure

Energy Savings per installation	0.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact		GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	0	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	0	0	0	0		Estimated Participation
Impact						
Gross Energy Savings (GJ)	0	0	0	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	0	0	0	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$0.00	$0.00	$0.00	
Energy Purchases	$ -	$ -	$ -	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ 8,000	$ -	$ 8,000		
Subtotal	$ 6,968	$ 8,000	$ -	$ 8,000	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$0.000 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ (6,968)		$ -	$ (8,000)	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ -**		**$ -**	**$ -**	**$ -**	Informational (for comparison with supply options)

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	PROGRAM														ALTERNATE		NET PRESENT VALUE									BENEFIT/COST						PARAMETERS													
	COSTS ($000)											SAVINGS (GJ)			LIFE	Impact		Levelized Cost	Utility Benefits (Costs)		Participant Benefits (Costs)			Program Net Savings			Natural Gas Utility	Participant					SCT Net Benefits	UTILITY					PARTICIPANT								
	Utility			Partners																																									
	Incentives	Administration	Total	Incentives	Administration	Total	Participant	Total	% Utility	% Partner	% Participant	Gross	Net-to-Gross	Net	Years	Energy	Capacity	($/GJ)	Program	Alternate	Program	Carbon Tax	Alternate	Natural Gas	Alternate Energy	Alternate Capacity	Natural Gas	Total Costs	Total Benefits	Benefit/Cost	Natural Gas		SCT	($'000s)	Natural Gas Utility Discount	Natural Gas Supply	Alternate Discount Rate	Alternate Supply	Discount Rate	Natural Gas NPV	Carbon Tax NPV	Alternate Energy NPV	Alternate Capacity NPV	Natural Gas Tariff	Energy Tariff	Capacity Tariff
																MWh	kW		($'000s)	($'000s)	($'000s)	($'000s)	($'000s)	(GJ)	(MWh)	(kW)		($'000s)	($'000s)		Rate Impact		(T+U)-I				$/kWh		$/GJ	$/GJ	$/kWh	$/kW/a	$/GJ	$/kWh	$/kW/a
Label	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR	AS	AT
Source Sheet or Calculation	Program	Program	B+C	Program	Program	E+F	Program	D+G+H	D/I	G/I	H/I	Program	Program	M+N	Program	Program	Program	D/Y	O+AJ	Q x N x AL	M x N x AN	M x N x AO	N x (QxAP + RxAQ)	PV(AI,P,-O)	PV(AK,P,-Q*N)	PV(AK,P,-R)	T/D	H=D, (V+W)=D	H=D, (V+W)=D, X	AD/AC	T/(V+D)	(T+U)/I	(T+U)-I	Input	Program	Input	Input	Input	PV(AM,P,-Input!D25)	Input	PV(AM,P,-Input!D28)	PV(AM,P,-Input!D29)	Input	Input	Input
2011																																													
Faucet Aerator (1.5 G.P.M. max)	3	0	3	0	0	0	0	3	100%	0%	0%	475	90%	427	10	0	-	1	61	N/A	36	6	N/A	3,645	-	-	23.0	-	42	N/A	1.6	23.0	58	3.00%	142.86	3%	1.02	3.0%	85.29	13.60	0.71	0.00	9.999	0.083	-
Low Flow Showhead (1.5 G.P.M. max)	1	0	1	0	0	0	0	1	100%	0%	0%	200	95%	190	10	0	-	1	27	N/A	16	3	N/A	1,624	-	-	30.3	-	19	N/A	1.6	30.3	26	3.00%	142.86	3%	1.02	3.0%	85.29	13.60	0.71	0.00	9.999	0.083	-
Low Flow Showerhead Handheld (1.5 GPM max)	3	0	3	0	0	0	0	3	100%	0%	0%	214	95%	203	10	0	-	2	29	N/A	17	3	N/A	1,734	-	-	8.6	-	20	N/A	1.4	8.6	26	3.00%	142.86	3%	1.02	3.0%	85.29	13.60	0.71	0.00	9.999	0.083	-
Water Heater Blanket (standard size)	0	0	0	0	0	0	0	0	100%	0%	0%	14	95%	13	10	0	-	2	2	N/A	1	0	N/A	112	-	-	7.7	-	1	N/A	1.4	7.7	2	3.00%	142.86	3%	1.02	3.0%	85.29	13.60	0.71	0.00	9.999	0.083	-
Water Heater Pipe Wrap (R-12 ft)2	1	0	1	0	0	0	0	1	100%	0%	0%	161	95%	153	8	0	-	1	18	N/A	11	2	N/A	1,076	-	-	31.3	-	13	N/A	1.6	31.3	18	3.00%	120.22	3%	0.84	3.0%	70.19	11.41	0.58	0.00	9.999	0.083	-
Outlet Gaskets (package for 4)	2	0	2	0	0	0	0	2	100%	0%	0%	21	95%	20	15	0	-	9	4	N/A	2	0	N/A	243	-	-	1.9	-	3	N/A	0.9	1.9	2	3.00%	193.94	3%	1.43	3.0%	119.37	18.55	0.99	0.00	9.999	0.083	-
Window Film (package to cover 2 standard windows)	2	0	2	0	0	0	0	2	100%	0%	0%	33	95%	31	1	0	-	66	1	N/A	0	0	N/A	31	-	-	0.5	-	0	N/A	0.4	0.5	(1)	3.00%	29.54	3%	0.12	3.0%	9.71	2.62	0.08	0.00	9.999	0.083	-
Basic Home Comfort Draftproofing (prescriptive, set time)	22	0	22	0	0	0	0	22	100%	0%	0%	299	100%	299	25	0	-	4	82	N/A	52	8	N/A	5,201	-	-	3.7	-	60	N/A	1.1	3.7	60	3.00%	276.02	3%	2.09	3.0%	174.11	26.51	1.44	0.00	9.999	0.083	-
High Efficiency Furnace	571	0	571	0	0	0	0	571	100%	0%	0%	1,061	100%	1,061	18	79	-	39	235	131	146	22	90	14,586	1,091	-	0.4	-	259	N/A	0.3	0.6	(206)	3.00%	221.16	3%	1.65	3.0%	137.52	21.19	1.14	0.00	9.999	0.083	-
Minor Home Repair	5	0	5	0	0	0	0	5	100%	0%	0%	5	100%	5	10	0	-	107	1	N/A	0	0	N/A	43	-	-	0.2	-	1	N/A	0.1	0.2	(4)	3.00%	142.86	3%	1.02	3.0%	85.29	13.60	0.71	0.00	9.999	0.083	-
Basic stream enabling costs																																													
Carbon Monoxide Detector	28	0	28	0	0	0	0	28							10																															
Portfolio level admin costs																																													
Admin Costs Basic Stream	0	363	363	0	0	0	0	363																																					
Basic ECAP Measures	639	363	1,001	0	0	0	0	1,001	100%	0%	0%	2,483	96%	2,404	12	79	-	35	598	170	283	44	90	28,295	1,091		0.6	-	417	N/A	0.5	0.8	(233)													
Faucet Aerators (1.5 G.P.M. max)	1	0	1	0	0	0	0	1	100%	0%	0%	158	90%	143	10	0	-	1	20	N/A	12	2	N/A	1,216	-	-	23.0	-	14	N/A	1.6	23.0	19	3.00%	142.86	3%	1.02	3.0%	85.29	13.60	0.71	0.00	9.999	0.083	-
Low Flow Fixed Showhead (1.5 GPM)	0	0	0	0	0	0	0	0	100%	0%	0%	66	95%	63	10	0	-	1	9	N/A	5	1	N/A	539	-	-	30.3	-	6	N/A	1.6	30.3	9	3.00%	142.86	3%	1.02	3.0%	85.29	13.60	0.71	0.00	9.999	0.083	-
Low Flow Handheld Showhead (1.5 GPM)	1	0	1	0	0	0	0	1	100%	0%	0%	66	95%	63	10	0	-	2	9	N/A	5	1	N/A	539	-	-	8.0	-	6	N/A	1.4	8.0	8	3.00%	142.86	3%	1.02	3.0%	85.29	13.60	0.71	0.00	9.999	0.083	-
Water Heater Blanket (standard size)	0	0	0	0	0	0	0	0	100%	0%	0%	5	95%	4	10	0	-	2	1	N/A	0	0	N/A	37	-	-	7.7	-	0	N/A	1.4	7.7	1	3.00%	142.86	3%	1.02	3.0%	85.29	13.60	0.71	0.00	9.999	0.083	-
Water Heater Pipe Wrap	0	0	0	0	0	0	0	0	100%	0%	0%	54	95%	51	8	0	-	1	6	N/A	4	1	N/A	359	-	-	31.3	-	4	N/A	1.6	31.3	6	3.00%	120.22	3%	0.84	3.0%	70.19	11.41	0.58	0.00	9.999	0.083	-
Outlet Gaskets (package for 4)	1	0	1	0	0	0	0	1	100%	0%	0%	7	95%	7	15	0	-	9	1	N/A	1	0	N/A	81	-	-	1.9	-	1	N/A	0.9	1.9	1	3.00%	193.94	3%	1.43	3.0%	119.37	18.55	0.99	0.00	9.999	0.083	-
Window Film (package to cover 2 standard windows)	1	0	1	0	0	0	0	1	100%	0%	0%	11	95%	11	1	0	-	66	0	N/A	0	0	N/A	10	-	-	0.5	-	0	N/A	0.4	0.5	(0)	3.00%	29.54	3%	0.12	3.0%	9.71	2.62	0.08	0.00	9.999	0.083	-
Advanced Draftproofing	45	0	45	0	0	0	0	45	100%	0%	0%	1,061	100%	1,061	18	79	-	3	152	131	146	22	90	14,586	1,091	-	3.3	-	259	N/A	0.8	6.2	237	3.00%	142.86	3%	1.65	3.0%	137.52	21.19	1.14	0.00	9.999	0.083	-
High Efficiency Furnace	190	0	190	0	0	0	0	190	100%	0%	0%	352	100%	352	18	26	-	39	78	43	48	7	30	4,842	362	-	0.4	-	86	N/A	0.3	0.6	(68)	3.00%	221.16	3%	1.65	3.0%	137.52	21.19	1.14	0.00	9.999	0.083	-
Ceiling Insulation	109	0	109	0	0	0	0	109	100%	0%	0%	1,056	100%	1,056	25	0	-	6	292	N/A	184	28	N/A	18,391	-	-	2.7	-	212	N/A	1.0	2.7	183	3.00%	276.02	3%	2.09	3.0%	174.11	26.51	1.44	0.00	9.999	0.083	-
Wall Insulation	38	0	38	0	0	0	0	38	100%	0%	0%	324	100%	324	25	0	-	7	90	N/A	56	9	N/A	5,646	-	-	2.4	-	65	N/A	1.0	2.4	52	3.00%	276.02	3%	2.09	3.0%	174.11	26.51	1.44	0.00	9.999	0.083	-
Crawlspace Insulation	2	0	2	0	0	0	0	2	100%	0%	0%	13	100%	13	10	0	-	18	2	N/A	1	0	N/A	115	-	-	1.0	-	1	N/A	0.6	1.0	(0)	3.00%	142.86	3%	1.02	3.0%	85.29	13.60	0.71	0.00	9.999	0.083	-
Minor Home Repair	2	0	2	0	0	0	0	2	100%	0%	0%	2	100%	2	10	0	-	107	0	N/A	0	0	N/A	14	-	-	0.2	-	0	N/A	0.1	0.2	(1)	3.00%	142.86	3%	1.02	3.0%	85.29	13.60	0.71	0.00	9.999	0.083	-
Advance Stream enabling costs																																												
Carbon Monoxide Detector	9	0	9	0	0	0	0	9							10																															
Ventilation Fan	45	0	45	0	0	0	0	45							25																															
Portfolio level admin costs																																													
Admin Costs Advanced Stream	0	250	250	0	0	0	0	250																																					
Advanced ECAP Measures	443	250	693	0	0	0	0	693	100%	0%	0%	3,176	97%	3,150	14	106	-	15	857	227	464	71	120	46,374	1,453	-	1.2	-	655	N/A	0.7	1.6	391													
Total basic and advanced ECAP measures	1,082	613	1,694	0	0	0	0	1,694	100%	0%	0%	5,654		5,548		185	0	23	1,455	397	746	115	210	74,626	2,544	0	0.9	-	1,072	N/A	0.6	1.1	158													

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ
1	**UTILITY**		**Terasen Gas Inc**																																		
2																																					
3																																					
4			**Year**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	
5			Units																																		
6		**NATURAL GAS**																																			
7		Incremental Cost of Gas (nominal)	$ Per GJ	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.43	
8	1		*Year*	*0*	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*	*16*	*17*	*18*	*19*	*20*	*21*	*22*	*23*	*24*	*25*	*26*	*27*	*28*	*29*	*30*	*31*		
9		carbon tax	$ per GJ	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*		
10		Distribution adder	$ per GJ	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*		
11		Total incremental cost of gas including carbon		*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.28*		
12	2	GDP Deflator		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
13	3	Incremental Cost of Gas (Real)		$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.28		
14	4	Net Present Value -2010			$29.54	$43.67	$57.39	$70.71	$83.64	$96.20	$108.38	$120.22	$131.71	$142.86	$153.69	$164.20	$174.41	$184.32	$193.94	$203.28	$212.35	$221.16	$229.71	$238.01	$246.07	$253.89	$261.48	$268.86	$276.02	$282.97	$289.72	$296.27	$302.63	$308.81	$314.74		
15	5	Net Present Value -2011			$29.54	$43.67	$57.39	$70.71	$83.64	$96.20	$108.38	$120.22	$131.71	$142.86	$153.69	$164.20	$174.41	$184.32	$193.94	$203.28	$212.35	$221.16	$229.71	$238.01	$246.07	$253.89	$261.48	$268.86	$276.02	$282.97	$289.72	$296.27	$302.63	$308.74			
16	6	Net Present Value -2012				$29.54	$43.67	$57.39	$70.71	$83.64	$96.20	$108.38	$120.22	$131.71	$142.86	$153.69	$164.20	$174.41	$184.32	$193.94	$203.28	$212.35	$221.16	$229.71	$238.01	$246.07	$253.89	$261.48	$268.86	$276.02	$282.97	$289.72	$296.27	$302.56				
17																																					
18																																					
19		**ELECTRICITY**																																			
20		Incremental Cost of Elec	$ Per kWh	$0.10																																	
21		Incremental Cost of E Capacity	$ Per kW/a	$170.00																																	
22																																					
23																																					
24																																					
25	**RETAIL**																																				
26																																					
27				Rate	Customers																																
28		Residential Retail			1,000																																
29		**TGI**	$ Per MJ	$0.0100	1,000																																
30		**TGVI**	$ Per MJ	$0.0143	1,000																																
31		**Electricity**	$ Per MJ	$0.0230																																	
32		**Electricity**	$ per kWh	$0.0829	1,000																																
33		**Electricity**	$ per kW per year		1,000																																
34		Commercial Retail																																			
35		**TGI**	$ Per MJ	$0.0094	50																																
36		**TGVI**	$ Per MJ	$0.0150	50																																
37		**Electricity**	$ Per MJ	$0.0214																																	
38		**Electricity**	$ per kWh	$0.0749	1,000																																
39		**Electricity**	$ per kW per year	$52.0000	1,000																																
40																																					
41	**TAX**		**Year**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**		
42	1		*Year*		*0*	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*	*16*	*17*	*18*	*19*	*20*	*21*	*22*	*23*	*24*	*25*	*26*	*27*	*28*	*29*	*30*		
43	2	Carbon	$ Per tonne		$20.00	$25.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00		
44	3	Carbon	$ Per GJ		$0.9976	$1.2470	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964		
45	4	GDP Deflator			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
46	5	Carbon (Real)			$1.00	$1.25	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50		
47	6	Net Present Value -2010			$2.14	$3.51	$4.84	$6.13	$7.39	$8.60	$9.78	$10.93	$12.05	$13.13	$14.18	$15.19	$16.18	$17.14	$18.08	$18.98	$19.86	$20.71	$21.54	$22.35	$23.13	$23.89	$24.62	$25.34	$26.03	$26.71	$27.36	$27.99	$28.61	$29.21			
48	7	Net Present Value -2011				$2.62	$3.99	$5.32	$6.61	$7.86	$9.08	$10.26	$11.41	$12.52	$13.60	$14.65	$15.67	$16.66	$17.62	$18.55	$19.46	$20.34	$21.19	$22.02	$22.82	$23.61	$24.36	$25.10	$25.81	$26.51	$27.18	$27.84	$28.47	$29.09				
49	8	Net Present Value -2012					$2.86	$4.23	$5.56	$6.85	$8.11	$9.32	$10.50	$11.65	$12.76	$13.85	$14.90	$15.91	$16.90	$17.86	$18.80	$19.70	$20.58	$21.43	$22.26	$23.07	$23.85	$24.61	$25.34	$26.06	$26.75	$27.42	$28.08	$28.71			
50																																					
51		**Discount Rate (real)**[1]																																			
52		**TERASEN GAS**																																			
53		**Rate of Inflation**	1.90%																																		
54		**TGI**	3.00%																																		
55		**TGVI**	3.00%																																		
56		**BC HYDRO**																																			
57		**Rate of Inflation**	2.00%																																		
58		**BC Hydro**	3.00%																																		
59		**Customer**	3.00%																																		
60		*Footnote 1: Source LR 070531*																																			
61																																					
62				**SHEET LABELS**																																	
63	**New Construction**																																				
64		#REF!		**BASEBOARD**																																	
65		#REF!		**HEATPUMP**																																	

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Measure Data for Faucet Aerator (1.5 G.P.M. max)

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 4.13			
Total Incentive	$ 4.13		$ 4	$ -
Participant	$ -			

Annual Impact Per Measure

Energy Savings per installation	0.74	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	10%	0.90		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	10	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	623	642		642		Estimated Participation
Impact						
Gross Energy Savings (GJ)	448	475	0	475	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	403	427	0	427	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$142.86	$142.86	$142.86	
Energy Purchases	$ 61,045	$ 61,045	$ -	$ 61,045	$ -	
Utility Program Costs						
DSM Incentives		$ 2,650	$ -	$ 2,650	$ -	
Administration		$ -	$ -	$ -		
Subtotal	$ 2,498	$ 2,650	$ -	$ 2,650	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.024 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 58,547		$ -	$ 58,395	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 0.7**		**$ -**	**$ 0.7**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Low Flow Showhead (1.5 G.P.M. max)

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$	11		
Total Incentive	$	11	$ 11	$ -
Participant	$	-		

Annual Impact Per Measure

Energy Savings per installation	2.5	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	5%	0.95		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	10	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	78	81		81		Estimated Participation
Impact						
Gross Energy Savings (GJ)	189	200	0	200	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	179	190	0	190	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$142.86	$142.86	$142.86	
Energy Purchases	$ 27,196	$ 27,196	$ -	$ 27,196	$ -	
Utility Program Costs						
DSM Incentives		$ 898	$ -	$ 898	$ -	
Administration		$ -	$ -	$ -		
Subtotal	$ 846	$ 898	$ -	$ 898	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.024 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 26,349		$ -	$ 26,298	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 0.6**		**$ -**	**$ 0.6**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Low Flow Showerhead Handheld (1.5 GPM max)

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$	40		
Total Incentive	$	40	$ 40	$ -
Participant	$	-		

Annual Impact Per Measure

Energy Savings per installation	2.5	GJ	Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	5%	0.95	Net-to-Gross
Alternate Energy Impact	0	GJ 0	kWh
Alternate Capacity Impact		kW/a	
Measure Lifetime	10	Years	Estimated lifespan of measure

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	81	86	0	86		Estimated Participation
Impact						
Gross Energy Savings (GJ)	202	214	0	214	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	192	203	0	203	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$142.86	$142.86	$142.86	
Energy Purchases	$ 29,044	$ 29,044	$ -	$ 29,044	$ -	
Utility Program Costs						
DSM Incentives		$ 3,394	$ -	$ 3,394	$ -	
Administration		$ -	$ -	$ -		
Subtotal	$ 3,199	$ 3,394	$ -	$ 3,394	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.024 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 25,844		$ -	$ 25,650	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 2.0**		**$ -**	**$ 2.0**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Water Heater Blanket (standard size)

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 29			
Total Incentive	$ 29		$ 29	$ -
Participant	$ -			

Annual Impact Per Measure

Energy Savings per installation	1.7	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	5%	0.95		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	10	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	8	8	0	8	0	Estimated Participation
Impact						
Gross Energy Savings (GJ)	13	14	0	14	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	12	13	0	13	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$142.86	$142.86	$142.86	
Energy Purchases	$ 1,881	$ 1,881	$ -	$ 1,881	$ -	
Utility Program Costs						
DSM Incentives		$ 246	$ -	$ 246	$ -	
Administration		$ -	$ -	$ -		
Subtotal	$ 232	$ 246	$ -	$ 246	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.024 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 1,649		$ -	$ 1,635	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 2.2**		**$ -**	**$ 2.2**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Water Heater Pipe Wrap (8-12 ft)2

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 4			
Total Incentive	$ 4		$ 4	$ -
Participant	$ -			

Annual Impact Per Measure

Energy Savings per installation	1.2	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	5%	0.95		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	8	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	128	136	0	136		Estimated Participation
Impact						
Gross Energy Savings (GJ)	152	161	0	161	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	144	153	0	153	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$120.22	$120.22	$120.22	
Energy Purchases	$ 18,429	$ 18,429	$ -	$ 18,429	$ -	
Utility Program Costs						
DSM Incentives		$ 589	$ -	$ 589	$ -	
Administration		$ -	$ -	$ -		
Subtotal	$ 555	$ 589	$ -	$ 589	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$0.842 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 17,874		$ -	$ 17,840	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 0.5**		**$ -**	**$ 0.5**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Outlet Gaskets (package for 4)

PER MEASURE			**Utility Incentive to the participant**	**partner incentive**
Incremental Cost	$ 7			
Total Incentive	$ 7		**$ 7**	**$ -**
Participant	**$ -**			

Annual Impact Per Measure

Energy Savings per installation	**0.1**	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	**5%**	0.95		Net-to-Gross
Alternate Energy Impact	**0**	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	**15**	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	289	306	**0**	**306**		Estimated Participation
Impact						
Gross Energy Savings (GJ)	20	21	0	21	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	19	20	0	20	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$193.94	$193.94	$193.94	
Energy Purchases	$ 3,952	$ 3,952	$ -	$ 3,952	$ -	
Utility Program Costs						
DSM Incentives		$ 2,099	$ -	$ 2,099	$ -	
Administration		$ -	**$ -**	**$ -**		
Subtotal	$ 1,978	$ 2,099	$ -	$ 2,099	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	**$ -**	**$ -**	**$ -**	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.433 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 1,973		$ -	$ 1,853	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 8.6**		**$ -**	**$ 8.6**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Window Film (package to cover 2 standard windows)

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 10			
Total Incentive	$ 10		$ 10	$ -
Participant	$ -			

Annual Impact Per Measure

Energy Savings per installation	0.2	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	5%	0.95		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	1	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	195	207	0	207		Estimated Participation
Impact						
Gross Energy Savings (GJ)	31	33	0	33	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	30	31	0	31	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$29.54	$29.54	$29.54	
Energy Purchases	$ 930	$ 930	$ -	$ 930	$ -	
Utility Program Costs						
DSM Incentives		$ 2,010	$ -	$ 2,010	$ -	
Administration		$ -	$ -	$ -		
Subtotal	$ 1,894	$ 2,010	$ -	$ 2,010	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$0.117 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ (964)		$ -	$ (1,079)	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 65.7**		**$ -**	**$ 65.7**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Basic Home Comfort Draftproofing (prescriptive, set time)

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$	54		
Total Incentive	$	54	$ 54	$ -
Participant	$	-		

Annual Impact Per Measure

Energy Savings per installation	0.7	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	25	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	391	415	0	415		Estimated Participation
Impact						
Gross Energy Savings (GJ)	282	299	0	299	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	282	299	0	299	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$276.02	$276.02	$276.02	
Energy Purchases	$ 82,435	$ 82,435	$ -	$ 82,435	$ -	
Utility Program Costs						
DSM Incentives		$ 22,432	$ -	$ 22,432	$ -	
Administration		$ -	$ -	$ -		
Subtotal	$ 21,145	$ 22,432	$ -	$ 22,432	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$2.090 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 61,290		$ -	$ 60,002	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 4.3**		**$ -**	**$ 4.3**	**$ -**	Informational (for comparison with supply options)

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Measure Data for High Efficiency Furnace

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$	6,000		
Total Incentive	$	6,000	$ 6,000	$ -
Participant	$	-		

Annual Impact Per Measure

Energy Savings per installation	11.1	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	3	GJ	833 kWh	
Alternate Capacity Impact		kW/a		
Measure Lifetime	18	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	90	95	0	95		Estimated Participation
Impact						
Gross Energy Savings (GJ)	1,000	1,061	0	1,061	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	1,000	1,061	0	1,061	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	74,779	79,333	0	79,333	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$221.16	$221.16	$221.16	
Energy Purchases	$ 234,546	$ 234,546	$ -	$ 234,546	$ -	
Utility Program Costs						
DSM Incentives		$ 571,200	$ -	$ 571,200	$ -	
Administration		$ -	$ -	$ -		
Subtotal	$ 538,411	$ 571,200	$ -	$ 571,200	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ 130,933	$ -	$ 130,933	$ -	$1.650 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ 130,933	$ 130,933	$ -	$ 130,933	$ -	
Total Resource Net Benefit (Cost)	$ (172,932)		$ -	$ (205,721)	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 39.2**		**$ -**	**$ 39.2**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Minor Home Repair

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$	100		
Total Incentive	$	100	$ 100	$ -
Participant	$	-		

Annual Impact Per Measure

Energy Savings per installation	0.1	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	10	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	43	46	0	46		Estimated Participation
Impact						
Gross Energy Savings (GJ)	5	5	0	5	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	5	5	0	5	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$142.86	$142.86	$142.86	
Energy Purchases	$ 723	$ 723	$ -	$ 723	$ -	
Utility Program Costs						
DSM Incentives		$ 4,600	$ -	$ 4,600	$ -	
Administration		$ -	$ -	$ -		
Subtotal	$ 4,336	$ 4,600	$ -	$ 4,600	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.024 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ (3,613)		$ -	$ (3,877)	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 106.6**		**$ -**	**$ 106.6**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Carbon Monoxide Detector

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 62			
Total Incentive	$ 62		$ 62	$ -
Participant	$ -			

Annual Impact Per Measure

Energy Savings per installation	0.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	10	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	434	461	0	461		Estimated Participation
Impact						
Gross Energy Savings (GJ)	0	0	0	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	0	0	0	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$142.86	$142.86	$142.86	
Energy Purchases	$ -	$ -	$ -	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 28,450	$ -	$ 28,450	$ -	
Administration		$ -	$ -	$ -		
Subtotal	$ 26,817	$ 28,450	$ -	$ 28,450	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.024 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ (26,817)		$ -	$ (28,450)	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ -**		**$ -**	**$ -**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Admin Costs Basic Stream

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ -			
Total Incentive	$ -		$ -	$ -
Participant	$ -			

Annual Impact Per Measure

Energy Savings per installation	0.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	0	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	0	0	0			Estimated Participation
Impact						
Gross Energy Savings (GJ)	0	0	0	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	0	0	0	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$0.00	$0.00	$0.00	
Energy Purchases	$ -	$ -	$ -	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ 362,747	$ -	$ 362,747		
Subtotal	$ 341,924	$ 362,747	$ -	$ 362,747	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$0.000 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ (341,924)		$ -	$ (362,747)	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	$ -		$ -	$ -	$ -	Informational (for comparison with supply options)

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Measure Data for Faucet Aerators (1.5 G.P.M. max)

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 4			
Total Incentive	$ 4		$ 4	$ -
Participant	$ -			

Annual Impact Per Measure

Energy Savings per installation	0.7	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	10%	0.90		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	10	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	202	214	0	214		Estimated Participation
Impact						
Gross Energy Savings (GJ)	149	158	0	158	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	134	143	0	143	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$142.86	$142.86	$142.86	
Energy Purchases	$ 20,361	$ 20,361	$ -	$ 20,361	$ -	
Utility Program Costs						
DSM Incentives		$ 884	$ -	$ 884	$ -	
Administration		$ -	$ -	$ -		
Subtotal	$ 833	$ 884	$ -	$ 884	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.024 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 19,528		$ -	$ 19,477	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 0.7**		**$ -**	**$ 0.7**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Low Flow Fixed Showhead (1.5 GPM)

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 11			
Total Incentive	$ 11		$ 11	$ -
Participant	$ -			

Annual Impact Per Measure

Energy Savings per installation	2.5	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	5%	0.95		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	10	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	25	27	0	27		Estimated Participation
Impact						
Gross Energy Savings (GJ)	63	66	0	66	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	60	63	0	63	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$142.86	$142.86	$142.86	
Energy Purchases	$ 9,020	$ 9,020	$ -	$ 9,020	$ -	
Utility Program Costs						
DSM Incentives		$ 298	$ -	$ 298	$ -	
Administration		$ -	$ -	$ -		
Subtotal	$ 281	$ 298	$ -	$ 298	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.024 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 8,740		$ -	$ 8,723	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 0.6**		**$ -**	**$ 0.6**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Low Flow Handheld Showhead (1.5 GPM)

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 40			
Total Incentive	$ 40		$ 40	$ -
Participant	$ -			

Annual Impact Per Measure

Energy Savings per installation	2.5	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	5%	0.95		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	10	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	27	28	0	28		Estimated Participation
Impact						
Gross Energy Savings (GJ)	67	71	0	71	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	64	67	0	67	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$142.86	$142.86	$142.86	
Energy Purchases	$ 9,636	$ 9,636	$ -	$ 9,636	$ -	
Utility Program Costs						
DSM Incentives		$ 1,126	$ -	$ 1,126	$ -	
Administration		$ -	$ -	$ -		
Subtotal	$ 1,061	$ 1,126	$ -	$ 1,126	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.024 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 8,575		$ -	$ 8,510	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 2.0**		**$ -**	**$ 2.0**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Water Heater Blanket (standard size)

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 29			
Total Incentive	$ 29		$ 29	$ -
Participant	$ -			

Annual Impact Per Measure

Energy Savings per installation	1.7	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	5%	0.95		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	10	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	3	3	0	3		Estimated Participation
Impact						
Gross Energy Savings (GJ)	4	5	0	5	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	4	4	0	4	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$142.86	$142.86	$142.86	
Energy Purchases	$ 627	$ 627	$ -	$ 627	$ -	
Utility Program Costs						
DSM Incentives		$ 82	$ -	$ 82	$ -	
Administration		$ -	$ -	$ -		
Subtotal	$ 77	$ 82	$ -	$ 82	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.024 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 550		$ -	$ 545	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 2.2**		**$ -**	**$ 2.2**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Water Heater Pipe Wrap

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 4			
Total Incentive	$ 4		$ 4	$ -
Participant	$ -			

Annual Impact Per Measure

Energy Savings per installation	1.2	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	5%	0.95		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	8	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	43	45	0	45		Estimated Participation
Impact						
Gross Energy Savings (GJ)	51	54	0	54	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	48	51	0	51	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$120.22	$120.22	$120.22	
Energy Purchases	$ 6,143	$ 6,143	$ -	$ 6,143	$ -	
Utility Program Costs						
DSM Incentives		$ 196	$ -	$ 196	$ -	
Administration		$ -	$ -	$ -		
Subtotal	$ 185	$ 196	$ -	$ 196	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$0.842 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 5,958		$ -	$ 5,947	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 0.5**		**$ -**	**$ 0.5**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Outlet Gaskets (package for 4)

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 7			
Total Incentive	$ 7		$ 7	$ -
Participant	$ -			

Annual Impact Per Measure

Energy Savings per installation	0.1	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	5%	0.95		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	15	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	96	102	0	102		Estimated Participation
Impact						
Gross Energy Savings (GJ)	7	7	0	7	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	6	7	0	7	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$193.94	$193.94	$193.94	
Energy Purchases	$ 1,316	$ 1,316	$ -	$ 1,316	$ -	
Utility Program Costs						
DSM Incentives		$ 699	$ -	$ 699	$ -	
Administration		$ -	$ -	$ -		
Subtotal	$ 659	$ 699	$ -	$ 699	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.433 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 657		$ -	$ 617	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 8.6**		**$ -**	**$ 8.6**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Window Film (package to cover 2 standard windows)

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 10			
Total Incentive	$ 10		$ 10	$ -
Participant	$ -			

Annual Impact Per Measure

Energy Savings per installation	0.2	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	5%	0.95		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	1	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	65	69	0	69		Estimated Participation
Impact						
Gross Energy Savings (GJ)	10	11	0	11	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	10	11	0	11	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$29.54	$29.54	$29.54	
Energy Purchases	$ 311	$ 311	$ -	$ 311	$ -	
Utility Program Costs						
DSM Incentives		$ 671	$ -	$ 671	$ -	
Administration		$ -	$ -	$ -		
Subtotal	$ 633	$ 671	$ -	$ 671	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$0.117 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ (322)		$ -	$ (360)	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 65.7**		**$ -**	**$ 65.7**	**$ -**	Informational (for comparison with supply options)

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Measure Data for High Efficiency Furnace

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 6,000			
Total Incentive	$ 6,000		$ 6,000	$ -
Participant	$ -			

Annual Impact Per Measure

Energy Savings per installation	11.1	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	3	GJ	833 kWh	
Alternate Capacity Impact		kW/a		
Measure Lifetime	18	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	30	32	0	32		Estimated Participation
Impact						
Gross Energy Savings (GJ)	332	352	0	352	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	332	352	0	352	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	24,822	26,333	0	26,333	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$221.16	$221.16	$221.16	
Energy Purchases	$ 77,853	$ 77,853	$ -	$ 77,853	$ -	
Utility Program Costs						
DSM Incentives		$ 189,600	$ -	$ 189,600	$ -	
Administration		$ -	$ -	$ -		
Subtotal	$ 178,716	$ 189,600	$ -	$ 189,600	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ 43,461	$ -	$ 43,461	$ -	$1.650 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ 43,461	$ 43,461	$ -	$ 43,461	$ -	
Total Resource Net Benefit (Cost)	$ (57,402)		$ -	$ (68,285)	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 39.2**		**$ -**	**$ 39.2**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Advanced Draftproofing

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 296			
Total Incentive	$ 296		$ 296	$ -
Participant	$ -			

Annual Impact Per Measure

Energy Savings per installation	1.8	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	10	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	145	154	0	154		Estimated Participation
Impact						
Gross Energy Savings (GJ)	261	276	0	276	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	261	276	0	276	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$142.86	$142.86	$142.86	
Energy Purchases	$ 39,498	$ 39,498	$ -	$ 39,498	$ -	
Utility Program Costs						
DSM Incentives		$ 45,389	$ -	$ 45,389	$ -	
Administration		$ -	$ -	$ -		
Subtotal	$ 42,783	$ 45,389	$ -	$ 45,389	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.024 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ (3,285)		$ -	$ (5,891)	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 19.2**		**$ -**	**$ 19.2**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Ceiling Insulation

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 1,180			
Total Incentive	$ 1,180		$ 1,180	$ -
Participant	$ -			

Annual Impact Per Measure

Energy Savings per installation	11.5	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	25	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	87	92	0	92		Estimated Participation
Impact						
Gross Energy Savings (GJ)	996	1,056	0	1,056	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	996	1,056	0	1,056	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$276.02	$276.02	$276.02	
Energy Purchases	$ 291,520	$ 291,520	$ -	$ 291,520	$ -	
Utility Program Costs						
DSM Incentives		$ 108,560	$ -	$ 108,560	$ -	
Administration		$ -	$ -	$ -		
Subtotal	$ 102,328	$ 108,560	$ -	$ 108,560	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$2.090 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 189,191		$ -	$ 182,960	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 5.9**		**$ -**	**$ 5.9**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Wall Insulation

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 3,041			
Total Incentive	$ 3,041		$ 3,041	$ -
Participant	$ -			

Annual Impact Per Measure

Energy Savings per installation	26.2	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	25	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	12	12	0	12		Estimated Participation
Impact						
Gross Energy Savings (GJ)	306	324	0	324	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	306	324	0	324	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$276.02	$276.02	$276.02	
Energy Purchases	$ 89,502	$ 89,502	$ -	$ 89,502	$ -	
Utility Program Costs						
DSM Incentives		$ 37,708	$ -	$ 37,708	$ -	
Administration		$ -	$ -	$ -		
Subtotal	$ 35,544	$ 37,708	$ -	$ 37,708	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$2.090 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 53,958		$ -	$ 51,793	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 6.7**		**$ -**	**$ 6.7**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Crawlspace Insulation

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 627			
Total Incentive	$ 627		$ 627	$ -
Participant	$ -			

Annual Impact Per Measure

Energy Savings per installation	4.2	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	25	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	3	3	0	3		Estimated Participation
Impact						
Gross Energy Savings (GJ)	13	13	0	13	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	13	13	0	13	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$276.02	$276.02	$276.02	
Energy Purchases	$ 3,710	$ 3,710	$ -	$ 3,710	$ -	
Utility Program Costs						
DSM Incentives		$ 2,006	$ -	$ 2,006	$ -	
Administration		$ -	$ -	$ -		
Subtotal	$ 1,891	$ 2,006	$ -	$ 2,006	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$2.090 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 1,818		$ -	$ 1,703	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 8.6**		**$ -**	**$ 8.6**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Ventilation Fan

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$	585		
Total Incentive	$	585	$ 585	$ -
Participant	$	-		

Annual Impact Per Measure

Energy Savings per installation	0.0	GJ	Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00	Net-to-Gross
Alternate Energy Impact		GJ	0 kWh
Alternate Capacity Impact		kW/a	
Measure Lifetime	25	Years	Estimated lifespan of measure

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	72	77	0	77		Estimated Participation
Impact						
Gross Energy Savings (GJ)	0	0	0	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	0	0	0	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$276.02	$276.02	$276.02	
Energy Purchases	$ -	$ -	$ -	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 44,928	$ -	$ 44,928	$ -	
Administration		$ -	$ -	$ -		
Subtotal	$ 42,349	$ 44,928	$ -	$ 44,928	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$2.090 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ (42,349)		$ -	$ (44,928)	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	$ -		$ -	$ -	$ -	Informational (for comparison with supply options)

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Measure Data for Minor Home Repair

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$	100		
Total Incentive	$	100	$ 100	$ -
Participant	$	-		

Annual Impact Per Measure

Energy Savings per installation	0.1	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	10	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	14	15	0	15		Estimated Participation
Impact						
Gross Energy Savings (GJ)	2	2	0	2	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	2	2	0	2	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$142.86	$142.86	$142.86	
Energy Purchases	$ 239	$ 239	$ -	$ 239	$ -	
Utility Program Costs						
DSM Incentives		$ 1,520	$ -	$ 1,520	$ -	
Administration		$ -	$ -	$ -		
Subtotal	$ 1,433	$ 1,520	$ -	$ 1,520	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.024 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ (1,194)		$ -	$ (1,281)	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 106.6**		**$ -**	**$ 106.6**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Carbon Monoxide Detector

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 62			
Total Incentive	$ 62		$ 62	$ -
Participant	$ -			

Annual Impact Per Measure

Energy Savings per installation	0.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	10	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	145	154	0	154		Estimated Participation
Impact						
Gross Energy Savings (GJ)	0	0	0	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	0	0	0	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$142.86	$142.86	$142.86	
Energy Purchases	$ -	$ -	$ -	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 9,483	$ -	$ 9,483	$ -	
Administration		$ -	$ -	$ -		
Subtotal	$ 8,939	$ 9,483	$ -	$ 9,483	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.024 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ (8,939)		$ -	$ (9,483)	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ -**		**$ -**	**$ -**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Admin Costs Advanced Stream

PER MEASURE		Utility Incentive to the participant	partner incentive
Incremental Cost	$ -		
Total Incentive	$ -	$ -	$ -
Participant	$ -		

Annual Impact Per Measure

Energy Savings per installation	0.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	0	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	0	0	0	0		Estimated Participation
Impact						
Gross Energy Savings (GJ)	0	0	0	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	0	0	0	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$0.00	$0.00	$0.00	
Energy Purchases	$ -	$ -	$ -	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ 249,832	$ -	$ 249,832		
Subtotal	$ 235,490	$ 249,832	$ -	$ 249,832	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$0.000 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ (235,490)		$ -	$ (249,832)	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ -**		**$ -**	**$ -**	**$ -**	Informational (for comparison with supply options)

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	PROGRAM														ALTERNATE		NET PRESENT VALUE									BENEFIT/COST							PARAMETERS														
	COSTS ($000)											SAVINGS (GJ)			LIFE	Impact		Levelized Cost	Utility Benefits (Costs)		Participant Benefits (Costs)			Program Net Savings			Natural Gas	Participant						TRC Net Benefits	UTILITY					PARTICIPANT										
	Utility			Partners																																												
	Incentives	Administration	Total	Incentives	Administration	Total	Participant	Total	% Utility	% Partner	% Participant	Gross	Net-to-Gross	Net	Years	Energy	Capacity	($/GJ)	Program	Alternate	Program	Carbon Tax	Alternate	Natural Gas	Alternate Energy	Alternate Capacity	Natural Gas	Total Costs	Total Benefits	Benefit/Cost	Natural Gas	Total Resource		Natural Gas Utility Discount	Natural Gas Supply	Alternate Discount Rate	Alternate Supply	Discount Rate	Natural Gas NPV	Carbon Tax NPV	Alternate Energy NPV	Alternate Capacity NPV	Natural Gas Tariff	Energy Tariff	Capacity Tariff			
Label	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR	AS	AT			
Source Sheet or Calculation	Program	Program	B+C	Program	Program	E+F	Program	D+G+H	D/I	G/I	H/I	Program	Program	MxN	Program	Program	Program	D/Y	OxAJ	Q x N x AL	M x N x AN	M x N x AO	N x (QxAP + RxAQ)	PV(AJ,P,-O)	PV(AK,P,-Q*N)	PV(AK,P,-R)	T/D	H=D, (V+W)=D	I=O, (V+W)=O, X	AD/AC	T/(V+O)	(T+U)/I	(T+U)-I	Input	Program	Input	Input	Input	PV(AM,P,-Input!D25)	Input	PV(AM,P,-Input!D28)	PV(AM,P,-Input!D29)	Input	Input	Input			
2011																																															
Faucet Aerator (1.5 G.P.M. max)	3	0	3	0	0	0	0	3	100%	0%	0%	475	90%	427	10	0	-	1	31	N/A	31	5	N/A	2,981	-	-	11.5	-	36	N/A	0.9	11.5	28	7.15%	71.51	6%	0.88	6.0%	73.59	10.90	0.61	0.00	9.999	0.083	-			
Low Flow Show head (1.5 G.P.M. max)	1	0	1	0	0	0	0	1	100%	0%	0%	200	95%	190	10	0	-	1	14	N/A	14	2	N/A	1,328	-	-	15.2	-	16	N/A	0.9	15.2	13	7.15%	71.51	6%	0.88	6.0%	73.59	10.90	0.61	0.00	9.999	0.083	-			
Low Flow Showerhead Handheld (1.5 GPM max)	3	0	3	0	0	0	0	3	100%	0%	0%	214	95%	203	10	0	-	2	15	N/A	15	2	N/A	1,418	-	-	4.3	-	17	N/A	0.8	4.3	11	7.15%	71.51	6%	0.88	6.0%	73.59	10.90	0.61	0.00	9.999	0.083	-			
Water Heater Blanket (standard size)	0	0	0	0	0	0	0	0	100%	0%	0%	14	95%	13	10	0	-	3	1	N/A	1	0	N/A	92	-	-	3.8	-	1	N/A	0.8	3.8	1	7.15%	71.51	6%	0.88	6.0%	73.59	10.90	0.61	0.00	9.999	0.083	-			
Water Heater Pipe Wrap (R-12 ft)2	1	0	1	0	0	0	0	1	100%	0%	0%	161	95%	153	8	0	-	1	9	N/A	10	1	N/A	910	-	-	15.8	-	11	N/A	0.9	15.8	9	7.15%	60.70	6%	0.75	6.0%	62.09	9.45	0.51	0.00	9.999	0.083	-			
Outlet Gaskets (package for 4)	2	0	2	0	0	0	0	2	100%	0%	0%	21	95%	20	15	0	-	11	2	N/A	2	0	N/A	184	-	-	0.9	-	2	N/A	0.5	0.9	(0)	7.15%	94.20	6%	1.17	6.0%	97.11	13.76	0.80	0.00	9.999	0.083	-			
Window Film (package to cover 2 standard windows)	2	0	2	0	0	0	0	2	100%	0%	0%	33	95%	31	1	0	-	68	0	N/A	0	0	N/A	29	-	-	0.2	-	0	N/A	0.2	0.2	(2)	7.15%	13.99	6%	0.11	6.0%	9.43	2.47	0.08	0.00	9.999	0.083	-			
Basic Home Comfort Draft proofing (prescriptive, set time)	22	0	22	0	0	0	0	22	100%	0%	0%	299	100%	299	25	0	-	7	38	N/A	38	5	N/A	3,434	-	-	1.7	-	43	N/A	0.6	1.7	15	7.15%	125.59	6%	1.53	6.0%	127.82	17.22	1.06	0.00	9.999	0.083	-			
High Efficiency Furnace	571	0	571	0	0	0	0	571	100%	0%	0%	1,061	100%	1,061	18	79	-	54	112	103	115	16	71	10,553	859	-	0.2	-	202	N/A	0.2	0.4	(356)	7.15%	105.31	6%	1.30	6.0%	108.27	15.06	0.90	0.00	9.999	0.083	-			
Minor Home Repair	5	0	5	0	0	0	0	5	100%	0%	0%	5	100%	5	10	0	-	130	0	N/A	0	0	N/A	35	-	-	0.1	-	0	N/A	0.1	0.1	(4)	7.15%	71.51	6%	0.88	6.0%	73.59	10.90	0.61	0.00	9.999	0.083	-			
Basic stream enabling costs																																														
Carbon Monoxide Detector	28	0	28	0	0	0	0	28							10																																
Portfolio level admin costs																																														
Admin Costs Basic Stream	0	363	363	0	0	0	0	363																																						
Basic ECAP Measures	639	363	1,001	0	0	0	0	1,001	100%	0%	0%	2,483	96%	2,404	12	79	-	48	287	134	227	32	71	20,964	859		0.3	-	330	N/A	0.2	0.4	(580)														
Faucet Aerators (1.5 G.P.M. max)	1	0	1	0	0	0	0	1	100%	0%	0%	158	90%	143	10	0	-	1	10	N/A	10	2	N/A	994	-	-	11.5	-	12	N/A	0.9	11.5	9	7.15%	71.51	6%	0.88	6.0%	73.59	10.90	0.61	0.00	9.999	0.083	-			
Low Flow Fixed Show head (1.5 GPM)	0	0	0	0	0	0	0	0	100%	0%	0%	66	95%	63	10	0	-	1	5	N/A	5	1	N/A	440	-	-	15.2	-	5	N/A	0.9	15.2	4	7.15%	71.51	6%	0.88	6.0%	73.59	10.90	0.61	0.00	9.999	0.083	-			
Low Flow Handheld Show head (1.5 GPM)	1	0	1	0	0	0	0	1	100%	0%	0%	66	95%	63	10	0	-	3	5	N/A	5	1	N/A	440	-	-	4.0	-	5	N/A	0.8	4.0	3	7.15%	71.51	6%	0.88	6.0%	73.59	10.90	0.61	0.00	9.999	0.083	-			
Water Heater Blanket (standard size)	0	0	0	0	0	0	0	0	100%	0%	0%	5	95%	4	10	0	-	3	0	N/A	0	0	N/A	31	-	-	3.8	-	0	N/A	0.8	3.8	0	7.15%	71.51	6%	0.88	6.0%	73.59	10.90	0.61	0.00	9.999	0.083	-			
Water Heater Pipe Wrap	0	0	0	0	0	0	0	0	100%	0%	0%	54	95%	51	8	0	-	1	3	N/A	3	0	N/A	303	-	-	15.8	-	4	N/A	0.9	15.8	3	7.15%	60.70	6%	0.75	6.0%	62.09	9.45	0.51	0.00	9.999	0.083	-			
Outlet Gaskets (package for 4)	1	0	1	0	0	0	0	1	100%	0%	0%	7	95%	7	15	0	-	11	1	N/A	1	0	N/A	61	-	-	0.9	-	1	N/A	0.5	0.9	(0)	7.15%	94.20	6%	1.17	6.0%	97.11	13.76	0.80	0.00	9.999	0.083	-			
Window Film (package to cover 2 standard windows)	1	0	1	0	0	0	0	1	100%	0%	0%	11	95%	11	1	0	-	68	0	N/A	0	0	N/A	10	-	-	0.2	-	0	N/A	0.2	0.2	(1)	7.15%	13.99	6%	0.11	6.0%	9.43	2.47	0.08	0.00	9.999	0.083	-			
Advanced Draft proofing	45	0	45	0	0	0	0	45	100%	0%	0%	1,061	100%	1,061	18	79	-	4	76	103	115	16	71	10,553	859	-	1.7	-	202	N/A	0.5	3.9	134	7.15%	71.51	6%	1.30	6.0%	108.27	15.06	0.90	0.00	9.999	0.083	-			
High Efficiency Furnace	190	0	190	0	0	0	0	190	100%	0%	0%	352	100%	352	18	26	-	54	37	34	38	5	24	3,503	285	-	0.2	-	67	N/A	0.2	0.4	(118)	7.15%	105.31	6%	1.30	6.0%	108.27	15.06	0.90	0.00	9.999	0.083	-			
Ceiling Insulation	109	0	109	0	0	0	0	109	100%	0%	0%	1,056	100%	1,056	25	0	-	9	133	N/A	135	18	N/A	12,144	-	-	1.2	-	153	N/A	0.5	1.2	24	7.15%	125.59	6%	1.53	6.0%	127.82	17.22	1.06	0.00	9.999	0.083	-			
Wall Insulation	38	0	38	0	0	0	0	38	100%	0%	0%	324	100%	324	25	0	-	10	41	N/A	41	6	N/A	3,728	-	-	1.1	-	47	N/A	0.5	1.1	3	7.15%	125.59	6%	1.53	6.0%	127.82	17.22	1.06	0.00	9.999	0.083	-			
Crawlspace Insulation	2	0	2	0	0	0	0	2	100%	0%	0%	13	100%	13	10	0	-	21	1	N/A	1	0	N/A	94	-	-	0.5	-	1	N/A	0.3	0.5	(1)	7.15%	71.51	6%	0.88	6.0%	73.59	10.90	0.61	0.00	9.999	0.083	-			
Minor Home Repair	2	0	2	0	0	0	0	2	100%	0%	0%	2	100%	2	10	0	-	130	0	N/A	0	0	N/A	12	-	-	0.1	-	0	N/A	0.1	0.1	(1)	7.15%	71.51	6%	0.88	6.0%	73.59	10.90	0.61	0.00	9.999	0.083	-			
Advance Stream enabling costs																																														
Carbon Monoxide Detector	9	0	9	0	0	0	0	9							10																																
Ventilation Fan	45	0	45	0	0	0	0	45							25																																
Portfolio level admin costs																																														
Admin Costs Advanced Stream	0	250	250	0	0	0	0	250																																						
Advanced ECAP Measures	443	250	693	0	0	0	0	693	100%	0%	0%	3,176	97%	3,150	14	106	-	21	404	178	355	49	95	32,314	1,144		0.6	-	498	N/A	0.4	0.8	(110)														
Total basic and advanced ECAP measures	1,082	613	1,694	0	0	0	0	1,694	100%	0%	0%	5,654		5,548		185	0	32	691	312	581	81	166	53,242	2,003	0	0.4	-	827	N/A	0.3	0.6	(691)														

Row	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI
1	UTILITY		Terasen Gas Inc																																
2																																			
3																																			
4			Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041
5			Units																																
6		NATURAL GAS																																	
7		Incremental Cost of Gas (nominal)	$ Per GJ	$5.50	$6.17	$6.81	$7.35	$7.87	$8.26	$8.56	$8.78	$8.99	$9.19	$9.40	$9.60	$9.81	$10.03	$10.25	$10.47	$10.70	$10.93	$11.17	$11.42	$11.67	$11.92	$12.19	$12.45	$12.73	$13.01	$13.29	$13.58	$13.88	$14.19	$14.50	$14.82
8	1		*Year*	*0*	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*	*16*	*17*	*18*	*19*	*20*	*21*	*22*	*23*	*24*	*25*	*26*	*27*	*28*	*29*	*30*	*31*
9		carbon tax	$ per GJ	*0.75*	*1.00*	*1.25*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*
10		Distribution adder	$ per GJ	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	
11		Total incremental cost of gas including carbon		*6.41*	*7.32*	*8.21*	*9.01*	*9.52*	*9.92*	*10.22*	*10.43*	*10.64*	*10.85*	*11.05*	*11.26*	*11.47*	*11.68*	*11.90*	*12.13*	*12.35*	*12.59*	*12.83*	*13.07*	*13.32*	*13.58*	*13.84*	*14.11*	*14.38*	*14.66*	*14.95*	*15.24*	*15.54*	*15.84*	*16.15*	*16.31*
12	2	GDP Deflator		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
13	3	Incremental Cost of Gas (Real)		$6.41	$7.32	$8.21	$9.01	$9.52	$9.92	$10.22	$10.43	$10.64	$10.85	$11.05	$11.26	$11.47	$11.68	$11.90	$12.13	$12.35	$12.59	$12.83	$13.07	$13.32	$13.58	$13.84	$14.11	$14.38	$14.66	$14.95	$15.24	$15.54	$15.84	$16.15	$16.31
14	4	Net Present Value -2010			$12.36	$19.03	$25.87	$32.61	$39.16	$45.47	$51.47	$57.19	$62.63	$67.80	$72.71	$77.39	$81.83	$86.05	$90.07	$93.89	$97.52	$100.98	$104.26	$107.39	$110.36	$113.19	$115.88	$118.43	$120.87	$123.18	$125.39	$127.49	$129.48	$131.38	$133.17
15	5	Net Present Value -2011				$13.99	$21.31	$28.54	$35.56	$42.31	$48.75	$54.87	$60.70	$66.24	$71.51	$76.51	$81.27	$85.80	$90.10	$94.20	$98.09	$101.79	$105.31	$108.66	$111.84	$114.87	$117.75	$120.49	$123.10	$125.59	$127.95	$130.19	$132.33	$134.37	$136.28
16	6	Net Present Value -2012					$15.51	$23.25	$30.78	$38.01	$44.91	$51.47	$57.71	$63.65	$69.29	$74.66	$79.76	$84.61	$89.22	$93.61	$97.78	$101.74	$105.51	$109.10	$112.51	$115.76	$118.85	$121.79	$124.58	$127.24	$129.77	$132.18	$134.47	$136.65	$138.70

Row	A	B	C	D	E	F	G	H	I	J	K	L
17												
18												
19		ELECTRICITY										
20		Incremental Cost of Elec	$ Per kWh	$0.12								
21		Incremental Cost of E Capacity	$ Per kW/a	$170.00								
22												
23												
24												
25	RETAIL											
26				Rate	Customers		789,928	Total Customers in BC		80,000	Total Residential and Commercial Customers on VI	
27		Residential Retail			*000's*							
28		TGI	$ Per MJ	$0.0100	640		712,304	Total Residential Customers in BC				
29		TGVI	$ Per MJ	$0.0143	72							
30		Electricity	$ Per MJ	$0.0230								
31		Electricity	$ per kWh	$0.0827	1,511		1,511,435	Total BCH Residential Customers in BC				89%
32		Electricity	$ per kW per year									
33		Commercial Retail										
34		TGI	$ Per MJ	$0.0094	78		77,624	Total Commercial Customers in BC				
35		TGVI	$ Per MJ	$0.0159	8							
36		Electricity	$ Per MJ	$0.0214								
37		Electricity	$ per kWh	$0.0769	190		189,764	Total Light Industrial and Commercial Customers in BC				
38		Electricity	$ per kW per year	$52.0000	15							
39												
40	TAX											

Row	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI
41			Year	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
42	1		*Year*		*0*	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*	*16*	*17*	*18*	*19*	*20*	*21*	*22*	*23*	*24*	*25*	*26*	*27*	*28*	*29*	*30*
43	2	Carbon	$ Per tonne		$20.00	$25.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00
44	3	Carbon	$ Per GJ		$0.9976	$1.2470	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964
45	4	GDP Deflator			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
46	5	Carbon (Real)			$1.00	$1.25	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50
47	6	Net Present Value -2010				$2.02	$3.23	$4.37	$5.43	$6.42	$7.34	$8.20	$9.00	$9.75	$10.45	$11.11	$11.72	$12.29	$12.82	$13.31	$13.78	$14.21	$14.61	$14.99	$15.34	$15.67	$15.97	$16.26	$16.52	$16.77	$17.00	$17.22	$17.42	$17.61	$17.79
48	7	Net Present Value -2011					$2.47	$3.68	$4.82	$5.88	$6.87	$7.79	$8.65	$9.45	$10.20	$10.90	$11.56	$12.17	$12.74	$13.27	$13.76	$14.23	$14.66	$15.06	$15.44	$15.79	$16.12	$16.42	$16.71	$16.97	$17.22	$17.45	$17.67	$17.87	$18.06
49	8	Net Present Value -2012						$2.70	$3.92	$5.05	$6.11	$7.10	$8.02	$8.88	$9.69	$10.44	$11.14	$11.79	$12.40	$12.97	$13.50	$14.00	$14.46	$14.89	$15.29	$15.67	$16.02	$16.35	$16.65	$16.94	$17.21	$17.45	$17.69	$17.90	$18.10

Row	A	B	C	D
50				
51		**Discount Rate (real)[1]**		
52		**TERASEN GAS**		
53		**Rate of Inflation**	1.90%	
54		**TGI**	7.15%	
55		**TGVI**	6.89%	
56		**BC HYDRO**		
57		**Rate of Inflation**	2.00%	
58		**BC Hydro**	6.00%	
59		**Customer**	6.00%	
60		*Footnote 1: Source LR 070531*		
61				
62				**SHEET LABELS**
63	**New Construction**			
64		#REF!		**BASEBOARD**
65		#REF!		**HEATPUMP**

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Measure Data for Faucet Aerator (1.5 G.P.M. max)

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 4.13			
Total Incentive	$ 4.13		$ 4	$ -
Participant	$ -			

Annual Impact Per Measure

Energy Savings per installation	0.74	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	10%	0.90		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	10	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	599	642		642		Estimated Participation
Impact						
Gross Energy Savings (GJ)	414	475	0	475	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	372	427	0	427	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$67.80	$71.51	$74.66	
Energy Purchases	$ 30,555	$ 30,555	$ -	$ 30,555	$ -	
Utility Program Costs						
DSM Incentives		$ 2,650	$ -	$ 2,650	$ -	
Administration		$ -	$ -	$ -		
Subtotal	$ 2,308	$ 2,650	$ -	$ 2,650	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$0.883 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 28,247		$ -	$ 27,905	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 0.9**		**$ -**	**$ 0.9**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Low Flow Show head (1.5 G.P.M. max)

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$	11		
Total Incentive	$	11	$ 11	$ -
Participant	$	-		

Annual Impact Per Measure

Energy Savings per installation	2.5	GJ	Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	5%	0.95	Net-to-Gross
Alternate Energy Impact	0	GJ 0	kWh
Alternate Capacity Impact		kW/a	
Measure Lifetime	10	Years	Estimated lifespan of measure

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	75	81		81		Estimated Participation
Impact						
Gross Energy Savings (GJ)	175	200	0	200	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	166	190	0	190	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$67.80	$71.51	$74.66	
Energy Purchases	$ 13,612	$ 13,612	$ -	$ 13,612	$ -	
Utility Program Costs						
DSM Incentives		$ 898	$ -	$ 898	$ -	
Administration		$ -	$ -	$ -		
Subtotal	$ 782	$ 898	$ -	$ 898	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$0.883 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 12,830		$ -	$ 12,715	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 0.7**		**$ -**	**$ 0.7**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Low Flow Showerhead Handheld (1.5 GPM max)

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$	40		
Total Incentive	$	40	$ 40	$ -
Participant	$	-		

Annual Impact Per Measure

Energy Savings per installation	2.5	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	5%	0.95		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	10	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	75	86	0	86		Estimated Participation
Impact						
Gross Energy Savings (GJ)	186	214	0	214	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	177	203	0	203	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$67.80	$71.51	$74.66	
Energy Purchases	$ 14,537	$ 14,537	$ -	$ 14,537	$ -	
Utility Program Costs						
DSM Incentives		$ 3,394	$ -	$ 3,394	$ -	
Administration		$ -	$ -	$ -		
Subtotal	$ 2,956	$ 3,394	$ -	$ 3,394	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$0.883 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 11,581		$ -	$ 11,143	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 2.4**		**$ -**	**$ 2.4**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Water Heater Blanket (standard size)

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 29			
Total Incentive	$ 29		$ 29	$ -
Participant	$ -			

Annual Impact Per Measure

Energy Savings per installation	1.7	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	5%	0.95		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	10	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	7	8	0	8	0	Estimated Participation
Impact						
Gross Energy Savings (GJ)	12	14	0	14	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	11	13	0	13	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$67.80	$71.51	$74.66	
Energy Purchases	$ 942	$ 942	$ -	$ 942	$ -	
Utility Program Costs						
DSM Incentives		$ 246	$ -	$ 246	$ -	
Administration		$ -	$ -	$ -		
Subtotal	$ 214	$ 246	$ -	$ 246	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$0.883 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 727		$ -	$ 696	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 2.7**		**$ -**	**$ 2.7**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Water Heater Pipe Wrap (8-12 ft)2

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 4			
Total Incentive	$ 4		$ 4	$ -
Participant	$ -			

Annual Impact Per Measure

Energy Savings per installation	1.2	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	5%	0.95		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	8	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	118	136	0	136		Estimated Participation
Impact						
Gross Energy Savings (GJ)	141	161	0	161	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	134	153	0	153	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$57.19	$60.70	$63.65	
Energy Purchases	$ 9,305	$ 9,305	$ -	$ 9,305	$ -	
Utility Program Costs						
DSM Incentives		$ 589	$ -	$ 589	$ -	
Administration		$ -	$ -	$ -		
Subtotal	$ 513	$ 589	$ -	$ 589	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$0.745 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 8,792		$ -	$ 8,716	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 0.6**		**$ -**	**$ 0.6**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Outlet Gaskets (package for 4)

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$	7		
Total Incentive	$	7	$ 7	$ -
Participant	$	-		

Annual Impact Per Measure

Energy Savings per installation	0.1	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	5%	0.95		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	15	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	267	306	0	306		Estimated Participation
Impact						
Gross Energy Savings (GJ)	19	21	0	21	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	18	20	0	20	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$90.07	$94.20	$97.78	
Energy Purchases	$ 1,919	$ 1,919	$ -	$ 1,919	$ -	
Utility Program Costs						
DSM Incentives		$ 2,099	$ -	$ 2,099	$ -	
Administration		$ -	$ -	$ -		
Subtotal	$ 1,828	$ 2,099	$ -	$ 2,099	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.165 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 91		$ -	$ (180)	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 11.4**		**$ -**	**$ 11.4**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Window Film (package to cover 2 standard windows)

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 10			
Total Incentive	$ 10		$ 10	$ -
Participant	$ -			

Annual Impact Per Measure

Energy Savings per installation	0.2	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	5%	0.95		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	1	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	180	207	0	207		Estimated Participation
Impact						
Gross Energy Savings (GJ)	29	33	0	33	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	27	31	0	31	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$12.36	$13.99	$15.51	
Energy Purchases	$ 441	$ 441	$ -	$ 441	$ -	
Utility Program Costs						
DSM Incentives		$ 2,010	$ -	$ 2,010	$ -	
Administration		$ -	$ -	$ -		
Subtotal	$ 1,751	$ 2,010	$ -	$ 2,010	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$0.113 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ (1,310)		$ -	$ (1,569)	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 68.4**		**$ -**	**$ 68.4**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Basic Home Comfort Draft proofing (prescriptive, set time)

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$	54		
Total Incentive	$	54	$ 54	$ -
Participant	$	-		

Annual Impact Per Measure

Energy Savings per installation	0.7	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	25	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	361	415	0	415		Estimated Participation
Impact						
Gross Energy Savings (GJ)	260	299	0	299	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	260	299	0	299	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$120.87	$125.59	$129.77	
Energy Purchases	$ 37,507	$ 37,507	$ -	$ 37,507	$ -	
Utility Program Costs						
DSM Incentives		$ 22,432	$ -	$ 22,432	$ -	
Administration		$ -	$ -	$ -		
Subtotal	$ 19,538	$ 22,432	$ -	$ 22,432	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.534 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 17,968		$ -	$ 15,074	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 6.5**		**$ -**	**$ 6.5**	**$ -**	Informational (for comparison with supply options)

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Measure Data for High Efficiency Furnace

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 6,000			
Total Incentive	$ 6,000		$ 6,000	$ -
Participant	$ -			

Annual Impact Per Measure

Energy Savings per installation	11.1	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	3	GJ	833 kWh	
Alternate Capacity Impact		kW/a		
Measure Lifetime	18	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	83	95	0	95		Estimated Participation
Impact						
Gross Energy Savings (GJ)	924	1,061	0	1,061	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	924	1,061	0	1,061	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	70,606	79,333	0	79,333	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$100.98	$105.31	$109.10	
Energy Purchases	$ 111,682	$ 111,682	$ -	$ 111,682	$ -	
Utility Program Costs						
DSM Incentives		$ 571,200	$ -	$ 571,200	$ -	
Administration		$ -	$ -	$ -		
Subtotal	$ 497,512	$ 571,200	$ -	$ 571,200	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ 103,079	$ -	$ 103,079	$ -	$1.299 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ 103,079	$ 103,079	$ -	$ 103,079	$ -	
Total Resource Net Benefit (Cost)	$ (282,751)		$ -	$ (356,439)	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 54.1**		**$ -**	**$ 54.1**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Minor Home Repair

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 100			
Total Incentive	$ 100		$ 100	$ -
Participant	$ -			

Annual Impact Per Measure

Energy Savings per installation	0.1	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	10	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	40	46	0	46		Estimated Participation
Impact						
Gross Energy Savings (GJ)	4	5	0	5	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	4	5	0	5	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$67.80	$71.51	$74.66	
Energy Purchases	$ 362	$ 362	$ -	$ 362	$ -	
Utility Program Costs						
DSM Incentives		$ 4,600	$ -	$ 4,600	$ -	
Administration		$ -	$ -	$ -		
Subtotal	$ 4,007	$ 4,600	$ -	$ 4,600	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$0.883 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ (3,645)		$ -	$ (4,238)	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 130.3**		**$ -**	**$ 130.3**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Carbon Monoxide Detector

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 62			
Total Incentive	$ 62		$ 62	$ -
Participant	$ -			

Annual Impact Per Measure

Energy Savings per installation	0.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	10	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	401	461	0	461		Estimated Participation
Impact						
Gross Energy Savings (GJ)	0	0	0	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	0	0	0	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$67.80	$71.51	$74.66	
Energy Purchases	$ -	$ -	$ -	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 28,450	$ -	$ 28,450	$ -	
Administration		$ -	$ -	$ -		
Subtotal	$ 24,780	$ 28,450	$ -	$ 28,450	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$0.883 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ (24,780)		$ -	$ (28,450)	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	$ -		$ -	$ -	$ -	Informational (for comparison with supply options)

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Measure Data for Admin Costs Basic Stream

PER MEASURE		Utility Incentive to the participant	partner incentive
Incremental Cost	$ -		
Total Incentive	$ -	$ -	$ -
Participant	$ -		

Annual Impact Per Measure

Energy Savings per installation	0.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	0	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	0	0	0			Estimated Participation
Impact						
Gross Energy Savings (GJ)	0	0	0	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	0	0	0	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$0.00	$0.00	$0.00	
Energy Purchases	$ -	$ -	$ -	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ 362,747	$ -	$ 362,747		
Subtotal	$ 315,951	$ 362,747	$ -	$ 362,747	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$0.000 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ (315,951)		$ -	$ (362,747)	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	$ -		$ -	$ -	$ -	Informational (for comparison with supply options)

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Measure Data for Faucet Aerators (1.5 G.P.M. max)

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$	4		
Total Incentive	$	4	$ 4	$ -
Participant	$	-		

Annual Impact Per Measure

Energy Savings per installation	0.7	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	10%	0.90		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	10	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	186	214	0	214		Estimated Participation
Impact						
Gross Energy Savings (GJ)	138	158	0	158	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	124	143	0	143	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$67.80	$71.51	$74.66	
Energy Purchases	$ 10,191	$ 10,191	$ -	$ 10,191	$ -	
Utility Program Costs						
DSM Incentives		$ 884	$ -	$ 884	$ -	
Administration		$ -	$ -	$ -		
Subtotal	$ 770	$ 884	$ -	$ 884	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$0.883 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 9,422		$ -	$ 9,308	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 0.9**		**$ -**	**$ 0.9**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Low Flow Fixed Show head (1.5 GPM)

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 11			
Total Incentive	$ 11		$ 11	$ -
Participant	$ -			

Annual Impact Per Measure

Energy Savings per installation	2.5	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	5%	0.95		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	10	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	23	27	0	27		Estimated Participation
Impact						
Gross Energy Savings (GJ)	58	66	0	66	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	55	63	0	63	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$67.80	$71.51	$74.66	
Energy Purchases	$ 4,515	$ 4,515	$ -	$ 4,515	$ -	
Utility Program Costs						
DSM Incentives		$ 298	$ -	$ 298	$ -	
Administration		$ -	$ -	$ -		
Subtotal	$ 259	$ 298	$ -	$ 298	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$0.883 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 4,256		$ -	$ 4,217	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 0.7**		**$ -**	**$ 0.7**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Low Flow Handheld Show head (1.5 GPM)

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$	40		
Total Incentive	$	40	$ 40	$ -
Participant	$	-		

Annual Impact Per Measure

Energy Savings per installation	2.5	GJ	Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	5%	0.95	Net-to-Gross
Alternate Energy Impact	0	GJ 0	kWh
Alternate Capacity Impact		kW/a	
Measure Lifetime	10	Years	Estimated lifespan of measure

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	25	28	0	28		Estimated Participation
Impact						
Gross Energy Savings (GJ)	62	71	0	71	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	59	67	0	67	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$67.80	$71.51	$74.66	
Energy Purchases	$ 4,823	$ 4,823	$ -	$ 4,823	$ -	
Utility Program Costs						
DSM Incentives		$ 1,126	$ -	$ 1,126	$ -	
Administration		$ -	$ -	$ -		
Subtotal	$ 981	$ 1,126	$ -	$ 1,126	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$0.883 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 3,842		$ -	$ 3,697	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 2.4**		**$ -**	**$ 2.4**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Water Heater Blanket (standard size)

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 29			
Total Incentive	$ 29		$ 29	$ -
Participant	$ -			

Annual Impact Per Measure

Energy Savings per installation	1.7	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	5%	0.95		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	10	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	2	3	0	3		Estimated Participation
Impact						
Gross Energy Savings (GJ)	4	5	0	5	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	4	4	0	4	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$67.80	$71.51	$74.66	
Energy Purchases	$ 314	$ 314	$ -	$ 314	$ -	
Utility Program Costs						
DSM Incentives		$ 82	$ -	$ 82	$ -	
Administration		$ -	$ -	$ -		
Subtotal	$ 71	$ 82	$ -	$ 82	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$0.883 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 242		$ -	$ 232	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 2.7**		**$ -**	**$ 2.7**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Water Heater Pipe Wrap

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 4			
Total Incentive	$ 4		$ 4	$ -
Participant	$ -			

Annual Impact Per Measure

Energy Savings per installation	1.2	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	5%	0.95		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	8	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	39	45	0	45		Estimated Participation
Impact						
Gross Energy Savings (GJ)	47	54	0	54	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	45	51	0	51	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$57.19	$60.70	$63.65	
Energy Purchases	$ 3,102	$ 3,102	$ -	$ 3,102	$ -	
Utility Program Costs						
DSM Incentives		$ 196	$ -	$ 196	$ -	
Administration		$ -	$ -	$ -		
Subtotal	$ 171	$ 196	$ -	$ 196	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$0.745 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 2,931		$ -	$ 2,905	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 0.6**		**$ -**	**$ 0.6**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Outlet Gaskets (package for 4)

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 7			
Total Incentive	$ 7		$ 7	$ -
Participant	$ -			

Annual Impact Per Measure

Energy Savings per installation	0.1	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	5%	0.95		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	15	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	89	102	0	102		Estimated Participation
Impact						
Gross Energy Savings (GJ)	6	7	0	7	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	6	7	0	7	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$90.07	$94.20	$97.78	
Energy Purchases	$ 639	$ 639	$ -	$ 639	$ -	
Utility Program Costs						
DSM Incentives		$ 699	$ -	$ 699	$ -	
Administration		$ -	$ -	$ -		
Subtotal	$ 609	$ 699	$ -	$ 699	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.165 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 30		$ -	$ (60)	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 11.4**		**$ -**	**$ 11.4**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Window Film (package to cover 2 standard windows)

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$	10		
Total Incentive	$	10	$ 10	$ -
Participant	$	-		

Annual Impact Per Measure

Energy Savings per installation	0.2	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	5%	0.95		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	1	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	60	69	0	69		Estimated Participation
Impact						
Gross Energy Savings (GJ)	10	11	0	11	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	9	11	0	11	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$12.36	$13.99	$15.51	
Energy Purchases	$ 147	$ 147	$ -	$ 147	$ -	
Utility Program Costs						
DSM Incentives		$ 671	$ -	$ 671	$ -	
Administration		$ -	$ -	$ -		
Subtotal	$ 585	$ 671	$ -	$ 671	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$0.113 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ (438)		$ -	$ (524)	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 68.4**		**$ -**	**$ 68.4**	**$ -**	Informational (for comparison with supply options)

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Measure Data for High Efficiency Furnace

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 6,000			
Total Incentive	$ 6,000		$ 6,000	$ -
Participant	$ -			

Annual Impact Per Measure

Energy Savings per installation	11.1	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	3	GJ	833 kWh	
Alternate Capacity Impact		kW/a		
Measure Lifetime	18	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	28	32	0	32		Estimated Participation
Impact						
Gross Energy Savings (GJ)	307	352	0	352	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	307	352	0	352	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	23,437	26,333	0	26,333	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$100.98	$105.31	$109.10	
Energy Purchases	$ 37,071	$ 37,071	$ -	$ 37,071	$ -	
Utility Program Costs						
DSM Incentives		$ 189,600	$ -	$ 189,600	$ -	
Administration		$ -	$ -	$ -		
Subtotal	$ 165,141	$ 189,600	$ -	$ 189,600	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ 34,215	$ -	$ 34,215	$ -	$1.299 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ 34,215	$ 34,215	$ -	$ 34,215	$ -	
Total Resource Net Benefit (Cost)	$ (93,854)		$ -	$ (118,314)	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 54.1**		**$ -**	**$ 54.1**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Advanced Draft proofing

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 296			
Total Incentive	$ 296		$ 296	$ -
Participant	$ -			

Annual Impact Per Measure

Energy Savings per installation	1.8	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	10	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	134	154	0	154		Estimated Participation
Impact						
Gross Energy Savings (GJ)	241	276	0	276	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	241	276	0	276	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$67.80	$71.51	$74.66	
Energy Purchases	$ 19,770	$ 19,770	$ -	$ 19,770	$ -	
Utility Program Costs						
DSM Incentives		$ 45,389	$ -	$ 45,389	$ -	
Administration		$ -	$ -	$ -		
Subtotal	$ 39,533	$ 45,389	$ -	$ 45,389	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$0.883 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ (19,763)		$ -	$ (25,619)	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 23.5**		**$ -**	**$ 23.5**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Ceiling Insulation

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 1,180			
Total Incentive	$ 1,180		$ 1,180	$ -
Participant	$ -			

Annual Impact Per Measure

Energy Savings per installation	11.5	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	25	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	80	92	0	92		Estimated Participation
Impact						
Gross Energy Savings (GJ)	920	1,056	0	1,056	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	920	1,056	0	1,056	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$120.87	$125.59	$129.77	
Energy Purchases	$ 132,638	$ 132,638	$ -	$ 132,638	$ -	
Utility Program Costs						
DSM Incentives		$ 108,560	$ -	$ 108,560	$ -	
Administration		$ -	$ -	$ -		
Subtotal	$ 94,555	$ 108,560	$ -	$ 108,560	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.534 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 38,083		$ -	$ 24,078	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 8.9**		**$ -**	**$ 8.9**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Wall Insulation

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 3,041			
Total Incentive	$ 3,041		$ 3,041	$ -
Participant	$ -			

Annual Impact Per Measure

Energy Savings per installation	26.2	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	25	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	11	12	0	12		Estimated Participation
Impact						
Gross Energy Savings (GJ)	282	324	0	324	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	282	324	0	324	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$120.87	$125.59	$129.77	
Energy Purchases	$ 40,722	$ 40,722	$ -	$ 40,722	$ -	
Utility Program Costs						
DSM Incentives		$ 37,708	$ -	$ 37,708	$ -	
Administration		$ -	$ -	$ -		
Subtotal	$ 32,844	$ 37,708	$ -	$ 37,708	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.534 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 7,879		$ -	$ 3,014	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 10.1**		**$ -**	**$ 10.1**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Crawlspace Insulation

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 627			
Total Incentive	$ 627		$ 627	$ -
Participant	$ -			

Annual Impact Per Measure

Energy Savings per installation	4.2	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	25	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	3	3	0	3		Estimated Participation
Impact						
Gross Energy Savings (GJ)	12	13	0	13	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	12	13	0	13	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$120.87	$125.59	$129.77	
Energy Purchases	$ 1,688	$ 1,688	$ -	$ 1,688	$ -	
Utility Program Costs						
DSM Incentives		$ 2,006	$ -	$ 2,006	$ -	
Administration		$ -	$ -	$ -		
Subtotal	$ 1,748	$ 2,006	$ -	$ 2,006	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.534 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ (60)		$ -	$ (319)	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 13.0**		**$ -**	**$ 13.0**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Ventilation Fan

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$	585		
Total Incentive	$	585	$ 585	$ -
Participant	$	-		

Annual Impact Per Measure

Energy Savings per installation	0.0	GJ	Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00	Net-to-Gross
Alternate Energy Impact		GJ	0 kWh
Alternate Capacity Impact		kW/a	
Measure Lifetime	25	Years	Estimated lifespan of measure

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	67	77	0	77		Estimated Participation
Impact						
Gross Energy Savings (GJ)	0	0	0	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	0	0	0	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$120.87	$125.59	$129.77	
Energy Purchases	$ -	$ -	$ -	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 44,928	$ -	$ 44,928	$ -	
Administration		$ -	$ -	$ -		
Subtotal	$ 39,132	$ 44,928	$ -	$ 44,928	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.534 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ (39,132)		$ -	$ (44,928)	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	$ -		$ -	$ -	$ -	Informational (for comparison with supply options)

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Measure Data for Minor Home Repair

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 100			
Total Incentive	$ 100		$ 100	$ -
Participant	$ -			

Annual Impact Per Measure

Energy Savings per installation	0.1	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	10	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	13	15	0	15		Estimated Participation
Impact						
Gross Energy Savings (GJ)	1	2	0	2	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	1	2	0	2	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$67.80	$71.51	$74.66	
Energy Purchases	$ 120	$ 120	$ -	$ 120	$ -	
Utility Program Costs						
DSM Incentives		$ 1,520	$ -	$ 1,520	$ -	
Administration		$ -	$ -	$ -		
Subtotal	$ 1,324	$ 1,520	$ -	$ 1,520	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$0.883 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ (1,204)		$ -	$ (1,400)	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 130.3**		**$ -**	**$ 130.3**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Carbon Monoxide Detector

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 62			
Total Incentive	$ 62		$ 62	$ -
Participant	$ -			

Annual Impact Per Measure

Energy Savings per installation	0.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	10	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	134	154	0	154		Estimated Participation
Impact						
Gross Energy Savings (GJ)	0	0	0	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	0	0	0	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$67.80	$71.51	$74.66	
Energy Purchases	$ -	$ -	$ -	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 9,483	$ -	$ 9,483	$ -	
Administration		$ -	$ -	$ -		
Subtotal	$ 8,260	$ 9,483	$ -	$ 9,483	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$0.883 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ (8,260)		$ -	$ (9,483)	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ -**		**$ -**	**$ -**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Admin Costs Advanced Stream

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ -			
Total Incentive	$ -		$ -	$ -
Participant	$ -			

Annual Impact Per Measure

Energy Savings per installation	0.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	0	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	0	0	0	0		Estimated Participation
Impact						
Gross Energy Savings (GJ)	0	0	0	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	0	0	0	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$0.00	$0.00	$0.00	
Energy Purchases	$ -	$ -	$ -	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ 249,832	$ -	$ 249,832		
Subtotal	$ 217,602	$ 249,832	$ -	$ 249,832	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$0.000 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ (217,602)		$ -	$ (249,832)	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ -**		**$ -**	**$ -**	**$ -**	Informational (for comparison with supply options)

FORTIS BC

2011 Conservation for Affordable Housing Programs	PROGRAM															ALTERNATE		NET PRESENT VALUE									BENEFIT/COST						PARAMETERS																			
	COSTS ($000)											SAVINGS (GJ)			LIFE	Impact		Levelized Cost	Utility Benefits (Costs)		Participant Benefits (Costs)			Program Net Savings				Participant						UTILITY				PARTICIPANT														
FEVI	Utility			Partners			Participant	Total	% Utility	% Partner	% Participant	Gross	Net-to-Gross	Net	Years	Energy	Capacity	($/GJ)	Program	Alternate	Program	Carbon Tax	Alternate	Natural Gas	Alternate Energy	Alternate Capacity	Natural Gas	Total Costs	Total Benefits	Benefit/Cost	Natural Gas	SCT	SCT Net Benefits	Natural Gas Utility Discount Rate	Natural Gas Supply	Alternate Discount Rate	Alternate Supply	Discount Rate	Natural Gas NPV	Carbon Tax NPV	Alternate Energy NPV	Alternate Capacity NPV	Natural Gas Tariff	Energy Tariff	Capacity Tariff								
	Incentives	Administration	Total	Incentives	Administration	Total										MWh	kW		($'000s)	($'000s)	($'000s)	($'000s)	($'000s)	(GJ)	(MWh)	(kW)	Utility	($'000s)	($'000s)		Rate Impact	SCT	($'000s)		$/GJ		$/kWh		$/GJ	$/GJ	$/kWh	$/kW/a	$/GJ	$/kWh	$/kW/a								
Label	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR	AS	AT								
Source Sheet or Calculation	Program	Program	B+C	Program	Program	E+F	Program	D+G+H	D/I	G/I	H/I	Program	Program	MxN	Program	Program	Program	D/Y	OxAJ	Q x N x AL	M x N x AN	M x N x AO	N x (QxAP + RxAQ)	PV(AU,P,-O)	PV(AK,P,-Q*N)	PV(AK,P,-R)	T/D	H>0, (V+W)<0	H>0, (V+W)>0, X	AD/AC	T/(V+D)	(T+U)/I	(T+U)-I	Input	Program	Input	Input	Input	PV(AM,P,-InputD25)	Input	PV(AN,P,-InputD28)	PV(AM,P,-InputD29)	Input	Input	Input								
2011																																																				
RESIDENTIAL:																																																			
Retrofit ESK	22	25	47	0	0	0	0	47	100%	0%	0%	1,804	73%	1,317	8	0	-	5	206	N/A	132	14	N/A	9,244	0	-	4.4	-	147	N/A	1.1	4.4	159	3.00%	120.14	3%	0.84	3.0%	100.56	10.93	0.58	0.00	9.999	0.083	-								
Mobile Homes Study	0	2	2	0	0	0	0	2	100%	0%	0%	0	0%	0	1	0	-	LB	LB	N/A	N/A	N/A	N/A	-	0	-	LB	-	-	N/A	N/A	LB	LB	3.00%	29.52	3%	0.12	3.0%	13.91	2.14	0.08	0.00	9.999	0.083	-								
CHF CO-Ops	0	3	3	0	0	0	0	3	100%	0%	0%	0	0%	0	0	0	-	LB	LB	N/A	N/A	N/A	N/A	-	0	-	LB	-	-	N/A	N/A	LB	LB	3.00%	0.00	3%	0.00	3.0%	0.00	0.00	0.00	0.00	9.999	0.083	-								
Energy Efficiency Specialist Certification	0	35	35	0	0	0	0	35	100%	0%	0%	0	0%	0	0	0	-	LB	LB	N/A	N/A	N/A	N/A	-	0	-	LB	-	-	N/A	N/A	LB	LB	3.00%	0.00	3%	0.00	3.0%	0.00	0.00	0.00	0.00	9.999	0.083	-								
ECAP	270	153	424	0	0	0	0	424	100%	0%	0%	1,414	99%	1,387		46	-	32	256	78	143	20	41	13,089	501	-	0.6	-	204	N/A	0.5	0.8	(89)	3.00%	120.14	3%	0.00	3.0%	0.00	0.00	0.00	0.00	9.999	0.083	-								
Total Residential	292	218	510	0	0	0	0	510	100%	-	0%	3,217		2,704		46	0	23	462	78	275	34	41	22,332	501	N/A	0.9	-	351	N/A	0.6	1.1	30	1.4	192																				

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ
1	**UTILITY**		**FORTIS BC**																																	
2																																				
3																																				
4			**Year**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	
5			Units																																	
6		**NATURAL GAS**																																		
7		Incremental Cost of Gas (nominal)	$ Per GJ	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.43
8	1		*Year*	*0*	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*	*16*	*17*	*18*	*19*	*20*	*21*	*22*	*23*	*24*	*25*	*26*	*27*	*28*	*29*	*30*		
9		carbon tax	$ per GJ	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*		
10		Distribution adder	$ per GJ	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*		
11		Total incremental cost of gas including carbon		*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*		
12	2	GDP Deflator		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
13	3	Incremental Cost of Gas (Real)		$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43		
14	4	Net Present Value -2010			$29.52	$43.65	$57.35	$70.66	$83.59	$96.13	$108.31	$120.14	$131.62	$142.77	$153.59	$164.10	$174.30	$184.20	$193.82	$203.15	$212.22	$221.02	$229.56	$237.85	$245.91	$253.72	$261.32	$268.68	$275.84	$282.79	$289.53	$296.08	$302.43	$308.61			
15	5	Net Present Value -2011			$29.52	$43.65	$57.35	$70.66	$83.59	$96.13	$108.31	$120.14	$131.62	$142.77	$153.59	$164.10	$174.30	$184.20	$193.82	$203.15	$212.22	$221.02	$229.56	$237.85	$245.91	$253.72	$261.32	$268.68	$275.84	$282.79	$289.53	$296.08	$302.43				
16	6	Net Present Value -2012			$29.52	$43.65	$57.35	$70.66	$83.59	$96.13	$108.31	$120.14	$131.62	$142.77	$153.59	$164.10	$174.30	$184.20	$193.82	$203.15	$212.22	$221.02	$229.56	$237.85	$245.91	$253.72	$261.32	$268.68	$275.84	$282.79	$289.53	$296.08					
17																																				
18																																				
19		**ELECTRICITY**																																		
20		Incremental Cost of Elec	$ Per kWh	$0.10																																
21		Incremental Cost of E Capacity	$ Per kW/a	$170.00																																
22																																				
23																																				
24																																				
25	**RETAIL**																																			
26				Rate	Customers																																
27		Residential Retail			1,000																																
28		**TGI**	$ Per MJ	$0.0100	1,000																																
29		**TGVI**	$ Per MJ	$0.0143	1,000																																
30		**Electricity**	$ Per MJ	$0.0230																																
31		**Electricity**	$ per kWh	$0.0829	1,000																																
32		**Electricity**	$ per kW per year		1,000																																
33		Commercial Retail																																		
34		**TGI**	$ Per MJ	$0.0094	50																																
35		**TGVI**	$ Per MJ	$0.0160	50																																
36		**Electricity**	$ Per MJ	$0.0214																																
37		**Electricity**	$ per kWh	$0.0749	750																																
38		**Electricity**	$ per kW per year	$52.0000	50																																
39																																				
40	**TAX**																																			
41			**Year**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**		
42			*Year*	*0*	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*	*16*	*17*	*18*	*19*	*20*	*21*	*22*	*23*	*24*	*25*	*26*	*27*	*28*	*29*	*30*		
43	2	Carbon	$ Per tonne		$20.00	$25.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00		
44	3	Carbon	$ Per GJ		$0.9976	$1.2470	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964		
45	4	GDP Deflator			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
46	5	Carbon (Real)			$1.00	$1.25	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50		
47	6	Net Present Value -2010			$2.14	$3.51	$4.84	$6.13	$7.38	$8.60	$9.78	$10.93	$12.05	$13.13	$14.18	$15.19	$16.18	$17.14	$18.08	$18.98	$19.86	$20.71	$21.54	$22.35	$23.13	$23.89	$24.62	$25.34	$26.03	$26.71	$27.38	$27.99	$28.61	$29.21			
48	7	Net Present Value -2011				$2.62	$3.99	$5.32	$6.61	$7.86	$9.08	$10.26	$11.41	$12.52	$13.60	$14.65	$15.67	$16.66	$17.62	$18.55	$19.46	$20.34	$21.19	$22.02	$22.82	$23.61	$24.36	$25.10	$25.81	$26.51	$27.18	$27.84	$28.47	$29.09				
49	8	Net Present Value -2012					$2.86	$4.23	$5.56	$6.85	$8.11	$9.32	$10.50	$11.65	$12.76	$13.85	$14.90	$15.91	$16.90	$17.86	$18.80	$19.70	$20.58	$21.43	$22.26	$23.07	$23.85	$24.61	$25.34	$26.06	$26.75	$27.42	$28.08	$28.71			
50																																				
51		**Discount Rate (real)**[1]																																		
52		**TERASEN GAS**																																		
53		**Rate of Inflation**	1.90%																																	
54		**TGI**	3.00%																																	
55		**TGVI**	3.00%																																	
56		**BC HYDRO**																																		
57		**Rate of Inflation**	2.00%																																	
58		**BC Hydro**	3.00%																																	
59		**Customer**	3.00%																																	
60		*Footnote 1: Source LR 670531*																																		
61																																				
62				**SHEET LABELS**																																
63	**New Construction**																																			
64		Retrofit ESK		**BASEBOARD**																																
65		Mobile Homes Study		**HEATPUMP**																																

