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November 26, 2013

**Via Email**  
**Original via Mail**

Commercial Energy Consumers Association of British Columbia  
c/o Owen Bird Law Corporation  
P.O. Box 49130, Three Bentall Centre  
2900 – 595 Burrard Street  
Vancouver, BC V7X 1J5

Attention: Mr. Christopher P. Weafer

Dear Mr. Weafer:

**Re: FortisBC Energy Inc. (FEI)**

**Application for Approval of a Multi-Year Performance Based Ratemaking Plan  
for 2014 through 2018 (the Application)**

**Response to the Commercial Energy Consumers Association of British  
Columbia (CEC) Information Request (IR) No. 2**

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On June 10, 2013, FEI filed the Application as referenced above. FEI respectfully submits the attached response to CEC IR No. 2.

FEI notes that the responses to CEC IRs No. 2, questions 9.8, 20 series, 21 series, 22 series, 24.1 through to 24.8, 24.11, 24.12, 25 series, 26 series, 38 series, 48 series, 49.8, 49.9, 51 series, 58.2, 99 series, 100.1, 104 series, 105 series and 106 series relate to the PBR Methodology, and will be submitted with the PBR Methodology IR responses.

If further information is required, please contact the undersigned.

Sincerely,

**FORTISBC ENERGY INC.**

***Original signed:***

Diane Roy

Attachment

cc: Commission Secretary  
Registered Parties (e-mail only)

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## 1 PART 1 - O&M

### 2 1 Reference: CEC 1.1.1

10 The question asks about the use of "efficiency gain plans" and post implementation  
11 documentation of these plans. FEI uses other effective mechanisms, described in the  
12 Application, to encourage a productivity improvement culture that focusses on delivering cost-  
13 effective service. FEI provides a recap of its position on the subject of Productivity here to set  
14 the context to address a number of related questions contained in the CEC's Information  
15 Request number one.

4 1.1 In order to determine which departments have suitable metrics to substantiate  
5 productivity and efficiency evaluation please confirm that the following lists the  
6 metrics provided in the application and if not complete please complete the list:

- 8 • Call Volumes, Page 147 and 148
- 9 • Self-Serve Transactions, Page 149
- 10 • Number of Customer Bills, Page 150
- 11 • Meter Readings, Page 150
- 12 • Service Level Call Answer Time, Page 152
- 13 • Wait Times for Installation, Page 156
- 14 • Energy Calculator Visits, Page 156
- 15 • High Carbon Customer Attachments, Page 157
- 16 • New Home Market Capture Rates, Page 157
- 17 • Renewable Natural Gas Customers, Page 157
- 18 • NGT demand, Page 158
- 19 • Stress and Corrosion Cracks, Page 176
- 20 • ILI Identified Dents, Page 176
- 21 • Historic and Current Engineering Data Records, Page 176
- 22 • BC One Call Volumes, Page 176
- 23 • Greenhouse Gas Emissions, Page 188
- 24 • Regulatory Applications, Page 191
- 25 • Information Requests Answered, Page 191
- 26 • Number of Employees, Page 196

### 27 **Response:**

29 The metrics provided in the question represent a number of statistics tracked and reported by  
30 the Company with many of the metrics not suitable as productivity measures. Please refer to the  
31 response to BCUC IR 2.338.20 for further discussion of FEI's view on productivity metrics.

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1.2 Please provide any other O&M metrics that FEI considers useful in assessing and managing the productivity and efficiency of departmental O&M.

**Response:**

Please refer to the response to BCUC IR 2.338.20 for further discussion of FEI's view on productivity metrics.

Exhibit B-1, Page 123

From 2010 to 2013 Projection, the period covered by this table, O&M is shown to have increased at an annual rate of 2.4 percent. For the most part, increases are gradual and ongoing, except for 2012 where several initiatives were postponed pending an RRA decision that arrived in April of that year. Actual 2012 O&M was approximately \$14.7 million lower than the approved amount, of which \$7.4 million was captured in the Customer Service Variance deferral account and will be returned to customers. The projection for 2013 incorporates sustainable savings realized in 2012 (as discussed below) and is \$14.7 million lower than the approved amount. Of this \$14.7 million, \$10.3 million is being captured in the Customer Service Variance deferral account and will be returned to customers. This \$14.7 million savings has been flowed through to the 2013 O&M Base that sets customer rates for the PBR Period, and results in a sustainable benefit to customers.

1.3 Please confirm that the sustainable savings identified and realized in 2012, \$14.7 million, will not be all of the sustainable savings achieved because FEI does not track productivity improvement and does not know what savings should be embedded into future cost estimates.

**Response:**

Not confirmed.

The savings identified and realized in 2012 amounted to \$14.724 million, of which savings in the amount of \$10.424 million were identified as 'sustainable' and will flow forward into the 2013 Projection (the remaining savings of \$4.299 million were classified as temporary). These sustainable savings, combined with additional permanent pressures and opportunities identified

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1 in 2013, together form the \$14.67 million of sustainable savings that will flow into the 2013 Base  
2 and serve to benefit customers for the duration of the PBR period.

3 Providing a basis for the 2013 Projection, the 2013 O&M Budget was built in the fall of 2012,  
4 utilizing FEI's approach of constructing detailed budgets that relied upon trending and analysis  
5 as well as zero-basing. As part of the process, incremental O&M funding requests were  
6 prioritized, and approved taking into consideration safety and reliability requirements and  
7 ensuring that funding was put to best use while minimizing the impact on customer rates. In the  
8 spring of 2013, with the benefit of hindsight and having full knowledge of 2012 actual O&M  
9 results, the 2013 O&M Budget was adjusted to reflect the most recent assessment of  
10 developing pressures and opportunities. Part of this assessment included giving full recognition  
11 to the extent of 2012 sustainable savings as well as forecasting the extent of 2013 sustainable  
12 savings. This assessment gave rise to the 2013 O&M Projection which then carried the  
13 embedded sustainable savings into the 2013 Base where they will serve to benefit customers  
14 for the duration of the PBR period.

15 By giving full recognition to the extent of 2012 sustainable savings, and by providing a refreshed  
16 2013 O&M Projection based upon the latest assessment of pressures and opportunities, FEI is  
17 confident that the sustainable savings identified for 2013 will in fact be representative of those  
18 that are actually achieved.