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only enter in boxes marked in blue

Measure Data for Retrofit ESK

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 10.47			
Total Incentive	$ 10.47		$ 10.47	$ -
Participant	$ -			

Annual Impact Per Measure

Energy Savings per installation	0.9	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	27%	0.73		Net-to-Gross
Alternate Energy Impact		GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	8	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	2,039	2,100		2,100		Estimated Participation
Impact						
Gross Energy Savings (GJ)	1,700	1,804	0	1,804	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	1,241	1,317	0	1,317	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$120.14	$120.14	$120.14	
Energy Purchases	$ 158,206	$ 158,206	$ -	$ 158,206	$ -	
Utility Program Costs						
DSM Incentives		$ 21,987	$ -	$ 21,987	$ -	
Administration		$ 24,570		$ 24,570		
Subtotal	$ 43,884	$ 46,557	$ -	$ 46,557	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$0.842 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 114,321		$ -	$ 111,649	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 5.0**		**$ -**	**$ 5.0**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Mobile Homes Study

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ -			
Total Incentive	$ -		$ -	$ -
Participant	$ -			

Annual Impact Per Measure

Energy Savings per installation	0.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact		GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	1	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	0	0		0		Estimated Participation
Impact						
Gross Energy Savings (GJ)	0	0	0	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	0	0	0	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$29.52	$29.52	$29.52	
Energy Purchases	$ -	$ -	$ -	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ 2,000		$ 2,000		
Subtotal	$ 1,885	$ 2,000	$ -	$ 2,000	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$0.117 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ (1,885)		$ -	$ (2,000)	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ -**		**$ -**	**$ -**	**$ -**	Informational (for comparison with supply options)

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Measure Data for CHF CO-Ops

PER MEASURE		Utility Incentive to the participant	partner incentive
Incremental Cost	$ -		
Total Incentive	$ -	$ -	$ -
Participant	$ -		

Annual Impact Per Measure

Energy Savings per installation	0.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact		GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	0	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	0	0		0		Estimated Participation
Impact						
Gross Energy Savings (GJ)	0	0	0	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	0	0	0	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$0.00	$0.00	$0.00	
Energy Purchases	$ -	$ -	$ -	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ 3,000		$ 3,000		
Subtotal	$ 2,828	$ 3,000	$ -	$ 3,000	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$0.000 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ (2,828)		$ -	$ (3,000)	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ -**		**$ -**	**$ -**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Energy Efficiency Specialist Certification

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ -			
Total Incentive	$ -		$ -	$ -
Participant	$ -			

Annual Impact Per Measure

Energy Savings per installation	0.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact		GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	0	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	0	0		0		Estimated Participation
Impact						
Gross Energy Savings (GJ)	0	0	0	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	0	0	0	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$0.00	$0.00	$0.00	
Energy Purchases	$ -	$ -	$ -	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ 35,000		$ 35,000		
Subtotal	$ 32,991	$ 35,000	$ -	$ 35,000	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$0.000 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ (32,991)		$ -	$ (35,000)	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ -**		**$ -**	**$ -**	**$ -**	Informational (for comparison with supply options)

FORTIS BC

	PROGRAM														ALTERNATE		NET PRESENT VALUE								BENEFIT/COST						PARAMETERS													
2011 Conservation for Affordable Housing Programs	COSTS ($000)											SAVINGS (GJ)			LIFE	Impact		Levelized Cost	Utility Benefits (Costs)		Participant Benefits (Costs)			Program Net Savings			Natural Gas	Participant			Natural Gas	Total Resource	TRC Net Benefits	UTILITY				PARTICIPANT									
FEVI	Utility			Partners			Participant	Total	% Utility	% Partner	% Participant	Gross	Net-to-Gross	Net	Years	Energy	Capacity	($/GJ)	Program	Alternate	Program	Carbon Tax	Alternate	Natural Gas	Alternate Energy	Alternate Capacity	Utility	Total Costs	Total Benefits	Benefit/Cost	Rate Impact			Natural Gas Utility Discount Rate	Natural Gas Supply	Alternate Discount Rate	Alternate Supply	Discount Rate	Natural Gas NPV	Carbon Tax NPV	Alternate Energy NPV	Alternate Capacity NPV	Natural Gas Tariff	Energy Tariff	Capacity Tariff
	Incentives	Administration	Total	Incentives	Administration	Total										MWh	kW		($'000s)	($'000s)	($'000s)	($'000s)	($'000s)	(GJ)	(MWh)	(kW)		($'000s)	($'000s)				($'000s)	$/GJ		$/kWh		$/GJ		$/kWh	$/kW/a	$/GJ	$/kWh	$/kW/a
Label	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR	AS	AT
Source Sheet or Calculation	Program	Program	B+C	Program	Program	E+F	Program	D+G+H	D/I	G/I	H/I	Program	Program	MxN	Program	Program	Program	D/Y	OxAJ	Q x N x AL	M x N x AN	M x N x AO	N x (QxAP + RxAQ)	PV(AU,P,-O)	PV(AK,P,-Q*N)	PV(AK,P,-R)	T/D	H=0, (V+W)=0	H=0, (V+W)>0, X	AD/AC	T/(V+D)	(T+U)/I	(T+U)-I	Input	Program	Input	Input	Input	PV(AM,P,-Input!D25)	Input	PV(AM,P,-Input!D28)	PV(AM,P,-Input!D29)	Input	Input	Input
2011																																												
RESIDENTIAL:																																												
Retrofit ESK	22	25	47	0	0	0	0	47	100%	0%	0%	1,804	73%	1,317	8	0	-	6	105	N/A	117	12	N/A	7,897	0	-	2.3	-	129	N/A	0.6	2.3	58	6.89%	61.36	6%	0.75	6.0%	88.96	9.11	0.51	0.00	9.999	0.083	-
Mobile Homes Study	0	2	2	0	0	0	0	2	100%	0%	0%	0	0%	0	1	0	-	LB	LB	N/A	N/A	N/A	N/A	-	0	-	LB	-	-	N/A	N/A	LB	LB	6.89%	14.03	6%	0.11	6.0%	13.51	2.02	0.08	0.00	9.999	0.083	-
CHF CO-Ops	0	3	3	0	0	0	0	3	100%	0%	0%	0	0%	0	0	0	-	LB	LB	N/A	N/A	N/A	N/A	-	0	-	LB	-	-	N/A	N/A	LB	LB	6.89%	0.00	6%	0.00	6.0%	0.00	0.00	0.00	0.00	9.999	0.083	-
Energy Efficiency Specialist Certification	0	35	35	0	0	0	0	35	100%	0%	0%	0	0%	0	0	0	-	LB	LB	N/A	N/A	N/A	N/A	-	0	-	LB	-	-	N/A	N/A	LB	LB	6.89%	0.00	6%	0.00	6.0%	0.00	0.00	0.00	0.00	9.999	0.083	-
ECAP	270	153	424	0	0	0	0	424	100%	0%	0%	1,414	99%	1,387		46	-	32	170	78	143	20	41	13,089	501	-	0.4	-	204	N/A	0.3	0.6	(176)	6.89%	61.36	6%	0.00	6.0%	0.00	0.00	0.00	0.00	9.999	0.083	-
Total Residential	292	218	510	0	0	0	0	510	100%	-	0%	3,217		2,704		46	0	24	275	78	260	32	41	20,986	501	N/A	0.5	-	333	N/A	0.4	0.7	(157)	0.9	(52)										

	A	B	C	D	E	F	G	H	I	J	K	L
1	UTILITY		FORTIS BC									
2												
3												
4			Year	2010	2011	2012	2013	2014	2015	2016	2017	2018
5			Units									
6		NATURAL GAS										
7		Incremental Cost of Gas (nominal)	$ Per GJ	$5.50	$6.17	$6.81	$7.35	$7.87	$8.26	$8.56	$8.78	$8.99
8	1		Year	0	1	2	3	4	5	6	7	8
9		carbon tax	$ per GJ	0.75	1.00	1.25	1.50	1.50	1.50	1.50	1.50	1.50
10		Distribution adder	$ per GJ	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
11		Total incremental cost of gas including carbon		6.40	7.32	8.21	9.00	9.52	9.91	10.21	10.43	10.64
12	2	GDP Deflator		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
13	3	Incremental Cost of Gas (Real)		$6.40	$7.32	$8.21	$9.00	$9.52	$9.91	$10.21	$10.43	$10.64
14	4	Net Present Value -2010			$12.39	$19.11	$26.00	$32.82	$39.46	$45.87	$51.98	$57.82
15	5	Net Present Value -2011				$14.03	$21.40	$28.69	$35.78	$42.63	$49.17	$55.41
16	6	Net Present Value -2012					$15.55	$23.34	$30.93	$38.25	$45.24	$51.91
17												
18												
19		ELECTRICITY										
20		Incremental Cost of Elec	$ Per kWh	$0.12								
21		Incremental Cost of E Capacity	$ Per kW/a	$170.00								
22												
23												
24												
25	RETAIL											
26				Rate	Customers		789,928	Total Customers in BC		80,000	Total Residential and Commercial Customers on VI	
27		Residential Retail			000's							
28		TGI	$ Per MJ	$0.0100	640		712,304	Total Residential Customers in BC				
29		TGVI	$ Per MJ	$0.0143	72							
30		Electricity	$ Per MJ	$0.0230								
31		Electricity	$ per kWh	$0.0827	1,511		1,511,435	Total BCH Residential Customers in BC				89%
32		Electricity	$ per kW per year									
33		Commercial Retail										
34		TGI	$ Per MJ	$0.0094	78		77,624	Total Commercial Customers in BC				
35		TGVI	$ Per MJ	$0.0169	8							
36		Electricity	$ Per MJ	$0.0214								
37		Electricity	$ per kWh	$0.0769	190		189,764	Total Light Industrial and Commercial Customers in BC				
38		Electricity	$ per kW per year	$52.0000	15							
39												
40	TAX											
41			Year	2009	2010	2011	2012	2013	2014	2015	2016	2017
42	1		Year		0	1	2	3	4	5	6	7
43	2	Carbon	$ Per tonne		$20.00	$25.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00
44	3	Carbon	$ Per GJ		$0.9976	$1.2470	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964
45	4	GDP Deflator			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
46	5	Carbon (Real)			$1.00	$1.25	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50
47	6	Net Present Value -2010				$2.02	$3.25	$4.40	$5.47	$6.47	$7.41	$8.29
48	7	Net Present Value -2011					$2.48	$3.70	$4.85	$5.92	$6.92	$7.86
49	8	Net Present Value -2012						$2.71	$3.93	$5.08	$6.15	$7.16
50												
51		Discount Rate (real)[1]										
52		TERASEN GAS										
53		Rate of Inflation	1.90%									
54		TGI	7.15%									
55		TGVI	6.89%									
56		BC HYDRO										
57		Rate of Inflation	2.00%									
58		BC Hydro	6.00%									
59		Customer	6.00%									
60		Footnote 1: Source LR 070531										
61												
62				SHEET LABELS								
63	New Construction											
64		Retrofit ESK		BASEBOARD								
65		Mobile Homes Study		HEATPUMP								

	M	N	O	P	Q	R	S	T	U	V	W	X
4	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
7	$9.19	$9.40	$9.60	$9.81	$10.03	$10.25	$10.47	$10.70	$10.93	$11.17	$11.42	$11.67
8	9	10	11	12	13	14	15	16	17	18	19	20
9	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
10	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
11	10.84	11.05	11.25	11.46	11.68	11.90	12.12	12.35	12.58	12.82	13.07	13.32
12	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
13	$10.84	$11.05	$11.25	$11.46	$11.68	$11.90	$12.12	$12.35	$12.58	$12.82	$13.07	$13.32
14	$63.39	$68.70	$73.75	$78.57	$83.16	$87.54	$91.72	$95.69	$99.48	$103.10	$106.54	$109.83
15	$61.36	$67.03	$72.44	$77.59	$82.50	$87.18	$91.64	$95.89	$99.94	$103.80	$107.49	$111.00
16	$58.27	$64.33	$70.11	$75.61	$80.86	$85.87	$90.63	$95.18	$99.51	$103.64	$107.58	$111.33
41	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
42	8	9	10	11	12	13	14	15	16	17	18	19
43	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00
44	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964
45	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
46	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50
47	$9.11	$9.88	$10.60	$11.27	$11.90	$12.49	$13.04	$13.55	$14.04	$14.49	$14.91	$15.30
48	$8.74	$9.56	$10.33	$11.05	$11.72	$12.35	$12.94	$13.49	$14.01	$14.49	$14.94	$15.36
49	$8.10	$8.97	$9.80	$10.56	$11.28	$11.96	$12.58	$13.17	$13.72	$14.24	$14.72	$15.17

	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI
4	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041
7	$11.92	$12.19	$12.45	$12.73	$13.01	$13.29	$13.58	$13.88	$14.19	$14.50	$14.82
8	21	22	23	24	25	26	27	28	29	30	
9	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	
10	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	
11	13.57	13.84	14.10	14.38	14.66	14.94	15.23	15.53	15.84	16.15	
12	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
13	$13.57	$13.84	$14.10	$14.38	$14.66	$14.94	$15.23	$15.53	$15.84	$16.15	
14	$112.96	$115.95	$118.80	$121.52	$124.11	$126.58	$128.94	$131.19	$133.33	$135.38	
15	$114.35	$117.54	$120.59	$123.49	$126.26	$128.90	$131.42	$133.83	$136.12	$138.31	
16	$114.91	$118.32	$121.58	$124.68	$127.64	$130.47	$133.16	$135.73	$138.18	$140.52	
41	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
42	20	21	22	23	24	25	26	27	28	29	30
43	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00
44	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964
45	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
46	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50
47	$15.67	$16.02	$16.34	$16.64	$16.93	$17.19	$17.44	$17.67	$17.89	$18.09	$18.28
48	$15.76	$16.13	$16.47	$16.79	$17.10	$17.38	$17.64	$17.89	$18.12	$18.34	$18.54
49	$15.59	$15.99	$16.36	$16.70	$17.03	$17.33	$17.61	$17.88	$18.12	$18.36	$18.57

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Measure Data for Retrofit ESK

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 10.47			
Total Incentive	$ 10.47		$ 10.47	$ -
Participant	$ -			

Annual Impact Per Measure

Energy Savings per installation	0.9	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	27%	0.73		Net-to-Gross
Alternate Energy Impact		GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	8	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1,960	2,100		2,100		Estimated Participation
Impact						
Gross Energy Savings (GJ)	1,571	1,804	0	1,804	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	1,147	1,317	0	1,317	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$57.82	$61.36	$64.33	
Energy Purchases	$ 80,800	$ 80,800	$ -	$ 80,800	$ -	
Utility Program Costs						
DSM Incentives		$ 21,987	$ -	$ 21,987	$ -	
Administration		$ 24,570		$ 24,570		
Subtotal	$ 40,551	$ 46,557	$ -	$ 46,557	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$0.745 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 40,249		$ -	$ 34,243	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 6.0**		**$ -**	**$ 6.0**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Mobile Homes Study

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ -			
Total Incentive	$ -		$ -	$ -
Participant	$ -			

Annual Impact Per Measure

Energy Savings per installation	0.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact		GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	1	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	0	0		0		Estimated Participation
Impact						
Gross Energy Savings (GJ)	0	0	0	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	0	0	0	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$12.39	$14.03	$15.55	
Energy Purchases	$ -	$ -	$ -	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ 2,000		$ 2,000		
Subtotal	$ 1,742	$ 2,000	$ -	$ 2,000	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$0.113 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ (1,742)		$ -	$ (2,000)	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ -**		**$ -**	**$ -**	**$ -**	Informational (for comparison with supply options)

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Measure Data for CHF CO-Ops

PER MEASURE		Utility Incentive to the participant	partner incentive
Incremental Cost	$ -		
Total Incentive	$ -	$ -	$ -
Participant	$ -		

Annual Impact Per Measure

Energy Savings per installation	0.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact		GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	0	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	0	0		0		Estimated Participation
Impact						
Gross Energy Savings (GJ)	0	0	0	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	0	0	0	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$0.00	$0.00	$0.00	
Energy Purchases	$ -	$ -	$ -	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ 3,000		$ 3,000		
Subtotal	$ 2,613	$ 3,000	$ -	$ 3,000	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$0.000 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ (2,613)		$ -	$ (3,000)	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ -**		**$ -**	**$ -**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Energy Efficiency Specialist Certification

PER MEASURE		Utility Incentive to the participant	partner incentive
Incremental Cost	$ -		
Total Incentive	$ -	$ -	$ -
Participant	$ -		

Annual Impact Per Measure

Energy Savings per installation	0.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact		GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	0	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	0	0		0		Estimated Participation
Impact						
Gross Energy Savings (GJ)	0	0	0	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	0	0	0	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$0.00	$0.00	$0.00	
Energy Purchases	$ -	$ -	$ -	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ 35,000		$ 35,000		
Subtotal	$ 30,485	$ 35,000	$ -	$ 35,000	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$0.000 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ (30,485)		$ -	$ (35,000)	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ -**		**$ -**	**$ -**	**$ -**	Informational (for comparison with supply options)

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	PROGRAM															ALTERNATE		NET PRESENT VALUE									BENEFIT/COST						PARAMETERS															
	COSTS ($000)											SAVINGS (GJ)			LIFE	Impact		Levelized Cost	Utility Benefits (Costs)		Participant Benefits (Costs)			Program Net Savings			Natural Gas	Participant			Natural Gas		SCT	SCT Net Benefits	UTILITY					PARTICIPANT											
	Utility			Partners												Energy	Capacity		Program	Alternate	Program	Carbon Tax	Alternate	Natural Gas	Alternate Energy	Alternate Capacity	Utility	Total Costs	Total Benefits	Benefit/Cost	Rate Impact			Natural Gas Utility Discount	Natural Gas Supply	Alternate Discount Rate	Alternate Supply	Discount Rate	Natural Gas NPV	Carbon Tax NPV	Alternate Energy NPV	Alternate Capacity NPV	Natural Gas Tariff	Energy Tariff	Capacity Tariff			
	Incentives	Administration	Total	Incentives	Administration	Total	Participant	Total	% Utility	% Partner	% Participant	Gross	Net-to-Gross	Net	Years	MWh	kW	($/GJ)	($'000s)	($'000s)	($'000s)	($'000s)	($'000s)	(GJ)	(MWh)	(kW)	Utility	($'000s)	($'000s)					$/GJ	$/kWh		$/GJ	$/GJ	$/kWh	$/kW/a	$/GJ	$/kWh	$/kW/a			
Label	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR	AS	AT			
Source Sheet or Calculation	Program	Program	B+C	Program	Program	E+F	Program	D+G+H	D/I	G/I	H/I	Program	Program	MxN	Program	Program	Program	D/Y	OxAJ	Q x N x AL	M x N x AN	M x N x AO	N x (QxAP + RxAQ)	PV(AI,P,-O)	PV(AK,P,-Q*N)	PV(AK,P,-R)	T/D	H=D, (V+W)=D	H=D, (V+W)=D, X	AD/AC	T/(V+O)	(T+U)/I	(T+U)-I	Input	Program	Input	Input	Input	PV(AM,P,-Input!D25)	Input	PV(AM,P,-Input!D28)	PV(AM,P,-Input!D29)	Input	Input	Input			
2011																																															
Faucet Aerator (1.5 G.P.M. max)	1	0	1	0	0	0	0	1	100%	0%	0%	119	90%	107	10	0	-	1	15	N/A	9	1	N/A	911	-	-	23.0	-	10	N/A	1.6	23.0	15	3.00%	142.86	3%	1.02	3.0%	83.79	13.60	0.71	0.00	9.823	0.083	-			
Low Flow Showhead (1.5 G.P.M. max)	0	0	0	0	0	0	0	0	100%	0%	0%	50	95%	48	10	0	-	1	7	N/A	4	1	N/A	406	-	-	30.3	-	5	N/A	1.6	30.3	7	3.00%	142.86	3%	1.02	3.0%	83.79	13.60	0.71	0.00	9.823	0.083	-			
Low Flow Showerhead Handheld (1.5 GPM max)	1	0	1	0	0	0	0	1	100%	0%	0%	54	95%	51	10	0	-	2	7	N/A	4	1	N/A	434	-	-	8.6	-	5	N/A	1.4	8.6	6	3.00%	142.86	3%	1.02	3.0%	83.79	13.60	0.71	0.00	9.823	0.083	-			
Water Heater Blanket (standard size)	0	0	0	0	0	0	0	0	100%	0%	0%	3	95%	3	10	0	-	2	0	N/A	0	0	N/A	28	-	-	7.7	-	0	N/A	1.4	7.7	0	3.00%	142.86	3%	1.02	3.0%	83.79	13.60	0.71	0.00	9.823	0.083	-			
Water Heater Pipe Wrap (R-12 ft)2	0	0	0	0	0	0	0	0	100%	0%	0%	40	95%	38	8	0	-	1	5	N/A	3	0	N/A	269	-	-	31.3	-	3	N/A	1.7	31.3	4	3.00%	120.22	3%	0.84	3.0%	68.95	11.41	0.58	0.00	9.823	0.083	-			
Outlet Gaskets (package for 4)	1	0	1	0	0	0	0	1	100%	0%	0%	5	95%	5	15	0	-	9	1	N/A	1	0	N/A	61	-	-	1.9	-	1	N/A	0.9	1.9	0	3.00%	193.94	3%	1.43	3.0%	117.27	18.55	0.99	0.00	9.823	0.083	-			
Window Film (package to cover 2 standard windows)	1	0	1	0	0	0	0	1	100%	0%	0%	8	95%	8	1	0	-	66	0	N/A	0	0	N/A	8	-	-	0.5	-	0	N/A	0.4	0.5	(0)	3.00%	29.54	3%	0.12	3.0%	9.54	2.62	0.08	0.00	9.823	0.083	-			
Basic Home Comfort Draftproofing (prescriptive, set time)	6	0	6	0	0	0	0	6	100%	0%	0%	75	100%	75	25	0	-	4	21	N/A	13	2	N/A	1,300	-	-	3.7	-	15	N/A	1.1	3.7	15	3.00%	276.02	3%	2.09	3.0%	171.05	26.51	1.44	0.00	9.823	0.083	-			
High Efficiency Furnace	143	0	143	0	0	0	0	143	100%	0%	0%	265	100%	265	18	20	-	39	59	33	36	6	23	3,646	273	-	0.4	-	64	N/A	0.3	0.6	(51)	3.00%	221.16	3%	1.65	3.0%	135.10	21.19	1.14	0.00	9.823	0.083	-			
Minor Home Repair	1	0	1	0	0	0	0	1	100%	0%	0%	1	100%	1	10	0	-	107	0	N/A	0	0	N/A	11	-	-	0.2	-	0	N/A	0.1	0.2	(1)	3.00%	142.86	3%	1.02	3.0%	83.79	13.60	0.71	0.00	9.823	0.083	-			
Basic stream enabling costs																																															
Carbon Monoxide Detector	7	0	7	0	0	0	0	7							10																																	
Portfolio level admin costs																																															
Admin Costs Basic Stream	0	91	91	0	0	0	0	91																																							
Basic ECAP Measures	160	91	250	0	0	0	0	250	100%	0%	0%	621	96%	601	12	20	-	35	150	43	69	11	23	7,074	273		0.6	-	103	N/A	0.5	0.8	(58)															
Faucet Aerators (1.5 G.P.M. max)	0	0	0	0	0	0	0	0	100%	0%	0%	40	90%	36	10	0	-	1	5	N/A	3	0	N/A	304	-	-	23.0	-	3	N/A	1.6	23.0	5	3.00%	142.86	3%	1.02	3.0%	83.79	13.60	0.71	0.00	9.823	0.083	-			
Low Flow Fixed Showhead (1.5 GPM)	0	0	0	0	0	0	0	0	100%	0%	0%	17	95%	16	10	0	-	1	2	N/A	1	0	N/A	135	-	-	30.3	-	2	N/A	1.6	30.3	2	3.00%	142.86	3%	1.02	3.0%	83.79	13.60	0.71	0.00	9.823	0.083	-			
Low Flow Handheld Showhead (1.5 GPM)	0	0	0	0	0	0	0	0	100%	0%	0%	17	95%	16	10	0	-	2	2	N/A	1	0	N/A	135	-	-	8.0	-	2	N/A	1.4	8.0	2	3.00%	142.86	3%	1.02	3.0%	83.79	13.60	0.71	0.00	9.823	0.083	-			
Water Heater Blanket (standard size)	0	0	0	0	0	0	0	0	100%	0%	0%	1	95%	1	10	0	-	2	0	N/A	0	0	N/A	9	-	-	7.7	-	0	N/A	1.4	7.7	0	3.00%	142.86	3%	1.02	3.0%	83.79	13.60	0.71	0.00	9.823	0.083	-			
Water Heater Pipe Wrap	0	0	0	0	0	0	0	0	100%	0%	0%	13	95%	13	8	0	-	1	2	N/A	1	0	N/A	90	-	-	31.3	-	1	N/A	1.7	31.3	1	3.00%	120.22	3%	0.84	3.0%	68.95	11.41	0.58	0.00	9.823	0.083	-			
Outlet Gaskets (package for 4)	0	0	0	0	0	0	0	0	100%	0%	0%	2	95%	2	15	0	-	9	0	N/A	0	0	N/A	20	-	-	1.9	-	0	N/A	0.9	1.9	0	3.00%	193.94	3%	1.43	3.0%	117.27	18.55	0.99	0.00	9.823	0.083	-			
Window Film (package to cover 2 standard windows)	0	0	0	0	0	0	0	0	100%	0%	0%	3	95%	3	1	0	-	66	0	N/A	0	0	N/A	3	-	-	0.5	-	0	N/A	0.4	0.5	(0)	3.00%	29.54	3%	0.12	3.0%	9.54	2.62	0.08	0.00	9.823	0.083	-			
Advanced Draftproofing	11	0	11	0	0	0	0	11	100%	0%	0%	265	100%	265	18	20	-	3	38	33	36	6	23	3,646	273	-	3.3	-	64	N/A	0.8	6.2	59	3.00%	142.86	3%	1.65	3.0%	135.10	21.19	1.14	0.00	9.823	0.083	-			
High Efficiency Furnace	47	0	47	0	0	0	0	47	100%	0%	0%	88	100%	88	18	7	-	39	19	11	12	2	7	1,210	91	-	0.4	-	21	N/A	0.3	0.6	(17)	3.00%	221.16	3%	1.65	3.0%	135.10	21.19	1.14	0.00	9.823	0.083	-			
Ceiling Insulation	27	0	27	0	0	0	0	27	100%	0%	0%	264	100%	264	25	0	-	6	73	N/A	45	7	N/A	4,598	-	-	2.7	-	52	N/A	1.0	2.7	46	3.00%	276.02	3%	2.09	3.0%	171.05	26.51	1.44	0.00	9.823	0.083	-			
Wall Insulation	9	0	9	0	0	0	0	9	100%	0%	0%	81	100%	81	25	0	-	7	22	N/A	14	2	N/A	1,412	-	-	2.4	-	16	N/A	1.0	2.4	13	3.00%	276.02	3%	2.09	3.0%	171.05	26.51	1.44	0.00	9.823	0.083	-			
Crawlspace Insulation	1	0	1	0	0	0	0	1	100%	0%	0%	3	100%	3	10	0	-	18	0	N/A	0	0	N/A	29	-	-	1.0	-	0	N/A	0.6	1.0	(0)	3.00%	142.86	3%	1.02	3.0%	83.79	13.60	0.71	0.00	9.823	0.083	-			
Minor Home Repair	0	0	0	0	0	0	0	0	100%	0%	0%	0	100%	0	10	0	-	107	0	N/A	0	0	N/A	4	-	-	0.2	-	0	N/A	0.1	0.2	(0)	3.00%	142.86	3%	1.02	3.0%	83.79	13.60	0.71	0.00	9.823	0.083	-			
Advance Stream enabling costs																																															
Carbon Monoxide Detector	2	0	2	0	0	0	0	2							10																																	
Ventilation Fan	11	0	11	0	0	0	0	11							25																																	
Portfolio level admin costs																																															
Admin Costs Advanced Stream	0	62	62	0	0	0	0	62																																							
Advanced ECAP Measures	111	62	173	0	0	0	0	173	100%	0%	0%	794	97%	787	14	26	-	15	214	57	114	18	30	11,594	363	-	1.2	-	162	N/A	0.7	1.6	98															
Total basic and advanced ECAP measures	270	153	424	0	0	0	0	424	100%	0%	0%	1,414		1,387		46	0	23	364	99	183	29	53	18,657	636	0	0.9	-	265	N/A	0.6	1.1	40															

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ
1	**UTILITY**		**FORTIS BC**																																	
2																																				
3																																				
4			**Year**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	
5			Units																																	
6		**NATURAL GAS**																																		
7		Incremental Cost of Gas (nominal)	$ Per GJ	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.43
8	1		*Year*	*0*	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*	*16*	*17*	*18*	*19*	*20*	*21*	*22*	*23*	*24*	*25*	*26*	*27*	*28*	*29*	*30*	*31*	
9		carbon tax	$ per GJ	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	
10		Distribution adder	$ per GJ	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*		
11		Total incremental cost of gas including carbon		*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.28*	
12	2	GDP Deflator		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
13	3	Incremental Cost of Gas (Real)		$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.28	
14	4	Net Present Value -2010			$29.54	$43.67	$57.39	$70.71	$83.64	$96.20	$108.38	$120.22	$131.71	$142.86	$153.69	$164.20	$174.41	$184.32	$193.94	$203.28	$212.35	$221.16	$229.71	$238.01	$246.07	$253.89	$261.48	$268.86	$276.02	$282.97	$289.72	$296.27	$302.63	$308.81	$314.74		
15	5	Net Present Value -2011			$29.54	$43.67	$57.39	$70.71	$83.64	$96.20	$108.38	$120.22	$131.71	$142.86	$153.69	$164.20	$174.41	$184.32	$193.94	$203.28	$212.35	$221.16	$229.71	$238.01	$246.07	$253.89	$261.48	$268.86	$276.02	$282.97	$289.72	$296.27	$302.63	$308.74			
16	6	Net Present Value -2012				$29.54	$43.67	$57.39	$70.71	$83.64	$96.20	$108.38	$120.22	$131.71	$142.86	$153.69	$164.20	$174.41	$184.32	$193.94	$203.28	$212.35	$221.16	$229.71	$238.01	$246.07	$253.89	$261.48	$268.86	$276.02	$282.97	$289.72	$296.27	$302.56				
17																																				
18																																				
19		**ELECTRICITY**																																		
20		Incremental Cost of Elec	$ Per kWh	$0.10																																
21		Incremental Cost of E Capacity	$ Per kW/a	$170.00																																
22																																				
23																																				
24																																				
25	**RETAIL**																																			
26				Rate	Customers																															
27		Residential Retail			1,000																															
28		**TGI**	$ Per MJ	$0.0059	1,000																															
29		**TGVI**	$ Per MJ	$0.0143	1,000																															
30		**Electricity**	$ Per MJ	$0.0230																																
31		**Electricity**	$ per kWh	$0.0829	1,000																															
32		**Electricity**	$ per kW per year		1,000																															
33		Commercial Retail																																		
34		**TGI**	$ Per MJ	$0.0092	50																															
35		**TGVI**	$ Per MJ	$0.0169	50																															
36		**Electricity**	$ Per MJ	$0.0214																																
37		**Electricity**	$ per kWh	$0.0749	1,000																															
38		**Electricity**	$ per kW per year	$52.0000	1,000																															
39																																				
40	**TAX**																																			
41			**Year**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**		
42			*Year*		*0*	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*	*16*	*17*	*18*	*19*	*20*	*21*	*22*	*23*	*24*	*25*	*26*	*27*	*28*	*29*	*30*	
43	2	Carbon	$ Per tonne		$20.00	$25.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	
44	3	Carbon	$ Per GJ		$0.9576	$1.2470	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	
45	4	GDP Deflator			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
46	5	Carbon (Real)			$1.00	$1.25	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	
47	6	Net Present Value -2010			$2.14	$3.51	$4.84	$6.13	$7.39	$8.60	$9.78	$10.93	$12.05	$13.13	$14.18	$15.19	$16.18	$17.14	$18.08	$18.98	$19.86	$20.71	$21.54	$22.35	$23.13	$23.89	$24.62	$25.34	$26.03	$26.71	$27.38	$27.99	$28.61	$29.21			
48	7	Net Present Value -2011				$2.62	$3.99	$5.32	$6.61	$7.86	$9.08	$10.26	$11.41	$12.52	$13.60	$14.65	$15.67	$16.66	$17.62	$18.55	$19.46	$20.34	$21.19	$22.02	$22.82	$23.61	$24.36	$25.10	$25.81	$26.51	$27.18	$27.84	$28.47	$29.09				
49	8	Net Present Value -2012					$2.86	$4.23	$5.56	$6.85	$8.11	$9.32	$10.50	$11.65	$12.76	$13.85	$14.90	$15.91	$16.90	$17.86	$18.80	$19.70	$20.58	$21.43	$22.26	$23.07	$23.85	$24.61	$25.34	$26.06	$26.75	$27.42	$28.08	$28.71			
50																																				
51		**Discount Rate (real)**[1]																																		
52		**TERASEN GAS**																																		
53		**Rate of Inflation**	1.90%																																	
54		**TGI**	3.00%																																	
55		**TGVI**	3.00%																																	
56		**BC HYDRO**																																		
57		**Rate of Inflation**	2.00%																																	
58		**BC Hydro**	3.00%																																	
59		**Customer**	3.00%																																	
60		*Footnote 1: Source LR 070531*																																		
61																																				
62				**SHEET LABELS**																																
63	**New Construction**																																			
64		#REF!		**BASEBOARD**																																
65		#REF!		**HEATPUMP**																																

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Measure Data for Faucet Aerator (1.5 G.P.M. max)

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 4.13			
Total Incentive	$ 4.13		$ 4	$ -
Participant	$ -			

Annual Impact Per Measure

Energy Savings per installation	0.74	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	10%	0.90		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	10	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	156	160		160		Estimated Participation
Impact						
Gross Energy Savings (GJ)	112	119	0	119	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	101	107	0	107	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$142.86	$142.86	$142.86	
Energy Purchases	$ 15,261	$ 15,261	$ -	$ 15,261	$ -	
Utility Program Costs						
DSM Incentives		$ 662	$ -	$ 662	$ -	
Administration		$ -	$ -	$ -		
Subtotal	$ 624	$ 662	$ -	$ 662	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.024 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 14,637		$ -	$ 14,599	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 0.7**		**$ -**	**$ 0.7**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Low Flow Showhead (1.5 G.P.M. max)

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 11			
Total Incentive	$ 11		$ 11	$ -
Participant	$ -			

Annual Impact Per Measure

Energy Savings per installation	2.5	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	5%	0.95		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	10	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	20	20		20		Estimated Participation
Impact						
Gross Energy Savings (GJ)	47	50	0	50	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	45	48	0	48	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$142.86	$142.86	$142.86	
Energy Purchases	$ 6,799	$ 6,799	$ -	$ 6,799	$ -	
Utility Program Costs						
DSM Incentives		$ 224	$ -	$ 224	$ -	
Administration		$ -	$ -	$ -		
Subtotal	$ 212	$ 224	$ -	$ 224	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.024 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 6,587		$ -	$ 6,574	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 0.6**		**$ -**	**$ 0.6**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Low Flow Showerhead Handheld (1.5 GPM max)

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$	40		
Total Incentive	$	40	$ 40	$ -
Participant	$	-		

Annual Impact Per Measure

Energy Savings per installation	2.5	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	5%	0.95		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	10	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	20	21	0	21		Estimated Participation
Impact						
Gross Energy Savings (GJ)	50	54	0	54	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	48	51	0	51	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$142.86	$142.86	$142.86	
Energy Purchases	$ 7,261	$ 7,261	$ -	$ 7,261	$ -	
Utility Program Costs						
DSM Incentives		$ 849	$ -	$ 849	$ -	
Administration		$ -	$ -	$ -		
Subtotal	$ 800	$ 849	$ -	$ 849	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.024 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 6,461		$ -	$ 6,412	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 2.0**		**$ -**	**$ 2.0**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Water Heater Blanket (standard size)

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 29			
Total Incentive	$ 29		$ 29	$ -
Participant	$ -			

Annual Impact Per Measure

Energy Savings per installation	1.7	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	5%	0.95		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	10	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	2	2	0	2	0	Estimated Participation
Impact						
Gross Energy Savings (GJ)	3	3	0	3	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	3	3	0	3	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$142.86	$142.86	$142.86	
Energy Purchases	$ 470	$ 470	$ -	$ 470	$ -	
Utility Program Costs						
DSM Incentives		$ 61	$ -	$ 61	$ -	
Administration		$ -	$ -	$ -		
Subtotal	$ 58	$ 61	$ -	$ 61	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.024 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 412		$ -	$ 409	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 2.2**		**$ -**	**$ 2.2**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Water Heater Pipe Wrap (8-12 ft)2

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$	4		
Total Incentive	$	4	$ 4	$ -
Participant	$	-		

Annual Impact Per Measure

Energy Savings per installation	1.2	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	5%	0.95		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	8	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	32	34	0	34		Estimated Participation
Impact						
Gross Energy Savings (GJ)	38	40	0	40	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	36	38	0	38	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$120.22	$120.22	$120.22	
Energy Purchases	$ 4,607	$ 4,607	$ -	$ 4,607	$ -	
Utility Program Costs						
DSM Incentives		$ 147	$ -	$ 147	$ -	
Administration		$ -	$ -	$ -		
Subtotal	$ 139	$ 147	$ -	$ 147	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$0.842 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 4,469		$ -	$ 4,460	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 0.5**		**$ -**	**$ 0.5**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Outlet Gaskets (package for 4)

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 7			
Total Incentive	$ 7		$ 7	$ -
Participant	$ -			

Annual Impact Per Measure

Energy Savings per installation	0.1	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	5%	0.95		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	15	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	72	77	0	77		Estimated Participation
Impact				15.32		
Gross Energy Savings (GJ)	5	5	0	5	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	5	5	0	5	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$193.94	$193.94	$193.94	
Energy Purchases	$ 988	$ 988	$ -	$ 988	$ -	
Utility Program Costs						
DSM Incentives		$ 525	$ -	$ 525	$ -	
Administration		$ -	$ -	$ -		
Subtotal	$ 495	$ 525	$ -	$ 525	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.433 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 493		$ -	$ 463	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 8.6**		**$ -**	**$ 8.6**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Window Film (package to cover 2 standard windows)

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 10			
Total Incentive	$ 10		$ 10	$ -
Participant	$ -			

Annual Impact Per Measure

Energy Savings per installation	0.2	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	5%	0.95		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	1	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	49	52	0	52		Estimated Participation
Impact						
Gross Energy Savings (GJ)	8	8	0	8	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	7	8	0	8	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$29.54	$29.54	$29.54	
Energy Purchases	$ 233	$ 233	$ -	$ 233	$ -	
Utility Program Costs						
DSM Incentives		$ 502	$ -	$ 502	$ -	
Administration		$ -	$ -	$ -		
Subtotal	$ 474	$ 502	$ -	$ 502	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$0.117 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ (241)		$ -	$ (270)	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 65.7**		**$ -**	**$ 65.7**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Basic Home Comfort Draftproofing (prescriptive, set time)

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 54			
Total Incentive	$ 54		$ 54	$ -
Participant	$ -			

Annual Impact Per Measure

Energy Savings per installation	0.7	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	25	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	98	104	0	104		Estimated Participation
Impact						
Gross Energy Savings (GJ)	70	75	0	75	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	70	75	0	75	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$276.02	$276.02	$276.02	
Energy Purchases	$ 20,609	$ 20,609	$ -	$ 20,609	$ -	
Utility Program Costs						
DSM Incentives		$ 5,608	$ -	$ 5,608	$ -	
Administration		$ -	$ -	$ -		
Subtotal	$ 5,286	$ 5,608	$ -	$ 5,608	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$2.090 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 15,322		$ -	$ 15,001	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 4.3**		**$ -**	**$ 4.3**	**$ -**	Informational (for comparison with supply options)

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Measure Data for High Efficiency Furnace

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$	6,000		
Total Incentive	$	6,000	$ 6,000	$ -
Participant	$	-		

Annual Impact Per Measure

Energy Savings per installation	11.1	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	3	GJ	833 kWh	
Alternate Capacity Impact		kW/a		
Measure Lifetime	18	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	22	24	0	24		Estimated Participation
Impact						
Gross Energy Savings (GJ)	250	265	0	265	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	250	265	0	265	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	18,695	19,833	0	19,833	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$221.16	$221.16	$221.16	
Energy Purchases	$ 58,636	$ 58,636	$ -	$ 58,636	$ -	
Utility Program Costs						
DSM Incentives		$ 142,800	$ -	$ 142,800	$ -	
Administration		$ -	$ -	$ -		
Subtotal	$ 134,603	$ 142,800	$ -	$ 142,800	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ 32,733	$ -	$ 32,733	$ -	$1.650 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ 32,733	$ 32,733	$ -	$ 32,733	$ -	
Total Resource Net Benefit (Cost)	$ (43,233)		$ -	$ (51,430)	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 39.2**		**$ -**	**$ 39.2**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Minor Home Repair

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 100			
Total Incentive	$ 100		$ 100	$ -
Participant	$ -			

Annual Impact Per Measure

Energy Savings per installation	0.1	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	10	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	11	12	0	12		Estimated Participation
Impact						
Gross Energy Savings (GJ)	1	1	0	1	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	1	1	0	1	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$142.86	$142.86	$142.86	
Energy Purchases	$ 181	$ 181	$ -	$ 181	$ -	
Utility Program Costs						
DSM Incentives		$ 1,150	$ -	$ 1,150	$ -	
Administration		$ -	$ -	$ -		
Subtotal	$ 1,084	$ 1,150	$ -	$ 1,150	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.024 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ (903)		$ -	$ (969)	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 106.6**		**$ -**	**$ 106.6**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Carbon Monoxide Detector

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 62			
Total Incentive	$ 62		$ 62	$ -
Participant	$ -			

Annual Impact Per Measure

Energy Savings per installation	0.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	10	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	109	115	0	115		Estimated Participation
Impact						
Gross Energy Savings (GJ)	0	0	0	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	0	0	0	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$142.86	$142.86	$142.86	
Energy Purchases	$ -	$ -	$ -	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 7,112	$ -	$ 7,112	$ -	
Administration		$ -	$ -	$ -		
Subtotal	$ 6,704	$ 7,112	$ -	$ 7,112	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.024 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ (6,704)		$ -	$ (7,112)	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ -**		**$ -**	**$ -**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Admin Costs Basic Stream

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ -			
Total Incentive	$ -		$ -	$ -
Participant	$ -			

Annual Impact Per Measure

Energy Savings per installation	0.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	0	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	0	0	0			Estimated Participation
Impact						
Gross Energy Savings (GJ)	0	0	0	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	0	0	0	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$0.00	$0.00	$0.00	
Energy Purchases	$ -	$ -	$ -	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ 90,687	$ -	$ 90,687		
Subtotal	$ 85,481	$ 90,687	$ -	$ 90,687	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$0.000 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ (85,481)		$ -	$ (90,687)	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	$ -		$ -	$ -	$ -	Informational (for comparison with supply options)

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Measure Data for Faucet Aerators (1.5 G.P.M. max)

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 4			
Total Incentive	$ 4		$ 4	$ -
Participant	$ -			

Annual Impact Per Measure

Energy Savings per installation	0.7	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	10%	0.90		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	10	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	50	54	0	54		Estimated Participation
Impact						
Gross Energy Savings (GJ)	37	40	0	40	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	34	36	0	36	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$142.86	$142.86	$142.86	
Energy Purchases	$ 5,090	$ 5,090	$ -	$ 5,090	$ -	
Utility Program Costs						
DSM Incentives		$ 221	$ -	$ 221	$ -	
Administration		$ -	$ -	$ -		
Subtotal	$ 208	$ 221	$ -	$ 221	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.024 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 4,882		$ -	$ 4,869	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 0.7**		**$ -**	**$ 0.7**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Low Flow Fixed Showhead (1.5 GPM)

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$	11		
Total Incentive	$	11	$ 11	$ -
Participant	$	-		

Annual Impact Per Measure

Energy Savings per installation	2.5	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	5%	0.95		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	10	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	6	7	0	7		Estimated Participation
Impact						
Gross Energy Savings (GJ)	16	17	0	17	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	15	16	0	16	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$142.86	$142.86	$142.86	
Energy Purchases	$ 2,255	$ 2,255	$ -	$ 2,255	$ -	
Utility Program Costs						
DSM Incentives		$ 74	$ -	$ 74	$ -	
Administration		$ -	$ -	$ -		
Subtotal	$ 70	$ 74	$ -	$ 74	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.024 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 2,185		$ -	$ 2,181	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 0.6**		**$ -**	**$ 0.6**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Low Flow Handheld Showhead (1.5 GPM)

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 40			
Total Incentive	$ 40		$ 40	$ -
Participant	$ -			

Annual Impact Per Measure

Energy Savings per installation	2.5	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	5%	0.95		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	10	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	7	7	0	7		Estimated Participation
Impact						
Gross Energy Savings (GJ)	17	18	0	18	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	16	17	0	17	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$142.86	$142.86	$142.86	
Energy Purchases	$ 2,409	$ 2,409	$ -	$ 2,409	$ -	
Utility Program Costs						
DSM Incentives		$ 282	$ -	$ 282	$ -	
Administration		$ -	$ -	$ -		
Subtotal	$ 265	$ 282	$ -	$ 282	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.024 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 2,144		$ -	$ 2,127	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 2.0**		**$ -**	**$ 2.0**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Water Heater Blanket (standard size)

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 29			
Total Incentive	$ 29		$ 29	$ -
Participant	$ -			

Annual Impact Per Measure

Energy Savings per installation	1.7	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	5%	0.95		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	10	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	0	1		Estimated Participation
Impact						
Gross Energy Savings (GJ)	1	1	0	1	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	1	1	0	1	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$142.86	$142.86	$142.86	
Energy Purchases	$ 157	$ 157	$ -	$ 157	$ -	
Utility Program Costs						
DSM Incentives		$ 20	$ -	$ 20	$ -	
Administration		$ -	$ -	$ -		
Subtotal	$ 19	$ 20	$ -	$ 20	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.024 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 137		$ -	$ 136	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 2.2**		**$ -**	**$ 2.2**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Water Heater Pipe Wrap

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 4			
Total Incentive	$ 4		$ 4	$ -
Participant	$ -			

Annual Impact Per Measure

Energy Savings per installation	1.2	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	5%	0.95		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	8	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	11	11	0	11		Estimated Participation
Impact						
Gross Energy Savings (GJ)	13	13	0	13	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	12	13	0	13	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$120.22	$120.22	$120.22	
Energy Purchases	$ 1,536	$ 1,536	$ -	$ 1,536	$ -	
Utility Program Costs						
DSM Incentives		$ 49	$ -	$ 49	$ -	
Administration		$ -	$ -	$ -		
Subtotal	$ 46	$ 49	$ -	$ 49	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$0.842 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 1,490		$ -	$ 1,487	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 0.5**		**$ -**	**$ 0.5**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Outlet Gaskets (package for 4)

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 7			
Total Incentive	$ 7		$ 7	$ -
Participant	$ -			

Annual Impact Per Measure

Energy Savings per installation	0.1	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	5%	0.95		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	15	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	24	26	0	26		Estimated Participation
Impact						
Gross Energy Savings (GJ)	2	2	0	2	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	2	2	0	2	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$193.94	$193.94	$193.94	
Energy Purchases	$ 329	$ 329	$ -	$ 329	$ -	
Utility Program Costs						
DSM Incentives		$ 175	$ -	$ 175	$ -	
Administration		$ -	$ -	$ -		
Subtotal	$ 165	$ 175	$ -	$ 175	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.433 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 164		$ -	$ 154	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 8.6**		**$ -**	**$ 8.6**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Window Film (package to cover 2 standard windows)

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 10			
Total Incentive	$ 10		$ 10	$ -
Participant	$ -			

Annual Impact Per Measure

Energy Savings per installation	0.2	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	5%	0.95		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	1	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	16	17	0	17		Estimated Participation
Impact						
Gross Energy Savings (GJ)	3	3	0	3	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	2	3	0	3	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$29.54	$29.54	$29.54	
Energy Purchases	$ 78	$ 78	$ -	$ 78	$ -	
Utility Program Costs						
DSM Incentives		$ 168	$ -	$ 168	$ -	
Administration		$ -	$ -	$ -		
Subtotal	$ 158	$ 168	$ -	$ 168	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$0.117 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ (80)		$ -	$ (90)	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 65.7**		**$ -**	**$ 65.7**	**$ -**	Informational (for comparison with supply options)

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Measure Data for High Efficiency Furnace

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 6,000			
Total Incentive	$ 6,000		$ 6,000	$ -
Participant	$ -			

Annual Impact Per Measure

Energy Savings per installation	11.1	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	3	GJ	833 kWh	
Alternate Capacity Impact		kW/a		
Measure Lifetime	18	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	7	8	0	8		Estimated Participation
Impact						
Gross Energy Savings (GJ)	83	88	0	88	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	83	88	0	88	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	6,205	6,583	0	6,583	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$221.16	$221.16	$221.16	
Energy Purchases	$ 19,463	$ 19,463	$ -	$ 19,463	$ -	
Utility Program Costs						
DSM Incentives		$ 47,400	$ -	$ 47,400	$ -	
Administration		$ -	$ -	$ -		
Subtotal	$ 44,679	$ 47,400	$ -	$ 47,400	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ 10,865	$ -	$ 10,865	$ -	$1.650 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ 10,865	$ 10,865	$ -	$ 10,865	$ -	
Total Resource Net Benefit (Cost)	$ (14,350)		$ -	$ (17,071)	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 39.2**		**$ -**	**$ 39.2**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Advanced Draftproofing

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 296			
Total Incentive	$ 296		$ 296	$ -
Participant	$ -			

Annual Impact Per Measure

Energy Savings per installation	1.8	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	10	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	36	38	0	38		Estimated Participation
Impact						
Gross Energy Savings (GJ)	65	69	0	69	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	65	69	0	69	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$142.86	$142.86	$142.86	
Energy Purchases	$ 9,875	$ 9,875	$ -	$ 9,875	$ -	
Utility Program Costs						
DSM Incentives		$ 11,347	$ -	$ 11,347	$ -	
Administration		$ -	$ -	$ -		
Subtotal	$ 10,696	$ 11,347	$ -	$ 11,347	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.024 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ (821)		$ -	$ (1,473)	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 19.2**		**$ -**	**$ 19.2**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Ceiling Insulation

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 1,180			
Total Incentive	$ 1,180		$ 1,180	$ -
Participant	$ -			

Annual Impact Per Measure

Energy Savings per installation	11.5	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	25	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	22	23	0	23		Estimated Participation
Impact						
Gross Energy Savings (GJ)	249	264	0	264	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	249	264	0	264	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$276.02	$276.02	$276.02	
Energy Purchases	$ 72,880	$ 72,880	$ -	$ 72,880	$ -	
Utility Program Costs						
DSM Incentives		$ 27,140	$ -	$ 27,140	$ -	
Administration		$ -	$ -	$ -		
Subtotal	$ 25,582	$ 27,140	$ -	$ 27,140	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$2.090 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 47,298		$ -	$ 45,740	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 5.9**		**$ -**	**$ 5.9**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Wall Insulation

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 3,041			
Total Incentive	$ 3,041		$ 3,041	$ -
Participant	$ -			

Annual Impact Per Measure

Energy Savings per installation	26.2	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	25	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	3	3	0	3		Estimated Participation
Impact						
Gross Energy Savings (GJ)	76	81	0	81	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	76	81	0	81	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$276.02	$276.02	$276.02	
Energy Purchases	$ 22,375	$ 22,375	$ -	$ 22,375	$ -	
Utility Program Costs						
DSM Incentives		$ 9,427	$ -	$ 9,427	$ -	
Administration		$ -	$ -	$ -		
Subtotal	$ 8,886	$ 9,427	$ -	$ 9,427	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$2.090 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 13,489		$ -	$ 12,948	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 6.7**		**$ -**	**$ 6.7**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Crawlspace Insulation

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 627			
Total Incentive	$ 627		$ 627	$ -
Participant	$ -			

Annual Impact Per Measure

Energy Savings per installation	4.2	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	25	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	0	1		Estimated Participation
Impact						
Gross Energy Savings (GJ)	3	3	0	3	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	3	3	0	3	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$276.02	$276.02	$276.02	
Energy Purchases	$ 927	$ 927	$ -	$ 927	$ -	
Utility Program Costs						
DSM Incentives		$ 502	$ -	$ 502	$ -	
Administration		$ -	$ -	$ -		
Subtotal	$ 473	$ 502	$ -	$ 502	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$2.090 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 455		$ -	$ 426	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 8.6**		**$ -**	**$ 8.6**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Ventilation Fan

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 585			
Total Incentive	$ 585		$ 585	$ -
Participant	$ -			

Annual Impact Per Measure

Energy Savings per installation	0.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact		GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	25	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	18	19	0	19		Estimated Participation
Impact						
Gross Energy Savings (GJ)	0	0	0	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	0	0	0	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$276.02	$276.02	$276.02	
Energy Purchases	$ -	$ -	$ -	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 11,232	$ -	$ 11,232	$ -	
Administration		$ -	$ -	$ -		
Subtotal	$ 10,587	$ 11,232	$ -	$ 11,232	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$2.090 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ (10,587)		$ -	$ (11,232)	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ -**		**$ -**	**$ -**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Minor Home Repair

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$	100		
Total Incentive	$	100	$ 100	$ -
Participant	$	-		

Annual Impact Per Measure

Energy Savings per installation	0.1	GJ	Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00	Net-to-Gross
Alternate Energy Impact	0	GJ	0 kWh
Alternate Capacity Impact		kW/a	
Measure Lifetime	10	Years	Estimated lifespan of measure

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	4	4	0	4		Estimated Participation
Impact						
Gross Energy Savings (GJ)	0	0	0	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	0	0	0	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$142.86	$142.86	$142.86	
Energy Purchases	$ 60	$ 60	$ -	$ 60	$ -	
Utility Program Costs						
DSM Incentives		$ 380	$ -	$ 380	$ -	
Administration		$ -	$ -	$ -		
Subtotal	$ 358	$ 380	$ -	$ 380	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.024 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ (298)		$ -	$ (320)	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 106.6**		**$ -**	**$ 106.6**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Carbon Monoxide Detector

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 62			
Total Incentive	$ 62		$ 62	$ -
Participant	$ -			

Annual Impact Per Measure

Energy Savings per installation	0.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	10	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	36	38	0	38		Estimated Participation
Impact						
Gross Energy Savings (GJ)	0	0	0	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	0	0	0	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$142.86	$142.86	$142.86	
Energy Purchases	$ -	$ -	$ -	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 2,371	$ -	$ 2,371	$ -	
Administration		$ -	$ -	$ -		
Subtotal	$ 2,235	$ 2,371	$ -	$ 2,371	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.024 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ (2,235)		$ -	$ (2,371)	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ -**		**$ -**	**$ -**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Admin Costs Advanced Stream

PER MEASURE		Utility Incentive to the participant	partner incentive
Incremental Cost	$ -		
Total Incentive	$ -	$ -	$ -
Participant	$ -		

Annual Impact Per Measure

Energy Savings per installation	0.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	0	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	0	0	0	0		Estimated Participation
Impact						
Gross Energy Savings (GJ)	0	0	0	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	0	0	0	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$0.00	$0.00	$0.00	
Energy Purchases	$ -	$ -	$ -	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ 62,458	$ -	$ 62,458		
Subtotal	$ 58,873	$ 62,458	$ -	$ 62,458	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$0.000 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ (58,873)		$ -	$ (62,458)	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ -**		**$ -**	**$ -**	**$ -**	Informational (for comparison with supply options)

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	PROGRAM															ALTERNATE		NET PRESENT VALUE									BENEFIT/COST							PARAMETERS														
	COSTS ($000)											SAVINGS (GJ)			LIFE	Impact		Levelized Cost	Utility Benefits (Costs)		Participant Benefits (Costs)			Program Net Savings			Natural Gas	Participant			Natural Gas		TRC Net Benefits	UTILITY				PARTICIPANT												
	Utility			Partners																																													
	Incentives	Administration	Total	Incentives	Administration	Total	Participant	Total	% Utility	% Partner	% Participant	Gross	Net-to-Gross	Net	Years	Energy	Capacity	($/GJ)	Program ($'000s)	Alternate ($'000s)	Program ($'000s)	Carbon Tax ($'000s)	Alternate ($'000s)	Natural Gas	Alternate Energy	Alternate Capacity	Natural Gas	Total Costs	Total Benefits	Benefit/Cost	Natural Gas	Total Resource		Natural Gas Utility Discount	Natural Gas Supply $/GJ	Alternate Discount Rate	Alternate Supply $/kWh	Discount Rate	Natural Gas NPV $/GJ	Carbon Tax NPV $/GJ	Alternate Energy NPV $/kWh	Alternate Capacity NPV $/kW/a	Natural Gas Tariff $/GJ	Energy Tariff $/kWh	Capacity Tariff $/kW/a						
Label	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR	AS	AT						
Source Sheet or Calculation	Program	Program	B+C	Program	Program	E+F	Program	D+G+H	D/I	G/I	H/I	Program	Program	MxN	Program	Program	Program	D/Y	OxAJ	Q x N x AL	M x N x AN	M x N x AO	N x (QxAP + RxAQ)	PV(AI,P,-O)	PV(AK,P,-Q*N)	PV(AK,P,-R)	T/D	H=D, (V+W)=D	I=D, (V+W)=D, X	AD/AC	T/(V+D)	(T+U)/I	(T+U)-I	Input	Program	Input	Input	Input	PV(AM,P,-Input!D25)	Input	PV(AM,P,-Input!D28)	PV(AM,P,-Input!D29)	Input	Input	Input						
2011																																																		
Faucet Aerator (1.5 G.P.M. max)	1	0	1	0	0	0	0	1	100%	0%	0%	119	90%	107	10	0	-	1	8	N/A	8	1	N/A	737	-	-	11.4	-	9	N/A	0.9	11.4	7	7.38%	70.64	6%	0.88	6.0%	72.30	10.78	0.61	0.00	9.823	0.083	-						
Low Flow Show head (1.5 G.P.M. max)	0	0	0	0	0	0	0	0	100%	0%	0%	50	95%	48	10	0	-	1	3	N/A	3	1	N/A	328	-	-	15.0	-	4	N/A	0.9	15.0	3	7.38%	70.64	6%	0.88	6.0%	72.30	10.78	0.61	0.00	9.823	0.083	-						
Low Flow Showerhead Handheld (1.5 GPM max)	1	0	1	0	0	0	0	1	100%	0%	0%	54	95%	51	10	0	-	2	4	N/A	4	1	N/A	351	-	-	4.2	-	4	N/A	0.8	4.2	3	7.38%	70.64	6%	0.88	6.0%	72.30	10.78	0.61	0.00	9.823	0.083	-						
Water Heater Blanket (standard size)	0	0	0	0	0	0	0	0	100%	0%	0%	3	95%	3	10	0	-	3	0	N/A	0	0	N/A	23	-	-	3.8	-	0	N/A	0.8	3.8	0	7.38%	70.64	6%	0.88	6.0%	72.30	10.78	0.61	0.00	9.823	0.083	-						
Water Heater Pipe Wrap (R-12 ft)2	0	0	0	0	0	0	0	0	100%	0%	0%	40	95%	38	8	0	-	1	2	N/A	2	0	N/A	226	-	-	15.6	-	3	N/A	0.9	15.6	2	7.38%	60.07	6%	0.75	6.0%	61.00	9.36	0.51	0.00	9.823	0.083	-						
Outlet Gaskets (package for 4)	1	0	1	0	0	0	0	1	100%	0%	0%	5	95%	5	15	0	-	12	0	N/A	0	0	N/A	45	-	-	0.9	-	1	N/A	0.5	0.9	(0)	7.38%	92.66	6%	1.17	6.0%	95.40	13.55	0.80	0.00	9.823	0.083	-						
Window Film (package to cover 2 standard windows)	1	0	1	0	0	0	0	1	100%	0%	0%	8	95%	8	1	0	-	69	0	N/A	0	0	N/A	7	-	-	0.2	-	0	N/A	0.2	0.2	(0)	7.38%	13.94	6%	0.11	6.0%	9.27	2.46	0.08	0.00	9.823	0.083	-						
Basic Home Comfort Draft proofing (prescriptive, set time)	6	0	6	0	0	0	0	6	100%	0%	0%	75	100%	75	25	0	-	7	9	N/A	9	1	N/A	841	-	-	1.6	-	11	N/A	0.6	1.6	4	7.38%	122.67	6%	1.53	6.0%	125.57	16.86	1.06	0.00	9.823	0.083	-						
High Efficiency Furnace	143	0	143	0	0	0	0	143	100%	0%	0%	265	100%	265	18	20	-	55	27	26	28	4	18	2,595	215	-	0.2	-	50	N/A	0.2	0.4	(90)	7.38%	103.36	6%	1.30	6.0%	106.36	14.80	0.90	0.00	9.823	0.083	-						
Minor Home Repair	1	0	1	0	0	0	0	1	100%	0%	0%	1	100%	1	10	0	-	132	0	N/A	0	0	N/A	9	-	-	0.1	-	0	N/A	0.1	0.1	(1)	7.38%	70.64	6%	0.88	6.0%	72.30	10.78	0.61	0.00	9.823	0.083	-						
Basic stream enabling costs																																																	
Carbon Monoxide Detector	7	0	7	0	0	0	0	7							10																																			
Portfolio level admin costs																																																	
Admin Costs Basic Stream	0	91	91	0	0	0	0	91																																									
Basic ECAP Measures	160	91	250	0	0	0	0	250	100%	0%	0%	621	96%	601	12	20	-	48	71	34	56	8	18	5,163	215		0.3	-	81	N/A	0.2	0.4	(146)																		
Faucet Aerators (1.5 G.P.M. max)	0	0	0	0	0	0	0	0	100%	0%	0%	40	90%	36	10	0	-	1	3	N/A	3	0	N/A	246	-	-	11.4	-	3	N/A	0.9	11.4	2	7.38%	70.64	6%	0.88	6.0%	72.30	10.78	0.61	0.00	9.823	0.083	-						
Low Flow Fixed Show head (1.5 GPM)	0	0	0	0	0	0	0	0	100%	0%	0%	17	95%	16	10	0	-	1	1	N/A	1	0	N/A	109	-	-	15.0	-	1	N/A	0.9	15.0	1	7.38%	70.64	6%	0.88	6.0%	72.30	10.78	0.61	0.00	9.823	0.083	-						
Low Flow Handheld Show head (1.5 GPM)	0	0	0	0	0	0	0	0	100%	0%	0%	17	95%	16	10	0	-	3	1	N/A	1	0	N/A	109	-	-	4.0	-	1	N/A	0.8	4.0	1	7.38%	70.64	6%	0.88	6.0%	72.30	10.78	0.61	0.00	9.823	0.083	-						
Water Heater Blanket (standard size)	0	0	0	0	0	0	0	0	100%	0%	0%	1	95%	1	10	0	-	3	0	N/A	0	0	N/A	8	-	-	3.8	-	0	N/A	0.8	3.8	0	7.38%	70.64	6%	0.88	6.0%	72.30	10.78	0.61	0.00	9.823	0.083	-						
Water Heater Pipe Wrap	0	0	0	0	0	0	0	0	100%	0%	0%	13	95%	13	8	0	-	1	1	N/A	1	0	N/A	75	-	-	15.6	-	1	N/A	0.9	15.6	1	7.38%	60.07	6%	0.75	6.0%	61.00	9.36	0.51	0.00	9.823	0.083	-						
Outlet Gaskets (package for 4)	0	0	0	0	0	0	0	0	100%	0%	0%	2	95%	2	15	0	-	12	0	N/A	0	0	N/A	15	-	-	0.9	-	0	N/A	0.5	0.9	(0)	7.38%	92.66	6%	1.17	6.0%	95.40	13.55	0.80	0.00	9.823	0.083	-						
Window Film (package to cover 2 standard windows)	0	0	0	0	0	0	0	0	100%	0%	0%	3	95%	3	1	0	-	69	0	N/A	0	0	N/A	2	-	-	0.2	-	0	N/A	0.2	0.2	(0)	7.38%	13.94	6%	0.11	6.0%	9.27	2.46	0.08	0.00	9.823	0.083	-						
Advanced Draft proofing	11	0	11	0	0	0	0	11	100%	0%	0%	265	100%	265	18	20	-	4	19	26	28	4	18	2,595	215	-	1.7	-	50	N/A	0.5	3.9	33	7.38%	70.64	6%	1.30	6.0%	106.36	14.80	0.90	0.00	9.823	0.083	-						
High Efficiency Furnace	47	0	47	0	0	0	0	47	100%	0%	0%	88	100%	88	18	7	-	55	9	9	9	1	6	861	71	-	0.2	-	17	N/A	0.2	0.4	(30)	7.38%	103.36	6%	1.30	6.0%	106.36	14.80	0.90	0.00	9.823	0.083	-						
Ceiling Insulation	27	0	27	0	0	0	0	27	100%	0%	0%	264	100%	264	25	0	-	9	32	N/A	33	4	N/A	2,974	-	-	1.2	-	38	N/A	0.5	1.2	5	7.38%	122.67	6%	1.53	6.0%	125.57	16.86	1.06	0.00	9.823	0.083	-						
Wall Insulation	9	0	9	0	0	0	0	9	100%	0%	0%	81	100%	81	25	0	-	10	10	N/A	10	1	N/A	913	-	-	1.1	-	12	N/A	0.5	1.1	1	7.38%	122.67	6%	1.53	6.0%	125.57	16.86	1.06	0.00	9.823	0.083	-						
Crawlspace Insulation	1	0	1	0	0	0	0	1	100%	0%	0%	3	100%	3	10	0	-	22	0	N/A	0	0	N/A	23	-	-	0.5	-	0	N/A	0.3	0.5	(0)	7.38%	70.64	6%	0.88	6.0%	72.30	10.78	0.61	0.00	9.823	0.083	-						
Minor Home Repair	0	0	0	0	0	0	0	0	100%	0%	0%	0	100%	0	10	0	-	132	0	N/A	0	0	N/A	3	-	-	0.1	-	0	N/A	0.1	0.1	(0)	7.38%	70.64	6%	0.88	6.0%	72.30	10.78	0.61	0.00	9.823	0.083	-						
Advance Stream enabling costs																																																	
Carbon Monoxide Detector	2	0	2	0	0	0	0	2							10																																			
Ventilation Fan	11	0	11	0	0	0	0	11							25																																			
Portfolio level admin costs																																																	
Admin Costs Advanced Stream	0	62	62	0	0	0	0	62																																									
Advanced ECAP Measures	111	62	173	0	0	0	0	173	100%	0%	0%	794	97%	787	14	26	-	22	99	45	87	12	24	7,935	286		0.6	-	123	N/A	0.4	0.8	(30)																		
Total basic and advanced ECAP measures	270	153	424	0	0	0	0	424	100%	0%	0%	1,414		1,387		46	0	32	170	78	143	20	41	13,089	501	0	0.4	-	204	N/A	0.3	0.6	(176)																		

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI
1	UTILITY		FORTIS BC																																
2																																			
3																																			
4			Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041
5			Units																																
6		NATURAL GAS																																	
7		Incremental Cost of Gas (nominal)	$ Per GJ	$5.50	$6.17	$6.81	$7.35	$7.87	$8.26	$8.56	$8.78	$8.99	$9.19	$9.40	$9.60	$9.81	$10.03	$10.25	$10.47	$10.70	$10.93	$11.17	$11.42	$11.67	$11.92	$12.19	$12.45	$12.73	$13.01	$13.29	$13.58	$13.88	$14.19	$14.50	$14.82
8	1		Year	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
9		carbon tax	$ per GJ	0.75	1.00	1.25	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
10		Distribution adder	$ per GJ	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	
11		Total incremental cost of gas including carbon		6.41	7.32	8.21	9.01	9.52	9.92	10.22	10.43	10.64	10.85	11.05	11.26	11.47	11.68	11.90	12.13	12.35	12.59	12.83	13.07	13.32	13.58	13.84	14.11	14.38	14.66	14.95	15.24	15.54	15.84	16.15	16.31
12	2	GDP Deflator		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
13	3	Incremental Cost of Gas (Real)		$6.41	$7.32	$8.21	$9.01	$9.52	$9.92	$10.22	$10.43	$10.64	$10.85	$11.05	$11.26	$11.47	$11.68	$11.90	$12.13	$12.35	$12.59	$12.83	$13.07	$13.32	$13.58	$13.84	$14.11	$14.38	$14.66	$14.95	$15.24	$15.54	$15.84	$16.15	$16.31
14	4	Net Present Value -2010			$12.32	$18.95	$25.73	$32.40	$38.87	$45.08	$50.98	$56.59	$61.91	$66.96	$71.75	$76.30	$80.61	$84.70	$88.58	$92.26	$95.75	$99.07	$102.22	$105.21	$108.04	$110.73	$113.29	$115.71	$118.02	$120.20	$122.28	$124.25	$126.12	$127.90	$129.57
15	5	Net Present Value -2011				$13.94	$21.22	$28.38	$35.33	$42.00	$48.33	$54.36	$60.07	$65.50	$70.64	$75.52	$80.15	$84.54	$88.71	$92.66	$96.41	$99.98	$103.36	$106.56	$109.61	$112.50	$115.24	$117.85	$120.32	$122.67	$124.89	$127.01	$129.02	$130.93	$132.72
16	6	Net Present Value -2012					$15.46	$23.15	$30.61	$37.77	$44.58	$51.04	$57.18	$63.00	$68.53	$73.77	$78.74	$83.46	$87.93	$92.18	$96.21	$100.03	$103.66	$107.10	$110.37	$113.48	$116.42	$119.22	$121.87	$124.39	$126.79	$129.06	$131.22	$133.27	$135.19
17																																			
18																																			
19		ELECTRICITY																																	
20		Incremental Cost of Elec	$ Per kWh	$0.12																															
21		Incremental Cost of E Capacity	$ Per kW/a	$170.00																															
22																																			
23																																			
24																																			
25	RETAIL																																		
26				Rate	Customers		789,928	Total Customers in BC		80,000	Total Residential and Commercial Customers on VI																								
27		Residential Retail			000's																														
28		TGI	$ Per MJ	$0.0098	640		712,304	Total Residential Customers in BC																											
29		TGVI	$ Per MJ	$0.0143	72																														
30		Electricity	$ Per MJ	$0.0230																															
31		Electricity	$ per kWh	$0.0827	1,511		1,511,435	Total BCH Residential Customers in BC				89%																							
32		Electricity	$ per kW per year																																
33		Commercial Retail																																	
34		TGI	$ Per MJ	$0.0092	78		77,624	Total Commercial Customers in BC																											
35		TGVI	$ Per MJ	$0.0169	8																														
36		Electricity	$ Per MJ	$0.0214																															
37		Electricity	$ per kWh	$0.0769	190		189,764	Total Light Industrial and Commercial Customers in BC																											
38		Electricity	$ per kW per year	$52.0000	15																														
39																																			
40	TAX																																		
41			Year	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
42	1		Year		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
43	2	Carbon	$ Per tonne		$20.00	$25.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00
44	3	Carbon	$ Per GJ		$0.9976	$1.2470	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964
45	4	GDP Deflator			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
46	5	Carbon (Real)			$1.00	$1.25	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50
47	6	Net Present Value -2010				$2.01	$3.22	$4.34	$5.39	$6.37	$7.28	$8.12	$8.91	$9.65	$10.33	$10.97	$11.56	$12.11	$12.63	$13.11	$13.55	$13.97	$14.35	$14.71	$15.05	$15.36	$15.65	$15.92	$16.18	$16.41	$16.63	$16.83	$17.02	$17.20	$17.37
48	7	Net Present Value -2011					$2.46	$3.67	$4.79	$5.84	$6.82	$7.73	$8.57	$9.36	$10.10	$10.78	$11.42	$12.01	$12.56	$13.08	$13.55	$14.00	$14.42	$14.80	$15.16	$15.50	$15.81	$16.10	$16.37	$16.63	$16.86	$17.08	$17.28	$17.47	$17.65
49	8	Net Present Value -2012						$2.69	$3.90	$5.03	$6.07	$7.05	$7.96	$8.81	$9.59	$10.33	$11.01	$11.65	$12.24	$12.79	$13.31	$13.79	$14.23	$14.65	$15.04	$15.40	$15.73	$16.04	$16.33	$16.61	$16.86	$17.09	$17.31	$17.51	$17.70
50																																			
51		Discount Rate (real)[1]																																	
52		TERASEN GAS																																	
53		Rate of Inflation	1.90%																																
54		TGI	7.38%																																
55		TGVI	6.89%																																
56		BC HYDRO																																	
57		Rate of Inflation	2.00%																																
58		BC Hydro	6.00%																																
59		Customer	6.00%																																
60		Footnote 1: Source LR 070531																																	
61																																			
62				SHEET LABELS																															
63	New Construction																																		
64		#REF!		BASEBOARD																															
65		#REF!		HEATPUMP																															

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Measure Data for Faucet Aerator (1.5 G.P.M. max)

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 4.13			
Total Incentive	$ 4.13		$ 4	$ -
Participant	$ -			

Annual Impact Per Measure

Energy Savings per installation	0.74	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	10%	0.90		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	10	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	149	160		160		Estimated Participation
Impact						
Gross Energy Savings (GJ)	103	119	0	119	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	93	107	0	107	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$66.96	$70.64	$73.77	
Energy Purchases	$ 7,546	$ 7,546	$ -	$ 7,546	$ -	
Utility Program Costs						
DSM Incentives		$ 662	$ -	$ 662	$ -	
Administration		$ -	$ -	$ -		
Subtotal	$ 575	$ 662	$ -	$ 662	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$0.883 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 6,972		$ -	$ 6,884	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 0.9**		**$ -**	**$ 0.9**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Low Flow Show head (1.5 G.P.M. max)

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$	11		
Total Incentive	$	11	$ 11	$ -
Participant	$	-		

Annual Impact Per Measure

Energy Savings per installation	2.5	GJ	Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	5%	0.95	Net-to-Gross
Alternate Energy Impact	0	GJ 0	kWh
Alternate Capacity Impact		kW/a	
Measure Lifetime	10	Years	Estimated lifespan of measure

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	19	20		20		Estimated Participation
Impact						
Gross Energy Savings (GJ)	43	50	0	50	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	41	48	0	48	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$66.96	$70.64	$73.77	
Energy Purchases	$ 3,362	$ 3,362	$ -	$ 3,362	$ -	
Utility Program Costs						
DSM Incentives		$ 224	$ -	$ 224	$ -	
Administration		$ -	$ -	$ -		
Subtotal	$ 195	$ 224	$ -	$ 224	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$0.883 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 3,167		$ -	$ 3,137	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 0.7**		**$ -**	**$ 0.7**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Low Flow Showerhead Handheld (1.5 GPM max)

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 40			
Total Incentive	$ 40		$ 40	$ -
Participant	$ -			

Annual Impact Per Measure

Energy Savings per installation	2.5	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	5%	0.95		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	10	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	19	21	0	21		Estimated Participation
Impact						
Gross Energy Savings (GJ)	46	54	0	54	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	44	51	0	51	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$66.96	$70.64	$73.77	
Energy Purchases	$ 3,590	$ 3,590	$ -	$ 3,590	$ -	
Utility Program Costs						
DSM Incentives		$ 849	$ -	$ 849	$ -	
Administration		$ -	$ -	$ -		
Subtotal	$ 736	$ 849	$ -	$ 849	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$0.883 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 2,854		$ -	$ 2,742	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 2.4**		**$ -**	**$ 2.4**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Water Heater Blanket (standard size)

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 29			
Total Incentive	$ 29		$ 29	$ -
Participant	$ -			

Annual Impact Per Measure

Energy Savings per installation	1.7	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	5%	0.95		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	10	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	2	2	0	2	0	Estimated Participation
Impact						
Gross Energy Savings (GJ)	3	3	0	3	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	3	3	0	3	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$66.96	$70.64	$73.77	
Energy Purchases	$ 233	$ 233	$ -	$ 233	$ -	
Utility Program Costs						
DSM Incentives		$ 61	$ -	$ 61	$ -	
Administration		$ -	$ -	$ -		
Subtotal	$ 53	$ 61	$ -	$ 61	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$0.883 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 179		$ -	$ 171	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 2.7**		**$ -**	**$ 2.7**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Water Heater Pipe Wrap (8-12 ft)2

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$	4		
Total Incentive	$	4	$ 4	$ -
Participant	$	-		

Annual Impact Per Measure

Energy Savings per installation	1.2	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	5%	0.95		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	8	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	29	34	0	34		Estimated Participation
Impact						
Gross Energy Savings (GJ)	35	40	0	40	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	33	38	0	38	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$56.59	$60.07	$63.00	
Energy Purchases	$ 2,302	$ 2,302	$ -	$ 2,302	$ -	
Utility Program Costs						
DSM Incentives		$ 147	$ -	$ 147	$ -	
Administration		$ -	$ -	$ -		
Subtotal	$ 128	$ 147	$ -	$ 147	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$0.745 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 2,175		$ -	$ 2,155	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 0.7**		**$ -**	**$ 0.7**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Outlet Gaskets (package for 4)

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$	7		
Total Incentive	$	7	$ 7	$ -
Participant	$	-		

Annual Impact Per Measure

Energy Savings per installation	0.1	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	5%	0.95		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	15	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	66	77	0	77		Estimated Participation
Impact				15.32		
Gross Energy Savings (GJ)	5	5	0	5	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	4	5	0	5	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$88.58	$92.66	$96.21	
Energy Purchases	$ 472	$ 472	$ -	$ 472	$ -	
Utility Program Costs						
DSM Incentives		$ 525	$ -	$ 525	$ -	
Administration		$ -	$ -	$ -		
Subtotal	$ 455	$ 525	$ -	$ 525	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.165 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 17		$ -	$ (53)	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 11.6**		**$ -**	**$ 11.6**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Window Film (package to cover 2 standard windows)

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$	10		
Total Incentive	$	10	$ 10	$ -
Participant	$	-		

Annual Impact Per Measure

Energy Savings per installation	0.2	GJ	Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	5%	0.95	Net-to-Gross
Alternate Energy Impact	0	GJ	0 kWh
Alternate Capacity Impact		kW/a	
Measure Lifetime	1	Years	Estimated lifespan of measure

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	45	52	0	52		Estimated Participation
Impact						
Gross Energy Savings (GJ)	7	8	0	8	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	7	8	0	8	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$12.32	$13.94	$15.46	
Energy Purchases	$ 110	$ 110	$ -	$ 110	$ -	
Utility Program Costs						
DSM Incentives		$ 502	$ -	$ 502	$ -	
Administration		$ -	$ -	$ -		
Subtotal	$ 436	$ 502	$ -	$ 502	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$0.113 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ (326)		$ -	$ (393)	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 68.5**		**$ -**	**$ 68.5**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Basic Home Comfort Draft proofing (prescriptive, set time)

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$	54		
Total Incentive	$	54	$ 54	$ -
Participant	$	-		

Annual Impact Per Measure

Energy Savings per installation	0.7	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	25	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	90	104	0	104		Estimated Participation
Impact						
Gross Energy Savings (GJ)	65	75	0	75	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	65	75	0	75	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$118.02	$122.67	$126.79	
Energy Purchases	$ 9,159	$ 9,159	$ -	$ 9,159	$ -	
Utility Program Costs						
DSM Incentives		$ 5,608	$ -	$ 5,608	$ -	
Administration		$ -	$ -	$ -		
Subtotal	$ 4,864	$ 5,608	$ -	$ 5,608	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.534 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 4,295		$ -	$ 3,551	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 6.7**		**$ -**	**$ 6.7**	**$ -**	Informational (for comparison with supply options)

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Measure Data for High Efficiency Furnace

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 6,000			
Total Incentive	$ 6,000		$ 6,000	$ -
Participant	$ -			

Annual Impact Per Measure

Energy Savings per installation	11.1	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	3	GJ	833 kWh	
Alternate Capacity Impact		kW/a		
Measure Lifetime	18	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	21	24	0	24		Estimated Participation
Impact						
Gross Energy Savings (GJ)	230	265	0	265	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	230	265	0	265	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	17,652	19,833	0	19,833	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$99.07	$103.36	$107.10	
Energy Purchases	$ 27,403	$ 27,403	$ -	$ 27,403	$ -	
Utility Program Costs						
DSM Incentives		$ 142,800	$ -	$ 142,800	$ -	
Administration		$ -	$ -	$ -		
Subtotal	$ 123,846	$ 142,800	$ -	$ 142,800	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ 25,770	$ -	$ 25,770	$ -	$1.299 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ 25,770	$ 25,770	$ -	$ 25,770	$ -	
Total Resource Net Benefit (Cost)	$ (70,673)		$ -	$ (89,628)	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 55.0**		**$ -**	**$ 55.0**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Minor Home Repair

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 100			
Total Incentive	$ 100		$ 100	$ -
Participant	$ -			

Annual Impact Per Measure

Energy Savings per installation	0.1	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	10	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	10	12	0	12		Estimated Participation
Impact						
Gross Energy Savings (GJ)	1	1	0	1	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	1	1	0	1	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$66.96	$70.64	$73.77	
Energy Purchases	$ 89	$ 89	$ -	$ 89	$ -	
Utility Program Costs						
DSM Incentives		$ 1,150	$ -	$ 1,150	$ -	
Administration		$ -	$ -	$ -		
Subtotal	$ 997	$ 1,150	$ -	$ 1,150	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$0.883 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ (908)		$ -	$ (1,061)	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 131.7**		**$ -**	**$ 131.7**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Carbon Monoxide Detector

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$	62		
Total Incentive	$	62	$ 62	$ -
Participant	$	-		

Annual Impact Per Measure

Energy Savings per installation	0.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	10	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	100	115	0	115		Estimated Participation
Impact						
Gross Energy Savings (GJ)	0	0	0	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	0	0	0	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$66.96	$70.64	$73.77	
Energy Purchases	$ -	$ -	$ -	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 7,112	$ -	$ 7,112	$ -	
Administration		$ -	$ -	$ -		
Subtotal	$ 6,168	$ 7,112	$ -	$ 7,112	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$0.883 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ (6,168)		$ -	$ (7,112)	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ -**		**$ -**	**$ -**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Admin Costs Basic Stream

PER MEASURE		Utility Incentive to the participant	partner incentive
Incremental Cost	$ -		
Total Incentive	$ -	$ -	$ -
Participant	$ -		

Annual Impact Per Measure

Energy Savings per installation	0.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	0	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	0	0	0			Estimated Participation
Impact						
Gross Energy Savings (GJ)	0	0	0	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	0	0	0	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$0.00	$0.00	$0.00	
Energy Purchases	$ -	$ -	$ -	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ 90,687	$ -	$ 90,687		
Subtotal	$ 78,650	$ 90,687	$ -	$ 90,687	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$0.000 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ (78,650)		$ -	$ (90,687)	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ -**		**$ -**	**$ -**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Faucet Aerators (1.5 G.P.M. max)

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$	4		
Total Incentive	$	4	$ 4	$ -
Participant	$	-		

Annual Impact Per Measure

Energy Savings per installation	0.7	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	10%	0.90		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	10	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	46	54	0	54		Estimated Participation
Impact						
Gross Energy Savings (GJ)	34	40	0	40	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	31	36	0	36	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$66.96	$70.64	$73.77	
Energy Purchases	$ 2,517	$ 2,517	$ -	$ 2,517	$ -	
Utility Program Costs						
DSM Incentives		$ 221	$ -	$ 221	$ -	
Administration		$ -	$ -	$ -		
Subtotal	$ 192	$ 221	$ -	$ 221	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$0.883 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 2,325		$ -	$ 2,296	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 0.9**		**$ -**	**$ 0.9**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Low Flow Fixed Show head (1.5 GPM)

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$	11		
Total Incentive	$	11	$ 11	$ -
Participant	$	-		

Annual Impact Per Measure

Energy Savings per installation	2.5	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	5%	0.95		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	10	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	6	7	0	7		Estimated Participation
Impact						
Gross Energy Savings (GJ)	14	17	0	17	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	14	16	0	16	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$66.96	$70.64	$73.77	
Energy Purchases	$ 1,115	$ 1,115	$ -	$ 1,115	$ -	
Utility Program Costs						
DSM Incentives		$ 74	$ -	$ 74	$ -	
Administration		$ -	$ -	$ -		
Subtotal	$ 65	$ 74	$ -	$ 74	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$0.883 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 1,050		$ -	$ 1,041	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 0.7**		**$ -**	**$ 0.7**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Low Flow Handheld Show head (1.5 GPM)

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 40			
Total Incentive	$ 40		$ 40	$ -
Participant	$ -			

Annual Impact Per Measure

Energy Savings per installation	2.5	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	5%	0.95		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	10	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	6	7	0	7		Estimated Participation
Impact						
Gross Energy Savings (GJ)	15	18	0	18	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	15	17	0	17	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$66.96	$70.64	$73.77	
Energy Purchases	$ 1,191	$ 1,191	$ -	$ 1,191	$ -	
Utility Program Costs						
DSM Incentives		$ 282	$ -	$ 282	$ -	
Administration		$ -	$ -	$ -		
Subtotal	$ 244	$ 282	$ -	$ 282	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$0.883 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 947		$ -	$ 910	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 2.4**		**$ -**	**$ 2.4**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Water Heater Blanket (standard size)

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 29			
Total Incentive	$ 29		$ 29	$ -
Participant	$ -			

Annual Impact Per Measure

Energy Savings per installation	1.7	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	5%	0.95		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	10	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	0	1		Estimated Participation
Impact						
Gross Energy Savings (GJ)	1	1	0	1	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	1	1	0	1	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$66.96	$70.64	$73.77	
Energy Purchases	$ 78	$ 78	$ -	$ 78	$ -	
Utility Program Costs						
DSM Incentives		$ 20	$ -	$ 20	$ -	
Administration		$ -	$ -	$ -		
Subtotal	$ 18	$ 20	$ -	$ 20	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$0.883 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 60		$ -	$ 57	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 2.7**		**$ -**	**$ 2.7**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Water Heater Pipe Wrap

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$	4		
Total Incentive	$	4	$ 4	$ -
Participant	$	-		

Annual Impact Per Measure

Energy Savings per installation	1.2	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	5%	0.95		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	8	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	10	11	0	11		Estimated Participation
Impact						
Gross Energy Savings (GJ)	12	13	0	13	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	11	13	0	13	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$56.59	$60.07	$63.00	
Energy Purchases	$ 767	$ 767	$ -	$ 767	$ -	
Utility Program Costs						
DSM Incentives		$ 49	$ -	$ 49	$ -	
Administration		$ -	$ -	$ -		
Subtotal	$ 43	$ 49	$ -	$ 49	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$0.745 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 725		$ -	$ 718	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 0.7**		**$ -**	**$ 0.7**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Outlet Gaskets (package for 4)

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 7			
Total Incentive	$ 7		$ 7	$ -
Participant	$ -			

Annual Impact Per Measure

Energy Savings per installation	0.1	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	5%	0.95		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	15	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	22	26	0	26		Estimated Participation
Impact						
Gross Energy Savings (GJ)	2	2	0	2	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	1	2	0	2	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$88.58	$92.66	$96.21	
Energy Purchases	$ 157	$ 157	$ -	$ 157	$ -	
Utility Program Costs						
DSM Incentives		$ 175	$ -	$ 175	$ -	
Administration		$ -	$ -	$ -		
Subtotal	$ 151	$ 175	$ -	$ 175	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.165 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 6		$ -	$ (18)	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 11.6**		**$ -**	**$ 11.6**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Window Film (package to cover 2 standard windows)

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 10			
Total Incentive	$ 10		$ 10	$ -
Participant	$ -			

Annual Impact Per Measure

Energy Savings per installation	0.2	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	5%	0.95		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	1	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	15	17	0	17		Estimated Participation
Impact						
Gross Energy Savings (GJ)	2	3	0	3	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	2	3	0	3	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$12.32	$13.94	$15.46	
Energy Purchases	$ 37	$ 37	$ -	$ 37	$ -	
Utility Program Costs						
DSM Incentives		$ 168	$ -	$ 168	$ -	
Administration		$ -	$ -	$ -		
Subtotal	$ 146	$ 168	$ -	$ 168	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$0.113 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ (109)		$ -	$ (131)	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 68.5**		**$ -**	**$ 68.5**	**$ -**	Informational (for comparison with supply options)

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Measure Data for High Efficiency Furnace

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 6,000			
Total Incentive	$ 6,000		$ 6,000	$ -
Participant	$ -			

Annual Impact Per Measure

Energy Savings per installation	11.1	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	3	GJ	833 kWh	
Alternate Capacity Impact		kW/a		
Measure Lifetime	18	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	7	8	0	8		Estimated Participation
Impact						
Gross Energy Savings (GJ)	76	88	0	88	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	76	88	0	88	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	5,859	6,583	0	6,583	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$99.07	$103.36	$107.10	
Energy Purchases	$ 9,096	$ 9,096	$ -	$ 9,096	$ -	
Utility Program Costs						
DSM Incentives		$ 47,400	$ -	$ 47,400	$ -	
Administration		$ -	$ -	$ -		
Subtotal	$ 41,108	$ 47,400	$ -	$ 47,400	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ 8,554	$ -	$ 8,554	$ -	$1.299 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ 8,554	$ 8,554	$ -	$ 8,554	$ -	
Total Resource Net Benefit (Cost)	$ (23,459)		$ -	$ (29,750)	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 55.0**		**$ -**	**$ 55.0**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Advanced Draft proofing