19 Furthermore, based on the process described above, FEI does recognize and track productivity,  
20 albeit on a more holistic level than that inferred in the IR. Tracking productivity improvement on  
21 a total company basis does not impact the ability of individual departments to recognize and  
22 embed savings which are sustainable. This was demonstrated in FEI's 2004-2009 PBR where  
23 significant savings were achieved by tracking productivity on a holistic basis.

24 Please refer to the response to BCUC IR 2.338.20 for discussion of FEI's view on productivity  
25 metrics.  
26

27  
28  
29 1.4 Please identify how the sustainable savings are estimated by departments and  
30 how FEI determines the amount to include in the \$14.7 million total.  
31

32 **Response:**

33 On a department basis, a process similar to that described in the response to CEC IR 2.1.3 is  
34 followed. Departments start with their 2013 detailed O&M Budget and on the basis of giving full  
35 reflection to the 2012 realized sustainable savings as well as an updated assessment of 2013  
36 pressures and opportunities, produce a 2013 O&M Projection for their department.

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1 On a department basis, the difference between the 2013 Allowed O&M and the 2013 Projection  
2 O&M is identified as the sustainable savings for the department. Some of the reasons for these  
3 savings are outlined on page 123 of Exhibit B-1. However, as outlined in the response to CEC  
4 IR 1.1.1, departments are not expected to formally document and quantify all productivity  
5 initiatives and related savings except in certain situations, such as those where a business case  
6 is required (i.e. IT capital investment).

7 Please also refer to the response to BCUC IR 2.338.20 for further discussion of FEI's position  
8 on use of productivity metrics.

9

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**Reference: CEC 1.1**

As outlined in that response, business areas identify and reflect achievable productivity opportunities in their budget requirements when preparing the detailed budgets for the year. Sustainable savings are reflected in future budget requirements. Additionally, productivity improvement objectives are embedded into personal performance plans of managers throughout the organization to ensure accountability for a productivity improvement culture.

2.1 Please provide any documentation of the efficiency of the departments, where metrics are used to establish service levels, activities or outcomes versus the costs of delivering them in their budgets.

**Response:**

The efficiency of departments is measured by their ability to generate sustainable savings with respect to their Allowed O&M. In this respect, the efficiency of departments for 2012 and 2013 is best documented in Table C3-1, on page 123 of the Application.

Please refer to the response to BCUC IR 2.338.20.

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**Reference: CEC 1.2.1**

9 Yes, FEI has been able, in a limited number of circumstances, to obtain government support for  
10 its initiatives in the form of special directions and/or regulations which provide benefits to its  
11 customers. These circumstances have been limited to instances where FEI has received a  
12 decision that it believed was contrary to the interests of its customers and inconsistent with  
13 government policy, and where government has agreed that the public interest would be served  
14 with such support. The *Greenhouse Gas Reduction (Clean Energy) Regulation*, passed in May  
15 2012, which enables public utilities to make certain investments to promote natural gas for  
16 transportation is a recent example.

3.1 Does FEI calculate the benefits of government supported initiatives?

**Response:**

7 Yes. In the normal course of such initiatives there is a requirement to estimate benefits and  
8 costs beforehand and report on actual outcomes as well. The benefits and costs of government  
9 supported initiatives may have varying implications for different groups of stakeholders.

3.2 Does FEI expect to share in the benefits of government supported initiatives?

**Response:**

16 In general the government supported initiatives are outside the PBR formulas and are not  
17 subject to the earnings sharing mechanism. The benefits of increased volumes on the system  
18 are forecast each year and go to ratepayers. FEI and its customers benefit over the long-term  
19 to the extent that government supported initiatives help maintain a healthy utility business.

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1     4     **Reference: CEC 1.2.2**

2     The FEI forecast of O&M and capital costs does not represent the appropriate benchmark for  
3     the company to be held to when determining whether or not new efficiencies have been  
4     achieved. The 2014 through 2018 O&M and capital forecasts included in the Application are for  
5     reference purposes only. They represent a high level forecast of future trends, challenges and  
6     capital priorities over the upcoming five years.

2

3     4.1     FEI asserts that its forecast is not the appropriate benchmark but has included a  
4     PBR formula forecast against the budget forecast (Page 59, Figure B6-2) and  
5     concluded that the PBR formula is lower than the budget forecast and therefore  
6     is an incentive for them to find productivity gains. Please explain why FEI has  
7     used this benchmark in its application but in answer to the question above  
8     disavows what it has in the application.

9

10    **Response:**

11    FEI does not understand what leads the CEC to conclude that there is a conflict between the  
12    two statements. FEI has stated that the O&M and capital forecasts were prepared at a high  
13    level to allow the Commission and interested parties to understand the future trends, challenges  
14    and priorities over the upcoming five years. There is no conflict between that statement and the  
15    conclusion that a formula O&M line that is lower than this forecast indicates that FEI will be  
16    challenged to find efficiencies to meet the formula-based line over the PBR Period. However, it  
17    is the formula-based O&M that will be used to set rates and establish the benchmark for FEI to  
18    aim to do better than. In other words, efficiency achievements will be measured against the  
19    formula-based O&M amount rather than the five year forecast provided.

20



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**Reference: CEC 1.9.3**

Specifically related to the outsourcing of meter reading services FEI does not believe that is could have achieved better results under a PBR than without a PBR. FEI's focus in providing services to customers is to achieve the highest quality of service at the lowest possible cost regardless of the regulatory mechanism.

5.1 Please provide specific reasons why the Meter reading contract would not be better under one form of regulation than another.

**Response:**

Regardless of the form of regulation, the agreement provides high quality of service at low cost and provides cost certainty over the duration of the agreement.

5.2 Would it be the case that third party contracts are generally less susceptible to productivity improvement once set than internal work and if not please explain why?

**Response:**

Generally, productivity improvements related to third-party contracts can be more challenging. The benefits associated with productivity improvements in third-party agreements are generally shared between the contracting parties. In the case of the meter reading contract, productivity measures can be influenced by the Company through control over activity volumes, which are applied to transactional pricing.

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1     **6     Reference: CEC 1.9.4**

18     For the purpose of defining a significant contract, FEI chose the threshold of contracts issued for  
19     one (1) million dollars annually. Most significant contracts have an initial term with an optional  
20     contract renewal period. With respect to annual expenditure magnitudes FEI relies on historical  
21     values. Contractual values are estimates and may come in under one (1) million dollars in any  
22     given year based on operational demand. Please see the table below.

3             6.1     Please identify the operating and maintenance contracts in the list.

4  
5     **Response:**

6     Most of the contracts on the list comprise both capital and operating and maintenance work,  
7     depending on the specific task being performed. The contracts that are solely O&M related are  
8     meter reading, advertising, and vegetation management.

9

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11             6.2     Please indicate whether any of the operating contracts has productivity  
12             improvement bonuses included in the terms of the contract and if so please  
13             provide the language and if not please explain why it is not appropriate to have  
14             such a clause in the contracts.

15

16     **Response:**

17     FEI does not commonly use productivity improvement bonuses in contracts. FEI receives  
18     competitive pricing through its procurement processes and volume discounts and achieves  
19     savings in this manner. The majority of the contracts are on an “as and when required basis” for  
20     numerous smaller pieces of work. FEI requires its contractors to meet the completion date  
21     given for each piece of work under the contracts; however, FEI does not benefit from early  
22     completion and therefore does not provide a productivity bonus.

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**Reference: CEC 1.10.1 and CEC 1.10.2**

The following are further details of the changes and quantification of the related savings where possible. As discussed in the different sections, not all of the savings related to the initiatives are quantifiable as the resources freed up are reassigned to support other activities. Additionally, some of the benefits of these initiatives are more focused on improving service levels and increasing capacity than reducing costs from the bottom-line.

6.3 Why would the reassignment of resources be a reason for non-quantification of benefits?

**Response:**

To clarify, the reassignment of resources results in no “net quantifiable dollar savings” as the resources remain but are used in other activities in the Company. The decision to redeploy resources occurs regularly when business requires it and is indicative of the productivity-focused culture in the Company.

Also, as indicated in the response to CEC IR 1.1.1, FEI departments are not expected to formally document and quantify all productivity initiatives and related benefits. Further, as discussed in the response to BCUC IR 2.338.20, the focus should not necessarily be on how the efficiencies are achieved (i.e. monitored using metrics for different areas, keeping track in detail of benefits) and instead should be on ensuring that they are achieved with the respective savings benefiting customers and the Company.

6.4 Please confirm that increased service levels or reduced costs regardless of reassignment can be defined and quantified in many cases.

**Response:**

Please refer to the response to CEC IR 2.6.3.

6.5 Total quantified benefits \$40,000, \$10,000, \$200,000 are shown. Please indicate whether these were achieved in 2012 or in 2013.

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**Response:**

Total quantified benefits shown of \$40 thousand, \$10 thousand, and \$200 thousand are annualized savings associated with initiatives that were implemented during 2012. Thus a partial impact of these annualized savings would have been reflected in the 2012 actuals, while the full impact of the annualized savings would have been recognized in the 2013 Projection, and thus embedded into the 2013 Base to the benefit of customers for the full duration of the PBR period.

6.6 Where the benefits are explicitly referenced as being embedded in 2013 please confirm they were achieved in 2012 and please provide the estimated costs of project to achieve the savings.

**Response:**

Sustainable savings that have been embedded into the 2013 Base O&M were achieved in years 2012 and 2013. For a breakdown of these savings by year, by department, please refer to the response to BCUC IR 1.83.1.

The department savings shown in the response to BCUC IR 1.83.1 are net savings to the extent that any costs incurred to achieve these savings would be netted against the actual savings. Typically, FEI does not attempt to specifically track the O&M costs that give rise to productivity savings.

Please also refer to the response to BCUC IR 2.338.20.

6.7 Please provide a list of savings anticipated for 2013 for all departments and compare in side by side columns the 2012 list used to adjust the base costs.

**Response:**

Please refer to the response to BCUC IR 1.83.1.

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6.8 Please indicate for each of the productivity improvements discussed, which SQL would relate to the service level involved.

**Response:**

For the productivity improvement initiatives referenced, there is no measurable impact on the SQLs. However, as indicated in Exhibit B-1, the streamlining and enhancement of processes contributed to increased productivity and provided increased service to customers. An example is the process improvements impacting customers requesting installation of a new gas service. The on-line self-help home energy calculator has been a popular attraction for customers with over 10,000 uses of the calculator during the last year. Regarding the meter exchange appointment setting process, we were able to increase the efficiency in the way we contacted customers for setting appointments, resulting in savings. The remaining two initiatives contributed to increased efficiency in how we operate internally, also resulting in savings.

6.9 How does FEI determine how much to invest in customer service improvements? Are the cost tradeoffs identified, quantified and made part of the improvement decision making and if so please provide any relevant evidence for these items.

**Response:**

Not all improvements in customer service require investments or additional costs. Those that do not are implemented based on customer needs. For those that do require investments, some are implemented within existing budget levels provided that the benefits outweigh the costs. Larger investments require a business case and are prioritized against all corporate initiatives for implementation.

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**Reference: CEC 1.11.1**

For the BC One Call processes, the savings are achieved through the reduction in ticket processing time required. The technology stream enhanced and integrated FEI technologies, and therefore enabled automation for some of the routine and time consuming processes/steps required in assembling the underground utility information packages required by the information requestors through BC One Call.

7.1 Is BC One Call relevant to the O&M processes and if so please explain how O&M was impacted by the improvements.

**Response:**

The BC One Call process improvement directly impacts O&M by reducing the overall time to process BC One Call requests, and has resulted in a \$600 thousand reduction in the 2013 Base O&M. Please refer to the response to BCUC IR 1.54.2.

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**Reference: CEC 1.11.2 and CEC 1.11.3**

As indicated on page 175 of Exhibit B-1 Section C3.9.3 Engineering Services and Project Management Review, the total savings is estimated at \$600 thousand per year.

8.1 What were the costs of the project to make this improvement?

**Response:**

The BC One Call automation project cost \$820 thousand in capital and \$40 thousand in O&M.