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 296			
Total Incentive	$ 296		$ 296	$ -
Participant	$ -			

Annual Impact Per Measure

Energy Savings per installation	1.8	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	10	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	33	38	0	38		Estimated Participation
Impact						
Gross Energy Savings (GJ)	60	69	0	69	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	60	69	0	69	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$66.96	$70.64	$73.77	
Energy Purchases	$ 4,883	$ 4,883	$ -	$ 4,883	$ -	
Utility Program Costs						
DSM Incentives		$ 11,347	$ -	$ 11,347	$ -	
Administration		$ -	$ -	$ -		
Subtotal	$ 9,841	$ 11,347	$ -	$ 11,347	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$0.883 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ (4,958)		$ -	$ (6,465)	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 23.8**		**$ -**	**$ 23.8**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Ceiling Insulation

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 1,180			
Total Incentive	$ 1,180		$ 1,180	$ -
Participant	$ -			

Annual Impact Per Measure

Energy Savings per installation	11.5	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	25	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	20	23	0	23		Estimated Participation
Impact						
Gross Energy Savings (GJ)	229	264	0	264	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	229	264	0	264	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$118.02	$122.67	$126.79	
Energy Purchases	$ 32,389	$ 32,389	$ -	$ 32,389	$ -	
Utility Program Costs						
DSM Incentives		$ 27,140	$ -	$ 27,140	$ -	
Administration		$ -	$ -	$ -		
Subtotal	$ 23,538	$ 27,140	$ -	$ 27,140	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.534 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 8,851		$ -	$ 5,249	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 9.1**		**$ -**	**$ 9.1**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Wall Insulation

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 3,041			
Total Incentive	$ 3,041		$ 3,041	$ -
Participant	$ -			

Annual Impact Per Measure

Energy Savings per installation	26.2	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	25	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	3	3	0	3		Estimated Participation
Impact						
Gross Energy Savings (GJ)	70	81	0	81	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	70	81	0	81	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$118.02	$122.67	$126.79	
Energy Purchases	$ 9,944	$ 9,944	$ -	$ 9,944	$ -	
Utility Program Costs						
DSM Incentives		$ 9,427	$ -	$ 9,427	$ -	
Administration		$ -	$ -	$ -		
Subtotal	$ 8,176	$ 9,427	$ -	$ 9,427	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.534 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 1,768		$ -	$ 517	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 10.3**		**$ -**	**$ 10.3**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Crawlspace Insulation

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 627			
Total Incentive	$ 627		$ 627	$ -
Participant	$ -			

Annual Impact Per Measure

Energy Savings per installation	4.2	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	25	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1	0	1		Estimated Participation
Impact						
Gross Energy Savings (GJ)	3	3	0	3	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	3	3	0	3	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$118.02	$122.67	$126.79	
Energy Purchases	$ 412	$ 412	$ -	$ 412	$ -	
Utility Program Costs						
DSM Incentives		$ 502	$ -	$ 502	$ -	
Administration		$ -	$ -	$ -		
Subtotal	$ 435	$ 502	$ -	$ 502	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.534 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ (23)		$ -	$ (89)	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 13.3**		**$ -**	**$ 13.3**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Ventilation Fan

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$	585		
Total Incentive	$	585	$ 585	$ -
Participant	$	-		

Annual Impact Per Measure

Energy Savings per installation	0.0	GJ	Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00	Net-to-Gross
Alternate Energy Impact		GJ	0 kWh
Alternate Capacity Impact		kW/a	
Measure Lifetime	25	Years	Estimated lifespan of measure

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	17	19	0	19		Estimated Participation
Impact						
Gross Energy Savings (GJ)	0	0	0	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	0	0	0	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$118.02	$122.67	$126.79	
Energy Purchases	$ -	$ -	$ -	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 11,232	$ -	$ 11,232	$ -	
Administration		$ -	$ -	$ -		
Subtotal	$ 9,741	$ 11,232	$ -	$ 11,232	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.534 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ (9,741)		$ -	$ (11,232)	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	$ -		$ -	$ -	$ -	Informational (for comparison with supply options)

FORTIS BC
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Measure Data for Minor Home Repair

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 100			
Total Incentive	$ 100		$ 100	$ -
Participant	$ -			

Annual Impact Per Measure

Energy Savings per installation	0.1	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	10	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	3	4	0	4		Estimated Participation
Impact						
Gross Energy Savings (GJ)	0	0	0	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	0	0	0	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$66.96	$70.64	$73.77	
Energy Purchases	$ 30	$ 30	$ -	$ 30	$ -	
Utility Program Costs						
DSM Incentives		$ 380	$ -	$ 380	$ -	
Administration		$ -	$ -	$ -		
Subtotal	$ 330	$ 380	$ -	$ 380	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$0.883 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ (300)		$ -	$ (350)	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 131.7**		**$ -**	**$ 131.7**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Carbon Monoxide Detector

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 62			
Total Incentive	$ 62		$ 62	$ -
Participant	$ -			

Annual Impact Per Measure

Energy Savings per installation	0.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	10	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	33	38	0	38		Estimated Participation
Impact						
Gross Energy Savings (GJ)	0	0	0	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	0	0	0	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$66.96	$70.64	$73.77	
Energy Purchases	$ -	$ -	$ -	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ 2,371	$ -	$ 2,371	$ -	
Administration		$ -	$ -	$ -		
Subtotal	$ 2,056	$ 2,371	$ -	$ 2,371	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$0.883 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ (2,056)		$ -	$ (2,371)	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ -**		**$ -**	**$ -**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Admin Costs Advanced Stream

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ -			
Total Incentive	$ -		$ -	$ -
Participant	$ -			

Annual Impact Per Measure

Energy Savings per installation	0.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact	0	GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	0	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	0	0	0	0		Estimated Participation
Impact						
Gross Energy Savings (GJ)	0	0	0	0	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	0	0	0	0	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$0.00	$0.00	$0.00	
Energy Purchases	$ -	$ -	$ -	$ -	$ -	
Utility Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ 62,458	$ -	$ 62,458		
Subtotal	$ 54,168	$ 62,458	$ -	$ 62,458	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$0.000 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ (54,168)		$ -	$ (62,458)	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ -**		**$ -**	**$ -**	**$ -**	Informational (for comparison with supply options)

FORTIS BC

2011 Innovative Technologies Planned	PROGRAM															ALTERNATE		NET PRESENT VALUE									BENEFIT/COST							PARAMETERS														
	COSTS ($000)											SAVINGS (GJ)			LIFE	Impact		Levelized Cost	Utility Benefits (Costs)		Participant Benefits (Costs)			Program Net Savings				Participant							UTILITY				PARTICIPANT									
FEI	Utility			Partners											Years	Energy	Capacity	($/GJ)	Program	Alternate	Program	Carbon Tax	Alternate	Natural Gas	Alternate Energy	Alternate Capacity	Natural Gas	Total Costs	Total Benefits	Benefit/Cost	Natural Gas	Societal Cost Test	SCT Net Benefits	Natural Gas Utility Discount Rate	Natural Gas Supply	Alternate Discount Rate	Alternate Supply	Discount Rate	Natural Gas NPV	Carbon Tax NPV	Alternate Energy NPV	Alternate Capacity NPV	Natural Gas Tariff	Energy Tariff	Capacity Tariff
	Incentives	Administration	Total	Incentives	Administration	Total	Participant	Total	% Utility	% Partner	% Participant	Gross	Net-to-Gross	Net		MWh	kW		($'000s)	($'000s)	($'000s)	($'000s)	($'000s)	(GJ)	(MWh)	(kW)	Utility	($'000s)	($'000s)		Rate Impact		($'000s)		$/GJ		$/kWh		$/GJ	$/GJ	$/kWh	$/kW/a	$/GJ	$/kWh	$/kW/a
Label	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR	AS	AT
Source Sheet or Calculation	Program	Program	B+C	Program	Program	E+F	Program	D+G+H	D/I	G/I	H/I	Program	Program	MxN	Program	Program	Program	D/Y	OxAJ	Q x N x AL	M x N x AN	M x N x AO	N x (QxAP + RxAQ)	PV(AU,P,-O)	PV(AK,P,-Q*N)	PV(AK,P,-R)	T/D	H=0, (V+W)=0	H=0, (V+W)>0, X	AD/AC	T/(V+D)	(T+U)/I	(T+U)-I	Input	Program	Input	Input	Input	PV(AM,P,-InputD33)	Input	PV(AM,P,-InputD28)	PV(AM,P,-InputD29)	Input	Input	Input
2011																																																
Commercial																																																
Solar Air Heating PSECA Program	73	1	74	0	0	0	422	496	15%	0%	85%	1,458	100%	1,458	30	0	-	3	573	N/A	267	42	N/A	28,568	0	-	7.7	422	309	0.7	1.7	1.2	77	3.00%	302.63	3%	2.35	3.0%	183.48	28.61	1.09	0.00	11.000	0.083	-
NGV Vehicles (COV)	702	1	703	0	0	0	0	703	100%	0%	0%	(13,716)	100%	(13,716)	8	303	-	FS	(2,144)	2,491	(901)	(150)	119	(96,282)	2,129	-	FS	1,051	119	0.1	0.3	0.9	(355)	3.00%	120.22	3%	6.32	3.0%	65.71	10.93	0.39	0.00	11.000	0.083	-
Solar for School (Solar BC)	22	1	23	120	0	120	13	155	15%	77%	8%	265	100%	265	25	0	-	5	92	N/A	43	7	N/A	4,608	0	-	4.0	13	50	3.8	1.4	0.6	(63)	3.00%	268.86	3%	2.09	3.0%	163.00	25.34	0.97	0.00	11.000	0.083	-
NGV Vehicles (Abbots)	2,275	1	2,276	0	0	0	0	2,276	100%	0%	0%	(193,275)	100%	(193,275)	8	5,000	-	FS	(30,206)	41,065	(12,700)	(2,113)	1,958	(1,356,731)	35,098	-	FS	14,813	1,958	0.1	0.4	1.3	8,584	3.00%	120.22	3%	6.32	3.0%	65.71	10.93	0.39	0.00	11.000	0.083	-
Solar Residential Hot Water Pilot Program	50	26	76	40	0	40	165	281	27%	14%	59%	420	100%	420	25	0	2	10	80	N/A	68	11	N/A	7,314	0	35	1.1	165	79	0.5	0.6	0.3	(201)	3.00%	146.21	3%	2.09	3.0%	163.00	25.34	0.97	0.00	11.000	0.083	-
NGV Vehicles (Waste Management Inc.)	804	1	804	0	0	0	0	804	100%	0%	0%	(21,140)	100%	(21,140)	10	468	-	FS	(3,926)	4,671	(1,688)	(277)	3,593	(180,328)	3,992	-	FS	1,966	3,593	1.8	0.4	1.0	(59)	3.00%	142.86	3%	7.68	3.0%	79.85	13.13	7.68	0.00	11.000	0.083	-
Total Commercial	3,926	29	3,955	160	0	160	600	4,715	84%	0	13%	(225,989)		(225,989)		5,771	2	FS	(35,529)	48,227	(14,911)	(2,481)	5,670	(1,592,853)	41,219	35	FS	17,992	5,670	0.3	0.4	1.2	7,983	0.9	(2,676)												

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI
1	**UTILITY**		**FORTIS BC**																																
2																																			
3																																			
4			**Year**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	
5			Units																																
6		**NATURAL GAS**																																	
7		Incremental Cost of Gas (nominal)	$ Per GJ	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.43
8	1		*Year*	*0*	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*	*16*	*17*	*18*	*19*	*20*	*21*	*22*	*24*	*25*	*26*	*27*	*28*	*29*	*30*	*31*	
9		carbon tax	$ per GJ	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	
10		TGI Dist adder		*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	
11		Total incremental cost of gas including carbon		*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	
12	2	GDP Deflator		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
13	3	Incremental Cost of Gas (Real)		$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	
14	4	Net Present Value -2010			$29.54	$43.67	$57.39	$70.71	$83.64	$96.20	$108.38	$120.22	$131.71	$142.86	$153.69	$164.20	$174.41	$184.32	$193.94	$203.28	$212.35	$221.16	$229.71	$238.01	$246.07	$253.89	$261.48	$268.86	$276.02	$282.97	$289.72	$296.27	$302.63	$308.81		
15	5	Net Present Value -2011				$29.54	$43.67	$57.39	$70.71	$83.64	$96.20	$108.38	$120.22	$131.71	$142.86	$153.69	$164.20	$174.41	$184.32	$193.94	$203.28	$212.35	$221.16	$229.71	$238.01	$246.07	$253.89	$261.48	$268.86	$276.02	$282.97	$289.72	$296.27	$302.63			
16	6	Net Present Value -2012					$29.54	$43.67	$57.39	$70.71	$83.64	$96.20	$108.38	$120.22	$131.71	$142.86	$153.69	$164.20	$174.41	$184.32	$193.94	$203.28	$212.35	$221.16	$229.71	$238.01	$246.07	$253.89	$261.48	$268.86	$276.02	$282.97	$289.72	$296.27				
17																																			
18																																			
19		**ELECTRICITY**																																	
20		Incremental Cost of Elec	$ Per kWh	$0.12																															
21		Incremental Cost of E Capacity	$ Per kW	$170.88																															
22		COST OF Diesel	$per L	$0.98																															
23																																			
24																																			
25	**RETAIL**																																		
26				Rate	Customers		789,928	Total Customers in BC		80,000	Total Residential and Commercial Customers on V1																										
27		Residential Retail		000's																															
28		**TGI**	$ Per MJ	$0.0110	640		712,304	Total Residential Customers in BC																											
29		**TGVI**	$ Per MJ	$0.0143	72																														
30		**Diesel**	$ Per L	$0.9800																															
31		**Electricity**	$ per kWh	$0.0827	1,511		1,511,435	Total BCH Residential Customers in BC				89%																									
32		**Electricity**	$ per kW per year																																
33		Commercial Retail																																	
34		**TGI**	$ Per MJ	$0.0094	78		77,624	Total Commercial Customers in BC																											
35		**TGVI**	$ Per MJ	$0.0159	8																														
36		**Electricity**	$ Per MJ	$0.0155																															
37		**Electricity**	$ per kWh	$0.0558	190		189,764	Total Light Industrial and Commercial Customers in BC																											
38		**Electricity**	$ per kW per year	$52	15																														
39																																			
40	**TAX**																																		
41			**Year**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**		
42	1		*Year*	*0*	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*	*16*	*17*	*18*	*19*	*20*	*21*	*23*	*24*	*25*	*26*	*27*	*28*	*29*	*30*		
43	2	Carbon	$ Per tonne		$20.00	$25.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00		
44	3	Carbon	$ Per GJ		$0.597%	$1.247%	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964		
45	4	GDP Deflator			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
46	5	Carbon (Real)			$1.00	$1.25	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50		
47	6	Net Present Value -2010				$2.34	$3.51	$4.84	$6.13	$7.39	$8.69	$9.78	$10.93	$12.05	$13.13	$14.18	$15.19	$16.18	$17.14	$18.08	$18.98	$19.86	$20.71	$21.54	$22.35	$23.13	$23.89	$24.62	$25.34	$26.03	$26.71	$27.36	$27.99	$28.61			
48	7	Net Present Value -2011					$2.62	$3.99	$5.32	$6.61	$7.86	$9.08	$10.26	$11.41	$12.52	$13.60	$14.65	$15.67	$16.66	$17.62	$18.55	$19.46	$20.34	$21.19	$22.02	$22.82	$23.61	$24.36	$25.10	$25.81	$26.51	$27.18	$27.84	$28.47			
49	8	Net Present Value -2012						$2.86	$4.23	$5.56	$6.85	$8.11	$9.32	$10.50	$11.65	$12.76	$13.85	$14.90	$15.91	$16.90	$17.86	$18.80	$19.70	$20.58	$21.43	$22.26	$23.07	$23.85	$24.61	$25.34	$26.06	$26.75	$27.42	$28.08		
50																																			
51		**Discount Rate (real)[1]**																																	
52		**TERASEN GAS**																																	
53		**Rate of Inflation**	1.90%																																
54		**TGI**	3.00%																																
55		**TGVI**	3.00%																																
56		**BC HYDRO**																																	
57		**Rate of Inflation**	2.00%																																
58		**BC Hydro**	3.00%																																
59		**Customer**	3.00%																																
60																																			
61																				2010															
62													2010 Planne	2011 planned		2010 split																			
63											Technologies					incnetives	admins	participants	incentive per participant		admin														
64				**SHEET LABELS**																															
65		**Residential**									Solar Thermal		300,000	600,000	0.8	240000	48000	240	1000	200															
66		**New Construction**									NGV		1,000,000	2,000,000		800000	8000	16	50,000	500															
67		0		**Hydronic Baseboard Systems**							Hydronic heating systems		125,000	250,000		100000	20000	100	1000	200															
68		0		**Hydronic Under Floor Systems**							TES type projects		750,000	1,500,000		600000	5217	3	230,000	2000															
69		NGV Vehicles		**Combo System 95% EE**							GSHP with ags back up		125,000	250,000		100000	6667	33	3000	200															
70		0		**GSHP with Gas Backup**									2,300,000	4,600,000																					
71		0		**Solar Thermal Hot Water**								Total	6,900,000																						
72												avaiable fur	69,000			1921217.4																			
73																																			
74																					2011													
75	**ADJUSTMENTS**																																		
76	**2010-2011 RRA application reconciliation**			**Incentives**	**Admin**											2011 split			participants	incentive per participant		admin													
77		**TGI**	2010	0.081	0.081											incnetives	admins																		
78			2011	0.081	0.081						Solar Thermal					480000	96000		480	1000		200													
79											NGV					1600000	16000		32	50,000		500													
80											Hydronic heating systems					200000	40000		200	1000		200												
81				**4669000**		2011	Decision by BCUC from the NSP				TES type projects					1200000	10435		5	230,000		2,000												
82				**2300000**		2010					GSHP with ags back up					200000	13333		67	3000		200												
83				**6969000**																															
84																3855768.1																		
85																																			
86											available funds		378782.61																					
87													813231.88																					

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NEW

Measure Data for Solar Air Heating PSECA Program

PER MEASURE		Utility Incentive to the participant	partner incentive
Total Incremental Cost	$ 495,143		
Utility Incentive	$ 73,103	$ 73,103	$ -
Incremental Participant cost	422040		

Annual Impact Per Measure

Energy Savings per installation	1457.5	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact		GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	30	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1		1		Estimated Participation
Impact						
Gross Energy Savings (GJ)	1,374	1,458	0	1,458	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	1,374	1,458	0	1,458	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$302.63	$302.63	#N/A	
Energy Purchases	#N/A	#N/A	$ -	$ 441,084	#N/A	
Utility Program Costs						
DSM Incentives		$ 73,103	$ -	$ 73,103	$ -	
Administration		$ 1,000		$ 1,000		
Subtotal	$ 69,849	$ 74,103	$ -	$ 74,103	$ -	
Partner Program Costs						
DSM Incentives		#REF!	#REF!	$ -	#REF!	
Administration		$ -	$ -		$ -	
Subtotal	#REF!	#REF!	#REF!	$ -	#REF!	
Participants' Net Costs						
Incremental Cost		$ 422,040	$ -	$ 422,040	$ -	
Subtotal	$ 397,813	$ 422,040	$ -	$ 422,040	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$2.352 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	#N/A		#REF!	$ (55,059)	#N/A	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 17.4**		**$ -**	**$ 17.4**	**$ -**	Informational (for comparison with supply options)

FortisBC

Innovative Technology

Measure Data for NGV Vehicles (COV)

PER MEASURE

Implementation Lag

Total Cost	$ 78,000		
Total Incentive	$ 78,000		
Utility Incentive	***$ 78,000***	*No lag*	*Present Value accounts for any implementation lag*
Partner Incentive	***$ -***	*No lag*	*Present Value accounts for any implementation lag*
Participant Cost			

Annual Impact Per Measure

Time lag to implementation	-	Years	
Energy Cons per installation	**-1524.0**	GJ	Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	**0%**	100%	Net-to-Gross
Alternate Energy Impact	**33,697**	L	
Alternate Capacity Impact		kW/a	
Measure Lifetime	**8**	Years	Estimated lifespan of measure

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
Number of NGV Vehicles (COV)						
	8	9	**0**	**9**		Estimated Participation
Impact						
Gross Energy Savings (GJ)	(11,895)	(13,716)	0	(13,716)	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	(11,895)	(13,716)	0	(13,716)	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (Litres)	269,912	303,273	0	303,273	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Cost Benefit Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$120.22	$120.22	$120.22	
Energy Purchases	$ (1,648,904)	$ (1,648,904)	$ -	$ (1,648,904)	$ -	
Utility Program Costs						
DSM Incentives		$ 702,000	$ -	$ 702,000	$ -	Including Implementation Lag
Administration		$ 500	**$ -**	**$ 500**		
Subtotal	$ 609,256	$ 702,500	$ -	$ 702,500	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	Including Implementation Lag
Administration		$ -	**$ -**	**$ -**	**$ -**	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ 1,694,937	$ -	$ 1,694,937	$ -	$5.589 PV $ per L
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ 1,694,937	$ 1,694,937	$ -	$ 1,694,937	$ -	
Total Resource Net Benefit (Cost)	$ (563,223)		$ -	$ (656,467)	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ -**		**$ -**	**$ -**	**$ -**	Informational (for comparison with supply options)

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NEW

Measure Data for Solar for School (Solar BC)

PER MEASURE			Utility Incentive to the participant	partner incentive
Total Incremental Cost	$	154,977		
Total Incentive	$	141,998	$ 22,352	$ 119,646
Incremental Participant cost	$	12,979		

Annual Impact Per Measure

Energy Savings per installation	264.6	GJ	Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00	Net-to-Gross
Alternate Energy Impact		GJ	0 kWh
Alternate Capacity Impact		kW/a	
Measure Lifetime	25	Years	Estimated lifespan of measure

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1		1		Estimated Participation
Impact						
Gross Energy Savings (GJ)	249	265	0	265	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	249	265	0	265	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$268.86	$268.86	$268.86	
Energy Purchases	$ 71,140	$ 71,140	$ -	$ 71,140	$ -	
Utility Program Costs						
DSM Incentives		$ 22,352	$ -	$ 22,352	$ -	
Administration		$ 500		$ 500		
Subtotal	$ 21,540	$ 22,852	$ -	$ 22,852	$ -	
Partner Program Costs						
DSM Incentives		$ 119,646	$ -	$ 119,646	$ -	
Administration		$ -	$ -		$ -	
Subtotal	$ 112,778	$ 119,646	$ -	$ 119,646	$ -	
Participants' Net Costs						
Incremental Cost		$ 12,979	$ -	$ 12,979	$ -	
Subtotal	$ 12,234	$ 12,979	$ -	$ 12,979	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$2.090 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 37,366		$ -	$ (84,337)	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 7.8**		**$ -**	**$ 7.8**	**$ -**	Informational (for comparison with supply options)

TERASEN GAS INC

Innovative Technology

Measure Data for NGV Vehicles (Abbots)

PER MEASURE			Implementation Lag	
Total Cost	$ 91,000			
Total Incentive	$ 91,000			
Utility Incentive	***$ 91,000***		*No lag*	*Present Value accounts for any implementation lag*
Partner Incentive	***$ -***		*No lag*	*Present Value accounts for any implementation lag*
Participant Cost				

Annual Impact Per Measure

Time lag to implementation	-	Years	
Energy Cons per installation	**-7731.0**	GJ	Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	**0%**	100%	Net-to-Gross
Alternate Energy Impact	**200,000**	L	
Alternate Capacity Impact		kW/a	
Measure Lifetime	**8**	Years	Estimated lifespan of measure

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
Number of NGV Vehicles (Abbots)						
	22	25	**0**	**25**		Estimated Participation
Impact						
Gross Energy Savings (GJ)	(167,621)	(193,275)	0	(193,275)	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	(167,621)	(193,275)	0	(193,275)	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (Litres)	4,449,982	5,000,000	0	5,000,000	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Cost Benefit Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$120.22	$120.22	$120.22	
Energy Purchases	$ (23,235,042)	$ (23,235,042)	$ -	$ (23,235,042)	$ -	
Utility Program Costs						
DSM Incentives		$ 2,275,000	$ -	$ 2,275,000	$ -	Including Implementation Lag
Administration		$ 500	**$ -**	**$ 500**		
Subtotal	$ 1,973,468	$ 2,275,500	$ -	$ 2,275,500	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	Including Implementation Lag
Administration		$ -	**$ -**	**$ -**	**$ -**	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ 27,944,072	$ -	$ 27,944,072	$ -	$5.589 PV $ per L
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ 27,944,072	$ 27,944,072	$ -	$ 27,944,072	$ -	
Total Resource Net Benefit (Cost)	$ 2,735,563		$ -	$ 2,433,531	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ -**		**$ -**	**$ -**	**$ -**	Informational (for comparison with supply options)

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Measure Data for Solar Residential Hot Water Pilot Program

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 8,500			
Total Incentive	$ 3,000		$ 1,667	$ 1,333
Participant	$ 5,500			

Annual Impact Per Measure

Energy Savings per installation	14.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact		GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	25	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY		Total	2010	2011	2012	Explanatory Notes
Number of Solar Systems						
	26	30	0	30		Estimated Participation
Impact						
Gross Energy Savings (GJ)	364	420	0	420	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	364	420	0	420	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$141.61	$146.21	$150.20	
Energy Purchases	$ 61,409	$ 61,409	$ -	$ 61,409	$ -	
Utility Program Costs						
DSM Incentives		$ 50,000	$ -	$ 50,000	$ -	
Administration		$ 26,000	$ -	$ 26,000		
Subtotal	$ 65,912	$ 76,000	$ -	$ 76,000	$ -	
Partner Program Costs						
DSM Incentives		$ 39,990	$ -	$ 39,990	$ -	
Administration		$ -		$ -	$ -	
Subtotal	$ 34,682	$ 39,990	$ -	$ 39,990	$ -	
Participants' Net Costs						
Incremental Cost		$ 165,000	$ -	$ 165,000	$ -	
Subtotal	$ 143,099	$ 165,000	$ -	$ 165,000	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.534 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ (147,602)		$ -	$ (219,581)	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 50.9**		**$ -**	**$ 50.9**	**$ -**	Informational (for comparison with supply options)

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Innovative Technology

Measure Data for NGV Vehicles (Waste Management Inc.)

PER MEASURE			Implementation Lag	
Total Cost	$	40,178		
Total Incentive	$	40,178		
Utility Incentive	$	*40,178*	*No lag*	*Present Value accounts for any implementation lag*
Partner Incentive	$	-	*No lag*	*Present Value accounts for any implementation lag*
Participant Cost				

Annual Impact Per Measure

Time lag to implementation	-	Years	
Energy Cons per installation	-1057.0	GJ	Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	100%	Net-to-Gross
Alternate Energy Impact	23400.0	L	
Alternate Capacity Impact		kW/a	
Measure Lifetime	10	Years	Estimated lifespan of measure

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
Number of NGV Vehicles (Waste Management Inc.)						
	17	20	**0**	**20**		Estimated Participation
Impact						
Gross Energy Savings (GJ)	(18,413)	(21,140)	0	(21,140)	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	(18,413)	(21,140)	0	(21,140)	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (Litres)	416,518	468,000	0	468,000	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Cost Benefit Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$142.86	$142.86	$153.69	
Energy Purchases	$ (3,020,071)	$ (3,020,071)	$ -	$ (3,020,071)	$ -	
Utility Program Costs						
DSM Incentives		$ 803,560	$ -	$ 803,560	$ -	Including Implementation Lag
Administration		$ 500	**$ -**	**$ 500**		
Subtotal	$ 700,332	$ 804,060	$ -	$ 804,060	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	Including Implementation Lag
Administration		$ -	**$ -**	**$ -**	**$ -**	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ 3,100,069	$ -	$ 3,100,069	$ -	$6.624 PV $ per L
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ 3,100,069	$ 3,100,069	$ -	$ 3,100,069	$ -	
Total Resource Net Benefit (Cost)	$ (620,335)		$ -	$ (724,063)	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ -**		**$ -**	**$ -**	**$ -**	Informational (for comparison with supply options)

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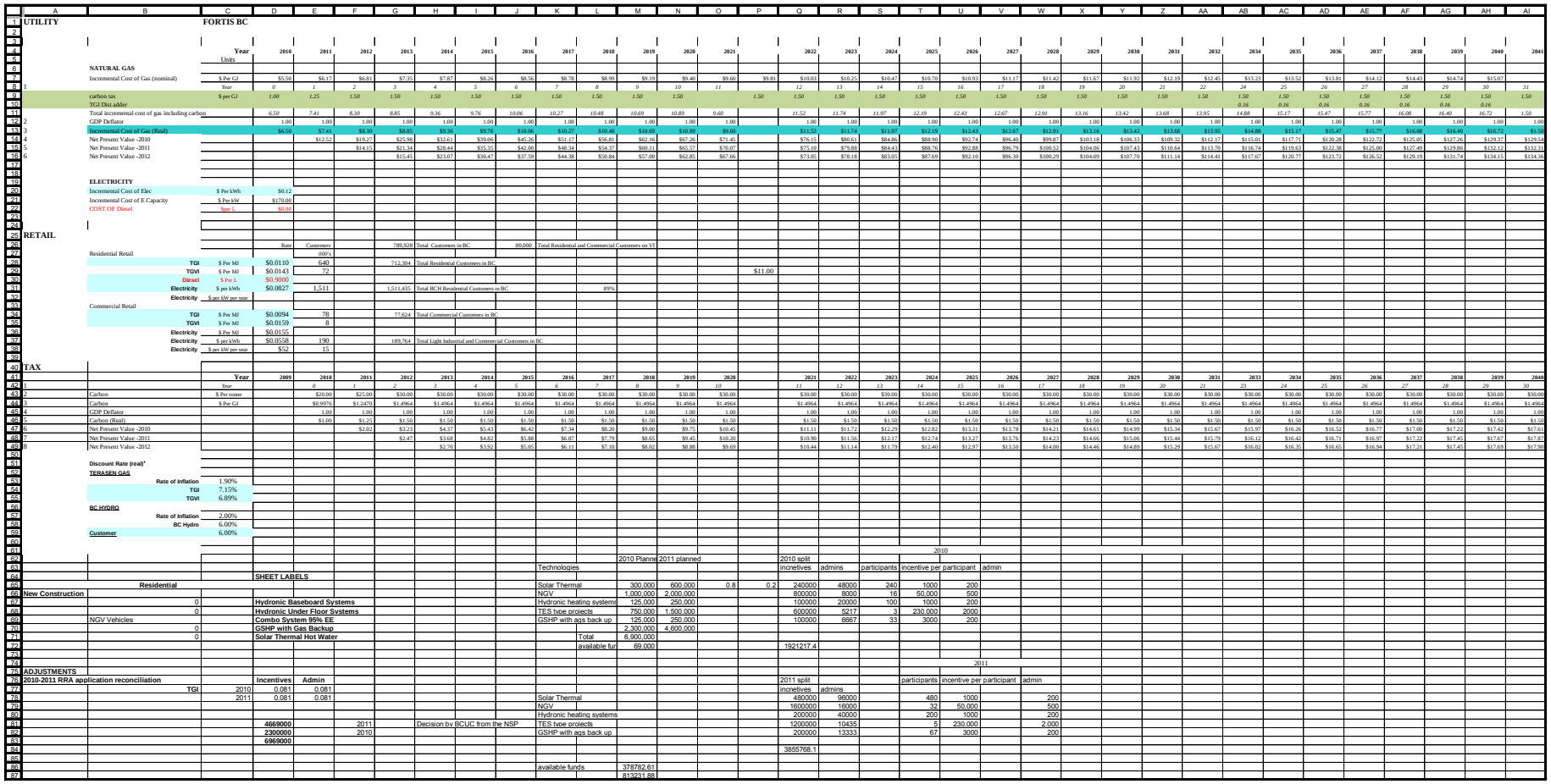
2011 Innovative Technologies Planned	PROGRAM														ALTERNATE		NET PRESENT VALUE								BENEFIT/COST							PARAMETERS											
	COSTS ($000)											SAVINGS (GJ)			LIFE	Impact		Levelized Cost	Utility Benefits (Costs)		Participant Benefits (Costs)			Program Net Savings				Participant						UTILITY				PARTICIPANT							
FEI	Utility			Partners																																							
	Incentives	Administration	Total	Incentives	Administration	Total	Participant	Total	% Utility	% Partner	% Participant	Gross	Net-to-Gross	Net	Years	Energy	Capacity	($/GJ)	Program	Alternate	Program	Carbon Tax	Alternate	Natural Gas	Alternate Energy	Alternate Capacity	Natural Gas	Total Costs	Total Benefits	Benefit/Cost	Natural Gas	Total Resource	TRC Net Benefits	Natural Gas Utility Discount Rate	Natural Gas Supply	Alternate Discount Rate	Alternate Supply	Discount Rate	Natural Gas NPV	Carbon Tax NPV	Alternate Energy NPV	Alternate Capacity NPV	Natural Gas Tariff	Energy Tariff	Capacity Tariff
																MWh	kW		($'000s)	($'000s)	($'000s)	($'000s)	($'000s)	(GJ)	(MWh)	(kW)	Utility	($'000s)	($'000s)		Rate Impact		($'000s)		$/GJ		$/kWh		$/GJ	$/GJ	$/kWh	$/kW/a	$/GJ	$/kWh	$/kW/a
Label	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR	AS	AT
Source Sheet or Calculation	Program	Program	B+C	Program	Program	E+F	Program	D+G+H	D/I	G/I	H/I	Program	Program	MxN	Program	Program	Program	D/Y	OxAJ	Q x N x AL	M x N x AN	M x N x AO	N x (QxAP + RxAQ)	PV(AU,P,-O)	PV(AK,P,-Q*N)	PV(AK,P,-R)	T/D	H=0, (V+W)=0	H=0, (V+W)>0, X	AD/AC	T/(V+D)	(T+U)/I	(T+U)-I	Input	Program	Input	Input	Input	PV(AM,P,-InputD33)	Input	PV(AM,P,-InputD28)	PV(AM,P,-InputD29)	Input	Input	Input
2011																																												
Commercial																																												
Solar Air Heating PSECA Program	73	1	74	0	0	0	422	496	15%	0%	85%	1,458	100%	1,458	30	0	-	4	193	N/A	188	26	N/A	17,817	0	-	2.6	422	213	0.5	0.7	0.4	(303)	7.15%	132.31	6%	1.65	6.0%	128.85	17.61	0.77	0.00	11.000	0.083	-
NGV Vehicles (COV)	702	1	703	0	0	0	0	703	100%	0%	0%	(13,716)	100%	(13,716)	8	303	-	FS	(816)	1,695	(797)	(124)	105	(81,428)	1,883	-	FS	921	105	0.1	0.5	1.1	176	7.15%	59.49	6%	5.59	6.0%	58.13	9.00	0.35	0.00	11.000	0.083	-
Solar for School (Solar BC)	22	1	23	120	0	120	13	155	15%	77%	8%	265	100%	265	25	0	-	8	32	N/A	32	4	N/A	3,042	0	-	1.4	13	36	2.8	0.6	0.2	(123)	7.15%	122.38	6%	1.53	6.0%	119.66	16.52	0.71	0.00	11.000	0.083	-
NGV Vehicles (Abbots)	2,275	1	2,276	0	0	0	0	2,276	100%	0%	0%	(193,275)	100%	(193,275)	8	5,000	-	FS	(11,499)	27,944	(11,235)	(1,740)	1,733	(1,147,424)	31,049	-	FS	12,975	1,733	0.1	0.8	2.0	14,170	7.15%	59.49	6%	5.59	6.0%	58.13	9.00	0.35	0.00	11.000	0.083	-
Solar Residential Hot Water Pilot Program	50	26	76	40	0	40	165	281	27%	14%	59%	420	100%	420	25	0	2	16	61	N/A	50	7	N/A	4,829	0	26	0.8	165	57	0.3	0.5	0.2	(220)	7.15%	146.21	6%	1.53	6.0%	119.66	16.52	0.71	0.00	11.000	0.083	-
NGV Vehicles (Waste Management Inc.)	804	1	804	0	0	0	0	804	100%	0%	0%	(21,140)	100%	(21,140)	10	468	-	FS	(1,481)	3,100	(1,456)	(221)	3,100	(147,454)	3,445	-	FS	1,678	3,100	1.8	0.6	1.4	815	7.15%	70.07	6%	6.62	6.0%	68.90	10.45	6.62	0.00	11.000	0.083	-
Total Commercial	3,926	29	3,955	160	0	160	600	4,715	84%	0	13%	(225,989)		(225,989)		5,771	2	FS	(13,509)	32,739	(13,219)	(2,048)	4,938	(1,350,618)	36,377	26	FS	15,867	4,938	0.3	0.8	1.8	14,515	1.5	10,462										



FORTIS BC

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NEW

Measure Data for Solar Air Heating PSECA Program

PER MEASURE			Utility Incentive to the participant	partner incentive
Total Incremental Cost	$ 495,143			
Utility Incentive	$ 73,103		$ 73,103	$ -
Incremental Participant cost	422040			

Annual Impact Per Measure

Energy Savings per installation	1457.5	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact		GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	30	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1		1		Estimated Participation
Impact						
Gross Energy Savings (GJ)	1,269	1,458	0	1,458	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	1,269	1,458	0	1,458	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$129.37	$132.31	#N/A	
Energy Purchases	#N/A	#N/A	$ -	$ 192,841	#N/A	
Utility Program Costs						
DSM Incentives		$ 73,103	$ -	$ 73,103	$ -	
Administration		$ 1,000		$ 1,000		
Subtotal	$ 64,543	$ 74,103	$ -	$ 74,103	$ -	
Partner Program Costs						
DSM Incentives		#REF!	#REF!	$ -	#REF!	
Administration		$ -	$ -		$ -	
Subtotal	#REF!	#REF!	#REF!	$ -	#REF!	
Participants' Net Costs						
Incremental Cost		$ 422,040	$ -	$ 422,040	$ -	
Subtotal	$ 367,595	$ 422,040	$ -	$ 422,040	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.652 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	#N/A		#REF!	$ (303,302)	#N/A	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 27.8**		**$ -**	**$ 27.8**	**$ -**	Informational (for comparison with supply options)

Fortis BC

Innovative Technology

Measure Data for NGV Vehicles (COV)

PER MEASURE

Implementation Lag

Total Cost	$ 78,000		
Total Incentive	$ 78,000		
Utility Incentive	***$ 78,000***	*No lag*	*Present Value accounts for any implementation lag*
Partner Incentive	***$ -***	*No lag*	*Present Value accounts for any implementation lag*
Participant Cost			

Annual Impact Per Measure

Time lag to implementation	-	Years	
Energy Cons per installation	**-1524.0**	GJ	Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	**0%**	100%	Net-to-Gross
Alternate Energy Impact	**33,697**	L	
Alternate Capacity Impact		kW/a	
Measure Lifetime	**8**	Years	Estimated lifespan of measure

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	8	9	**0**	**9**		Estimated Participation
Impact						
Gross Energy Savings (GJ)	(11,895)	(13,716)	0	(13,716)	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	(11,895)	(13,716)	0	(13,716)	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (Liters)	269,912	303,273	0	303,273	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Cost Benefit Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$56.21	$59.49	$62.21	
Energy Purchases	$ (816,032)	$ (816,032)	$ -	$ (816,032)	$ -	
Utility Program Costs						
DSM Incentives		$ 702,000	$ -	$ 702,000	$ -	Including Implementation Lag
Administration		$ 500	**$ -**	**$ 500**		
Subtotal	$ 609,256	$ 702,500	$ -	$ 702,500	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	Including Implementation Lag
Administration		$ -	**$ -**	**$ -**	**$ -**	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$1,694,937	$ -	$1,694,937	$ -	$5.589 PV $ per L
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$1,694,937	$1,694,937	$ -	$1,694,937	$ -	
Total Resource Net Benefit (Cost)	$ 269,649		$ -	$ 176,404	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ -**		**$ -**	**$ -**	**$ -**	Informational (for comparison with supply options)

FORTIS BC

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NEW

Measure Data for Solar for School (Solar BC)

PER MEASURE			Utility Incentive to the participant	partner incentive
Total Incremental Cost	$	154,977		
Total Incentive	$	141,998	$ 22,352	$ 119,646
Incremental Participant cost	$	12,979		

Annual Impact Per Measure

Energy Savings per installation	264.6	GJ	Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00	Net-to-Gross
Alternate Energy Impact		GJ	0 kWh
Alternate Capacity Impact		kW/a	
Measure Lifetime	25	Years	Estimated lifespan of measure

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1		1		Estimated Participation
Impact						
Gross Energy Savings (GJ)	230	265	0	265	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	230	265	0	265	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$117.71	$122.38	$126.52	
Energy Purchases	$ 32,382	$ 32,382	$ -	$ 32,382	$ -	
Utility Program Costs						
DSM Incentives		$ 22,352	$ -	$ 22,352	$ -	
Administration		$ 500		$ 500		
Subtotal	$ 19,904	$ 22,852	$ -	$ 22,852	$ -	
Partner Program Costs						
DSM Incentives		$ 119,646	$ -	$ 119,646	$ -	
Administration		$ -	$ -		$ -	
Subtotal	$ 104,211	$ 119,646	$ -	$ 119,646	$ -	
Participants' Net Costs						
Incremental Cost		$ 12,979	$ -	$ 12,979	$ -	
Subtotal	$ 11,305	$ 12,979	$ -	$ 12,979	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.534 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 1,174		$ -	$ (123,095)	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 11.8**		**$ -**	**$ 11.8**	**$ -**	Informational (for comparison with supply options)

Fortis BC

Innovative Technology

Measure Data for NGV Vehicles (Abbots)

PER MEASURE			Implementation Lag	
Total Cost	$ 91,000			
Total Incentive	$ 91,000			
Utility Incentive	***$ 91,000***		*No lag*	*Present Value accounts for any implementation lag*
Partner Incentive	***$ -***		*No lag*	*Present Value accounts for any implementation lag*
Participant Cost				

Annual Impact Per Measure

Time lag to implementation	-	Years	
Energy Cons per installation	-7731.0	GJ	Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	100%	Net-to-Gross
Alternate Energy Impact	200,000	L	
Alternate Capacity Impact		kW/a	
Measure Lifetime	8	Years	Estimated lifespan of measure

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	22	25	**0**	**25**		Estimated Participation
Impact						
Gross Energy Savings (GJ)	(167,621)	(193,275)	0	(193,275)	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	(167,621)	(193,275)	0	(193,275)	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (Liters)	4,449,982	5,000,000	0	5,000,000	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Cost Benefit Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$56.21	$59.49	$62.21	
Energy Purchases	#########	#########	$ -	$ (11,498,879)	$ -	
Utility Program Costs						
DSM Incentives		$2,275,000	$ -	$ 2,275,000	$ -	Including Implementation Lag
Administration		$ 500	**$ -**	**$ 500**		
Subtotal	$ 1,973,468	$ 2,275,500	$ -	$ 2,275,500	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	Including Implementation Lag
Administration		$ -	**$ -**	**$ -**	**$ -**	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		#########	$ -	$ 27,944,072	$ -	$5.589 PV $ per L
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	#########	#########	$ -	$ 27,944,072	$ -	
Total Resource Net Benefit (Cost)	$ 14,471,725		$ -	$ 14,169,693	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ -**		**$ -**	**$ -**	**$ -**	Informational (for comparison with supply options)

Fortis BC

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NEW

Measure Data for Solar Residential Hot Water Pilot Program

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 8,500			
Total Incentive	$ 3,000		$ 1,667	$ 1,333
Participant	$ 5,500			

Annual Impact Per Measure

Energy Savings per installation	14.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact		GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	25	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY		Total	2010	2011	2012	Explanatory Notes
	26	30	0	30		Estimated Participation
Impact						
Gross Energy Savings (GJ)	364	420	0	420	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	364	420	0	420	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$141.61	$146.21	$150.20	
Energy Purchases	$ 61,409	$ 61,409	$ -	$ 61,409	$ -	
Utility Program Costs						
DSM Incentives		$ 50,000	$ -	$ 50,000	$ -	
Administration		$ 26,000	$ -	$ 26,000		
Subtotal	$ 65,912	$ 76,000	$ -	$ 76,000	$ -	
Partner Program Costs						
DSM Incentives		$ 39,990	$ -	$ 39,990	$ -	
Administration		$ -		$ -	$ -	
Subtotal	$ 34,682	$ 39,990	$ -	$ 39,990	$ -	
Participants' Net Costs						
Incremental Cost		$ 165,000	$ -	$ 165,000	$ -	
Subtotal	$ 143,099	$ 165,000	$ -	$ 165,000	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.534 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ (147,602)		$ -	$ (219,581)	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 50.9**		**$ -**	**$ 50.9**	**$ -**	Informational (for comparison with supply options)

Fortis BC

Innovative Technology

Measure Data for NGV Vehicles (Waste Management Inc.)

PER MEASURE		Implementation Lag	
Total Cost	$ 40,178		
Total Incentive	$ 40,178		
Utility Incentive	***$ 40,178***	*No lag*	*Present Value accounts for any implementation lag*
Partner Incentive	***$ -***	*No lag*	*Present Value accounts for any implementation lag*
Participant Cost			

Annual Impact Per Measure

Time lag to implementation	-	Years	
Energy Cons per installation	-1057.0	GJ	Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	100%	Net-to-Gross
Alternate Energy Impact	23400.0	L	
Alternate Capacity Impact		kW/a	
Measure Lifetime	10	Years	Estimated lifespan of measure

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	17	20	**0**	**20**		Estimated Participation
Impact						
Gross Energy Savings (GJ)	(18,413)	(21,140)	0	(21,140)	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	(18,413)	(21,140)	0	(21,140)	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (Liters)	416,518	468,000	0	468,000	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Cost Benefit Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$67.26	$70.07	$73.05	
Energy Purchases	#########	#########	$ -	#########	$ -	
Utility Program Costs						
DSM Incentives		$ 803,560	$ -	$ 803,560	$ -	Including Implementation Lag
Administration		$ 500	**$ -**	**$ 500**		
Subtotal	$ 700,332	$ 804,060	$ -	$ 804,060	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	Including Implementation Lag
Administration		$ -	**$ -**	**$ -**	**$ -**	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$3,100,069	$ -	$ 3,100,069	$ -	$6.624 PV $ per L
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ 3,100,069	$ 3,100,069	$ -	$ 3,100,069	$ -	
Total Resource Net Benefit (Cost)	$ 918,557		$ -	$ 814,830	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ -**		**$ -**	**$ -**	**$ -**	Informational (for comparison with supply options)

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	ALTERNATE		NET PRESENT VALUE									BENEFIT/COST							PARAMETERS														
2011 Innovative Technologies Planned	Impact		Levelized Cost	Utility Benefits (Costs)		Participant Benefits (Costs)			Program Net Savings				Participant						UTILITY				PARTICIPANT										
FEI	Energy	Capacity	($/GJ)	Program	Alternate	Program	Carbon Tax	Alternate	Natural Gas	Alternate Energy	Alternate Capacity	Natural Gas	Total Costs	Total Benefits	Benefit/Cost	Natural Gas		SCT Net Benefits	Natural Gas Utility Discount Rate	Natural Gas Supply	Alternate Discount Rate	Alternate Supply	Discount Rate	Natural Gas NPV	Carbon Tax NPV	Alternate Energy NPV	Alternate Capacity NPV	Natural Gas Tariff	Energy Tariff	Capacity Tariff				
	MWh	kW		($'000s)	($'000s)	($'000s)	($'000s)	($'000s)	(GJ)	(MWh)	(kW)	Utility	($'000s)	($'000s)		Rate Impact	SCT	($'000s)	$/GJ		$/kWh		$/GJ	$/GJ	$/kWh	$/kW/a	$/GJ	$/kWh	$/kW/a				
Label	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR	AS	AT			
Source Sheet or Calculation	Program	Program	D/Y	OxAJ	Q x N x AL	M x N x AN	M x N x AO	N x (QxAP + RxAQ)	PV(AI,P,-O)	PV(AK,P,-Q*N)	PV(AK,P,-R)	T/D	H>0, (V+W)<0	H<0, (V+W)>0, X	AD/AC	T/(V+D)	(T+U)/I	(T+U)-I	Input	Program	Input	Input	Input	PV(AM,P,-InputD33)	Input	PV(AM,P,-InputD28)	PV(AM,P,-InputD29)	Input	Input	Input			
2011																																	
Commercial																																	
NGV Vehicles (COV)	303	-	FS	(2,144)	2,491	(901)	(150)	119	(96,282)	2,129	-	FS	1,051	119	0.1	0.3	0.9	(355)	3.00%	120.22	3%	6.32	3.0%	65.71	10.93	0.39	0.00	11.000	0.083	-			
NGV Vehicles (Abbots)	5,000	-	FS	(30,206)	41,065	(12,700)	(2,113)	1,958	(1,356,731)	35,098	-	FS	14,813	1,958	0.1	0.4	1.3	8,584	3.00%	120.22	3%	6.32	3.0%	65.71	10.93	0.39	0.00	11.000	0.083	-			
NGV Vehicles (Waste Management Inc.)	468	-	FS	(3,926)	4,671	(1,688)	(277)	3,593	(180,328)	3,992	-	FS	1,966	3,593	1.8	0.4	1.0	(59)	3.00%	142.86	3%	7.68	3.0%	79.85	13.13	7.68	0.00	11.000	0.083	-			
Total Commercial	5,771	0	FS	(36,275)	48,227	(15,290)	(2,540)	5,670	(1,633,342)	41,219	0	FS	17,830	5,670	0.3	0.4	1.2	8,170	0.9	(2,713)													

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI
1	**UTILITY**		**FORTIS BC**																																
2																																			
3																																			
4			**Year**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**
5			Units																																
6		**NATURAL GAS**																																	
7		Incremental Cost of Gas (nominal)	$ Per GJ	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	
8	1		Year	*0*	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*	*16*	*17*	*18*	*19*	*20*	*21*	*22*	*23*	*24*	*25*	*26*	*27*	*28*	*29*	*30*	*31*
9		carbon tax	$ per GJ	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
10		TGI Dist adder		*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*
11		Total incremental cost of gas including carbon		*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*	*15.44*
12	2	GDP Deflator		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
13	3	Incremental Cost of Gas (Real)		$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$15.44	$8.16
14	4	Net Present Value -2010			$29.54	$43.67	$57.39	$70.71	$83.64	$96.20	$108.38	$120.22	$131.71	$142.86	$153.69	$164.20	$174.41	$184.32	$193.94	$203.28	$212.35	$221.16	$229.71	$238.01	$246.07	$253.89	$261.48	$268.86	$276.02	$282.97	$289.72	$296.27	$302.63	$308.81	$308.87	
15	5	Net Present Value -2011				$29.54	$43.67	$57.39	$70.71	$83.64	$96.20	$108.38	$120.22	$131.71	$142.86	$153.69	$164.20	$174.41	$184.32	$193.94	$203.28	$212.35	$221.16	$229.71	$238.01	$246.07	$253.89	$261.48	$268.86	$276.02	$282.97	$289.72	$296.27	$302.63	$302.65		
16	6	Net Present Value -2012					$29.54	$43.67	$57.39	$70.71	$83.64	$96.20	$108.38	$120.22	$131.71	$142.86	$153.69	$164.20	$174.41	$184.32	$193.94	$203.28	$212.35	$221.16	$229.71	$238.01	$246.07	$253.89	$261.48	$268.86	$276.02	$282.97	$289.72	$296.27	$296.34		
17																																			
18																																			
19		**ELECTRICITY**																																	
20		Incremental Cost of Elec	$ Per kWh	$0.12																															
21		Incremental Cost of E Capacity	$ Per kW	$170.00																															
22		COST OF Diesel	$per L	$0.90																															
23																																			
24																																			
25	**RETAIL**																																		
26				Rate	Customers		789,928	Total Customers in BC		80,000	Total Residential and Commercial Customers on VI																									
27		Residential Retail			000's																															
28		**TGI**	$ Per MJ	$0.0110	640		712,304	Total Residential Customers in BC																												
29		**TGVI**	$ Per MJ	$0.0143	72											$11.00																				
30		**Diesel**	$ Per L	$0.9000																															
31		**Electricity**	$ per kWh	$0.0827	1,511		1,511,435	Total BCH Residential Customers in BC				89%																									
32		**Electricity**	$ per kW per year																																
33		Commercial Retail																																	
34		**TGI**	$ Per MJ	$0.0094	78		77,624	Total Commercial Customers in BC																												
35		**TGVI**	$ Per MJ	$0.0159	8																														
36		**Electricity**	$ Per MJ	$0.0155																															
37		**Electricity**	$ per kWh	$0.0558	190		189,764	Total Light Industrial and Commercial Customers in BC																												
38		**Electricity**	$ per kW per year	$52	15																														
39																																			
40	**TAX**																																		
41			**Year**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**		
42	1		Year	*0*	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*	*16*	*17*	*18*	*19*	*20*	*21*	*23*	*24*	*25*	*26*	*27*	*28*	*29*	*30*		
43	2	Carbon	$ Per tonne		$20.00	$25.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00		
44	3	Carbon	$ Per GJ		$0.9976	$1.2470	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964		
45	4	GDP Deflator			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
46	5	Carbon (Real)			$1.00	$1.23	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50		
47	6	Net Present Value -2010				$2.14	$3.51	$4.84	$6.13	$7.39	$8.60	$9.78	$10.93	$12.05	$13.13	$14.18	$15.19	$16.18	$17.14	$18.08	$18.98	$19.86	$20.71	$21.54	$22.35	$23.13	$23.89	$24.62	$25.34	$26.03	$26.71	$27.36	$27.99	$28.61			
48	7	Net Present Value -2011					$2.62	$3.99	$5.32	$6.61	$7.86	$9.08	$10.26	$11.41	$12.52	$13.68	$14.65	$15.67	$16.66	$17.62	$18.55	$19.46	$20.34	$21.19	$22.02	$22.82	$23.61	$24.36	$25.10	$25.81	$26.51	$27.18	$27.84	$28.47		
49	8	Net Present Value -2012						$2.86	$4.23	$5.56	$6.85	$8.11	$9.32	$10.50	$11.65	$12.78	$13.85	$14.90	$15.91	$16.90	$17.86	$18.80	$19.70	$20.58	$21.43	$22.26	$23.07	$23.85	$24.61	$25.34	$26.06	$26.75	$27.42	$28.08		
50																																			
51		**Discount Rate (real)[1]**																																	
52		**TERASEN GAS**																																	
53		**Rate of Inflation**	1.90%																																
54		**TGI**	3.00%																																
55		**TGVI**	3.00%																																
56		**BC HYDRO**																																	
57		**Rate of Inflation**	2.00%																																
58		**BC Hydro**	3.00%																																
59		**Customer**	3.00%																																
60																																			
61																					2010														
62													2010 Planne	2011 planned			2010 split																		
63											Technologies						incnetives	admins	participants	incentive per participant		admin													
64				**SHEET LABELS**																															
65		**Residential**									Solar Thermal		300,000	600,000	0.8	0.2	240000	48000	240	1000	200														
66		**New Construction**									NGV		1,000,000	2,000,000			800000	8000	16	50,000	500														
67		0		**Hydronic Baseboard Systems**							Hydronic heating systems		125,000	250,000			100000	20000	100	1000	200														
68		0		**Hydronic Under Floor Systems**							TES type projects		750,000	1,500,000			600000	5217	3	230,000	2000														
69		NGV Vehicles		**Combo System 95% EE**							GSHP with aqs back up		125,000	250,000			100000	6667	33	3000	200														
70		0		**GSHP with Gas Backup**									2,300,000	4,600,000																					
71		0		**Solar Thermal Hot Water**								Total	6,900,000																						
72												available fur	69,000				1921217.4																		
73																																			
74																							2011												
75	**ADJUSTMENTS**																																		
76	**2010-2011 RRA application reconciliation**			**Incentives**	**Admin**												2011 split			participants	incentive per participant	admin													
77		**TGI**	2010	0.081	0.081												incnetives	admins																	
78			2011	0.081	0.081						Solar Thermal						480000	96000		480	1000		200												
79											NGV						1600000	16000		32	50,000		500												
80											Hydronic heating systems						200000	40000		200	1000		200												
81				**4669000**		2011		Decision by BCUC from the NSP			TES type projects						1200000	10435		5	230,000		2,000												
82				**2300000**		2010					GSHP with aqs back up						200000	13333		67	3000		200												
83				**6969000**																															
84																	3855768.1																		
85																																			
86											available funds		378782.61																						

FortisBC

Innovative Technology

Measure Data for NGV Vehicles (COV)

PER MEASURE

Implementation Lag

Total Cost	$ 78,000		
Total Incentive	$ 78,000		
Utility Incentive	***$ 78,000***	*No lag*	*Present Value accounts for any implementation lag*
Partner Incentive	***$ -***	*No lag*	*Present Value accounts for any implementation lag*
Participant Cost			

Annual Impact Per Measure

Time lag to implementation	-	Years	
Energy Cons per installation	-1524.0	GJ	Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	100%	Net-to-Gross
Alternate Energy Impact	33,697	L	
Alternate Capacity Impact		kW/a	
Measure Lifetime	8	Years	Estimated lifespan of measure

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
Number of NGV Vehicles (COV)						
	8	9	**0**	**9**		Estimated Participation
Impact						
Gross Energy Savings (GJ)	(11,895)	(13,716)	0	(13,716)	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	(11,895)	(13,716)	0	(13,716)	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (Litres)	269,912	303,273	0	303,273	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Cost Benefit Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$120.22	$120.22	$120.22	
Energy Purchases	$ (1,648,904)	$ (1,648,904)	$ -	$ (1,648,904)	$ -	
Utility Program Costs						
DSM Incentives		$ 702,000	$ -	$ 702,000	$ -	Including Implementation Lag
Administration		$ 500	**$ -**	**$ 500**		
Subtotal	$ 609,256	$ 702,500	$ -	$ 702,500	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	Including Implementation Lag
Administration		$ -	**$ -**	**$ -**	**$ -**	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ 1,694,937	$ -	$ 1,694,937	$ -	$5.589 PV $ per L
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ 1,694,937	$ 1,694,937	$ -	$ 1,694,937	$ -	
Total Resource Net Benefit (Cost)	$ (563,223)		$ -	$ (656,467)	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ -**		**$ -**	**$ -**	**$ -**	Informational (for comparison with supply options)

FortisBC

Innovative Technology

Measure Data for NGV Vehicles (Abbots)

PER MEASURE			Implementation Lag	
Total Cost	$ 91,000			
Total Incentive	$ 91,000			
Utility Incentive	***$ 91,000***		*No lag*	*Present Value accounts for any implementation lag*
Partner Incentive	***$ -***		*No lag*	*Present Value accounts for any implementation lag*
Participant Cost				

Annual Impact Per Measure

Time lag to implementation	-	Years	
Energy Cons per installation	**-7731.0**	GJ	Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	**0%**	100%	Net-to-Gross
Alternate Energy Impact	**200,000**	L	
Alternate Capacity Impact		kW/a	
Measure Lifetime	**8**	Years	Estimated lifespan of measure

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
Number of NGV Vehicles (Abbots)						
	22	25	**0**	**25**		Estimated Participation
Impact						
Gross Energy Savings (GJ)	(167,621)	(193,275)	0	(193,275)	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	(167,621)	(193,275)	0	(193,275)	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (Litres)	4,449,982	5,000,000	0	5,000,000	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Cost Benefit Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$120.22	$120.22	$120.22	
Energy Purchases	$ (23,235,042)	$ (23,235,042)	$ -	$ (23,235,042)	$ -	
Utility Program Costs						
DSM Incentives		$ 2,275,000	$ -	$ 2,275,000	$ -	Including Implementation Lag
Administration		$ 500	**$ -**	**$ 500**		
Subtotal	$ 1,973,468	$ 2,275,500	$ -	$ 2,275,500	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	Including Implementation Lag
Administration		$ -	**$ -**	**$ -**	**$ -**	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ 27,944,072	$ -	$ 27,944,072	$ -	$5.589 PV $ per L
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ 27,944,072	$ 27,944,072	$ -	$ 27,944,072	$ -	
Total Resource Net Benefit (Cost)	$ 2,735,563		$ -	$ 2,433,531	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ -**		**$ -**	**$ -**	**$ -**	Informational (for comparison with supply options)

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Innovative Technology

Measure Data for NGV Vehicles (Waste Management Inc.)

PER MEASURE			Implementation Lag	
Total Cost	$ 40,178			
Total Incentive	$ 40,178			
Utility Incentive	***$ 40,178***		*No lag*	*Present Value accounts for any implementation lag*
Partner Incentive	***$ -***		*No lag*	*Present Value accounts for any implementation lag*
Participant Cost				

Annual Impact Per Measure			
Time lag to implementation	-	Years	
Energy Cons per installation	**-1057.0**	GJ	Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	**0%**	100%	Net-to-Gross
Alternate Energy Impact	**23400.0**	L	
Alternate Capacity Impact		kW/a	
Measure Lifetime	**10**	Years	Estimated lifespan of measure

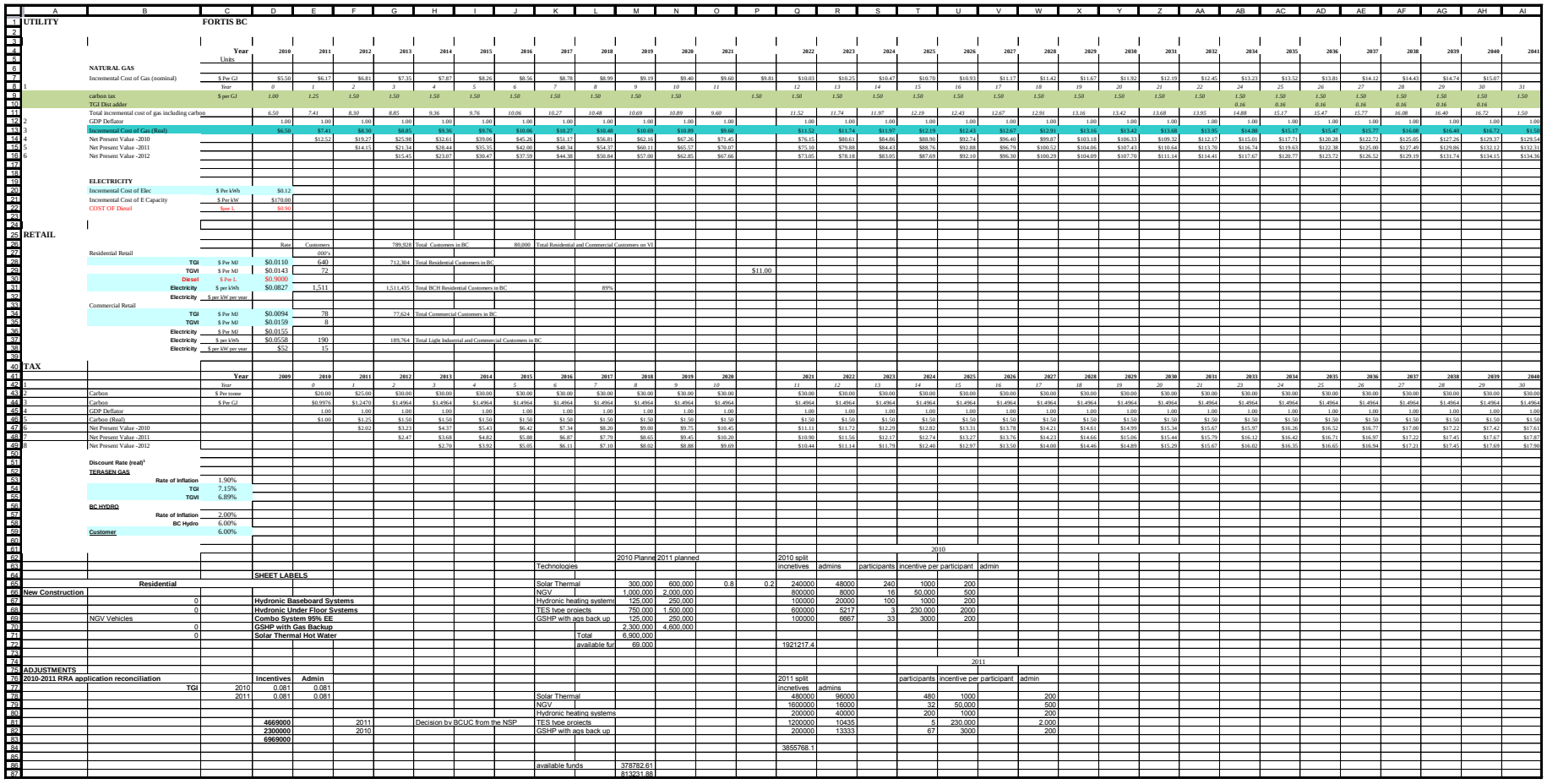
ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
Number of NGV Vehicles (Waste Management Inc.)						
	17	20	**0**	**20**		Estimated Participation
Impact						
Gross Energy Savings (GJ)	(18,413)	(21,140)	0	(21,140)	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	(18,413)	(21,140)	0	(21,140)	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (Litres)	416,518	468,000	0	468,000	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Cost Benefit Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$142.86	$142.86	$142.86	
Energy Purchases	$ (3,020,071)	$ (3,020,071)	$ -	$ (3,020,071)	$ -	
Utility Program Costs						
DSM Incentives		$ 803,560	$ -	$ 803,560	$ -	Including Implementation Lag
Administration		$ 500	**$ -**	**$ 500**		
Subtotal	$ 700,332	$ 804,060	$ -	$ 804,060	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	Including Implementation Lag
Administration		$ -	**$ -**	**$ -**	**$ -**	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ 3,100,069	$ -	$ 3,100,069	$ -	$6.624 PV $ per L
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ 3,100,069	$ 3,100,069	$ -	$ 3,100,069	$ -	
Total Resource Net Benefit (Cost)	$ (620,335)		$ -	$ (724,063)	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ -**		**$ -**	**$ -**	**$ -**	Informational (for comparison with supply options)

FORTIS BC

2011 Innovative Technologies Planned	PROGRAM															ALTERNATE		NET PRESENT VALUE									BENEFIT/COST						PARAMETERS													
	COSTS ($000)											SAVINGS (GJ)			LIFE	Impact		Levelized Cost	Utility Benefits (Costs)		Participant Benefits (Costs)			Program Net Savings				Participant						UTILITY				PARTICIPANT								
FEI	Utility			Partners											Years	Energy	Capacity		Program	Alternate	Program	Carbon Tax	Alternate	Natural Gas	Alternate Energy	Alternate Capacity	Natural Gas	Total Costs	Total Benefits	Benefit/Cost	Natural Gas	Total Resource	TRC Net Benefits	Natural Gas Utility Discount Rate	Natural Gas Supply	Alternate Discount Rate	Alternate Supply	Discount Rate	Natural Gas NPV	Carbon Tax NPV	Alternate Energy NPV	Alternate Capacity NPV	Natural Gas Tariff	Energy Tariff	Capacity Tariff
	Incentives	Administration	Total	Incentives	Administration	Total	Participant	Total	% Utility	% Partner	% Participant	Gross	Net-to-Gross	Net		MWh	kW	($/GJ)	($'000s)	($'000s)	($'000s)	($'000s)	($'000s)	(GJ)	(MWh)	(kW)	Utility	($'000s)	($'000s)		Rate Impact		($'000s)		$/GJ		$/kWh		$/GJ	$/GJ	$/kWh	$/kW/a	$/GJ	$/kWh	$/kW/a
Label	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR	AS	AT
Source Sheet or Calculation	Program	Program	B+C	Program	Program	E+F	Program	D+G+H	D/I	G/I	H/I	Program	Program	M-N	Program	Program	Program	D/Y	OxAJ	Q x N x AL	M x N x AN	M x N x AO	N x (QxAP + RxAQ)	PV(AU,P,-O)	PV(AK,P,-Q*N)	PV(AK,P,-R)	T/D	H=0, (V+W)=0	H=0, (V+W)>0, X	AD/AC	T/(V+D)	(T+U)/I	(T+U)-I	Input	Program	Input	Input	Input	PV(AM,P,-InputD33)	Input	PV(AM,P,-InputD28)	PV(AM,P,-InputD29)	Input	Input	Input
2011																																														
Commercial																																														
NGV Vehicles (COV)	702	1	703	0	0	0	0	703	100%	0%	0%	(13,716)	100%	(13,716)	8	303	-	FS	(816)	1,695	(797)	(124)	105	(81,428)	1,883	-	FS	921	105	0.1	0.5	1.1	176	7.15%	59.49	6%	5.59	6.0%	58.13	9.00	0.35	0.00	11.000	0.083	-
NGV Vehicles (Abbots)	2,275	1	2,276	0	0	0	0	2,276	100%	0%	0%	(193,275)	100%	(193,275)	8	5,000	-	FS	(11,499)	27,944	(11,235)	(1,740)	1,733	(1,147,424)	31,049	-	FS	12,975	1,733	0.1	0.8	2.0	14,170	7.15%	59.49	6%	5.59	6.0%	58.13	9.00	0.35	0.00	11.000	0.083	-
NGV Vehicles (Waste Management Inc.)	804	1	804	0	0	0	0	804	100%	0%	0%	(21,140)	100%	(21,140)	10	468	-	FS	(1,481)	3,100	(1,456)	(221)	3,100	(147,454)	3,445	-	FS	1,678	3,100	1.8	0.6	1.4	815	7.15%	70.07	6%	6.62	6.0%	68.90	10.45	6.62	0.00	11.000	0.083	-
Total Commercial	3,781	2	3,782	0	0	0	0	3,782	100%	-	0%	(228,131)		(228,131)		5,771	0	FS	(13,796)	32,739	(13,489)	(2,085)	4,938	(1,376,307)	36,377	0	FS	15,574	4,938	0.3	0.8	1.9	15,161	1.5	11,022											



	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI
1	**UTILITY**		**FORTIS BC**																																
2																																			
3																																			
4			**Year**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**		**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**
5			Units																																
6		**NATURAL GAS**																																	
7		Incremental Cost of Gas (nominal)	$ Per GJ	$5.50	$6.17	$6.81	$7.35	$7.87	$8.26	$8.56	$8.78	$8.99	$9.19	$9.40	$9.60	$9.81	$10.03	$10.25	$10.47	$10.70	$10.93	$11.17	$11.42	$11.67	$11.92	$12.19	$12.45	$13.23	$13.52	$13.81	$14.12	$14.43	$14.74	$15.07		
8	1		*Year*	*0*	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*		*12*	*13*	*14*	*15*	*16*	*17*	*18*	*19*	*20*	*21*	*22*	*24*	*25*	*26*	*27*	*28*	*29*	*30*	*31*	
9		carbon tax	$ per GJ	*1.00*	*1.25*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*		*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	
10		TGI Dist adder																										*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*		
11		Total incremental cost of gas including carbon		*6.50*	*7.41*	*8.30*	*8.85*	*9.36*	*9.76*	*10.06*	*10.27*	*10.48*	*10.69*	*10.89*	*9.60*		*11.52*	*11.74*	*11.97*	*12.19*	*12.43*	*12.67*	*12.91*	*13.16*	*13.42*	*13.68*	*13.95*	*14.88*	*15.17*	*15.47*	*15.77*	*16.08*	*16.40*	*16.72*	*1.50*	
12	2	GDP Deflator		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
13	3	Incremental Cost of Gas (Real)		$6.50	$7.41	$8.30	$8.85	$9.36	$9.76	$10.06	$10.27	$10.48	$10.69	$10.89	$9.60		$11.52	$11.74	$11.97	$12.19	$12.43	$12.67	$12.91	$13.16	$13.42	$13.68	$13.95	$14.88	$15.17	$15.47	$15.77	$16.08	$16.40	$16.72	$1.50	
14	4	Net Present Value -2010			$12.52	$19.27	$25.98	$32.61	$39.06	$45.26	$51.17	$56.81	$62.16	$67.26	$71.45		$76.15	$80.61	$84.86	$88.90	$92.74	$96.40	$99.87	$103.18	$106.33	$109.32	$112.17	$115.01	$117.71	$120.28	$122.72	$125.05	$127.26	$129.37	$129.54	
15	5	Net Present Value -2011				$14.13	$21.34	$28.44	$35.35	$42.00	$48.34	$54.37	$60.11	$65.57	$70.07		$75.38	$79.88	$84.43	$88.76	$92.88	$96.79	$100.52	$104.06	$107.43	$110.64	$113.70	$116.74	$119.63	$122.38	$125.00	$127.49	$129.86	$132.12	$132.31		
16	6	Net Present Value -2012					$15.45	$23.07	$30.47	$37.59	$44.38	$50.84	$57.00	$62.85	$67.66		$73.05	$78.18	$83.05	$87.69	$92.10	$96.30	$100.29	$104.09	$107.70	$111.14	$114.41	$117.67	$120.77	$123.72	$126.52	$129.19	$131.74	$134.15	$134.36		
17																																			
18																																			
19		**ELECTRICITY**																																	
20		Incremental Cost of Elec	$ Per kWh	$0.12																															
21		Incremental Cost of E Capacity	$ Per kW	$170.00																															
22		COST OF Diesel	$per L	$0.90																															
23																																			
24																																			
25	**RETAIL**																																		
26				Rate	Customers		789,928	Total Customers in BC		80,000	Total Residential and Commercial Customers on VI																									
27		Residential Retail			000's																															
28		TGI	$ Per MJ	$0.0110	640		712,304	Total Residential Customers in BC																												
29		TGVI	$ Per MJ	$0.0143	72											$11.00																			
30		Diesel	$ Per L	$0.9000																															
31		Electricity	$ per kWh	$0.0827	1,511		1,511,435	Total BCH Residential Customers in BC				89%																								
32		Electricity	$ per kW per year																																
33		Commercial Retail																																	
34		TGI	$ Per MJ	$0.0094	78		77,624	Total Commercial Customers in BC																												
35		TGVI	$ Per MJ	$0.0159	8																														
36		Electricity	$ Per MJ	$0.0155																															
37		Electricity	$ per kWh	$0.0558	190		189,764	Total Light Industrial and Commercial Customers in BC																												
38		Electricity	$ per kW per year	$52	15																														
39																																			
40	**TAX**																																		
41			**Year**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**		**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	
42	1		*Year*	*0*	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*		*11*	*12*	*13*	*14*	*15*	*16*	*17*	*18*	*19*	*20*	*21*	*23*	*24*	*25*	*26*	*27*	*28*	*29*	*30*		
43	2	Carbon	$ Per tonne		$20.00	$25.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00		$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00		
44	3	Carbon	$ Per GJ		$0.9976	$1.2470	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964		$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964		
45	4	GDP Deflator			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
46	5	Carbon (Real)			$1.00	$1.23	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50		$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50		
47	6	Net Present Value -2010				$2.02	$3.23	$4.37	$5.43	$6.42	$7.34	$8.20	$9.00	$9.75	$10.45		$11.11	$11.72	$12.29	$12.82	$13.31	$13.78	$14.21	$14.61	$14.99	$15.34	$15.67	$15.97	$16.26	$16.52	$16.77	$17.00	$17.22	$17.42	$17.61		
48	7	Net Present Value -2011					$2.47	$3.68	$4.82	$5.88	$6.87	$7.79	$8.65	$9.45	$10.20		$10.90	$11.56	$12.17	$12.74	$13.27	$13.76	$14.23	$14.66	$15.06	$15.44	$15.79	$16.12	$16.42	$16.71	$16.97	$17.22	$17.45	$17.67	$17.87		
49	8	Net Present Value -2012						$2.70	$3.92	$5.05	$6.11	$7.10	$8.02	$8.88	$9.69		$10.44	$11.14	$11.79	$12.40	$12.97	$13.50	$14.00	$14.46	$14.89	$15.29	$15.67	$16.02	$16.35	$16.65	$16.94	$17.21	$17.45	$17.69	$17.90		
50																																			
51		**Discount Rate (real)[1]**																																	
52		**TERASEN GAS**																																	
53		Rate of Inflation	1.90%																																
54		TGI	7.15%																																
55		TGVI	6.89%																																
56		**BC HYDRO**																																	
57		Rate of Inflation	2.00%																																
58		BC Hydro	6.00%																																
59		**Customer**	6.00%																																
60																																			
61																					2010														
62													2010 Planne	2011 planned			2010 split																		
63											Technologies						incnetives	admins	participants	incentive per participant		admin													
64				**SHEET LABELS**																																
65		**Residential**									Solar Thermal		300,000	600,000	0.8	0.2	240000	48000	240	1000	200														
66	**New Construction**										NGV		1,000,000	2,000,000			800000	8000	16	50,000	500														
67		0		**Hydronic Baseboard Systems**							Hydronic heating systems		125,000	250,000			100000	20000	100	1000	200														
68		0		**Hydronic Under Floor Systems**							TES type projects		750,000	1,500,000			600000	5217	3	230,000	2000														
69		NGV Vehicles		**Combo System 95% EE**							GSHP with aqs back up		125,000	250,000			100000	6667	33	3000	200														
70		0		**GSHP with Gas Backup**									2,300,000	4,600,000																					
71		0		**Solar Thermal Hot Water**								Total	6,900,000																						
72												available fur	69,000				1921217.4																		
73																																			
74																					2011														
75	**ADJUSTMENTS**																																		
76	**2010-2011 RRA application reconciliation**			**Incentives**	**Admin**												2011 split			participants	incentive per participant	admin													
77		**TGI**	2010	0.081	0.081												incnetives	admins																	
78			2011	0.081	0.081						Solar Thermal						480000	96000		480	1000		200												
79											NGV						1600000	16000		32	50,000		500												
80											Hydronic heating systems						200000	40000		200	1000		200												
81				**4669000**		2011		Decision by BCUC from the NSP			TES type projects						1200000	10435		5	230,000		2,000												
82				**2300000**		2010					GSHP with aqs back up						200000	13333		67	3000		200												
83				**6969000**																															
84																	3855768.1																		
85																																			
86											available funds		378782.61																						
87													813231.88																						

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NEW

Measure Data for Solar Air Heating PSECA Program

PER MEASURE		Utility Incentive to the participant	partner incentive
Total Incremental Cost	$ 495,143		
Utility Incentive	$ 73,103	$ 73,103	$ -
Incremental Participant cost	422040		

Annual Impact Per Measure

Energy Savings per installation	1457.5	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact		GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	30	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1		1		Estimated Participation
Impact						
Gross Energy Savings (GJ)	1,269	1,458	0	1,458	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	1,269	1,458	0	1,458	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$129.37	$132.31	#N/A	
Energy Purchases	#N/A	#N/A	$ -	$ 192,841	#N/A	
Utility Program Costs						
DSM Incentives		$ 73,103	$ -	$ 73,103	$ -	
Administration		$ 1,000		$ 1,000		
Subtotal	$ 64,543	$ 74,103	$ -	$ 74,103	$ -	
Partner Program Costs						
DSM Incentives		#REF!	#REF!	$ -	#REF!	
Administration		$ -	$ -		$ -	
Subtotal	#REF!	#REF!	#REF!	$ -	#REF!	
Participants' Net Costs						
Incremental Cost		$ 422,040	$ -	$ 422,040	$ -	
Subtotal	$ 367,595	$ 422,040	$ -	$ 422,040	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.652 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	#N/A		#REF!	$ (303,302)	#N/A	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 27.8**		**$ -**	**$ 27.8**	**$ -**	Informational (for comparison with supply options)

Fortis BC

Innovative Technology

Measure Data for NGV Vehicles (COV)

PER MEASURE

Implementation Lag

Total Cost	$ 78,000		
Total Incentive	$ 78,000		
Utility Incentive	***$ 78,000***	*No lag*	*Present Value accounts for any implementation lag*
Partner Incentive	***$ -***	*No lag*	*Present Value accounts for any implementation lag*
Participant Cost			

Annual Impact Per Measure

Time lag to implementation	-	Years	
Energy Cons per installation	**-1524.0**	GJ	Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	**0%**	100%	Net-to-Gross
Alternate Energy Impact	**33,697**	L	
Alternate Capacity Impact		kW/a	
Measure Lifetime	**8**	Years	Estimated lifespan of measure

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	8	9	**0**	**9**		Estimated Participation
Impact						
Gross Energy Savings (GJ)	(11,895)	(13,716)	0	(13,716)	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	(11,895)	(13,716)	0	(13,716)	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (Liters)	269,912	303,273	0	303,273	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Cost Benefit Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$56.21	$59.49	$62.21	
Energy Purchases	$ (816,032)	$ (816,032)	$ -	$ (816,032)	$ -	
Utility Program Costs						
DSM Incentives		$ 702,000	$ -	$ 702,000	$ -	Including Implementation Lag
Administration		$ 500	**$ -**	**$ 500**		
Subtotal	$ 609,256	$ 702,500	$ -	$ 702,500	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	Including Implementation Lag
Administration		$ -	**$ -**	**$ -**	**$ -**	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$1,694,937	$ -	$1,694,937	$ -	$5.589 PV $ per L
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$1,694,937	$1,694,937	$ -	$1,694,937	$ -	
Total Resource Net Benefit (Cost)	$ 269,649		$ -	$ 176,404	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ -**		**$ -**	**$ -**	**$ -**	Informational (for comparison with supply options)

FORTIS BC

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NEW

Measure Data for Solar for School (Solar BC)

PER MEASURE			Utility Incentive to the participant	partner incentive
Total Incremental Cost	$	154,977		
Total Incentive	$	141,998	$ 22,352	$ 119,646
Incremental Participant cost	$	12,979		

Annual Impact Per Measure

Energy Savings per installation	264.6	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact		GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	25	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1		1		Estimated Participation
Impact						
Gross Energy Savings (GJ)	230	265	0	265	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	230	265	0	265	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	$ Total	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$117.71	$122.38	$126.52	
Energy Purchases	$ 32,382	$ 32,382	$ -	$ 32,382	$ -	
Utility Program Costs						
DSM Incentives		$ 22,352	$ -	$ 22,352	$ -	
Administration		$ 500		$ 500		
Subtotal	$ 19,904	$ 22,852	$ -	$ 22,852	$ -	
Partner Program Costs						
DSM Incentives		$ 119,646	$ -	$ 119,646	$ -	
Administration		$ -	$ -		$ -	
Subtotal	$ 104,211	$ 119,646	$ -	$ 119,646	$ -	
Participants' Net Costs						
Incremental Cost		$ 12,979	$ -	$ 12,979	$ -	
Subtotal	$ 11,305	$ 12,979	$ -	$ 12,979	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.534 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 1,174		$ -	$ (123,095)	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 11.8**		**$ -**	**$ 11.8**	**$ -**	Informational (for comparison with supply options)

Fortis BC

Innovative Technology

Measure Data for NGV Vehicles (Abbots)

PER MEASURE

Implementation Lag

Total Cost	$ 91,000		
Total Incentive	$ 91,000		
Utility Incentive	***$ 91,000***	*No lag*	*Present Value accounts for any implementation lag*
Partner Incentive	***$ -***	*No lag*	*Present Value accounts for any implementation lag*
Participant Cost			

Annual Impact Per Measure

Time lag to implementation	-	Years	
Energy Cons per installation	**-7731.0**	GJ	Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	**0%**	100%	Net-to-Gross
Alternate Energy Impact	**200,000**	L	
Alternate Capacity Impact		kW/a	
Measure Lifetime	**8**	Years	Estimated lifespan of measure

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	22	25	**0**	**25**		Estimated Participation
Impact						
Gross Energy Savings (GJ)	(167,621)	(193,275)	0	(193,275)	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	(167,621)	(193,275)	0	(193,275)	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (Liters)	4,449,982	5,000,000	0	5,000,000	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Cost Benefit Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$56.21	$59.49	$62.21	
Energy Purchases	$ (11,498,879)	$ (11,498,879)	$ -	$ (11,498,879)	$ -	
Utility Program Costs						
DSM Incentives		$ 2,275,000	$ -	$ 2,275,000	$ -	Including Implementation Lag
Administration		$ 500	**$ -**	**$ 500**		
Subtotal	$ 1,973,468	$ 2,275,500	$ -	$ 2,275,500	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	Including Implementation Lag
Administration		$ -	**$ -**	**$ -**	**$ -**	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ 27,944,072	$ -	$ 27,944,072	$ -	$5.589 PV $ per L
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ 27,944,072	$ 27,944,072	$ -	$ 27,944,072	$ -	
Total Resource Net Benefit (Cost)	$ 14,471,725		$ -	$ 14,169,693	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ -**		**$ -**	**$ -**	**$ -**	Informational (for comparison with supply options)

Fortis BC

only enter in boxes marked in blue

NEW

Measure Data for Solar Residential Hot Water Pilot Program

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 8,500			
Total Incentive	$ 3,000		$ 1,667	$ 1,333
Participant	$ 5,500			

Annual Impact Per Measure

Energy Savings per installation	14.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact		GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	25	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY		Total	2010	2011	2012	Explanatory Notes
	26	30	0	30		Estimated Participation
Impact						
Gross Energy Savings (GJ)	364	420	0	420	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	364	420	0	420	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$141.61	$146.21	$150.20	
Energy Purchases	$ 61,409	$ 61,409	$ -	$ 61,409	$ -	
Utility Program Costs						
DSM Incentives		$ 50,000	$ -	$ 50,000	$ -	
Administration		$ 26,000	$ -	$ 26,000		
Subtotal	$ 65,912	$ 76,000	$ -	$ 76,000	$ -	
Partner Program Costs						
DSM Incentives		$ 39,990	$ -	$ 39,990	$ -	
Administration		$ -		$ -	$ -	
Subtotal	$ 34,682	$ 39,990	$ -	$ 39,990	$ -	
Participants' Net Costs						
Incremental Cost		$ 165,000	$ -	$ 165,000	$ -	
Subtotal	$ 143,099	$ 165,000	$ -	$ 165,000	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.534 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ (147,602)		$ -	$ (219,581)	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 50.9**		**$ -**	**$ 50.9**	**$ -**	Informational (for comparison with supply options)

Fortis BC

Innovative Technology

Measure Data for NGV Vehicles (Waste Management Inc.)

PER MEASURE			Implementation Lag	
Total Cost	$	40,178		
Total Incentive	$	40,178		
Utility Incentive	*$*	*40,178*	*No lag*	*Present Value accounts for any implementation lag*
Partner Incentive	*$*	*-*	*No lag*	*Present Value accounts for any implementation lag*
Participant Cost				

Annual Impact Per Measure

Time lag to imp	-	Years	
Energy Cons per installation	-1057.0	GJ	Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	100%	Net-to-Gross
Alternate Energy Impact	23400.0	L	
Alternate Capacity Impact		kW/a	
Measure Lifetime	10	Years	Estimated lifespan of measure

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	17	20	0	20		Estimated Participation
Impact						
Gross Energy Savings (GJ)	(18,413)	(21,140)	0	(21,140)	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	(18,413)	(21,140)	0	(21,140)	0	Gross Energy Savings less Free Riders
ıergy Impact (Increase) (Liters)	416,518	468,000	0	468,000	0	Other Utility Billed energy impact
ıacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Cost Benefit Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$67.26	$70.07	$73.05	
Energy Purchas	$ (1,481,179)	$ (1,481,179)	$ -	$ (1,481,179)	$ -	
Utility Program Costs						
DSM Incentives		$ 803,560	$ -	$ 803,560	$ -	Including Implementation Lag
Administration		$ 500	$ -	$ 500		
Subtotal	$ 700,332	$ 804,060	$ -	$ 804,060	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	Including Implementation Lag
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ 3,100,069	$ -	$ 3,100,069	$ -	$6.624 PV $ per L
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ 3,100,069	$ 3,100,069	$ -	$ 3,100,069	$ -	
Total Resource Net Benefit (Co	$ 918,557		$ -	$ 814,830	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (L	$ -		$ -	$ -	$ -	Informational (for comparison with supply options)

FORTIS BC

	PROGRAM															ALTERNATE		NET PRESENT VALUE									BENEFIT/COST							PARAMETERS															
2011 Innovative Technologies	COSTS ($000)											SAVINGS (GJ)			LIFE	Impact		Levelized Cost	Utility Benefits (Costs)		Participant Benefits (Costs)			Program Net Savings				Participant							UTILITY				PARTICIPANT											
FEVI	Utility			Partners											Years	Energy	Capacity	($/GJ)	Program	Alternate	Program	Carbon Tax	Alternate	Natural Gas	Alternate Energy	Alternate Capacity	Natural Gas	Total Costs	Total Benefits	Benefit/Cost	Natural Gas	SCT	SCT Net Benefits	Natural Gas Utility Discount Rate	Natural Gas Supply	Alternate Discount Rate	Alternate Supply	Discount Rate	Natural Gas NPV	Carbon Tax NPV	Alternate Energy NPV	Alternate Capacity NPV	Natural Gas Tariff	Energy Tariff	Capacity Tariff													
	Incentives	Administration	Total	Incentives	Administration	Total	Participant	Total	% Utility	% Partner	% Participant	Gross	Net-to-Gross	Net		MWh	kW		($'000s)	($'000s)	($'000s)	($'000s)	($'000s)	(GJ)	(MWh)	(kW)	Utility	($'000s)	($'000s)		Rate Impact	SCT	($'000s)		$/GJ		$/kWh		$/GJ	$/GJ	$/kWh	$/kW/a	$/GJ	$/kWh	$/kW/a													
Label	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR	AS	AT													
Source Sheet or Calculation	Program	Program	B+C	Program	Program	E+F	Program	D+G+H	D/I	G/I	H/I	Program	Program	MxN	Program	Program	Program	D/Y	OxAJ	Q x N x AL	M x N x AN	M x N x AO	N x (QxAP + RxAQ)	PV(AI,P,-O)	PV(AK,P,-Q*N)	PV(AK,P,-R)	T/D	H=D, (V+W)=D	H=D, (V+W)>D, X	AD/AC	T/(V+D)	(T+U)/I	(T+U)-I	Input	Program	Input	Input	Input	PV(AM,P,-InputD25)	Input	PV(AN,P,-InputD28)	PV(AM,P,-InputD29)	Input	Input	Input													
2011																																																								
RESIDENTIAL:																																																								
SolarBC Schools Incentive Program	5	0	5	33	0	33	3	41	12%	80%	8%	61	100%	61	25	0	-	5	22	N/A	18	2	N/A	1,060	-	-	4.3	3	20	6.2	0.9	0.5	(19)	3.00%	275.84	3%	2.09	3.0%	294.98	26.51	1.44	0.00	9.999	0.083	-													
Total IT	5	0	5	33	0	33	3	41	12%	80%	8%	61	100%	61	25	-	-	5	22	N/A	18	2	N/A	1,060	-	-	4.3	3	20	6.2	0.9	0.5	(19)	3.00%	275.84	3%	2.09	3.0%	294.98	26.51	1.44	0.00	9.999	0.083	-													

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ
1	**UTILITY**		**FORTIS BC**																																	
2																																				
3																																				
4			**Year**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	
5			Units																																	
6		**NATURAL GAS**																																		
7		Incremental Cost of Gas (nominal)	$ Per GJ	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.43
8	1		*Year*	*0*	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*	*16*	*17*	*18*	*19*	*20*	*21*	*22*	*23*	*24*	*25*	*26*	*27*	*28*	*29*	*30*	*31*	
9		carbon tax	$ per GJ	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	
10		Distribution adder	$ per GJ	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	
11		Total incremental cost of gas including carbon		*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.43*	*15.28*	
12	2	GDP Deflator		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
13	3	Incremental Cost of Gas (Real)		$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.28	
14	4	Net Present Value -2010			$29.52	$43.65	$57.35	$70.66	$83.59	$96.13	$108.31	$120.14	$131.62	$142.77	$153.59	$164.10	$174.30	$184.20	$193.82	$203.15	$212.22	$221.02	$229.56	$237.85	$245.91	$253.72	$261.32	$268.68	$275.84	$282.79	$289.53	$296.08	$302.43	$308.61	$314.64		
15	5	Net Present Value -2011			$29.52	$43.65	$57.35	$70.66	$83.59	$96.13	$108.31	$120.14	$131.62	$142.77	$153.59	$164.10	$174.30	$184.20	$193.82	$203.15	$212.22	$221.02	$229.56	$237.85	$245.91	$253.72	$261.32	$268.68	$275.84	$282.79	$289.53	$296.08	$302.43	$308.56			
16	6	Net Present Value -2012				$29.52	$43.65	$57.35	$70.66	$83.59	$96.13	$108.31	$120.14	$131.62	$142.77	$153.59	$164.10	$174.30	$184.20	$193.82	$203.15	$212.22	$221.02	$229.56	$237.85	$245.91	$253.72	$261.32	$268.68	$275.84	$282.79	$289.53	$296.08	$302.37				
17																																				
18																																				
19		**ELECTRICITY**																																		
20		Incremental Cost of Elec	$ Per kWh	$0.10																																
21		Incremental Cost of E Capacity	$ Per kW/a	$170.00																																
22																																				
23																																				
24																																				
25	**RETAIL**																																			
26				Rate	Customers																															
27		Residential Retail			1,000																															
28		**TGI**	$ Per MJ	$0.0100	1,000																															
29		**TGVI**	$ Per MJ	$0.0143	1,000																															
30		**Electricity**	$ Per MJ	$0.0230																																
31		**Electricity**	$ per kWh	$0.0829	1,000																															
32		**Electricity**	$ per kW per year		1,000																															
33		Commercial Retail																																		
34		**TGI**	$ Per MJ	$0.0094	50																															
35		**TGVI**	$ Per MJ	$0.0168	50																															
36		**Electricity**	$ Per MJ	$0.0214																																
37		**Electricity**	$ per kWh	$0.0709	750																															
38		**Electricity**	$ per kW per year	$52.0000	50																															
39																																				
40	**TAX**																																			
41			**Year**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**		
42	1		*Year*		*0*	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*	*16*	*17*	*18*	*19*	*20*	*21*	*22*	*23*	*24*	*25*	*26*	*27*	*28*	*29*	*30*	
43	2	Carbon	$ Per tonne		$20.00	$25.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	
44	3	Carbon	$ Per GJ		$0.9976	$1.2470	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	
45	4	GDP Deflator			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
46	5	Carbon (Real)			$1.00	$1.25	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	
47	6	Net Present Value -2008			$2.14	$3.51	$4.84	$6.13	$7.38	$8.60	$9.78	$10.93	$12.05	$13.13	$14.18	$15.19	$16.18	$17.14	$18.08	$18.98	$19.86	$20.71	$21.54	$22.35	$23.13	$23.89	$24.62	$25.34	$26.03	$26.71	$27.38	$27.99	$28.61	$29.21			
48	7	Net Present Value -2009				$2.62	$3.99	$5.32	$6.61	$7.86	$9.08	$10.26	$11.41	$12.52	$13.60	$14.65	$15.67	$16.66	$17.62	$18.55	$19.46	$20.34	$21.19	$22.02	$22.82	$23.61	$24.36	$25.10	$25.81	$26.51	$27.18	$27.84	$28.47	$29.09				
49	8	Net Present Value -2010					$2.86	$4.23	$5.56	$6.85	$8.11	$9.32	$10.50	$11.65	$12.76	$13.85	$14.90	$15.91	$16.90	$17.86	$18.80	$19.70	$20.58	$21.43	$22.26	$23.07	$23.85	$24.61	$25.34	$26.06	$26.75	$27.42	$28.08	$28.71			
50																																				
51		**Discount Rate (real)**[1]																																		
52		**TERASEN GAS**																																		
53		**Rate of Inflation**	1.90%																																	
54		**TGI**	3.00%																																	
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59		**Customer**	3.00%																																	
60		*Footnote 1: Source LR 670531*																																		
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63	**New Construction**																																			
64		#REF!		**BASEBOARD**																																
65		#REF!		**HEATPUMP**																																

FORTIS BC

only enter in boxes marked in blue

NEW

Measure Data for SolarBC Schools Incentive Program

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 41,191			
Total Incentive	$ 38,058		$ 4,932	$ 33,126
Participant	$ 3,133			
Annual Impact Per Measure				
Energy Savings per installation	60.9	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact		GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	25	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1		1		Estimated Participation
Impact						
Gross Energy Savings (GJ)	57	61	0	61	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	57	61	0	61	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$275.84	$275.84	$275.84	
Energy Purchases	$ 16,788	$ 16,788	$ -	$ 16,788	$ -	
Utility Program Costs						
DSM Incentives		$ 4,932	$ -	$ 4,932	$ -	
Administration		$ 100		$ 100		
Subtotal	$ 4,743	$ 5,032	$ -	$ 5,032	$ -	
Partner Program Costs						
DSM Incentives		$ 33,126	$ -	$ 33,126	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ 31,224	$ 33,126	$ -	$ 33,126	$ -	
Participants' Net Costs						
Incremental Cost		$ 3,133	$ -	$ 3,133	$ -	
Subtotal	$ 2,953	$ 3,133	$ -	$ 3,133	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$2.090 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 9,091		$ -	$ (24,503)	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 7.7**		**$ -**	**$ 7.7**	**$ -**	Informational (for comparison with supply options)

FORTIS BC

	PROGRAM														ALTERNATE		NET PRESENT VALUE								BENEFIT/COST							PARAMETERS												
2011 Innovative Technologies	COSTS ($000)											SAVINGS (GJ)			LIFE	Impact		Levelized Cost	Utility Benefits (Costs)		Participant Benefits (Costs)			Program Net Savings			Participant							UTILITY				PARTICIPANT								
FEVI	Utility			Partners			Participant	Total	% Utility	% Partner	% Participant	Gross	Net-to-Gross	Net	Years	Energy	Capacity	($/GJ)	Program	Alternate	Program	Carbon Tax	Alternate	Natural Gas	Alternate Energy	Alternate Capacity	Natural Gas	Total Costs	Total Benefits	Benefit/Cost	Natural Gas	Total Resource	TRC Net Benefits	Natural Gas Utility Discount Rate	Natural Gas Supply	Alternate Discount Rate	Alternate Supply	Discount Rate	Natural Gas NPV	Carbon Tax NPV	Alternate Energy NPV	Alternate Capacity NPV	Natural Gas Tariff	Energy Tariff	Capacity Tariff			
	Incentives	Administration	Total	Incentives	Administration	Total										MWh	kW		($'000s)	($'000s)	($'000s)	($'000s)	($'000s)	(GJ)	(MWh)	(kW)	Utility	($'000s)	($'000s)		Rate Impact		($'000s)	$/GJ		$/kWh	$/GJ	$/GJ	$/kWh	$/kW/a	$/GJ	$/kWh	$/kW/a			
Label	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR	AS	AT			
Source Sheet or Calculation	Program	Program	B+C	Program	Program	E+F	Program	D+G+H	D/I	G/I	H/I	Program	Program	MxN	Program	Program	Program	D/Y	OxAJ	Q x N x AL	M x N x AN	M x N x AO	N x [QxAP + RxAQ]	PV(AJ,P,-O)	PV(AK,P,-Q*N)	PV(AK,P,-R)	T/D	H=Q, (V+W)=0	H=Q, (V+W)=0, X	AD/AC	T/(V+D)	(T+U)/I	(T+U)-I	Input	Program	Input	Input	Input	PV(AM,P,-InputD25)	Input	PV(AM,P,-InputD28)	PV(AM,P,-InputD29)	Input	Input	Input			
2011																																															
RESIDENTIAL:																																															
SolarBC Schools Incentive Program	5	0	5	33	0	33	3	41	12%	80%	8%	61	100%	61	25	0	-	7	8	N/A	13	1	N/A	716	-	-	1.6	3	14	4.5	0.4	0.2	(33)	6.89%	128.90	6%	1.53	6.0%	216.55	17.64	1.06	0.00	9.999	0.083	-			
Total IT	5	0	5	33	0	33	3	41	12%	80%	8%	61	100%	61	25	-	-	7	8	N/A	13	1	N/A	716	-	-	1.6	3	14	4.5	0.4	0.2	(33)	6.89%	128.90	6%	1.53	6.0%	216.55	17.64	1.06	0.00	9.999	0.083	-			

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI
1	UTILITY		FORTIS BC																																
2																																			
3																																			
4			Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041
5			Units																																
6		NATURAL GAS																																	
7		Incremental Cost of Gas (nominal)	$ Per GJ	$5.50	$6.17	$6.81	$7.35	$7.87	$8.26	$8.56	$8.78	$8.99	$9.19	$9.40	$9.60	$9.81	$10.03	$10.25	$10.47	$10.70	$10.93	$11.17	$11.42	$11.67	$11.92	$12.19	$12.45	$12.73	$13.01	$13.29	$13.58	$13.88	$14.19	$14.50	$14.82
8	1		Year	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
9		carbon tax	$ per GJ	0.75	1.00	1.25	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
10		Distribution adder	$ per GJ	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	
11		Total incremental cost of gas including carbon		6.40	7.32	8.21	9.00	9.52	9.91	10.21	10.43	10.64	10.84	11.05	11.25	11.46	11.68	11.90	12.12	12.35	12.58	12.82	13.07	13.32	13.57	13.84	14.10	14.38	14.66	14.94	15.23	15.53	15.84	16.15	16.32
12	2	GDP Deflator		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
13	3	Incremental Cost of Gas (Real)		$6.40	$7.32	$8.21	$9.00	$9.52	$9.91	$10.21	$10.43	$10.64	$10.84	$11.05	$11.25	$11.46	$11.68	$11.90	$12.12	$12.35	$12.58	$12.82	$13.07	$13.32	$13.57	$13.84	$14.10	$14.38	$14.66	$14.94	$15.23	$15.53	$15.84	$16.15	$16.32
14	4	Net Present Value -2010			$12.39	$19.11	$26.00	$32.82	$39.46	$45.87	$51.98	$57.82	$63.39	$68.70	$73.75	$78.57	$83.16	$87.54	$91.72	$95.69	$99.48	$103.10	$106.54	$109.83	$112.96	$115.95	$118.80	$121.52	$124.11	$126.58	$128.94	$131.19	$133.33	$135.38	$137.31
15	5	Net Present Value -2011				$14.03	$21.40	$28.69	$35.78	$42.63	$49.17	$55.41	$61.36	$67.03	$72.44	$77.59	$82.50	$87.18	$91.64	$95.89	$99.94	$103.80	$107.49	$111.00	$114.35	$117.54	$120.59	$123.49	$126.26	$128.90	$131.42	$133.83	$136.12	$138.31	$140.38
16	6	Net Present Value -2012					$15.55	$23.34	$30.93	$38.25	$45.24	$51.91	$58.27	$64.33	$70.11	$75.61	$80.86	$85.87	$90.63	$95.18	$99.51	$103.64	$107.58	$111.33	$114.91	$118.32	$121.58	$124.68	$127.64	$130.47	$133.16	$135.73	$138.18	$140.52	$142.73
17																																			
18																																			
19		ELECTRICITY																																	
20		Incremental Cost of Elec	$ Per kWh	$0.12																															
21		Incremental Cost of E Capacity	$ Per kW/a	$170.00																															
22																																			
23																																			
24																																			
25	RETAIL																																		
26				Rate	Customers		789,928	Total Customers in BC		80,000	Total Residential and Commercial Customers on VI																								
27		Residential Retail			000's																														
28		TGI	$ Per MJ	$0.0100	640		712,304	Total Residential Customers in BC																											
29		TGVI	$ Per MJ	$0.0143	72																														
30		Electricity	$ Per MJ	$0.0230																															
31		Electricity	$ per kWh	$0.0827	1,511		1,511,435	Total BCH Residential Customers in BC				89%																							
32		Electricity	$ per kW per year																																
33		Commercial Retail																																	
34		TGI	$ Per MJ	$0.0094	78		77,624	Total Commercial Customers in BC																											
35		TGVI	$ Per MJ	$0.0169	8																														
36		Electricity	$ Per MJ	$0.0214																															
37		Electricity	$ per kWh	$0.0769	190		189,764	Total Light Industrial and Commercial Customers in BC																											
38		Electricity	$ per kW per year	$52.0000	15																														
39																																			
40	TAX																																		
41			Year	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
42	1		Year		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
43	2	Carbon	$ Per tonne		$20.00	$25.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00
44	3	Carbon	$ Per GJ		$0.9976	$1.2470	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964
45	4	GDP Deflator			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
46	5	Carbon (Real)			$1.00	$1.25	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50
47	6	Net Present Value -2008				$2.02	$3.25	$4.40	$5.47	$6.47	$7.41	$8.29	$9.11	$9.88	$10.60	$11.27	$11.90	$12.49	$13.04	$13.55	$14.04	$14.49	$14.91	$15.30	$15.67	$16.02	$16.34	$16.64	$16.93	$17.19	$17.44	$17.67	$17.89	$18.09	$18.28
48	7	Net Present Value -2009					$2.48	$3.70	$4.85	$5.92	$6.92	$7.86	$8.74	$9.56	$10.33	$11.05	$11.72	$12.35	$12.94	$13.49	$14.01	$14.49	$14.94	$15.36	$15.76	$16.13	$16.47	$16.79	$17.10	$17.38	$17.64	$17.89	$18.12	$18.34	$18.54
49	8	Net Present Value -2010						$2.71	$3.93	$5.08	$6.15	$7.16	$8.10	$8.97	$9.80	$10.56	$11.28	$11.96	$12.58	$13.17	$13.72	$14.24	$14.72	$15.17	$15.59	$15.99	$16.36	$16.70	$17.03	$17.33	$17.61	$17.88	$18.12	$18.36	$18.57
50																																			
51		Discount Rate (real)[1]																																	
52		TERASEN GAS																																	
53		Rate of Inflation	1.90%																																
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NEW

Measure Data for SolarBC Schools Incentive Program

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 41,191			
Total Incentive	$ 38,058		$ 4,932	$ 33,126
Participant	$ 3,133			

Annual Impact Per Measure

Energy Savings per installation	60.9	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	0%	1.00		Net-to-Gross
Alternate Energy Impact		GJ	0	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	25	Years	Estimated lifespan of measure	

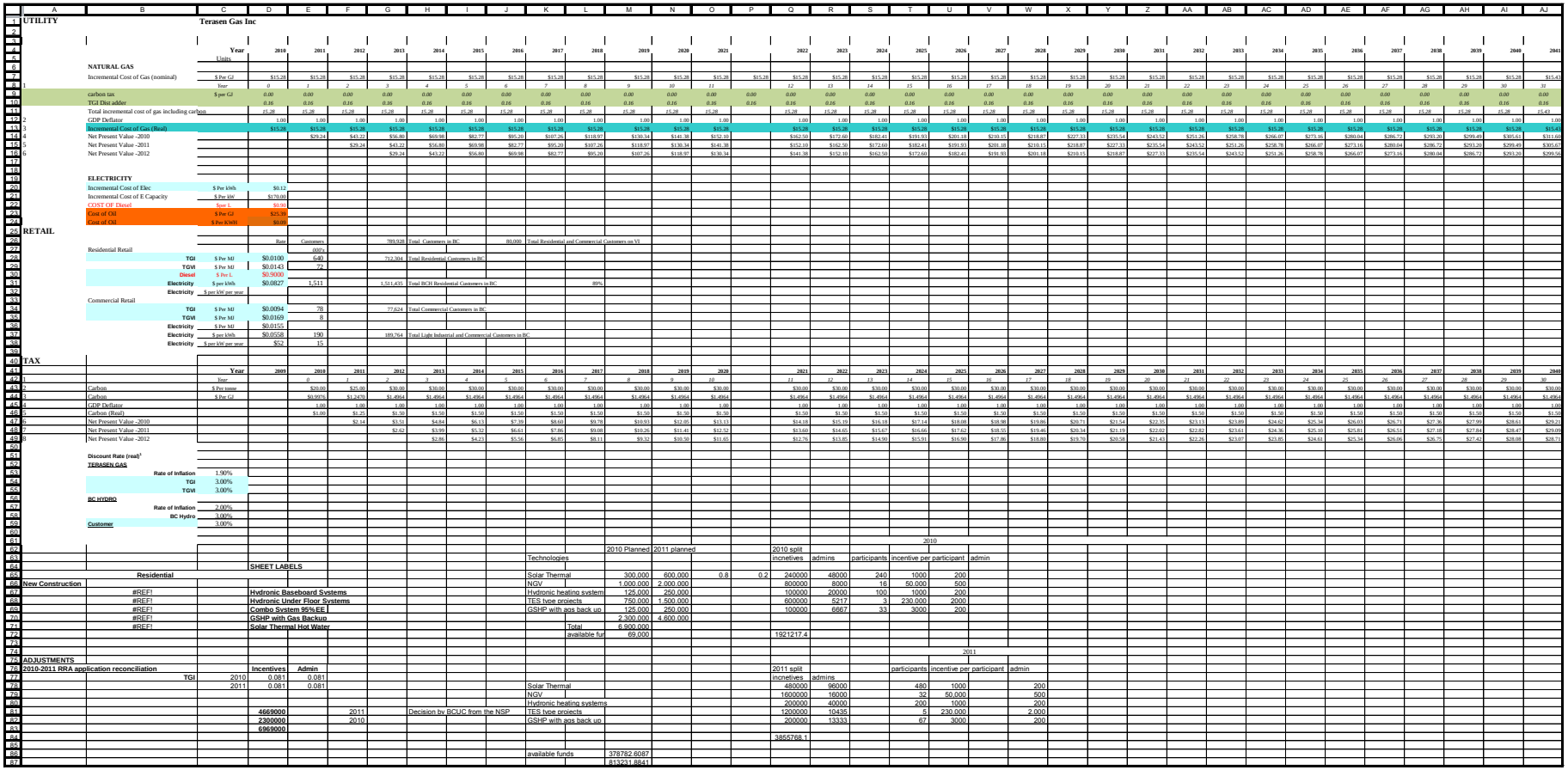
ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	1	1		1		Estimated Participation
Impact						
Gross Energy Savings (GJ)	53	61	0	61	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	53	61	0	61	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	0	0	0	0	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$124.11	$128.90	$133.16	
Energy Purchases	$ 7,845	$ 7,845	$ -	$ 7,845	$ -	
Utility Program Costs						
DSM Incentives		$ 4,932	$ -	$ 4,932	$ -	
Administration		$ 100		$ 100		
Subtotal	$ 4,383	$ 5,032	$ -	$ 5,032	$ -	
Partner Program Costs						
DSM Incentives		$ 33,126	$ -	$ 33,126	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ 28,853	$ 33,126	$ -	$ 33,126	$ -	
Participants' Net Costs						
Incremental Cost		$ 3,133	$ -	$ 3,133	$ -	
Subtotal	$ 2,729	$ 3,133	$ -	$ 3,133	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ -	$ -	$ -	$ -	$1.534 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ -	$ -	$ -	$ -	$ -	
Total Resource Net Benefit (Cost)	$ 733		$ -	$ (33,446)	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	**$ 11.7**		**$ -**	**$ 11.7**	**$ -**	Informational (for comparison with supply options)

TERASEN GAS INC

	PROGRAM														ALTERNATE		NET PRESENT VALUE									BENEFIT/COST						PARAMETERS													
2011 High Carbon Fuel Switching Programs	COSTS ($000)										SAVINGS (GJ)			LIFE	Impact		Levelized Cost	Utility Benefits (Costs)		Participant Benefits (Costs)			Program Net Savings			Natural Gas	Participant			Natural Gas		SCT Net Benefits	UTILITY				PARTICIPANT								
FEI	Utility			Partners																																									
	Incentives	Administration	Total	Incentives	Administration	Total	Participant	Total	% Utility	% Partner	% Participant	Gross	Net-to-Gross	Net	Years	Energy	Capacity	($/GJ)	Program	Alternate	Program	Carbon Tax	Alternate	Natural Gas	Alternate Energy	Alternate Capacity	Natural Gas	Total Costs	Total Benefits	Benefit/Cost	Natural Gas	SCT	($'000s)	Natural Gas Utility Discount	Natural Gas Supply	Alternate Discount Rate	Alternate Supply	Discount Rate	Natural Gas NPV	Carbon Tax NPV	Alternate Energy NPV	Alternate Capacity NPV	Natural Gas Tariff	Energy Tariff	Capacity Tariff
															L	kW		($'000s)	($'000s)	($'000s)	($'000s)	($'000s)	(GJ)	(MWh)	(kW)	Utility	($'000s)	($'000s)		Rate Impact	SCT			$/GJ		$/L		$/GJ	$/GJ	$/L	$/kW/a	$/GJ	$/kWh	$/kW/a
Label	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR	AS	AT
Source Sheet or Calculation	Program	Program	B+C	Program	Program	E+F	Program	D+G+H	D/I	G/I	H/I	Program	Program	M-N	Program	Program	Program	D/Y	OxAJ	Q x N x AL	M x N x AN	M x N x AO	N x (QxAP + RxAQ)	PV(AI,P,-O)	PV(AK,P,-Q*N)	PV(AK,P,-R)	T/D	H=0, (V+W)=0	H=0, (V+W)=X, X	AD/AC	T/(V+D)	(T+U)/I	(T+U)-I	Input	Program	Input	Input	Input	PV(AM,P,-Input!D25)	Input	PV(AM,P,-Input!D28)	PV(AM,P,-Input!D29)	Input	Input	Input
Switch 'N' Shrink High Carbon Fuel Switching	100	21	121	-	-	-	-	121	100%	-	0%	(3,440)	50%	(1,720)	18	4	-	FS	(508)	835	(236)	(36)	643	(23,656)	25	-	FS	272	643	2.4	0.4	1.3	206	3.00%	227.33	3%	349.20	3.0%	137.40	$20.71	349.20	0.00	9.990	0.083	-
Total Residential	100	21	121	-	-	-	-	121		-	0%	(3,440)		(1,720)		4	-	FS	(508)	835	(236)	(36)	643	(23,656)	25	-	FS	272	643	2.4	0.4	1.3	206												



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Measure Data for Switch 'N' Shrink High Carbon Fuel Switching

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$	1,250		
Total Incentive	$	1,250	$ 1,250	$ -
Participant	$	-		

Annual Impact Per Measure

Energy Savings per installation	-43.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	50%	0.50		Net-to-Gross
Alternate Energy Impact	46	GJ	12,778	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	18	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	69	80	0	80		Estimated Participation
Impact						
Gross Energy Savings (GJ)	(2,983)	(3,440)	0	(3,440)	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	(1,492)	(1,720)	0	(1,720)	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	3,275	3,680	0	3,680	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$218.87	$227.33	$227.33	
Energy Purchases	$ (391,004)	$ (391,004)	$ -	$ (391,004)	$ -	
Utility Program Costs						
DSM Incentives		$ 100,000	$ -	$ 100,000	$ -	
Administration		$ 20,760	$ -	$ 20,760		
Subtotal	$ 104,731	$ 120,760	$ -	$ 120,760	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ 642,531	$ -	$ 642,531	$ -	$349.202 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ 642,531	$ 642,531	$ -	$ 642,531	$ -	
Total Resource Net Benefit (Cost)	$ 146,796		$ -	$ 130,767	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	$ -		$ -	$ -	$ -	Informational (for comparison with supply options)

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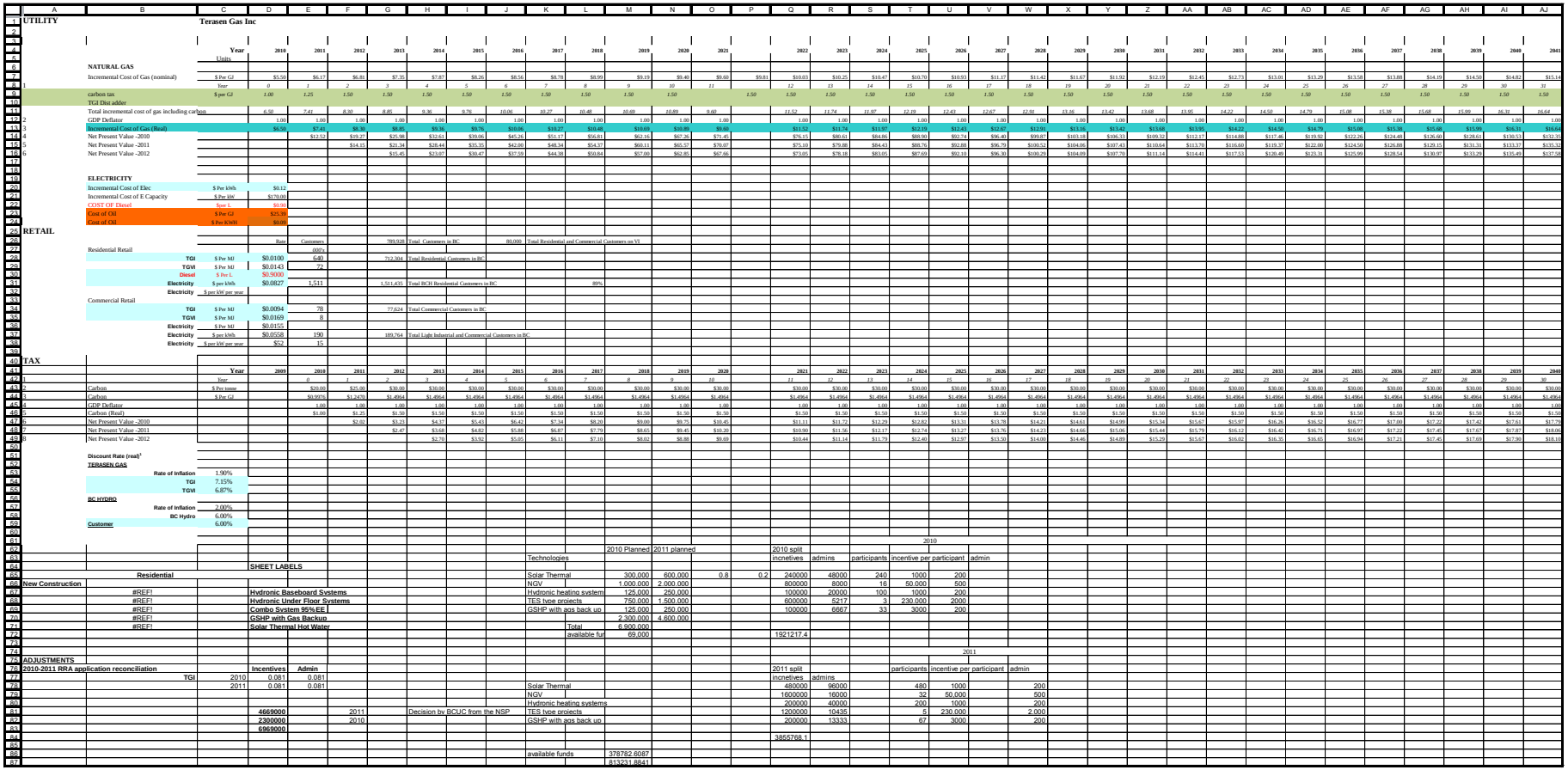
	PROGRAM															ALTERNATE		NET PRESENT VALUE									BENEFIT/COST						
2011 High Carbon Fuel Switching Programs	COSTS ($000)											SAVINGS (GJ)			LIFE	Impact		Levelized Cost	Utility Benefits (Costs)		Participant Benefits (Costs)			Program Net Savings				Participant					
FEI	Utility			Partners											Years	Energy	Capacity	($/GJ)	Program	Alternate	Program	Carbon Tax	Alternate	Natural Gas	Alternate Energy	Alternate Capacity	Natural Gas	Total Costs	Total Benefits	Benefit/Cost	Natural Gas	Total Resource	TRC Net Benefits
	Incentives	Administration	Total	Incentives	Administration	Total	Participant	Total	% Utility	% Partner	% Participant	Gross	Net-to-Gross	Net		L	kW		($'000s)	($'000s)	($'000s)	($'000s)	($'000s)	(GJ)	(MWh)	(kW)	Utility	($'000s)	($'000s)		Rate Impact		($'000s)
Label	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH
Source Sheet or Calculation	Program	Program	B+C	Program	Program	E+F	Program	D+G+H	D/I	G/I	H/I	Program	Program	MxN	Program	Program	Program	D/Y	OxAJ	Q x N x AL	M x N x AN	M x N x AO	N x (QxAP + RxAQ)	PV(AI,P,-O)	PV(AK,P,-Q*N)	PV(AK,P,-R)	T/D	H>0, (V+W)<0	H<0, (V+W)>0, X	AD/AC	T/(V+D)	(T+U)/I	(T+U)-I
Switch 'N' Shrink High Carbon Fuel Switching	100	21	121	-	-	-	-	121	100%	-	0%	(3,440)	50%	(1,720)	18	4	-	FS	(178)	506	(186)	(25)	506	(17,116)	20	-	FS	211	506	2.4	0.6	1.7	207
Total Residential	100	21	121	-	-	-	-	121		-	0%	(3,440)		(1,720)		4	-	FS	(178)	506	(186)	(25)	506	(17,116)	20	-	FS	211	506	2.4	0.6	1.7	207



	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ
1	**UTILITY**		**Terasen Gas Inc**																																	
2																																				
3																																				
4			Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021		2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041
5			Units																																	
6		**NATURAL GAS**																																		
7		Incremental Cost of Gas (nominal)	$ Per GJ	$5.50	$6.17	$6.81	$7.35	$7.87	$8.26	$8.56	$8.78	$8.99	$9.19	$9.40	$9.60	$9.81	$10.03	$10.25	$10.47	$10.70	$10.93	$11.17	$11.42	$11.67	$11.92	$12.19	$12.45	$12.73	$13.01	$13.29	$13.58	$13.88	$14.19	$14.50	$14.82	$15.14
8	1		Year	*0*	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*		*12*	*13*	*14*	*15*	*16*	*17*	*18*	*19*	*20*	*21*	*22*	*23*	*24*	*25*	*26*	*27*	*28*	*29*	*30*	*31*
9		carbon tax	$ per GJ	*1.00*	*1.25*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*		*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*
10		TGI Dist adder																																		
11		Total incremental cost of gas including carbon		*6.50*	*7.41*	*8.30*	*8.85*	*9.36*	*9.76*	*10.06*	*10.27*	*10.48*	*10.69*	*10.89*	*9.60*		*11.52*	*11.74*	*11.97*	*12.19*	*12.43*	*12.67*	*12.91*	*13.16*	*13.42*	*13.68*	*13.95*	*14.22*	*14.50*	*14.79*	*15.08*	*15.38*	*15.68*	*15.99*	*16.31*	*16.64*
12	2	GDP Deflator		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
13	3	Incremental Cost of Gas (Real)		$6.50	$7.41	$8.30	$8.85	$9.36	$9.76	$10.06	$10.27	$10.48	$10.69	$10.89	$9.60		$11.52	$11.74	$11.97	$12.19	$12.43	$12.67	$12.91	$13.16	$13.42	$13.68	$13.95	$14.22	$14.50	$14.79	$15.08	$15.38	$15.68	$15.99	$16.31	$16.64	
14	4	Net Present Value -2010			$12.52	$19.27	$25.98	$32.61	$39.08	$45.26	$51.17	$56.81	$62.16	$67.26	$71.45		$76.15	$80.61	$84.86	$88.90	$92.74	$96.40	$99.87	$103.18	$106.33	$109.32	$112.17	$114.88	$117.46	$119.92	$122.28	$124.48	$126.60	$128.63	$130.53	$132.35	
15	5	Net Present Value -2011				$14.15	$21.34	$28.44	$35.35	$42.00	$48.34	$54.37	$60.11	$65.57	$70.07		$75.10	$79.88	$84.43	$88.76	$92.88	$96.79	$100.52	$104.06	$107.43	$110.64	$113.70	$116.60	$119.37	$122.00	$124.50	$126.88	$129.15	$131.31	$133.37	$135.32	
16	6	Net Present Value -2012					$15.45	$23.07	$30.47	$37.59	$44.38	$50.84	$57.00	$62.85	$67.66		$73.05	$78.18	$83.05	$87.69	$92.10	$96.30	$100.29	$104.09	$107.70	$111.14	$114.41	$117.53	$120.49	$123.31	$125.99	$128.54	$130.97	$133.29	$135.49	$137.58	
17																																				
18																																				
19		**ELECTRICITY**																																		
20		Incremental Cost of Elec	$ Per kWh	$0.12																																
21		Incremental Cost of E Capacity	$ Per kW	$170.00																																
22		COST OF Diesel	$per L	$0.90																																
23		Cost of Oil	$ Per GJ	$25.39																																
24		Cost of Oil	$ Per KWH	$0.09																																
25	**RETAIL**																																			
26				Rate	Customers		789,928	Total Customers in BC		80,000	Total Residential and Commercial Customers on VI																										
27		Residential Retail			(000's)																																
28		**TGI**	$ Per MJ	$0.0100	640		712,304	Total Residential Customers in BC																													
29		**TGVI**	$ Per MJ	$0.0143	72																																
30		**Diesel**	$ Per L	$0.9000																																
31		**Electricity**	$ per kWh	$0.0827	1,511		1,511,435	Total BCH Residential Customers in BC				89%																									
32		**Electricity**	$ per kW per year																																	
33		Commercial Retail																																		
34		**TGI**	$ Per MJ	$0.0094	78		77,624	Total Commercial Customers in BC																													
35		**TGVI**	$ Per MJ	$0.0169	8																																
36		**Electricity**	$ Per MJ	$0.0155																																
37		**Electricity**	$ per kWh	$0.0558	190		189,764	Total Light Industrial and Commercial Customers in BC																													
38		**Electricity**	$ per kW per year	$52	15																																
39																																				
40	**TAX**																																			
41			**Year**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**		**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**
42	1		Year		*0*	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*		*11*	*12*	*13*	*14*	*15*	*16*	*17*	*18*	*19*	*20*	*21*	*22*	*23*	*24*	*25*	*26*	*27*	*28*	*29*	*30*
43	2	Carbon	$ Per tonne		$20.00	$25.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00		$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00
44	3	Carbon	$ Per GJ		$0.957%	$1.2478	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964		$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964
45	4	GDP Deflator			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
46	5	Carbon (Real)			$1.00	$1.25	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50		$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50
47	6	Net Present Value -2010				$2.60	$3.23	$4.37	$5.45	$6.42	$7.34	$8.20	$9.00	$9.75	$10.45		$11.11	$11.72	$12.29	$12.82	$13.31	$13.78	$14.21	$14.61	$14.99	$15.34	$15.67	$15.97	$16.26	$16.52	$16.77	$17.00	$17.22	$17.42	$17.61	$17.79	
48	7	Net Present Value -2011					$2.47	$3.68	$4.82	$5.88	$6.87	$7.79	$8.65	$9.45	$10.20		$10.90	$11.56	$12.17	$12.74	$13.27	$13.76	$14.23	$14.66	$15.06	$15.44	$15.79	$16.12	$16.42	$16.71	$16.97	$17.22	$17.45	$17.67	$17.87	$18.06	
49	8	Net Present Value -2012						$2.70	$3.92	$5.05	$6.11	$7.10	$8.02	$8.88	$9.69		$10.44	$11.14	$11.79	$12.40	$12.97	$13.50	$14.00	$14.46	$14.89	$15.29	$15.67	$16.02	$16.35	$16.65	$16.94	$17.21	$17.45	$17.68	$17.90	$18.10	
50																																				
51		**Discount Rate (real)[1]**																																		
52		**TERASEN GAS**																																		
53		**Rate of Inflation**	1.90%																																	
54		**TGI**	7.15%																																	
55		**TGVI**	6.87%																																	
56		**BC HYDRO**																																		
57		**Rate of Inflation**	2.00%																																	
58		**BC Hydro**	6.00%																																	
59		**Customer**	6.00%																																	
60																																				
61																						2010														
62													2010 Planned	2011 planned			2010 split																			
63											Technologies						incnetives	admins	participants	incentive per participant	admin															
64				**SHEET LABELS**																																	
65		**Residential**									Solar Thermal		300,000	600,000	0.8	0.2	240000	48000	240	1000	200															
66		**New Construction**									NGV		1,000,000	2,000,000			800000	8000	16	50,000	500															
67		#REF!		**Hydronic Baseboard Systems**							Hydronic heating systems		125,000	250,000			100000	20000	100	1000	200															
68		#REF!		**Hydronic Under Floor Systems**							TES type projects		750,000	1,500,000			600000	5217	3	230,000	2000															
69		#REF!		**Combo System 95%EE**							GSHP with gas back up		125,000	250,000			100000	6667	33	3000	200															
70		#REF!		**GSHP with Gas Backup**									2,300,000	4,600,000																						
71		#REF!		**Solar Thermal Hot Water**								Total	6,900,000																							
72												available fur	69,000				1921217.4																			
73																																				
74																						2011														
75	**ADJUSTMENTS**																																			
76	**2010-2011 RRA application reconciliation**			**Incentives**	**Admin**												2011 split			participants	incentive per participant	admin														
77		**TGI**	2010	0.081	0.081												incnetives	admins																		
78			2011	0.081	0.081						Solar Thermal						480000	96000		480	1000		200													
79											NGV						1600000	16000		32	50,000		500													
80											Hydronic heating systems						200000	40000		200	1000		200													
81				**4669000**		2011		Decision by BCUC from the NSP			TES type projects						1200000	10435		5	230,000		2,000													
82				**2300000**		2010					GSHP with gas back up						200000	13333		67	3000		200													
83				**6969000**																																
84																	3855768.1																		
85																																				
86											available funds		378782.6087																						
87													813231.8841																						

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only enter in boxes marked in blue

Measure Data for Switch 'N' Shrink High Carbon Fuel Switching

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$	1,250		
Total Incentive	$	1,250	$ 1,250	$ -
Participant	$	-		

Annual Impact Per Measure

Energy Savings per installation	-43.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	50%	0.50		Net-to-Gross
Alternate Energy Impact	46	GJ	12,778	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	18	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	69	80	0	80		Estimated Participation
Impact						
Gross Energy Savings (GJ)	(2,983)	(3,440)	0	(3,440)	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	(1,492)	(1,720)	0	(1,720)	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	3,275	3,680	0	3,680	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$99.87	$103.36	$107.10	
Energy Purchases	$ (177,771)	$ (177,771)	$ -	$ (177,771)	$ -	
Utility Program Costs						
DSM Incentives		$ 100,000	$ -	$ 100,000	$ -	
Administration		$ 20,760	$ -	$ 20,760		
Subtotal	$ 104,731	$ 120,760	$ -	$ 120,760	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ 505,840	$ -	$ 505,840	$ -	$274.913 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ 505,840	$ 505,840	$ -	$ 505,840	$ -	
Total Resource Net Benefit (Cost)	$ 223,337		$ -	$ 207,309	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	$ -		$ -	$ -	$ -	Informational (for comparison with supply options)

FORTIS BC

	PROGRAM															ALTERNATE		NET PRESENT VALUE									BENEFIT/COST						PARAMETERS														
2011 High Carbon Fuel Switching Programs	COSTS ($000)											SAVINGS (GJ)			LIFE	Impact		Levelized Cost	Utility Benefits (Costs)		Participant Benefits (Costs)			Program Net Savings				Participant						UTILITY				PARTICIPANT									
FEVI	Utility			Partners												Energy	Capacity		Program	Alternate	Program	Carbon Tax	Alternate	Natural Gas	Alternate Energy	Alternate Capacity	Natural Gas	Total Costs	Total Benefits	Benefit/Cost	Natural Gas		SCT	SCT Net Benefits	Natural Gas Utility Discount	Natural Gas Supply	Alternate Discount Rate	Alternate Supply	Discount Rate	Natural Gas NPV	Carbon Tax NPV	Alternate Energy NPV	Alternate Capacity NPV	Natural Gas Tariff	Energy Tariff	Capacity Tariff
	Incentives	Administration	Total	Incentives	Administration	Total	Participant	Total	% Utility	% Partner	% Participant	Gross	Net-to-Gross	Net	Years	MWh	kW	($/GJ)	($'000s)	($'000s)	($'000s)	($'000s)	($'000s)	(GJ)	(MWh)	(kW)	Utility	($'000s)	($'000s)		Rate Impact	SCT	($'000s)	$/GJ	$/GJ		$/kWh		$/GJ	$/GJ	$/kWh	$/kW/a	$/GJ	$/kWh	$/kW/a
Label	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR	AS	AT
Source Sheet or Calculation	Program	Program	B+C	Program	Program	E+F	Program	D+G+H	D/I	G/I	H/I	Program	Program	M±N	Program	Program	Program	D/Y	OxAJ	Q x N x AL	M x N x AN	M x N x AO	N x (QxAP + RxAQ)	PV(AI,P,-O)	PV(AK,P,-Q*N)	PV(AK,P,-R)	T/D	R+O, (V+W)+O	R+O, (V+W)+O, X	AD/AC	T/(V+O)	(T+U)/I	(T+U)-I	Input	Program	Input	Input	Input	PV(AM,P,-Input!D25)	Input	PV(AM,P,-Input!D28)	PV(AM,P,-Input!D29)	Input	Input	Input
2011																																														
RESIDENTIAL:																																														
Switch 'N' Shrink High Carbon Fuel Switching	320	83	403	0	0	0	0	403	100%	0%	0%	(13,760)	50%	(6,880)	18	15	-	FS	(1,977)	3,341	(1,355)	(143)	2,570	(94,624)	101	-	FS	1,498	2,570	1.7	0.6	1.4	961	3.00%	221.02	3%	349.20	3.0%	197.02	20.71	349.20	0.00	9.999	0.083	-
Total Residential	320	83	403	-	-	-	0	403	100%	-	0%	(13,760)		(6,880)		15	-	FS	(1,977)	3,341	(1,355)	(143)	2,570	(94,624)	101	-	FS	1,498	2,570	1.7	0.6	1.4	961													

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
1	UTILITY		Terasen Gas Inc														
2																	
3																	
4			Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
5			Units														
6		NATURAL GAS															
7		Incremental Cost of Gas (nominal)	$ Per GJ	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28
8	1		Year	0	1	2	3	4	5	6	7	8	9	10	11	12	13
9		carbon tax	$ per GJ	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10		Distribution adder	$ per GJ	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
11		Total incremental cost of gas including carbon		15.43	15.43	15.43	15.43	15.43	15.43	15.43	15.43	15.43	15.43	15.43	15.43	15.43	15.43
12	2	GDP Deflator		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
13	3	Incremental Cost of Gas (Real)		$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43
14	4	Net Present Value -2010			$29.52	$43.65	$57.35	$70.66	$83.59	$96.13	$108.31	$120.14	$131.62	$142.77	$153.59	$164.10	$174.30
15	5	Net Present Value -2011				$29.52	$43.65	$57.35	$70.66	$83.59	$96.13	$108.31	$120.14	$131.62	$142.77	$153.59	$164.10
16	6	Net Present Value -2012					$29.52	$43.65	$57.35	$70.66	$83.59	$96.13	$108.31	$120.14	$131.62	$142.77	$153.59
17																	
18																	
19		ELECTRICITY															
20		Incremental Cost of Elec	$ Per kWh	$0.12													
21		Incremental Cost of E Capacity	$ Per kW/a	$170.00													
22		Oil															
23		Cost of Oil	$ Per GJ	$25.39													
24		Cost of Oil	$ Per KWH	$0.09													
25	RETAIL																
26				Rate	Customers		789,928	Total Customers in BC		80,000	Total Residential and Commercial Customers on VI						
27		Residential Retail			000's												
28		TGI	$ Per MJ	$0.0100	640		712,304	Total Residential Customers in BC									
29		TGVI	$ Per MJ	$0.0143	72												
30		Electricity	$ Per MJ	$0.0230													
31		Electricity	$ per kWh	$0.0827	1,511		1,511,435	Total BCH Residential Customers in BC				89%					
32		Electricity	$ per kW per year														
33		Commercial Retail															
34		TGI	$ Per MJ	$0.0094	78		77,624	Total Commercial Customers in BC									
35		TGVI	$ Per MJ	$0.0169	8												
36		Electricity	$ Per MJ	$0.0214													
37		Electricity	$ per kWh	$0.0769	190		189,764	Total Light Industrial and Commercial Customers in BC									
38		Electricity	$ per kW per year	$52.0000	15												
39																	
40	TAX																
41			Year	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
42	1		Year		0	1	2	3	4	5	6	7	8	9	10	11	12
43	2	Carbon	$ Per tonne		$20.00	$25.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00
44	3	Carbon	$ Per GJ		$0.9976	$1.2470	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964
45	4	GDP Deflator			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
46	5	Carbon (Real)			$1.00	$1.25	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50
47	6	Net Present Value -2010				$2.14	$3.51	$4.84	$6.13	$7.39	$8.60	$9.78	$10.93	$12.05	$13.13	$14.18	$15.19
48	7	Net Present Value -2011					$2.62	$3.99	$5.32	$6.61	$7.86	$9.08	$10.26	$11.41	$12.52	$13.60	$14.65
49	8	Net Present Value -2012						$2.86	$4.23	$5.56	$6.85	$8.11	$9.32	$10.50	$11.65	$12.76	$13.85
50																	
51		Discount Rate (real)[1]															
52		TERASEN GAS															
53		Rate of Inflation	1.90%														
54		TGI	3.00%														
55		TGVI	3.00%														
56		BC HYDRO															
57		Rate of Inflation	2.00%														
58		BC Hydro	3.00%														
59		Customer	3.00%														
60		Footnote 1: Source LR 070531															
61																	
62				SHEET LABELS													
63	New Construction																
64		#REF!		BASEBOARD													
65		#REF!		HEATPUMP													
66																	
67																	
68	Heating Oil vs Nat Ga	0.02	Year	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
69	1	tonnes/GJ	Year	0	1	2	3	4	5	6	7	8	9	10	11	12	13
70	2	Carbon	$ Per tonne	$15.00	$20.00	$25.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00
71	3	Carbon	$ Per GJ	$0.30	$0.40	$0.50	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60
72	4	GDP Deflator		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
73	5	Carbon (Real)		$0.30	$0.40	$0.50	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60
74	6	Net Present Value -2009			$0.64	$1.05	$1.52	$1.96	$2.37	$2.76	$3.13	$3.47	$3.80	$4.10	$4.39	$4.66	$4.91
75	7	Net Present Value -2010				$0.82	$1.32	$1.79	$2.23	$2.64	$3.03	$3.40	$3.74	$4.06	$4.37	$4.65	$4.92
76	8	Net Present Value -2011					$1.00	$1.50	$1.97	$2.41	$2.82	$3.21	$3.58	$3.92	$4.25	$4.55	$4.84

	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ
4	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	
7	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.28	$15.43
8	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
10	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15		
11	15.43	15.43	15.43	15.43	15.43	15.43	15.43	15.43	15.43	15.43	15.43	15.43	15.43	15.43	15.43	15.43	15.43		
12	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
13	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43	$15.43		
14	$184.20	$193.82	$203.15	$212.22	$221.02	$229.56	$237.85	$245.91	$253.72	$261.32	$268.68	$275.84	$282.79	$289.53	$296.08	$302.43	$308.61		
15	$174.30	$184.20	$193.82	$203.15	$212.22	$221.02	$229.56	$237.85	$245.91	$253.72	$261.32	$268.68	$275.84	$282.79	$289.53	$296.08	$302.43		
16	$164.10	$174.30	$184.20	$193.82	$203.15	$212.22	$221.02	$229.56	$237.85	$245.91	$253.72	$261.32	$268.68	$275.84	$282.79	$289.53	$296.08		
41	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	
42	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
43	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	
44	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	
45	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
46	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	
47	$16.18	$17.14	$18.08	$18.98	$19.86	$20.71	$21.54	$22.35	$23.13	$23.89	$24.62	$25.34	$26.03	$26.71	$27.36	$27.99	$28.61	$29.21	
48	$15.67	$16.66	$17.62	$18.55	$19.46	$20.34	$21.19	$22.02	$22.82	$23.61	$24.36	$25.10	$25.81	$26.51	$27.18	$27.84	$28.47	$29.09	
49	$14.90	$15.91	$16.90	$17.86	$18.80	$19.70	$20.58	$21.43	$22.26	$23.07	$23.85	$24.61	$25.34	$26.06	$26.75	$27.42	$28.08	$28.71	
68	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041
69	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
70	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00
71	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60
72	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00
73	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$1.20
74	$5.15	$5.37	$5.58	$5.78	$5.96	$6.14	$6.30	$6.46	$6.60	$6.74	$6.87	$6.99	$7.10	$7.21	$7.31	$7.40	$7.49	$7.57	$7.65
75	$5.18	$5.41	$5.64	$5.85	$6.04	$6.23	$6.40	$6.57	$6.72	$6.87	$7.00	$7.13	$7.25	$7.36	$7.47	$7.57	$7.67	$7.75	$7.84
76	$5.10	$5.36	$5.60	$5.82	$6.03	$6.23	$6.41	$6.59	$6.75	$6.90	$7.05	$7.19	$7.31	$7.43	$7.55	$7.65	$7.75	$7.85	$7.94

FORTIS BC
RESIDENTIAL
NEW

only enter in boxes marked in blue

Measure Data for Switch 'N' Shrink High Carbon Fuel Switching

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$ 1,000			
Total Incentive	$ 1,000		$ 1,000	$ -
Participant	$ -			

Annual Impact Per Measure

Energy Savings per installation	-43.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	50%	0.50		Net-to-Gross
Alternate Energy Impact	46	GJ	12,778	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	18	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	302	320	0	320	0	Estimated Participation
Impact						
Gross Energy Savings (GJ)	(12,970)	(13,760)	0	(13,760)	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	(6,485)	(6,880)	0	(6,880)	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	13,875	14,720	0	14,720	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$221.02	$221.02	$221.02	
Energy Purchases	$ (1,520,592)	$ (1,520,592)	$ -	$ (1,520,592)	$ -	
Utility Program Costs						
DSM Incentives		$ 320,000	$ -	$ 320,000	$ -	
Administration		$ 83,040	$ -	$ 83,040	$ -	
Subtotal	$ 379,904	$ 403,040	$ -	$ 403,040	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ 2,570,124	$ -	$ 2,570,124	$ -	$349.202 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ 2,570,124	$ 2,570,124	$ -	$ 2,570,124	$ -	
Total Resource Net Benefit (Cost)	$ 669,629		$ -	$ 646,493	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	$ -		$ -	$ -	$ -	Informational (for comparison with supply options)

FORTIS BC

PROGRAM

2011 High Carbon Fuel Switching Programs — FEVI	COSTS ($000) Utility Incentives	COSTS ($000) Utility Administration	COSTS ($000) Utility Total	COSTS ($000) Partners Incentives	COSTS ($000) Partners Administration	COSTS ($000) Partners Total	Participant	Total	% Utility	% Partner	% Participant	SAVINGS (GJ) Gross	SAVINGS (GJ) Net-to-Gross	SAVINGS (GJ) Net	LIFE Years
Label	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
Source Sheet or Calculation	Program	Program	B+C	Program	Program	E+F	Program	D+G+H	D/I	G/I	H/I	Program	Program	MxN	Program
2011															
RESIDENTIAL:															
Switch 'N' Shrink High Carbon Fuel Switching	320	83	403	0	0	0	0	403	100%	0%	0%	(13,760)	50%	(6,880)	18
Total Residential	320	83	403	-	-	-	0	403	100%	-	0%	(13,760)		(6,880)	

ALTERNATE / NET PRESENT VALUE

2011 High Carbon Fuel Switching Programs — FEVI	ALTERNATE Impact Energy MWh	ALTERNATE Impact Capacity kW	Levelized Cost ($/GJ)	Utility Benefits (Costs) Program ($'000s)	Utility Benefits (Costs) Alternate ($'000s)	Participant Benefits (Costs) Program ($'000s)	Participant Benefits (Costs) Carbon Tax ($'000s)	Participant Benefits (Costs) Alternate ($'000s)	Program Net Savings Natural Gas (GJ)	Program Net Savings Alternate Energy (MWh)	Program Net Savings Alternate Capacity (kW)
Label	Q	R	S	T	U	V	W	X	Y	Z	AA
Source Sheet or Calculation	Program	Program	D/Y	OxAJ	Q x N x AL	M x N x AN	M x N x AO	N x (QxAP + RxAQ)	PV(AI,P,-O)	PV(AK,P,-Q*N)	PV(AK,P,-R)
2011											
RESIDENTIAL:											
Switch 'N' Shrink High Carbon Fuel Switching	15	-	FS	(739)	2,023	(1,067)	(103)	2,023	(69,759)	80	-
Total Residential	15	-	FS	(739)	2,023	(1,067)	(103)	2,023	(69,759)	80	-

BENEFIT/COST / PARAMETERS

2011 High Carbon Fuel Switching Programs — FEVI	Natural Gas Utility	Participant Total Costs ($'000s)	Participant Total Benefits ($'000s)	Participant Benefit/Cost	Natural Gas Rate Impact	Total Resource	TRC Net Benefits ($'000s)	UTILITY Natural Gas Utility Discount	UTILITY Natural Gas Supply $/GJ	UTILITY Alternate Discount Rate	UTILITY Alternate Supply $/kWh	PARTICIPANT Discount Rate	PARTICIPANT Natural Gas NPV $/GJ	PARTICIPANT Carbon Tax NPV $/GJ	PARTICIPANT Alternate Energy NPV $/kWh	PARTICIPANT Alternate Capacity NPV $/kW/a	Natural Gas Tariff $/GJ	Energy Tariff $/kWh	Capacity Tariff $/kW/a
Label	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR	AS	AT
Source Sheet or Calculation	T/D	H>0, (V+W)<0	H<0, (V+W)>0, X	AD/AC	T/(V+D)	(T+U)/I	(T+U)-I	Input	Program	Input	Input	Input	PV(AM,P,-InputD25)	Input	PV(AM,P,-InputD28)	PV(AM,P,-InputD29)	Input	Input	Input
2011																			
RESIDENTIAL:																			
Switch 'N' Shrink High Carbon Fuel Switching	FS	1,170	2,023	1.7	0.9	1.8	881	6.89%	107.48	6%	274.91	6.0%	155.11	14.91	274.91	0.00	9.999	0.083	-
Total Residential	FS	1,170	2,023	1.7	0.9	1.8	881												

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ
1	UTILITY		Terasen Gas Inc																																	
2																																				
3																																				
4			Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	
5			Units																																	
6		NATURAL GAS																																		
7		Incremental Cost of Gas (nominal)	$ Per GJ	$5.50	$6.17	$6.81	$7.35	$7.87	$8.26	$8.56	$8.78	$8.99	$9.19	$9.40	$9.60	$9.81	$10.03	$10.25	$10.47	$10.70	$10.93	$11.17	$11.42	$11.67	$11.92	$12.19	$12.45	$12.73	$13.01	$13.29	$13.58	$13.88	$14.19	$14.50	$14.82	$15.14
8	1		*Year*	*0*	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*	*16*	*17*	*18*	*19*	*20*	*21*	*22*	*23*	*24*	*25*	*26*	*27*	*28*	*29*	*30*		
9		carbon tax	$ per GJ	*0.75*	*1.00*	*1.25*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*	*1.50*		
10		Distribution adder	$ per GJ	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*		
11		Total incremental cost of gas including carbon		*6.40*	*7.31*	*8.20*	*9.00*	*9.51*	*9.91*	*10.21*	*10.42*	*10.63*	*10.84*	*11.04*	*11.25*	*11.46*	*11.67*	*11.89*	*12.12*	*12.34*	*12.58*	*12.82*	*13.06*	*13.31*	*13.57*	*13.83*	*14.10*	*14.37*	*14.65*	*14.94*	*15.23*	*15.53*	*15.83*	*16.14*		
12	2	GDP Deflator		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
13	3	Incremental Cost of Gas (Real)		$6.40	$7.31	$8.20	$9.00	$9.51	$9.91	$10.21	$10.42	$10.63	$10.84	$11.04	$11.25	$11.46	$11.67	$11.89	$12.12	$12.34	$12.58	$12.82	$13.06	$13.31	$13.57	$13.83	$14.10	$14.37	$14.65	$14.94	$15.23	$15.53	$15.83	$16.14		
14	4	Net Present Value -2010			$12.39	$19.10	$26.00	$32.81	$39.46	$45.86	$51.98	$57.82	$63.38	$68.69	$73.75	$78.56	$83.16	$87.53	$91.71	$95.68	$99.47	$103.09	$106.53	$109.82	$112.95	$115.94	$118.79	$121.51	$124.10	$126.57	$128.93	$131.18	$133.32	$135.37		
15	5	Net Present Value -2011				$14.02	$21.39	$28.68	$35.78	$42.62	$49.16	$55.40	$61.35	$67.02	$72.43	$77.58	$82.49	$87.17	$91.63	$95.88	$99.93	$103.79	$107.48	$110.99	$114.34	$117.53	$120.58	$123.48	$126.25	$128.90	$131.42	$133.82	$136.11	$138.30		
16	6	Net Present Value -2012					$15.55	$23.34	$30.93	$38.25	$45.24	$51.90	$58.27	$64.33	$70.11	$75.61	$80.86	$85.86	$90.63	$95.17	$99.50	$103.63	$107.57	$111.32	$114.90	$118.32	$121.57	$124.68	$127.64	$130.46	$133.16	$135.72	$138.18	$140.51		
17																																				
18																																				
19		ELECTRICITY																																		
20		Incremental Cost of Elec	$ Per kWh	$0.12																																
21		Incremental Cost of E Capacity	$ Per kW/a	$170.00																																
22		Oil																																		
23		Cost of Oil	$ Per GJ	$25.39																																
24		Cost of Oil	$ Per KWH	$0.09																																
25	RETAIL																																			
26				Rate	Customers		789,928	Total Customers in BC		80,000	Total Residential and Commercial Customers on VI																									
27		Residential Retail			000's																															
28		TGI	$ Per MJ	$0.0100	640		712,304	Total Residential Customers in BC																												
29		TGVI	$ Per MJ	$0.0143	72																															
30		Electricity	$ Per MJ	$0.0230																																
31		Electricity	$ per kWh	$0.0827	1,511		1,511,435	Total BCH Residential Customers in BC				89%																								
32		Electricity	$ per kW per year																																	
33		Commercial Retail																																		
34		TGI	$ Per MJ	$0.0094	78		77,624	Total Commercial Customers in BC																												
35		TGVI	$ Per MJ	$0.0169	8																															
36		Electricity	$ Per MJ	$0.0214																																
37		Electricity	$ per kWh	$0.0769	190		189,764	Total Light Industrial and Commercial Customers in BC																												
38		Electricity	$ per kW per year	$52.0000	15																															
39																																				
40	TAX																																			
41			Year	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	
42	1		*Year*		*0*	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*	*16*	*17*	*18*	*19*	*20*	*21*	*22*	*23*	*24*	*25*	*26*	*27*	*28*	*29*	*30*	
43	2	Carbon	$ Per tonne		$20.00	$25.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	
44	3	Carbon	$ Per GJ		$0.9976	$1.2470	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	$1.4964	
45	4	GDP Deflator			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
46	5	Carbon (Real)			$1.00	$1.25	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	$1.50	
47	6	Net Present Value -2010				$2.02	$3.25	$4.40	$5.47	$6.47	$7.41	$8.29	$9.11	$9.88	$10.60	$11.27	$11.90	$12.49	$13.04	$13.55	$14.04	$14.49	$14.91	$15.30	$15.67	$16.02	$16.34	$16.64	$16.93	$17.19	$17.44	$17.67	$17.89	$18.09	$18.28	
48	7	Net Present Value -2011					$2.48	$3.70	$4.85	$5.92	$6.92	$7.86	$8.74	$9.56	$10.33	$11.05	$11.72	$12.35	$12.94	$13.49	$14.01	$14.49	$14.94	$15.36	$15.76	$16.13	$16.47	$16.79	$17.10	$17.38	$17.64	$17.89	$18.12	$18.34	$18.54	
49	8	Net Present Value -2012						$2.71	$3.93	$5.08	$6.15	$7.16	$8.10	$8.97	$9.80	$10.56	$11.28	$11.96	$12.58	$13.17	$13.72	$14.24	$14.72	$15.17	$15.59	$15.99	$16.36	$16.70	$17.03	$17.33	$17.61	$17.88	$18.12	$18.36	$18.57	
50																																				
51		**Discount Rate (real)[1]**																																		
52		**TERASEN GAS**																																		
53		Rate of Inflation	1.90%																																	
54		TGI	7.15%																																	
55		TGVI	6.89%																																	
56		**BC HYDRO**																																		
57		Rate of Inflation	2.00%																																	
58		BC Hydro	6.00%																																	
59		Customer	6.00%																																	
60		*Footnote 1: Source LR 070531*																																		
61																																				
62				SHEET LABELS																																
63	New Construction																																			
64		#REF!		BASEBOARD																																
65		#REF!		HEATPUMP																																
66																																				
67																																				
68	Heating Oil vs Nat Ga	0.02	Year	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041
69	1	tonnes/GJ	*Year*	*0*	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*	*16*	*17*	*18*	*19*	*20*	*21*	*22*	*23*	*24*	*25*	*26*	*27*	*28*	*29*	*30*	*31*	*32*
70	2	Carbon	$ Per tonne	$15.00	$20.00	$25.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00
71	3	Carbon	$ Per GJ	$0.30	$0.40	$0.50	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60
72	4	GDP Deflator		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00
73	5	Carbon (Real)		$0.30	$0.40	$0.50	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$0.60	$1.20
74	6	Net Present Value -2009			$0.64	$1.05	$1.52	$1.96	$2.37	$2.76	$3.13	$3.47	$3.80	$4.10	$4.39	$4.66	$4.91	$5.15	$5.37	$5.58	$5.78	$5.96	$6.14	$6.30	$6.46	$6.60	$6.74	$6.87	$6.99	$7.10	$7.21	$7.31	$7.40	$7.49	$7.57	$7.65
75	7	Net Present Value -2010				$0.82	$1.32	$1.79	$2.23	$2.64	$3.03	$3.40	$3.74	$4.06	$4.37	$4.65	$4.92	$5.18	$5.41	$5.64	$5.85	$6.04	$6.23	$6.40	$6.57	$6.72	$6.87	$7.00	$7.13	$7.25	$7.36	$7.47	$7.57	$7.67	$7.75	$7.84
76	8	Net Present Value -2011					$1.00	$1.50	$1.97	$2.41	$2.82	$3.21	$3.58	$3.92	$4.25	$4.55	$4.84	$5.10	$5.36	$5.60	$5.82	$6.03	$6.23	$6.41	$6.59	$6.75	$6.90	$7.05	$7.19	$7.31	$7.43	$7.55	$7.65	$7.75	$7.85	$7.94
77																																				

FORTIS BC
RESIDENTIAL
NEW

only enter in boxes marked in blue

Measure Data for Switch 'N' Shrink High Carbon Fuel Switching

PER MEASURE			Utility Incentive to the participant	partner incentive
Incremental Cost	$	1,000		
Total Incentive	$	1,000	$ 1,000	$ -
Participant	$	-		

Annual Impact Per Measure

Energy Savings per installation	-43.0	GJ		Average Annual Energy Savings per Measure
Free Rider Rate / Net-to-Gross	50%	0.50		Net-to-Gross
Alternate Energy Impact	46	GJ	12,778	kWh
Alternate Capacity Impact		kW/a		
Measure Lifetime	18	Years	Estimated lifespan of measure	

ANNUAL ACTIVITY	2009 NPV	Total	2010	2011	2012	Explanatory Notes
	279	320	0	320	0	Estimated Participation
Impact						
Gross Energy Savings (GJ)	(11,985)	(13,760)	0	(13,760)	0	Extension of Unit Savings x No. of Upgrades
Net Energy Savings (GJ)	(5,992)	(6,880)	0	(6,880)	0	Gross Energy Savings less Free Riders
Alternate Energy Impact (Increase) (kWh)	13,101	14,720	0	14,720	0	Other Utility Billed energy impact
Alternate Capacity Impact (Increase) (kW/a)	$0.00	-				Other Utility Billed capacity impact

Benefit Cost Summary

	2009 NPV	*$ Total*	2010	2011	2012	
Avoided Revenue Requirements						
PV $ per GJ			$103.09	$107.48	$111.32	
Energy Purchases	$ (739,449)	$ (739,449)	$ -	$ (739,449)	$ -	
Utility Program Costs						
DSM Incentives		$ 320,000	$ -	$ 320,000	$ -	
Administration		$ 83,040	$ -	$ 83,040	$ -	
Subtotal	$ 351,046	$ 403,040	$ -	$ 403,040	$ -	
Partner Program Costs						
DSM Incentives		$ -	$ -	$ -	$ -	
Administration		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Participants' Net Costs						
Incremental Cost		$ -	$ -	$ -	$ -	
Subtotal	$ -	$ -	$ -	$ -	$ -	
Alternate Savings - Net						
Energy (Purchases)		$ 1,859,565	$ -	$ 1,859,565	$ -	$252.658 PV $ per kWh
Capacity (Purchases)		$ -	$ -	$ -	$ -	PV$ per kW/a
Subtotal	$ 1,859,565	$ 1,859,565	$ -	$ 1,859,565	$ -	
Total Resource Net Benefit (Cost)	$ 769,070		$ -	$ 717,076	$ -	Avoided Revenue Requirement less Utility less Partners less Participant Costs plus Alternate Savings
Utility Levelized Cost per GJ (Lifetime)	$ -		$ -	$ -	$ -	Informational (for comparison with supply options)

2011 DSM Planned

	PROGRAM									ALTERNATE		NET PRESENT VALUE									Benefits/cost test						
	COSTS ($000)							SAVINGS (GJ)		Impact		Levelized Cost	Utility Benefits (Costs)		Participant Benefits (Costs)			Program Net Savings				Participant					
	Utility			Participant	Total	% Utility	% Participant	Gross	Net	Energy	Capacity	($/GJ)	Program	Alternate	Program	Carbon Tax	Alternate	Natural Gas	Alternate Energy	Alternate Capacity	Natural Gas	Total Costs	Total Benefits	Benefit/Cost	Natural Gas	Societal Cost Test	SCT Net Benefits
	Incentives	Administration	Total							MWh	kW		($'000s)	($'000s)	($'000s)	($'000s)	($'000s)	(GJ)	(MWh)	(kW)	Utility	($'000s)	($'000s)		Rate Impact		($'000s)
2011 Planned																											
Residential Energy Efficiency Programs																											
2011 Residential Total	1,710	826	2,535	3	2,537	100%	0%	27,540	21,288	0	0	10	5,185	0	2,659	371	0	244,816	0	0	2.0	3	3,031	908.5	1.0	2.0	2,648
Commercial Energy Efficiency Programs																											
2011 Commercial Total	3,091	172	3,263	5,418	8,694	38%	62%	160,630	133,090	(1,281)	0	2	31,425	(2,974)	16,346	2,436	(1,466)	1,609,600	(19,064)	0	9.6	5,418	17,316	3.2	1.6	3.3	19,757
Joint Initiatives																											
2011 Joint Initiatives Total	2,678	605	3,283	7,090	10,372	32%	68%	98,163	87,916	0	0	3	26,796	0	13,046	1,935	0	1,287,180	0	0	8.2	7,090	14,981	2.1	1.6	2.6	16,424
Conservation for Affordable Housing Programs																											
2011 Affordable Housing Total	1,462	1,109	2,571	0	2,571	100%	0%	16,087	13,519	231	0	19	2,741	391	1,225	207	207	133,935	2,504	0	1.1	-	1,639	N/A	0.7	1.2	561
Innovative Technology																											
2011 Innovative Technology Total																											
High carbon fuel switching																											
2011 High Carbon Fuel Switching Total	420	104	524	0	524	100%	0	(17,200)	(8,600)	18	0	FS	(2,029)	3,405	(1,592)	(178)	3,213	(118,280)	127	0	FS	1,770	3,213	1.8	0.6	1.3	853
Portfolio Level Expenditure																											
2011 Portfolio Level Total		10,669																									
2011 TOTAL	**9,361**	**13,484**	**22,845**	**12,511**	**35,367**	**65%**	**35%**	**285,220**	**247,213**	**(1,032)**	**0**	**7**	**64,119**	**822**	**31,685**	**4,771**	**1,954**	**3,157,251**	**(16,433)**	**0**	**2.8**	**12,511**	**38,410**	**3.1**	**1.2**	**1.7**	**29,574**

FORTIS BC

2011 DSM Planned

	PROGRAM									ALTERNATE		NET PRESENT VALUE									Benefit/cost test						
	COSTS ($000)							SAVINGS (GJ)		Impact		Levelized Cost	Utility Benefits (Costs)		Participant Benefits (Costs)			Program Net Savings				Participant					
2011 FEI Programs Planned	Utility			Participant	Total	% Utility	% Participant	Gross	Net	Energy	Capacity	($/GJ)	Program	Alternate	Program	Carbon Tax	Alternate	Natural Gas	Alternate Energy	Alternate Capacity	Natural Gas	Total Costs	Total Benefits	Benefit/Cost	Natural Gas		SCT Net Benefits
	Incentives	Administration	Total							MWh	kW		($'000s)	($'000s)	($'000s)	($'000s)	($'000s)	(GJ)	(MWh)	(kW)	Utility	($'000s)	($'000s)		Rate Impact	Societal Cost Test	($'000s)
2011																											
Residential Energy Efficiency Programs:																											
Energy Efficiency Program	1,373	375	1,748	(23)	1,724	88%	1%	22,032	17,030	0	-	9	4,149	0	1,958	297	0	195,853	-	-	2.4	-	2,279	N/A	1.1	2.4	2,424
Non Program Specific Admin Cost		314																									
2011 Residential Total	**1,373**	**689**	**2,062**	**(23)**	**2,038**	88%	1%	22,032	17,030	**0**	**-**	**9**	**4,149**	**-**	**1,958**	**297**	**-**	**195,853**	**-**	**-**	**2.0**	**-**	**2,278**	**N/A**	**1.0**	**2.0**	**2,111**
Commercial Energy Efficiency Programs:																											
Energy Efficiency Program	2,701	108	2,809	4,572	7,391	38%	62%	141,022	117,077	(1,281)	-	2	27,770	(2,974)	13,488	2,179	(1,466)	1,440,876	(19,064)	-	9.9	4,572	14,201	3.1	1.7	2.7	17,405
Non Program Specific Admin Cost		**30**																									
2011 Commercial Total	**2,701**	**138**	**2,839**	**4,572**	**7,421**	**38%**	**62%**	**141,022**	**117,077**	**(1,281)**	**-**	**2**	**27,770**	**(2,974)**	**13,488**	**2,179**	**(1,466)**	**1,440,876**	**(19,064)**	**-**	**9.8**	**4,572**	**14,201**	**3.1**	**1.7**	**3.3**	**17,375**
Joint Initiatives																											
Energy Efficiency Program	2,428	354	2,732	6,354	9,137	30%	70%	88,536	79,180	0	0	2	24,271	0	11,662	1,752	0	1,166,273	0	0	8.9	6,354.4	13,414	2.1	1.7	2.7	15,134
Non Program Specific Admin Cost		160																									
2011 Joint Initiatives Total	**2,428**	**514**	**2,942**	**6,354**	**9,297**	32%	68%	**88,536**	**79,180**	**0**	**0**	**2**	**24,271**	**0**	**11,662**	**1,752**	**0**	**1,166,273**	**0**	**0**	**8.2**	**6,354**	**13,414**	**2.1**	**1.7**	**2.6**	**14,974**
Conservation for Affordable Housing Programs*																											
Energy Efficiency Program	1,170	881	2,051	0	2,051	100%	0%	12,870	10,816	185	0	18	2,279	312	950	173	166	111,601	2,003	0	1.1	0.0	1,289	0.0	0.8	1.3	541
Non Program Specific Admin Cost		7																									
2011 Affordable Housing Total	**1,170**	**888**	**2,058**	**0**	**2,058**	**100%**	**0%**	**12,870**	**10,816**	**185**	**0**	**32**	**2,279**	**312**	**950**	**173**	**166**	**111,601**	**2,003**	**0**	**1.1**	**-**	**1,289**	**N/A**	**0.8**	**1.3**	**534**
Innovative Technology																											
Energy Efficiency Program																											
Non Program Specific Admin Cost																											
2010 Innovative Technology Total																											
High Carbon Fuel Switching																											
High Carbon Fuel Switching Program	100	21	121	0	121	100%	0%	(3,440)	(1,720)	4	0	FS	(508)	835	(236)	(36)	643	(23,656)	25	0	FS	272.0	643	2.4	0.4	1.3	206
Non Program Specific Admin Cost		0																									
2011 High Carbon Fuel Switching Total	**100**	**21**	**121**	**0**	**121**	**100%**	**0%**	**(3,440)**	**(1,720)**	**4**	**0**	**FS**	**(508)**	**835**	**(236)**	**(36)**	**643**	**(23,656)**	**25**	**0**	**FS**	**272**	**643**	**2.4**	**0.4**	**1.3**	**206**
Portfolio level expenditure																											
Conservation Education & Outreach		2,890																									
Enabling activities		1,776																									
DSMS consultant costs		304																									
Industrial Program costs		1,875																									
Labor		2,168																									
TGI Portfolio level total		**9,013**																									
2011 Total	**7,772**	**11,262**	**19,034**	**10,903**	**29,947**	**64%**	**36%**	**261,020**	**222,382**	**(1,093)**	**0**	**6.6**	**57,960**	**(1,826)**	**27,822**	**4,366**	**(658)**	**2,890,947**	**(17,035)**	**0**	**3.0**	**10,903**	**31,530**	**2.9**	**1.2**	**1.8**	**26,187**

Notes
*Affordable Housing
Utility benefits includes 30% adder

FORTIS BC VANCOUVER ISLAND

2011 DSM Planned

2011 FEVI Programs Planned	PROGRAM									ALTERNATE		NET PRESENT VALUE										BENEFIT/COST						
	COSTS ($000)							SAVINGS (GJ)		Impact		Levelized Cost	Utility Benefits (Costs)		Participant Benefits (Costs)			Program Net Savings				Participant						
	Utility																											
	Incentives	Administration	Total	Participant	Total	% Utility	% Participant	Gross	Net	Energy MWh	Capacity kW	($/GJ)	Program ($'000s)	Alternate ($'000s)	Program ($'000s)	Carbon Tax ($'000s)	Alternate ($'000s)	Natural Gas (GJ)	Alternate Energy (MWh)	Alternate Capacity (kW)	Natural Gas Utility	Total Costs ($'000s)	Total Benefits ($'000s)	Benefit/Cost	Natural Gas Rate Impact	Societal Cost Test	SCT Net Benefits ($'000s)
2011																												
Residential Energy Efficiency Programs:																												
Energy Efficiency Program	337	96	433	26	459	94%	6%	5,508	4,258	0	0	9	1,036	0	701	74	0	48,963	0	0	2.4	26	776	29.5	0.9	2.3	577
Non Program Specific Admin Cost		40																									
2011 Residential Total	**337**	**136**	**473**	**26**	**499**	**94%**	**6%**	**5,508**	**4,258**	**0**	**0**	**9**	**1,036**	**0**	**701**	**74**	**0**	**48,963**	**0**	**0**	**2.2**	**26**	**776**	**29.5**	**0.9**	**2.1**	**537**
Commercial Energy Efficiency Programs:																												
Energy Efficiency Program	391	24	415	846	1,263	33%	67%	19,608	16,013	0	0	2	3,655	0	2,858	257	0	168,724	0	0	8.8	846	3,115	3.7	1.1	2.9	2,392
Non Program Specific Admin Cost		10																									
2011 Commercial Total	**391**	**34**	**425**	**846**	**1,273**	**33%**	**67%**	**19,608**	**16,013**	0	0	**2**	**3,655**	**0**	**2,858**	**257**	**0**	**168,724**	**0**	**0**	**8.6**	**846**	**3,115**	**3.7**	**1.1**	**2.9**	**2,382**
Joint Initiatives																												
Energy Efficiency Program	249	51	300	735	1,036	29%	71%	9,627	8,736	0	0	2	2,526	0	1,384	182	0	120,907	0	0	8.4	735	1,566	2.1	1.5	2.4	1,490
Non Program Specific Admin Cost		40																									
2011 Joint Initiatives Total	**249**	**91**	**340**	**735**	**1,076**	**29%**	**71%**	**9,627**	**8,736**	**0**	**0**	**2**	**2,526**	**0**	**1,384**	**182**	**0**	**120,907**	**0**	**0**	**7.4**	**735**	**1,566**	**2.1**	**1.5**	**2.3**	**1,450**
Conservation for Affordable Housing Programs*																												
Energy Efficiency Program	292	218	510	0	510	100%	0%	3,217	2,704	46	0	23	462	78	275	34	41	22,332	501	0	0.9	0	351	0.0	0.6	1.1	30
Non Program Specific Admin Cost		3																									
2011 Affordable Housing Total	**292**	**221**	**513**	**0**	**513**	**100%**	**0%**	**3,217**	**2,704**	**46**	**0**	**21**	**462**	**78**	**275**	**34**	**41**	**22,332**	**501**	**0**	**0.9**	**0**	**351**	**0.0**	**0.6**	**1.1**	**27**
Innovative Technology																												
Energy Efficiency Program																												
Non Program Specific Admin Cost																												
2010 Innovative Technology Total																												
High Carbon Fuel Switching																												
High Carbon Fuel Switching Program	320	83	403	0	403	100%	0%	(13,760)	(6,880)	15	0	FS	(1,521)	2,570	(1,355)	(143)	2,570	(94,624)	101	0	FS	1,498	2,570	1.7	0.7	1.3	646
Non Program Specific Admin Cost		0																									
2011 High Carbon Fuel Switching Total	**320**	**83**	**403**	**0**	**403**	**100%**	**0%**	**(13,760)**	**(6,880)**	**15**	**0**	**FS**	**(1,521)**	**2,570**	**(1,355)**	**(143)**	**2,570**	**(94,624)**	**101**	**0**	**FS**	**1,498**	**2,570**	**1.7**	**0.7**	**1.3**	**646**
Portfolio level expenditure																												
Conservation Education & Outreach		648																									
Enabling Activities		390																									
DSMS consultant costs		76																									
Industrial Program Costs		0																									
Labor Costs		542																									
TGVI Portfolio level total		**1,656**																									
2011 Planned Total	**1,590**	**2,220**	**3,810**	**1,608**	**5,420**	**70%**	**30%**	**24,200**	**24,831**	**61**	**0**	**14**	**6,159**	**2,648**	**3,864**	**405**	**2,612**	**266,303**	**602**	**0**	**2**	**1,608**	**6,880**	**4**	**1**	**1.5**	**3,387**

2011 DSM Planned

	PROGRAM									ALTERNATE		NET PRESENT VALUE									Benefits/cost test						
	COSTS ($000)							SAVINGS (GJ)		Impact		Levelized Cost	Utility Benefits (Costs)		Participant Benefits (Costs)			Program Net Savings				Participant					
	Utility			Participant	Total	% Utility	% Participant	Gross	Net	Energy	Capacity	($/GJ)	Program	Alternate	Program	Carbon Tax	Alternate	Natural Gas	Alternate Energy	Alternate Capacity	Natural Gas	Total Costs	Total Benefits	Benefit/Cost	Natural Gas	Total Resource	TRC Net Benefits
	Incentives	Administration	Total							MWh	kW		($'000s)	($'000s)	($'000s)	($'000s)	($'000s)	(GJ)	(MWh)	(kW)	Utility	($'000s)	($'000s)		Rate Impact		($'000s)
2011 Planned																											
Residential Energy Efficiency Programs																											
2011 Residential Total	1,710	824	2,534	3	2,537	100%	0%	27,540	21,288	0	0	14	1,952	0	2,180	277	0	187,405	0	0	0.8	3	2,457	736.5	0.4	0.8	(586)
Commercial Energy Efficiency Programs																											
2011 Commercial Total	3,091	172	3,263	5,418	8,694	38%	62%	160,630	133,090	(1,281)	0	3	12,318	(1,764)	12,684	1,694	(1,130)	1,144,830	(14,697)	0	3.8	5,418	13,248	2.4	0.8	1.2	1,860
Joint Initiatives																											
2011 Joint Initiatives Total	2,678	605	3,283	7,090	10,372	32%	68%	98,163	87,916	0	0	4	9,652	0	10,019	1,322	0	901,538	0	0	2.9	7,090	11,341	1.6	0.7	0.9	(720)
Conservation for Affordable Housing Programs																											
2011 Affordable Housing Total	1,462	1,109	2,571	0	2,571	100%	0%	16,087	13,519	231	0	24	1,381	391	1,168	160	207	105,500	2,504	0	0.5	-	1,535	N/A	0.4	0.7	(799)
Innovative Technology																											
2011 Innovative Technology Total	0	0	0	0	0	#DIV/0!	#DIV/0!	0	0	0	0	-	0	0	0	0	0	0	0	0	N/A	-	-	N/A	N/A	N/A	0
High carbon fuel switching																											
2011 High Carbon Fuel Switching Total	420	104	524	0	524	100%	0	(17,200)	(8,600)	18	0	FS	(917)	2,529	(1,253)	(128)	2,529	(86,875)	100	0	FS	1,381	2,529	1.8	0.9	1.8	1,088
Portfolio Level Expenditure																											
2011 Portfolio Level Total		10,669																									
2011 TOTAL	**9,361**	**13,482**	**22,844**	**12,511**	**35,367**	**65%**	**35%**	**285,220**	**247,213**	**(1,032)**	**0**	**10**	**24,386**	**1,156**	**24,797**	**3,326**	**1,606**	**2,252,399**	**(12,094)**	**0**	**1.1**	**12,511**	**29,729**	**2.4**	**0.5**	**0.7**	**(9,825)**

FORTIS BC

2011 DSM Planned

	PROGRAM									ALTERNATE			NET PRESENT VALUE									Benefit/cost test						
	COSTS ($000)							SAVINGS (GJ)		Impact		Levelized Cost	Utility Benefits (Costs)		Participant Benefits (Costs)			Program Net Savings				Participant						
2011 FEI Programs Planned	Utility			Participant	Total	% Utility	% Participant	Gross	Net	Energy	Capacity	($/GJ)	Program	Alternate	Program	Carbon Tax	Alternate	Natural Gas	Alternate Energy	Alternate Capacity	Natural Gas	Total Costs	Total Benefits	Benefit/Cost	Natural Gas	Total Resource	TRC Net Benefits
	Incentives	Administration	Total							MWh	kW		($'000s)	($'000s)	($'000s)	($'000s)	($'000s)	(GJ)	(MWh)	(kW)	Utility	($'000s)	($'000s)		Rate Impact		($'000s)
2011																												
Residential Energy Efficiency Programs:																												
Energy Efficiency Program	1,373	375	1,748	(23)	1,724	88%	-3%	22,032	17,030	0	-	12	1,556	0	1,605	221	0	149,446	-	-	0.9	-	1,849	N/A	0.5	0.9	(168)
Non Program Specific Admin Cost		314																									
2011 Residential Total	**1,373**	**689**	**2,062**	**(23)**	**2,038**	88%	-3%	22,032	17,030	**0**	**-**	**12**	**1,556**	**-**	**1,605**	**221**	**-**	**149,446**	**-**	**-**	**0.8**	**-**	**1,849**	**N/A**	**0.4**	**0.8**	**(482)**
Commercial Energy Efficiency Programs:																											
Energy Efficiency Program	2,701	108	2,809	4,572	7,391	38%	62%	141,022	117,077	(1,281)	-	3	10,862	(1,764)	10,454	1,510	(1,130)	1,021,668	(14,697)	-	3.9	4,572	10,834	2.4	0.8	1.2	1,707
Non Program Specific Admin Cost		**30**																									
2011 Commercial Total	**2,701**	**138**	**2,839**	**4,572**	**7,421**	**38%**	**62%**	**141,022**	**117,077**	**(1,281)**	**-**	**3**	**10,862**	**(1,764)**	**10,454**	**1,510**	**(1,130)**	**1,021,668**	**(14,697)**	**-**	**3.8**	**4,572**	**10,834**	**2.4**	**0.8**	**1.2**	**1,677**
Joint Initiatives																											
Energy Efficiency Program	2,428	354	2,732	6,354	9,137	30%	70%	88,536	79,180	0	0	3	8,729	0	8,934	1,194	0	814,827	0	0	3.2	6,354.4	10,128	1.6	0.7	1.0	(407)
Non Program Specific Admin Cost		160																									
2011 Joint Initiatives Total	**2,428**	**514**	**2,942**	**6,354**	**9,297**	32%	68%	**88,536**	**79,180**	**0**	**0**	**3**	**8,729**	**0**	**8,934**	**1,194**	**0**	**814,827**	**0**	**0**	**3.0**	**6,354**	**10,128**	**1.6**	**0.7**	**0.9**	**(567)**
Conservation for Affordable Housing Programs*																											
Energy Efficiency Program	1,170	881	2,051	0	2,051	100%	0%	12,870	10,816	185	0	24	1,107	312	908	128	166	84,514	2,003	0	0.5	0.0	1,202	0.0	0.4	0.7	(631)
Non Program Specific Admin Cost		7																									
2011 Affordable Housing Total	**1,170**	**888**	**2,058**	**0**	**2,058**	**100%**	**0%**	**12,870**	**10,816**	**185**	**0**	**32**	**1,107**	**312**	**908**	**128**	**166**	**84,514**	**2,003**	**0**	**0.5**	**-**	**1,202**	**N/A**	**0.4**	**0.7**	**(638)**
Innovative Technology																											
Energy Efficiency Program																											
Non Program Specific Admin Cost																											
2010 Innovative Technology Total																											
High Carbon Fuel Switching																											
High Carbon Fuel Switching Program	100	21	121	0	121	100%	0%	(3,440)	(1,720)	4	0	FS	(178)	506	(186)	(25)	506	(17,116)	20	0	FS	211.2	506	2.4	0.6	1.7	207
Non Program Specific Admin Cost		0																									
2011 High Carbon Fuel Switching Total	**100**	**21**	**121**	**0**	**121**	**100%**	**0%**	**(3,440)**	**(1,720)**	**4**	**0**	**FS**	**(178)**	**506**	**(186)**	**(25)**	**506**	**(17,116)**	**20**	**0**	**FS**	**211**	**506**	**2.4**	**0.6**	**1.7**	**207**
Portfolio level expenditure																											
Conservation Education & Outreach		2,890																									
Enabling activities		1,776																									
DSMS consultant costs		304																									
Industrial Program costs		1,875																									
Labor		2,168																									
TGI Portfolio level total		**9,013**																									
2011 Total	**7,772**	**11,262**	**19,034**	**10,903**	**29,947**	**64%**	**36%**	**261,020**	**222,382**	**(1,093)**	**0**	**9.3**	**22,076**	**(945)**	**21,714**	**3,029**	**(459)**	**2,053,338**	**(12,674)**	**0**	**1.2**	**10,903**	**24,285**	**2.2**	**0.5**	**0.7**	**(8,816)**