8.2 When was the project complete and the benefits realized?

**Response:**

The BC One Call ticket processing automation was fully functional on April 30, 2012 with full benefit realization in 2013.

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1      9      **Reference: CEC 1.11.4**

1

**Table C4-1: 2013 Project Portfolio Benefits**

Project Name	Value \$ (000s)	Integration	Customer Service	Growth	Safety	People	Financial Benefits (000s)	Risk
GeoSpatial Program - eForms	\$2,400				✓	✓	\$2,800	✓
Geospatial Program - GIS Toolset Refresh	\$2,800	✓	✓	✓	✓	✓	\$1,000	✓
Customer Portal and Bill Redesign	\$1,600	✓	✓		✓	✓	\$2,500	✓
Knowledge Management Program - SharePoint Upgrade and Migration	\$1,307	✓					\$1,700	✓
Knowledge Management Program - Integrated Intranet	\$1,277	✓	✓		✓	✓		✓
Financial Consolidation & Enterprise Reporting Solution	\$1,148			✓	✓	✓	\$1,000	✓
Incident Management System	\$1,000	✓			✓	✓	\$1,075	✓
Knowledge Management Program - New Business Solutions	\$800	✓	✓		✓	✓	TBC	✓
Knowledge Management Program - Small & Medium New Builds	\$600	✓	✓		✓	✓		✓
2013 Customer Service Enhancement	\$1,971	✓	✓	✓			\$750	✓
ClickSchedule Business Enhancement	\$512		✓		✓		\$585	✓
2013 SAP BI-BW Enhancement	\$231				✓	✓		✓
2013 GIS (GE Smallworld) and Mobile GIS (Tensing) Enhancement	\$225				✓			
2013 Operations Enhancement	\$220		✓					✓
Contractor Access to Planning Systems	\$143			✓	✓		\$100	✓
2013 Supply Chain Enhancement	\$133	✓	✓					✓
2013 Finance Enhancement	\$120			✓		✓		✓
2013 BC One Call Enhancements (includes DCRS)	\$110				✓			
2013 Meter Management Enhancement	\$108	✓	✓	✓	✓			✓
Web optimization templates and mobile	\$99	✓	✓	✓	✓	✓		
2013 FileNet Enhancement	\$90				✓			
2013 Forecasting Enhancement	\$85	✓	✓					✓
2013 WINS Enhancement	\$55			✓				
2013 Entegate Enhancement	\$25				✓	✓		✓
2013 McLaren Enterprise Engineer Enhancement	\$22	✓	✓		✓			
	<b>\$17,081</b>						<b>\$11,510</b>	

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**Response:**

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This is a list of all business technology projects, including those over \$500 thousand, from the 2013 **Transformation and Enhancements sub-portfolios** within the IT Capital Budget. As these sub-portfolios are discretionary, these projects are subjected to the new Benefits Management practice. This process is described in detail in Exhibit B-1-1, Appendix C4.



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9.2 A number of these projects are labeled 2013, are they projects FEI has undertaken in 2013 and for which the benefits will be achieved in 2013?

**Response:**

Typically benefits will begin to be realized after implementation of the respective project. All of these quantitative and qualitative benefits are expected to be achieved in subsequent fiscal years as detailed in the table provided in response to BCUC IR 1.151.1.

9.3 For the projects not labeled 2013 please provide an expected in service date for each of the projects.

**Response:**

Please see the table below for the planned in service year for the projects not labelled 2013:

Project Name	Planned In Service Date
ClickSchedule Business Enhancement	2013
Contractor Access to Planning Systems	2013
Customer Portal and Bill Redesign	2014
Financial Consolidation & Enterprise Reporting Solution	2014
Geospatial Program - eForms	2014
Geospatial Program - GIS Toolset Refresh	2014
Incident Management System	2014
Knowledge Management Program - Integrated Intranet	2014
Knowledge Management Program - New Business Solutions	2014
Knowledge Management Program - SharePoint Upgrade and Migration	2014
Knowledge Management Program - Small & Medium New Builds	2013
Web optimization templates and mobile	2013

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9.4 Please explain why the bulk of projects with financial benefits are not labeled 2013.

**Response:**

The label of the project does not imply when the benefits are expected to be realized rather it details the year that the project occurs. The projects that are not labelled 2013 also do not show financial benefits because they are typically annual business technology enhancements projects that are consistent with the Enhancements sub-portfolio described in Exhibit B-1-1, Section 4.6.4.3 page 247.

9.5 Please explain whether or not the column labeled Value represents an estimated cost for the project.

**Response:**

The column labeled Value is the estimated total cost of implementation for the project inclusive of Capital and O&M related to Capital projects (OPEX).

9.6 Please indicate for each of the financial benefits, which ones involve cost reductions and which ones involve other financial benefits.

**Response:**

Please refer to the response to BCUC IR 1.151.1.

9.7 Please identify the quantity total for operational cost reductions expected.

**Response:**

The table above was revised to include quantitative benefit statements including cost reductions and expected timelines which can be found in FEI's response to BCUC IR 1.151.1.

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9.8 Please confirm that FEI's proposed process is to have an incentive to share only in cost reductions.

**Response:**

This IR has been identified as relating to the PBR Methodology and will be submitted with the PBR Methodology IR responses.

9.9 Please explain why if the IT department can provide a list of projects identifying improvements that FEI as a whole cannot do the same.

**Response:**

The improvements that FEI as a whole has undertaken are described in the Application, but are not amendable to a list of projects similar to that for the discrete IT capital portfolio. Each department within FEI has its own scope of responsibility and within that responsibility seeks out opportunities for efficiencies and improvements. The Operations department, for example, is responsible for installing, operating and maintaining the gas distribution and transmission systems and plant assets in order to provide safe reliable and cost effective service to customers. Within its responsibility, Operations (amongst other things) addresses challenges, such as new codes and regulations, and seeks out improvements. As stated on page 138, for example, Operations regularly reviews maintenance programs and schedules for assets with a view to managing risk and reliability, optimizing resources and budgets. This is a routine practice for Operations, but isn't a "project" comparable to an IT project on the list in Table C4-1.