Notes
*Affordable Housing
Utility benefits includes 30% adder

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2011 DSM Planned

2011 FEVI Programs Planned	PROGRAM									ALTERNATE		NET PRESENT VALUE									BENEFIT/COST						
	COSTS ($000)							SAVINGS (GJ)		Impact		Levelized Cost	Utility Benefits (Costs)		Participant Benefits (Costs)			Program Net Savings			Natural Gas	Participant			Natural Gas	Total Resource	TRC Net Benefits
	Utility																										
	Incentives	Administration	Total	Participant	Total	% Utility	% Participant	Gross	Net	Energy MWh	Capacity kW	($/GJ)	Program ($'000s)	Alternate ($'000s)	Program ($'000s)	Carbon Tax ($'000s)	Alternate ($'000s)	Natural Gas (GJ)	Alternate Energy (MWh)	Alternate Capacity (kW)	Utility	Total Costs ($'000s)	Total Benefits ($'000s)	Benefit/Cost	Rate Impact		
2011																											
Residential Energy Efficiency Programs:																											
Energy Efficiency Program	337	96	433	26	459	94%	6%	5,508	4,258	0	0	11	396	0	575	56	0	37,959	0	0	0.9	26	631	24.0	0.4	0.9	(64)
Non Program Specific Admin Cost		40																									
2011 Residential Total	**337**	**136**	**473**	**26**	**499**	**94%**	**6%**	**5,508**	**4,258**	**0**	**0**	**11**	**396**	**0**	**575**	**56**	**0**	**37,959**	**0**	**0**	**0.8**	**26**	**631**	**24.0**	**0.4**	**0.8**	**(104)**
Commercial Energy Efficiency Programs:																											
Energy Efficiency Program	391	24	415	846	1,263	33%	67%	19,608	16,013	0	0	3	1,456	0	2,230	184	0	123,163	0	0	3.5	846	2,414	2.9	0.6	1.2	193
Non Program Specific Admin Cost		10																									
2011 Commercial Total	**391**	**34**	**425**	**846**	**1,273**	**33%**	**67%**	**19,608**	**16,013**	0	0	**3**	**1,456**	**0**	**2,230**	**184**	**0**	**123,163**	**0**	**0**	**3.4**	**846**	**2,414**	**2.9**	**0.5**	**1.1**	**183**
Joint Initiatives																											
Energy Efficiency Program	249	51	300	735	1,036	29%	71%	9,627	8,736	0	0	3	923	0	1,085	127	0	86,712	0	0	3.1	735	1,212	1.6	0.7	0.9	(113)
Non Program Specific Admin Cost		40																									
2011 Joint Initiatives Total	**249**	**91**	**340**	**735**	**1,076**	**29%**	**71%**	**9,627**	**8,736**	**0**	**0**	**3**	**923**	**0**	**1,085**	**127**	**0**	**86,712**	**0**	**0**	**2.7**	**735**	**1,212**	**1.6**	**0.6**	**0.9**	**(153)**
Conservation for Affordable Housing Programs*																											
Energy Efficiency Program	292	218	510	0	510	100%	0%	3,217	2,704	46	0	24	275	78	260	32	41	20,986	501	0	0.5	0	333	0.0	0.4	0.7	(157)
Non Program Specific Admin Cost		3																									
2011 Affordable Housing Total	**292**	**221**	**513**	**0**	**513**	**100%**	**0%**	**3,217**	**2,704**	**46**	**0**	**21**	**275**	**78**	**260**	**32**	**41**	**20,986**	**501**	**0**	**0.5**	**0**	**333**	**0.0**	**0.4**	**0.7**	**(160)**
Innovative Technology																											
Energy Efficiency Program																											
Non Program Specific Admin Cost																											
2010 Innovative Technology Total																											
High Carbon Fuel Switching																											
High Carbon Fuel Switching Program	320	83	403	0	403	100%	0%	(13,760)	(6,880)	15	0	FS	(739)	2,023	(1,067)	(103)	2,023	(69,759)	80	0	FS	1,170	2,023	1.7	0.9	1.8	881
Non Program Specific Admin Cost		0																									
2011 High Carbon Fuel Switching Total	**320**	**83**	**403**	**0**	**403**	**100%**	**0%**	**(13,760)**	**(6,880)**	**15**	**0**	**FS**	**(739)**	**2,023**	**(1,067)**	**(103)**	**2,023**	**(69,759)**	**80**	**0**	**FS**	**1,170**	**2,023**	**1.7**	**0.9**	**1.8**	**881**
Portfolio level expenditure																											
Conservation Education & Outreach		648																									
Enabling Activities		390																									
DSMS consultant costs		76																									
Industrial Program Costs		0																									
Labor Costs		542																									
TGVI Portfolio level total		**1,656**																									
2011 Planned Total	**1,590**	**2,220**	**3,810**	**1,608**	**5,420**	**70%**	**30%**	**24,200**	**24,831**	**61**	**0**	**19**	**2,310**	**2,101**	**3,082**	**297**	**2,065**	**199,060**	**580**	**0**	**1**	**1,608**	**5,444**	**3**	**0**	**0.8**	**(1,009)**

2011 DSM Planned

	PROGRAM									ALTERNATE		NET PRESENT VALUE									Benefits/cost test						
	COSTS ($000)							SAVINGS (GJ)		Impact		Levelized Cost	Utility Benefits (Costs)		Participant Benefits (Costs)			Program Net Savings				Participant					
	Utility																										
	Incentives	Administration	Total	Participant	Total	% Utility	% Participant	Gross	Net	Energy	Capacity	($/GJ)	Program	Alternate	Program	Carbon Tax	Alternate	Natural Gas	Alternate Energy	Alternate Capacity	Natural Gas	Total Costs	Total Benefits	Benefit/Cost	Natural Gas	Societal Cost Test	SCT Net Benefits
										MWh	kW		($'000s)	($'000s)	($'000s)	($'000s)	($'000s)	(GJ)	(MWh)	(kW)	Utility	($'000s)	($'000s)		Rate Impact		($'000s)
2011 Planned																											
Residential Energy Efficiency Programs																											
2011 Residential Total	1,710	826	2,535	3	2,537	100%	0%	27,540	21,288	0	0	10	5,185	0	2,659	371	0	244,816	#VALUE!	#VALUE!	2.0	3	3,031	908.5	1.0	2.0	2,648
Commercial Energy Efficiency Programs																											
2011 Commercial Total	3,091	172	3,263	5,418	8,694	38%	62%	160,630	133,090	(1,281)	0	2	31,425	(2,974)	16,346	2,436	(1,466)	1,609,600	(19,064)	0	9.6	5,418	17,316	3.2	1.6	3.3	19,757
Joint Initiatives																											
2011 Joint Initiatives Total	2,678	605	3,283	7,090	10,372	32%	68%	98,163	87,916	0	0	3	26,796	0	13,046	1,935	0	1,287,180	0	0	8.2	7,090	14,981	2.1	1.6	2.6	16,424
Conservation for Affordable Housing Programs																											
2011 Affordable Housing Total	1,462	1,109	2,571	0	2,571	100%	0%	16,087	13,519	231	0	19	2,741	391	1,225	207	207	133,935	2,504	0	1.1	-	1,639	N/A	0.7	1.2	561
Innovative Technology																											
2011 Innovative Technology Total	3,931	124	4,055	603	4,851	84%	12%	(225,928)	(225,928)	5,771	2	FS	(35,035)	48,227	(14,893)	(2,480)	41,219	(1,591,793)	41,219	35	FS	17,976	41,219	2.3	0.4	1.2	8,340
High carbon fuel switching																											
2011 High Carbon Fuel Switching Total	420	104	524	0	524	100%	0	(17,200)	(8,600)	18	0	FS	(2,029)	3,405	(1,592)	(178)	3,213	(118,280)	127	0	FS	1,770	3,213	1.8	0.6	1.3	853
Portfolio Level Expenditure																											
2011 Portfolio Level Total		10,669																									
2011 TOTAL	**13,292**	**13,608**	**26,900**	**13,114**	**40,218**	**67%**	**33%**	**59,292**	**21,285**	**4,740**	**2**	**17**	**29,083**	**49,049**	**16,793**	**2,291**	**43,173**	**1,565,458**	**#VALUE!**	**#VALUE!**	**1.1**	**13,114**	**62,257**	**4.7**	**0.7**	**1.5**	**37,914**

FORTIS BC

2011 DSM Planned

	PROGRAM									ALTERNATE		NET PRESENT VALUE										Benefit/cost test						
	COSTS ($000)							SAVINGS (GJ)		Impact		Levelized Cost	Utility Benefits (Costs)		Participant Benefits (Costs)			Program Net Savings				Participant						
2011 FEI Programs Planned	Utility			Participant	Total	% Utility	% Participant	Gross	Net	Energy	Capacity	($/GJ)	Program	Alternate	Program	Carbon Tax	Alternate	Natural Gas	Alternate Energy	Alternate Capacity	Natural Gas	Total Costs	Total Benefits	Benefit/Cost	Natural Gas		SCT Net Benefits
	Incentives	Administration	Total							MWh	kW		($'000s)	($'000s)	($'000s)	($'000s)	($'000s)	(GJ)	(MWh)	(kW)	Utility	($'000s)	($'000s)		Rate Impact	Societal Cost Test	($'000s)
2011																												
Residential Energy Efficiency Programs:																												
Energy Efficiency Program	1,373	375	1,748	(23)	1,724	88%	1%	22,032	17,030	0	-	9	4,149	0	1,958	297	0	195,853	-	-	2.4	-	2,279	N/A	1.1	2.4	2,424
Non Program Specific Admin Cost		314																										
2011 Residential Total	**1,373**	**689**	**2,062**	**(23)**	**2,038**	88%	1%	22,032	17,030	**0**	-	**9**	**4,149**	**-**	**1,958**	**297**	**-**	**195,853**	-	-	**2.0**	**-**	**2,278**	**N/A**	**1.0**	**2.0**	**2,111**
Commercial Energy Efficiency Programs:																												
Energy Efficiency Program	2,701	108	2,809	4,572	7,391	38%	62%	141,022	117,077	(1,281)	-	2	27,770	(2,974)	13,488	2,179	(1,466)	1,440,876	(19,064)	-	9.9	4,572	14,201	3.1	1.7	2.7	17,405
Non Program Specific Admin Cost		**30**																										
2011 Commercial Total	**2,701**	**138**	**2,839**	**4,572**	**7,421**	**38%**	**62%**	**141,022**	**117,077**	**(1,281)**	-	**2**	**27,770**	**(2,974)**	**13,488**	**2,179**	**(1,466)**	**1,440,876**	**(19,064)**	-	**9.8**	**4,572**	**14,201**	**3.1**	**1.7**	**3.3**	**17,375**
Joint Initiatives																												
Energy Efficiency Program	2,428	354	2,732	6,354	9,137	30%	70%	88,536	79,180	0	0	2	24,271	0	11,662	1,752	0	1,166,273	0	0	8.9	6,354.4	13,414	2.1	1.7	2.7	15,134
Non Program Specific Admin Cost		160																										
2011 Joint Initiatives Total	**2,428**	**514**	**2,942**	**6,354**	**9,297**	32%	68%	**88,536**	**79,180**	**0**	**0**	**2**	**24,271**	**0**	**11,662**	**1,752**	**0**	**1,166,273**	**0**	**0**	**8.2**	**6,354**	**13,414**	**2.1**	**1.7**	**2.6**	**14,974**
Conservation for Affordable Housing Programs*																												
Energy Efficiency Program	1,170	881	2,051	0	2,051	100%	0%	12,870	10,816	185	0	18	2,279	312	950	173	166	111,601	2,003	0	1.1	0.0	1,289	0.0	0.8	1.3	541
Non Program Specific Admin Cost		7																										
2011 Affordable Housing Total	**1,170**	**888**	**2,058**	**0**	**2,058**	**100%**	**0%**	**12,870**	**10,816**	**185**	**0**	**32**	**2,279**	**312**	**950**	**173**	**166**	**111,601**	**2,003**	**0**	**1.1**	**-**	**1,289**	**N/A**	**0.8**	**1.3**	**534**
Innovative Technology																												
Energy Efficiency Program	3,926	29	3,955	600	4,715	84%	13%	(225,989)	(225,989)	5,771	2	FS	(35,057)	48,227	(14,911)	(2,481)	5,670	(1,592,853)	41,219	35	FS	17,992	5,670	0.3	0.4	1.2	8,455
Non Program Specific Admin Cost		85																										
2010 Innovative Technology Total	**3,926**	**114**	**4,040**	**600**	**4,800**	**84%**	**13%**	**(225,989)**	**(225,989)**	**5,771**	**2**	**FS**	**(35,057)**	**48,227**	**(14,911)**	**(2,481)**	**5,670**	**(1,592,853)**	**41,219**	**35**	**FS**	**17,992**	**5,670**	**0.3**	**0.4**	**1.2**	**8,370**
High Carbon Fuel Switching																												
High Carbon Fuel Switching Program	100	21	121	0	121	100%	0%	(3,440)	(1,720)	4	0	FS	(508)	835	(236)	(36)	643	(23,656)	25	0	FS	272.0	643	2.4	0.4	1.3	206
Non Program Specific Admin Cost		0																										
2011 High Carbon Fuel Switching Total	**100**	**21**	**121**	**0**	**121**	**100%**	**0%**	**(3,440)**	**(1,720)**	**4**	**0**	**FS**	**(508)**	**835**	**(236)**	**(36)**	**643**	**(23,656)**	**25**	**0**	**FS**	**272**	**643**	**2.4**	**0.4**	**1.3**	**206**
Portfolio level expenditure																												
Conservation Education & Outreach		2,890																										
Enabling activities		1,776																										
DSMS consultant costs		304																										
Industrial Program costs		1,875																										
Labor		2,168																										
TGI Portfolio level total		**9,013**																										
2011 Total	**11,698**	**11,376**	**23,074**	**11,503**	**34,747**	**66%**	**33%**	**35,031**	**(3,606)**	**4,679**	**2**	**17.8**	**22,902**	**46,401**	**12,911**	**1,885**	**5,012**	**1,298,094**	**24,184**	**35**	**1.0**	**11,503**	**19,808**	**1.7**	**0.6**	**1.5**	**34,556**

Notes
*Affordable Housing
Utility benefits includes 30% adder

FORTIS BC VANCOUVER ISLAND

2011 DSM Planned

2011 FEVI Programs Planned	PROGRAM									ALTERNATE		NET PRESENT VALUE										BENEFIT/COST						
	COSTS ($000)							SAVINGS (GJ)		Impact		Levelized Cost	Utility Benefits (Costs)		Participant Benefits (Costs)			Program Net Savings				Participant						
	Utility																											
	Incentives	Administration	Total	Participant	Total	% Utility	% Participant	Gross	Net	Energy	Capacity	($/GJ)	Program	Alternate	Program	Carbon Tax	Alternate	Natural Gas	Alternate Energy	Alternate Capacity	Natural Gas	Total Costs	Total Benefits	Benefit/Cost	Natural Gas	Societal Cost Test	SCT Net Benefits
										MWh	kW		($'000s)	($'000s)	($'000s)	($'000s)	($'000s)	(GJ)	(MWh)	(kW)	Utility	($'000s)	($'000s)		Rate Impact		($'000s)
2011																												
Residential Energy Efficiency Programs:																												
Energy Efficiency Program	337	96	433	26	459	94%	6%	5,508	4,258	0	0	9	1,036	0	701	74	0	48,963	0	0	2.4	26	776	29.5	0.9	2.3	577
Non Program Specific Admin Cost		40																									
2011 Residential Total	**337**	**136**	**473**	**26**	**499**	**94%**	**6%**	**5,508**	**4,258**	**0**	**0**	**9**	**1,036**	**0**	**701**	**74**	**0**	**48,963**	**0**	**0**	**2.2**	**26**	**776**	**29.5**	**0.9**	**2.1**	**537**
Commercial Energy Efficiency Programs:																											
Energy Efficiency Program	391	24	415	846	1,263	33%	67%	19,608	16,013	0	0	2	3,655	0	2,858	257	0	168,724	0	0	8.8	846	3,115	3.7	1.1	2.9	2,392
Non Program Specific Admin Cost		10																									
2011 Commercial Total	**391**	**34**	**425**	**846**	**1,273**	**33%**	**67%**	**19,608**	**16,013**	0	0	**2**	**3,655**	**0**	**2,858**	**257**	**0**	**168,724**	**0**	**0**	**8.6**	**846**	**3,115**	**3.7**	**1.1**	**2.9**	**2,382**
Joint Initiatives																											
Energy Efficiency Program	249	51	300	735	1,036	29%	71%	9,627	8,736	0	0	2	2,526	0	1,384	182	0	120,907	0	0	8.4	735	1,566	2.1	1.5	2.4	1,490
Non Program Specific Admin Cost		40																									
2011 Joint Initiatives Total	**249**	**91**	**340**	**735**	**1,076**	**29%**	**71%**	**9,627**	**8,736**	**0**	**0**	**2**	**2,526**	**0**	**1,384**	**182**	**0**	**120,907**	**0**	**0**	**7.4**	**735**	**1,566**	**2.1**	**1.5**	**2.3**	**1,450**
Conservation for Affordable Housing Programs*																											
Energy Efficiency Program	292	218	510	0	510	100%	0%	3,217	2,704	46	0	23	462	78	275	34	41	22,332	501	0	0.9	0	351	0.0	0.6	1.1	30
Non Program Specific Admin Cost		3																									
2011 Affordable Housing Total	**292**	**221**	**513**	**0**	**513**	**100%**	**0%**	**3,217**	**2,704**	**46**	**0**	**21**	**462**	**78**	**275**	**34**	**41**	**22,332**	**501**	**0**	**0.9**	**0**	**351**	**0.0**	**0.6**	**1.1**	**27**
Innovative Technology																											
Energy Efficiency Program	5	0	5	3	41	12%	8%	61	61	0	0	5	22	0	18	2	0	1,060	0	0	4.3	3	20	6.2	0.9	0.5	(19)
Non Program Specific Admin Cost		10																									
2010 Innovative Technology Total	**5**	**10**	**15**	**3**	**51**	**29%**	**6%**	**61**	**61**	**0**	**0**	**5**	**22**	**0**	**18**	**2**	**0**	**1,060**	**0**	**0**	**1.5**	**3**	**20**	**6.2**	**0.7**	**0.4**	**(29)**
High Carbon Fuel Switching																											
High Carbon Fuel Switching Program	320	83	403	0	403	100%	0%	(13,760)	(6,880)	15	0	FS	(1,521)	2,570	(1,355)	(143)	2,570	(94,624)	101	0	FS	1,498	2,570	1.7	0.7	1.3	646
Non Program Specific Admin Cost		0																									
2011 High Carbon Fuel Switching Total	**320**	**83**	**403**	**0**	**403**	**100%**	**0%**	**(13,760)**	**(6,880)**	**15**	**0**	**FS**	**(1,521)**	**2,570**	**(1,355)**	**(143)**	**2,570**	**(94,624)**	**101**	**0**	**FS**	**1,498**	**2,570**	**1.7**	**0.7**	**1.3**	**646**
Portfolio level expenditure																											
Conservation Education & Outreach		648																									
Enabling Activities		390																									
DSMS consultant costs		76																									
Industrial Program Costs		0																									
Labor Costs		542																									
TGVI Portfolio level total		**1,656**																									
2011 Planned Total	**1,595**	**2,230**	**3,825**	**1,611**	**5,472**	**70%**	**29%**	**24,261**	**24,892**	**61**	**0**	**14**	**6,181**	**2,648**	**3,882**	**407**	**2,612**	**267,362**	**602**	**0**	**2**	**1,611**	**6,900**	**4**	**1**	**1.5**	**3,358**

2011 DSM Planned

	PROGRAM									ALTERNATE		NET PRESENT VALUE								Benefits/cost test						
	COSTS ($000)							SAVINGS (GJ)		Impact		Levelized Cost	Utility Benefits (Costs)		Participant Benefits (Costs)			Program Net Savings				Participant					
	Utility			Participant	Total	% Utility	% Participant	Gross	Net	Energy	Capacity	($/GJ)	Program	Alternate	Program	Carbon Tax	Alternate	Natural Gas	Alternate Energy	Alternate Capacity	Natural Gas	Total Costs	Total Benefits	Benefit/Cost	Natural Gas	Total Resource	TRC Net Benefits
	Incentives	Administration	Total							MWh	kW		($'000s)	($'000s)	($'000s)	($'000s)	($'000s)	(GJ)	(MWh)	(kW)	Utility	($'000s)	($'000s)		Rate Impact		($'000s)
2011 Planned																											
Residential Energy Efficiency Programs																											
2011 Residential Total	1,710	825	2,535	3	2,537	100%	0%	27,540	21,288	0	#VALUE!	14	1,952	0	2,180	277	0	187,405	#VALUE!	#VALUE!	0.8	3	2,457	736.5	0.4	0.8	(586)
Commercial Energy Efficiency Programs																											
2011 Commercial Total	3,091	172	3,263	5,418	8,694	38%	62%	160,630	133,090	(1,281)	0	3	12,318	(1,764)	12,684	1,694	(1,130)	1,144,830	(14,697)	0	3.8	5,418	13,248	2.4	0.8	1.2	1,860
Joint Initiatives																											
2011 Joint Initiatives Total	2,678	605	3,283	7,090	10,372	32%	68%	98,163	87,916	0	0	4	9,652	0	10,019	1,322	0	901,538	0	0	2.9	7,090	11,341	1.6	0.7	0.9	(720)
Conservation for Affordable Housing Programs																											
2011 Affordable Housing Total	1,462	1,109	2,571	0	2,571	100%	0%	16,087	13,519	231	0	24	1,381	391	1,168	160	207	105,500	2,504	0	0.5	-	1,535	N/A	0.4	0.7	(799)
Innovative Technology																											
2011 Innovative Technology Total	3,931	98	4,029	603	4,825	83%	12%	(225,928)	(225,928)	5,771	2	FS	(13,502)	32,739	(13,206)	(2,047)	36,377	(1,349,902)	36,377	26	FS	15,856	36,377	2.3	0.8	1.8	14,412
High carbon fuel switching																											
2011 High Carbon Fuel Switching Total	420	104	524	0	524	100%	0	(17,200)	(8,600)	18	0	FS	(917)	2,529	(1,253)	(128)	2,529	(86,875)	100	0	FS	1,381	2,529	1.8	0.9	1.8	1,088
Portfolio Level Expenditure																											
2011 Portfolio Level Total		10,669																									
2011 TOTAL	**13,292**	**13,581**	**26,873**	**13,114**	**40,192**	**67%**	**33%**	**59,292**	**21,285**	**4,740**	**########**	**30**	**10,884**	**33,895**	**11,591**	**1,279**	**37,983**	**902,497**	**#VALUE!**	**#VALUE!**	**0.4**	**13,114**	**50,852**	**3.9**	**0.3**	**1.1**	**4,587**

FORTIS BC

2011 DSM Planned

2011 FEI Programs Planned	PROGRAM									ALTERNATE		Levelized Cost	NET PRESENT VALUE									Benefit/cost test						
	COSTS ($000)							SAVINGS (GJ)		Impact			Utility Benefits (Costs)		Participant Benefits (Costs)			Program Net Savings				Participant						
	Utility																											
	Incentives	Administration	Total	Participant	Total	% Utility	% Participant	Gross	Net	Energy	Capacity	($/GJ)	Program	Alternate	Program	Carbon Tax	Alternate	Natural Gas	Alternate Energy	Alternate Capacity	Natural Gas	Total Costs	Total Benefits	Benefit/Cost	Natural Gas	Total Resource	TRC Net Benefits
										MWh	kW		($'000s)	($'000s)	($'000s)	($'000s)	($'000s)	(GJ)	(MWh)	(kW)	Utility	($'000s)	($'000s)		Rate Impact		($'000s)
2011																												
Residential Energy Efficiency Programs:																												
Energy Efficiency Program	1,373	375	1,748	(23)	1,724	88%	-1%	22,032	17,030	0	-	12	1,556	0	1,605	221	0	149,446	-	-	0.9	-	1,849	N/A	0.5	0.9	(168)
Non Program Specific Admin Cost		314																									
2011 Residential Total	**1,373**	**689**	**2,062**	**(23)**	**2,038**	88%	-1%	22,032	17,030	**0**	-	**12**	**1,556**	**-**	**1,605**	**221**	**-**	**149,446**	-	-	**0.8**	**-**	**1,849**	**N/A**	**0.4**	**0.8**	**(482)**
Commercial Energy Efficiency Programs:																												
Energy Efficiency Program	2,701	108	2,809	4,572	7,391	38%	62%	141,022	117,077	(1,281)	-	3	10,862	(1,764)	10,454	1,510	(1,130)	1,021,668	(14,697)	-	3.9	4,572	10,834	2.4	0.8	1.2	1,707
Non Program Specific Admin Cost		**30**																									
2011 Commercial Total	**2,701**	**138**	**2,839**	**4,572**	**7,421**	**38%**	**62%**	**141,022**	**117,077**	**(1,281)**	**-**	**3**	**10,862**	**(1,764)**	**10,454**	**1,510**	**(1,130)**	**1,021,668**	**(14,697)**	**-**	**3.8**	**4,572**	**10,834**	**2.4**	**0.8**	**1.2**	**1,677**
Joint Initiatives																												
Energy Efficiency Program	2,428	354	2,732	6,354	9,137	30%	70%	88,536	79,180	0	0	3	8,729	0	8,934	1,194	0	814,827	0	0	3.2	6,354.4	10,128	1.6	0.7	1.0	(407)
Non Program Specific Admin Cost		160																									
2011 Joint Initiatives Total	**2,428**	**514**	**2,942**	**6,354**	**9,297**	32%	68%	**88,536**	**79,180**	**0**	**0**	**3**	**8,729**	**0**	**8,934**	**1,194**	**0**	**814,827**	**0**	**0**	**3.0**	**6,354**	**10,128**	**1.6**	**0.7**	**0.9**	**(567)**
Conservation for Affordable Housing Programs																												
Energy Efficiency Program	1,170	881	2,051	0	2,051	100%	0%	12,870	10,816	185	0	24	1,107	312	908	128	166	84,514	2,003	0	0.5	0.0	1,202	0.0	0.4	0.7	(631)
Non Program Specific Admin Cost		7																									
2011 Affordable Housing Total	**1,170**	**888**	**2,058**	**0**	**2,058**	**100%**	**0%**	**12,870**	**10,816**	**185**	**0**	**32**	**1,107**	**312**	**908**	**128**	**166**	**84,514**	**2,003**	**0**	**0.5**	**-**	**1,202**	**N/A**	**0.4**	**0.7**	**(638)**
Innovative Technology																												
Energy Efficiency Program	3,926	32	3,958	600	4,718	84%	13%	(225,989)	(225,989)	5,771	2	FS	(13,509)	32,739	(13,219)	(2,048)	4,938	(1,350,618)	36,377	26	FS	15,867	4,938	0.3	0.8	1.8	14,515
Non Program Specific Admin Cost		56																									
2010 Innovative Technology Total	**3,926**	**88**	**4,014**	**600**	**4,774**	**84%**	**13%**	**(225,989)**	**(225,989)**	**5,771**	**2**	**FS**	**(13,509)**	**32,739**	**(13,219)**	**(2,048)**	**4,938**	**(1,350,618)**	**36,377**	**26**	**FS**	**15,867**	**4,938**	**0.3**	**0.8**	**1.8**	**14,456**
High Carbon Fuel Switching																												
High Carbon Fuel Switching Program	100	21	121	0	121	100%	0%	(3,440)	(1,720)	4	0	FS	(178)	506	(186)	(25)	506	(17,116)	20	0	FS	211.2	506	2.4	0.6	1.7	207
Non Program Specific Admin Cost		0																									
2011 High Carbon Fuel Switching Total	**100**	**21**	**121**	**0**	**121**	**100%**	**0%**	**(3,440)**	**(1,720)**	**4**	**0**	**FS**	**(178)**	**506**	**(186)**	**(25)**	**506**	**(17,116)**	**20**	**0**	**FS**	**211**	**506**	**2.4**	**0.6**	**1.7**	**207**
Portfolio level expenditure																												
Conservation Education & Outreach		2,890																									
Enabling activities		1,776																									
DSMS consultant costs		304																									
Industrial Program costs		1,875																									
Labor		2,168																									
TGI Portfolio level total		**9,013**																									
2011 Total	**11,698**	**11,350**	**23,048**	**11,503**	**34,721**	**66%**	**33%**	**35,031**	**(3,606)**	**4,679**	**2**	**32.8**	**8,566**	**31,794**	**8,495**	**981**	**4,479**	**702,719**	**23,702**	**26**	**0.4**	**11,503**	**13,955**	**1.2**	**0.3**	**1.1**	**5,639**

Notes
*Affordable Housing
Utility benefits includes 30% adder

FORTIS BC VANCOUVER ISLAND

2011 DSM Planned

2011 FEVI Programs Planned	PROGRAM									ALTERNATE		NET PRESENT VALUE										BENEFIT/COST						
	COSTS ($000)							SAVINGS (GJ)		Impact		Levelized Cost	Utility Benefits (Costs)		Participant Benefits (Costs)			Program Net Savings				Participant						
	Utility																											
	Incentives	Administration	Total	Participant	Total	% Utility	% Participant	Gross	Net	Energy MWh	Capacity kW	($/GJ)	Program ($'000s)	Alternate ($'000s)	Program ($'000s)	Carbon Tax ($'000s)	Alternate ($'000s)	Natural Gas (GJ)	Alternate Energy (MWh)	Alternate Capacity (kW)	Natural Gas Utility	Total Costs ($'000s)	Total Benefits ($'000s)	Benefit/Cost	Natural Gas Rate Impact	Total Resource	TRC Net Benefits ($'000s)
2011																												
Residential Energy Efficiency Programs:																												
Energy Efficiency Program	337	96	433	26	459	94%	6%	5,508	4,258	0	0	11	396	0	575	56	0	37,959	0	0	0.9	26	631	24.0	0.4	0.9	(64)
Non Program Specific Admin Cost		40																										
2011 Residential Total	**337**	**136**	**473**	**26**	**499**	**94%**	**6%**	**5,508**	**4,258**	**0**	**0**	**11**	**396**	**0**	**575**	**56**	**0**	**37,959**	**0**	**0**	**0.8**	**26**	**631**	**24.0**	**0.4**	**0.8**	**(104)**
Commercial Energy Efficiency Programs:																												
Energy Efficiency Program	391	24	415	846	1,263	33%	67%	19,608	16,013	0	0	3	1,456	0	2,230	184	0	123,163	0	0	3.5	846	2,414	2.9	0.6	1.2	193
Non Program Specific Admin Cost		10																										
2011 Commercial Total	**391**	**34**	**425**	**846**	**1,273**	**33%**	**67%**	**19,608**	**16,013**	0	0	**3**	**1,456**	**0**	**2,230**	**184**	**0**	**123,163**	**0**	**0**	**3.4**	**846**	**2,414**	**2.9**	**0.5**	**1.1**	**183**
Joint Initiatives																												
Energy Efficiency Program	249	51	300	735	1,036	29%	71%	9,627	8,736	0	0	3	923	0	1,085	127	0	86,712	0	0	3.1	735	1,212	1.6	0.7	0.9	(113)
Non Program Specific Admin Cost		40																										
2011 Joint Initiatives Total	**249**	**91**	**340**	**735**	**1,076**	**29%**	**71%**	**9,627**	**8,736**	**0**	**0**	**3**	**923**	**0**	**1,085**	**127**	**0**	**86,712**	**0**	**0**	**2.7**	**735**	**1,212**	**1.6**	**0.6**	**0.9**	**(153)**
Conservation for Affordable Housing Programs																												
Energy Efficiency Program	292	218	510	0	510	100%	0%	3,217	2,704	46	0	24	275	78	260	32	41	20,986	501	0	0.5	0	333	0.0	0.4	0.7	(157)
Non Program Specific Admin Cost		3																										
2011 Affordable Housing Total	**292**	**221**	**513**	**0**	**513**	**100%**	**0%**	**3,217**	**2,704**	**46**	**0**	**21**	**275**	**78**	**260**	**32**	**41**	**20,986**	**501**	**0**	**0.5**	**0**	**333**	**0.0**	**0.4**	**0.7**	**(160)**
Innovative Technology																												
Energy Efficiency Program	5	0	5	3	41	12%	8%	61	61	0	0	7	8	0	13	1	0	716	0	0	1.6	3	14	4.5	0.4	0.2	(33)
Non Program Specific Admin Cost		10																										
2010 Innovative Technology Total	**5**	**10**	**15**	**3**	**51**	**29%**	**6%**	**61**	**61**	**0**	**0**	**7**	**8**	**0**	**13**	**1**	**0**	**716**	**0**	**0**	**0.5**	**3**	**14**	**4.5**	**0.3**	**0.2**	**(43)**
High Carbon Fuel Switching																												
High Carbon Fuel Switching Program	320	83	403	0	403	100%	0%	(13,760)	(6,880)	15	0	FS	(739)	2,023	(1,067)	(103)	2,023	(69,759)	80	0	FS	1,170	2,023	1.7	0.9	1.8	881
Non Program Specific Admin Cost		0																										
2011 High Carbon Fuel Switching Total	**320**	**83**	**403**	**0**	**403**	**100%**	**0%**	**(13,760)**	**(6,880)**	**15**	**0**	**FS**	**(739)**	**2,023**	**(1,067)**	**(103)**	**2,023**	**(69,759)**	**80**	**0**	**FS**	**1,170**	**2,023**	**1.7**	**0.9**	**1.8**	**881**
Portfolio level expenditure																												
Conservation Education & Outreach		648																										
Enabling Activities		390																										
DSMS consultant costs		76																										
Industrial Program Costs		0																										
Labor Costs		542																										
TGVI Portfolio level total		**1,656**																										
2011 Planned Total	**1,595**	**2,230**	**3,825**	**1,611**	**5,472**	**70%**	**29%**	**24,261**	**24,892**	**61**	**0**	**19**	**2,318**	**2,101**	**3,096**	**298**	**2,065**	**199,777**	**580**	**0**	**1**	**1,611**	**5,458**	**3**	**0**	**0.8**	**(1,052)**

Attachment 112.1

REFER TO LIVE SPREADSHEET

Provided in electronic format only

(accessible by opening the Attachments Tab in Adobe)

Attachment 116.1

33.0 Reference: EEC

Exhibit B-1, Chapter 5, p. 116 Table 5-1; p. 121

Rate Impact

As a result of Commission Order G-36-09 accepting certain expenditures pertaining to the energy efficiency programs and Orders G-140-09 and G-141-09 approving the RRA NSA for TGI and TGVI respectively, the total approved funding for EEC for 2010 and 2011 is $60.229 million for TGI and $12.086 for TGVI.

Terasen Utilities are contemplating to submit a request for on-going funding as part of the 2012 RRA for both TGI and TGVI and have developed three funding scenarios in this LTRP. Under Scenario C, EEC funding would equate to $80 million in 2012 and be fixed at five percent of the Utilities' gross revenue thereafter.

33.1 Assuming that the Scenario C version of EEC is accepted by the Commission for 2012 as part of accepting the 2010 LTRP, please provide a spreadsheet calculation of amortized EEC capital costs and EEC OMA costs. Please present the years from 2012 to 2021 based on the EEC programs from 2008 onward. Please also assume that the gross utility revenues remain constant until 2021.

Response:

The Terasen Utilities are not at this time requesting future funding for EEC activities within this LTRP. The request for future funding will be made in the Terasen Utilities' next Revenue Requirements Application or Applications. Terasen Utilities is anticipating to its next Revenue Requirements in the Spring or Summer of 2011. Further, the development and presentation of EEC Scenario C in the 2010 LTRP was for illustrative and discussion purposes only. It is not certain that EEC Scenario C will be the subject of future funding requests made through the Revenue Requirement Application(s) in 2011. Feedback obtained through the 2010 LTRP regulatory review process will help to inform that request.

As described in more detail in the response to BCUC IR 1.51.5, there is an error in Table 5-1, on page 116 of the LTRP, with respect to the approved funding amounts. This error has led to incorrect approved funding amounts being referenced in the preamble to this IR. The correct total approved funding for EEC for 2010 and 2011 is $55.463 million for TGI and $10.886 million for TGVI.

The intent of providing the different EEC funding scenario within the LTRP relates to the relationship between dollars available for EEC programs and activities and the energy savings from these programs and activities. In general, the more funds there are for EEC programs and activities the greater the energy savings. The EEC scenarios outlined in the LTRP illustrate this

point. The Terasen Utilities must secure EEC funding beyond 2012 and the amount of funding that will be requested will be determined based on results of the CPR study that is currently underway.

In responding to BCUC IR 1.51.5, Terasen Utilities has prepared Attachment 51.5 that shows the rate base, cost of service, and rate impacts for each of Scenarios A, B, and C.

To respond specifically to the question 33.1, the amortized EEC capital costs for Scenario C are shown in Attachment 51.5, Tabs 3 (for TGI) and 6 (for TGVI), Pages 1 through 3. Since none of the EEC expenditures have been allocated to TGW for reasons given in the LTRP there is no impact on TGW or its customers.

There are no impacts on OMA costs for TGI or TGVI for any of the three Scenarios since all program and incentive expenditures are captured in the EEC Deferral Account.

Assumptions used in Attachment 51.5

The three scenarios show the impacts of a constant EEC expenditure of $4 million (Scenario A), $35 million (Scenario B) and $80 million (Scenario C) through 2031, except that in Scenario C, beginning in 2022 the EEC expenditure is decreased by $5 million per year. For all scenarios, 80% of the expenditures and any decreases are allocated to TGI and the balance to TGVI.

In calculating the cost of service impact and rates it was also assumed the future income tax rates from 2012 forward would remain constant at 25% and the financing of the Rate Base would be consistent with the 2011 approved ratios and rates. The amortization period for all expenditures starting in 2010 is 10 years; expenditures prior to 2010 were amortized over 3 years.

The impact on customer rates are shown on pages 3 through 6 of each Tab. With constant continuous expenditure at a specified dollar level, at about year 12 or 13 the incremental impact on rates becomes zero as there is very little change or no incremental change in the cost of service from the year before. In the case of Option C, when there is a declining level of expenditure the incremental impact on rates becomes negative, i.e., there is a continuous rate decline. This occurs because the older higher expenditures from the initial years are fully amortized and what is left is the continuing smaller EEC investments which lowers the rate base, earned return, associated income tax expense and amortization expense. The calculated incremental or decremental cost of service is allocated to each rate class proportional to each rate class' contribution to margin using 2011 as a proxy base and then dividing by the rate class annual volumes. For TGVI it is assumed in future years that all transport service customers would be impacted by the change in cost of service from EEC expenditures.

51.3.1 For the above question, please provide a summary table that compares the key performance indicators (table columns 1 to 6) for Funding Scenarios A, B, and C.

Response:

Please see the response to BCUC IR 1.51.3.

51.4 The Utilities have proposed three Funding Scenarios that are vastly different in budget scale and program design (e.g., ~ $4 m for Scenario A to ~ $88 m for Scenario C). How do the Utilities reconcile their position in respect of putting forward three EEC Funding Scenarios which are fundamentally so different?

Response:

Please see the response to BCUC IR 1.51.1.

51.5 For each of the Funding Scenario, please provide an estimate of the 20-year impact on rates and ratebase of Scenarios A, B, and C. Please describe and quantify the input assumptions used in the calculation.

Response:

In Attachment 51.5, for each of the scenarios for TGI and TGVI the impact on rate base, customer rates and impact on cost of service is shown. For a description of the assumptions see the response to BCUC IR 1.33.1.

In Attachment 51.5, the results for TGI and TGVI are organized as follows:

Tab 1 – TGI Scenario A,
Tab 2 – TGI Scenario B,
Tab 3 – TGI Scenario C,
Tab 4 – TGVI Scenario A,
Tab 5 – TGVI Scenario B, and
Tab 6 – TGVI Scenario C.

In responding to this IR, TGI is correcting an error in Table 5-1 of the LTRP. The table incorrectly double counted the approved EEC funding for Affordable Housing. Per the Negotiated Settlement Agreements for TGI's and TGVI's 2010-2011 Revenue Requirements and Rates Applications, the Affordable Housing funding represents an allocation from the Residential and Commercial Programs, not an incremental funding envelope. The correct totals for TGI & TGVI EEC expenditures have been used in responding to BCUC IR 1.33.1, 1.33.1.1, 1.33.1.2 and 1.51.5. The corrected table is included below.

($000s)	TGI		TGVI	
	2010	2011	2010	2011
Residential and Commercial Programs	20,675	20,675	4,126	4,126
Affordable Housing	2,400	2,400	600	600
Industrial Interruptible	435	1,875	-	-
Innovative Technologies	2,334	4,669	478	956
Total	**25,844**	**29,619**	**5,204**	**5,682**

51.6 Scenario C represents in excess of a two-fold increase in Utilities DSM budget compared to previous years. Please discuss what improvements to the Utilities EEC measurement and validation processes are proposed as part of the 2010 LTRP in order to provide transparency to all stakeholders.

Response:

Please see also the response to BCUC IR 1.51.1. At this time, the Terasen Utilities is not requesting approval of any of the scenarios. Methods to provide transparency to EEC stakeholders were discussed and established during the original EEC Application proceeding in 2008. These included such things as establishing an EEC Stakeholder group, of which the Commission is part, holding two meetings of that group per year and the submission of an Annual EEC Report to the Commission that details results for the last year and outlines plans for the year upcoming. The first Annual EEC Report since the increased funding was approved, was filed with the Commission on March 31, 2010 for 2009 activities.

Attachment 51.5

Attachment 51.1

TERASEN GAS INC.
OPTION A - EEC EXPENDITURE ANALYSIS

Line No.	Particulars	2008	2009	2010	2011	2012	2013	2014	2015	2016
						1	2	3	4	5
1	EEC Expenditure	$ 654	3966	$ 25,845	$ 29,619	$ 3,200	$ 3,200	$ 3,200	$ 3,200	$ 3,200
2	Income Tax Offset	- 203	- 1,190	- 7,366	- 7,849	- 800	- 800	- 800	- 800	- 800
3	Net Additions	$ 451	$ 2,776	$ 18,479	$ 21,770	$ 2,400	$ 2,400	$ 2,400	$ 2,400	$ 2,400
4	Amortization 10 Years	$ 150	$ 925	$ 1,848	$ 2,177	$ 240	$ 240	$ 240	$ 240	$ 240
5										
6	EEC Deferral Account									
7	Opening Balance	$ 1,526	$ 1,205	$ 3,545	$ 21,670	$ 41,238	$ 39,258	$ 37,039	$ 34,579	$ 31,880
8	Net Additions	451	2,776	18,479	21,770	2,400	2,400	2,400	2,400	2,400
9	Amortization	- 772	- 436	- 355	- 2,202	- 4,379	- 4,619	- 4,859	- 5,099	- 5,339
10	Ending Balance	$ 1,205	$ 3,545	$ 21,670	$ 41,238	$ 39,258	$ 37,039	$ 34,579	$ 31,880	$ 28,940
11										
12	EEC Deferral Mid-Year	$ 1,366	$ 2,375	$ 12,608	$ 31,454	$ 40,248	$ 38,148	$ 35,809	$ 33,229	$ 30,410
13										
14	Change in Rate Base					$ 8,794	-$ 2,099	-$ 2,339	-$ 2,579	-$ 2,819
15										
16	EEC Deferral Impact on Non-Bypass Rates									
17	Change in Cost of Service					$ 3,619	$ 127	$ 105	$ 83	$ 61

Attachment 51.1

TERASEN GAS INC.
OPTION A - EEC EXPENDITURE ANALYSIS

Line No.	Particulars	2017	2018	2019	2020	2021	2022	2023	2024
		6	7	8	9	10	11	12	13
1	EEC Expenditure	$ 3,200	$ 3,200	$ 3,200	$ 3,200	$ 3,200	$ 3,200	$ 3,200	$ 3,200
2	Income Tax Offset	- 800	- 800	- 800	- 800	- 800	- 800	- 800	- 800
3	Net Additions	$ 2,400	$ 2,400	$ 2,400	$ 2,400	$ 2,400	$ 2,400	$ 2,400	$ 2,400
4	Amortization 10 Years	$ 240	$ 240	$ 240	$ 240	$ 240	$ 240	$ 240	$ 240
5									
6	EEC Deferral Account								
7	Opening Balance	$ 28,940	$ 25,761	$ 22,341	$ 18,682	$ 15,137	$ 13,200	$ 13,200	$ 13,200
8	Net Additions	2,400	2,400	2,400	2,400	2,400	2,400	2,400	2,400
9	Amortization	- 5,579	- 5,819	- 6,059	- 5,945	- 4,337	- 2,400	- 2,400	- 2,400
10	Ending Balance	$ 25,761	$ 22,341	$ 18,682	$ 15,137	$ 13,200	$ 13,200	$ 13,200	$ 13,200
11									
12	EEC Deferral Mid-Year	$ 27,351	$ 24,051	$ 20,512	$ 16,909	$ 14,168	$ 13,200	$ 13,200	$ 13,200
13									
14	Change in Rate Base	-$ 3,059	-$ 3,299	-$ 3,539	-$ 3,602	-$ 2,741	-$ 968	$ -	$ -
15									
16	EEC Deferral Impact on Non-Bypass Rates								
17	Change in Cost of Service	$ 39	$ 17	-$ 5	-$ 484	-$ 2,396	-$ 2,672	$ -	$ -

Attachment 51.1

TERASEN GAS INC.
OPTION A - EEC EXPENDITURE ANALYSIS

Line No.	Particulars	2025 14	2026 15	2027 16	2028 17	2029 18	2030 19	2031 20	2032 21
1	EEC Expenditure	$ 3,200	$ 3,200	$ 3,200	$ 3,200	$ 3,200	$ 3,200	$ 3,200	$ 3,200
2	Income Tax Offset	- 800	- 800	- 800	- 800	- 800	- 800	- 800	- 800
3	Net Additions	$ 2,400	$ 2,400	$ 2,400	$ 2,400	$ 2,400	$ 2,400	$ 2,400	$ 2,400
4	Amortization 10 Years	$ 240	$ 240	$ 240	$ 240	$ 240	$ 240	$ 240	$ 240
5									
6	EEC Deferral Account								
7	Opening Balance	$ 13,200	$ 13,200	$ 13,200	$ 13,200	$ 13,200	$ 13,200	$ 13,200	$ 13,200
8	Net Additions	2,400	2,400	2,400	2,400	2,400	2,400	2,400	2,400
9	Amortization	- 2,400	- 2,400	- 2,400	- 2,400	- 2,400	- 2,400	- 2,400	- 2,400
10	Ending Balance	$ 13,200	$ 13,200	$ 13,200	$ 13,200	$ 13,200	$ 13,200	$ 13,200	$ 13,200
11									
12	EEC Deferral Mid-Year	$ 13,200	$ 13,200	$ 13,200	$ 13,200	$ 13,200	$ 13,200	$ 13,200	$ 13,200
13									
14	Change in Rate Base	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
15									
16	EEC Deferral Impact on Non-Bypass Rates								
17	Change in Cost of Service	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -

TERASEN GAS INC.
OPTION A - EEC EXPENDITURE ANALYSIS

Line No.	Particulars	2008	2009	2010	2011	2012	2013	2014	2015	2016
						1	2	3	4	5
1					2011					
2	Rate Impact Based on 2011 Margin & Volume				Margin at Revised Rates / Volume TJ					
3	Residential				$ 331,183 / 68,578.9	$ 0.032	$ 0.001	$ 0.001	$ 0.001	$ 0.001
4	Small Commercial				88,744 / 24,603.1	$ 0.024	$ 0.001	$ 0.001	$ 0.001	$ 0.000
5	Large Comercial - Sales				47,896 / 17,168.5	$ 0.019	$ 0.001	$ 0.001	$ 0.000	$ 0.000
6	Seasonal Service				265 / 184.6	$ 0.010	$ 0.000	$ 0.000	$ 0.000	$ 0.000
7	General Firm Service - Sales				7,380 / 3,184.3	$ 0.016	$ 0.001	$ 0.000	$ 0.000	$ 0.000
8	General Interruptible Service - Sales				47 / 22.7	$ 0.014	$ 0.000	$ 0.000	$ 0.000	$ 0.000
9	NGV				403 / 103.8	$ 0.026	$ 0.001	$ 0.001	$ 0.001	$ 0.000
10	Large Firm Transportation Service				5,224 / 8,103.2	$ 0.004	$ 0.000	$ 0.000	$ 0.000	$ 0.000
11	Large Interuptible T-Service				9,710 / 11,080.5	$ 0.006	$ 0.000	$ 0.000	$ 0.000	$ 0.000
12	Large Commercial T-Service				17,607 / 6,177.2	$ 0.019	$ 0.001	$ 0.001	$ 0.000	$ 0.000
13	General Firm T-Service				25,476 / 12,944.1	$ 0.013	$ 0.000	$ 0.000	$ 0.000	$ 0.000
14	General Interruptible T-Service				7,067 / 5,587.4	$ 0.008	$ 0.000	$ 0.000	$ 0.000	$ 0.000
15										
16	Total Non-Bypass Sales & T-Service				$ 541,002 / 157,738.3					

Attachment 51.1

TERASEN GAS INC.
OPTION A - EEC EXPENDITURE ANALYSIS

Line No.	Particulars	2017	2018	2019	2020	2021	2022	2023	2024
		6	7	8	9	10	11	12	13
1									
2	Rate Impact Based on 2011 Margin & Volume								
3	Residential	$ 0.000	$ 0.000	-$ 0.000	-$ 0.004	-$ 0.021	-$ 0.024	$ -	$ -
4	Small Commercial	$ 0.000	$ 0.000	-$ 0.000	-$ 0.003	-$ 0.016	-$ 0.018	$ -	$ -
5	Large Comercial - Sales	$ 0.000	$ 0.000	-$ 0.000	-$ 0.002	-$ 0.012	-$ 0.014	$ -	$ -
6	Seasonal Service	$ 0.000	$ 0.000	-$ 0.000	-$ 0.001	-$ 0.006	-$ 0.007	$ -	$ -
7	General Firm Service - Sales	$ 0.000	$ 0.000	-$ 0.000	-$ 0.002	-$ 0.010	-$ 0.011	$ -	$ -
8	General Interruptible Service - Sales	$ 0.000	$ 0.000	-$ 0.000	-$ 0.002	-$ 0.009	-$ 0.010	$ -	$ -
9	NGV	$ 0.000	$ 0.000	-$ 0.000	-$ 0.003	-$ 0.017	-$ 0.019	$ -	$ -
10	Large Firm Transportation Service	$ 0.000	$ 0.000	-$ 0.000	-$ 0.001	-$ 0.003	-$ 0.003	$ -	$ -
11	Large Interuptible T-Service	$ 0.000	$ 0.000	-$ 0.000	-$ 0.001	-$ 0.004	-$ 0.004	$ -	$ -
12	Large Commercial T-Service	$ 0.000	$ 0.000	-$ 0.000	-$ 0.003	-$ 0.013	-$ 0.014	$ -	$ -
13	General Firm T-Service	$ 0.000	$ 0.000	-$ 0.000	-$ 0.002	-$ 0.009	-$ 0.010	$ -	$ -
14	General Interruptible T-Service	$ 0.000	$ 0.000	-$ 0.000	-$ 0.001	-$ 0.006	-$ 0.006	$ -	$ -
15									
16	Total Non-Bypass Sales & T-Service								

Attachment 51.1

TERASEN GAS INC.
OPTION A - EEC EXPENDITURE ANALYSIS

Line No.	Particulars	2025	2026	2027	2028	2029	2030	2031	2032
		14	15	16	17	18	19	20	21
1									
2	Rate Impact Based on 2011 Margin & Volume								
3	Residential	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
4	Small Commercial	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
5	Large Comercial - Sales	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
6	Seasonal Service	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
7	General Firm Service - Sales	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
8	General Interruptible Service - Sales	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
9	NGV	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
10	Large Firm Transportation Service	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
11	Large Interuptible T-Service	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
12	Large Commercial T-Service	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
13	General Firm T-Service	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
14	General Interruptible T-Service	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
15									
16	Total Non-Bypass Sales & T-Service								

TERASEN GAS INC.
OPTION A - EEC EXPENDITURE ANALYSIS

Line No.	Particulars	2008	2009	2010	2011	2012	2013	2014	2015	2016
						1	2	3	4	5
1	EEC Deferral Impact on Cost of Service									
2	Amortization Expense				$ 2,202	$ 4,379	$ 4,619	$ 4,859	$ 5,099	$ 5,339
3	Income Tax Expense				1,225	1,970	2,023	2,073	2,121	2,165
4	Earned Return				2,493	3,191	3,024	2,839	2,634	2,411
5	Total Impact on Cost of Service				$ 5,921	$ 9,540	$ 9,667	$ 9,771	$ 9,854	$ 9,915
6										
7	Change in Total Cost of Service					$ 3,619	$ 127	$ 105	$ 83	$ 61
8										
9	Income Tax Expense									
10	Earned Return				$ 2,493	$ 3,191	$ 3,024	$ 2,839	$ 2,634	$ 2,411
11	Less Utility Interest Expense				- 1,298	- 1,661	- 1,574	- 1,478	- 1,371	- 1,255
12	Add Amortization Expense				2,202	4,379	4,619	4,859	5,099	5,339
13	Taxable Income After Tax				$ 3,398	$ 5,909	$ 6,069	$ 6,220	$ 6,362	$ 6,495
14										
15	Taxable Income				$ 4,623	$ 7,879	$ 8,092	$ 8,294	$ 8,483	$ 8,660
16	Tax Rate	31%	30%	28.50%	26.50%	25%	25%	25%	25%	25%
17	Income Tax Expense				$ 1,225	$ 1,970	$ 2,023	$ 2,073	$ 2,121	$ 2,165
18										
19	Capital Structure & Embedded Cost									
20	% of Capital Structure									
21	Short Term Debt				1.63%					
22	Long Term Debt				58.37%					
23	Common Equity				40.00%					
24	Total				100.00%					
25										
26	Embedded Cost									
27	Short Term Debt				4.500%					
28	Long Term Debt				6.945%					
29	Common Equity				9.500%					
30										
31	Return on Rate Base				7.93%					
32	Cost of Debt (Before Tax)				4.13%					

TERASEN GAS INC.
OPTION A - EEC EXPENDITURE ANALYSIS

Line No.	Particulars	2017	2018	2019	2020	2021	2022	2023	2024
		6	7	8	9	10	11	12	13
1	EEC Deferral Impact on Cost of Service								
2	Amortization Expense	$ 5,579	$ 5,819	$ 6,059	$ 5,945	$ 4,337	$ 2,400	$ 2,400	$ 2,400
3	Income Tax Expense	2,206	2,244	2,280	2,196	1,625	967	967	967
4	Earned Return	2,168	1,907	1,626	1,340	1,123	1,046	1,046	1,046
5	Total Impact on Cost of Service	$ 9,954	$ 9,970	$ 9,965	$ 9,481	$ 7,085	$ 4,414	$ 4,414	$ 4,414
6									
7	Change in Total Cost of Service	$ 39	$ 17	-$ 5	-$ 484	-$ 2,396	-$ 2,672	$ -	$ -
8									
9	Income Tax Expense								
10	Earned Return	$ 2,168	$ 1,907	$ 1,626	$ 1,340	$ 1,123	$ 1,046	$ 1,046	$ 1,046
11	Less Utility Interest Expense	- 1,129	- 993	- 847	- 698	- 585	- 545	- 545	- 545
12	Add Amortization Expense	5,579	5,819	6,059	5,945	4,337	2,400	2,400	2,400
13	Taxable Income After Tax	$ 6,619	$ 6,733	$ 6,839	$ 6,587	$ 4,875	$ 2,902	$ 2,902	$ 2,902
14									
15	Taxable Income	$ 8,825	$ 8,978	$ 9,119	$ 8,783	$ 6,501	$ 3,869	$ 3,869	$ 3,869
16	Tax Rate	25%	25%	25%	25%	25%	25%	25%	25%
17	Income Tax Expense	$ 2,206	$ 2,244	$ 2,280	$ 2,196	$ 1,625	$ 967	$ 967	$ 967
18									
19	Capital Structure & Embedded Cost								
20	% of Capital Structure								
21	Short Term Debt								
22	Long Term Debt								
23	Common Equity								
24	Total								
25									
26	Embedded Cost								
27	Short Term Debt								
28	Long Term Debt								
29	Common Equity								
30									
31	Return on Rate Base								
32	Cost of Debt (Before Tax)								

TERASEN GAS INC.
OPTION A - EEC EXPENDITURE ANALYSIS

Line No.	Particulars	2025 14	2026 15	2027 16	2028 17	2029 18	2030 19	2031 20	2032 21
1	EEC Deferral Impact on Cost of Service								
2	Amortization Expense	$ 2,400	$ 2,400	$ 2,400	$ 2,400	$ 2,400	$ 2,400	$ 2,400	$ 2,400
3	Income Tax Expense	967	967	967	967	967	967	967	967
4	Earned Return	1,046	1,046	1,046	1,046	1,046	1,046	1,046	1,046
5	Total Impact on Cost of Service	$ 4,414	$ 4,414	$ 4,414	$ 4,414	$ 4,414	$ 4,414	$ 4,414	$ 4,414
6									
7	Change in Total Cost of Service	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
8									
9	Income Tax Expense								
10	Earned Return	$ 1,046	$ 1,046	$ 1,046	$ 1,046	$ 1,046	$ 1,046	$ 1,046	$ 1,046
11	Less Utility Interest Expense	- 545	- 545	- 545	- 545	- 545	- 545	- 545	- 545
12	Add Amortization Expense	2,400	2,400	2,400	2,400	2,400	2,400	2,400	2,400
13	Taxable Income After Tax	$ 2,902	$ 2,902	$ 2,902	$ 2,902	$ 2,902	$ 2,902	$ 2,902	$ 2,902
14									
15	Taxable Income	$ 3,869	$ 3,869	$ 3,869	$ 3,869	$ 3,869	$ 3,869	$ 3,869	$ 3,869
16	Tax Rate	25%	25%	25%	25%	25%	25%	25%	25%
17	Income Tax Expense	$ 967	$ 967	$ 967	$ 967	$ 967	$ 967	$ 967	$ 967
18									
19	Capital Structure & Embedded Cost								
20	% of Capital Structure								
21	Short Term Debt								
22	Long Term Debt								
23	Common Equity								
24	Total								
25									
26	Embedded Cost								
27	Short Term Debt								
28	Long Term Debt								
29	Common Equity								
30									
31	Return on Rate Base								
32	Cost of Debt (Before Tax)								

Attachment 51.1

TERASEN GAS INC.
OPTION B - EEC EXPENDITURE ANALYSIS

Line No.	Particulars	2008	2009	2010	2011	2012	2013	2014	2015	2016
						1	2	3	4	5
1	EEC Expenditure	$ 654	$ 3,966	$ 25,845	$ 29,619	$ 28,000	$ 28,000	$ 28,000	$ 28,000	$ 28,000
2	Income Tax Offset	- 203	- 1,190	- 7,366	- 7,849	- 7,000	- 7,000	- 7,000	- 7,000	- 7,000
3	Net Additions	$ 451	$ 2,776	$ 18,479	$ 21,770	$ 21,000	$ 21,000	$ 21,000	$ 21,000	$ 21,000
4	Amortization 10 Years	$ 45	$ 278	$ 1,848	$ 2,177	$ 2,100	$ 2,100	$ 2,100	$ 2,100	$ 2,100
5										
6	EEC Deferral Account									
7	Opening Balance	$ 1,526	$ 1,205	$ 3,545	$ 21,670	$ 41,238	$ 57,858	$ 72,379	$ 84,799	$ 95,120
8	Net Additions	451	2,776	18,479	21,770	21,000	21,000	21,000	21,000	21,000
9	Amortization	- 772	- 436	- 355	- 2,202	- 4,379	- 6,479	- 8,579	- 10,679	- 12,779
10	Ending Balance	$ 1,205	$ 3,545	$ 21,670	$ 41,238	$ 57,858	$ 72,379	$ 84,799	$ 95,120	$ 103,340
11										
12	EEC Deferral Mid-Year	$ 1,366	$ 2,375	$ 12,608	$ 31,454	$ 49,548	$ 65,118	$ 78,589	$ 89,959	$ 99,230
13										
14	Change in Rate Base					$ 18,094	$ 15,571	$ 13,471	$ 11,371	$ 9,271
15										
16	EEC Deferral Impact on Non-Bypass Rates									
17	Change in Cost of Service					$ 4,474	$ 4,232	$ 4,038	$ 3,845	$ 3,652

TERASEN GAS INC.
OPTION B - EEC EXPENDITURE ANALYSIS

Line No.	Particulars	2017	2018	2019	2020	2021	2022	2023	2024
		6	7	8	9	10	11	12	13
1	EEC Expenditure	$ 28,000	$ 28,000	$ 28,000	$ 28,000	$ 28,000	$ 28,000	$ 28,000	$ 28,000
2	Income Tax Offset	- 7,000	- 7,000	- 7,000	- 7,000	- 7,000	- 7,000	- 7,000	- 7,000
3	Net Additions	$ 21,000	$ 21,000	$ 21,000	$ 21,000	$ 21,000	$ 21,000	$ 21,000	$ 21,000
4	Amortization 10 Years	$ 2,100	$ 2,100	$ 2,100	$ 2,100	$ 2,100	$ 2,100	$ 2,100	$ 2,100
5									
6	EEC Deferral Account								
7	Opening Balance	$ 103,340	$ 109,461	$ 113,481	$ 115,402	$ 115,577	$ 115,500	$ 115,500	$ 115,500
8	Net Additions	21,000	21,000	21,000	21,000	21,000	21,000	21,000	21,000
9	Amortization	- 14,879	- 16,979	- 19,079	- 20,825	- 21,077	- 21,000	- 21,000	- 21,000
10	Ending Balance	$ 109,461	$ 113,481	$ 115,402	$ 115,577	$ 115,500	$ 115,500	$ 115,500	$ 115,500
11									
12	EEC Deferral Mid-Year	$ 106,401	$ 111,471	$ 114,442	$ 115,489	$ 115,538	$ 115,500	$ 115,500	$ 115,500
13									
14	Change in Rate Base	$ 7,171	$ 5,071	$ 2,971	$ 1,048	$ 49	-$ 38	$ -	$ -
15									
16	EEC Deferral Impact on Non-Bypass Rates								
17	Change in Cost of Service	$ 3,459	$ 3,266	$ 3,073	$ 2,424	$ 341	-$ 106	$ -	$ -

TERASEN GAS INC.
OPTION B - EEC EXPENDITURE ANALYSIS

Line No.	Particulars	2025 14	2026 15	2027 16	2028 17	2029 18	2030 19	2031 20	2032 21
1	EEC Expenditure	$ 28,000	$ 28,000	$ 28,000	$ 28,000	$ 28,000	$ 28,000	$ 28,000	$ 28,000
2	Income Tax Offset	- 7,000	- 7,000	- 7,000	- 7,000	- 7,000	- 7,000	- 7,000	- 7,000
3	Net Additions	$ 21,000	$ 21,000	$ 21,000	$ 21,000	$ 21,000	$ 21,000	$ 21,000	$ 21,000
4	Amortization 10 Years	$ 2,100	$ 2,100	$ 2,100	$ 2,100	$ 2,100	$ 2,100	$ 2,100	$ 2,100
5									
6	EEC Deferral Account								
7	Opening Balance	$ 115,500	$ 115,500	$ 115,500	$ 115,500	$ 115,500	$ 115,500	$ 115,500	$ 115,500
8	Net Additions	21,000	21,000	21,000	21,000	21,000	21,000	21,000	21,000
9	Amortization	- 21,000	- 21,000	- 21,000	- 21,000	- 21,000	- 21,000	- 21,000	- 21,000
10	Ending Balance	$ 115,500	$ 115,500	$ 115,500	$ 115,500	$ 115,500	$ 115,500	$ 115,500	$ 115,500
11									
12	EEC Deferral Mid-Year	$ 115,500	$ 115,500	$ 115,500	$ 115,500	$ 115,500	$ 115,500	$ 115,500	$ 115,500
13									
14	Change in Rate Base	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
15									
16	EEC Deferral Impact on Non-Bypass Rates								
17	Change in Cost of Service	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -

TERASEN GAS INC.
OPTION B - EEC EXPENDITURE ANALYSIS

Line No.	Particulars	2008	2009	2010	2011	2012	2013	2014	2015	2016
						1	2	3	4	5
1					2011					
2	Rate Impact Based on 2011 Margin & Volume				Margin at Revised Rates / Volume TJ					
3	Residential				$ 331,183 / 68,578.9	$ 0.040	$ 0.038	$ 0.036	$ 0.034	$ 0.033
4	Small Commercial				88,744 / 24,603.1	$ 0.030	$ 0.028	$ 0.027	$ 0.026	$ 0.024
5	Large Comercial - Sales				47,896 / 17,168.5	$ 0.023	$ 0.022	$ 0.021	$ 0.020	$ 0.019
6	Seasonal Service				265 / 184.6	$ 0.012	$ 0.011	$ 0.011	$ 0.010	$ 0.010
7	General Firm Service - Sales				7,380 / 3,184.3	$ 0.019	$ 0.018	$ 0.017	$ 0.016	$ 0.016
8	General Interruptible Service - Sales				47 / 22.7	$ 0.017	$ 0.016	$ 0.015	$ 0.015	$ 0.014
9	NGV				403 / 103.8	$ 0.032	$ 0.030	$ 0.029	$ 0.028	$ 0.026
10	Large Firm Transportation Service				5,224 / 8,103.2	$ 0.005	$ 0.005	$ 0.005	$ 0.005	$ 0.004
11	Large Interuptible T-Service				9,710 / 11,080.5	$ 0.007	$ 0.007	$ 0.007	$ 0.006	$ 0.006
12	Large Commercial T-Service				17,607 / 6,177.2	$ 0.024	$ 0.022	$ 0.021	$ 0.020	$ 0.019
13	General Firm T-Service				25,476 / 12,944.1	$ 0.016	$ 0.015	$ 0.015	$ 0.014	$ 0.013
14	General Interruptible T-Service				7,067 / 5,587.4	$ 0.010	$ 0.010	$ 0.009	$ 0.009	$ 0.009
15										
16	Total Non-Bypass Sales & T-Service				$ 541,002 / 157,738.3					

Attachment 51.1

TERASEN GAS INC.
OPTION B - EEC EXPENDITURE ANALYSIS

Line No.	Particulars	2017	2018	2019	2020	2021	2022	2023	2024
		6	7	8	9	10	11	12	13
1									
2	Rate Impact Based on 2011 Margin & Volume								
3	Residential	$ 0.031	$ 0.029	$ 0.027	$ 0.022	$ 0.003	-$ 0.001	$ -	$ -
4	Small Commercial	$ 0.023	$ 0.022	$ 0.020	$ 0.016	$ 0.002	-$ 0.001	$ -	$ -
5	Large Comercial - Sales	$ 0.018	$ 0.017	$ 0.016	$ 0.012	$ 0.002	-$ 0.001	$ -	$ -
6	Seasonal Service	$ 0.009	$ 0.009	$ 0.008	$ 0.006	$ 0.001	-$ 0.000	$ -	$ -
7	General Firm Service - Sales	$ 0.015	$ 0.014	$ 0.013	$ 0.010	$ 0.001	-$ 0.000	$ -	$ -
8	General Interruptible Service - Sales	$ 0.013	$ 0.013	$ 0.012	$ 0.009	$ 0.001	-$ 0.000	$ -	$ -
9	NGV	$ 0.025	$ 0.023	$ 0.022	$ 0.017	$ 0.002	-$ 0.001	$ -	$ -
10	Large Firm Transportation Service	$ 0.004	$ 0.004	$ 0.004	$ 0.003	$ 0.000	-$ 0.000	$ -	$ -
11	Large Interuptible T-Service	$ 0.006	$ 0.005	$ 0.005	$ 0.004	$ 0.001	-$ 0.000	$ -	$ -
12	Large Commercial T-Service	$ 0.018	$ 0.017	$ 0.016	$ 0.013	$ 0.002	-$ 0.001	$ -	$ -
13	General Firm T-Service	$ 0.013	$ 0.012	$ 0.011	$ 0.009	$ 0.001	-$ 0.000	$ -	$ -
14	General Interruptible T-Service	$ 0.008	$ 0.008	$ 0.007	$ 0.006	$ 0.001	-$ 0.000	$ -	$ -
15									
16	Total Non-Bypass Sales & T-Service								

Attachment 51.1

TERASEN GAS INC.
OPTION B - EEC EXPENDITURE ANALYSIS

Line No.	Particulars	2025 14	2026 15	2027 16	2028 17	2029 18	2030 19	2031 20	2032 21
1									
2	Rate Impact Based on 2011 Margin & Volume								
3	Residential	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
4	Small Commercial	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
5	Large Comercial - Sales	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
6	Seasonal Service	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
7	General Firm Service - Sales	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
8	General Interruptible Service - Sales	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
9	NGV	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
10	Large Firm Transportation Service	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
11	Large Interuptible T-Service	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
12	Large Commercial T-Service	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
13	General Firm T-Service	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
14	General Interruptible T-Service	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
15									
16	Total Non-Bypass Sales & T-Service								

Attachment 51.1

TERASEN GAS INC.
OPTION B - EEC EXPENDITURE ANALYSIS

Line No.	Particulars	2008	2009	2010	2011	2012	2013	2014	2015	2016
						1	2	3	4	5
1	EEC Deferral Impact on Cost of Service									
2	Amortization Expense				$ 2,202	$ 4,379	$ 6,479	$ 8,579	$ 10,679	$ 12,779
3	Income Tax Expense				1,225	2,087	2,985	3,855	4,699	5,517
4	Earned Return				2,493	3,928	5,162	6,230	7,131	7,866
5	Total Impact on Cost of Service				$ 5,921	$ 10,395	$ 14,626	$ 18,665	$ 22,510	$ 26,162
6										
7	Change in Total Cost of Service					$ 4,474	$ 4,232	$ 4,038	$ 3,845	$ 3,652
8										
9	Income Tax Expense									
10	Earned Return				$ 2,493	$ 3,928	$ 5,162	$ 6,230	$ 7,131	$ 7,866
11	Less Utility Interest Expense				- 1,298	- 2,045	- 2,688	- 3,243	- 3,713	- 4,095
12	Add Amortization Expense				2,202	4,379	6,479	8,579	10,679	12,779
13	Taxable Income After Tax				$ 3,398	$ 6,262	$ 8,954	$ 11,566	$ 14,098	$ 16,550
14										
15	Taxable Income				$ 4,623	$ 8,350	$ 11,939	$ 15,421	$ 18,797	$ 22,067
16	Tax Rate	31.00%	30.00%	28.50%	26.50%	25.00%	25.00%	25.00%	25.00%	25.00%
17	Income Tax Expense				$ 1,225	$ 2,087	$ 2,985	$ 3,855	$ 4,699	$ 5,517
18										
19	Capital Structure & Embedded Cost									
20	% of Capital Structure									
21	Short Term Debt				1.63%					
22	Long Term Debt				58.37%					
23	Common Equity				40.00%					
24	Total				100.00%					
25										
26	Embedded Cost									
27	Short Term Debt				4.50%					
28	Long Term Debt				6.95%					
29	Common Equity				9.50%					
30										
31	Return on Rate Base				7.93%					
32	Cost of Debt (Before Tax)				4.13%					

Attachment 51.1

TERASEN GAS INC.
OPTION B - EEC EXPENDITURE ANALYSIS

Line No.	Particulars	2017	2018	2019	2020	2021	2022	2023	2024
		6	7	8	9	10	11	12	13
1	EEC Deferral Impact on Cost of Service								
2	Amortization Expense	$ 14,879	$ 16,979	$ 19,079	$ 20,825	$ 21,077	$ 21,000	$ 21,000	$ 21,000
3	Income Tax Expense	6,308	7,072	7,809	8,405	8,489	8,463	8,463	8,463
4	Earned Return	8,435	8,836	9,072	9,155	9,159	9,156	9,156	9,156
5	Total Impact on Cost of Service	$ 29,622	$ 32,888	$ 35,961	$ 38,384	$ 38,725	$ 38,619	$ 38,619	$ 38,619
6									
7	Change in Total Cost of Service	$ 3,459	$ 3,266	$ 3,073	$ 2,424	$ 341	-$ 106	$ -	$ -
8									
9	Income Tax Expense								
10	Earned Return	$ 8,435	$ 8,836	$ 9,072	$ 9,155	$ 9,159	$ 9,156	$ 9,156	$ 9,156
11	Less Utility Interest Expense	- 4,391	- 4,601	- 4,723	- 4,766	- 4,768	- 4,767	- 4,767	- 4,767
12	Add Amortization Expense	14,879	16,979	19,079	20,825	21,077	21,000	21,000	21,000
13	Taxable Income After Tax	$ 18,923	$ 21,215	$ 23,428	$ 25,214	$ 25,467	$ 25,389	$ 25,389	$ 25,389
14									
15	Taxable Income	$ 25,230	$ 28,287	$ 31,238	$ 33,618	$ 33,957	$ 33,852	$ 33,852	$ 33,852
16	Tax Rate	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%
17	Income Tax Expense	$ 6,308	$ 7,072	$ 7,809	$ 8,405	$ 8,489	$ 8,463	$ 8,463	$ 8,463
18									
19	Capital Structure & Embedded Cost								
20	% of Capital Structure								
21	Short Term Debt								
22	Long Term Debt								
23	Common Equity								
24	Total								
25									
26	Embedded Cost								
27	Short Term Debt								
28	Long Term Debt								
29	Common Equity								
30									
31	Return on Rate Base								
32	Cost of Debt (Before Tax)								

Attachment 51.1

TERASEN GAS INC.
OPTION B - EEC EXPENDITURE ANALYSIS

Line No.	Particulars	2025 14	2026 15	2027 16	2028 17	2029 18	2030 19	2031 20	2032 21
1	EEC Deferral Impact on Cost of Service								
2	Amortization Expense	$ 21,000	$ 21,000	$ 21,000	$ 21,000	$ 21,000	$ 21,000	$ 21,000	$ 21,000
3	Income Tax Expense	8,463	8,463	8,463	8,463	8,463	8,463	8,463	8,463
4	Earned Return	9,156	9,156	9,156	9,156	9,156	9,156	9,156	9,156
5	Total Impact on Cost of Service	$ 38,619	$ 38,619	$ 38,619	$ 38,619	$ 38,619	$ 38,619	$ 38,619	$ 38,619
6									
7	Change in Total Cost of Service	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
8									
9	Income Tax Expense								
10	Earned Return	$ 9,156	$ 9,156	$ 9,156	$ 9,156	$ 9,156	$ 9,156	$ 9,156	$ 9,156
11	Less Utility Interest Expense	- 4,767	- 4,767	- 4,767	- 4,767	- 4,767	- 4,767	- 4,767	- 4,767
12	Add Amortization Expense	21,000	21,000	21,000	21,000	21,000	21,000	21,000	21,000
13	Taxable Income After Tax	$ 25,389	$ 25,389	$ 25,389	$ 25,389	$ 25,389	$ 25,389	$ 25,389	$ 25,389
14									
15	Taxable Income	$ 33,852	$ 33,852	$ 33,852	$ 33,852	$ 33,852	$ 33,852	$ 33,852	$ 33,852
16	Tax Rate	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%
17	Income Tax Expense	$ 8,463	$ 8,463	$ 8,463	$ 8,463	$ 8,463	$ 8,463	$ 8,463	$ 8,463
18									
19	Capital Structure & Embedded Cost								
20	% of Capital Structure								
21	Short Term Debt								
22	Long Term Debt								
23	Common Equity								
24	Total								
25									
26	Embedded Cost								
27	Short Term Debt								
28	Long Term Debt								
29	Common Equity								
30									
31	Return on Rate Base								
32	Cost of Debt (Before Tax)								

Attachment 51.1

TERASEN GAS INC.
OPTION C - EEC EXPENDITURE ANALYSIS

Line No.	Particulars	2008	2009	2010	2011	2012	2013	2014	2015	2016
						1	2	3	4	5
1	EEC Expenditure	$ 654	$ 3,966	$ 25,845	$ 29,619	$ 64,000	$ 64,000	$ 64,000	$ 64,000	$ 64,000
2	Income Tax Offset	- 203	- 1,190	- 7,366	- 7,849	- 16,000	- 16,000	- 16,000	- 16,000	- 16,000
3	Net Additions	$ 451	$ 2,776	$ 18,479	$ 21,770	$ 48,000	$ 48,000	$ 48,000	$ 48,000	$ 48,000
4	Amortization 10 Years	$ 45	$ 278	$ 1,848	$ 2,177	$ 4,800	$ 4,800	$ 4,800	$ 4,800	$ 4,800
5										
6	EEC Deferral Account									
7	Opening Balance	$ 1,526	$ 1,205	$ 3,545	$ 21,670	$ 41,238	$ 84,858	$ 123,679	$ 157,699	$ 186,920
8	Net Additions	451	2,776	18,479	21,770	48,000	48,000	48,000	48,000	48,000
9	Amortization	- 772	- 436	- 355	- 2,202	- 4,379	- 9,179	- 13,979	- 18,779	- 23,579
10	Ending Balance	$ 1,205	$ 3,545	$ 21,670	$ 41,238	$ 84,858	$ 123,679	$ 157,699	$ 186,920	$ 211,340
11										
12	EEC Deferral Mid-Year	$ 1,366	$ 2,375	$ 12,608	$ 31,454	$ 63,048	$ 104,268	$ 140,689	$ 172,309	$ 199,130
13										
14	Change in Rate Base					$ 31,594	$ 41,221	$ 36,421	$ 31,621	$ 26,821
15										
16	EEC Deferral Impact on Non-Bypass Rates									
17	Change in Cost of Service					$ 5,715	$ 10,190	$ 9,748	$ 9,307	$ 8,866

Attachment 51.1

TERASEN GAS INC.
OPTION C - EEC EXPENDITURE ANALYSIS

Line No.	Particulars	2017	2018	2019	2020	2021	2022	2023	2024
		6	7	8	9	10	11	12	13
1	EEC Expenditure	$ 64,000	$ 64,000	$ 64,000	$ 64,000	$ 64,000	$ 60,000	$ 56,000	$ 52,000
2	Income Tax Offset	- 16,000	- 16,000	- 16,000	- 16,000	- 16,000	- 15,000	- 14,000	- 13,000
3	Net Additions	$ 48,000	$ 48,000	$ 48,000	$ 48,000	$ 48,000	$ 45,000	$ 42,000	$ 39,000
4	Amortization 10 Years	$ 4,800	$ 4,800	$ 4,800	$ 4,800	$ 4,800	$ 4,500	$ 4,200	$ 3,900
5									
6	EEC Deferral Account								
7	Opening Balance	$ 211,340	$ 230,961	$ 245,781	$ 255,802	$ 261,377	$ 264,000	$ 261,000	$ 255,300
8	Net Additions	48,000	48,000	48,000	48,000	48,000	45,000	42,000	39,000
9	Amortization	- 28,379	- 33,179	- 37,979	- 42,425	- 45,377	- 48,000	- 47,700	- 47,100
10	Ending Balance	$ 230,961	$ 245,781	$ 255,802	$ 261,377	$ 264,000	$ 261,000	$ 255,300	$ 247,200
11									
12	EEC Deferral Mid-Year	$ 221,151	$ 238,371	$ 250,792	$ 258,589	$ 262,688	$ 262,500	$ 258,150	$ 251,250
13									
14	Change in Rate Base	$ 22,021	$ 17,221	$ 12,421	$ 7,798	$ 4,099	-$ 188	-$ 4,350	-$ 6,900
15									
16	EEC Deferral Impact on Non-Bypass Rates								
17	Change in Cost of Service	$ 8,425	$ 7,983	$ 7,542	$ 6,644	$ 4,313	$ 3,480	-$ 800	-$ 1,434

Attachment 51.1

TERASEN GAS INC.
OPTION C - EEC EXPENDITURE ANALYSIS

Line No.	Particulars	2025 14	2026 15	2027 16	2028 17	2029 18	2030 19	2031 20	2032 21
1	EEC Expenditure	$ 48,000	$ 44,000	$ 40,000	$ 36,000	$ 32,000	$ 28,000	$ 24,000	$ 20,000
2	Income Tax Offset	- 12,000	- 11,000	- 10,000	- 9,000	- 8,000	- 7,000	- 6,000	- 5,000
3	Net Additions	$ 36,000	$ 33,000	$ 30,000	$ 27,000	$ 24,000	$ 21,000	$ 18,000	$ 15,000
4	Amortization 10 Years	$ 3,600	$ 3,300	$ 3,000	$ 2,700	$ 2,400	$ 2,100	$ 1,800	$ 1,500
5									
6	EEC Deferral Account								
7	Opening Balance	$ 247,200	$ 237,000	$ 225,000	$ 211,500	$ 196,800	$ 181,200	$ 165,000	$ 148,500
8	Net Additions	36,000	33,000	30,000	27,000	24,000	21,000	18,000	15,000
9	Amortization	- 46,200	- 45,000	- 43,500	- 41,700	- 39,600	- 37,200	- 34,500	- 31,500
10	Ending Balance	$ 237,000	$ 225,000	$ 211,500	$ 196,800	$ 181,200	$ 165,000	$ 148,500	$ 132,000
11									
12	EEC Deferral Mid-Year	$ 242,100	$ 231,000	$ 218,250	$ 204,150	$ 189,000	$ 173,100	$ 156,750	$ 140,250
13									
14	Change in Rate Base	-$ 9,150	-$ 11,100	-$ 12,750	-$ 14,100	-$ 15,150	-$ 15,900	-$ 16,350	-$ 16,500
15									
16	EEC Deferral Impact on Non-Bypass Rates								
17	Change in Cost of Service	-$ 2,041	-$ 2,621	-$ 3,172	-$ 3,696	-$ 4,193	-$ 4,662	-$ 5,103	-$ 5,517

TERASEN GAS INC.
OPTION C - EEC EXPENDITURE ANALYSIS

Line No.	Particulars	2008	2009	2010	2011	2012	2013	2014	2015	2016
						1	2	3	4	5
1					2011					
	Rate Impact Based on 2011 Margin &			Margin at Revised						
2	Volume			Rates	Volume TJ					
3	Residential			$ 331,183	68,578.9	$ 0.051	$ 0.091	$ 0.087	$ 0.083	$ 0.079
4	Small Commercial			88,744	24,603.1	$ 0.038	$ 0.068	$ 0.065	$ 0.062	$ 0.059
5	Large Comercial - Sales			47,896	17,168.5	$ 0.029	$ 0.053	$ 0.050	$ 0.048	$ 0.046
6	Seasonal Service			265	184.6	$ 0.015	$ 0.027	$ 0.026	$ 0.025	$ 0.024
7	General Firm Service - Sales			7,380	3,184.3	$ 0.024	$ 0.044	$ 0.042	$ 0.040	$ 0.038
8	General Interruptible Service - Sales			47	22.7	$ 0.022	$ 0.039	$ 0.037	$ 0.036	$ 0.034
9	NGV			403	103.8	$ 0.041	$ 0.073	$ 0.070	$ 0.067	$ 0.064
10	Large Firm Transportation Service			5,224	8,103.2	$ 0.007	$ 0.012	$ 0.012	$ 0.011	$ 0.011
11	Large Interuptible T-Service			9,710	11,080.5	$ 0.009	$ 0.017	$ 0.016	$ 0.015	$ 0.014
12	Large Commercial T-Service			17,607	6,177.2	$ 0.030	$ 0.054	$ 0.051	$ 0.049	$ 0.047
13	General Firm T-Service			25,476	12,944.1	$ 0.021	$ 0.037	$ 0.035	$ 0.034	$ 0.032
14	General Interruptible T-Service			7,067	5,587.4	$ 0.013	$ 0.024	$ 0.023	$ 0.022	$ 0.021
15										
16	Total Non-Bypass Sales & T-Service			$ 541,002	157,738.3					

Attachment 51.1

TERASEN GAS INC.
OPTION C - EEC EXPENDITURE ANALYSIS

Line No.	Particulars	2017	2018	2019	2020	2021	2022	2023	2024
		6	7	8	9	10	11	12	13
1									
2	Rate Impact Based on 2011 Margin & Volume								
3	Residential	$ 0.075	$ 0.071	$ 0.067	$ 0.059	$ 0.038	$ 0.031	-$ 0.007	-$ 0.013
4	Small Commercial	$ 0.056	$ 0.053	$ 0.050	$ 0.044	$ 0.029	$ 0.023	-$ 0.005	-$ 0.010
5	Large Comercial - Sales	$ 0.043	$ 0.041	$ 0.039	$ 0.034	$ 0.022	$ 0.018	-$ 0.004	-$ 0.007
6	Seasonal Service	$ 0.022	$ 0.021	$ 0.020	$ 0.018	$ 0.011	$ 0.009	-$ 0.002	-$ 0.004
7	General Firm Service - Sales	$ 0.036	$ 0.034	$ 0.032	$ 0.028	$ 0.018	$ 0.015	-$ 0.003	-$ 0.006
8	General Interruptible Service - Sales	$ 0.032	$ 0.031	$ 0.029	$ 0.025	$ 0.017	$ 0.013	-$ 0.003	-$ 0.005
9	NGV	$ 0.060	$ 0.057	$ 0.054	$ 0.048	$ 0.031	$ 0.025	-$ 0.006	-$ 0.010
10	Large Firm Transportation Service	$ 0.010	$ 0.010	$ 0.009	$ 0.008	$ 0.005	$ 0.004	-$ 0.001	-$ 0.002
11	Large Interuptible T-Service	$ 0.014	$ 0.013	$ 0.012	$ 0.011	$ 0.007	$ 0.006	-$ 0.001	-$ 0.002
12	Large Commercial T-Service	$ 0.044	$ 0.042	$ 0.040	$ 0.035	$ 0.023	$ 0.018	-$ 0.004	-$ 0.008
13	General Firm T-Service	$ 0.031	$ 0.029	$ 0.027	$ 0.024	$ 0.016	$ 0.013	-$ 0.003	-$ 0.005
14	General Interruptible T-Service	$ 0.020	$ 0.019	$ 0.018	$ 0.016	$ 0.010	$ 0.008	-$ 0.002	-$ 0.003
15									
16	Total Non-Bypass Sales & T-Service								

Attachment 51.1

TERASEN GAS INC.
OPTION C - EEC EXPENDITURE ANALYSIS

Line No.	Particulars	2025 14	2026 15	2027 16	2028 17	2029 18	2030 19	2031 20	2032 21
1									
	Rate Impact Based on 2011 Margin &								
2	Volume								
3	Residential	-$ 0.018	-$ 0.023	-$ 0.028	-$ 0.033	-$ 0.037	-$ 0.042	-$ 0.046	-$ 0.049
4	Small Commercial	-$ 0.014	-$ 0.017	-$ 0.021	-$ 0.025	-$ 0.028	-$ 0.031	-$ 0.034	-$ 0.037
5	Large Comercial - Sales	-$ 0.011	-$ 0.014	-$ 0.016	-$ 0.019	-$ 0.022	-$ 0.024	-$ 0.026	-$ 0.028
6	Seasonal Service	-$ 0.005	-$ 0.007	-$ 0.008	-$ 0.010	-$ 0.011	-$ 0.012	-$ 0.014	-$ 0.015
7	General Firm Service - Sales	-$ 0.009	-$ 0.011	-$ 0.014	-$ 0.016	-$ 0.018	-$ 0.020	-$ 0.022	-$ 0.024
8	General Interruptible Service - Sales	-$ 0.008	-$ 0.010	-$ 0.012	-$ 0.014	-$ 0.016	-$ 0.018	-$ 0.020	-$ 0.021
9	NGV	-$ 0.015	-$ 0.019	-$ 0.023	-$ 0.027	-$ 0.030	-$ 0.033	-$ 0.037	-$ 0.040
10	Large Firm Transportation Service	-$ 0.002	-$ 0.003	-$ 0.004	-$ 0.004	-$ 0.005	-$ 0.006	-$ 0.006	-$ 0.007
11	Large Interuptible T-Service	-$ 0.003	-$ 0.004	-$ 0.005	-$ 0.006	-$ 0.007	-$ 0.008	-$ 0.008	-$ 0.009
12	Large Commercial T-Service	-$ 0.011	-$ 0.014	-$ 0.017	-$ 0.019	-$ 0.022	-$ 0.025	-$ 0.027	-$ 0.029
13	General Firm T-Service	-$ 0.007	-$ 0.010	-$ 0.012	-$ 0.013	-$ 0.015	-$ 0.017	-$ 0.019	-$ 0.020
14	General Interruptible T-Service	-$ 0.005	-$ 0.006	-$ 0.007	-$ 0.009	-$ 0.010	-$ 0.011	-$ 0.012	-$ 0.013
15									
16	Total Non-Bypass Sales & T-Service								

TERASEN GAS INC.
OPTION C - EEC EXPENDITURE ANALYSIS

Line No.	Particulars	2008	2009	2010	2011	2012 1	2013 2	2014 3	2015 4	2016 5
1	EEC Deferral Impact on Cost of Service									
2	Amortization Expense				$ 2,202	$ 4,379	$ 9,179	$ 13,979	$ 18,779	$ 23,579
3	Income Tax Expense				1,225	2,258	4,381	6,442	8,442	10,382
4	Earned Return				2,493	4,998	8,266	11,153	13,659	15,785
5	Total Impact on Cost of Service				$ 5,921	$ 11,636	$ 21,826	$ 31,574	$ 40,881	$ 49,747
6										
7	Change in Total Cost of Service					$ 5,715	$ 10,190	$ 9,748	$ 9,307	$ 8,866
8										
9	Income Tax Expense									
10	Earned Return				$ 2,493	$ 4,998	$ 8,266	$ 11,153	$ 13,659	$ 15,785
11	Less Utility Interest Expense				- 1,298	- 2,602	- 4,303	- 5,806	- 7,111	- 8,218
12	Add Amortization Expense				2,202	4,379	9,179	13,979	18,779	23,579
13	Taxable Income After Tax				$ 3,398	$ 6,775	$ 13,142	$ 19,326	$ 25,327	$ 31,146
14										
15	Taxable Income				$ 4,623	$ 9,034	$ 17,522	$ 25,768	$ 33,770	$ 41,529
16	Tax Rate	31.00%	30.00%	28.50%	26.50%	25.00%	25.00%	25.00%	25.00%	25.00%
17	Income Tax Expense				$ 1,225	$ 2,258	$ 4,381	$ 6,442	$ 8,442	$ 10,382
18										
19	Capital Structure & Embedded Cost									
20	% of Capital Structure									
21	Short Term Debt				1.63%					
22	Long Term Debt				58.37%					
23	Common Equity				40.00%					
24	Total				100.00%					
25										
26	Embedded Cost									
27	Short Term Debt				4.50%					
28	Long Term Debt				6.95%					
29	Common Equity				9.50%					
30										
31	Return on Rate Base				7.93%					
32	Cost of Debt (Before Tax)				4.13%					