The types of improvements across the whole of FEI are many and diverse. Many of the IT projects for instance are in fact designed to implement opportunities for other departments. The Customer Care Project and Long Term Sustainment Plan are examples of significant improvements. Other examples include FEI's focus on addressing demographic challenges and FEI's efforts towards integration with FortisBC Inc. These are discussed in the Application, but are not comparable to the IT capital budget.

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9 In support of its benefits management practices, FEI implemented three products: the benefits  
10 statement, benefits contract and benefits account. The benefits statement allows the Company  
11 to identify describe and qualify quantitative and qualitative benefits of the project during the  
12 planning phase. Next, the benefits contract monitors and controls the benefits during delivery  
13 (execution) of the initiative. Lastly, the benefits account allows the Company to track the actual  
14 achievement and variance of the quantitative and qualitative benefits at review points against  
15 the benefits originally planned. Because benefits management practices provide reporting  
16 throughout the benefits lifecycle, it will ensure continual improvement. This practice supports a  
17 repeatable and objective approach to investment analysis. This in turns drives informed  
18 decision-making regarding Business Technology projects funding requests.

9.10 Is the IT department the only department in FEI that has the above approach and  
can produce a list of its planned projects?

**Response:**

Please refer to the response to CEC IR 2.9.9.

9.11 Please identify such a list of improvement projects for any and all other  
departments to the extent they exist.

**Response:**

Please refer to the response to CEC IR 2.9.9.

9.12 Please confirm that the IT department does not have a list of projects for the  
future years 2014 to 2018 and if it does please provide the list.

**Response:**

Correct. However, FEI has provided an initial list of Transformation programs as seen in the  
Exhibit B-1-1, Section 4.6.4.3 on pages 246 and 247 that are expected to be delivered over the  
next 5 years. These programs will drive the identification of projects.

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9.13 Please confirm that FEI does not know whether it will have similar benefits to this project list above in the future.

**Response:**

It is not possible to forecast at this time the Capital and O&M savings to be achieved over the PBR period, as the detailed list of Transformation and Enhancement projects within each of the Business programs have not yet been identified for 2014 to 2018.

9.14 Please confirm that FEI could have projects with similar benefits in the future.

**Response:**

Please refer to the response to CEC IR 2.9.13.

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1    **10    Reference: CEC 1.12.1**

7    As discussed in Section C3.2 Historical O&M by Department in Exhibit B-1, FEI has achieved a  
8    number of sustainable productivity improvements in recent years of which integration is a  
9    contributor amongst others drivers. In addition, each department has included a discussion of  
10   the savings achieved. However, given FEI's approach to ensuring accountability for productivity  
11   improvement as described in the response to CEC IR 1.1.1, it has not required departments to  
12   specifically track savings benefits for each of the drivers including that due to integration. As a  
13   result, FEI does not have a comprehensive list of savings benefits due to integration with the  
14   electric business.

2

3            10.1    Please confirm that because of the FEI approach FEI does not know what  
4                   benefits it may or may not have achieved and at least cannot summarize them  
5                   for the Commission.

6

7    **Response:**

8    Not confirmed.

9    FEI and FBC do not view integration as a project with defined start and stop dates. Instead,  
10   integration is considered as ongoing and part of FortisBC's continuing efforts to achieve  
11   productivity opportunities. As indicated in the response to CEC IR 1.12.1, "given FEI's  
12   approach to ensuring accountability for productivity improvement as described in the response  
13   to CEC IR 1.1.1, it has not required departments to specifically track savings benefits for each of  
14   the drivers including that due to integration. As a result, FEI does not have a comprehensive list  
15   of savings benefits due to integration with the electric business." As a result, there is no  
16   comprehensive list of integration initiatives, along with their costs and benefits.

17   FEI has provided a number of examples of integration initiatives in the Application. In Exhibit B-  
18   1 Section 3.1 Productivity Focus, starting on page 11, examples of integration initiatives are  
19   discussed. These included opportunities in the HR department where functions were integrated  
20   with FBC. Efficiencies were gained in the Communications and External Relations groups  
21   through sharing of resources across the two companies. Integration initiatives were also  
22   discussed on a departmental level in the O&M departmental review in Section C3. For  
23   example, in the EH&S department, several functions involved in the provision of gas and electric  
24   services were integrated. Service quality levels have been maintained with additional workload  
25   managed within existing budgets.

26   While FEI has not administratively tracked the specifics of the different integration initiatives for  
27   the reasons outlined in the response to BCUC IR 2.338.20, it is confident that integration  
28   initiatives have contributed to the \$14.67 million sustainable O&M savings realized and that has  
29   been incorporated into the 2013 O&M Base for the PBR Plan.

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10.2 Given that there is no comprehensive list of the project benefits will it be fair to say that FEI has no way of knowing if the project has been a net benefits because no evaluation has been completed.

**Response:**

Please refer to the response to CEC IR 2.2.10.1.

10.3 Does FEI know what the costs of undertaking the project have been and if so could they please be provided.

**Response:**

With integration efforts to date, individual departments have been responsible for managing their costs and results within their budgets, so no Company-wide tracking is in place at this time. FEI follows the same approach to tracking of costs and benefits for integration as it does for productivity improvements. Please refer to the responses to CEC IRs 1.1.1 and 2.10.1 as well as BCUC IR 2.338.20.

10.4 Are all savings included in 2013 or will there be more achieved in later years?

**Response:**

Please refer to the response to CEC IR 1.12.4 where FEI indicated that there may be further opportunities in the 2014 – 2018 period to achieve additional savings. However, as indicated on page 13 of Exhibit B-1, Section A3-3 Productivity Focus - 2013 and Onward, future integration opportunities are expected to be more complex and dependent on the Company's ability to overcome some challenges.

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1  
2           10.5   Are savings potentials being stored in the 2013 base in excess staffing or costs  
3                   so a quick start to savings in the future can be turned into profit?  
4

5   **Response:**

6   No.

7



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1    11    **Reference: CEC 1.12.2**

21    The integration efforts of the FortisBC gas and electric businesses started in mid-2010 with the  
22    announcement of a common President and CEO and a common Board of Directors for all of the  
23    FortisBC companies.

2

3            11.1    Integration with electric began in 2010, when is it expected to be complete and  
4                    how much more integration is there to go (please express in terms of benefit  
5                    potential yet to be pursued?