TERASEN GAS INC.
OPTION C - EEC EXPENDITURE ANALYSIS

Line No.	Particulars	2017	2018	2019	2020	2021	2022	2023	2024
		6	7	8	9	10	11	12	13
1	EEC Deferral Impact on Cost of Service								
2	Amortization Expense	$ 28,379	$ 33,179	$ 37,979	$ 42,425	$ 45,377	$ 48,000	$ 47,700	$ 47,100
3	Income Tax Expense	12,261	14,079	15,837	17,417	18,453	19,325	19,170	18,883
4	Earned Return	17,531	18,896	19,881	20,499	20,824	20,809	20,464	19,917
5	Total Impact on Cost of Service	$ 58,171	$ 66,155	$ 73,697	$ 80,341	$ 84,654	$ 88,134	$ 87,334	$ 85,899
6									
7	Change in Total Cost of Service	$ 8,425	$ 7,983	$ 7,542	$ 6,644	$ 4,313	$ 3,480	-$ 800	-$ 1,434
8									
9	Income Tax Expense								
10	Earned Return	$ 17,531	$ 18,896	$ 19,881	$ 20,499	$ 20,824	$ 20,809	$ 20,464	$ 19,917
11	Less Utility Interest Expense	- 9,127	- 9,838	- 10,351	- 10,672	- 10,842	- 10,834	- 10,654	- 10,369
12	Add Amortization Expense	28,379	33,179	37,979	42,425	45,377	48,000	47,700	47,100
13	Taxable Income After Tax	$ 36,783	$ 42,238	$ 47,510	$ 52,251	$ 55,359	$ 57,975	$ 57,510	$ 56,648
14									
15	Taxable Income	$ 49,044	$ 56,317	$ 63,346	$ 69,668	$ 73,812	$ 77,300	$ 76,680	$ 75,530
16	Tax Rate	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%
17	Income Tax Expense	$ 12,261	$ 14,079	$ 15,837	$ 17,417	$ 18,453	$ 19,325	$ 19,170	$ 18,883
18									
19	Capital Structure & Embedded Cost								
20	% of Capital Structure								
21	Short Term Debt								
22	Long Term Debt								
23	Common Equity								
24	Total								
25									
26	Embedded Cost								
27	Short Term Debt								
28	Long Term Debt								
29	Common Equity								
30									
31	Return on Rate Base								
32	Cost of Debt (Before Tax)								

Attachment 51.1

TERASEN GAS INC.
OPTION C - EEC EXPENDITURE ANALYSIS

Line No.	Particulars	2025 14	2026 15	2027 16	2028 17	2029 18	2030 19	2031 20	2032 21
1	EEC Deferral Impact on Cost of Service								
2	Amortization Expense	$ 46,200	$ 45,000	$ 43,500	$ 41,700	$ 39,600	$ 37,200	$ 34,500	$ 31,500
3	Income Tax Expense	18,467	17,926	17,265	16,486	15,594	14,593	13,486	12,277
4	Earned Return	19,192	18,312	17,301	16,183	14,982	13,722	12,426	11,118
5	Total Impact on Cost of Service	$ 83,858	$ 81,238	$ 78,065	$ 74,369	$ 70,176	$ 65,514	$ 60,411	$ 54,894
6									
7	Change in Total Cost of Service	-$ 2,041	-$ 2,621	-$ 3,172	-$ 3,696	-$ 4,193	-$ 4,662	-$ 5,103	-$ 5,517
8									
9	Income Tax Expense								
10	Earned Return	$ 19,192	$ 18,312	$ 17,301	$ 16,183	$ 14,982	$ 13,722	$ 12,426	$ 11,118
11	Less Utility Interest Expense	- 9,992	- 9,534	- 9,007	- 8,426	- 7,800	- 7,144	- 6,469	- 5,788
12	Add Amortization Expense	46,200	45,000	43,500	41,700	39,600	37,200	34,500	31,500
13	Taxable Income After Tax	$ 55,400	$ 53,778	$ 51,794	$ 49,458	$ 46,782	$ 43,778	$ 40,457	$ 36,830
14									
15	Taxable Income	$ 73,866	$ 71,704	$ 69,058	$ 65,944	$ 62,376	$ 58,370	$ 53,942	$ 49,106
16	Tax Rate	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%
17	Income Tax Expense	$ 18,467	$ 17,926	$ 17,265	$ 16,486	$ 15,594	$ 14,593	$ 13,486	$ 12,277
18									
19	Capital Structure & Embedded Cost								
20	% of Capital Structure								
21	Short Term Debt								
22	Long Term Debt								
23	Common Equity								
24	Total								
25									
26	Embedded Cost								
27	Short Term Debt								
28	Long Term Debt								
29	Common Equity								
30									
31	Return on Rate Base								
32	Cost of Debt (Before Tax)								

TERASEN GAS (VANCOUVER ISLAND) INC.
OPTION A - EEC EXPENDITURE ANALYSIS

Line No.	Particulars	2008	2009	2010	2011	2012	2013	2014	2015	2016
						1	2	3	4	5
1	EEC Expenditure	$ -	133	$ 5,204	$ 5,683	$ 800	$ 800	$ 800	$ 800	$ 800
2	Income Tax Offset	-	- 40	- 1,483	- 1,506	- 200	- 200	- 200	- 200	- 200
3	Net Additions	$ -	$ 93	$ 3,721	$ 4,177	$ 600	$ 600	$ 600	$ 600	$ 600
4	Amortization 10 Years	$ -	$ 31	$ 372	$ 418	$ 60	$ 60	$ 60	$ 60	$ 60
5										
6	EEC Deferral Account									
7	Opening Balance	$ 195	$ -	$ 93	$ 3,805	$ 7,600	$ 7,401	$ 7,142	$ 6,823	$ 6,444
8	Net Additions	-	93	3,721	4,177	600	600	600	600	600
9	Amortization	- 195	-	- 9	- 381	- 799	- 859	- 919	- 979	- 1,039
10	Ending Balance	$ -	$ 93	$ 3,805	$ 7,600	$ 7,401	$ 7,142	$ 6,823	$ 6,444	$ 6,005
11										
12	EEC Deferral Mid-Year	$ 98	$ 47	$ 1,949	$ 5,702	$ 7,501	$ 7,272	$ 6,983	$ 6,633	$ 6,224
13										
14	Change in Rate Base					$ 1,798	-$ 229	-$ 289	-$ 349	-$ 409
15										
16	EEC Deferral Impact on Non-Bypass Rates									
17	Change in Cost of Service					$ 701	$ 60	$ 54	$ 49	$ 44

TERASEN GAS (VANCOUVER ISLAND) INC.
OPTION A - EEC EXPENDITURE ANALYSIS

Line No.	Particulars	2017 6	2018 7	2019 8	2020 9	2021 10	2022 11	2023 12	2024 13
1	EEC Expenditure	$ 800	$ 800	$ 800	$ 800	$ 800	$ 800	$ 800	$ 800
2	Income Tax Offset	- 200	- 200	- 200	- 200	- 200	- 200	- 200	- 200
3	Net Additions	$ 600	$ 600	$ 600	$ 600	$ 600	$ 600	$ 600	$ 600
4	Amortization 10 Years	$ 60	$ 60	$ 60	$ 60	$ 60	$ 60	$ 60	$ 60
5									
6	EEC Deferral Account								
7	Opening Balance	$ 6,005	$ 5,506	$ 4,947	$ 4,327	$ 3,658	$ 3,300	$ 3,300	$ 3,300
8	Net Additions	600	600	600	600	600	600	600	600
9	Amortization	- 1,099	- 1,159	- 1,219	- 1,270	- 958	- 600	- 600	- 600
10	Ending Balance	$ 5,506	$ 4,947	$ 4,327	$ 3,658	$ 3,300	$ 3,300	$ 3,300	$ 3,300
11									
12	EEC Deferral Mid-Year	$ 5,755	$ 5,226	$ 4,637	$ 3,993	$ 3,479	$ 3,300	$ 3,300	$ 3,300
13									
14	Change in Rate Base	-$ 469	-$ 529	-$ 589	-$ 644	-$ 514	-$ 179	$ -	$ -
15									
16	EEC Deferral Impact on Non-Bypass Rates								
17	Change in Cost of Service	$ 38	$ 33	$ 27	$ 10	-$ 462	-$ 493	$ -	$ -

Attachment 51.1

TERASEN GAS (VANCOUVER ISLAND) INC.
OPTION A - EEC EXPENDITURE ANALYSIS

Line No.	Particulars	2025 14	2026 15	2027 16	2028 17	2029 18	2030 19	2031 20	2032 21
1	EEC Expenditure	$ 800	$ 800	$ 800	$ 800	$ 800	$ 800	$ 800	$ 800
2	Income Tax Offset	- 200	- 200	- 200	- 200	- 200	- 200	- 200	- 200
3	Net Additions	$ 600	$ 600	$ 600	$ 600	$ 600	$ 600	$ 600	$ 600
4	Amortization 10 Years	$ 60	$ 60	$ 60	$ 60	$ 60	$ 60	$ 60	$ 60
5									
6	EEC Deferral Account								
7	Opening Balance	$ 3,300	$ 3,300	$ 3,300	$ 3,300	$ 3,300	$ 3,300	$ 3,300	$ 3,300
8	Net Additions	600	600	600	600	600	600	600	600
9	Amortization	- 600	- 600	- 600	- 600	- 600	- 600	- 600	- 600
10	Ending Balance	$ 3,300	$ 3,300	$ 3,300	$ 3,300	$ 3,300	$ 3,300	$ 3,300	$ 3,300
11									
12	EEC Deferral Mid-Year	$ 3,300	$ 3,300	$ 3,300	$ 3,300	$ 3,300	$ 3,300	$ 3,300	$ 3,300
13									
14	Change in Rate Base	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
15									
16	EEC Deferral Impact on Non-Bypass Rates								
17	Change in Cost of Service	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -

TERASEN GAS (VANCOUVER ISLAND) INC.
OPTION A - EEC EXPENDITURE ANALYSIS

Line No.	Particulars	2008	2009	2010	2011	2012	2013	2014	2015	2016
						1	2	3	4	5
1					2011					
	Rate Impact Based on 2011 Margin &				Margin at Revised					
2	Volume				Rates	Volume TJ				
3	Residential				$ 40,050	5,015.3	$ 0.059	$ 0.005	$ 0.005	$ 0.004	$ 0.004
4	Apartment General Service				4,602	1,116.6	$ 0.030	$ 0.003	$ 0.002	$ 0.002	$ 0.002
5	Small Commercial Service - 1				4,035	414.4	$ 0.071	$ 0.006	$ 0.006	$ 0.005	$ 0.004
6	Small Commercial Service - 2				4,358	485.2	$ 0.066	$ 0.006	$ 0.005	$ 0.005	$ 0.004
7	Large Commercial Service - 1				7,296	1,334.2	$ 0.040	$ 0.003	$ 0.003	$ 0.003	$ 0.002
8	Large Commercial Service - 2				5,758	1,396.8	$ 0.030	$ 0.003	$ 0.002	$ 0.002	$ 0.002
9	Large Commercial Service - 3				8,473	2,417.2	$ 0.026	$ 0.002	$ 0.002	$ 0.002	$ 0.002
10	Commercial High Load Factor				316	132.4	$ 0.017	$ 0.001	$ 0.001	$ 0.001	$ 0.001
11	Commercial Inverse Load Factor				201	120.5	$ 0.012	$ 0.001	$ 0.001	$ 0.001	$ 0.001
12	BC Hydro				14,894	17,945.0	$ 0.006	$ 0.001	$ 0.000	$ 0.000	$ 0.000
13	Joint Venture				2,776	2,920.0	$ 0.007	$ 0.001	$ 0.001	$ 0.000	$ 0.000
14	TGI - Squamish				443	422.3	$ 0.008	$ 0.001	$ 0.001	$ 0.001	$ 0.000
15	TGW				2,386	729.9					
16	Total Non-Bypass Sales & T-Service				$ 95,591	34,449.8					

TERASEN GAS (VANCOUVER ISLAND) INC.
OPTION A - EEC EXPENDITURE ANALYSIS

Line No.	Particulars	2017	2018	2019	2020	2021	2022	2023	2024
		6	7	8	9	10	11	12	13
1									
	Rate Impact Based on 2011 Margin &								
2	Volume								
3	Residential	$ 0.003	$ 0.003	$ 0.002	$ 0.001	-$ 0.039	-$ 0.041	$ -	$ -
4	Apartment General Service	$ 0.002	$ 0.001	$ 0.001	$ 0.000	-$ 0.020	-$ 0.021	$ -	$ -
5	Small Commercial Service - 1	$ 0.004	$ 0.003	$ 0.003	$ 0.001	-$ 0.047	-$ 0.050	$ -	$ -
6	Small Commercial Service - 2	$ 0.004	$ 0.003	$ 0.003	$ 0.001	-$ 0.043	-$ 0.046	$ -	$ -
7	Large Commercial Service - 1	$ 0.002	$ 0.002	$ 0.002	$ 0.001	-$ 0.026	-$ 0.028	$ -	$ -
8	Large Commercial Service - 2	$ 0.002	$ 0.001	$ 0.001	$ 0.000	-$ 0.020	-$ 0.021	$ -	$ -
9	Large Commercial Service - 3	$ 0.001	$ 0.001	$ 0.001	$ 0.000	-$ 0.017	-$ 0.018	$ -	$ -
10	Commercial High Load Factor	$ 0.001	$ 0.001	$ 0.001	$ 0.000	-$ 0.012	-$ 0.012	$ -	$ -
11	Commercial Inverse Load Factor	$ 0.001	$ 0.001	$ 0.000	$ 0.000	-$ 0.008	-$ 0.009	$ -	$ -
12	BC Hydro	$ 0.000	$ 0.000	$ 0.000	$ 0.000	-$ 0.004	-$ 0.004	$ -	$ -
13	Joint Venture	$ 0.000	$ 0.000	$ 0.000	$ 0.000	-$ 0.005	-$ 0.005	$ -	$ -
14	TGI - Squamish	$ 0.000	$ 0.000	$ 0.000	$ 0.000	-$ 0.005	-$ 0.005	$ -	$ -
15	TGW								
16	Total Non-Bypass Sales & T-Service								

TERASEN GAS (VANCOUVER ISLAND) INC.
OPTION A - EEC EXPENDITURE ANALYSIS

Line No.	Particulars	2025	2026	2027	2028	2029	2030	2031	2032
		14	15	16	17	18	19	20	21
1									
2	Rate Impact Based on 2011 Margin & Volume								
3	Residential	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
4	Apartment General Service	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
5	Small Commercial Service - 1	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
6	Small Commercial Service - 2	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
7	Large Commercial Service - 1	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
8	Large Commercial Service - 2	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
9	Large Commercial Service - 3	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
10	Commercial High Load Factor	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
11	Commercial Inverse Load Factor	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
12	BC Hydro	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
13	Joint Venture	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
14	TGI - Squamish	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
15	TGW								
16	Total Non-Bypass Sales & T-Service								

TERASEN GAS (VANCOUVER ISLAND) INC.
OPTION A - EEC EXPENDITURE ANALYSIS

Line No.	Particulars	2008	2009	2010	2011	2012	2013	2014	2015	2016
						1	2	3	4	5
1	EEC Deferral Impact on Cost of Service									
2	Amortization Expense				$ 381	$ 799	$ 859	$ 919	$ 979	$ 1,039
3	Income Tax Expense				220	366	383	399	415	429
4	Earned Return				432	569	551	530	503	472
5	Total Impact on Cost of Service				$ 1,034	$ 1,734	$ 1,794	$ 1,848	$ 1,897	$ 1,940
6										
7	Change in Total Cost of Service					$ 701	$ 60	$ 54	$ 49	$ 44
8										
9	Income Tax Expense									
10	Earned Return				$ 432	$ 569	$ 551	$ 530	$ 503	$ 472
11	Less Utility Interest Expense				- 204	- 269	- 261	- 250	- 238	- 223
12	Add Amortization Expense				381	799	859	919	979	1,039
13	Taxable Income After Tax				$ 609	$ 1,099	$ 1,150	$ 1,198	$ 1,244	$ 1,288
14										
15	Taxable Income				$ 829	$ 1,465	$ 1,533	$ 1,598	$ 1,659	$ 1,717
16	Tax Rate	31.00%	30.00%	28.50%	26.50%	25.00%	25.00%	25.00%	25.00%	25.00%
17	Income Tax Expense				$ 220	$ 366	$ 383	$ 399	$ 415	$ 429
18										
19	Capital Structure & Embedded Cost									
20	% of Capital Structure									
21	Short Term Debt				6.40%					
22	Long Term Debt				53.60%					
23	Common Equity				40.00%					
24	Total				100.00%					
25										
26	Embedded Cost									
27	Short Term Debt				4.750%					
28	Long Term Debt				6.119%					
29	Common Equity				10.000%					
30										
31	Return on Rate Base				7.58%					
32	Cost of Debt (Before Tax)				3.58%					

TERASEN GAS (VANCOUVER ISLAND) INC.
OPTION A - EEC EXPENDITURE ANALYSIS

Line No.	Particulars	2017	2018	2019	2020	2021	2022	2023	2024
		6	7	8	9	10	11	12	13
1	EEC Deferral Impact on Cost of Service								
2	Amortization Expense	$ 1,099	$ 1,159	$ 1,219	$ 1,270	$ 958	$ 600	$ 600	$ 600
3	Income Tax Expense	443	456	468	476	366	244	244	244
4	Earned Return	436	396	352	303	264	250	250	250
5	Total Impact on Cost of Service	$ 1,979	$ 2,011	$ 2,039	$ 2,049	$ 1,587	$ 1,094	$ 1,094	$ 1,094
6									
7	Change in Total Cost of Service	$ 38	$ 33	$ 27	$ 10	-$ 462	-$ 493	$ -	$ -
8									
9	Income Tax Expense								
10	Earned Return	$ 436	$ 396	$ 352	$ 303	$ 264	$ 250	$ 250	$ 250
11	Less Utility Interest Expense	- 206	- 187	- 166	- 143	- 125	- 118	- 118	- 118
12	Add Amortization Expense	1,099	1,159	1,219	1,270	958	600	600	600
13	Taxable Income After Tax	$ 1,329	$ 1,368	$ 1,405	$ 1,429	$ 1,097	$ 732	$ 732	$ 732
14									
15	Taxable Income	$ 1,772	$ 1,824	$ 1,873	$ 1,906	$ 1,462	$ 976	$ 976	$ 976
16	Tax Rate	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%
17	Income Tax Expense	$ 443	$ 456	$ 468	$ 476	$ 366	$ 244	$ 244	$ 244
18									
19	Capital Structure & Embedded Cost								
20	% of Capital Structure								
21	Short Term Debt								
22	Long Term Debt								
23	Common Equity								
24	Total								
25									
26	Embedded Cost								
27	Short Term Debt								
28	Long Term Debt								
29	Common Equity								
30									
31	Return on Rate Base								
32	Cost of Debt (Before Tax)								

TERASEN GAS (VANCOUVER ISLAND) INC.
OPTION A - EEC EXPENDITURE ANALYSIS

Line No.	Particulars	2025 14	2026 15	2027 16	2028 17	2029 18	2030 19	2031 20	2032 21
1	EEC Deferral Impact on Cost of Service								
2	Amortization Expense	$ 600	$ 600	$ 600	$ 600	$ 600	$ 600	$ 600	$ 600
3	Income Tax Expense	244	244	244	244	244	244	244	244
4	Earned Return	250	250	250	250	250	250	250	250
5	Total Impact on Cost of Service	$ 1,094	$ 1,094	$ 1,094	$ 1,094	$ 1,094	$ 1,094	$ 1,094	$ 1,094
6									
7	Change in Total Cost of Service	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
8									
9	Income Tax Expense								
10	Earned Return	$ 250	$ 250	$ 250	$ 250	$ 250	$ 250	$ 250	$ 250
11	Less Utility Interest Expense	- 118	- 118	- 118	- 118	- 118	- 118	- 118	- 118
12	Add Amortization Expense	600	600	600	600	600	600	600	600
13	Taxable Income After Tax	$ 732	$ 732	$ 732	$ 732	$ 732	$ 732	$ 732	$ 732
14									
15	Taxable Income	$ 976	$ 976	$ 976	$ 976	$ 976	$ 976	$ 976	$ 976
16	Tax Rate	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%
17	Income Tax Expense	$ 244	$ 244	$ 244	$ 244	$ 244	$ 244	$ 244	$ 244
18									
19	Capital Structure & Embedded Cost								
20	% of Capital Structure								
21	Short Term Debt								
22	Long Term Debt								
23	Common Equity								
24	Total								
25									
26	Embedded Cost								
27	Short Term Debt								
28	Long Term Debt								
29	Common Equity								
30									
31	Return on Rate Base								
32	Cost of Debt (Before Tax)								

TERASEN GAS (VANCOUVER ISLAND) INC.
OPTION B - EEC EXPENDITURE ANALYSIS

Line No.	Particulars	2008	2009	2010	2011	2012	2013	2014	2015	2016
						1	2	3	4	5
1	EEC Expenditure	$ -	$ 133	$ 5,204	$ 5,683	$ 7,000	$ 7,000	$ 7,000	$ 7,000	$ 7,000
2	Income Tax Offset	-	- 40	- 1,483	- 1,506	- 1,750	- 1,750	- 1,750	- 1,750	- 1,750
3	Net Additions	$ -	$ 93	$ 3,721	$ 4,177	$ 5,250	$ 5,250	$ 5,250	$ 5,250	$ 5,250
4	Amortization 10 Years	$ -	$ 9	$ 372	$ 418	$ 525	$ 525	$ 525	$ 525	$ 525
5										
6	EEC Deferral Account									
7	Opening Balance	$ 195	$ -	$ 93	$ 3,805	$ 7,600	$ 12,051	$ 15,977	$ 19,378	$ 22,254
8	Net Additions	-	93	3,721	4,177	5,250	5,250	5,250	5,250	5,250
9	Amortization	- 195	-	- 9	- 381	- 799	- 1,324	- 1,849	- 2,374	- 2,899
10	Ending Balance	$ -	$ 93	$ 3,805	$ 7,600	$ 12,051	$ 15,977	$ 19,378	$ 22,254	$ 24,605
11										
12	EEC Deferral Mid-Year	$ 98	$ 47	$ 1,949	$ 5,702	$ 9,826	$ 14,014	$ 17,678	$ 20,816	$ 23,429
13										
14	Change in Rate Base					$ 4,123	$ 4,188	$ 3,663	$ 3,138	$ 2,613
15										
16	EEC Deferral Impact on Non-Bypass Rates									
17	Change in Cost of Service					$ 908	$ 1,073	$ 1,027	$ 980	$ 933

TERASEN GAS (VANCOUVER ISLAND) INC.
OPTION B - EEC EXPENDITURE ANALYSIS

Line No.	Particulars	2017	2018	2019	2020	2021	2022	2023	2024
		6	7	8	9	10	11	12	13
1	EEC Expenditure	$ 7,000	$ 7,000	$ 7,000	$ 7,000	$ 7,000	$ 7,000	$ 7,000	$ 7,000
2	Income Tax Offset	- 1,750	- 1,750	- 1,750	- 1,750	- 1,750	- 1,750	- 1,750	- 1,750
3	Net Additions	$ 5,250	$ 5,250	$ 5,250	$ 5,250	$ 5,250	$ 5,250	$ 5,250	$ 5,250
4	Amortization 10 Years	$ 525	$ 525	$ 525	$ 525	$ 525	$ 525	$ 525	$ 525
5									
6	EEC Deferral Account								
7	Opening Balance	$ 24,605	$ 26,431	$ 27,732	$ 28,507	$ 28,768	$ 28,875	$ 28,875	$ 28,875
8	Net Additions	5,250	5,250	5,250	5,250	5,250	5,250	5,250	5,250
9	Amortization	- 3,424	- 3,949	- 4,474	- 4,990	- 5,143	- 5,250	- 5,250	- 5,250
10	Ending Balance	$ 26,431	$ 27,732	$ 28,507	$ 28,768	$ 28,875	$ 28,875	$ 28,875	$ 28,875
11									
12	EEC Deferral Mid-Year	$ 25,518	$ 27,081	$ 28,120	$ 28,638	$ 28,821	$ 28,875	$ 28,875	$ 28,875
13									
14	Change in Rate Base	$ 2,088	$ 1,563	$ 1,038	$ 518	$ 184	$ 54	$ -	$ -
15									
16	EEC Deferral Impact on Non-Bypass Rates								
17	Change in Cost of Service	$ 886	$ 839	$ 793	$ 734	$ 220	$ 148	$ -	$ -

TERASEN GAS (VANCOUVER ISLAND) INC.
OPTION B - EEC EXPENDITURE ANALYSIS

Line No.	Particulars	2025 14	2026 15	2027 16	2028 17	2029 18	2030 19	2031 20	2032 21
1	EEC Expenditure	$ 7,000	$ 7,000	$ 7,000	$ 7,000	$ 7,000	$ 7,000	$ 7,000	$ 7,000
2	Income Tax Offset	- 1,750	- 1,750	- 1,750	- 1,750	- 1,750	- 1,750	- 1,750	- 1,750
3	Net Additions	$ 5,250	$ 5,250	$ 5,250	$ 5,250	$ 5,250	$ 5,250	$ 5,250	$ 5,250
4	Amortization 10 Years	$ 525	$ 525	$ 525	$ 525	$ 525	$ 525	$ 525	$ 525
5									
6	EEC Deferral Account								
7	Opening Balance	$ 28,875	$ 28,875	$ 28,875	$ 28,875	$ 28,875	$ 28,875	$ 28,875	$ 28,875
8	Net Additions	5,250	5,250	5,250	5,250	5,250	5,250	5,250	5,250
9	Amortization	- 5,250	- 5,250	- 5,250	- 5,250	- 5,250	- 5,250	- 5,250	- 5,250
10	Ending Balance	$ 28,875	$ 28,875	$ 28,875	$ 28,875	$ 28,875	$ 28,875	$ 28,875	$ 28,875
11									
12	EEC Deferral Mid-Year	$ 28,875	$ 28,875	$ 28,875	$ 28,875	$ 28,875	$ 28,875	$ 28,875	$ 28,875
13									
14	Change in Rate Base	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
15									
16	EEC Deferral Impact on Non-Bypass Rates								
17	Change in Cost of Service	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -

TERASEN GAS (VANCOUVER ISLAND) INC.
OPTION B - EEC EXPENDITURE ANALYSIS

Line No.	Particulars	2008	2009	2010	2011	2012	2013	2014	2015	2016
						1	2	3	4	5
1					2011					
	Rate Impact Based on 2011 Margin &				Margin at Revised					
2	Volume				Rates	Volume TJ				
3	Residential				$ 40,050	5,015.3	$ 0.076	$ 0.090	$ 0.086	$ 0.082	$ 0.078
4	Apartment General Service				4,602	1,116.6	$ 0.039	$ 0.046	$ 0.044	$ 0.042	$ 0.040
5	Small Commercial Service - 1				4,035	414.4	$ 0.093	$ 0.109	$ 0.105	$ 0.100	$ 0.095
6	Small Commercial Service - 2				4,358	485.2	$ 0.085	$ 0.101	$ 0.096	$ 0.092	$ 0.088
7	Large Commercial Service - 1				7,296	1,334.2	$ 0.052	$ 0.061	$ 0.059	$ 0.056	$ 0.053
8	Large Commercial Service - 2				5,758	1,396.8	$ 0.039	$ 0.046	$ 0.044	$ 0.042	$ 0.040
9	Large Commercial Service - 3				8,473	2,417.2	$ 0.033	$ 0.039	$ 0.038	$ 0.036	$ 0.034
10	Commercial High Load Factor				316	132.4	$ 0.023	$ 0.027	$ 0.026	$ 0.024	$ 0.023
11	Commercial Inverse Load Factor				201	120.5	$ 0.016	$ 0.019	$ 0.018	$ 0.017	$ 0.016
12	BC Hydro				14,894	17,945.0	$ 0.008	$ 0.009	$ 0.009	$ 0.009	$ 0.008
13	Joint Venture				2,776	2,920.0	$ 0.009	$ 0.011	$ 0.010	$ 0.010	$ 0.009
14	TGI - Squamish				443	422.3	$ 0.010	$ 0.012	$ 0.011	$ 0.011	$ 0.010
15	TGW				2,386	729.9					
16	Total Non-Bypass Sales & T-Service				$ 95,591	34,449.8					

TERASEN GAS (VANCOUVER ISLAND) INC.
OPTION B - EEC EXPENDITURE ANALYSIS

Line No.	Particulars	2017	2018	2019	2020	2021	2022	2023	2024
		6	7	8	9	10	11	12	13
1									
	Rate Impact Based on 2011 Margin &								
2	Volume								
3	Residential	$ 0.074	$ 0.070	$ 0.066	$ 0.061	$ 0.018	$ 0.012	$ -	$ -
4	Apartment General Service	$ 0.038	$ 0.036	$ 0.034	$ 0.032	$ 0.009	$ 0.006	$ -	$ -
5	Small Commercial Service - 1	$ 0.090	$ 0.086	$ 0.081	$ 0.075	$ 0.022	$ 0.015	$ -	$ -
6	Small Commercial Service - 2	$ 0.083	$ 0.079	$ 0.074	$ 0.069	$ 0.021	$ 0.014	$ -	$ -
7	Large Commercial Service - 1	$ 0.051	$ 0.048	$ 0.045	$ 0.042	$ 0.013	$ 0.008	$ -	$ -
8	Large Commercial Service - 2	$ 0.038	$ 0.036	$ 0.034	$ 0.032	$ 0.009	$ 0.006	$ -	$ -
9	Large Commercial Service - 3	$ 0.032	$ 0.031	$ 0.029	$ 0.027	$ 0.008	$ 0.005	$ -	$ -
10	Commercial High Load Factor	$ 0.022	$ 0.021	$ 0.020	$ 0.018	$ 0.005	$ 0.004	$ -	$ -
11	Commercial Inverse Load Factor	$ 0.015	$ 0.015	$ 0.014	$ 0.013	$ 0.004	$ 0.003	$ -	$ -
12	BC Hydro	$ 0.008	$ 0.007	$ 0.007	$ 0.006	$ 0.002	$ 0.001	$ -	$ -
13	Joint Venture	$ 0.009	$ 0.008	$ 0.008	$ 0.007	$ 0.002	$ 0.001	$ -	$ -
14	TGI - Squamish	$ 0.010	$ 0.009	$ 0.009	$ 0.008	$ 0.002	$ 0.002	$ -	$ -
15	TGW								
16	Total Non-Bypass Sales & T-Service								

TERASEN GAS (VANCOUVER ISLAND) INC.
OPTION B - EEC EXPENDITURE ANALYSIS

Line No.	Particulars	2025	2026	2027	2028	2029	2030	2031	2032
		14	15	16	17	18	19	20	21
1									
	Rate Impact Based on 2011 Margin &								
2	Volume								
3	Residential	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
4	Apartment General Service	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
5	Small Commercial Service - 1	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
6	Small Commercial Service - 2	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
7	Large Commercial Service - 1	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
8	Large Commercial Service - 2	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
9	Large Commercial Service - 3	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
10	Commercial High Load Factor	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
11	Commercial Inverse Load Factor	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
12	BC Hydro	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
13	Joint Venture	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
14	TGI - Squamish	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
15	TGW								
16	Total Non-Bypass Sales & T-Service								

TERASEN GAS (VANCOUVER ISLAND) INC.
OPTION B - EEC EXPENDITURE ANALYSIS

Line No.	Particulars	2008	2009	2010	2011	2012	2013	2014	2015	2016
						1	2	3	4	5
1	EEC Deferral Impact on Cost of Service									
2	Amortization Expense				$ 381	$ 799	$ 1,324	$ 1,849	$ 2,374	$ 2,899
3	Income Tax Expense				220	397	628	852	1,069	1,279
4	Earned Return				432	745	1,063	1,341	1,579	1,777
5	Total Impact on Cost of Service				$ 1,034	$ 1,942	$ 3,015	$ 4,042	$ 5,022	$ 5,955
6										
7	Change in Total Cost of Service					$ 908	$ 1,073	$ 1,027	$ 980	$ 933
8										
9	Income Tax Expense									
10	Earned Return				$ 432	$ 745	$ 1,063	$ 1,341	$ 1,579	$ 1,777
11	Less Utility Interest Expense				- 204	- 352	- 502	- 634	- 746	- 840
12	Add Amortization Expense				381	799	1,324	1,849	2,374	2,899
13	Taxable Income After Tax				$ 609	$ 1,192	$ 1,885	$ 2,556	$ 3,207	$ 3,836
14										
15	Taxable Income				$ 829	$ 1,589	$ 2,513	$ 3,408	$ 4,276	$ 5,115
16	Tax Rate	31.00%	30.00%	28.50%	26.50%	25.00%	25.00%	25.00%	25.00%	25.00%
17	Income Tax Expense				$ 220	$ 397	$ 628	$ 852	$ 1,069	$ 1,279
18										
19	Capital Structure & Embedded Cost									
20	% of Capital Structure									
21	Short Term Debt				6.40%					
22	Long Term Debt				53.60%					
23	Common Equity				40.00%					
24	Total				100.00%					
25										
26	Embedded Cost									
27	Short Term Debt				4.75%					
28	Long Term Debt				6.12%					
29	Common Equity				10.00%					
30										
31	Return on Rate Base				7.58%					
32	Cost of Debt (Before Tax)				3.58%					

TERASEN GAS (VANCOUVER ISLAND) INC.
OPTION B - EEC EXPENDITURE ANALYSIS

Line No.	Particulars	2017	2018	2019	2020	2021	2022	2023	2024
		6	7	8	9	10	11	12	13
1	EEC Deferral Impact on Cost of Service								
2	Amortization Expense	$ 3,424	$ 3,949	$ 4,474	$ 4,990	$ 5,143	$ 5,250	$ 5,250	$ 5,250
3	Income Tax Expense	1,482	1,677	1,866	2,045	2,099	2,135	2,135	2,135
4	Earned Return	1,935	2,054	2,133	2,172	2,186	2,190	2,190	2,190
5	Total Impact on Cost of Service	$ 6,841	$ 7,680	$ 8,473	$ 9,207	$ 9,427	$ 9,575	$ 9,575	$ 9,575
6									
7	Change in Total Cost of Service	$ 886	$ 839	$ 793	$ 734	$ 220	$ 148	$ -	$ -
8									
9	Income Tax Expense								
10	Earned Return	$ 1,935	$ 2,054	$ 2,133	$ 2,172	$ 2,186	$ 2,190	$ 2,190	$ 2,190
11	Less Utility Interest Expense	- 915	- 971	- 1,008	- 1,026	- 1,033	- 1,035	- 1,035	- 1,035
12	Add Amortization Expense	3,424	3,949	4,474	4,990	5,143	5,250	5,250	5,250
13	Taxable Income After Tax	$ 4,445	$ 5,032	$ 5,599	$ 6,135	$ 6,296	$ 6,405	$ 6,405	$ 6,405
14									
15	Taxable Income	$ 5,926	$ 6,710	$ 7,465	$ 8,180	$ 8,394	$ 8,540	$ 8,540	$ 8,540
16	Tax Rate	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%
17	Income Tax Expense	$ 1,482	$ 1,677	$ 1,866	$ 2,045	$ 2,099	$ 2,135	$ 2,135	$ 2,135
18									
19	Capital Structure & Embedded Cost								
20	% of Capital Structure								
21	Short Term Debt								
22	Long Term Debt								
23	Common Equity								
24	Total								
25									
26	Embedded Cost								
27	Short Term Debt								
28	Long Term Debt								
29	Common Equity								
30									
31	Return on Rate Base								
32	Cost of Debt (Before Tax)								

TERASEN GAS (VANCOUVER ISLAND) INC.
OPTION B - EEC EXPENDITURE ANALYSIS

Line No.	Particulars	2025 14	2026 15	2027 16	2028 17	2029 18	2030 19	2031 20	2032 21
1	EEC Deferral Impact on Cost of Service								
2	Amortization Expense	$ 5,250	$ 5,250	$ 5,250	$ 5,250	$ 5,250	$ 5,250	$ 5,250	$ 5,250
3	Income Tax Expense	2,135	2,135	2,135	2,135	2,135	2,135	2,135	2,135
4	Earned Return	2,190	2,190	2,190	2,190	2,190	2,190	2,190	2,190
5	Total Impact on Cost of Service	$ 9,575	$ 9,575	$ 9,575	$ 9,575	$ 9,575	$ 9,575	$ 9,575	$ 9,575
6									
7	Change in Total Cost of Service	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
8									
9	Income Tax Expense								
10	Earned Return	$ 2,190	$ 2,190	$ 2,190	$ 2,190	$ 2,190	$ 2,190	$ 2,190	$ 2,190
11	Less Utility Interest Expense	- 1,035	- 1,035	- 1,035	- 1,035	- 1,035	- 1,035	- 1,035	- 1,035
12	Add Amortization Expense	5,250	5,250	5,250	5,250	5,250	5,250	5,250	5,250
13	Taxable Income After Tax	$ 6,405	$ 6,405	$ 6,405	$ 6,405	$ 6,405	$ 6,405	$ 6,405	$ 6,405
14									
15	Taxable Income	$ 8,540	$ 8,540	$ 8,540	$ 8,540	$ 8,540	$ 8,540	$ 8,540	$ 8,540
16	Tax Rate	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%
17	Income Tax Expense	$ 2,135	$ 2,135	$ 2,135	$ 2,135	$ 2,135	$ 2,135	$ 2,135	$ 2,135
18									
19	Capital Structure & Embedded Cost								
20	% of Capital Structure								
21	Short Term Debt								
22	Long Term Debt								
23	Common Equity								
24	Total								
25									
26	Embedded Cost								
27	Short Term Debt								
28	Long Term Debt								
29	Common Equity								
30									
31	Return on Rate Base								
32	Cost of Debt (Before Tax)								

Attachment 51.1

TERASEN GAS (VANCOUVER ISLAND) INC.
OPTION C - EEC EXPENDITURE ANALYSIS

Line No.	Particulars	2008	2009	2010	2011	2012	2013	2014	2015	2016
						1	2	3	4	5
1	EEC Expenditure	$ -	$ 133	$ 5,204	$ 5,683	$ 16,000	$ 16,000	$ 16,000	$ 16,000	$ 16,000
2	Income Tax Offset	-	- 40	- 1,483	- 1,506	- 4,000	- 4,000	- 4,000	- 4,000	- 4,000
3	Net Additions	$ -	$ 93	$ 3,721	$ 4,177	$ 12,000	$ 12,000	$ 12,000	$ 12,000	$ 12,000
4	Amortization 10 Years	$ -	$ 9	$ 372	$ 418	$ 1,200	$ 1,200	$ 1,200	$ 1,200	$ 1,200
5										
6	EEC Deferral Account									
7	Opening Balance	$ 195	$ -	$ 93	$ 3,805	$ 7,600	$ 18,801	$ 28,802	$ 37,603	$ 45,204
8	Net Additions	-	93	3,721	4,177	12,000	12,000	12,000	12,000	12,000
9	Amortization	- 195	-	- 9	- 381	- 799	- 1,999	- 3,199	- 4,399	- 5,599
10	Ending Balance	$ -	$ 93	$ 3,805	$ 7,600	$ 18,801	$ 28,802	$ 37,603	$ 45,204	$ 51,605
11										
12	EEC Deferral Mid-Year	$ 98	$ 47	$ 1,949	$ 5,702	$ 13,201	$ 23,802	$ 33,203	$ 41,403	$ 48,404
13										
14	Change in Rate Base					$ 7,498	$ 10,601	$ 9,401	$ 8,201	$ 7,001
15										
16	EEC Deferral Impact on Non-Bypass Rates									
17	Change in Cost of Service					$ 1,209	$ 2,545	$ 2,438	$ 2,331	$ 2,224

Attachment 51.1

TERASEN GAS (VANCOUVER ISLAND) INC.
OPTION C - EEC EXPENDITURE ANALYSIS

Line No.	Particulars	2017	2018	2019	2020	2021	2022	2023	2024
		6	7	8	9	10	11	12	13
1	EEC Expenditure	$ 16,000	$ 16,000	$ 16,000	$ 16,000	$ 16,000	$ 15,000	$ 14,000	$ 13,000
2	Income Tax Offset	- 4,000	- 4,000	- 4,000	- 4,000	- 4,000	- 3,750	- 3,500	- 3,250
3	Net Additions	$ 12,000	$ 12,000	$ 12,000	$ 12,000	$ 12,000	$ 11,250	$ 10,500	$ 9,750
4	Amortization 10 Years	$ 1,200	$ 1,200	$ 1,200	$ 1,200	$ 1,200	$ 1,125	$ 1,050	$ 975
5									
6	EEC Deferral Account								
7	Opening Balance	$ 51,605	$ 56,806	$ 60,807	$ 63,607	$ 65,218	$ 66,000	$ 65,250	$ 63,825
8	Net Additions	12,000	12,000	12,000	12,000	12,000	11,250	10,500	9,750
9	Amortization	- 6,799	- 7,999	- 9,199	- 10,390	- 11,218	- 12,000	- 11,925	- 11,775
10	Ending Balance	$ 56,806	$ 60,807	$ 63,607	$ 65,218	$ 66,000	$ 65,250	$ 63,825	$ 61,800
11									
12	EEC Deferral Mid-Year	$ 54,205	$ 58,806	$ 62,207	$ 64,413	$ 65,609	$ 65,625	$ 64,538	$ 62,813
13									
14	Change in Rate Base	$ 5,801	$ 4,601	$ 3,401	$ 2,206	$ 1,196	$ 16	-$ 1,088	-$ 1,725
15									
16	EEC Deferral Impact on Non-Bypass Rates								
17	Change in Cost of Service	$ 2,117	$ 2,010	$ 1,903	$ 1,784	$ 1,211	$ 1,045	-$ 197	-$ 354

Attachment 51.1

TERASEN GAS (VANCOUVER ISLAND) INC.
OPTION C - EEC EXPENDITURE ANALYSIS

Line No.	Particulars	2025 14	2026 15	2027 16	2028 17	2029 18	2030 19	2031 20	2032 21
1	EEC Expenditure	$ 12,000	$ 11,000	$ 10,000	$ 9,000	$ 8,000	$ 7,000	$ 6,000	$ 5,000
2	Income Tax Offset	- 3,000	- 2,750	- 2,500	- 2,250	- 2,000	- 1,750	- 1,500	- 1,250
3	Net Additions	$ 9,000	$ 8,250	$ 7,500	$ 6,750	$ 6,000	$ 5,250	$ 4,500	$ 3,750
4	Amortization 10 Years	$ 900	$ 825	$ 750	$ 675	$ 600	$ 525	$ 450	$ 375
5									
6	EEC Deferral Account								
7	Opening Balance	$ 61,800	$ 59,250	$ 56,250	$ 52,875	$ 49,200	$ 45,300	$ 41,250	$ 37,125
8	Net Additions	9,000	8,250	7,500	6,750	6,000	5,250	4,500	3,750
9	Amortization	- 11,550	- 11,250	- 10,875	- 10,425	- 9,900	- 9,300	- 8,625	- 7,875
10	Ending Balance	$ 59,250	$ 56,250	$ 52,875	$ 49,200	$ 45,300	$ 41,250	$ 37,125	$ 33,000
11									
12	EEC Deferral Mid-Year	$ 60,525	$ 57,750	$ 54,563	$ 51,038	$ 47,250	$ 43,275	$ 39,188	$ 35,063
13									
14	Change in Rate Base	-$ 2,288	-$ 2,775	-$ 3,188	-$ 3,525	-$ 3,788	-$ 3,975	-$ 4,088	-$ 4,125
15									
16	EEC Deferral Impact on Non-Bypass Rates								
17	Change in Cost of Service	-$ 504	-$ 647	-$ 784	-$ 914	-$ 1,038	-$ 1,154	-$ 1,264	-$ 1,368

Attachment 51.1

TERASEN GAS (VANCOUVER ISLAND) INC.
OPTION C - EEC EXPENDITURE ANALYSIS

Line No.	Particulars	2008	2009	2010	2011	2012	2013	2014	2015	2016
						1	2	3	4	5
1					2011					
	Rate Impact Based on 2011 Margin &				Margin at Revised					
2	Volume				Rates	Volume TJ				
3	Residential				$ 40,050	5,015.3	$ 0.101	$ 0.213	$ 0.204	$ 0.195	$ 0.186
4	Apartment General Service				4,602	1,116.6	$ 0.052	$ 0.110	$ 0.105	$ 0.101	$ 0.096
5	Small Commercial Service - 1				4,035	414.4	$ 0.123	$ 0.259	$ 0.248	$ 0.237	$ 0.227
6	Small Commercial Service - 2				4,358	485.2	$ 0.114	$ 0.239	$ 0.229	$ 0.219	$ 0.209
7	Large Commercial Service - 1				7,296	1,334.2	$ 0.069	$ 0.146	$ 0.139	$ 0.133	$ 0.127
8	Large Commercial Service - 2				5,758	1,396.8	$ 0.052	$ 0.110	$ 0.105	$ 0.101	$ 0.096
9	Large Commercial Service - 3				8,473	2,417.2	$ 0.044	$ 0.093	$ 0.089	$ 0.085	$ 0.082
10	Commercial High Load Factor				316	132.4	$ 0.030	$ 0.064	$ 0.061	$ 0.058	$ 0.055
11	Commercial Inverse Load Factor				201	120.5	$ 0.021	$ 0.044	$ 0.042	$ 0.041	$ 0.039
12	BC Hydro				14,894	17,945.0	$ 0.010	$ 0.022	$ 0.021	$ 0.020	$ 0.019
13	Joint Venture				2,776	2,920.0	$ 0.012	$ 0.025	$ 0.024	$ 0.023	$ 0.022
14	TGI - Squamish				443	422.3	$ 0.013	$ 0.028	$ 0.027	$ 0.026	$ 0.024
15	TGW				2,386	729.9					
16	Total Non-Bypass Sales & T-Service				$ 95,591	34,449.8					

Attachment 51.1

TERASEN GAS (VANCOUVER ISLAND) INC.
OPTION C - EEC EXPENDITURE ANALYSIS

Line No.	Particulars	2017	2018	2019	2020	2021	2022	2023	2024
		6	7	8	9	10	11	12	13
1									
	Rate Impact Based on 2011 Margin &								
2	Volume								
3	Residential	$ 0.177	$ 0.168	$ 0.159	$ 0.149	$ 0.101	$ 0.087	-$ 0.016	-$ 0.030
4	Apartment General Service	$ 0.091	$ 0.087	$ 0.082	$ 0.077	$ 0.052	$ 0.045	-$ 0.008	-$ 0.015
5	Small Commercial Service - 1	$ 0.216	$ 0.205	$ 0.194	$ 0.182	$ 0.123	$ 0.106	-$ 0.020	-$ 0.036
6	Small Commercial Service - 2	$ 0.199	$ 0.189	$ 0.179	$ 0.168	$ 0.114	$ 0.098	-$ 0.019	-$ 0.033
7	Large Commercial Service - 1	$ 0.121	$ 0.115	$ 0.109	$ 0.102	$ 0.069	$ 0.060	-$ 0.011	-$ 0.020
8	Large Commercial Service - 2	$ 0.091	$ 0.087	$ 0.082	$ 0.077	$ 0.052	$ 0.045	-$ 0.008	-$ 0.015
9	Large Commercial Service - 3	$ 0.078	$ 0.074	$ 0.070	$ 0.065	$ 0.044	$ 0.038	-$ 0.007	-$ 0.013
10	Commercial High Load Factor	$ 0.053	$ 0.050	$ 0.047	$ 0.045	$ 0.030	$ 0.026	-$ 0.005	-$ 0.009
11	Commercial Inverse Load Factor	$ 0.037	$ 0.035	$ 0.033	$ 0.031	$ 0.021	$ 0.018	-$ 0.003	-$ 0.006
12	BC Hydro	$ 0.018	$ 0.017	$ 0.017	$ 0.015	$ 0.011	$ 0.009	-$ 0.002	-$ 0.003
13	Joint Venture	$ 0.021	$ 0.020	$ 0.019	$ 0.018	$ 0.012	$ 0.010	-$ 0.002	-$ 0.004
14	TGI - Squamish	$ 0.023	$ 0.022	$ 0.021	$ 0.020	$ 0.013	$ 0.011	-$ 0.002	-$ 0.004
15	TGW								
16	Total Non-Bypass Sales & T-Service								

Attachment 51.1

TERASEN GAS (VANCOUVER ISLAND) INC.
OPTION C - EEC EXPENDITURE ANALYSIS

Line No.	Particulars	2025	2026	2027	2028	2029	2030	2031	2032
		14	15	16	17	18	19	20	21
1									
	Rate Impact Based on 2011 Margin &								
2	Volume								
3	Residential	-$ 0.042	-$ 0.054	-$ 0.066	-$ 0.076	-$ 0.087	-$ 0.096	-$ 0.106	-$ 0.114
4	Apartment General Service	-$ 0.022	-$ 0.028	-$ 0.034	-$ 0.039	-$ 0.045	-$ 0.050	-$ 0.055	-$ 0.059
5	Small Commercial Service - 1	-$ 0.051	-$ 0.066	-$ 0.080	-$ 0.093	-$ 0.106	-$ 0.118	-$ 0.129	-$ 0.139
6	Small Commercial Service - 2	-$ 0.047	-$ 0.061	-$ 0.074	-$ 0.086	-$ 0.098	-$ 0.108	-$ 0.119	-$ 0.129
7	Large Commercial Service - 1	-$ 0.029	-$ 0.037	-$ 0.045	-$ 0.052	-$ 0.059	-$ 0.066	-$ 0.072	-$ 0.078
8	Large Commercial Service - 2	-$ 0.022	-$ 0.028	-$ 0.034	-$ 0.039	-$ 0.045	-$ 0.050	-$ 0.055	-$ 0.059
9	Large Commercial Service - 3	-$ 0.018	-$ 0.024	-$ 0.029	-$ 0.034	-$ 0.038	-$ 0.042	-$ 0.046	-$ 0.050
10	Commercial High Load Factor	-$ 0.013	-$ 0.016	-$ 0.020	-$ 0.023	-$ 0.026	-$ 0.029	-$ 0.032	-$ 0.034
11	Commercial Inverse Load Factor	-$ 0.009	-$ 0.011	-$ 0.014	-$ 0.016	-$ 0.018	-$ 0.020	-$ 0.022	-$ 0.024
12	BC Hydro	-$ 0.004	-$ 0.006	-$ 0.007	-$ 0.008	-$ 0.009	-$ 0.010	-$ 0.011	-$ 0.012
13	Joint Venture	-$ 0.005	-$ 0.006	-$ 0.008	-$ 0.009	-$ 0.010	-$ 0.011	-$ 0.013	-$ 0.014
14	TGI - Squamish	-$ 0.006	-$ 0.007	-$ 0.009	-$ 0.010	-$ 0.011	-$ 0.013	-$ 0.014	-$ 0.015
15	TGW								
16	Total Non-Bypass Sales & T-Service								

Attachment 51.1

TERASEN GAS (VANCOUVER ISLAND) INC.
OPTION C - EEC EXPENDITURE ANALYSIS

Line No.	Particulars	2008	2009	2010	2011	2012	2013	2014	2015	2016
						1	2	3	4	5
1	EEC Deferral Impact on Cost of Service									
2	Amortization Expense				$ 381	$ 799	$ 1,999	$ 3,199	$ 4,399	$ 5,599
3	Income Tax Expense				220	442	984	1,509	2,018	2,512
4	Earned Return				432	1,001	1,805	2,518	3,140	3,671
5	Total Impact on Cost of Service				$ 1,034	$ 2,243	$ 4,788	$ 7,226	$ 9,557	$ 11,782
6										
7	Change in Total Cost of Service					$ 1,209	$ 2,545	$ 2,438	$ 2,331	$ 2,224
8										
9	Income Tax Expense									
10	Earned Return				$ 432	$ 1,001	$ 1,805	$ 2,518	$ 3,140	$ 3,671
11	Less Utility Interest Expense				- 204	- 473	- 853	- 1,190	- 1,484	- 1,735
12	Add Amortization Expense				381	799	1,999	3,199	4,399	5,599
13	Taxable Income After Tax				$ 609	$ 1,327	$ 2,951	$ 4,527	$ 6,055	$ 7,535
14										
15	Taxable Income				$ 829	$ 1,769	$ 3,935	$ 6,036	$ 8,074	$ 10,047
16	Tax Rate	31.00%	30.00%	28.50%	26.50%	25.00%	25.00%	25.00%	25.00%	25.00%
17	Income Tax Expense				$ 220	$ 442	$ 984	$ 1,509	$ 2,018	$ 2,512
18										
19	Capital Structure & Embedded Cost									
20	% of Capital Structure									
21	Short Term Debt				6.40%					
22	Long Term Debt				53.60%					
23	Common Equity				40.00%					
24	Total				100.00%					
25										
26	Embedded Cost									
27	Short Term Debt				4.75%					
28	Long Term Debt				6.12%					
29	Common Equity				10.00%					
30										
31	Return on Rate Base				7.58%					
32	Cost of Debt (Before Tax)				3.58%					

TERASEN GAS (VANCOUVER ISLAND) INC.
OPTION C - EEC EXPENDITURE ANALYSIS

Line No.	Particulars	2017	2018	2019	2020	2021	2022	2023	2024
		6	7	8	9	10	11	12	13
1	EEC Deferral Impact on Cost of Service								
2	Amortization Expense	$ 6,799	$ 7,999	$ 9,199	$ 10,390	$ 11,218	$ 12,000	$ 11,925	$ 11,775
3	Income Tax Expense	2,989	3,450	3,896	4,322	4,614	4,875	4,836	4,763
4	Earned Return	4,111	4,460	4,718	4,885	4,976	4,977	4,894	4,764
5	Total Impact on Cost of Service	$ 13,899	$ 15,909	$ 17,813	$ 19,597	$ 20,807	$ 21,852	$ 21,655	$ 21,301
6									
7	Change in Total Cost of Service	$ 2,117	$ 2,010	$ 1,903	$ 1,784	$ 1,211	$ 1,045	-$ 197	-$ 354
8									
9	Income Tax Expense								
10	Earned Return	$ 4,111	$ 4,460	$ 4,718	$ 4,885	$ 4,976	$ 4,977	$ 4,894	$ 4,764
11	Less Utility Interest Expense	- 1,943	- 2,107	- 2,229	- 2,308	- 2,351	- 2,352	- 2,313	- 2,251
12	Add Amortization Expense	6,799	7,999	9,199	10,390	11,218	12,000	11,925	11,775
13	Taxable Income After Tax	$ 8,967	$ 10,351	$ 11,687	$ 12,966	$ 13,842	$ 14,625	$ 14,507	$ 14,288
14									
15	Taxable Income	$ 11,956	$ 13,802	$ 15,583	$ 17,288	$ 18,456	$ 19,500	$ 19,342	$ 19,050
16	Tax Rate	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%
17	Income Tax Expense	$ 2,989	$ 3,450	$ 3,896	$ 4,322	$ 4,614	$ 4,875	$ 4,836	$ 4,763
18									
19	Capital Structure & Embedded Cost								
20	% of Capital Structure								
21	Short Term Debt								
22	Long Term Debt								
23	Common Equity								
24	Total								
25									
26	Embedded Cost								
27	Short Term Debt								
28	Long Term Debt								
29	Common Equity								
30									
31	Return on Rate Base								
32	Cost of Debt (Before Tax)								

TERASEN GAS (VANCOUVER ISLAND) INC.
OPTION C - EEC EXPENDITURE ANALYSIS

Line No.	Particulars	2025 14	2026 15	2027 16	2028 17	2029 18	2030 19	2031 20	2032 21
1	EEC Deferral Impact on Cost of Service								
2	Amortization Expense	$ 11,550	$ 11,250	$ 10,875	$ 10,425	$ 9,900	$ 9,300	$ 8,625	$ 7,875
3	Income Tax Expense	4,657	4,520	4,353	4,156	3,930	3,677	3,398	3,093
4	Earned Return	4,590	4,380	4,138	3,871	3,583	3,282	2,972	2,659
5	Total Impact on Cost of Service	$ 20,797	$ 20,150	$ 19,365	$ 18,451	$ 17,413	$ 16,259	$ 14,994	$ 13,627
6									
7	Change in Total Cost of Service	-$ 504	-$ 647	-$ 784	-$ 914	-$ 1,038	-$ 1,154	-$ 1,264	-$ 1,368
8									
9	Income Tax Expense								
10	Earned Return	$ 4,590	$ 4,380	$ 4,138	$ 3,871	$ 3,583	$ 3,282	$ 2,972	$ 2,659
11	Less Utility Interest Expense	- 2,169	- 2,070	- 1,955	- 1,829	- 1,693	- 1,551	- 1,404	- 1,257
12	Add Amortization Expense	11,550	11,250	10,875	10,425	9,900	9,300	8,625	7,875
13	Taxable Income After Tax	$ 13,971	$ 13,560	$ 13,058	$ 12,467	$ 11,790	$ 11,031	$ 10,193	$ 9,278
14									
15	Taxable Income	$ 18,628	$ 18,080	$ 17,410	$ 16,622	$ 15,720	$ 14,708	$ 13,590	$ 12,370
16	Tax Rate	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%
17	Income Tax Expense	$ 4,657	$ 4,520	$ 4,353	$ 4,156	$ 3,930	$ 3,677	$ 3,398	$ 3,093
18									
19	Capital Structure & Embedded Cost								
20	% of Capital Structure								
21	Short Term Debt								
22	Long Term Debt								
23	Common Equity								
24	Total								
25									
26	Embedded Cost								
27	Short Term Debt								
28	Long Term Debt								
29	Common Equity								
30									
31	Return on Rate Base								
32	Cost of Debt (Before Tax)								

Attachment 118.1

Prism ENGINEERING

saving you energy

FORTIS BC™

ANALYSIS OF ENERGY SAVINGS FROM FORTIS BC EFFICIENT BOILER PROGRAM (EBP)

Project 2011008

Update August 5th, 2011

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APPENDICES

1. EXECUTIVE SUMMARY

This report summarizes the results from a historical billing analysis that has been used to quantify the savings associated with FortisBC's Efficient Boiler Program (EBP) conducted by Prism Engineering Limited (Prism).

In total, 135 sites are included in the study including 85 Multi-Unit Residential Buildings (MURB), 14 Office Buildings, 13 Schools and 23 buildings which were aggregated into the group "Other" as shown in the following figure.

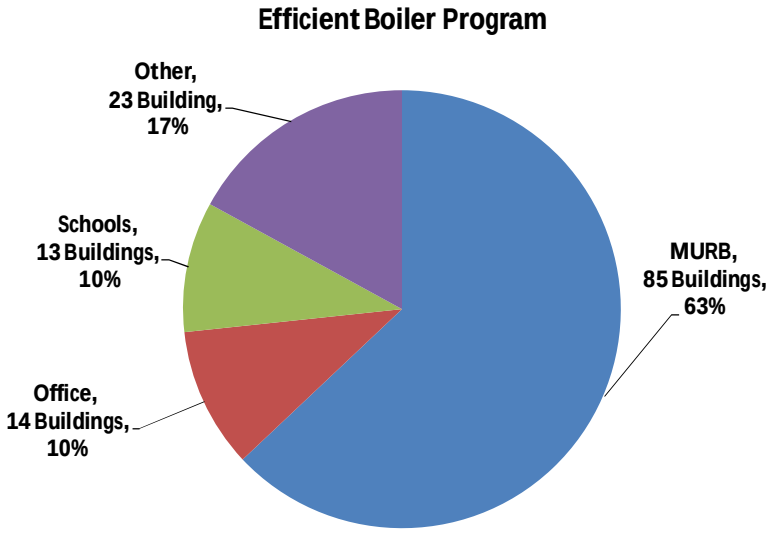


Figure 1: EBP Participant Breakdown by Building Type

The EBP estimates savings of 15% of pre-retrofit energy use and the results from this evaluation confirmed that this is an accurate overall projection. The average of the percentage savings in 2010[1] for the 131 sites was 16%. Through statistical analysis four sites were identified as outliers and excluded in this study.

Although the overall savings percentage was close to the EBP prediction, the range of results was significant. This analysis shows that savings are dependent on the building type, retrofitted boiler efficiency, other gas loads not impacted by the retrofit and whether or not other energy management measures were implemented along with the boiler replacement.

Multi-Unit Residential Buildings and School Buildings showed savings in 2010 which were above the overall average savings whereas Office Buildings and the buildings aggregated into the grouping "Other" showed savings below average as shown in the following figure.

[1] Although the projects were implemented between 2006 and 2009, 2010 was used to determine the savings for the program as all sites had at least one full year post retrofit.

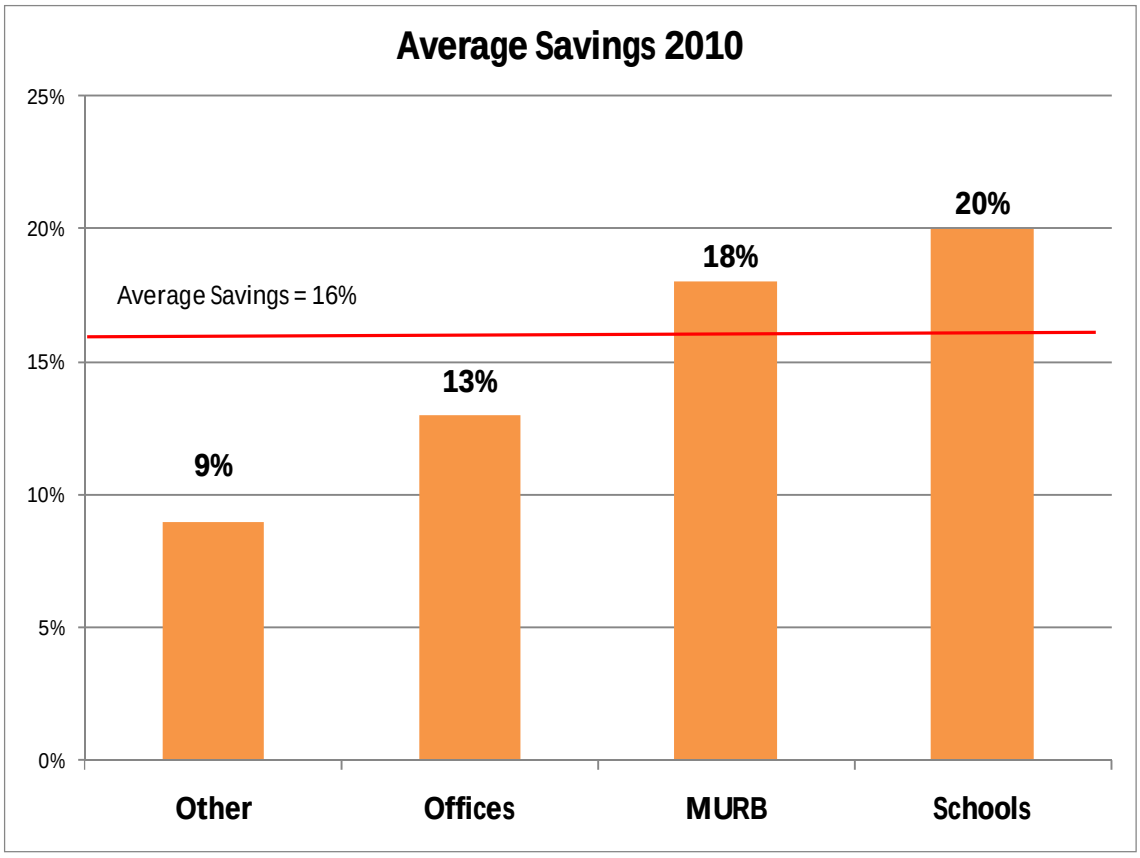


Figure 2: 2010 Savings Breakdown by Building Type

For the total set of building across all four building types the average savings and the median savings is 16%. The standard deviation for this analysis is 14% and the 95% confidence interval is from14% to 19%. This means that there is a 95% confidence that the savings will fall between 14% and 19%.

The boiler efficiency of the retrofitted boiler has an impact on the achieved savings. Sites with high efficiency boiler (efficiency ≥ 90%) achieved savings above average, whereas sites with mid efficiency boilers showed savings below average.

Furthermore it can be concluded that sites with a comprehensive retrofit at the same time as the boiler retrofit had achieved higher savings than sites which replaced the boiler only. The most common energy measures that occurred in addition to the boiler retrofit were upgrades of the building automation system and redesign of the HVAC system.

In 2010, the total energy savings from the 135 sites with at least one year post retrofit data were over 110,000 GJ. The cumulative savings from 2006 to February 2011 is just under 450,000 GJ.

2. BACKGROUND

2.1 Introduction

Prism Engineering Ltd. has carried out an analysis to quantify the savings associated with FortisBC's Efficient Boiler Program (EBP). The evaluation included 135 boiler upgrade projects and allows FortisBC to gain insights into the actual energy savings achieved from the program.

2.2 Scope

The scope of work for this project included the following:

1. Evaluate the energy savings resulting from the EBP, including total energy saved in GJ, energy saved in GJ per site (along with the average savings in %), actual vs. projected savings, and multi-year savings trends;
2. Carry out an analysis of the data segmented by boiler efficiency level such as mid vs. high efficiency;
3. Carry out an analysis of the data segmented by building type (MURB, office, school and other);
4. Review the boiler sizing (pre and post) to determine the percent oversized for both pre and post retrofit;
5. Where possible, carry out an assessment of the benefit of system changes (piping, pumping) that may have occurred at the same time as the boiler installation.

2.3 Limitations

The analysis has been carried out based on monthly utility data, information provided by FortisBC, and information collected through a phone survey of responsive applicants (details on sample group see 3.4). Site visits and detailed energy monitoring, both of which would increase the accuracy of the analysis, have not been included in this review.

3. METHODOLOGY

3.1 Overview

Prism used the following methodology to complete the savings analysis for this project:

1. Collected and imported data for each natural gas account provided;
2. Determined the appropriate balance point temperature for each meter (not standard 18°C balance point[2]);
3. Set up a baseline model of pre retrofit energy use using single variable linear regression (APPENDIX A for a summary of all models and APPENDIX B for the details of each model);
4. Calculated savings achieved annually post retrofit with weather adjustments: savings were calculated as the baseline adjusted for post retrofit periods weather conditions less the post retrofit energy use;
5. Determined if other measures were implemented at the same time and extensiveness of plant upgrade based on a survey to participants and phone follow-up;
6. Prepared Cumulative Sum (CUSUM) graphs to review the rate, seasonality and consistency of savings
7. Evaluated actual vs. projected savings (projections are based on FortisBC program estimate of 15% of pre retrofit energy use);
8. Carried out a statistical analysis of the savings results;
9. Consolidated results by sector and boiler efficiency type.

3.2 MT&R Software - Prism Utility Monitoring and Analysis (PUMA)

Prism has developed a database program for utility monitoring, targeting and reporting. This monitoring program:

- Minimized input time of electronic data transfer from FortisBC due to existing routines;
- Allows FortisBC to view “groups” of savings reports for various sectors;
- Includes innovative monitoring and targeting tools, such as CUSUM.

PUMA features an online interface for FortisBC to view utility monitoring and targeting reports. This web interface allows users to:

- Review trends regularly (monthly) without any software (beyond an internet browser)

[2] The balance point temperature characterizes the limit of the outside air temperature when heating is required. Depending on the building type and building construction the balance point temperature might vary which has an impact on the heating requirement of the building.

- Easily review consolidated or specific information – customizable reports.

FortisBC has been given online access to PUMA for this project for a period of six months and can view all accounts and the energy savings analysis carried out.

3.3 Data Provided by FortisBC

FortisBC has provided the following information:

1. Monthly gas consumption with reading date and days in electronic format with the last reading dates as shown in APPENDIX C;
2. Building information (type, sector, heated floor area, physical location);
3. Date of boiler installation;
4. Type of boiler installed (make, model, capacity, efficiency);
5. Survey results (provided through a third party).

Prism has treated all data as confidential.

3.4 Participants Survey

All 135 participants were asked to complete a 13 question phone based survey conducted by Justason Market Intelligence, a BC-based opinion research firm. 49 companies (36%) completed the survey. The survey questions are provided in APPENDIX D and the results are provided in APPENDIX **E** of this report.

Out of the 13 questions, the following two questions were particularly relevant for the interpretation of energy use analysis for the reasons identified below:

- Were any other energy management measures implemented at the same time as the boiler retrofit?
- What elements of this building are not impacted by the retrofit?

For the first question, we anticipated that savings may be higher if other measures were installed with the boiler retrofit which would INCREASE the reported savings from the project. Some of the sites carried out other retrofit measures such as installation of Building Automation System (BAS) or redesign of their HVAC system along with the boiler retrofit. This information is valuable as these sites might show energy savings above the average by taking advantage of a broader scope of retrofit.

For the second question, we anticipated that savings may be lower if other loads were in place using natural gas which would DECREASE the reported savings (from the perspective of an overall percentage) from the project. We asked to find out if there is any other natural gas equipment (ie kitchen equipment), or systems with separate boiler or other source of heat on site (ie gas fired rooftop units). This information is valuable as these sites might show energy savings below the average.

From the total number of survey results we identified 15 sites as outlier with available survey results and the permission to conduct a follow up call. 12 sites out of those 15

sites were contacted with the result that 7 sites responded and their feedback was incorporated in our analysis.

Table 1: Survey respondents and Follow – up phone calls

	MURB	**Office**	**School**	**Other**	**Total**
# Survey respondents	27	4	6	10	47
# Outlier with Survey respondents	8	2	3	2	15
# Outlier sites contacted	7	2	1	2	12
# Respondents	3	2	1	1	7

4. SURVEY

4.1 Survey results

Of the 135 program participants, 49 or 36% responded to the phone survey. 82% of the survey respondents were very satisfied with the program saying the application was easy, the process was simple and quick and that they were impressed with the fast approval rate. One customer commented that they were satisfied "because of strong personalized support." 16% were somewhat satisfied and 2% were very dissatisfied, citing difficulties with the application process.

The purpose of the survey was to collect site information on existing mechanical systems including any changes and operation practises to gain a better understanding of the individual savings. The program satisfaction was not part of the survey but recorded if any information was given by the applicants. The respondents who indicated that the application was easy were most likely with organizations which are experienced with boiler upgrades or retrofits.

According to respondents, if FortisBC had not offered the Efficient Boiler Program to the customers that participated in the survey, 69% would still have completed the retrofit, often due to old equipment needing upgrades. Those who would not have undertaken a retrofit project indicated that the "[FortisBC] incentives persuaded them to do it, [because otherwise] financial cost would have been a barrier."

Table 2: Summary of Survey Result Energy use

Retrofit scope	**only boilers**	**boiler & controls**	**other plant upgrades**	
	35%	45%	20%	
Other energy management measures	DDC control	redesign HVAC	Zone isolation	adding of insulation / heat recovery
	37%	24%	10%	10%
Elements not impacted by retrofit	roof top unit	domestic hot water	kitchen	other
	10%	10%	12%	5%
Operation and Maintenance costs	decrease	increase	no change	no information
	74%	2%	13%	11%

4.2 Savings Based on Survey Grouping

Table 3: Savings based on Survey Grouping

Survey group	Total	only boiler retrofit	including other measures	additional loads
# Sites[3]	47	17	30	17
Weighted Avg. Saving (2010)		13%	18%	11%

17 out of 47 sites that responded to the survey performed a boiler replacement only and these sites had an average savings of 13%. The sites which implemented other energy management measures along with the boiler retrofit such as control upgrades or redesign of HVAC system showed an average savings of 18%. Additional system upgrades are beneficial to optimize the operation of the boiler within the complete building system which results into higher savings than a boiler replacement only.

The sites with additional loads showed an average savings of 11 % which is lower than the overall average. It can be concluded that the additional loads impact the average savings but most of the sites with additional loads also had other energy management measures implemented which might have compensated some of the negative impact.

[3] Site A05 – 0005 is listed twice in survey result; Site A05 – 0009: utility data only until April 2007

5. ANALYSIS

5.1 Overall Energy Savings

For each meter, the energy savings were evaluated by comparing the pre and post retrofit data. A regression analysis was done on one year of data immediately prior to the boiler retrofit to identify the energy use model and dependence on weather[4]. This period is referred to as the "base period" and its trend of consumption as "baseline". Energy use after the base period was compiled from the FortisBC billing system and then compared to baseline for evaluation of the savings.

Cumulatively, over 442,000 GJ savings was achieved for the 135 sites of the sample group by boiler upgrades through the EBP up to end of February 2011[5]. The average saving over 4 years from 2007 to 2010 is 14% as shown on the following figure and APPENDIX F.

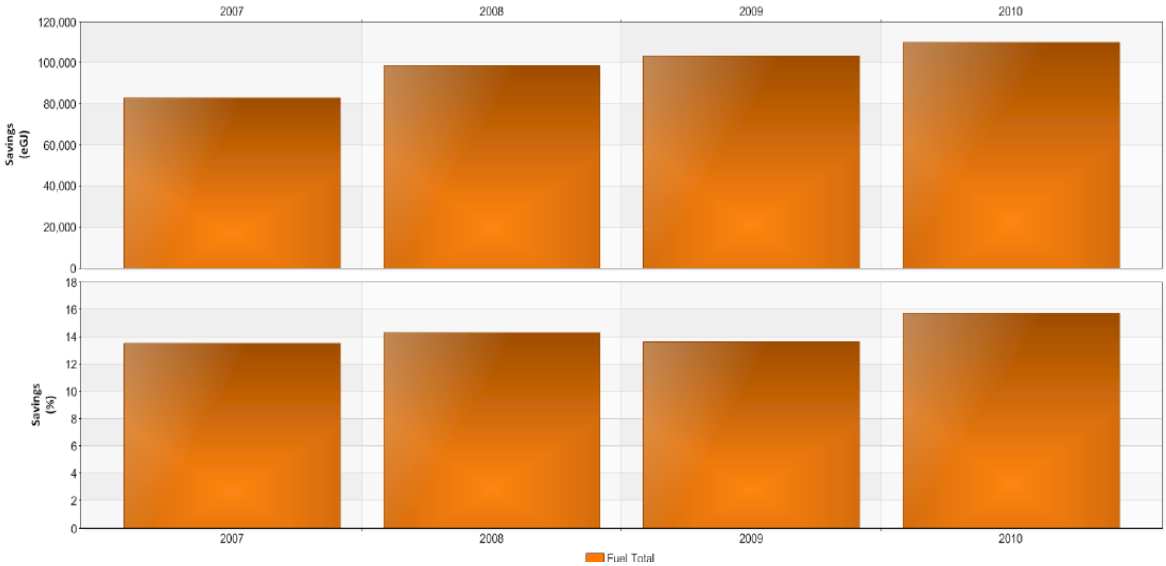


Figure 3: Four Year Summary of Energy Savings in GJ and Weighted Average Percentage

In 2010, the total saving for all studied sites was 110,000 GJ or 16% of baseline values. For the years 2007 to 2009 the savings results include the baseline year for some applicants. All applicants reviewed had a full year of savings by 2010. The 2010 savings is the highest of all four years because of the cumulative nature of the program. Note % is based on TOTAL GJ SAVINGS / TOTAL BASELINE ENERGY USE.

The accumulation of the savings is easily determinable using a Cumulative Sum (CUSUM) graph. CUSUM is an analysis technique employed to understand and quantify changes in energy usage and the trends in performance. The difference in energy use between actual and target is calculated for each period and added together,

[4] In two cases, the baseline period selected was not the twelve months prior to the retrofit. A05-0054 (745 days), A05 – 219 (not the year before retrofit)

[5] The majority of sites have data to the end of February 2011. Some sites only have data to November 2010 to January 2011.

creating a “running total.” This is referred to as the CUSUM, or Cumulative Sum, of the differences. The CUSUM is also referred to as the cumulative savings total and is calculated using the base period for each meter and adding the savings for each site. Trends in the CUSUM graph indicate consumption patterns.

When there have been changes in energy use, the CUSUM will deviate from the horizontal and slope upward over periods of reduced energy usage and downward over periods of increased usage. The steeper the slope, either upward or downward, the greater the deviation in energy use from that in the base period. As more projects were added to the EBP over time, it is expected that the rate of savings from the program as shown by the slope of the CUSUM graph would increase.

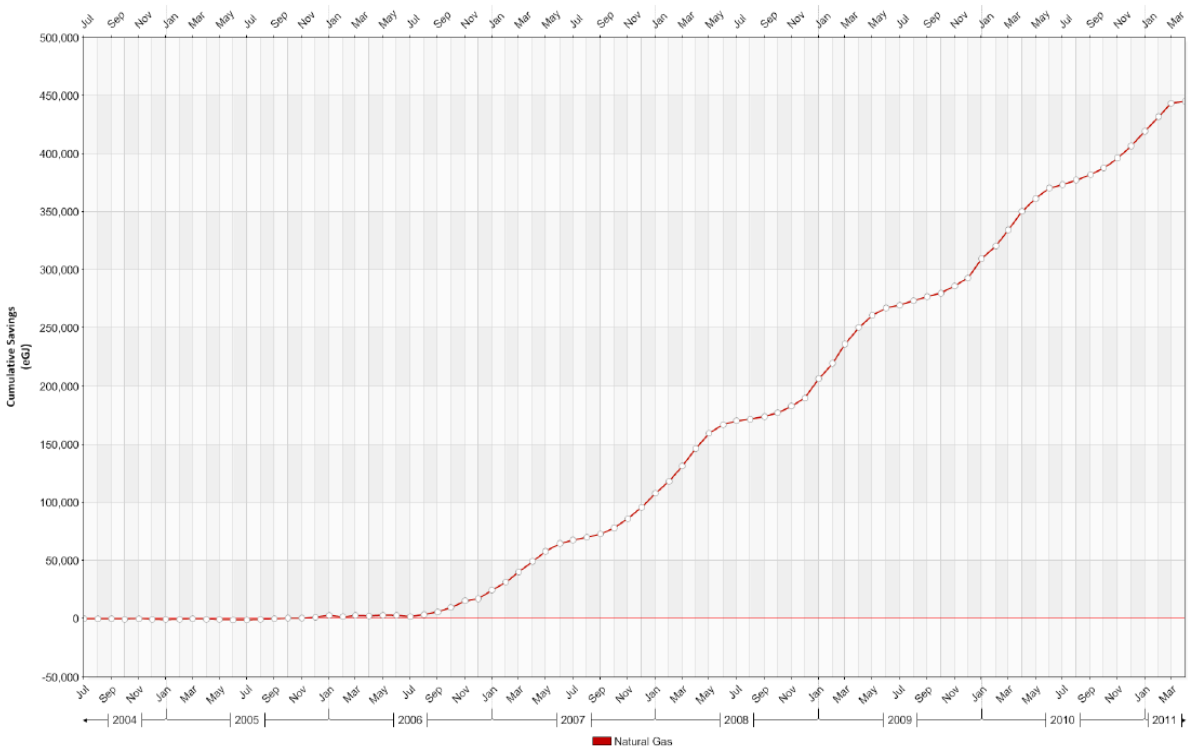


Figure 4: Combined Cumulative Savings for All Studied Sites in EBP Analysis

The CUSUM over the entire project (including all studied applicants) is shown above and in APPENDIX G demonstrates that significant savings were achieved from 2006 to 2010 from the EBP. Savings were achieved during heating and non heating periods with steeper incline in savings during the heating seasons. The CUSUM for each site are shown in APPENDIX H (available as a separate attachment due to file size).

As shown by the following graph of all studied sites, energy savings in 2010 ranged from +61% to -226% for the 135 sites. Approximately 50% of the sites have savings between 10 and 30%. Although individual sites are not identified in this overview, results for each site are presented later in this report in section 5.2.

The average savings can be calculated by using two different methods:

- Average of the percentage savings of all studied sites which does not account for the magnitude of savings. This figure is an arithmetic average based on the number of sites and might be of interest for analysis solely based on number of buildings.

- Weighted average saving which is based on the total consumption saving for all studied sites compared to the total baseline energy use for all studied sites. This figure accounts for the magnitude of savings of the individual sites and evens out outlier results of smaller sites.

For all studied sites in 2010, the average of the percentage savings was 14% and the weighted average saving for was 16% and shown in the graph and APPENDIX I.

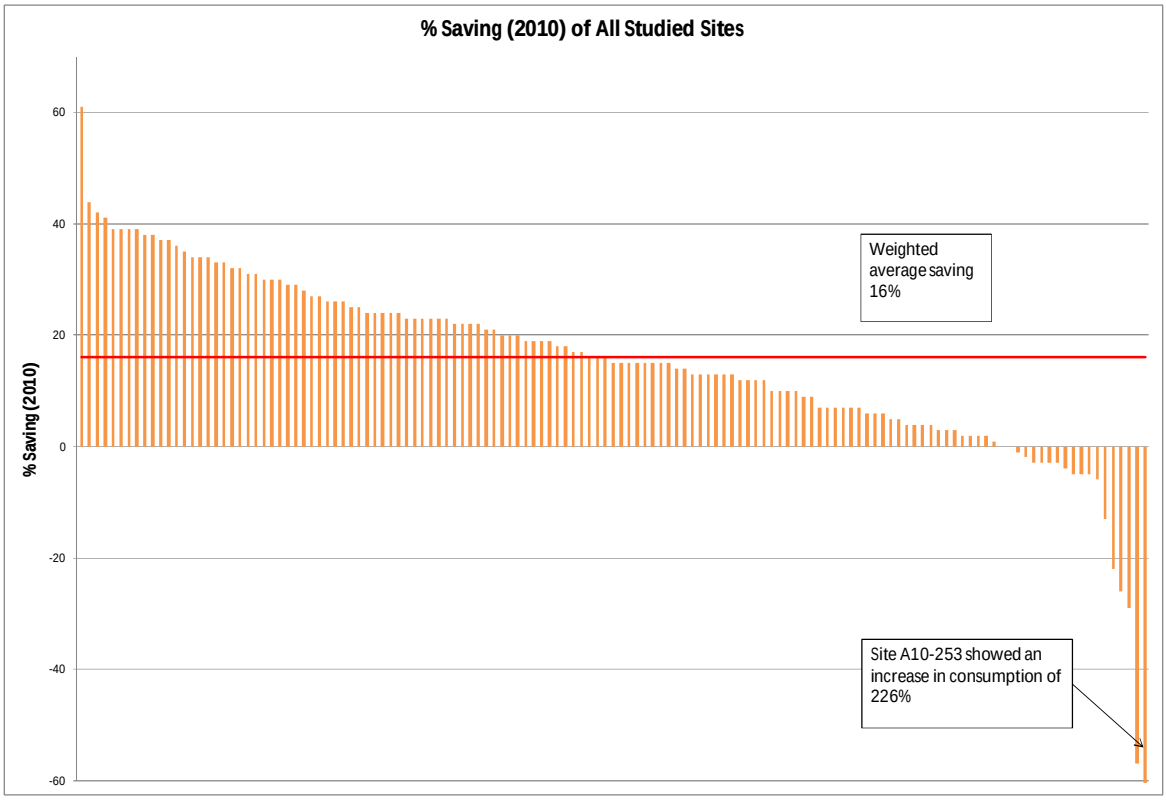


Figure 5: Energy Savings in Percentage for Each Studied Sites

The graph demonstrates the range of savings that have been determined. The reasons for this wide variance are discussed on a sector by sector basis in the next sections.

5.2 Energy Analysis by Building Type

To identify if energy savings was dependent on the type of building use, an energy use analysis by building type has been carried out for Multi Unit Residential Buildings (MURB), Office and School Buildings. The remaining building types are very diverse and appear in limited number within the scope of studied sites. The sample sizes for the remaining building types would have been too small for any analysis. Therefore we have aggregated the remaining 23 sites into a combined group called “Other”. The following sections review the results of each of these building categories and the results can be found in APPENDIX J and APPENDIX K.

For each building type an evaluation of the average savings was performed and site specific analysis for sites with unexpectedly high savings or increase of consumption. A statistical analysis was performed to determine the mean, median, standard deviation and confidence interval:

- Mean, which is the average value representing the centre of gravity of the distribution and is also referred to as average saving;
- Median, which is the middle value above which, and below which, 50% of the values are located.

The spread and dispersion of the energy savings are expressed by the standard deviation and confidence interval.

- Standard Deviation, is a measure of the typical or average distance from each value to the mean;
- Confidence interval, which provides an interval of a upper and lower limit of savings and the confidence level with which the actual savings will fall between the upper and lower limit.

Note that the standard deviation and confidence interval are highly sensitive to outliers. Therefore, the statistical analysis determined the outliers and the savings per building type in the subsequent section was performed excluding 4 sites which were identified as outliers.

For the total set of buildings across all four building types with four outliers removed, the mean and median energy savings are both 16%. The standard deviation is 14% and the 95% confidence interval is (14%, 19%). The values for each building types are shown in the summary table for each building type and the detailed statistical analysis is attached in the APPENDIX M.

Multi Unit Residential Buildings

Table 4: MURB Summary Energy Analysis

Number of sites(*)	84			
Average Saving 2010 (average of the savings in % of all sites)	18%			
Weighted Average Savings 2010 (total savings for all sites compared to the total baseline energy use for all sites)	17%			
# of Sites with savings between following savings range	> 30%	10% to 30%	0% to 10%	< 0%
	12	51	15	6
Standard deviation	12%			
95% Confidence interval	15.5%, 20.7%			
Number of survey respondents	27			

(*) outliers excluded

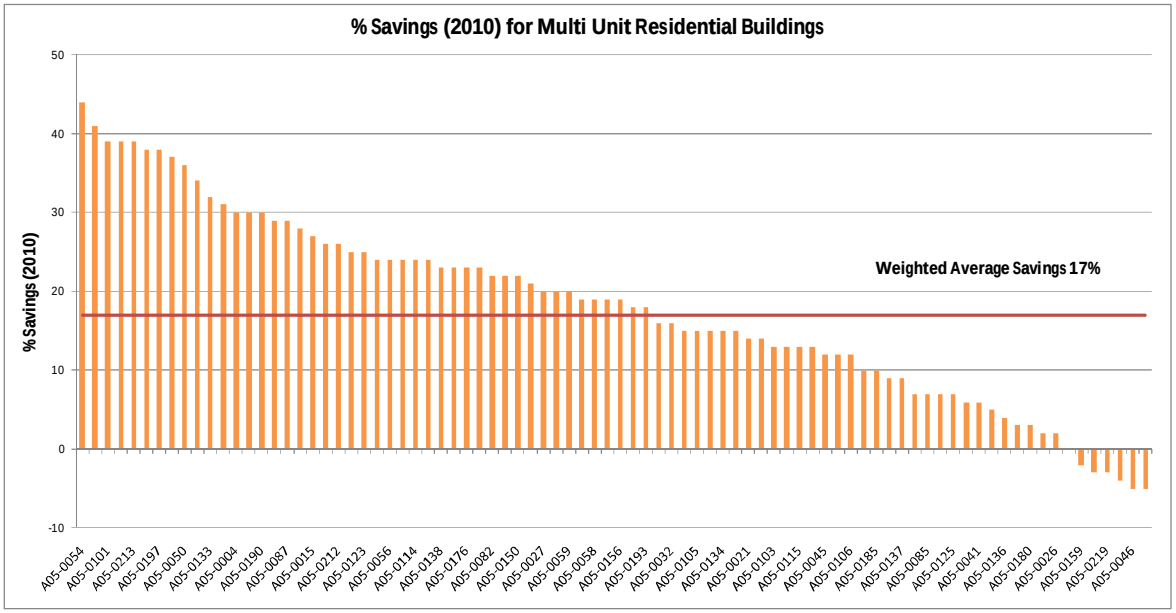


Figure 6: MURB, % Savings 2010

The bulk part of the MURB sites fall within the category of 10% to 30% savings with an average of 18% savings within this group. 12 sites are performing well above the average with the top performer showing savings up to 44%. The top performing sites show similar characteristic in terms of cumulative savings with persistent savings over multiple years after installation of the efficient boiler(s).

22 sites perform below average with 6 sites showing an increase in consumption and two of these sites have provided a response through the survey. A follow up call was conducted with both sites with the following result:

- Site A05 – 0069: Contact information was incorrect and no further information could be provided;
- Site A05 – 0020: The client confirmed the data from the survey and provided the information that no change in operation took place after the boiler retrofit. Furthermore she mentioned that the installed boiler did not operate reliably after installation and the contractor who installed the boiler had to come in several times. The client expresses her dissatisfaction with the retrofitted boiler due to the reliability problems of the retrofitted boiler. It can be concluded that the replacement process of the boiler was not optimal but no conclusion can be made regarding the increase in consumption.

Detailed analysis of specific sites:

The sites chosen for the detailed analysis are either sites with unexpectedly high savings or increase of consumption. Survey results were summarized for the respective site if available.

Table 5: MURB Detailed Analysis Specific Sites

A05 – 0054	Category > 30 % saving: The top performing site achieved savings of 44% but the client did not participate in the survey.
A05 – 0080	Category > 30 % saving: The site achieved savings of 41% and the client provided the information that the control upgrades were implemented along with the boiler retrofit.
A05 – 0005 A05 – 0177	Category > 30 % saving: Control improvements and redesign on the HVAC system had been carried out along with the boiler retrofit. The comprehensive retrofit might be the reason that these two sites achieved above average savings.
A05 – 0069	Category < 0% saving The cumulative saving analysis shows a persistent increase in gas consumption after the boiler replacement. The boiler replacement was carried out along with controls upgrade and redesign of the HVAC system. There is no obvious explanation for the increase of the consumption as no other loads were specified in the survey.