6

7    **Response**

8    Please refer to the responses to CEC IRs 2.2.10.1 and 2.2.10.4. FEI does not have a  
9    quantification of the benefit potential yet to be pursued.

10

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**Reference: CEC 1.12.4**

There may be further opportunities in the 2014 – 2018 period to achieve additional savings. However, as indicated on page 13 of Exhibit B-1, Section A3-3 Productivity Focus - 2013 and Onward, future integration opportunities are expected to be more complex and dependent on the Company's ability to overcome some challenges.

12.1 Does FEI have evidence that it can share on the record in this proceeding that the project potential has not reach a point of diminishing returns and if so please provide it.

**Response:**

Given the continuing and evolving nature of the integration activities and given that future opportunities are expected to be more complex and dependent on the Company's ability to overcome some challenges, FEI at this time has no further evidence on whether integration initiatives have reached a point of diminishing returns.

Please refer to the responses to CEC IRs 2.2.10.1, 2.2.10.4, 2.2.11.1 and 2.12.2.

12.2 Given the long lead times to overcome challenges please confirm that this project and its benefits would be planned well in advance of the eventual date that savings are realized.

**Response:**

FEI and FBC do not view integration as a project with defined start and stop dates. Instead, integration is considered as ongoing and a part of FortisBC's continuing efforts to achieve productivity opportunities. FEI has stated that future integration opportunities are expected to be more complex and dependent on the Company's ability to overcome some challenges. This means that it is not certain if or when future savings due to integration may be realized. Please refer to the response to CEC IR 2.10.1.

Productivity Improvement	Associated Savings	Systems / Non-systems
Employee Express (automated time-entry technology)	\$152,000 based on reduction of two FTEs (plus additional savings recognized through cost avoidance of an additional time administrator)	Systems
Integration and redefining of roles in employee services, employee relations and employee development	\$561,000 based on reduction of four FTEs	Non-systems

13.3 For the savings of \$561,000 regarding the integration of processes and related to the non-system aspects savings please provide an estimate for the value of additional functions absorbed?

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1    **Response:**

2    The additional functions absorbed by FEI HR staff include such things as compensation,  
3    benefits, and pension support, as well as employee development (including training) services. In  
4    addition, HR was able to absorb four Knowledge and Learning Facilitators within its employee  
5    development group, without any additions to budget. These positions formerly were part of the  
6    Customer Service group; as part of the larger employee development team, they continue to  
7    support the Customer Service group, but also now provide support to other operating groups as  
8    well.

9    It is difficult to estimate the value of additional functions absorbed. However, one measure of  
10   this may be in the cross-charges of FEI HR employees to the FBC group. For 2013, the amount  
11   of cross-charges from January 1 – October 31 is approximately \$296 thousand.

12

13

14

15           13.4   Please provide the total for the existing HR functions now and the total before the  
16                   project?

17

18    **Response:**

19   FEI assumes the project being referred to is the productivity improvement related to integration  
20   noted in Table 13.1 above. The total for the existing HR functions now and the total before the  
21   improvement is shown by the decrease in HR's O&M from 2012 Actual to 2013 Projection,  
22   which is captured in the Application in Table C3-33.

23

24

25

26           13.5   This example seems to show a previous process which was significantly less  
27                   efficient than might be expected. Please estimate how much of the benefit  
28                   derives from the integration efforts and how much is related to the streamlining  
29                   process.

30

31    **Response:**

32   FEI assumes the project being referred to is the non-systems integration productivity  
33   improvement in Table 13.1 above. One element of this improvement was the alignment of M&E  
34   compensation processes between the electric and gas utilities, including an aligned banding  
35   system and short-term incentive pay practices.

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1 While neither the gas nor the electric M&E compensation model was inefficient in itself, as  
2 suggested above, having two different models for an integrated organization was impractical.  
3 Efforts were used to maintain and administer two systems, which is costly and time consuming.  
4 As well, there were inequities between the two employee groups, which impacted morale, and  
5 movement across the organization. In the case of this project, the benefit was equally derived  
6 from integration efforts and streamlining the process.

7

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1    **14    Reference: CEC 1.15.1**

7    In a project of this complexity spanning a two year implementation window it is not unusual for  
8    the actual costs to be allocated to different cost categories as project needs change. The  
9    savings cannot be described in detail at a component level. The most significant areas of  
10   savings for the project related to internal labour and general consulting costs. These were  
11   achieved by identifying and retaining key resources throughout the project, which improved  
12   productivity and limited staff turnover. The project was implemented successfully with less staff  
13   than originally budgeted.

2

3            14.1    Was anyone responsible for the project provided an incentive payment for  
4                   bringing the project in below budget and on time?

5

6    **Response:**

7    No. Incentive payments were not tied directly to project deliverables, schedules, or budgets for  
8    project participants.

9

10

11

12            14.2    Would it be fair to say that at one level the result described is partly attributable  
13                   to providing a reasonable amount of room in the budgets to handle the  
14                   complexity of the project over two years?

15

16    **Response:**

17    FEI disagrees with the characterization that the project budget was not appropriate for the level  
18    of complexity and risk undertaken. The budget amounts were reviewed and approved by the  
19    BCUC through a very rigorous CPCN application process and are consistent with industry and  
20    regulatory standards which include an appropriate contingency allocation.

21

22

23

24            14.3    The results for this project contrast significantly with FEI experience with other  
25                   customer system project, please comment and identify key reasons for the better  
26                   results this time.

27

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1    **Response:**

2    The key reasons for the greater success of this customer system project compared to past  
3    initiatives in this area include:

4        1. The maturity of the marketplace for robust package customer solutions, which were not  
5        available in the past.

6        2. The use of experts in the area of product evaluation and selection, ensuring business  
7        requirements were clearly defined at the start of the project.

8        3. The use of third party project oversight to ensure project scope was controlled.

9        4. Through the selection of SAP as the system, the strong internal technical and application  
10       knowledge resident in the company.

11

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1    15    **Reference: CEC 1.15.2**

24    None of the savings in the CCE project were the result of the deferral of features and functions  
25    to be developed or added at a later date. The project delivered all of the functions and features  
26    expected in the initial project scope.