Offices Buildings

Table 6: Office Buildings Summary Energy Analysis

Number of sites	14			
Average Saving 2010 (average of the savings in % of all sites)	13%			
Weighted Average Savings 2010 (total savings for all sites compared to the total baseline energy use for all sites)	7%			
	14 %		13% ± 7.37%	
# of Sites with savings between following savings range	> 30%	10%to 30%	0% to10%	< 0%
	3	3	6	2
Standard deviation	14.1%			
95% Confidence interval	4.7%, 20.9%			
Number of survey respondents	4			

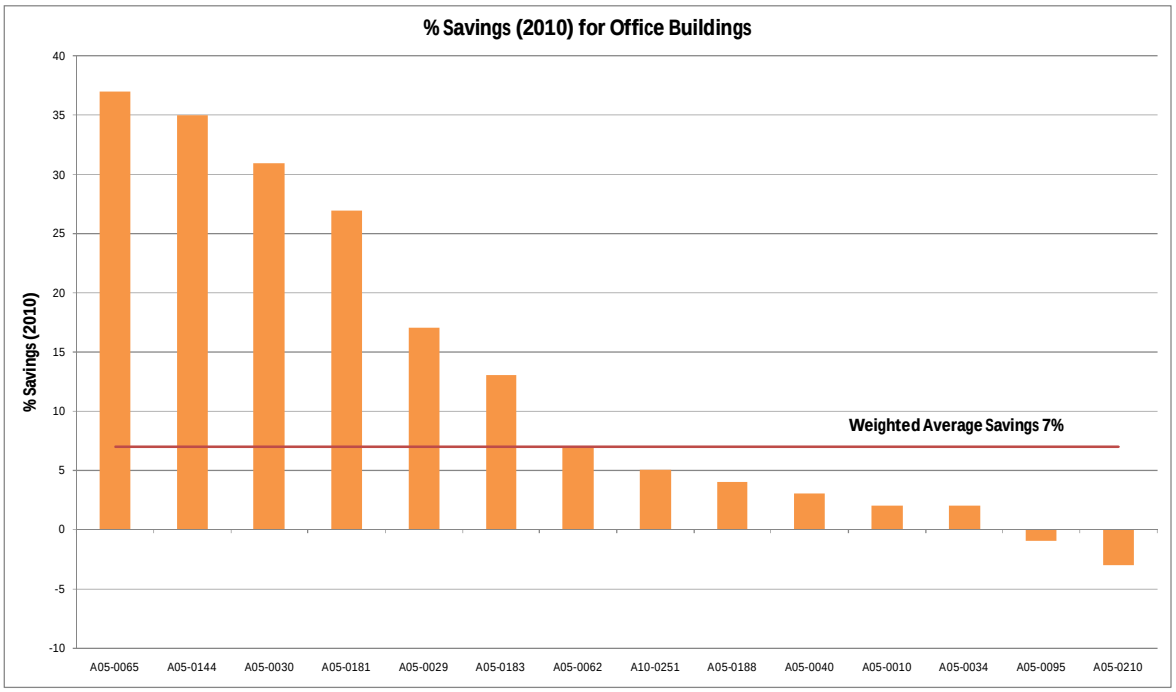


Figure 7: Office buildings, % Savings 2010

The office buildings showed a wide range of achieved savings for 2010 from 37% to -3%. Three sites with the highest savings in 2010 showed that savings were achieved immediately after the boiler retrofit and remained persistent over the entire period. The bulk part of the sites (6) achieved savings between 0% and 10% and only one site within this group participated in the survey.

Two sites had an increase in consumption with the worst performer showing an increase of 3%. Site A05 - 0095 which had an increase in consumption of 1% was followed up through a phone call. The CUSUM analysis for this site shows a significant change in consumption in November 2008 and the client was asked if any changes of operation happed during that particular time period. The client responded that no major changes of the building or operation were performed after the boiler installation.

Detailed analysis of specific sites:

The sites chosen for the detailed analysis are either sites with unexpectedly high savings or increase of consumption. Survey results were summarized for the respective site if available.

Table 7: Office Buildings Detailed Analysis Specific Sites

A05 – 0065	Category > 30 % saving: The top performing site achieved savings of 37% and the CUSUM shows that savings were achieved immediately after the boiler replacement. The client did not participate in the survey.
A05 – 0095	Category < 0 % saving: This site showed that savings were achieved after the boiler installation which did not remain persistent as the consumption started to increase about a year later. As discussed earlier the client did not provide any information which could have explained the change.
A05 – 0210	Category < 0 % saving: This site showed seasonal savings with savings achieved during the heating season only. During the non heating season the consumption increased which resulted into a net increase of 3% in consumption in 2010. The client provided the information that the building automation system has been upgraded along with the boiler retrofit measure. That indicates that the boiler plant does not operate efficiently during partial loads.

School Buildings

Table 8: School Buildings Summary Energy Analysis

Number of sites(*)	12			
Average Saving 2010 (average of the savings in % of all sites)	20%			
Weighted Average Savings 2010 (total savings for all sites compared to the total baseline energy use for all sites)	18%			
# of Sites with savings between following savings range	> 30%	10% to 30%	0% to10%	< 0%
	5	5	0	2
Standard deviation	16.2%			
95% Confidence interval	10.0%, 30.6%			
Number of survey respondents	6			

(*) outliers excluded

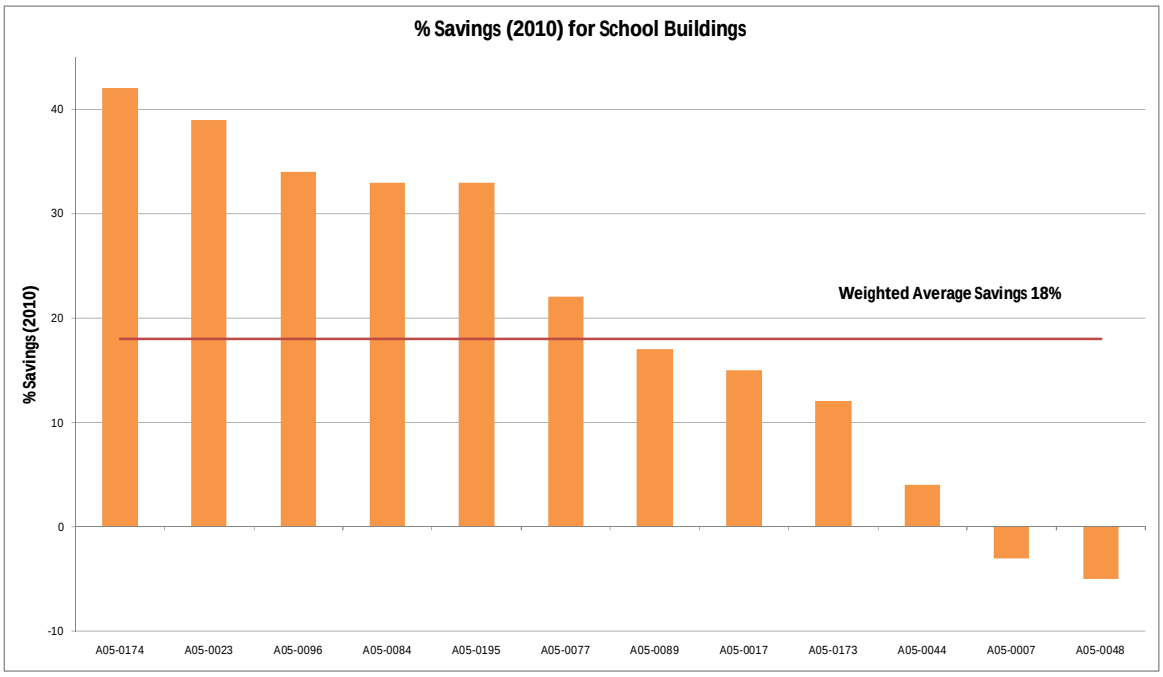


Figure 8: School Buildings, % Savings 2010

The top five school buildings achieved savings significantly above the overall average and 3 out of these sites also provided a survey feedback. The 5 schools within the midrange of savings achieved an average saving of 14%.

Two school buildings showed an increase in consumption with an increase of 5% of the worst performer.

Detailed analysis of specific sites:

The sites chosen for the detailed analysis are either sites with unexpectedly high savings or increase of consumption. Survey results were summarized for the respective site if available.

Table 9: School Buildings Detailed Analysis Specific Sites

A05 – 0174	Category > 30 % saving: The top performing site achieved savings of 42% and the client provided the information that no other energy savings measures were implemented along with the boiler retrofit.
A05 – 0023	Category > 30 % saving: The site with the second highest achieved savings of 39% provided the information that a building automation system was implemented along with the boiler retrofit.

Other Buildings Types

This "Other" category aggregates the results of the following building types: Housing, Care Homes, Church, Culture Center, Firehalls, Recreational Buildings, Hospital, Hotels, Greenhouses and Shopping Centre.

Table 10: Other Building Types Summary Energy Analysis

Number of sites(*)	21			
Average Saving 2010 (average of the savings in % of all sites)	9%			
Weighted Average Savings 2010 (total savings for all sites compared to the total baseline energy use for all sites)	11%			
# of Sites with savings between following savings range	> 30%	10%to 30%	0% to10%	< 0%
	2	8	7	4
Standard deviation	16.2%			
95% Confidence interval	10.0%, 30.6%			
Number of survey respondents	10			

(*) outliers excluded

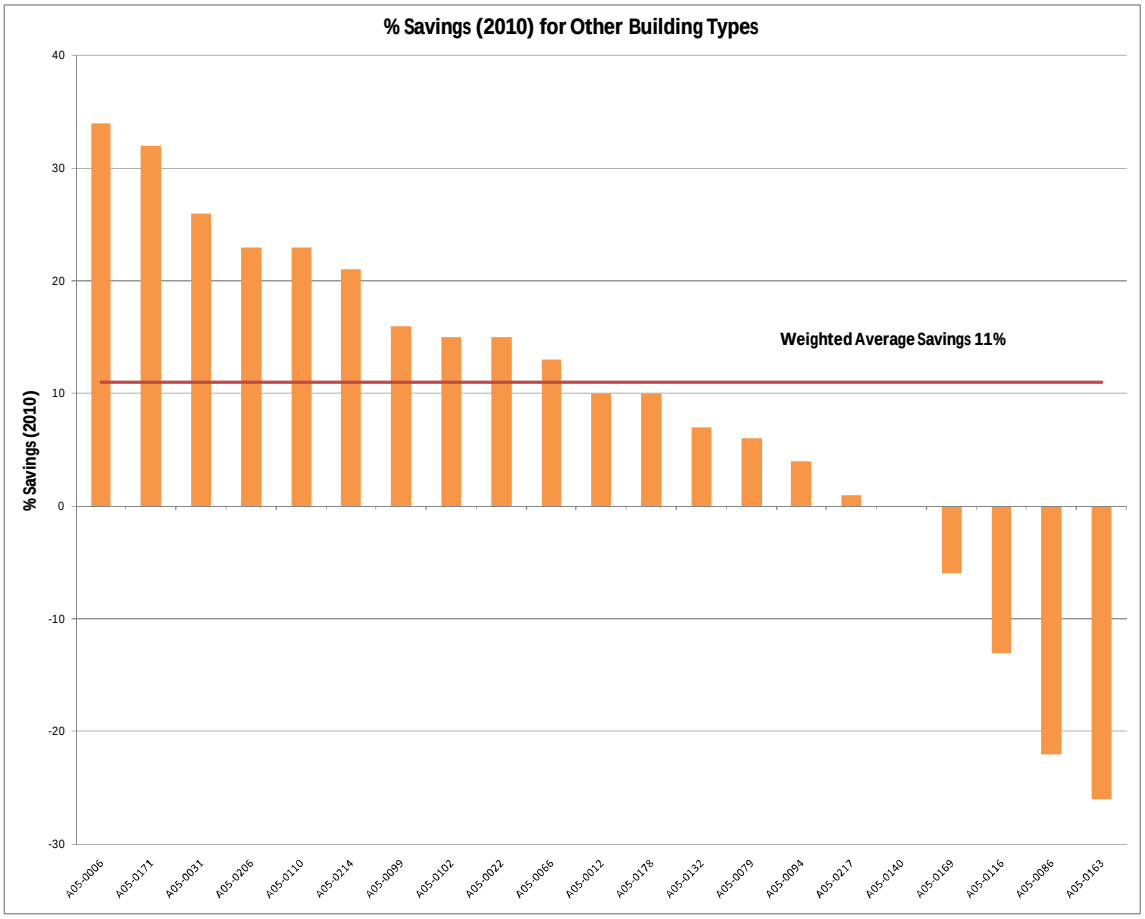


Figure 9: Other Building Types, % Savings 2010

The top two performing sites with savings over 30% are a hotel, and a housing building. The majority of sites achieved savings between 10% and 30% which includes 2 sites where other energy management measures were implemented besides the boiler installation. From the 4 sites with negative savings 3 sites provided survey responds.

Detailed analysis of specific sites:

The sites chosen for the detailed analysis are either sites with unexpectedly high savings or increase of consumption. Survey results were summarized for the respective site if available.

Table 11: Other Buildings Detailed Analysis Specific Sites

A05 – 0024	Category > 30 % saving: The top performing site is a greenhouse which achieved savings of 61% and the client did not participate in the survey. From the history of energy use it can be seen that the consumption was significant reduced after the boiler retrofit.
A05 – 0086	Category < 0 % saving: Site A05-0086 never achieved any savings after the boiler retrofit and had an increase in consumption of 22% by 2010. The client provided the information that the boiler retrofit was the only measure which was implemented but a roof top unit is operating on site which could explain the increase in consumption.

5.3 Energy Analysis by Boiler Efficiency Levels

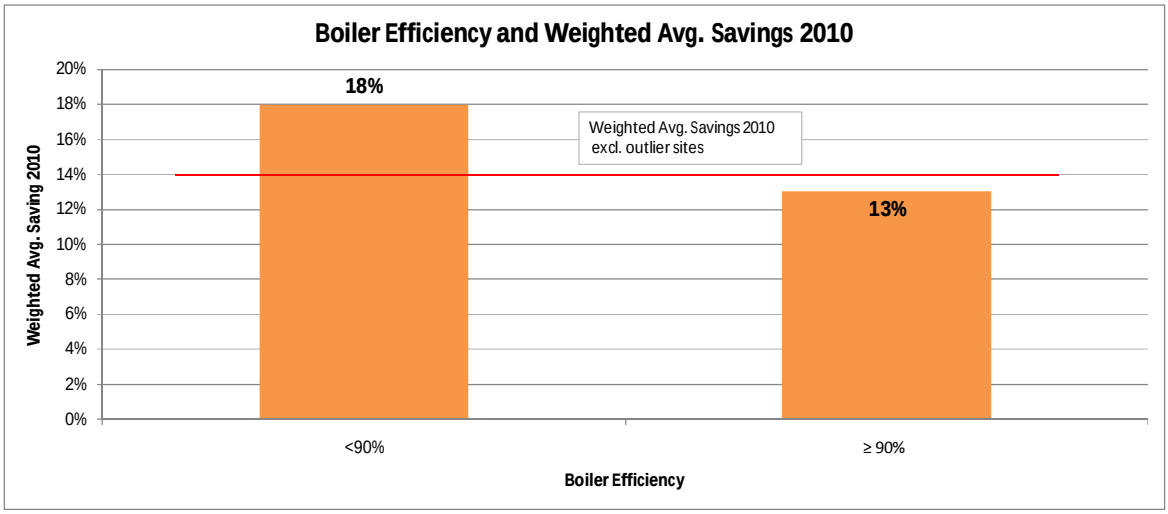
Analysis of the energy data segmented by boiler efficiency level was performed to identify the average savings of each. 131 sites are included in this analysis which represents the complete scope of all studied sites excluding the outliers. The achieved savings for 2010 of the all studied sites were considered for this analysis and shown in APPENDIX L.

Table 12: Energy Analysis by Boiler Efficiency Category

	High efficiency boiler (≥ 90%)	Mid efficiency boiler (< 90%)	All studied sites excluding outliers
Sample size	63(*)	68	131
Weighted Average Savings 2010	18%	13%	14%

(*) outliers excluded

As shown in the table above it can be concluded that the sites with high efficiency boilers achieved above average savings and higher savings than sites operating mid efficiency boilers. Furthermore, it can be seen that sites with mid efficiency boilers achieved savings slightly below the overall weighted average of all studied sites.



5.4 Boiler Sizing Review

A review of boiler sizing was performed for post retrofit conditions using the installed boiler capacity for the retrofitted boiler. A pre retrofit analysis was not performed due to lack of data of the installed capacity prior to the retrofit. The goal for this analysis was to estimate the oversized percentage of the new boilers.

Methodology

1. Baseline period for post retrofit condition
   - 2010 was set as baseline period for the analysis as the retrofit activities were completed for all studied sites prior to 2010;
   - Regression analysis[6] was used to model each meter's energy use and its correlation to weather.
2. Determined the design heating load to ensure adequate sizing of the boiler based on an estimated occupancy load for each sector
3. A total of 106 accounts were considered for this analysis as 29 sites were excluded from this analysis
   - 10 accounts with partial missing data for 2010;
   - 11 accounts did not show a weather sensitivity for 2010;
   - 8 accounts with the "Other" grouping due to missing information on their operation.
4. Determined the load factor for each site. The load factor represents the design heating load to the installed boiler capacity.

[6] A regression analysis is a statistical method of determining dependency of natural gas consumption to the weather expressed in heating degree days.

The results are summarized in the following table:

Table 13: Boiler Sizing Results

Load Factor	Number of Sites
<0.5	23
>0.5 to 0.7	42
>0.7 to 1.3	35
>1.3	8

A load factor of < 0.5 indicates that the installed boiler capacity is much higher than (more than twice) the design heating load. 16 out of 23 sites are residential sites.

The majority of the sites are within the classification > 0.5 to 0.7. To determine if the installed boiler capacity is reasonable an analysis on a by-case basis would have to be performed. For instance some sites operate a boiler plant with more than one boiler to guarantee operation in case one of the boilers fails. The installed boiler capacity would have to be assessed based on requirements on the boiler plant and the site operation requirements.

A significant portion of the sites fall within the range > 0.7 and 1.3 which would suggest that the installed boiler capacity is reasonable. This judgement would have to be verified on a by-case basis for the same reasons as discussed earlier.

Sites which fall under the last category of > 1.3 indicate that, most probably, other gas consuming equipments are operating on site. This can be confirmed for 2 sites as their survey results show that other gas consuming equipment are operating on site such as a gas fired roof top unit. Note that the weighted average savings for 2010 of this group of sites is 6% which is significantly below the overall average and confirms that other natural gas consuming equipment is operating on site.

5.5 Assessments of System Changes Benefits (Survey Participants Only)

The conducted survey provided following information regarding the scope of additional system changes of the different sites.

- Sites which carried out the boiler retrofit only;
- Control upgrades along with the boiler retrofit including redesign of the HVAC system, Zone isolation and DDC modifications for some of those sites;
- Other plant upgrades were carried out along with the boiler retrofit such as piping and distribution upgrade and most of these sites also performed modification on their DDC system.

Sites which had implemented other energy management measures along with the boiler showed a weighted average savings of 18% whereas sites which had only replaced the boiler showed an average savings of 13% with details shown in Appendix N.

It can be concluded that sites with other energy management measures additional to the boiler retrofit generally achieve higher savings than sites with boiler retrofit only.

Boiler Replacement Including Other Energy Management Measures

Table 14: Survey Result Boiler Replacement Including Other Energy Management Measures

Number of sites	28			
Average Saving 2010 (average of the savings in % of all sites)	18%			
Weighted Average Savings 2010 (total savings for all sites compared to the total baseline energy use for all sites)	18%			
# of Sites with savings between following savings range	> 30%	10% to 30%	0%to10 %	< 0%
	5	14	7	2

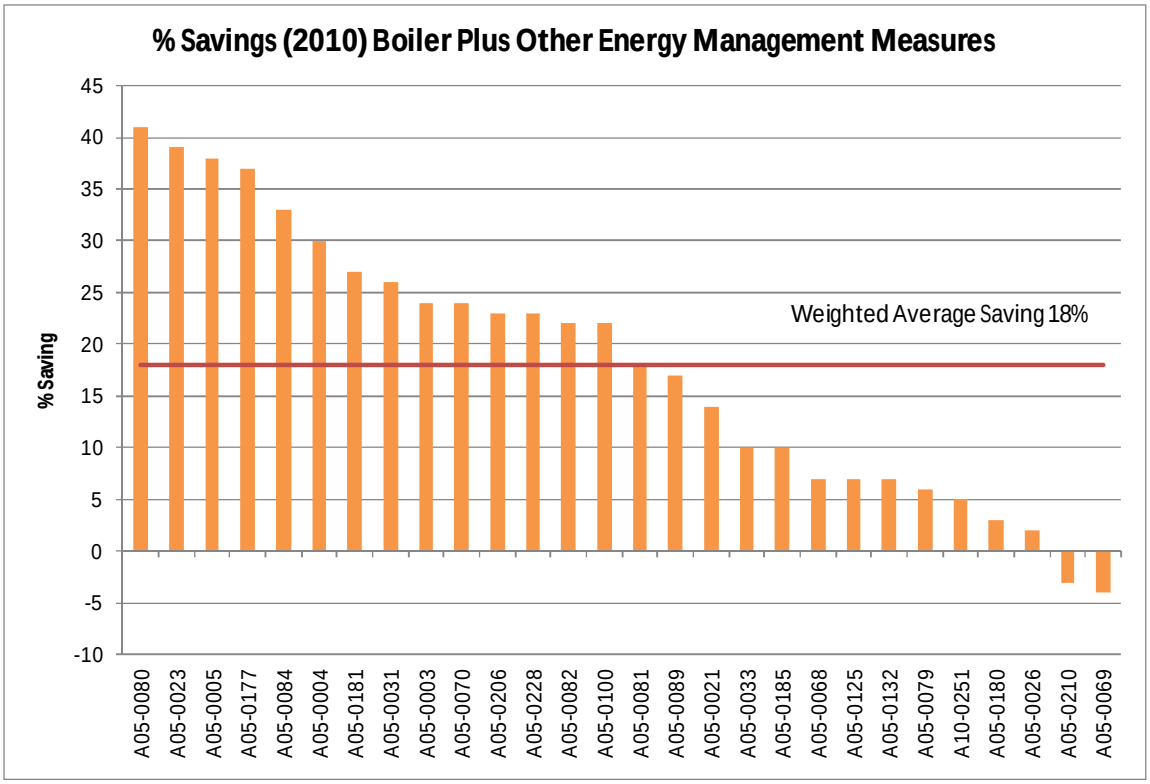


Figure 10: Boiler Retrofit including Other Energy Management Measures, % Savings 2010

Among the five sites with savings over 30% savings are three MURB and two school buildings with a MURB building as top performing site with 41% savings. The majority of the sites are MURB's which fall into the category of 10% to 30% savings.

The worst performing sites are a office building and a MURB building with -3% and -4% savings respectively.

Boiler Replacement Only

Table 15: Survey Result Boiler Replacement Only

Number of sites	17			
Average Saving 2010 (average of the savings in % of all sites)	16%			
Weighted Average Savings 2010 (total savings for all sites compared to the total baseline energy use for all sites)	15%			
# of Sites with savings between following savings range	> 30%	10%to 30%	0% to10%	< 0%
	4	8	1	3

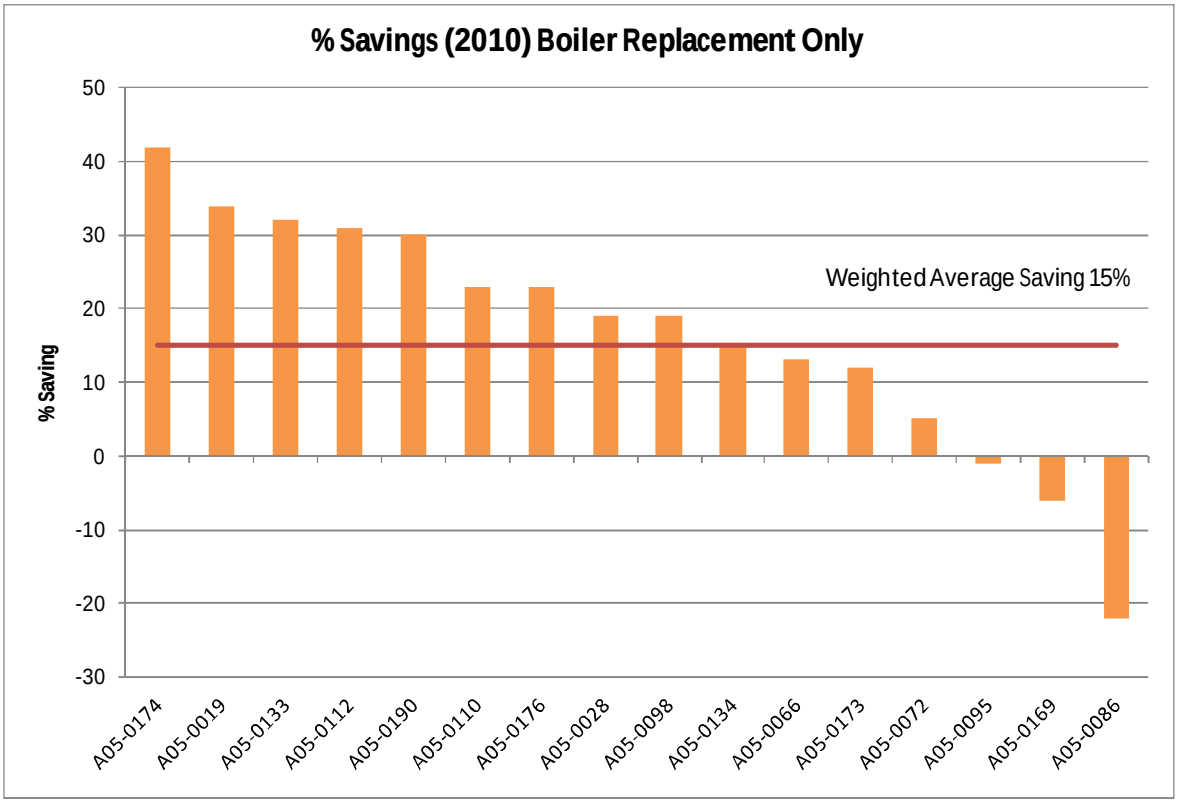


Figure 11: Boiler Retrofit Boiler Replacement Only, % Savings 2010

Among the sites with savings over 30% savings are two MURB, one office building and a school building which is the top performing site with 42% savings. The majority of the sites fall into the category of 10% to 30% savings with mostly MURB buildings.

The worst performer is a Shopping center which had an increase in consumption of 22% in 2010.

5.6 Assessment of Sites with Equipment not Impacted by the Boiler Retrofit (Survey Participants Only)

Table 16: Survey Result Systems not impacted by the Boiler Retrofit

Number of sites	16			
Average Saving 2010 (average of the savings in % of all sites)	17%			
Weighted Average Savings 2010 (total savings for all sites compared to the total baseline energy use for all sites)	13%			
# of Sites with savings between following savings range	> 30%	10% to 30%	0% to 10%	< 0%
	3	8	4	1

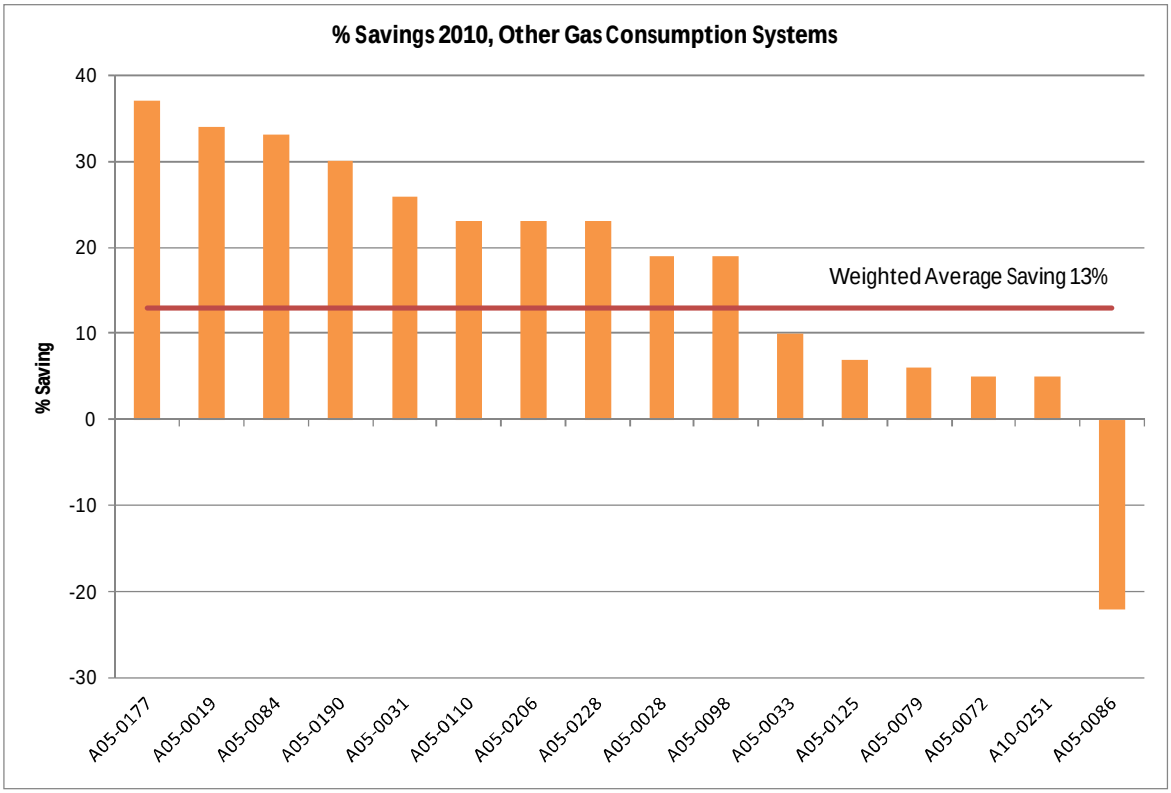


Figure 12: Sites with Result Systems not impacted by the Boiler Retrofit, % Savings 2010

Some of the sites which participated in the survey indicated that other natural gas consuming equipment is operating on site besides the boiler. In some cases an increase in natural gas consumption can be related to an increased in operation of these other units. The survey showed that six sites have additional gas consumption through kitchens and five sites operate gas fired roof top units.

The survey showed that 8 sites had performed the boiler retrofit only and also stated additional loads such as kitchen use and gas fired roof top units. The weighted average savings for 2010 of this group is 13% which is lower than the average of the group as discussed earlier. This indicates that the additional energy management measures partly compensate the increase in consumption for these sites.

6. RECOMMENDATIONS

6.1 Measurement and Verification

M&V of the savings from boiler retrofits is difficult to carry out using utility bill analysis in the following scenarios

- Other measures implemented at the same time;
- Other loads that are not impacted by the boiler retrofit.

It is recommended to establish a questionnaire to collect site specific information such as operation profile, basic information of installed mechanical system and other gas consuming equipment on site. This questionnaire should be a mandatory document which has to be filled out by the applicant along with the application for the Efficient Boiler Program. This would make future M&V analysis easier as results could be related to site specific circumstances especially for buildings which don't fall into the main categories.

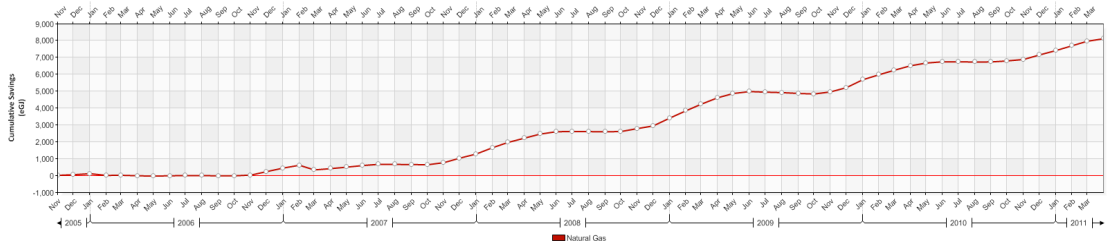
6.2 Sizing Boiler Plants

Approximately 20% of the sites had installed capacity 2x larger than what post retrofit consumption is indicating as required. If FortisBC provides incentives base on the installed capacity, they may consider the impact of boiler oversizing on incentive amounts.

6.3 Persistency of Savings

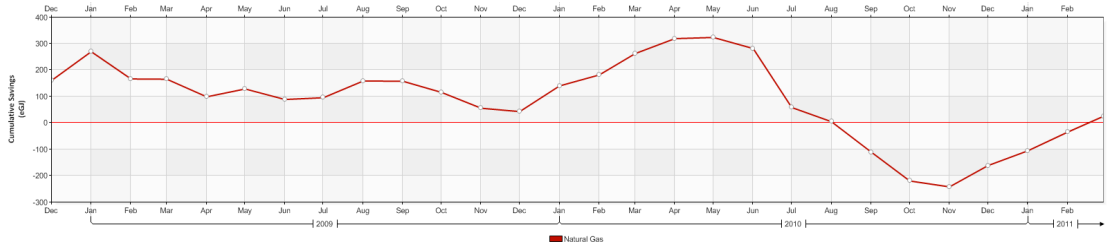
The different characteristic of savings is discussed using the CUSUM analysis and recommendations are developed for commonly observed consumption trends.

- Trend 1: Persistence savings
  Significant savings were achieved by sites which showed persistent savings over multiple years. It can be seen that slope is the steepest during the heating season when the actual savings are achieved. It is recommended to discuss the implementation and operation strategies with these sites to learn from their success.

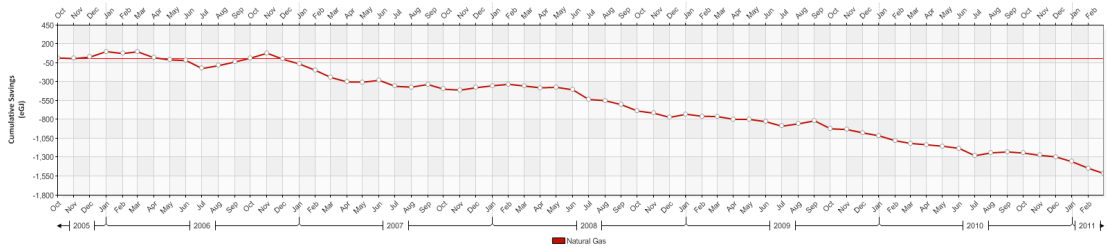


- Trend 2: Seasonal savings
  This consumption trend was observed for approximately 5 sites with different magnitudes in the change of consumption trends.

  This trend is characterized by savings achieved during the heating season (upward slope of the CUSUM) and increased consumption during the non heating season (downward slope of the CUSUM). This characteristic indicates that the boiler operates inefficient at partial load resulting into low or even negative savings over the entire period. It is recommended that further investigation should be carried out for sites showing seasonal savings to achieve persistent savings.



- Trend 3: Persistence increase of consumptions
  Some sites show a persistent increase of consumption after the boiler retrofit which can be seen by the constant downward slope of the CUSUM. Reasons for showing such a characteristic could be either related to increased loads, such as an increase in operation hours or a result of improper boiler operation. It is recommended to conduct further investigations at sites showing such a characteristic to achieve savings where the operation conditions remained the same and savings are not achieved.



6.4 Tracking savings ongoing

Now that all account baselines and grouping have been set up in PUMA and available online, FortisBC may wish to continue to use MT&R with PUMA as a part of the EBP to track and verify savings on an annual basis.

APPENDIX A: Base Period Summary

Base Period Summary

Project: **FortisBC Efficient Boiler Program Analysis (2011008)**

Site		Meter				Base Period			Category			Analysis					
Name	Weather Station	Name	Description	Premise ID	Account Number	Start	End	Days	Category	Actual	Baseline	Type	Base Load	B.P.T	Weather Factor	Degree Days	Weather Component	R2
A05-0003	Vancouver	GAS-0003	Install Date: 09/09/2005	406662	1178691	2004-09-01	2005-08-31	365	Consumption	4,807 GJ	4,806 GJ	Heating	5.09 GJ	18.00 °C	1.12 GJ / HDD	2,630 HDD	2,949 GJ	0.98
A05-0004	Vancouver	GAS-0004	Install Date: 09/09/2005	254236	1178545	2004-08-31	2005-08-31	366	Consumption	3,595 GJ	3,614 GJ	Heating	2.94 GJ	18.00 °C	0.97 GJ / HDD	2,629 HDD	2,539 GJ	0.98
A05-0005	Vancouver	GAS-0005	Install Date: 09/09/2005	610023	1178546	2004-09-01	2005-08-31	365	Consumption	3,163 GJ	3,163 GJ	Heating	2.26 GJ	18.00 °C	0.89 GJ / HDD	2,630 HDD	2,337 GJ	0.97
A05-0006	Vancouver	GAS-0006	Install Date: 08/02/2005	704208	1179373	2004-08-01	2005-07-31	365	Consumption	11,077 GJ	11,129 GJ	Heating	11.82 GJ	18.00 °C	2.59 GJ / HDD	2,630 HDD	6,816 GJ	0.97
A05-0007	Fort Nelson	GAS-0007	Install Date: 10/01/2006	51073	168567	2005-10-04	2006-09-26	358	Consumption	4,986 GJ	5,041 GJ	Heating	2.09 GJ	15.50 °C	0.79 GJ / HDD	5,420 HDD	4,295 GJ	0.99
A05-0008	Vancouver	GAS-0008	Install Date: 11/01/2005	280132	1850990	2004-10-29	2005-10-27	364	Consumption	5,407 GJ	5,397 GJ	Heating	7.26 GJ	16.50 °C	1.28 GJ / HDD	2,152 HDD	2,755 GJ	0.97
A05-0009	Williams Lake	GAS-0009	Install Date: 12/12/2005	36937	367968	2004-11-30	2005-11-25	361	Consumption	1,277 GJ	1,235 GJ	Heating	-0.08 GJ	15.00 °C	0.34 GJ / HDD	3,676 HDD	1,265 GJ	0.90
A05-0010	Vancouver	GAS-0010	Install Date: 09/01/2005	266683	1178913	2004-08-21	2005-08-31	376	Consumption	40,412 GJ	40,509 GJ	Heating	42.44 GJ	17.50 °C	9.92 GJ / HDD	2,476 HDD	24,557 GJ	0.98
A05-0011	Vancouver	GAS-0011	Install Date: 04/02/2007	468596	1179742	2006-03-01	2007-03-15	380	Consumption	6,310 GJ	6,292 GJ	Heating	6.72 GJ	14.00 °C	2.12 GJ / HDD	1,760 HDD	3,739 GJ	0.99
A05-0012	Vancouver	GAS-0012	Install Date: 09/20/2005	387051	500068	2004-09-15	2005-09-13	364	Consumption	1,249 GJ	1,247 GJ	Heating	0.13 GJ	17.50 °C	0.49 GJ / HDD	2,466 HDD	1,201 GJ	0.98
A05-0015	Vancouver	GAS-0015	Install Date: 09/01/2008	472188	686646	2007-08-18	2008-08-19	368	Consumption	884 GJ	883 GJ	Heating	1.14 GJ	16.00 °C	0.19 GJ / HDD	2,420 HDD	465 GJ	0.98
A05-0017	Vancouver	GAS-0017	Install Date: 09/01/2005	684089	772342	2004-09-01	2005-08-31	365	Consumption	1,513 GJ	1,516 GJ	Heating	0.10 GJ	16.00 °C	0.73 GJ / HDD	2,027 HDD	1,480 GJ	0.95
A05-0019	Vancouver	GAS-0019	Install Date: 10/05/2005	256597	623020	2004-09-28	2005-09-26	364	Consumption	2,838 GJ	2,782 GJ	Heating	1.60 GJ	16.50 °C	1.02 GJ / HDD	2,158 HDD	2,200 GJ	0.95
A05-0020	Vancouver	GAS-0020	Install Date: 10/05/2005	413028	1016484	2004-09-16	2005-09-13	363	Consumption	2,395 GJ	2,394 GJ	Heating	0.78 GJ	17.50 °C	0.86 GJ / HDD	2,461 HDD	2,109 GJ	0.96
A05-0021	Vancouver	GAS-0021	Install Date: 10/24/2005	399773	498623	2004-10-15	2005-10-13	364	Consumption	1,381 GJ	1,380 GJ	Heating	1.18 GJ	16.00 °C	0.47 GJ / HDD	2,035 HDD	949 GJ	0.98
A05-0022	Vancouver	GAS-0022	Install Date: 01/05/2006	311848	1696560	2005-01-01	2005-12-31	365	Consumption	2,655 GJ	2,690 GJ	Heating	2.42 GJ	17.00 °C	0.76 GJ / HDD	2,367 HDD	1,807 GJ	0.98
A05-0023	Quesnel	GAS-0023	Install Date: 11/01/2005	35729	372654	2004-09-25	2005-09-23	364	Consumption	432 GJ	429 GJ	Heating	0.13 GJ	15.00 °C	0.11 GJ / HDD	3,476 HDD	382 GJ	0.96
A05-0024	Mission	GAS-0024	Install Date: 11/03/2006	705498	1234106	2005-11-01	2006-10-31	365	Consumption	29,708 GJ	29,708 GJ	Non-Weather						
A05-0026	Vancouver	GAS-0026	Install Date: 12/07/2006	423077	639998	2005-11-17	2006-11-16	365	Consumption	840 GJ	830 GJ	Heating	0.66 GJ	17.50 °C	0.23 GJ / HDD	2,528 HDD	589 GJ	0.86
A05-0027	Vancouver	GAS-0027	Install Date: 11/22/2005	525328	646949	2004-11-06	2005-11-04	364	Consumption	2,154 GJ	2,146 GJ	Heating	1.37 GJ	16.50 °C	0.77 GJ / HDD	2,141 HDD	1,648 GJ	0.95
A05-0028	Mission	GAS-0028	Install Date: 06/29/2006	545094	565844	2005-06-29	2006-06-27	364	Consumption	3,677 GJ	3,677 GJ	Non-Weather						
A05-0029	Vancouver	GAS-0029	Install Date: 10/26/2006	617167	1025771	2005-10-14	2006-10-13	365	Consumption	1,809 GJ	1,806 GJ	Heating	1.48 GJ	13.00 °C	0.96 GJ / HDD	1,322 HDD	1,267 GJ	0.98
A05-0030	Vancouver	GAS-0030	Install Date: 10/01/2006	290739	522035	2005-06-23	2006-06-22	365	Consumption	1,099 GJ	1,160 GJ	Heating	1.19 GJ	12.50 °C	0.60 GJ / HDD	1,206 HDD	725 GJ	0.97
A05-0031	Vancouver	GAS-0031	Install Date: 12/23/2005	318638	481313	2004-12-10	2005-12-07	363	Consumption	1,665 GJ	1,664 GJ	Heating	2.51 GJ	18.00 °C	0.28 GJ / HDD	2,645 HDD	752 GJ	0.98
A05-0032	Vancouver	GAS-0032	Install Date: 09/30/2006	612048	1179455	2005-10-01	2006-09-30	365	Consumption	15,238 GJ	15,234 GJ	Heating	22.13 GJ	15.50 °C	3.70 GJ / HDD	1,935 HDD	7,156 GJ	0.96
A05-0033	Vancouver	GAS-0033	Install Date: 02/22/2006	310861	1696560	2005-02-01	2006-01-31	365	Consumption	4,370 GJ	4,372 GJ	Heating	6.26 GJ	18.00 °C	0.80 GJ / HDD	2,597 HDD	2,087 GJ	0.95
A05-0034	Vancouver	GAS-0034	Install Date: 10/05/2006	522033	847135	2005-10-06	2006-10-05	365	Consumption	110 GJ	111 GJ	Heating	0.14 GJ	13.50 °C	0.04 GJ / HDD	1,433 HDD	58 GJ	0.99
A05-0035	Fernie	GAS-0035	Install Date: 01/04/2007	236764	151124	2005-12-07	2006-12-05	364	Consumption	1,699 GJ	1,691 GJ	Heating	1.56 GJ	17.00 °C	0.29 GJ / HDD	3,931 HDD	1,123 GJ	0.94
A05-0037	Vancouver	GAS-0037	Install Date: 08/23/2006	313476	1307154	2005-08-24	2006-07-24	335	Consumption	1,899 GJ	1,858 GJ	Heating	2.99 GJ	14.50 °C	0.51 GJ / HDD	1,684 HDD	855 GJ	0.90
A05-0040	Vancouver	GAS-0040	Install Date: 03/16/2006	811250	1639618	2005-03-01	2006-02-28	365	Consumption	17,993 GJ	17,987 GJ	Heating	31.78 GJ	17.00 °C	2.80 GJ / HDD	2,284 HDD	6,385 GJ	0.96
A05-0041	Vancouver	GAS-0041	Install Date: 04/06/2006	308349	623991	2005-03-31	2006-03-29	364	Consumption	1,223 GJ	1,221 GJ	Heating	0.98 GJ	18.00 °C	0.33 GJ / HDD	2,640 HDD	865 GJ	0.88
A05-0042	Vancouver	GAS-0042	Install Date: 04/06/2006	308141	623990	2005-03-31	2006-03-29	364	Consumption	1,301 GJ	1,313 GJ	Heating	1.32 GJ	18.00 °C	0.32 GJ / HDD	2,640 HDD	835 GJ	0.92
A05-0043	Vancouver	GAS-0043	Install Date: 05/01/2007	670431	1696560	2006-05-01	2007-04-30	365	Consumption	7,890 GJ	7,891 GJ	Heating	8.24 GJ	17.50 °C	1.87 GJ / HDD	2,608 HDD	4,884 GJ	0.95
A05-0044	Vancouver	GAS-0044	Install Date: 09/05/2006	388193	622935	2005-08-13	2006-08-14	367	Consumption	1,312 GJ	1,308 GJ	Heating	0.09 GJ	13.50 °C	0.88 GJ / HDD	1,439 HDD	1,273 GJ	0.99
A05-0045	Vancouver	GAS-0045	Install Date: 08/11/2006	317893	1178526	2005-08-01	2006-07-31	365	Consumption	8,784 GJ	8,780 GJ	Heating	7.24 GJ	17.50 °C	2.43 GJ / HDD	2,525 HDD	6,138 GJ	0.97

Base Period Summary

Project: **FortisBC Efficient Boiler Program Analysis (2011008)**

Site		Meter				Base Period			Category			Analysis					
Name	Weather Station	Name	Description	Premise ID	Account Number	Start	End	Days	Category	Actual	Baseline	Type	Base Load	B.P.T	Weather Factor	Degree Days	Weather Component	R2
A05-0046	Vancouver	GAS-0046	Install Date: 02/05/2007	311883	1179092	2006-02-01	2007-01-31	365	Consumption	7,436 GJ	7,436 GJ	Heating	8.02 GJ	16.00 °C	2.04 GJ / HDD	2,208 HDD	4,510 GJ	0.99
A05-0048	Vancouver	GAS-0048	Install Date: 09/25/2006	403864	622935	2005-09-15	2006-09-14	365	Consumption	1,643 GJ	1,669 GJ	Heating	0.00 GJ	13.50 °C	1.16 GJ / HDD	1,441 HDD	1,669 GJ	0.99
A05-0050	Vancouver	GAS-0050	Install Date: 06/12/2007	360590	498499	2006-05-11	2007-05-09	364	Consumption	1,922 GJ	1,922 GJ	Heating	2.69 GJ	13.50 °C	0.62 GJ / HDD	1,523 HDD	943 GJ	0.96
A05-0051	Vancouver	GAS-0051	Install Date: 10/06/2006	409296	1247800	2005-09-14	2006-09-13	365	Consumption	5,223 GJ	5,316 GJ	Heating	2.92 GJ	17.50 °C	1.68 GJ / HDD	2,527 HDD	4,250 GJ	0.98
A05-0052	Vancouver	GAS-0052	Install Date: 08/01/2006	304098	1317022	2005-07-29	2006-07-28	365	Consumption	3,949 GJ	3,908 GJ	Heating	2.81 GJ	17.50 °C	1.14 GJ / HDD	2,522 HDD	2,883 GJ	0.95
A05-0053	Vancouver	GAS-0053	Install Date: 08/31/2006	282017	623537	2005-08-27	2006-08-29	368	Consumption	4,128 GJ	4,129 GJ	Heating	2.01 GJ	20.00 °C	1.00 GJ / HDD	3,394 HDD	3,388 GJ	0.97
A05-0054	Vancouver	GAS-0054	Install Date: 06/20/2006	332426	803143	2004-06-01	2006-06-15	745	Consumption	11,392 GJ	11,503 GJ	Heating	6.52 GJ	16.50 °C	1.51 GJ / HDD	4,412 HDD	6,644 GJ	1.00
A05-0055	Vancouver	GAS-0055	Install Date: 06/20/2006	332435	803143	2005-06-16	2006-06-15	365	Consumption	5,792 GJ	5,831 GJ	Heating	7.03 GJ	16.00 °C	1.57 GJ / HDD	2,081 HDD	3,264 GJ	0.97
A05-0056	Vancouver	GAS-0056	Install Date: 06/20/2006	332417	803143	2005-06-16	2006-06-15	365	Consumption	1,471 GJ	1,472 GJ	Heating	1.79 GJ	16.50 °C	0.37 GJ / HDD	2,223 HDD	819 GJ	0.98
A05-0057	Vancouver	GAS-0057	Install Date: 06/20/2006	332425	803143	2005-06-16	2006-06-15	365	Consumption	1,419 GJ	1,425 GJ	Heating	1.72 GJ	15.50 °C	0.41 GJ / HDD	1,944 HDD	797 GJ	0.97
A05-0058	Vancouver	GAS-0058	Install Date: 06/20/2006	332349	803143	2005-06-16	2006-06-15	365	Consumption	2,696 GJ	2,406 GJ	Heating	4.10 GJ	13.00 °C	0.69 GJ / HDD	1,321 HDD	911 GJ	0.99
A05-0059	Vancouver	GAS-0059	Install Date: 06/20/2006	332382	803143	2005-06-16	2006-06-15	365	Consumption	2,669 GJ	2,679 GJ	Heating	1.73 GJ	18.00 °C	0.76 GJ / HDD	2,682 HDD	2,047 GJ	0.98
A05-0060	Vancouver	GAS-0060	Install Date: 06/20/2006	332383	803143	2005-06-16	2006-06-15	365	Consumption	2,377 GJ	2,374 GJ	Heating	2.18 GJ	17.00 °C	0.67 GJ / HDD	2,372 HDD	1,580 GJ	0.98
A05-0061	Vancouver	GAS-0061	Install Date: 06/20/2006	332384	803143	2005-06-16	2006-06-15	365	Consumption	2,862 GJ	2,887 GJ	Heating	2.83 GJ	18.00 °C	0.69 GJ / HDD	2,682 HDD	1,854 GJ	0.98
A05-0062	Vancouver	GAS-0062	Install Date: 10/14/2006	522363	1196428	2005-10-01	2006-09-30	365	Consumption	9,071 GJ	9,060 GJ	Heating	0.64 GJ	15.50 °C	4.56 GJ / HDD	1,935 HDD	8,827 GJ	0.98
A05-0065	Vancouver	GAS-0065	Install Date: 12/18/2006	275850	509483	2005-10-28	2006-10-30	368	Consumption	4,788 GJ	4,804 GJ	Heating	0.58 GJ	15.50 °C	2.32 GJ / HDD	1,979 HDD	4,590 GJ	0.98
A05-0066	Cranbrook	GAS-0066	Install Date: 11/24/2006	30724	1178446	2005-11-04	2006-11-03	365	Consumption	3,232 GJ	3,239 GJ	Heating	2.38 GJ	16.00 °C	0.64 GJ / HDD	3,682 HDD	2,370 GJ	0.95
A05-0068	Vancouver	GAS-0068	Install Date: 09/01/2006	307235	1298386	2005-08-30	2006-08-31	367	Consumption	4,612 GJ	4,339 GJ	Heating	6.78 GJ	16.00 °C	0.89 GJ / HDD	2,081 HDD	1,852 GJ	0.71
A05-0069	Vancouver	GAS-0069	Install Date: 09/05/2006	414759	1178545	2005-09-01	2006-08-31	365	Consumption	8,905 GJ	8,869 GJ	Heating	7.48 GJ	18.00 °C	2.27 GJ / HDD	2,699 HDD	6,139 GJ	0.98
A05-0070	Vancouver	GAS-0070	Install Date: 09/05/2006	608173	1178545	2005-09-01	2006-08-31	365	Consumption	7,285 GJ	7,274 GJ	Heating	3.71 GJ	18.00 °C	2.19 GJ / HDD	2,699 HDD	5,921 GJ	0.99
A05-0072	Vancouver	GAS-0072	Install Date: 10/27/2006	248451	497887	2005-10-01	2006-09-30	365	Consumption	2,988 GJ	2,993 GJ	Heating	1.80 GJ	17.00 °C	0.99 GJ / HDD	2,364 HDD	2,338 GJ	0.99
A05-0077	Kamloops	GAS-0077	Install Date: 11/22/2006	64492	358232	2005-11-15	2006-11-14	365	Consumption	1,222 GJ	1,224 GJ	Heating	0.15 GJ	14.00 °C	0.52 GJ / HDD	2,236 HDD	1,168 GJ	0.99
A05-0079	Vancouver	GAS-0079	Install Date: 07/07/2006	606229	772955	2005-07-05	2006-06-30	361	Consumption	5,315 GJ	5,333 GJ	Heating	10.33 GJ	14.50 °C	0.95 GJ / HDD	1,685 HDD	1,606 GJ	0.97
A05-0080	Vancouver	GAS-0080	Install Date: 08/31/2006	256346	1121989	2005-08-26	2006-08-31	371	Consumption	2,986 GJ	3,060 GJ	Heating	2.81 GJ	16.50 °C	0.91 GJ / HDD	2,226 HDD	2,017 GJ	0.85
A05-0081	Vancouver	GAS-0081	Install Date: 09/13/2006	286361	1696560	2005-09-01	2006-08-31	365	Consumption	34,051 GJ	34,039 GJ	Heating	36.53 GJ	18.00 °C	7.67 GJ / HDD	2,699 HDD	20,708 GJ	0.98
A05-0082	Vancouver	GAS-0082	Install Date: 10/26/2006	285146	1696560	2005-10-01	2006-09-30	365	Consumption	8,599 GJ	8,589 GJ	Heating	11.33 GJ	17.00 °C	1.88 GJ / HDD	2,364 HDD	4,453 GJ	0.96
A05-0084	Vancouver	GAS-0084	Install Date: 10/18/2006	645039	772342	2005-09-16	2006-09-15	365	Consumption	730 GJ	747 GJ	Heating	0.05 GJ	15.00 °C	0.40 GJ / HDD	1,817 HDD	729 GJ	0.96
A05-0085	Vancouver	GAS-0085	Install Date: 07/05/2006	525780	647014	2005-07-08	2006-06-23	351	Consumption	2,988 GJ	2,972 GJ	Heating	1.39 GJ	18.00 °C	0.93 GJ / HDD	2,672 HDD	2,486 GJ	0.98
A05-0086	Penticton	GAS-0086	Install Date: 05/31/2007	191021	318777	2006-05-17	2007-05-17	366	Consumption	7,289 GJ	7,323 GJ	Heating	3.73 GJ	12.00 °C	3.39 GJ / HDD	1,758 HDD	5,956 GJ	1.00
A05-0087	Mission	GAS-0087	Install Date: 01/16/2007	779272	1179883	2006-01-01	2006-12-31	365	Consumption	5,748 GJ	5,755 GJ	Heating	7.08 GJ	16.00 °C	1.37 GJ / HDD	2,316 HDD	3,170 GJ	0.81
A05-0089	Williams Lake	GAS-0089	Install Date: 11/26/2006	45157	1701887	2005-11-19	2006-11-20	367	Consumption	1,554 GJ	1,582 GJ	Heating	0.00 GJ	11.50 °C	0.58 GJ / HDD	2,744 HDD	1,581 GJ	0.97
A05-0093	Vancouver	GAS-0093	Install Date: 11/01/2006	285521	623591	2005-10-28	2006-10-27	365	Consumption	4,199 GJ	4,140 GJ	Heating	4.03 GJ	17.50 °C	1.05 GJ / HDD	2,539 HDD	2,668 GJ	0.87
A05-0094	Vancouver	GAS-0094	Install Date: 09/01/2006	508110	1196426	2005-09-01	2006-08-31	365	Consumption	1,913 GJ	1,909 GJ	Heating	0.86 GJ	18.00 °C	0.59 GJ / HDD	2,699 HDD	1,594 GJ	0.95
A05-0095	Kelowna	GAS-0095	Install Date: 08/01/2007	160979	267929	2006-07-05	2007-07-05	366	Consumption	3,749 GJ	3,735 GJ	Heating	1.27 GJ	18.50 °C	0.84 GJ / HDD	3,878 HDD	3,269 GJ	0.93
A05-0096	Fort Nelson	GAS-0096	Install Date: 08/11/2006	51072	168568	2005-08-04	2006-08-02	364	Consumption	2,413 GJ	2,417 GJ	Heating	0.08 GJ	12.00 °C	0.53 GJ / HDD	4,518 HDD	2,389 GJ	0.99

Base Period Summary

Project: **FortisBC Efficient Boiler Program Analysis (2011008)**

Site		Meter				Base Period			Category			Analysis					
Name	Weather Station	Name	Description	Premise ID	Account Number	Start	End	Days	Category	Actual	Baseline	Type	Base Load	B.P.T	Weather Factor	Degree Days	Weather Component	R2
A05-0098	Mission	GAS-0098	Install Date: 12/16/2006	782766	1179918	2005-12-01	2006-11-30	365	Consumption	7,189 GJ	7,189 GJ	Heating	4.31 GJ	16.00 °C	2.43 GJ / HDD	2,310 HDD	5,614 GJ	0.92
A05-0099	Vancouver	GAS-0099	Install Date: 10/12/2006	652994	1179439	2005-10-01	2006-09-30	365	Consumption	8,128 GJ	8,122 GJ	Heating	4.16 GJ	17.50 °C	2.62 GJ / HDD	2,520 HDD	6,602 GJ	0.98
A05-0100	Mission	GAS-0100	Install Date: 12/07/2006	771423	950726	2005-12-09	2006-12-06	363	Consumption	1,612 GJ	1,656 GJ	Heating	1.78 GJ	16.50 °C	0.42 GJ / HDD	2,406 HDD	1,009 GJ	0.84
A05-0101	Vancouver	GAS-0101	Install Date: 12/07/2006	266117	1891403	2005-11-29	2006-11-27	364	Consumption	2,627 GJ	2,663 GJ	Heating	0.31 GJ	13.50 °C	1.77 GJ / HDD	1,439 HDD	2,550 GJ	0.98
A05-0102	Vancouver	GAS-0102	Install Date: 06/01/2007	702112	1179472	2006-06-01	2007-05-31	365	Consumption	38,602 GJ	38,607 GJ	Heating	40.54 GJ	15.50 °C	11.70 GJ / HDD	2,035 HDD	23,816 GJ	0.97
A05-0103	Vancouver	GAS-0103	Install Date: 05/24/2007	449169	647243	2006-05-04	2007-05-03	365	Consumption	1,909 GJ	1,910 GJ	Heating	2.81 GJ	17.00 °C	0.36 GJ / HDD	2,452 HDD	886 GJ	0.90
A05-0104	Vancouver	GAS-0104	Install Date: 04/19/2007	483716	1696560	2006-04-01	2007-03-31	365	Consumption	2,350 GJ	2,351 GJ	Heating	3.07 GJ	17.50 °C	0.47 GJ / HDD	2,597 HDD	1,229 GJ	0.90
A05-0105	Vancouver	GAS-0105	Install Date: 04/27/2007	266076	647243	2006-03-03	2007-03-01	364	Consumption	2,494 GJ	2,483 GJ	Heating	3.69 GJ	20.00 °C	0.33 GJ / HDD	3,464 HDD	1,141 GJ	0.92
A05-0106	Vancouver	GAS-0106	Install Date: 04/27/2007	265806	1696560	2006-04-01	2007-03-31	365	Consumption	3,067 GJ	3,068 GJ	Heating	5.16 GJ	17.50 °C	0.46 GJ / HDD	2,597 HDD	1,184 GJ	0.97
A05-0109	Vancouver	GAS-0109	Install Date: 11/03/2006	313159	656898	2005-10-08	2006-10-10	368	Consumption	2,637 GJ	2,606 GJ	Heating	3.00 GJ	17.00 °C	0.63 GJ / HDD	2,382 HDD	1,503 GJ	0.97
A05-0110	Vancouver	GAS-0110	Install Date: 10/12/2006	721346	1300786	2005-10-01	2006-09-30	365	Consumption	3,307 GJ	3,303 GJ	Heating	1.43 GJ	16.00 °C	1.34 GJ / HDD	2,071 HDD	2,781 GJ	0.98
A05-0112	Vancouver	GAS-0112	Install Date: 10/18/2006	505743	1178736	2005-10-01	2006-09-30	365	Consumption	5,481 GJ	5,476 GJ	Heating	3.29 GJ	17.50 °C	1.70 GJ / HDD	2,520 HDD	4,276 GJ	0.99
A05-0114	Vancouver	GAS-0114	Install Date: 01/29/2007	290590	1696560	2006-01-01	2006-12-31	365	Consumption	10,839 GJ	10,847 GJ	Heating	15.88 GJ	16.00 °C	2.40 GJ / HDD	2,102 HDD	5,051 GJ	0.97
A05-0115	Vancouver	GAS-0115	Install Date: 04/18/2007	257082	1696560	2006-04-01	2007-03-31	365	Consumption	6,129 GJ	6,132 GJ	Heating	10.43 GJ	17.50 °C	0.89 GJ / HDD	2,597 HDD	2,323 GJ	0.84
A05-0116	Abbotsford	GAS-0116	Install Date: 04/18/2007	737983	1240604	2006-04-08	2007-04-10	368	Consumption	2,594 GJ	2,585 GJ	Heating	2.22 GJ	17.00 °C	0.70 GJ / HDD	2,544 HDD	1,769 GJ	0.91
A05-0119	Vancouver	GAS-0119	Install Date: 06/28/2007	279229	1178600	2006-06-01	2007-05-31	365	Consumption	10,143 GJ	10,145 GJ	Heating	10.82 GJ	17.00 °C	2.52 GJ / HDD	2,463 HDD	6,198 GJ	0.99
A05-0120	Vancouver	GAS-0120	Install Date: 04/25/2007	480833	1037859	2006-04-11	2007-04-10	365	Consumption	5,782 GJ	5,495 GJ	Heating	5.69 GJ	17.00 °C	1.40 GJ / HDD	2,449 HDD	3,420 GJ	0.94
A05-0122	Vancouver	GAS-0122	Install Date: 12/01/2006	330288	711233	2005-12-01	2006-11-30	365	Consumption	4,901 GJ	4,913 GJ	Heating	7.88 GJ	17.00 °C	0.85 GJ / HDD	2,396 HDD	2,038 GJ	0.84
A05-0123	Vancouver	GAS-0123	Install Date: 10/01/2007	473191	734697	2006-08-09	2007-09-10	398	Consumption	2,528 GJ	2,570 GJ	Heating	2.49 GJ	16.00 °C	0.71 GJ / HDD	2,210 HDD	1,579 GJ	0.78
A05-0125	Vancouver	GAS-0125	Install Date: 08/05/2008	309195	623999	2007-06-29	2008-06-30	368	Consumption	2,677 GJ	2,676 GJ	Heating	2.38 GJ	16.50 °C	0.70 GJ / HDD	2,564 HDD	1,801 GJ	1.00
A05-0131	Vancouver	GAS-0131	Install Date: 05/01/2007	257372	1178474	2006-05-01	2007-04-30	365	Consumption	24,715 GJ	24,715 GJ	Heating	47.95 GJ	17.50 °C	2.77 GJ / HDD	2,608 HDD	7,213 GJ	0.89
A05-0132	Vancouver	GAS-0132	Install Date: 10/01/2008	688856	798495	2007-09-22	2008-09-19	364	Consumption	1,873 GJ	1,838 GJ	Heating	-0.01 GJ	16.50 °C	0.72 GJ / HDD	2,569 HDD	1,842 GJ	0.98
A05-0133	Vancouver	GAS-0133	Install Date: 09/01/2007	785675	1179701	2006-09-01	2007-08-31	365	Consumption	4,935 GJ	4,935 GJ	Heating	2.14 GJ	17.50 °C	1.57 GJ / HDD	2,650 HDD	4,154 GJ	0.98
A05-0134	Vancouver	GAS-0134	Install Date: 09/24/2007	541514	1178602	2006-09-01	2007-08-31	365	Consumption	5,064 GJ	5,065 GJ	Heating	2.63 GJ	18.00 °C	1.46 GJ / HDD	2,811 HDD	4,106 GJ	0.99
A05-0136	Vancouver	GAS-0136	Install Date: 10/01/2007	299702	1323619	2006-10-01	2007-09-30	365	Consumption	4,540 GJ	4,536 GJ	Heating	4.22 GJ	16.00 °C	1.34 GJ / HDD	2,231 HDD	2,995 GJ	0.95
A05-0137	Vancouver	GAS-0137	Install Date: 09/01/2007	478417	1323616	2006-09-01	2007-08-31	365	Consumption	5,503 GJ	5,504 GJ	Heating	5.81 GJ	15.50 °C	1.64 GJ / HDD	2,066 HDD	3,382 GJ	1.00
A05-0138	Vancouver	GAS-0138	Install Date: 09/01/2007	420870	1323620	2006-09-01	2007-08-31	365	Consumption	2,859 GJ	2,860 GJ	Heating	2.64 GJ	18.00 °C	0.68 GJ / HDD	2,811 HDD	1,897 GJ	0.98
A05-0140	Vancouver	GAS-0140	Install Date: 11/21/2007	365653	665969	2006-11-01	2007-10-31	365	Consumption	7,087 GJ	7,098 GJ	Heating	7.42 GJ	17.50 °C	1.63 GJ / HDD	2,697 HDD	4,391 GJ	0.93
A05-0144	Vancouver	GAS-0144	Install Date: 07/25/2007	496208	498924	2006-07-01	2007-07-03	368	Consumption	3,917 GJ	3,917 GJ	Non-Weather						
A05-0150	Vancouver	GAS-0150	Install Date: 08/01/2007	295067	623719	2006-06-29	2007-06-27	364	Consumption	3,860 GJ	3,860 GJ	Heating	3.49 GJ	17.00 °C	1.04 GJ / HDD	2,501 HDD	2,590 GJ	0.97
A05-0154	Vancouver	GAS-0154	Install Date: 04/07/2008	515881	1580407	2006-03-09	2007-03-07	364	Consumption	3,787 GJ	3,666 GJ	Heating	2.72 GJ	17.50 °C	1.03 GJ / HDD	2,610 HDD	2,676 GJ	0.88
A05-0155	Vancouver	GAS-0155	Install Date: 07/17/2007	536113	1178582	2006-07-01	2007-06-30	365	Consumption	6,219 GJ	6,217 GJ	Heating	7.28 GJ	14.50 °C	1.98 GJ / HDD	1,796 HDD	3,559 GJ	0.99
A05-0156	Vancouver	GAS-0156	Install Date: 04/05/2008	302558	1178576	2007-04-01	2008-03-31	366	Consumption	17,790 GJ	17,796 GJ	Heating	14.39 GJ	15.00 °C	6.05 GJ / HDD	2,072 HDD	12,528 GJ	0.99
A05-0159	Vancouver	GAS-0159	Install Date: 08/30/2007	423566	640106	2006-08-16	2007-08-15	365	Consumption	1,428 GJ	1,429 GJ	Heating	0.38 GJ	17.50 °C	0.49 GJ / HDD	2,653 HDD	1,291 GJ	0.97
A05-0163	Vancouver	GAS-0163	Install Date: 11/02/2007	605934	772334	2006-06-03	2007-06-01	364	Consumption	5,105 GJ	5,149 GJ	Heating	3.16 GJ	11.50 °C	3.72 GJ / HDD	1,076 HDD	4,001 GJ	0.71

Base Period Summary

Project: **FortisBC Efficient Boiler Program Analysis (2011008)**

Site		Meter				Base Period			Category			Analysis					
Name	Weather Station	Name	Description	Premise ID	Account Number	Start	End	Days	Category	Actual	Baseline	Type	Base Load	B.P.T	Weather Factor	Degree Days	Weather Component	R2
A05-0169	Mission	GAS-0169	Install Date: 04/03/2008	272939	1868083	2007-03-14	2008-03-11	364	Consumption	3,279 GJ	3,279 GJ	Non-Weather						
A05-0171	Warfield	GAS-0171	Install Date: 10/01/2008	197335	298535	2006-08-18	2007-08-17	365	Consumption	4,402 GJ	4,415 GJ	Heating	3.68 GJ	16.00 °C	0.97 GJ / HDD	3,158 HDD	3,071 GJ	0.92
A05-0173	Prince George	GAS-0173	Install Date: 09/01/2008	14291	127587	2007-08-22	2008-08-22	367	Consumption	1,556 GJ	1,548 GJ	Heating	0.04 GJ	13.50 °C	0.41 GJ / HDD	3,750 HDD	1,534 GJ	0.99
A05-0174	Prince George	GAS-0174	Install Date: 09/02/2008	10891	127587	2007-08-10	2008-08-13	370	Consumption	1,988 GJ	1,951 GJ	Heating	0.10 GJ	14.50 °C	0.47 GJ / HDD	4,077 HDD	1,913 GJ	0.99
A05-0176	Vancouver	GAS-0176	Install Date: 05/01/2009	510439	742126	2008-05-02	2009-04-30	364	Consumption	7,598 GJ	7,609 GJ	Heating	5.50 GJ	17.50 °C	1.94 GJ / HDD	2,885 HDD	5,609 GJ	0.97
A05-0177	Vancouver	GAS-0177	Install Date: 07/01/2009	307218	498155	2008-06-28	2009-06-26	364	Consumption	3,287 GJ	3,285 GJ	Heating	4.15 GJ	17.00 °C	0.67 GJ / HDD	2,652 HDD	1,776 GJ	0.97
A05-0178	Kelowna	GAS-0178	Install Date: 09/01/2009	161485	268955	2008-08-27	2009-08-25	364	Consumption	3,026 GJ	3,023 GJ	Heating	0.33 GJ	15.00 °C	0.90 GJ / HDD	3,238 HDD	2,904 GJ	0.99
A05-0180	Vancouver	GAS-0180	Install Date: 05/22/2009	304568	498108	2008-04-29	2009-04-28	365	Consumption	4,186 GJ	4,400 GJ	Heating	2.34 GJ	15.50 °C	1.55 GJ / HDD	2,288 HDD	3,548 GJ	0.70
A05-0181	Vancouver	GAS-0181	Install Date: 09/01/2009	490831	1126956	2008-09-03	2009-08-31	363	Consumption	3,455 GJ	3,447 GJ	Heating	0.25 GJ	18.50 °C	1.08 GJ / HDD	3,120 HDD	3,358 GJ	0.78
A05-0183	Vancouver	GAS-0183	Install Date: 06/01/2009	482862	736951	2008-05-10	2009-05-08	364	Consumption	830 GJ	832 GJ	Heating	0.04 GJ	14.50 °C	0.41 GJ / HDD	1,992 HDD	816 GJ	0.97
A05-0184	Vancouver	GAS-0184	Install Date: 11/04/2009	325339	692350	2008-09-20	2009-10-20	396	Consumption	1,083 GJ	1,071 GJ	Heating	0.07 GJ	13.50 °C	0.60 GJ / HDD	1,734 HDD	1,045 GJ	0.92
A05-0185	Vancouver	GAS-0185	Install Date: 11/02/2009	399907	1178545	2008-11-01	2009-10-31	365	Consumption	10,526 GJ	10,672 GJ	Heating	10.03 GJ	17.50 °C	2.53 GJ / HDD	2,771 HDD	7,010 GJ	0.96
A05-0188	Powell River	GAS-0188	Install Date: 09/01/2009	948964	1650898	2008-08-29	2009-08-27	364	Consumption	15,078 GJ	15,075 GJ	Heating	15.68 GJ	17.00 °C	3.17 GJ / HDD	2,956 HDD	9,365 GJ	0.96
A05-0189	Vancouver	GAS-0189	Install Date: 07/02/2009	562819	858120	2008-05-28	2009-05-26	364	Consumption	3,007 GJ	3,078 GJ	Heating	4.08 GJ	15.00 °C	0.74 GJ / HDD	2,142 HDD	1,591 GJ	0.98
A05-0190	Vancouver	GAS-0190	Install Date: 10/01/2009	462258	564349	2008-10-01	2009-09-30	365	Consumption	2,324 GJ	2,324 GJ	Heating	2.15 GJ	17.00 °C	0.59 GJ / HDD	2,622 HDD	1,538 GJ	0.98
A05-0192	Vancouver	GAS-0192	Install Date: 11/17/2009	267973	1862457	2008-10-31	2009-10-28	363	Consumption	1,902 GJ	1,915 GJ	Heating	1.35 GJ	17.50 °C	0.52 GJ / HDD	2,754 HDD	1,425 GJ	0.98
A05-0193	Vancouver	GAS-0193	Install Date: 06/29/2009	309516	655948	2008-05-07	2009-05-05	364	Consumption	2,592 GJ	2,648 GJ	Heating	2.86 GJ	16.00 °C	0.67 GJ / HDD	2,412 HDD	1,606 GJ	0.89
A05-0195	Vancouver	GAS-0195	Install Date: 09/23/2009	726355	1180024	2008-09-01	2009-08-31	365	Consumption	5,917 GJ	5,915 GJ	Heating	0.44 GJ	15.00 °C	2.76 GJ / HDD	2,087 HDD	5,754 GJ	0.98
A05-0196	Vancouver	GAS-0196	Install Date: 06/09/2009	325654	692347	2008-04-19	2009-04-20	367	Consumption	2,879 GJ	2,884 GJ	Heating	3.25 GJ	16.50 °C	0.65 GJ / HDD	2,619 HDD	1,691 GJ	0.77
A05-0197	Vancouver	GAS-0197	Install Date: 06/09/2009	326188	692347	2008-05-21	2009-05-19	364	Consumption	3,387 GJ	3,382 GJ	Heating	5.54 GJ	14.00 °C	0.73 GJ / HDD	1,869 HDD	1,365 GJ	0.96
A05-0206	Vancouver	GAS-0206	Install Date: 06/01/2009	345442	661463	2008-05-10	2009-05-07	363	Consumption	3,671 GJ	3,677 GJ	Heating	4.91 GJ	17.00 °C	0.70 GJ / HDD	2,711 HDD	1,895 GJ	0.62
A05-0210	Vancouver	GAS-0210	Install Date: 11/06/2009	541687	1178607	2008-11-01	2009-10-31	365	Consumption	9,470 GJ	9,525 GJ	Heating	11.12 GJ	14.00 °C	2.99 GJ / HDD	1,828 HDD	5,467 GJ	0.96
A05-0212	Vancouver	GAS-0212	Install Date: 12/03/2009	675822	1139860	2008-11-05	2009-11-03	364	Consumption	4,992 GJ	5,021 GJ	Heating	4.32 GJ	18.00 °C	1.18 GJ / HDD	2,929 HDD	3,446 GJ	0.99
A05-0213	Vancouver	GAS-0213	Install Date: 12/03/2009	675784	1139861	2008-12-05	2009-12-03	364	Consumption	5,318 GJ	5,318 GJ	Non-Weather						
A05-0214	Vancouver	GAS-0214	Install Date: 11/30/2009	676296	795104	2008-10-01	2009-10-28	393	Consumption	2,429 GJ	2,391 GJ	Heating	2.38 GJ	17.00 °C	0.52 GJ / HDD	2,811 HDD	1,455 GJ	0.99
A05-0217	Vancouver	GAS-0217	Install Date: 08/12/2009	67113	323616	2008-06-19	2009-06-17	364	Consumption	94 GJ	94 GJ	Heating	0.04 GJ	17.50 °C	0.03 GJ / HDD	2,811 HDD	79 GJ	0.99
A05-0219	Vancouver	GAS-0219	Install Date: 12/04/2009	288862	1777251	2007-10-31	2008-10-28	364	Consumption	1,728 GJ	1,626 GJ	Heating	0.04 GJ	11.00 °C	1.42 GJ / HDD	1,134 HDD	1,610 GJ	0.90
A05-0228	Vancouver	GAS-0228	Install Date: 11/01/2009	285568	623592	2008-10-29	2009-10-28	365	Consumption	2,762 GJ	2,762 GJ	Heating	2.30 GJ	17.00 °C	0.74 GJ / HDD	2,615 HDD	1,922 GJ	0.96
A10-0247	Vancouver	GAS-0247	Install Date: 10/06/2009	703441	1179124	2008-10-01	2009-09-30	365	Consumption	18,891 GJ	18,891 GJ	Heating	27.48 GJ	17.00 °C	3.38 GJ / HDD	2,622 HDD	8,859 GJ	0.99
A10-0251	Vancouver	GAS-0251	Install Date: 11/01/2009	306259	1037617	2008-10-30	2009-10-28	364	Consumption	3,559 GJ	3,539 GJ	Heating	3.74 GJ	16.00 °C	0.94 GJ / HDD	2,328 HDD	2,178 GJ	0.99
A10-0253	Kamloops	GAS-0253	Install Date: 12/15/2009	58610	1946680	2008-11-08	2009-11-06	364	Consumption	560 GJ	552 GJ	Heating	0.74 GJ	13.00 °C	0.11 GJ / HDD	2,534 HDD	281 GJ	0.96

APPENDIX B: Base Period Analysis

(Due to large file size, this Appendix is provided as a separate file)

APPENDIX C: Last Reading Dates

Last Reading Dates

Project: **FortisBC Efficient Boiler Program Analysis (2011008)**

Site			Meter				Last Reading				
Name	Description	Code	Name	Description	Type	Account Number	Date	Days	Consumption	Cost	Days Since
A05-0003	Premise : 406662		GAS-0003	Install Date: 09/09/2005	Natural Gas	1178691	2011-02-28	28	499	0	93
A05-0004	Premise : 254236		GAS-0004	Install Date: 09/09/2005	Natural Gas	1178545	2011-02-28	28	339	0	93
A05-0005	Premise : 610023		GAS-0005	Install Date: 09/09/2005	Natural Gas	1178546	2011-02-28	28	251	0	93
A05-0006	Premise : 704208		GAS-0006	Install Date: 08/02/2005	Natural Gas	1179373	2011-02-28	28	1,023	0	93
A05-0007	Premise : 51073		GAS-0007	Install Date: 10/01/2006	Natural Gas	168567	2011-03-04	30	651	0	89
A05-0008	Premise : 280132		GAS-0008	Install Date: 11/01/2005	Natural Gas	1850990	2011-02-28	28	570	0	93
A05-0009	Premise : 36937		GAS-0009	Install Date: 12/12/2005	Natural Gas	367968	2007-05-02	6	0	0	1491
A05-0010	Premise : 266683		GAS-0010	Install Date: 09/01/2005	Natural Gas	1178913	2011-02-28	28	5,613	0	93
A05-0011	Premise : 468596		GAS-0011	Install Date: 04/02/2007	Natural Gas	1179742	2011-02-16	63	1,749	0	105
A05-0012	Premise : 387051		GAS-0012	Install Date: 09/20/2005	Natural Gas	500068	2011-03-14	31	331	0	79
A05-0015	Premise : 472188		GAS-0015	Install Date: 09/01/2008	Natural Gas	686646	2011-03-17	58	140	0	76
A05-0017	Premise : 684089		GAS-0017	Install Date: 09/01/2005	Natural Gas	772342	2011-02-25	30	218	0	96
A05-0019	Premise : 256597		GAS-0019	Install Date: 10/05/2005	Natural Gas	623020	2011-03-29	29	199	0	64
A05-0020	Premise : 413028		GAS-0020	Install Date: 10/05/2005	Natural Gas	1016484	2011-03-14	91	1,190	0	79
A05-0021	Premise : 399773		GAS-0021	Install Date: 10/24/2005	Natural Gas	498623	2011-02-14	63	360	0	107
A05-0022	Premise : 311848		GAS-0022	Install Date: 01/05/2006	Natural Gas	1696560	2011-02-28	28	295	0	93
A05-0023	Premise : 35729		GAS-0023	Install Date: 11/01/2005	Natural Gas	372654	2011-03-25	58	89	0	68
A05-0024	Premise : 705498		GAS-0024	Install Date: 11/03/2006	Natural Gas	1234106	2011-02-28	28	5,917	0	93
A05-0026	Premise : 423077		GAS-0026	Install Date: 12/07/2006	Natural Gas	639998	2011-02-14	62	265	0	107
A05-0027	Premise : 525328		GAS-0027	Install Date: 11/22/2005	Natural Gas	646949	2011-02-04	60	489	0	117
A05-0028	Premise : 545094		GAS-0028	Install Date: 06/29/2006	Natural Gas	565844	2011-01-28	29	406	0	124
A05-0029	Premise : 617167		GAS-0029	Install Date: 10/26/2006	Natural Gas	1025771	2011-03-14	28	211	0	79
A05-0030	Premise : 290739		GAS-0030	Install Date: 10/01/2006	Natural Gas	522035	2011-03-23	29	197	0	70
A05-0031	Premise : 318638		GAS-0031	Install Date: 12/23/2005	Natural Gas	481313	2011-03-08	60	276	0	85
A05-0032	Premise : 612048		GAS-0032	Install Date: 09/30/2006	Natural Gas	1179455	2011-02-28	28	1,631	0	93
A05-0033	Premise : 310861		GAS-0033	Install Date: 02/22/2006	Natural Gas	1696560	2011-02-28	28	475	0	93
A05-0034	Premise : 522033		GAS-0034	Install Date: 10/05/2006	Natural Gas	847135	2011-02-04	59	31	0	117
A05-0035	Premise : 236764		GAS-0035	Install Date: 01/04/2007	Natural Gas	151124	2011-03-07	27	180	0	86
A05-0037	Premise : 313476		GAS-0037	Install Date: 08/23/2006	Natural Gas	1307154	2011-03-23	30	194	0	70
A05-0040	Premise : 811250		GAS-0040	Install Date: 03/16/2006	Natural Gas	1639618	2011-02-28	28	2,302	0	93
A05-0041	Premise : 308349		GAS-0041	Install Date: 04/06/2006	Natural Gas	623991	2011-03-29	29	152	0	64
A05-0042	Premise : 308141		GAS-0042	Install Date: 04/06/2006	Natural Gas	623990	2011-03-29	29	133	0	64
A05-0043	Premise : 670431		GAS-0043	Install Date: 05/01/2007	Natural Gas	1696560	2011-02-28	28	605	0	93
A05-0044	Premise : 388193		GAS-0044	Install Date: 09/05/2006	Natural Gas	622935	2011-03-14	28	270	0	79
A05-0045	Premise : 317893		GAS-0045	Install Date: 08/11/2006	Natural Gas	1178526	2011-02-28	28	971	0	93

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Site			Meter				Last Reading				
Name	Description	Code	Name	Description	Type	Account Number	Date	Days	Consumption	Cost	Days Since
A05-0046	Premise : 311883		GAS-0046	Install Date: 02/05/2007	Natural Gas	1179092	2011-02-28	28	892	0	93
A05-0048	Premise : 403864		GAS-0048	Install Date: 09/25/2006	Natural Gas	622935	2011-03-15	29	280	0	78
A05-0050	Premise : 360590		GAS-0050	Install Date: 06/12/2007	Natural Gas	498499	2011-02-09	63	358	0	112
A05-0051	Premise : 409296		GAS-0051	Install Date: 10/06/2006	Natural Gas	1247800	2011-02-14	31	706	0	107
A05-0052	Premise : 304098		GAS-0052	Install Date: 08/01/2006	Natural Gas	1317022	2011-03-28	31	376	0	65
A05-0053	Premise : 282017		GAS-0053	Install Date: 08/31/2006	Natural Gas	623537	2011-03-28	31	466	0	65
A05-0054	Premise : 332426		GAS-0054	Install Date: 06/20/2006	Natural Gas	803143	2011-02-16	29	530	0	105
A05-0055	Premise : 332435		GAS-0055	Install Date: 06/20/2006	Natural Gas	803143	2011-02-16	62	674	0	105
A05-0056	Premise : 332417		GAS-0056	Install Date: 06/20/2006	Natural Gas	803143	2011-01-18	62	325	0	134
A05-0057	Premise : 332425		GAS-0057	Install Date: 06/20/2006	Natural Gas	803143	2011-01-18	62	120	0	134
A05-0058	Premise : 332349		GAS-0058	Install Date: 06/20/2006	Natural Gas	803143	2011-02-16	29	224	0	105
A05-0059	Premise : 332382		GAS-0059	Install Date: 06/20/2006	Natural Gas	803143	2011-01-18	62	611	0	134
A05-0060	Premise : 332383		GAS-0060	Install Date: 06/20/2006	Natural Gas	803143	2011-01-18	62	567	0	134
A05-0061	Premise : 332384		GAS-0061	Install Date: 06/20/2006	Natural Gas	803143	2011-02-16	29	272	0	105
A05-0062	Premise : 522363		GAS-0062	Install Date: 10/14/2006	Natural Gas	1196428	2011-02-28	28	1,404	0	93
A05-0065	Premise : 275850		GAS-0065	Install Date: 12/18/2006	Natural Gas	509483	2011-03-28	31	539	0	65
A05-0066	Premise : 30724		GAS-0066	Install Date: 11/24/2006	Natural Gas	1178446	2011-03-04	29	379	0	89
A05-0068	Premise : 307235		GAS-0068	Install Date: 09/01/2006	Natural Gas	1298386	2011-02-28	28	575	0	93
A05-0069	Premise : 414759		GAS-0069	Install Date: 09/05/2006	Natural Gas	1178545	2011-02-28	28	1,207	0	93
A05-0070	Premise : 608173		GAS-0070	Install Date: 09/05/2006	Natural Gas	1178545	2011-02-28	28	759	0	93
A05-0072	Premise : 248451		GAS-0072	Install Date: 10/27/2006	Natural Gas	497887	2010-08-31	31	98	0	274
A05-0077	Premise : 64492		GAS-0077	Install Date: 11/22/2006	Natural Gas	358232	2011-02-10	29	184	0	111
A05-0079	Premise : 606229		GAS-0079	Install Date: 07/07/2006	Natural Gas	772955	2010-12-01	30	532	0	182
A05-0080	Premise : 256346		GAS-0080	Install Date: 08/31/2006	Natural Gas	1121989	2011-02-28	28	256	0	93
A05-0081	Premise : 286361		GAS-0081	Install Date: 09/13/2006	Natural Gas	1696560	2011-02-28	28	2,955	0	93
A05-0082	Premise : 285146		GAS-0082	Install Date: 10/26/2006	Natural Gas	1696560	2011-02-28	28	818	0	93
A05-0084	Premise : 645039		GAS-0084	Install Date: 10/18/2006	Natural Gas	772342	2011-03-16	29	84	0	77
A05-0085	Premise : 525780		GAS-0085	Install Date: 07/05/2006	Natural Gas	647014	2011-02-04	60	715	0	117
A05-0086	Premise : 191021		GAS-0086	Install Date: 05/31/2007	Natural Gas	318777	2011-03-16	29	1,193	0	77
A05-0087	Premise : 779272		GAS-0087	Install Date: 01/16/2007	Natural Gas	1179883	2011-02-28	28	538	0	93
A05-0089	Premise : 45157		GAS-0089	Install Date: 11/26/2006	Natural Gas	1701887	2011-03-17	29	223	0	76
A05-0093	Premise : 285521		GAS-0093	Install Date: 11/01/2006	Natural Gas	623591	2011-02-28	28	321	0	93
A05-0094	Premise : 508110		GAS-0094	Install Date: 09/01/2006	Natural Gas	1196426	2010-11-04	31	141	0	209
A05-0095	Premise : 160979		GAS-0095	Install Date: 08/01/2007	Natural Gas	267929	2011-03-03	29	418	0	90
A05-0096	Premise : 51072		GAS-0096	Install Date: 08/11/2006	Natural Gas	168568	2011-03-04	30	262	0	89

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Site			Meter				Last Reading				
Name	Description	Code	Name	Description	Type	Account Number	Date	Days	Consumption	Cost	Days Since
A05-0098	Premise : 782766		GAS-0098	Install Date: 12/16/2006	Natural Gas	1179918	2011-03-28	28	677	0	65
A05-0099	Premise : 652994		GAS-0099	Install Date: 10/12/2006	Natural Gas	1179439	2011-02-28	28	872	0	93
A05-0100	Premise : 771423		GAS-0100	Install Date: 12/07/2006	Natural Gas	950726	2011-03-08	60	371	0	85
A05-0101	Premise : 266117		GAS-0101	Install Date: 12/07/2006	Natural Gas	1891403	2011-03-25	29	222	0	68
A05-0102	Premise : 702112		GAS-0102	Install Date: 06/01/2007	Natural Gas	1179472	2011-02-28	28	3,861	0	93
A05-0103	Premise : 449169		GAS-0103	Install Date: 05/24/2007	Natural Gas	647243	2011-03-03	29	217	0	90
A05-0104	Premise : 483716		GAS-0104	Install Date: 04/19/2007	Natural Gas	1696560	2011-02-28	28	229	0	93
A05-0105	Premise : 266076		GAS-0105	Install Date: 04/27/2007	Natural Gas	647243	2011-02-01	32	264	0	120
A05-0106	Premise : 265806		GAS-0106	Install Date: 04/27/2007	Natural Gas	1696560	2011-02-28	28	325	0	93
A05-0109	Premise : 313159		GAS-0109	Install Date: 11/03/2006	Natural Gas	656898	2011-03-08	60	264	0	85
A05-0110	Premise : 721346		GAS-0110	Install Date: 10/12/2006	Natural Gas	1300786	2011-02-28	28	330	0	93
A05-0112	Premise : 505743		GAS-0112	Install Date: 10/18/2006	Natural Gas	1178736	2011-02-28	28	509	0	93
A05-0114	Premise : 290590		GAS-0114	Install Date: 01/29/2007	Natural Gas	1696560	2011-02-28	28	979	0	93
A05-0115	Premise : 257082		GAS-0115	Install Date: 04/18/2007	Natural Gas	1696560	2011-02-28	28	600	0	93
A05-0116	Premise : 737983		GAS-0116	Install Date: 04/18/2007	Natural Gas	1240604	2011-03-09	29	383	0	84
A05-0119	Premise : 279229		GAS-0119	Install Date: 06/28/2007	Natural Gas	1178600	2011-02-28	28	984	0	93
A05-0120	Premise : 480833		GAS-0120	Install Date: 04/25/2007	Natural Gas	1037859	2011-03-09	29	711	0	84
A05-0122	Premise : 330288		GAS-0122	Install Date: 12/01/2006	Natural Gas	711233	2011-02-28	28	476	0	93
A05-0123	Premise : 473191		GAS-0123	Install Date: 10/01/2007	Natural Gas	734697	2011-02-07	62	467	0	114
A05-0125	Premise : 309195		GAS-0125	Install Date: 08/05/2008	Natural Gas	623999	2011-03-29	29	242	0	64
A05-0131	Premise : 257372		GAS-0131	Install Date: 05/01/2007	Natural Gas	1178474	2011-02-28	28	2,878	0	93
A05-0132	Premise : 688856		GAS-0132	Install Date: 10/01/2008	Natural Gas	798495	2011-03-22	29	231	0	71
A05-0133	Premise : 785675		GAS-0133	Install Date: 09/01/2007	Natural Gas	1179701	2011-02-28	28	426	0	93
A05-0134	Premise : 541514		GAS-0134	Install Date: 09/24/2007	Natural Gas	1178602	2011-02-28	28	557	0	93
A05-0136	Premise : 299702		GAS-0136	Install Date: 10/01/2007	Natural Gas	1323619	2011-02-28	28	561	0	93
A05-0137	Premise : 478417		GAS-0137	Install Date: 09/01/2007	Natural Gas	1323616	2011-02-28	28	648	0	93
A05-0138	Premise : 420870		GAS-0138	Install Date: 09/01/2007	Natural Gas	1323620	2011-02-28	28	254	0	93
A05-0140	Premise : 365653		GAS-0140	Install Date: 11/21/2007	Natural Gas	665969	2011-02-28	28	796	0	93
A05-0144	Premise : 496208		GAS-0144	Install Date: 07/25/2007	Natural Gas	498924	2011-03-02	28	308	0	91
A05-0150	Premise : 295067		GAS-0150	Install Date: 08/01/2007	Natural Gas	623719	2011-03-29	32	356	0	64
A05-0154	Premise : 515881		GAS-0154	Install Date: 04/07/2008	Natural Gas	1580407	2011-03-09	29	331	0	84
A05-0155	Premise : 536113		GAS-0155	Install Date: 07/17/2007	Natural Gas	1178582	2011-02-28	28	648	0	93
A05-0156	Premise : 302558		GAS-0156	Install Date: 04/05/2008	Natural Gas	1178576	2011-02-28	28	1,871	0	93
A05-0159	Premise : 423566		GAS-0159	Install Date: 08/30/2007	Natural Gas	640106	2011-02-14	62	408	0	107
A05-0163	Premise : 605934		GAS-0163	Install Date: 11/02/2007	Natural Gas	772334	2011-03-02	29	899	0	91

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Site			Meter				Last Reading				
Name	Description	Code	Name	Description	Type	Account Number	Date	Days	Consumption	Cost	Days Since
A05-0169	Premise : 272939		GAS-0169	Install Date: 04/03/2008	Natural Gas	1868083	2011-02-28	28	793	0	93
A05-0171	Premise : 197335		GAS-0171	Install Date: 10/01/2008	Natural Gas	298535	2011-02-28	28	469	0	93
A05-0173	Premise : 14291		GAS-0173	Install Date: 09/01/2008	Natural Gas	127587	2011-02-18	30	203	0	103
A05-0174	Premise : 10891		GAS-0174	Install Date: 09/02/2008	Natural Gas	127587	2011-03-09	30	222	0	84
A05-0176	Premise : 510439		GAS-0176	Install Date: 05/01/2009	Natural Gas	742126	2010-12-31	30	643	0	152
A05-0177	Premise : 307218		GAS-0177	Install Date: 07/01/2009	Natural Gas	498155	2010-11-29	62	360	0	184
A05-0178	Premise : 161485		GAS-0178	Install Date: 09/01/2009	Natural Gas	268955	2011-03-02	5	81	0	91
A05-0180	Premise : 304568		GAS-0180	Install Date: 05/22/2009	Natural Gas	498108	2011-03-28	31	529	0	65
A05-0181	Premise : 490831		GAS-0181	Install Date: 09/01/2009	Natural Gas	1126956	2011-03-31	29	256	0	62
A05-0183	Premise : 482862		GAS-0183	Install Date: 06/01/2009	Natural Gas	736951	2011-03-10	29	93	0	83
A05-0184	Premise : 325339		GAS-0184	Install Date: 11/04/2009	Natural Gas	692350	2011-03-21	31	300	0	72
A05-0185	Premise : 399907		GAS-0185	Install Date: 11/02/2009	Natural Gas	1178545	2010-11-30	30	1,090	0	183
A05-0188	Premise : 948964		GAS-0188	Install Date: 09/01/2009	Natural Gas	1650898	2011-03-11	29	1,897	0	82
A05-0189	Premise : 562819		GAS-0189	Install Date: 07/02/2009	Natural Gas	858120	2011-03-25	58	496	0	68
A05-0190	Premise : 462258		GAS-0190	Install Date: 10/01/2009	Natural Gas	564349	2011-02-28	28	150	0	93
A05-0192	Premise : 267973		GAS-0192	Install Date: 11/17/2009	Natural Gas	1862457	2011-03-29	29	209	0	64
A05-0193	Premise : 309516		GAS-0193	Install Date: 06/29/2009	Natural Gas	655948	2011-03-07	60	554	0	86
A05-0195	Premise : 726355		GAS-0195	Install Date: 09/23/2009	Natural Gas	1180024	2011-02-28	28	503	0	93
A05-0196	Premise : 325654		GAS-0196	Install Date: 06/09/2009	Natural Gas	692347	2011-02-18	63	501	0	103
A05-0197	Premise : 326188		GAS-0197	Install Date: 06/09/2009	Natural Gas	692347	2011-02-18	63	525	0	103
A05-0206	Premise : 345442		GAS-0206	Install Date: 06/01/2009	Natural Gas	661463	2011-02-28	28	476	0	93
A05-0210	Premise : 541687		GAS-0210	Install Date: 11/06/2009	Natural Gas	1178607	2011-02-28	28	1,141	0	93
A05-0212	Premise : 675822		GAS-0212	Install Date: 12/03/2009	Natural Gas	1139860	2011-02-03	29	446	0	118
A05-0213	Premise : 675784		GAS-0213	Install Date: 12/03/2009	Natural Gas	1139861	2011-03-04	29	440	0	89
A05-0214	Premise : 676296		GAS-0214	Install Date: 11/30/2009	Natural Gas	795104	2010-11-29	32	118	0	184
A05-0217	Premise : 67113		GAS-0217	Install Date: 08/12/2009	Natural Gas	323616	2011-02-17	62	26	0	104
A05-0219	Premise : 288862		GAS-0219	Install Date: 12/04/2009	Natural Gas	1777251	2011-03-29	32	121	0	64
A05-0228	Premise : 285568		GAS-0228	Install Date: 11/01/2009	Natural Gas	623592	2011-03-28	31	277	0	65
A10-0247	Premise : 703441		GAS-0247	Install Date: 10/06/2009	Natural Gas	1179124	2011-02-28	28	1,908	0	93
A10-0251	Premise : 306259		GAS-0251	Install Date: 11/01/2009	Natural Gas	1037617	2010-11-30	33	402	0	183
A10-0253	Premise : 58610		GAS-0253	Install Date: 12/15/2009	Natural Gas	1946680	2011-03-09	28	278	0	84

APPENDIX D: Survey Questions

Q1. How many boilers did you have prior to the Efficient Boiler Retrofit Program?