2

3            15.1    Does FEI have a list of future improvement projects to be implemented using the  
4                    new system features and if so please provide it?

5

6    **Response:**

7    FEI does have a list of future initiatives that have been enabled by or that leverage the value of  
8    the CCE project. These opportunities are being tracked and evaluated and will only be  
9    scheduled for implementation based on approved business case criteria. The list includes the  
10   following:

- 11            • Re-platform online customer self serve including expanding customer direct access via  
12                    mobile devices;
- 13            • Expanded online services to support customer preferences;
- 14            • Expanded website capabilities;
- 15            • Billing statement redesign; and
- 16            • Outbound dialer enhancements.

17



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1    **16    Reference: CEC 1.16.1**

11    In general, the impact of operational efficiencies on customers and the shareholder would  
12    depend on what regulatory mechanisms are in place.

13    Specifically for the operational efficiencies (O&M savings) that are referred to in the preamble  
14    for the CCE Project, the O&M savings in 2012 and 2013 are being returned 100% to customers,  
15    and the shareholder does not benefit.

16    Under the PBR Proposal, and similar to the 2004 PBR Plan, rates will be set to provide 100% of  
17    the productivity savings to customers. To the extent the savings are in addition to the savings  
18    embedded in rates, they will be shared equally between customers and the shareholder for the  
19    term of the PBR. Under a cost of service regime, and absent any deferral mechanism, these  
20    savings would benefit the shareholder until O&M is next rebased.

2

3            16.1    Please confirm that the impact of future savings in a Cost of Service model would  
4            accrue 100% to customers to the extent they were forecast into the rates at the  
5            time of the applicable RRA.

6

7    **Response:**

8    Confirmed. However, FEI has filed a PBR Application in compliance with the Commission's  
9    direction as provided in its April 18, 2013 letter. An excerpt from the letter is provided below:

10            "The Commission requires FEU and FortisBC to describe its productivity improvement  
11            culture by an examination of PBR methodologies in its next Revenue Requirements  
12            Applications. This examination is to evaluate the most recent PBR methodologies  
13            employed by FEU and FortisBC and the various PBR methodologies approved by other  
14            jurisdictions in Canada. FEU and FortisBC are to propose a PBR methodology and  
15            explain how it addresses the limitations in the various PBR methodologies, and will  
16            achieve a productivity improvement culture."

17    FEI has responded to questions regarding Cost of Service regulation in the interest of being  
18    responsive. However, given the Commission's direction above, FEI considers the questions to  
19    be out of scope to the extent that they are directed at assessing the merits of PBR vs. Cost of  
20    Service generally.

21

22

23            16.2    Please explain why the O&M savings in 2012 and 2013 are being returned 100%  
24            to the customer. Is this being done through a deferral account and was this  
25            ordered by the Commission?

26

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1 **Response:**

2 The FEU proposed and the Commission approved in Order G-44-12 the creation of the  
3 Customer Service Variance Account. Please refer to BCUC IRs 2.278.1 and 2.278.2 for further  
4 discussion on this account.

5

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1    17    **Reference: CEC 1.16.2**

2    Specifically for the Customer Service department, over the term of the PBR, FEI will be  
3    evaluating new initiatives to determine the cost-benefit of each. Two examples of initiatives  
4    being considered are enhancements to the Company's customer portal and changes to the  
5    contact center hours of operation. At this time, the estimated savings and implementation dates  
6    for these initiatives have not been finalized.

2

3            17.1    Given that these estimates are not available now can FEI explain what the  
4                    project in Table C4-1 is referring to in the 3<sup>rd</sup> line. Is this the same project being  
5                    referenced here?  
6

7    **Response:**

8    FEI is uncertain which line item in Exhibit B-1, Table C4-1 is being referenced (numbered line 3  
9    on the page which is Total Net Capex or row 3 from the table which is Distribution System  
10   Reinforcements) and is uncertain which project it is to be compared to (customer portal  
11   enhancements or changes to the contact centre hours of operations).

12   In any case, FEI does not believe there is any relationship between any of the items above.

13

14

15

16            17.2.    Are the savings likely to be trivial or are they likely to be material?  
17

18   **Response:**

19   FEI expects that the savings related to the changes in contact center hours of operations as well  
20   as the customer portal will be modest. However, the company will be looking at the business  
21   case and impact for this initiative during the PBR period and until such analysis is complete, the  
22   value of the potential savings is unknown.

23

24

25

26            17.3    Does FEI have a project priority list for the CCE follow on projects and if not why  
27                    not?  
28

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1 **Response:**

2 FEI does have a list of future initiatives that have been enabled by or leverage the value of the  
3 CCE project. These opportunities are being tracked and evaluated and will be scheduled for  
4 implementation based on approved business case criteria. At this time the potential savings  
5 associated with each initiative has not been determined. The list of opportunities is included in  
6 the response to CEC IR 2.15.1.

7

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1    **18    Reference: CEC 1.17.1**

8    For clarity, the capture rate is an after-the fact comparison of gas customer growth against a  
9    larger measure, in this case new housing construction, and in itself does not affect customer  
10    growth. The flattening of the declining customer growth could be due to many factors such as  
11    government policies, building codes and standards, energy and equipment costs, or FEI's  
12    continued promotion of the benefits of natural gas. While FEI is encouraged with the recent  
13    improvement, it is too soon to tell whether there is indeed a reversal of the declining customer  
14    growth trend that will persist in the coming years.

2

3            18.1    Is it correct to say that the issues with respect to the capture rate could affect the  
4                    load forecast and revenue for a time period and will therefore affect the rate  
5                    setting while the only effect on proposed productivity will be the cost of efforts to  
6                    increase the capture rates?

7

8    **Response:**

9    It is correct that the capture rate will affect the load forecast and revenue, all else equal.  
10    However, capture rate alone is meaningless as actual customers attached and their load is what  
11    is important. One can capture ten out of one hundred potential customers or ten out of twenty  
12    potential customers and the impact on load forecast and revenue would be the same. As such,  
13    capture rate is only part of the picture with respect to new customer attachments. New  
14    customers also require main extensions, service connections and meters, and attract other  
15    costs, such as for example billing and customer care costs, property taxes and others. Both the  
16    revenues and costs of new customers will affect rate setting. Opportunities to achieve  
17    productivity improvements will lie in all of these areas as well as in finding more efficient and  
18    effective ways to influence the capture rate.