NUMBER OF BOILERS: _____

Q2. How many of these boilers were replaced through the Efficient Boiler Retrofit Program?

NUMBER OF BOILERS: _____

Q3. What proportion of the overall load is served by the retrofitted heating plant? Please answer in "percent of floor area".

PERCENT OF FLOOR AREA: _____%

Q4. Which of the following are part of the facility where the new boiler was installed?

Pool
Gas-fired cooking
Radiant heating
Domestic hot water
Reheat coils
Air handling unit coils
Other (please specify): _____

Q5. What elements of this building are not impacted by the retrofit? That is, they burn natural gas themselves, or they have a separate boiler or other source of heat.

Kitchen
Domestic hot water
Roof top unit (gas fired)
Other (please specify): _____

Q6. Which of the following best describes your retrofit?

Boiler replacement only
Boiler replacement plus enhanced controls
Other plant upgrades such as piping and distribution update (please specify): _____

Q7. Were any other energy management measures implemented at the same time as the boiler retrofit? READ LIST

Window replacement
Door replacement
Installing additional insulation
Redesign of HVAC system (fan coils, air handling units)
Zone isolation
Heat recovery
Direct digital control

Other (please specify): _____

Q8. Have you noticed a change in maintenance requirements or expenditures following the retrofit?

Yes, increased
Yes, decreased
No change
DON'T KNOW

Q9. Finally, how would you rate your satisfaction or dissatisfaction with Efficient Boiler Retrofit program? Please think about your organization's experience with the process and the program overall.

Very satisfied
Somewhat satisfied
NEITHER (DO NOT READ)
Somewhat dissatisfied
Very dissatisfied

Q10. Why are you _____?

OPEN END

Q11. Finally, please imagine that your organization had not been offered a financial incentive to participate in the Efficient Boiler Retrofit program. In that scenario, based on what you know about your organization, would you have completed the retrofit?

Yes
No

Q12. Why? What would have been the biggest incentive / barrier to completing the retrofit.

OPEN END

Q13. Terasen would like to attach your responses to these questions to your account in order more fully understand the impact of the retrofit to your overall usage. Your responses to these questions will be used only for this purpose and all your information including your answers to these questions will remain confidential. Do I have your permission to provide Terasen with your responses to my questions?

APPENDIX E: Survey Results

Survey Question	Results*		
1. How many boilers did you have prior to the Efficient Boiler Retrofit Program?		2	Average response
2. How many of these boilers were replaced through the Efficient Boiler Retrofit Program?		2	Average response
		79%	Replaced all of their boilers using the Efficient Boiler Retrofit Program.
3. What proportion of the overall load is served by the retrofitted heating plant?		88%	Average response
4. Which of the following are part of the facility where the new boiler was installed? **			
	4%	2	Pool
	4%	2	Gas-fired cooking
	12%	6	Other
	33%	16	Reheat coils
	39%	19	Air handling unit coils
	49%	24	Radiant heating
	82%	40	Domestic hot water
5. What elements of this building are not impacted by the retrofit?			
	10%	5	Other
	10%	5	Rooftop Unit (Gas fired)
	10%	5	Domestic Hot Water
	12%	6	Kitchen
	57%	28	No response
	100%	**49**	**Total**

*** Percentages may not total 100% due to rounding.**
**** Percentages do not total 100%, because question asked for multiple responses.**

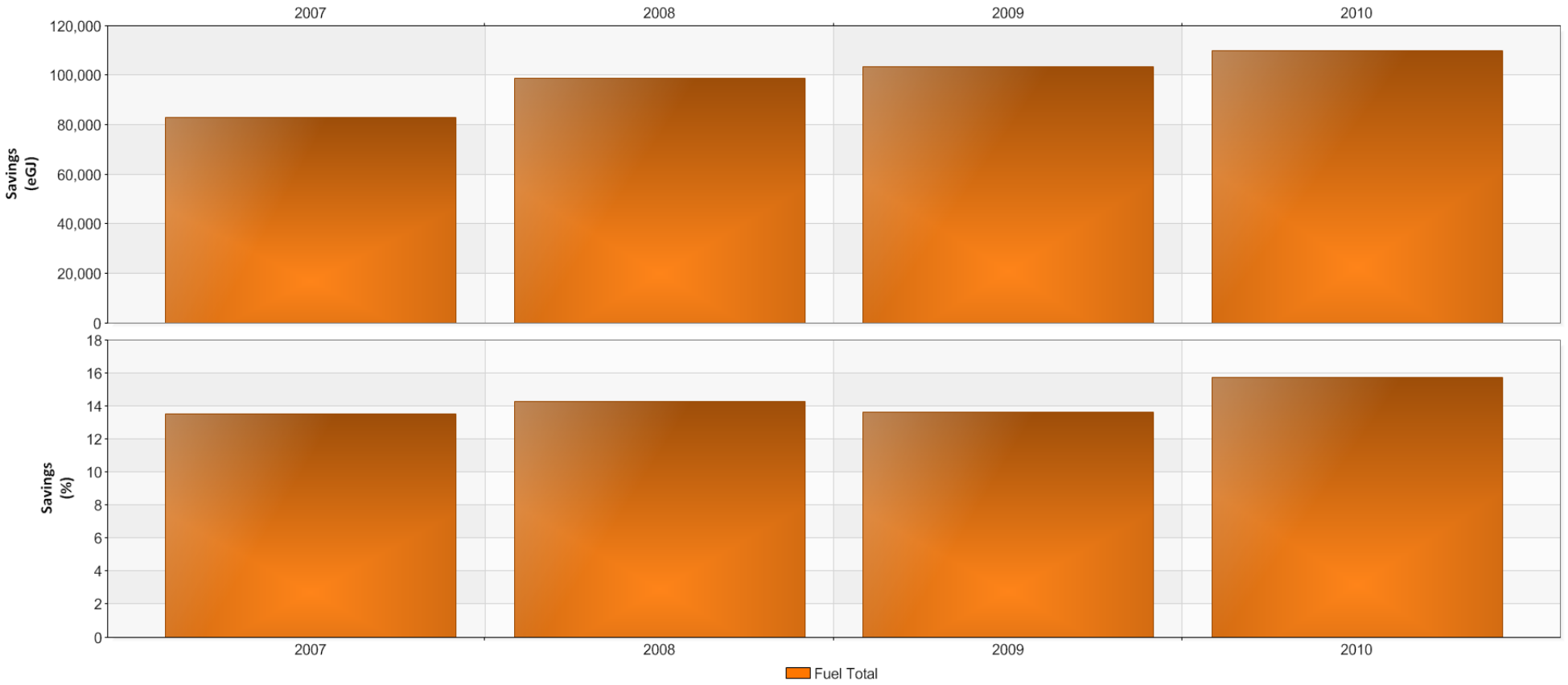
Survey Question	Results*		
	22%	10	Other Upgrades
	35%	17	Boiler Only
	45%	22	Boiler and Controls
	100%	**49**	**Total**
7. Were any other energy management measures implemented at the same time as the boiler retrofit? **			
	4%	2	Door replacement
	4%	2	Window replacement
	4%	2	Heat recovery
	6%	3	Installing additional insulation
	10%	5	Zone isolation
	12%	6	Other
	24%	12	Redesign of HVAC system
	37%	18	Direct digital control
	45%	22	No response
8. Have you noticed a change in maintenance requirements or expenditures following the retrofit?			
	2%	1	Yes, increased
	73%	33	Yes, decreased
	13%	6	No change
	11%	5	Don't know
	100%	**45**	**Total**
9. How would you rate your satisfaction or dissatisfaction with Efficient Boiler Retrofit program?			
	82%	40	Very satisfied
	16%	8	Somewhat satisfied
	2%	1	Very dissatisfied
	100%	**49**	**Total**

Survey Question	Results*		
10. Why?	· Easy application; process simple; quick; fast getting approval · Satisfied because of strong personalized support. · Process is quick and approval is fast · Very satisfied because the retrofit reduced operating costs and greenhouse emissions. · Easier if final payments could be predicted like with the small boiler incentive.		
11. If your organization had not been offered a financial incentive, would you have completed the retrofit?			
	69%	34	Yes
	31%	15	No
	100%	**49**	**Total**
12. Why? What would have been the biggest incentive / barrier to completing the retrofit.	Yes	· May have been delayed longer but $ and CO2 Savings primary driver. · Equipment needed to be replaced because it was too old. · Yes because of payback cost and its simplicity. No barriers to completing retrofit.	
	No	· Incentive persuaded them to do it, financial cost would have been a barrier. · They would have gone with a less expensive boiler.	

APPENDIX F: Annual Energy Savings

Annual Energy Savings: Project (2007 - 2010)

Project: **FortisBC Efficient Boiler Program Analysis (2011008)**



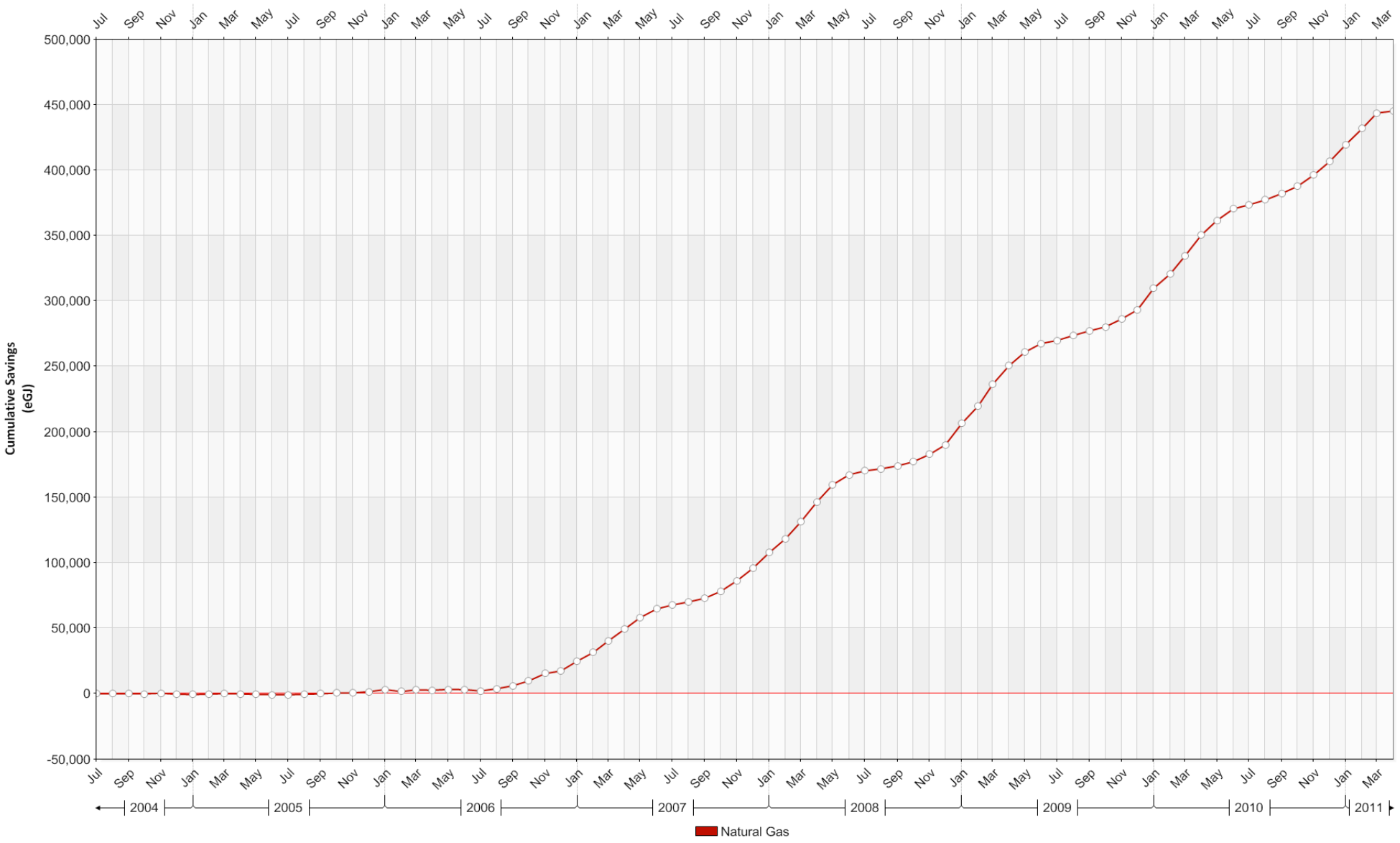
Year[1]	Fuel Total			
	Prorated Actual	Baseline	Savings	
	GJ	GJ	Abs. GJ	%
2007	531,179	614,081	82,901	14
2008	591,415	690,093	98,678	14
2009	655,617	759,086	103,470	14
2010	588,922	698,693	109,771	16
Total:	**2,367,133**	**2,761,953**	**394,820**	**14**

[1] "Year" refers to fiscal year ending in December
Brown indicates missing data and Blue indicates prorated data.

APPENDIX G: CUSUM – Project

CUSUM: Project

Project: **FortisBC Efficient Boiler Program Analysis (2011008)**



APPENDIX H: CUSUM – Site

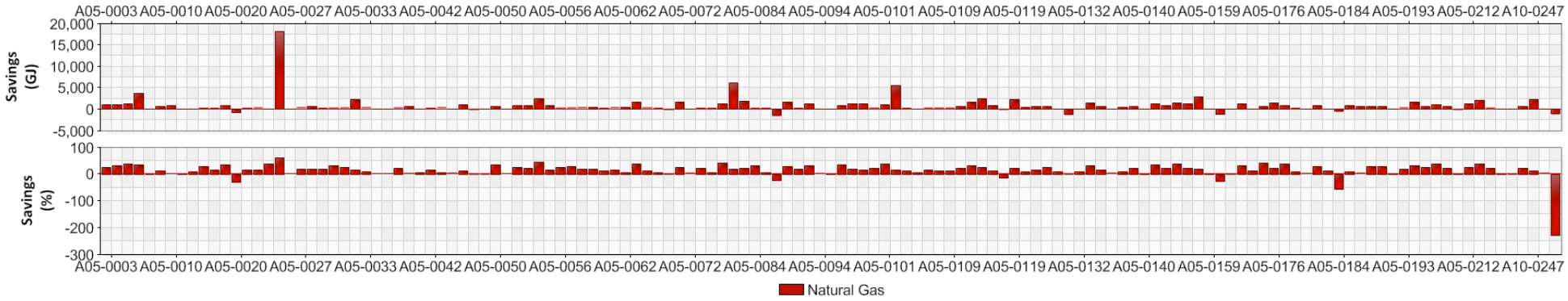
(Due to large file size, this Appendix is provided as a separate file)

APPENDIX I: Savings By Year By Site

Savings By Year By Site (2010)

Project: **FortisBC Efficient Boiler Program Analysis (2011008)**

Year: **2010**



Site		Natural Gas			
		Prorated Actual	Baseline	Savings	
Name	Description	GJ	GJ	Abs. GJ	%
A05-0003	Premise : 406662	3,687	4,839	1,152	24
A05-0004	Premise : 254236	2,534	3,640	1,106	30
A05-0005	Premise : 610023	1,967	3,188	1,221	38
A05-0006	Premise : 704208	7,444	11,203	3,760	34
A05-0007	Premise : 51073	5,307	5,170	-136	-3
A05-0008	Premise : 280132	4,758	5,432	675	12
A05-0010	Premise : 266683	39,283	40,216	933	2
A05-0011	Premise : 468596	5,656	5,631	-25	0
A05-0012	Premise : 387051	1,163	1,285	122	10
A05-0015	Premise : 472188	589	809	221	27
A05-0017	Premise : 684089	1,276	1,506	230	15
A05-0019	Premise : 256597	1,835	2,795	960	34
A05-0020	Premise : 413028	3,166	2,451	-715	-29
A05-0021	Premise : 399773	1,187	1,387	201	14
A05-0022	Premise : 311848	2,262	2,663	401	15
A05-0023	Premise : 35729	229	373	145	39
A05-0024	Premise : 705498	11,633	29,708	18,075	61
A05-0026	Premise : 423077	812	827	15	2
A05-0027	Premise : 525328	1,754	2,199	444	20

Brown indicates missing data and Blue indicates prorated data.

Savings By Year By Site (2010)

Project: **FortisBC Efficient Boiler Program Analysis (2011008)**
Year: **2010**

Site		Natural Gas			
		Prorated Actual	Baseline	Savings	
Name	Description	GJ	GJ	Abs. GJ	%
A05-0028	Premise : 545094	2,984	3,679	695	19
A05-0029	Premise : 617167	1,453	1,754	301	17
A05-0030	Premise : 290739	777	1,125	347	31
A05-0031	Premise : 318638	1,245	1,682	437	26
A05-0032	Premise : 612048	12,664	15,004	2,340	16
A05-0033	Premise : 310861	3,961	4,421	460	10
A05-0034	Premise : 522033	106	109	2	2
A05-0035	Premise : 236764	1,723	1,780	57	3
A05-0037	Premise : 313476	1,519	1,923	403	21
A05-0040	Premise : 811250	17,500	18,118	619	3
A05-0041	Premise : 308349	1,155	1,226	71	6
A05-0042	Premise : 308141	1,126	1,320	194	15
A05-0043	Premise : 670431	7,192	7,676	484	6
A05-0044	Premise : 388193	1,208	1,264	56	4
A05-0045	Premise : 317893	7,669	8,701	1,032	12
A05-0046	Premise : 311883	7,398	7,054	-344	-5
A05-0048	Premise : 403864	1,680	1,604	-76	-5
A05-0050	Premise : 360590	1,197	1,862	666	36
A05-0051	Premise : 409296	5,254	5,382	128	2
A05-0052	Premise : 304098	2,900	3,873	973	25
A05-0053	Premise : 282017	3,239	4,073	834	20
A05-0054	Premise : 332426	3,126	5,622	2,495	44
A05-0055	Premise : 332435	4,941	5,802	861	15
A05-0056	Premise : 332417	1,115	1,464	349	24
A05-0057	Premise : 332425	1,004	1,406	402	29
A05-0058	Premise : 332349	1,908	2,365	456	19
A05-0059	Premise : 332382	2,150	2,680	530	20
A05-0060	Premise : 332383	2,042	2,366	324	14
A05-0061	Premise : 332384	2,421	2,892	472	16
A05-0062	Premise : 522363	8,195	8,777	582	7
A05-0065	Premise : 275850	2,904	4,634	1,730	37

Brown indicates missing data and Blue indicates prorated data.

Savings By Year By Site (2010)

Project: **FortisBC Efficient Boiler Program Analysis (2011008)**
Year: **2010**

Site		Natural Gas			
		Prorated Actual	Baseline	Savings	
Name	Description	GJ	GJ	Abs. GJ	%
A05-0066	Premise : 30724	2,916	3,334	418	13
A05-0068	Premise : 307235	3,972	4,273	301	7
A05-0069	Premise : 414759	9,120	8,777	-343	-4
A05-0070	Premise : 608173	5,443	7,187	1,744	24
A05-0072	Premise : 248451	1,699	1,784	85	5
A05-0077	Premise : 64492	921	1,186	265	22
A05-0079	Premise : 606229	4,432	4,705	273	6
A05-0080	Premise : 256346	1,763	2,995	1,232	41
A05-0081	Premise : 286361	27,610	33,732	6,122	18
A05-0082	Premise : 285146	6,630	8,527	1,896	22
A05-0084	Premise : 645039	489	729	240	33
A05-0085	Premise : 525780	2,815	3,013	197	7
A05-0086	Premise : 191021	8,340	6,830	-1,510	-22
A05-0087	Premise : 779272	3,982	5,601	1,619	29
A05-0089	Premise : 45157	1,267	1,534	267	17
A05-0093	Premise : 285521	2,894	4,159	1,265	30
A05-0094	Premise : 508110	1,341	1,396	54	4
A05-0095	Premise : 160979	3,566	3,526	-40	-1
A05-0096	Premise : 51072	1,615	2,435	821	34
A05-0098	Premise : 782766	5,630	6,934	1,303	19
A05-0099	Premise : 652994	6,740	8,050	1,309	16
A05-0100	Premise : 771423	1,281	1,650	369	22
A05-0101	Premise : 266117	1,573	2,589	1,015	39
A05-0102	Premise : 702112	31,124	36,717	5,593	15
A05-0103	Premise : 449169	1,635	1,880	244	13
A05-0104	Premise : 483716	2,147	2,301	153	7
A05-0105	Premise : 266076	2,092	2,451	359	15
A05-0106	Premise : 265806	2,673	3,020	348	12
A05-0109	Premise : 313159	2,249	2,586	337	13
A05-0110	Premise : 721346	2,498	3,236	738	23
A05-0112	Premise : 505743	3,767	5,431	1,664	31

Brown indicates missing data and Blue indicates prorated data.

Savings By Year By Site (2010)

Project: **FortisBC Efficient Boiler Program Analysis (2011008)**
Year: **2010**

Site		Natural Gas			
		Prorated Actual	Baseline	Savings	
Name	Description	GJ	GJ	Abs. GJ	%
A05-0114	Premise : 290590	8,115	10,651	2,537	24
A05-0115	Premise : 257082	5,242	6,037	794	13
A05-0116	Premise : 737983	2,821	2,489	-332	-13
A05-0119	Premise : 279229	7,507	9,817	2,310	24
A05-0120	Premise : 480833	4,899	5,389	490	9
A05-0122	Premise : 330288	4,111	4,859	748	15
A05-0123	Premise : 473191	1,774	2,373	599	25
A05-0125	Premise : 309195	2,258	2,437	179	7
A05-0131	Premise : 257372	25,637	24,396	-1,240	-5
A05-0132	Premise : 688856	1,466	1,581	116	7
A05-0133	Premise : 785675	3,189	4,688	1,499	32
A05-0134	Premise : 541514	4,124	4,843	719	15
A05-0136	Premise : 299702	4,078	4,253	175	4
A05-0137	Premise : 478417	4,695	5,187	492	9
A05-0138	Premise : 420870	2,131	2,758	627	23
A05-0140	Premise : 365653	6,740	6,766	26	0
A05-0144	Premise : 496208	2,559	3,912	1,353	35
A05-0150	Premise : 295067	2,864	3,682	818	22
A05-0154	Premise : 515881	2,184	3,592	1,408	39
A05-0155	Premise : 536113	4,507	5,824	1,317	23
A05-0156	Premise : 302558	12,775	15,728	2,954	19
A05-0159	Premise : 423566	1,388	1,362	-26	-2
A05-0163	Premise : 605934	5,652	4,489	-1,163	-26
A05-0169	Premise : 272939	3,472	3,284	-188	-6
A05-0171	Premise : 197335	2,954	4,315	1,360	32
A05-0173	Premise : 14291	1,262	1,428	166	12
A05-0174	Premise : 10891	1,058	1,809	751	42
A05-0176	Premise : 510439	5,292	6,854	1,562	23
A05-0177	Premise : 307218	1,697	2,683	986	37
A05-0178	Premise : 161485	2,160	2,395	234	10
A05-0180	Premise : 304568	3,623	3,749	126	3

Brown indicates missing data and Blue indicates prorated data.

Savings By Year By Site (2010)

Project: **FortisBC Efficient Boiler Program Analysis (2011008)**
Year: **2010**

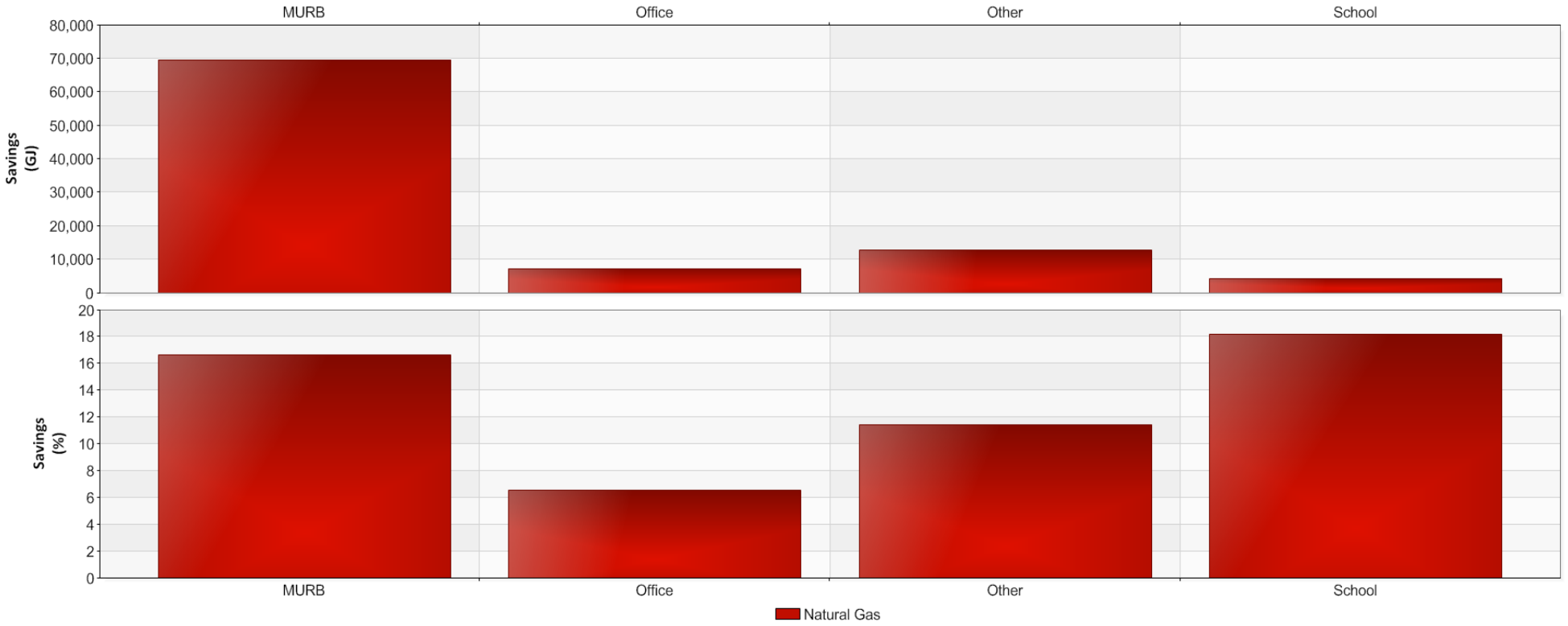
Site		Natural Gas			
		Prorated Actual	Baseline	Savings	
Name	Description	GJ	GJ	Abs. GJ	%
A05-0181	Premise : 490831	2,289	3,152	863	27
A05-0183	Premise : 482862	593	685	92	13
A05-0184	Premise : 325339	1,346	859	-487	-57
A05-0185	Premise : 399907	7,373	8,174	800	10
A05-0188	Premise : 948964	13,639	14,244	605	4
A05-0189	Premise : 562819	1,999	2,789	789	28
A05-0190	Premise : 462258	1,514	2,152	638	30
A05-0192	Premise : 267973	1,825	1,779	-46	-3
A05-0193	Premise : 309516	2,022	2,454	432	18
A05-0195	Premise : 726355	3,306	4,937	1,632	33
A05-0196	Premise : 325654	1,918	2,610	691	26
A05-0197	Premise : 326188	1,919	3,117	1,198	38
A05-0206	Premise : 345442	2,649	3,432	783	23
A05-0210	Premise : 541687	8,699	8,453	-246	-3
A05-0212	Premise : 675822	3,532	4,747	1,215	26
A05-0213	Premise : 675784	3,266	5,337	2,071	39
A05-0214	Premise : 676296	1,301	1,643	342	21
A05-0217	Premise : 67113	85	86	0	1
A05-0219	Premise : 288862	1,171	1,134	-37	-3
A05-0228	Premise : 285568	1,956	2,549	593	23
A10-0247	Premise : 703441	15,510	17,907	2,397	13
A10-0251	Premise : 306259	2,685	2,818	133	5
A10-0253	Premise : 58610	1,573	482	-1,091	-226
Total:		**588,922**	**698,693**	**109,771**	**16**

Brown indicates missing data and Blue indicates prorated data.

APPENDIX J: Savings By Year By Grouping 2010

Savings By Year By Grouping (2010)

Project: **FortisBC Efficient Boiler Program Analysis (2011008)**
Classification: **Building Type**
Year: **2010**



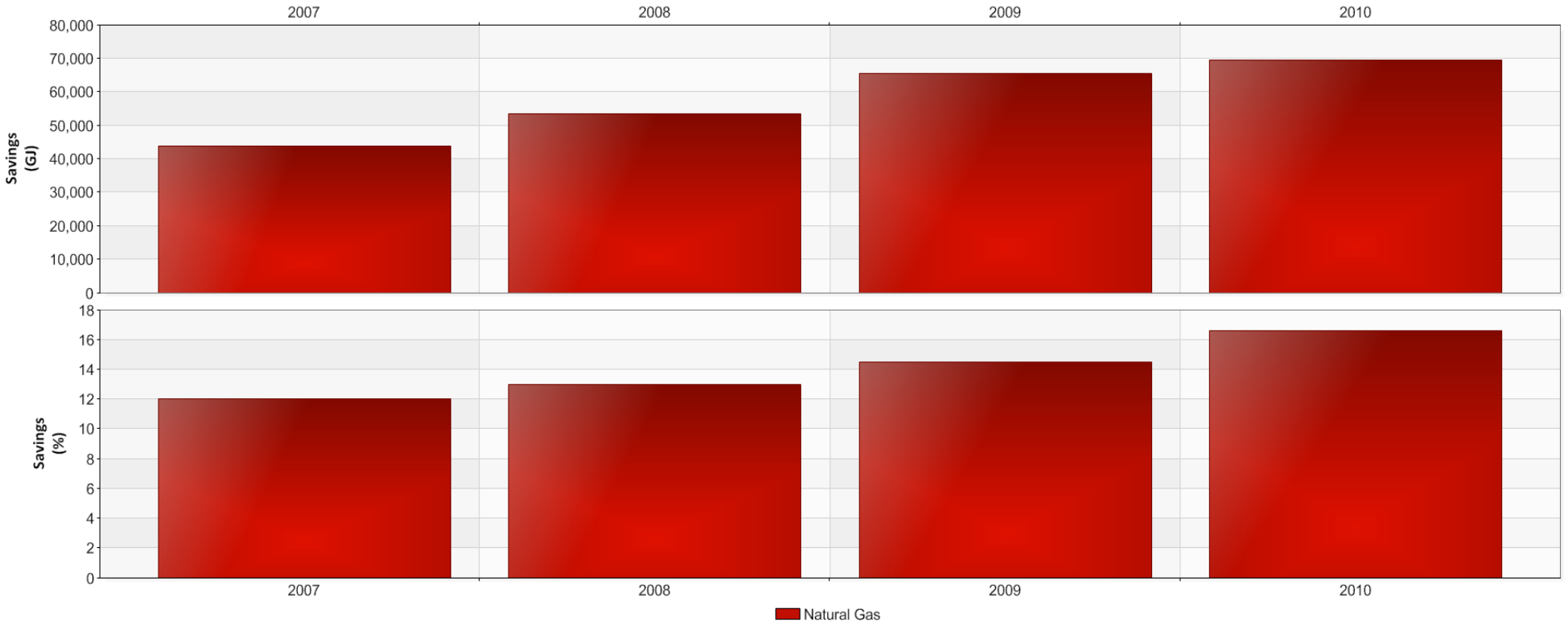
Grouping	Natural Gas Savings Abs. GJ	Natural Gas Savings %
MURB	69,582	17
Office	7,274	7
Other	12,774	11
School	4,359	18
Total:	**93,989**	**14**

Brown indicates missing data and Blue indicates prorated data.

APPENDIX K: Savings By Grouping By Year

Savings By Grouping By Year (2007 - 2010)

Project: **FortisBC Efficient Boiler Program Analysis (2011008)**
Classification: **Building Type**
Grouping: **MURB**

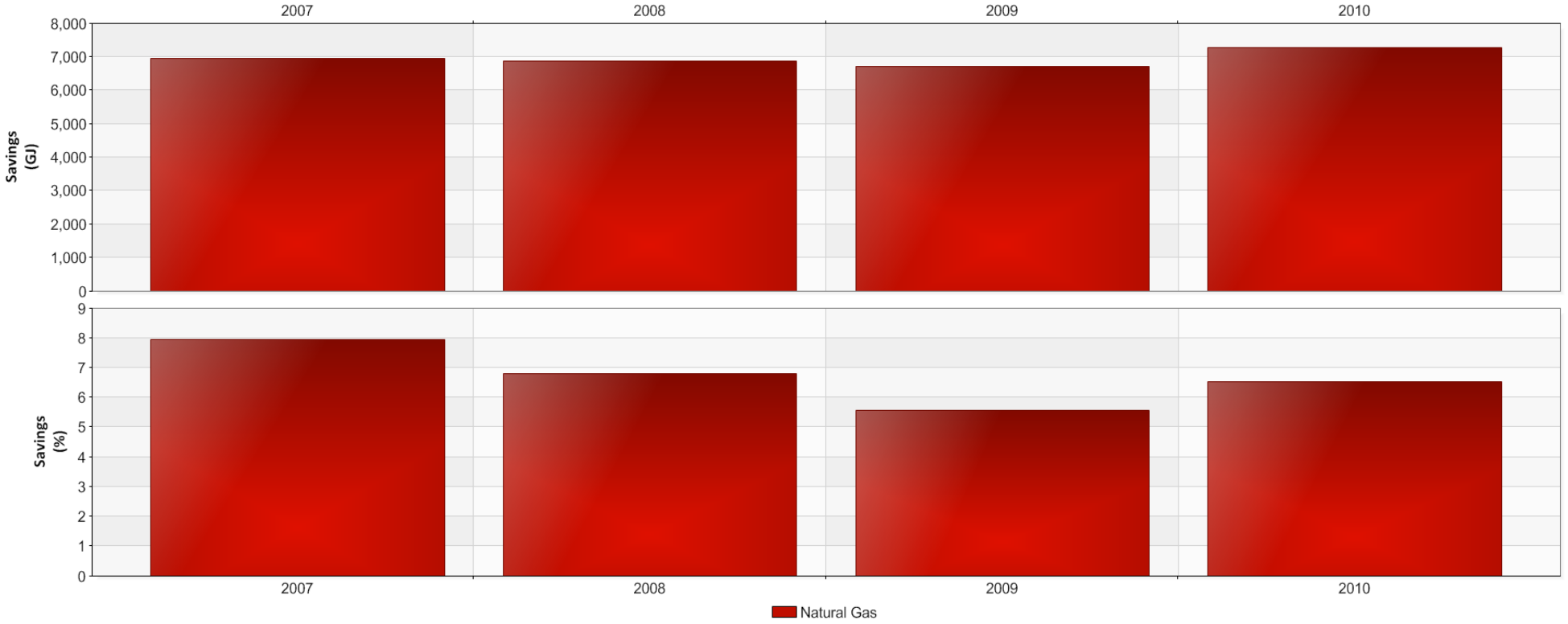


Year[1]	Natural Gas Savings	
	Abs. GJ	%
2007	43,989	12
2008	53,400	13
2009	65,604	15
2010	69,582	17
Total:	**232,575**	**14**

[1] "Year" refers to fiscal year ending in December
Brown indicates missing data and Blue indicates prorated data.

Savings By Grouping By Year (2007 - 2010)

Project: **FortisBC Efficient Boiler Program Analysis (2011008)**
Classification: **Building Type**
Grouping: **Office**

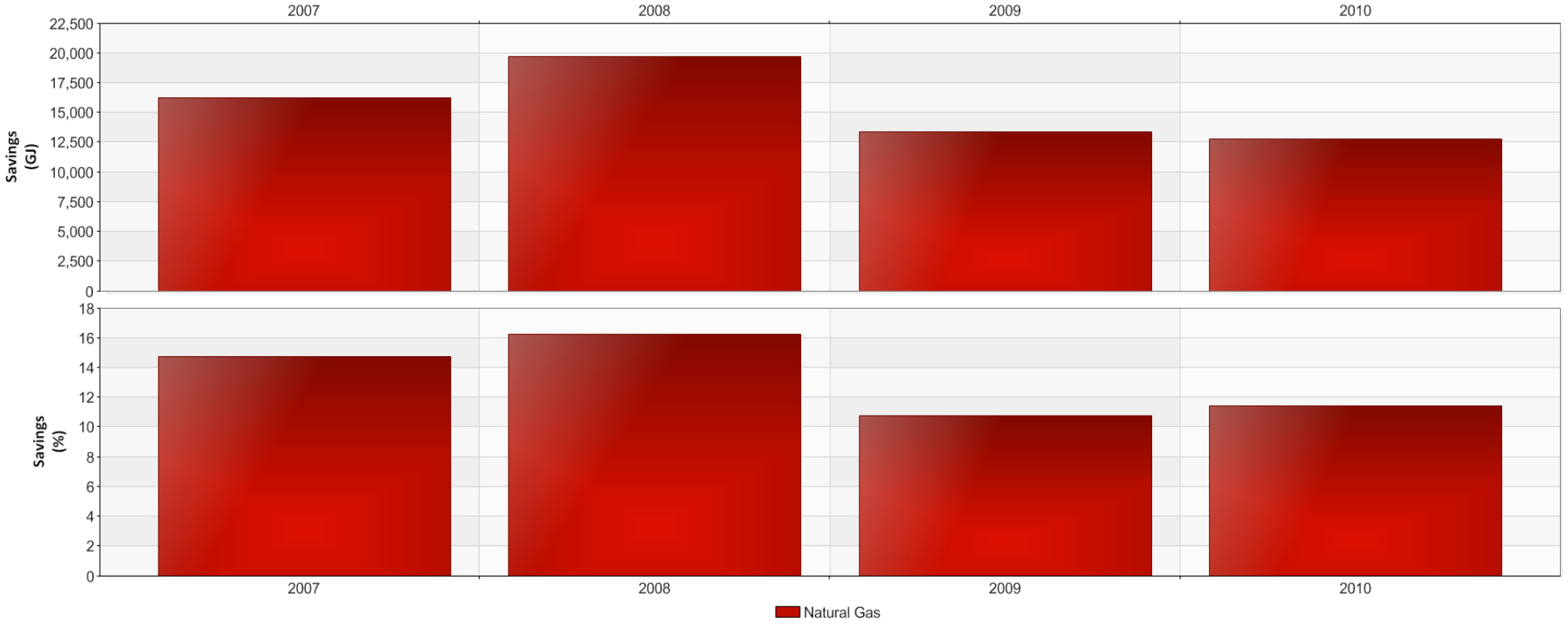


Year[1]	Natural Gas Savings Abs. GJ	Natural Gas Savings %
2007	6,948	8
2008	6,868	7
2009	6,717	6
2010	7,274	7
Total:	**27,807**	**7**

[1] "Year" refers to fiscal year ending in December
Brown indicates missing data and Blue indicates prorated data.

Savings By Grouping By Year (2007 - 2010)

Project: **FortisBC Efficient Boiler Program Analysis (2011008)**
Classification: **Building Type**
Grouping: **Other**

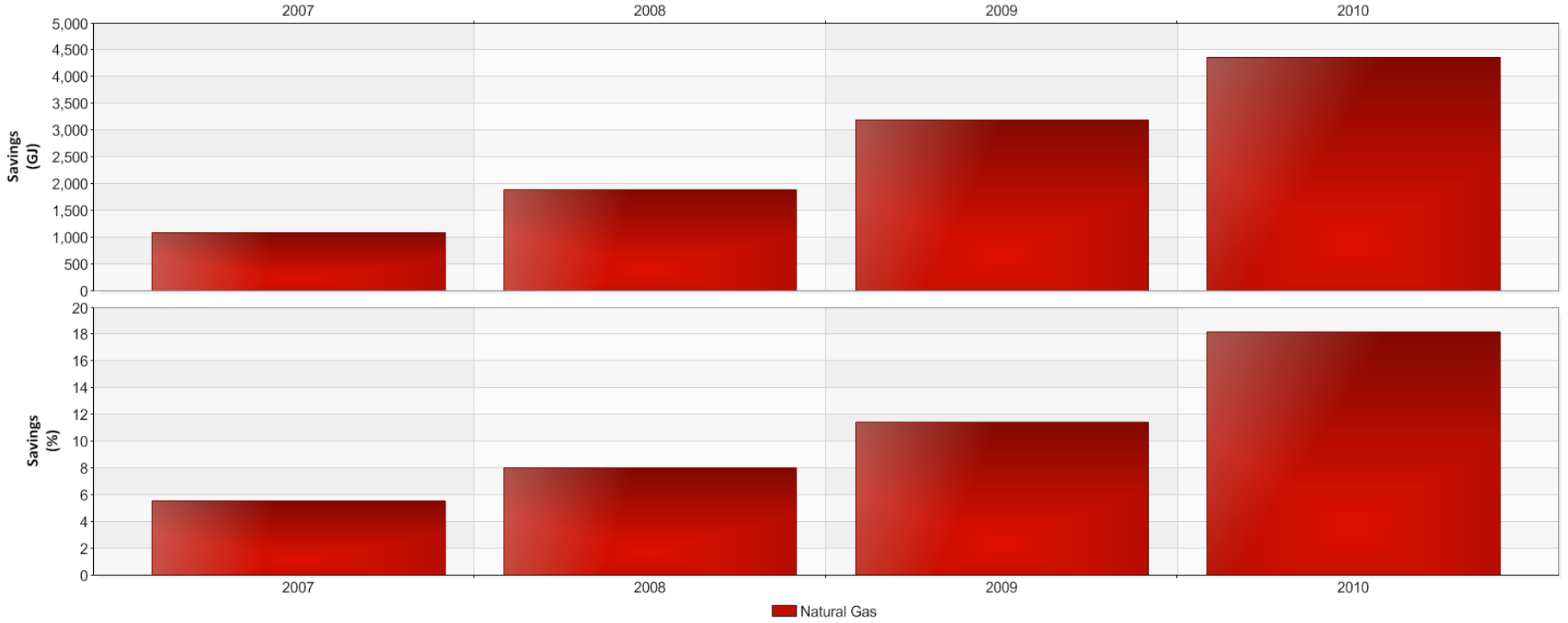


Year[1]	Natural Gas Savings	
	Abs. GJ	%
2007	16,282	15
2008	19,729	16
2009	13,363	11
2010	12,774	11
Total:	**62,148**	**13**

[1] "Year" refers to fiscal year ending in December
Brown indicates missing data and Blue indicates prorated data.

Savings By Grouping By Year (2007 - 2010)

Project: **FortisBC Efficient Boiler Program Analysis (2011008)**
Classification: **Building Type**
Grouping: **School**



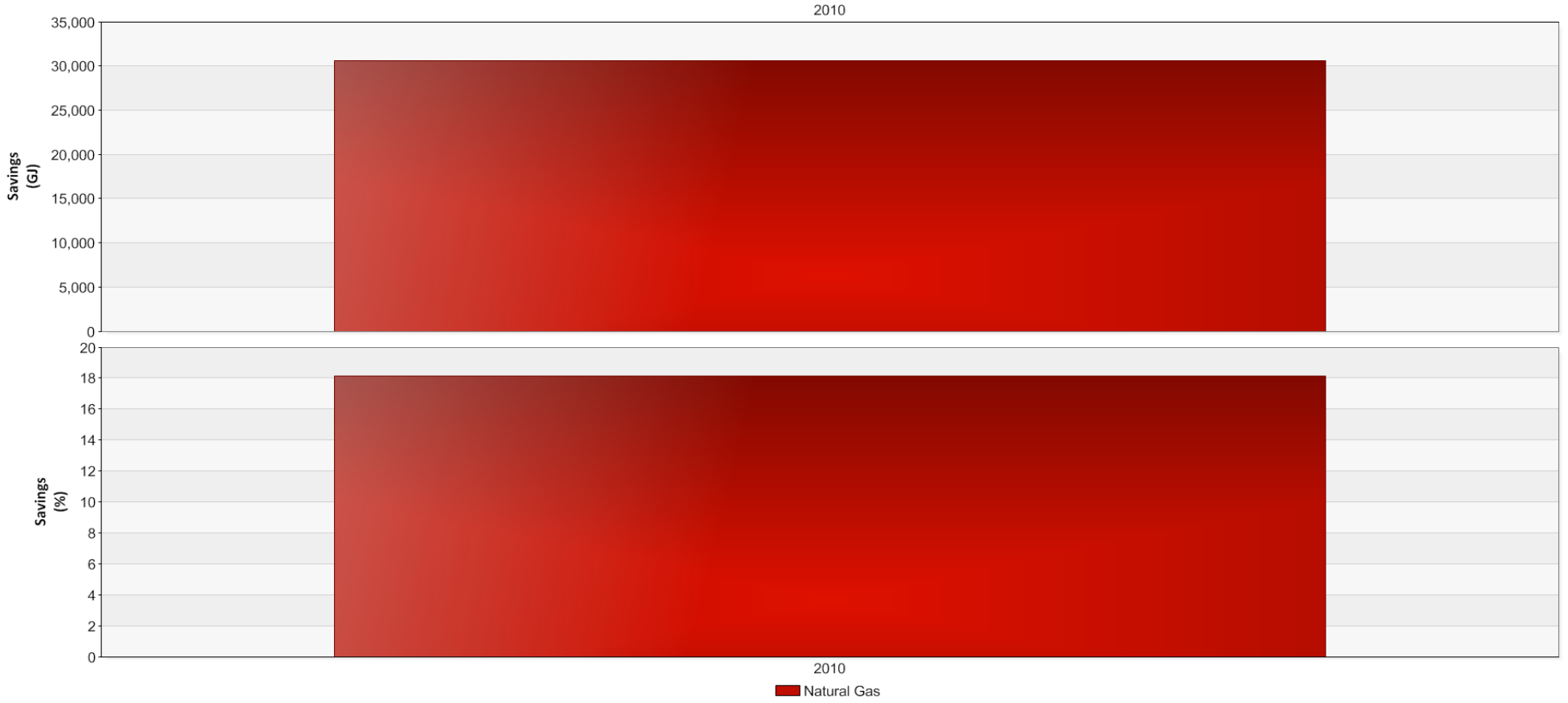
Year[1]	Natural Gas Savings	
	Abs. GJ	%
2007	1,082	6
2008	1,892	8
2009	3,198	11
2010	4,359	18
Total:	**10,531**	**11**

[1] "Year" refers to fiscal year ending in December
Brown indicates missing data and Blue indicates prorated data.

APPENDIX L: Savings By Boiler Efficiency Grouping By Year

Savings By Grouping By Year (2010)

Project: **FortisBC Efficient Boiler Program Analysis (2011008)**
Classification: **Boiler Efficiency**
Grouping: **High Efficiency**

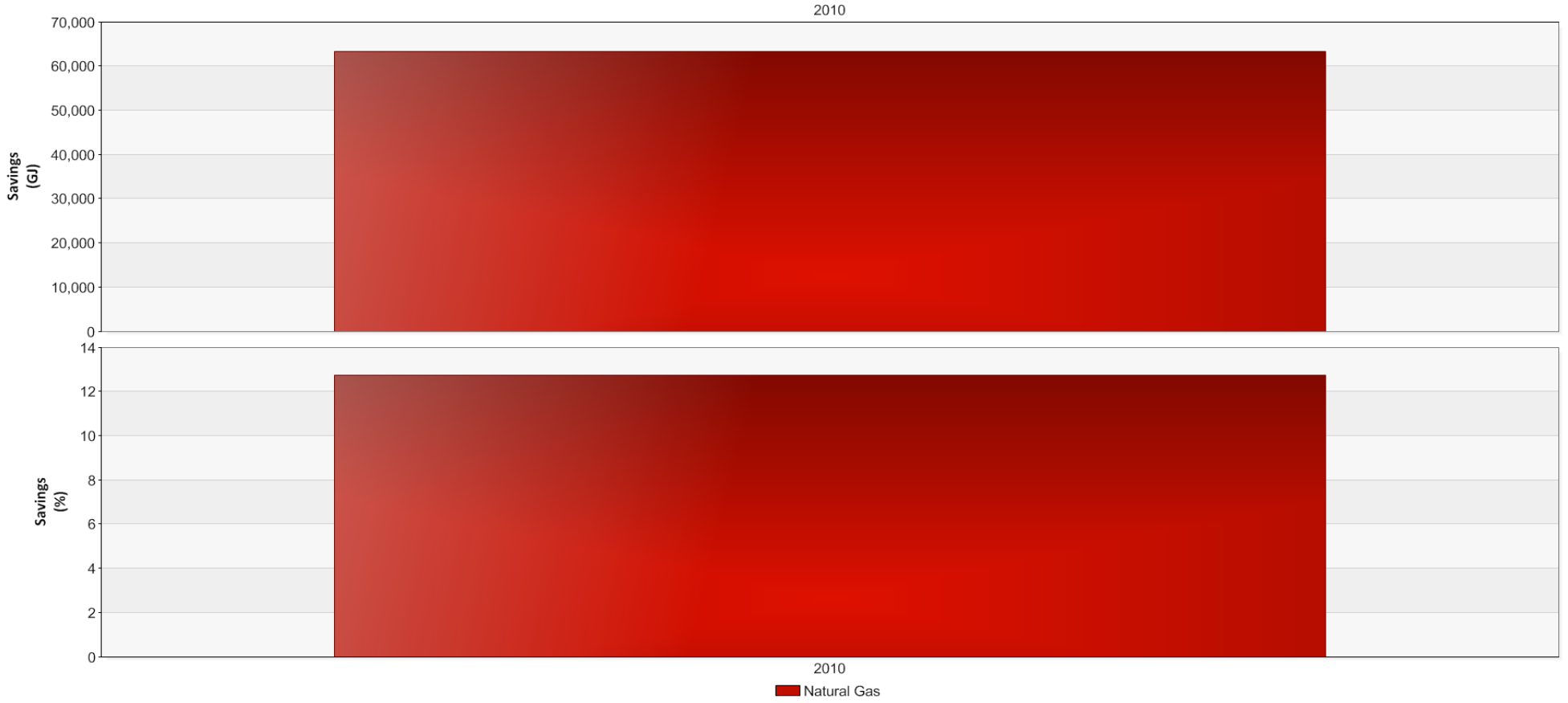


Year[1]	Natural Gas	
	Savings	
	Abs. GJ	%
2010	30,657	18
Total:	**30,657**	**18**

[1] "Year" refers to fiscal year ending in December
Brown indicates missing data and Blue indicates prorated data.

Savings By Grouping By Year (2010)

Project: **FortisBC Efficient Boiler Program Analysis (2011008)**
Classification: **Boiler Efficiency**
Grouping: **Mid Efficiency**



Year[1]	Natural Gas Savings Abs. GJ	Natural Gas Savings %
2010	63,332	13
Total:	**63,332**	**13**

[1] "Year" refers to fiscal year ending in December
Brown indicates missing data and Blue indicates prorated data.

APPENDIX M: Statistical Analysis of Energy Savings by Building Type

Appendix: Statistical Analysis of Energy Savings by Building Type

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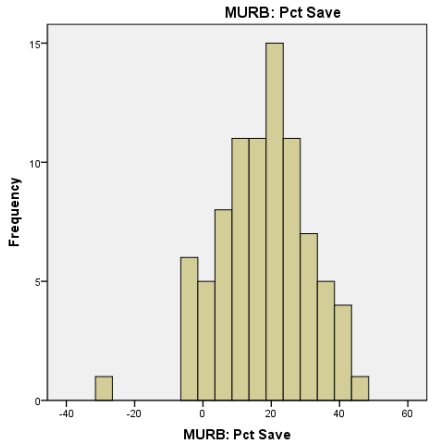
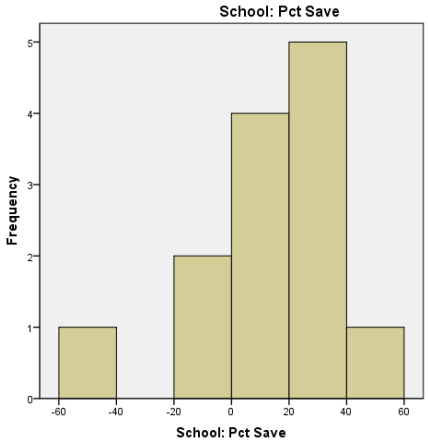
This appendix reports on detailed statistical analysis of the energy saving for each building type.

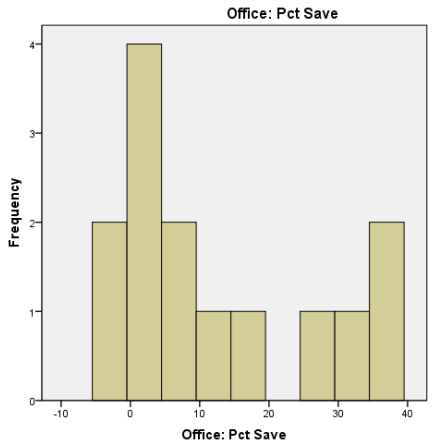
A. Graphical Displays of Distributions

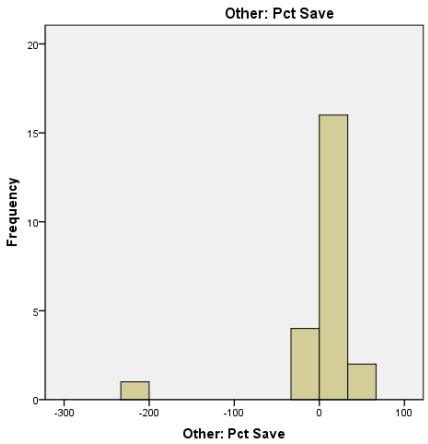
The following histograms provide a visual display of the distributions of energy saving (measured in percent) for each building type.

Since, sample sizes are very different across types -- 85 MURB buildings, 14 Office buildings, 13 Schools, and 23 Other buildings – so the histograms have somewhat different shapes.
The histograms for MURB, Schools, and Other, show gaps and hence statistical outliers. These will be investigated further, below.









B. Numerical Summaries

Typical or average levels of energy saving are provided by summary statistics of location, namely, the mean and the median:

- Mean = the "average" value; i.e. the centre of gravity of the distribution
- Median = the middle value; i.e. the value above which, and below which, 50% of values are located

Note that when the distribution is not symmetric, or when it includes outliers (i.e. extreme values), or both, then the mean and median made be substantially different. In fact, the mean is highly sensitive to the presence of extreme values.

Variability or spread in levels of energy saving are provided by summary statistics of dispersion, namely, the standard deviation and the interquartile range:

- Standard deviation (SD) = the typical or average distance from each value to the mean
- Interquartile Range (IQR) = the distance from the lower quartile (Q1), i.e. the 25th percentile, to the upper quartile (Q3), i.e. the 75th quartile. Hence IQR = Q3 – Q1

Note that since the standard deviation measures distance from the mean, it follows that the standard deviations will be highly sensitive to extreme values (just as the mean is). Specifically, the presence of extreme values will result in an inflated standard deviation.

The following table presents the numerical summaries, for each building type.

	MURB %Saving	*Office %Saving*	*School %Saving*	*Other %Saving*
Sample Size	85	14	13	23
Mean	17.6	12.8	14.3	1.0
Median	19.0	6.0	17.0	10.0
SD	13.0	14.1	26.5	52.9
Minimum	-29	-3	-57	-226
Maximum	44	37	42	61
Lower Quartile (Q1)	9.0	2.0	0.5	0.0
Upper Quartile (Q3)	25.5	28.0	33.5	23.0
IQR	16.5	26.0	33.0	23.0
Lower Inner Fence (Q1 – 1.5 x IQR)	-15.8	-37.0	-49.0	-34.5
Upper Inner Fence (Q3 + 1.5 x IQR)	50.2	67.0	83.0	57.5

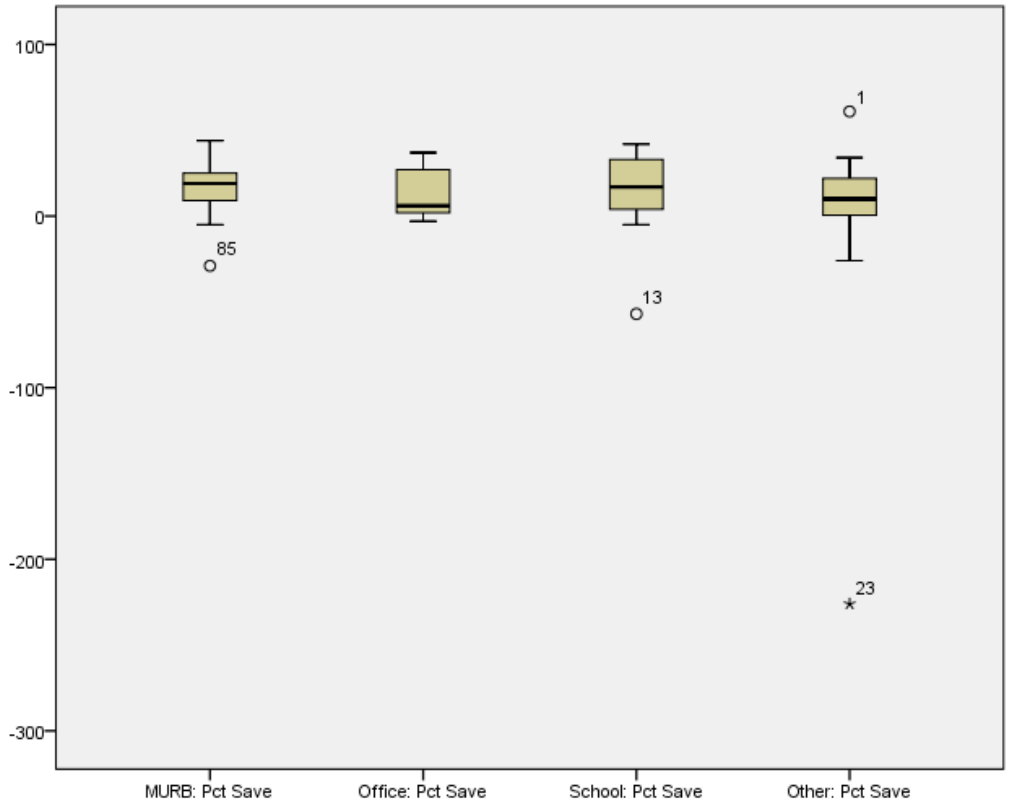
In the three small sample size building types, the difference between the mean and median is quite pronounced, especially for the "Other" type. And the inflated standard deviation is most evident for the School and Other types, where the minimum values are -57 and -226, respectively.

C. Outlier Identification and Boxplots

An objective method (developed by John Tukey) of identifying outliers is provided by the concept of "fences" which use quartiles and the interquartile range. Data values falling below (Q1 – 1.5 x IQR) or above (Q3 + 1.5 x IQR) are considered to be unusual values (i.e. outliers). Using this criterion, the outliers for each building type are:

- MURB: A05-0020 = -29% (Unusually Low)
- Office: None
- School: A05-0184 = -57% (Unusually Low)
- Other: A10-0253 = -226% (Unusually Low); A05-0024 = 61% (Unusually High)

A graphical device called a box plot provides a convenient visual display of a distribution along with identified outliers (using the fences criterion). The box shows the location of the lower quartile (the lower end of the box), median (the line segment in the interior of the box) and the upper quartile (the upper end of the box). The line segments below and above the box terminate at the minimum and maximum, unless there are outliers which are identified by hollow bullets and asterisks (asterisks indicate extreme outliers). In those cases, the line segments terminate at the lowest and highest data points falling within the fences.



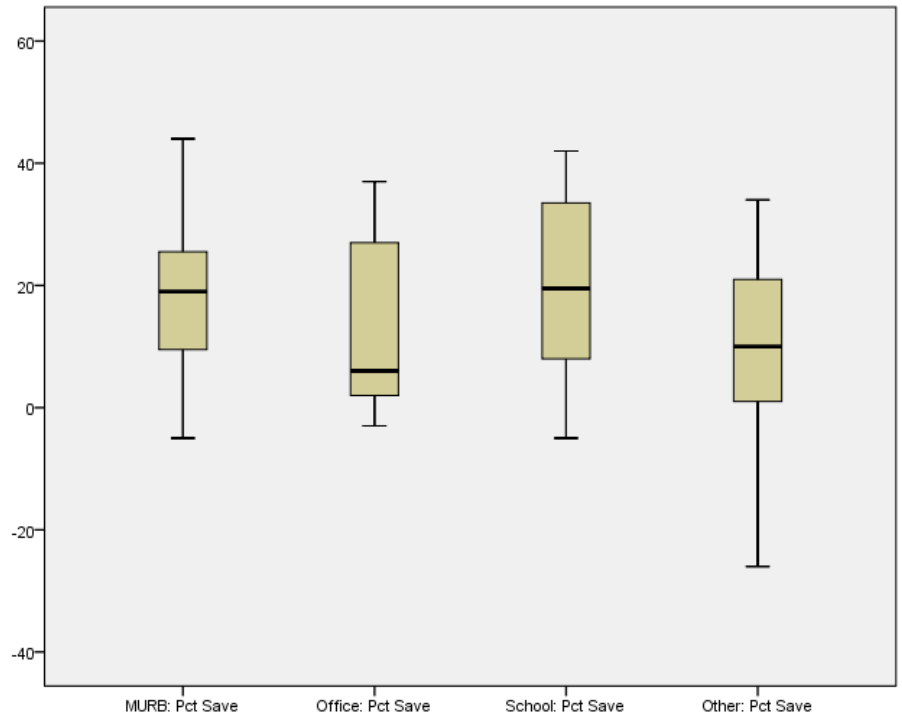
D. Numerical Summaries and Boxplots with Outliers Removed

The following table presents the numerical summaries, for each building type, now with the outliers removed.

	MURB %Saving	*Office %Saving*	*School %Saving*	*Other %Saving*
Sample Size	84	14	12	21
Mean	18.1	12.8	20.3	9.0
Median	19.0	6.0	19.5	10.0
SD	12.0	14.1	16.2	16.1
Minimum	-5	-3	-5	-26
Maximum	44	37	42	34
Lower Quartile	9.2	2.0	6.0	0.5
Upper Quartile	25.8	28.0	33.8	23.0
IQR	16.5	26.0	27.8	22.5

Note that with the outliers removed, the mean and median are much closer to one another and the standard deviations are reduced, and now similar across the four building types.

As in the previous boxplots, the line segments in the interior of the boxes indicate the medians, the lower and upper end of the boxes indicate the quartiles and the line segments stretch to the minimum and the maximum. The wider the box, the greater the dispersion. For all four building types the lower quartile is above zero, indicating that at least 75% of each building type has positive savings.



E. Confidence Intervals

The mean provides a single value estimate of average savings. To incorporate the dispersion in values, 95% confidence intervals (CI) are presented, first based on all data values and then with the four outliers (see Section C) removed. A confidence interval provides a range of plausible or likely values of the true mean, and as such, gives the best summary of the estimated energy saving. Since confidence intervals are based on means and standard deviations, they are also highly sensitive to outliers. Thus the second set of confidence intervals, in bold (with outliers removed), are the sounder estimates.

Building Type	*95% CI (all data)*	*95% CI (outliers removed)*
MURB %Saving	(14.8,20.4)	**(15.5,20.7)**
Office %Saving	(4.7,20.9)	**(4.7,20.9)**
School %Saving	(-1.7,30.3)	**(10.0,30.6)**
Other %Saving	(-21.9,23.9)	**(2.0,15.99)**

The first CI is much narrower than the other three because the sample size for MURBs is much larger. Since the lower limit of each confidence interval in the second set is positive, there is sufficient evidence to conclude that the mean energy saving for each building type is statistically significantly greater than zero. That is, it is fair to conclude that, on average, all four building types experience positive energy saving.

F. Frequency Tables

The distributions of energy savings can also be summarized by categorization, as showed in the table below. A total of 92% of MURBs, 86% of Offices, 77% of Schools and 78% of Others had positive saving. Overall, 87% (118 of 135) of buildings had positive savings; these appear in bold font in the table.

	MURB: % Savings		*Office: % Savings*		*School: % Savings*		*Other: % Savings*	
	Count	*Pct*	*Count*	*Pct*	*Count*	*Pct*	*Count*	*Pct*
Less than 0%	7	8%	2	14%	3	23%	5	23%
0% to 10%	17	**20%**	6	**43%**	1	**8%**	7	**30%**
11% to 20%	25	**29%**	2	**14%**	3	**23%**	4	**17%**
21% to 30%	24	**28%**	1	**7%**	1	**8%**	4	**17%**
Over 30%	12	**14%**	3	**21%**	5	**38%**	3	**13%**
Total	85	100%	14	100%	13	100%	23	100%

G. Conclusion

All four building types show, on average, positive energy savings, with MURBs having an average saving of 18% (CI: 16% to 21%), Offices at 13% (CI: 5% to 21%), Schools at 20% (CI: 10% to 31%) and Others at 9% (2% to 16%). The lower average for Others is likely due to the more heterogeneous make-up of the buildings in this group.

For the total set of buildings across all four types (with the four outliers removed), the mean and median energy saving are both 16%; the standard deviation is 14%. The 95% confidence interval is (14%, 19%).

*** END ***

Attachment 132.1

Effective: OCT 16 1997 L-64-1997

BCUC Secretary: *Original signed by R.J. Pellatt*

[FortisBC Energy Inc.]

T R A N S F E R P R I C I N G P O L I C Y

For Provision of Utility Resources and Services
August 1997

SCOPE

This policy addresses the pricing of resources and services provided by [FortisBC Energy Inc. (FortisBC Energy)] to:

- Non-Regulated Businesses (NRBs); and
- Divisions of the Utility providing unregulated products or services (collectively NRBs).

[FortisBC Energy Inc.] will ensure that it receives adequate compensation for the resources and services provided, thereby protecting ratepayers from subsidising unregulated activities.

The Transfer Pricing Policy will be used in conjunction with the [FortisBC Energy Inc.] Code of Conduct for Provision of Utility Resources and Services dated August, 1997. However, this policy does not replace [FortisBC Energy]/NRB contracts and undertakings in existence prior to approval of this Transfer Pricing Policy.

DEFINITIONS

[FortisBC Energy Inc.]	*May be abbreviated as follows: [FortisBC Energy], the Utility, or the Company, and may also include employees of the Company.*
Commission	*British Columbia Utilities Commission.*
Competitive Market Price (or Market Value)	*The price that would be paid for a resource or service in a fully functioning, competitive (unregulated) market. Alternatively, the prices of goods or services that can serve as substitutes for the resources or services being offered may also be used.*
Development	*The translation of research findings or other knowledge into a plan or design for new or substantially improved materials, devices, products, processes, systems or services prior to the commencement of commercial production or use.*
Guidelines	*Retail Markets Downstream of the Utility Meter Guidelines published by the British Columbia Utilities Commission in April, 1997.*
Non-Regulated Business (NRB)	*An affiliate of the Utility not regulated by the Commission or a division of the Utility offering unregulated products or services. "Related NRB" refers to any NRB which uses any resources of the Utility.*
Research	*Planned investigation undertaken for the purpose and expectation of gaining new scientific or technical knowledge and understanding. Such investigation may or may not be directed towards a specific practical aim or commercial application.*
RMDM	*Acronym for "Retail Markets Downstream of the Utility Meter", which may include any utility or energy related activity at or downstream of the utility meter.*
Transfer Price	*The price established for the provision of Utility resources and services, or the transfer of Utility assets, to an NRB or division of the Utility providing unregulated products and services. Transfer pricing for any Utility resource or service will be determined by applying the [FortisBC Energy] Transfer Pricing Policy approved by the Commission.*

POLICY

Transfer Prices charged to NRBs by the Utility will ensure Utility ratepayers are not adversely affected and will be established using the following pricing rules.

1. Pricing Rules

i. If an applicable [FortisBC Energy] tariff rate exists, the Transfer Price will be set according to the tariff.

ii. Where no tariff rate exists, the Transfer Price will be set at either the full cost (see Section 2 below) or, where feasible and practical, the Competitive Market Price, whichever is greater.

iii. In situations where it can be shown that an alternative Transfer Price will provide greater benefits to the ratepayer, the Utility may apply to the Commission for special pricing consideration.

2. Determining Full Costs

For the purposes of this policy, costs for the resources or services being provided by the Utility to an NRB will be based on the Utility's full cost as described below. The definition of full costs will depend on the type of service or resource being provided.

For the most part the types of resources and services that can be provided to NRBs by the Utility are human resources and associated equipment and facilities. The example in Appendix A summarizes how full costs are determined for the different types of services described below in Section 2.1. The determination of full costs, specifically the cost loadings, is based on the approved Code of Business Conduct with respect to Non-Regulated Businesses of [FortisBC Energy] dated March 31, 1995, with modifications reflecting the types of resources and services involved in RMDM.

If other Utility resources or services are used by an NRB that are not described by this policy, then* [FortisBC Energy] *will make an application to the Commission on a case-by-case basis. An example of this would be the determination of costs for a Utility asset permanently transferred to an NRB.

2.1 Type of Service

There are three types of services: Specific Committed Service, As Required Service and Designated Subsidiary/Affiliate Service. It is important that the type of service is specified before the commencement of any service. This specification is to ensure that the correct cost loadings are applied to any Transfer Price.

i. **Specific Committed Service**

Specific Committed Service is work that is contracted for and billed regardless of whether or not work is actually performed. Typically, this work is ongoing or on a continuing basis (such as accounting) in support of NRB activities. The receiving organization (i.e. the NRB) is, in effect, requiring that the providing organization's department (i.e. [FortisBC Energy]) maintain sufficient staffing levels throughout the year in order to provide this service. The receiving organization must pay for the Specific Committed Service even if the service provided is less than originally contracted.

It is important that the description and scope of the service to be provided be defined before the commencement of such a service, including an indication whether the service is performed at the employee's normal place of work ("on-site") or at the NRB's ("off-site"). A request for Specific Committed Service may be raised or terminated at any time throughout the year. Termination of a Specific Committed Service as a result of an activity change is subject to a sixty (60) day notice period.

At the end of the fiscal year, Specific Committed Services which were not provided (unless the Utility was unable to meet its commitments) will be offset against services used in excess of those committed. Any excess service on a total pooled basis will be billed, but any deficiency will not be refunded. If there is a shortfall in the level of service provided by [FortisBC Energy] a reasonable refund may be made. In the normal course of business, the time estimates for Specific Committed Service are reviewed annually.

To determine the full cost of Specific Committed Service, the following loadings are applied to direct labour costs: concessions loading, benefits loading and general overhead loading. Also facility and/or equipment charges are made if applicable. Appendix A, Column 1 shows an example of determining full cost for Specific Committed Service, both "on-site" and "off-site".

ii. **As Required Service**

As Required Service is work that is not specifically committed to by the receiving organization. The providing organization charges the cost of the actual time incurred to perform the work to the receiving organization. Typically, this is work that is not or cannot be budgeted in advance.

As Required Service must be specified to be either for an extended term (greater or equal to three months) or short term (less than three months) period prior to the commencement of the work. In addition, it must be identified whether the individual providing the services will work at his or her normal place of work ("on-site") or at the NRB's ("off-site").

To determine the full cost of As Required Service, the following loadings are applied to direct labour costs: concessions loading, benefits loading, general overhead loading, supervision loading and an availability charge loading. Also facility and/or equipment charges are made if applicable. Appendix A, Column 2 shows an example of determining full cost for As Required Service.

In certain situations, the Utility will need to retain the immediate right to recall the employee being contracted to the NRB for an As Required Service. In these situations the availability charge will be waived. Prior notification to the Commission is required to waive the availability charge for As Required Service.

iii. **Designated Subsidiary/Affiliate Service**

A Designated Subsidiary/Affiliate is a related company that is designated by [FortisBC Energy] and approved by the Commission to receive reduced loadings in the Transfer Price. The designation relates to the additional benefits that the related company provides to [FortisBC Energy]'s customers, employees or to the economic development of the Province of British Columbia.

A Designated Subsidiary/Affiliate receives services on the same basis as the As Required Service described above. To determine the full cost of Designated Subsidiary/Affiliate Service, the following loadings are applied to direct labour costs: concessions loading, benefits loading and a general overhead loading. Appendix A, Column 3 shows an example of determining full cost for A Designated Subsidiary/Affiliate Service.

The Commission may approve a subsidiary or affiliate with this status but exclude specific activities or projects of that subsidiary (e.g. projects taking place in certain geographic locations). Similarly, certain work to be performed for an NRB relating to a specific service, project or product may be designated by [FortisBC Energy] and approved by the Commission to receive reduced loadings.

3. Costs Relating to the Transfer of Activities from the Utility to NRB

3.1 Transfer Costs

Activities initially undertaken within the regulated Utility may, from time to time, be transferred to an NRB with Commission approval. Costs associated with transferring an activity to an NRB, and the start-up of NRB activities, shall be borne by the NRB. To the extent that these activities involve Utility resources during the transfer, the NRB shall reimburse the Utility using the appropriate pricing rules as defined in Section 1. Costs relating to the termination of an activity within the Utility shall be borne by the Utility.

3.2 Research Costs

As research is regarded as a continuing activity required to maintain the Utility's business and its effectiveness, such expenses shall be borne by the Utility. However, where it is evident that certain research activities are clearly directed towards specific non-regulated pursuits, the Utility will ensure it is compensated by the NRB according to the pricing rules defined in Section 1, net of any quantifiable benefits received by the Utility.

3.3 Development Costs

Development costs for new products and services transferred to an NRB will be tracked and charged to the NRB according to the pricing rules defined in Section 1, net of any quantifiable benefits received by the Utility.

4. Employment Issues

This section provides the guidelines which [FortisBC Energy] will follow in addressing the issues of employee transfers and human resource sharing between the Utility and NRBs. These guidelines implicitly recognize the fact that Utility ratepayers can realize significant benefits when employees have the opportunity to work for NRBs, by providing Utility employees with opportunities to expand their breadth of experience, enhance their skills and attributes, and continue their career development by taking advantage of the diversity of the [FortisBC Holdings Inc.] organization.

Accordingly, it is not the intent of these guidelines to restrict employee transfers or human resource sharing, but rather to ensure that the benefits gained by employees can be brought back to the Utility and realized by ratepayers, and ratepayers are not negatively impacted. In all cases of Utility employee transfers or human resource sharing, the terms of transfers or sharing must be clearly understood by the Utility, NRB and the employee prior to commencement, and properly documented.

These guidelines distinguish between three distinct types of human resource issues: Rotational Transfers, Non-Rotational Transfers and Human Resource Sharing.

4.1 Rotational Transfers

Rotational Transfers represent a career training and development vehicle, in which employees are transferred between the Utility and an NRB on a full-time basis, for a period of time not to exceed 3 years. In these instances, the salary and associated benefits of the employee in question will be assumed by the NRB for the duration of the rotational transfer period. As this initiative is specifically intended as a career training and development mechanism with expected benefits back to the Utility, the individual will typically be assured of continued employment by the Utility at the conclusion of the transfer period.

4.2 Non-Rotational Transfers

Non-Rotational Transfers represent transfers of personnel between the Utility and an NRB, which are not subject to a maximum time duration. As neither the Utility nor its NRBs are required to provide preference to the other's employees in filling permanent positions, non-rotational transfers typically represent instances in which an employee has successfully responded to a posting or advertisement for a position.

In the interest of retaining qualified individuals within the [FortisBC Holdings Inc.] group of companies, and recognizing that many NRB companies already contract with the Utility for human resource services (including common payroll systems and benefits packages), a non-rotational transfer will typically be considered an employee transfer rather than a termination and re-employment. In this manner, employees will not be subjected to a termination of continued employment status and the Utility and NRB will not be required to assume the administrative burden associated with a termination and new hire process.

As a non-rotational transfer is not specifically classified as a career development and training initiative, there will typically be no assurance of employment security from the Utility, unless such assurance is considered to be in the best interest of the Utility, in which case a specific agreement should be negotiated and documented. Any recruitment or administrative costs associated with a non-rotational transfer will be borne by the entity to which the employee is transferring.

4.3 Human Resource Sharing

These guidelines specifically recognize that human resource sharing initiatives can provide a variety of benefits to the Utility and NRBs. For example, circumstances occasionally occur in which the Utility and one or more NRBs each require an individual with similar skills and attributes, but the time commitment required by each entity is insufficient to justify the hiring of a full-time person. In the absence of a human resource sharing initiative, each individual entity would likely be forced to incur the significant cost associated with securing the services of an external consultant, whereas significant cost savings could be realized by hiring an individual on a full-time basis and entering into a cost sharing arrangement. This cost sharing method may also pay future dividends to the Utility by developing in-house expertise and experience rather than developing this expertise and experience in consultants. Additionally, Utility departments or NRBs that are subject to large fluctuations in human resource requirements may have individuals that are not fully utilized at all times, but for whom termination and subsequent re-hire is not a viable option (e.g. due to uncertainty of future availability, termination costs, retraining costs, etc.). In these instances, human resource sharing provides a mechanism through which the receiving entity can fulfil short term resource demands with a qualified individual, while the employing entity can eliminate inefficient salary and benefit costs.

Human resource sharing initiatives also represent an ideal mechanism through which to realize some of the career development and training benefits associated with a rotational transfer, without having to commit to the absolute loss of an individual's services for a certain period of time.

These guidelines are predicated upon the assumption that although all of the applicable entities benefit from human resource sharing initiatives, the employing entity is assuming the greatest degree of risk due to the need to ensure continued employment or incur termination costs. Therefore, a key principle of the human resource sharing initiative proposed by [FortisBC Energy] is that the employing entity will always retain first rights on the services of the individual in question, assuming reasonable notice is provided to the entity for which the individual is providing services at a given point in time.

Employment costs, including salary and benefits, will be allocated to the various entities on a pro rata basis, in accordance with the number of hours dedicated to each entity, and in a manner consistent with the [FortisBC Energy] Code of Conduct for the Provision of Utility Resources and Services.

5. Cost Collection Procedures

5.1 Work Orders

The Utility will be responsible for setting up the appropriate work order, documenting the work order number and ensuring that the appropriate individuals charge time to it. The providing organization's accounting group (typically [FortisBC Energy]'s Financial Accounting Group) will be responsible for maintaining the work order and collecting the appropriate charges.

5.2 Time Sheets

The individuals performing the service must report all time spent on that service by coding their time to the appropriate work order numbers. This is to occur whether the type of service is Specific Committed, As Required or Designated Subsidiary/Affiliate Service. Time sheets are to be sent monthly to the immediate supervisor or [FortisBC Energy]'s Payroll Department. The NRB shall also review the validity of these time sheets.

5.3 Invoicing

The NRB will be invoiced for the contracted amount in respect of Specific Committed Service and for the appropriate time based on the actual payroll level in respect of As Required Service or Designated/Affiliate Service (subject to confidentiality of salary information) with the applicable loadings applied.

The methodology for determining a salary level is on the basis of the average pay grade in the case of Management and Exempt employees or the exact wage grade in the case of bargaining unit employees.

6. Accounting for Services

6.1 Detailed Operating & Maintenance Expense Forecast

In the event that [FortisBC Energy] makes an application to the Commission for revenues related to operations and maintenance expenses (O&M), time estimates for Specific Committed Services will need to be estimated or forecast for each of the years covered by the application. These estimates or forecasts should be consistent with the relevant costs and assumptions contained in that application.

In the event that an activity change causes a reduction in the actual level of the Specific Committed Service compared to the annual budget (or revenue requirement application), [FortisBC Energy] will use these amounts to offset additional contributions from the NRBs. Net contributions received by the Utility through Transfer Pricing for As Required Service and Designated Subsidiary/Affiliate will be held in a deferral account for future return to [FortisBC Energy]'s customers.

6.2 Operating & Maintenance Expense Forecast Determined by Formula

In the event [FortisBC Energy] makes a multi-year application to the Commission for revenues related to O&M, and the allowed O&M level is determined by means of a formula, for the duration of the test period and in accordance with the terms of the Commission Order #G-85-97, [FortisBC Energy] will be entitled to capture the financial savings, such as cost reductions resulting from intercompany charges for RMDM or other NRB activities.

7. Review of Transfer Pricing Policy

The Transfer Pricing Policy will be reviewed on an annual basis as part of the Code of Conduct compliance review. However, [FortisBC Energy] may make application to the Commission for approval of changes to the policy including the pricing rules and the formula for determining full costs as and when required.

Appendix "A" **Example of Determining Full Cost for the Three Types of Service**
(for an employee at a daily base pay of $300, concession loading of 25.48% and benefits loading of 15.75%)

Column	1		2			3
	Specific Committed Service		As Required Service			Designated Subsidiary I Affiliate
	Off-Site Full-time	On-Site Full-time	On-Site Short Term	Off-Site Short Term	Off Site Extended	
BASE PAY(Daily)	$300.00	$300.00	$300.00	$300.00	$300.00	$300.00
PLUS:						
Concessions @ 25.48%	76.44	76.44	76.44	76.44	76.44	76.44
Benefits @ 15.75%	47.25	47.25	47.25	47.25	47.25	47.25
						423.69
GENERAL OVERHEAD	5%	10%	10%	10%	5%	5%
SUPERVISION	N/A	Direct Charge	20%	N/A	N/A	Direct Charge
AVAILABILITY CHARGE	N/A	N/A	20%	20%	20%	N/A
FACILITIES CHARGE (If Applicable)	N/A	$100.00	$100.00	$100.00	N/A	N/A
EQUIPMENT CHARGE (If Applicable)	Direct Charge	Direct Charge	Direct Charge	Direct Charge	Direct Charge	N/A
TOTAL COSTS PER DAY	$444.87	$566.06	$735.54	$650.80	$529.61	$444.87
Cost Ratios:						
to Base Pay	1.48	1.89	2.45	2.17	1.77	1.48
to Loaded Labour	1.05	1.34	1.74	1.54	1.25	1.05

* If the agreement between the NRB and Utility includes a right to immediate recall, the availability charge is waived. Prior notification to the Commission is required to waive the availability charge for As Required Service.