19

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1    **19    Reference: CEC 1.17.2**

3    All marketing costs related to improving capture rates in new construction are within the  
4    approved O&M budgets for the referenced years. No additional expense was incurred. The  
5    impact on the capture rate numbers was achieved by focusing existing sales and marketing  
6    resources on the builder community and demonstrating the features and benefits of natural gas  
7    over competing forms of energy for space and water heating.

8    While the overall increase represents a relatively small increase in added customers compared  
9    to the overall customer base, the existing customers do benefit from additional throughput and  
10    improved utilization of the natural gas system. For example, the increase of capture rate from  
11    61% to 67% in 2011 and 2012 respectively represents an increase of 344 new customers. This  
12    will add new volumes to the system and over time will allow fixed costs to be spread over a  
13    larger volume, all else equal.

4    19.1    While no additional expense was incurred relative to the existing O&M budget  
5    effort was focused on a particular segment, please advise with respect to what  
6    the extent of the effort was, whether or not it is continuing and what an estimate  
7    of the cost of the effort was and is ongoing if it is continuing.

9    **Response:**

10    Incremental effort focused specifically on the builder/developer community consisted of the  
11    following activities: increased educational seminars, increased participation in association  
12    presentations (for example UDI, GVHBA, etc.), providing collateral for show homes featuring  
13    natural gas and co-marketing with builders featuring natural gas in their developments including  
14    print advertising and signage. FEI believes these activities have been successful in increasing  
15    customer additions on the natural gas system and will continue such efforts at similar levels into  
16    the five year forecast period. Please refer to the response to CEC IR 2.110.5 for further  
17    information.

21    19.2    Given that the capture rate move from 61% to 67% means 344 new customers,  
22    please provide an estimate of added annual volumes, any added costs to capture  
23    the customers and the benefits over time expected from addition of these  
24    customers.

26    **Response:**

27    The 344 new customers referenced would be the difference in new residential properties  
28    completed between 2011 and 2012 that were FEI Rate Schedule 1 customers. Based on an

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1 average annual consumption of 90 GJ per year for residential customers, the 344 new  
2 customers add approximately 30,960 GJ per year of energy demand. For further explanation of  
3 the effect of adding customers to additional revenue, margin, and costs with varying  
4 consumption scenarios, see Exhibit B-1-1, Appendix E5 for a discussion and quantification on  
5 the impact of adding residential and commercial customers.

6



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1     **20     Reference: CEC 1.34.2 and CEC 1.34.3**

17     It is very common, if not universal, to refer to PBR formulas as I-X formulas. This recognizes  
18     that inflation is a central concept in PBR. In addition, it is cost effectiveness in the utilities'  
19     particular circumstances and not "least cost benchmarks" that should be the focus of the  
20     efficiency improvement projects as least cost benchmarks may not even be accessible for a  
21     utility because of the varying local economic, regulatory and legislative conditions specific to  
22     each utility. By removing inflation, the Company not only is challenged to become more  
23     productive through the X-factor, but without the ability to address the increase in input costs, the  
24     Company may be forced to find cost savings that are beyond efficiency.

2

3             20.1     Please provide data with respect to what happens to wage rates for private  
4                         sector competitive businesses during recessionary times for the last 20 years.

5

6     **Response:**

7     This IR has been identified as relating to the PBR Methodology and will be submitted with the  
8     PBR Methodology IR responses.

9

10

11

12             20.2     In a recession do the wages respond to economic recessions, in that inflation can  
13                         slow down and the wages decrease as the economy drops below full capacity  
14                         employment?

15

16     **Response:**

17     This IR has been identified as relating to the PBR Methodology and will be submitted with the  
18     PBR Methodology IR responses.

19

20

21

22             20.3     Given a future period of 5 years would FEI expect the level of wages to remain  
23                         stable should a recession take hold?

24

25     **Response:**

26     This IR has been identified as relating to the PBR Methodology and will be submitted with the  
27     PBR Methodology IR responses.

28



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1    **21    Reference: CEC 1.35.1**

20    The EUCPI is geared towards electric utilities, and therefore was not considered as an index for  
21    FEI's proposed PBR. Generally, a firm's inflation rate is compared to that of the broader  
22    economy. This is consistent with the selection of the BC-CPI, which is a measure of inflation for  
23    the overall BC economy. However, EUCPI has a narrow focus on electric utilities, which is in  
24    contrast to how a firm should be evaluated.

25    In addition, the selection of AWE is consistent with that of the Alberta Utilities Commission  
26    recent decision to use AWE as a measure of labor inflation in their PBR implementation.

4            21.1    Has the company considered using a core inflation index rather than AWE and  
5                    CPI as an appropriate measure of inflation?  
6

7    **Response:**

8    This IR has been identified as relating to the PBR Methodology and will be submitted with the  
9    PBR Methodology IR responses.

12           21.2    Please provide a core inflation index for consideration as an alternative along  
13                    with historical data for the index.  
14

15    **Response:**

16    This IR has been identified as relating to the PBR Methodology and will be submitted with the  
17    PBR Methodology IR responses.  
18

21           21.3    Has the company considered estimating future inflation based on real return  
22                    market bonds and would the company consider looking at this and other  
23                    alternatives for measuring and estimating inflation other than CPI and AWE.  
24

25    **Response:**

26    This IR has been identified as relating to the PBR Methodology and will be submitted with the  
27    PBR Methodology IR responses.  
28

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1    **22    Reference: CEC 1.36.1 and CEC 1.36.2**

7    FEI investigated the possibility of using alternative sources of labor-related inflation other than  
8    the BC AWE. However, an alternative source that represented BC's economy-wide labor  
9    inflation is not available, and the BC AWE remains the most appropriate measure of BC labor-  
10   related inflation.

2

3            22.1    Would alternatives such as core inflation Core CPI, Core CPI-XFET and or CPIW  
4                   be better measures of inflation? (Please see graphic below for measures and the  
5                   historical data.)  
6

7    **Response:**

8    This IR has been identified as relating to the PBR Methodology and will be submitted with the  
9    PBR Methodology IR responses.

10

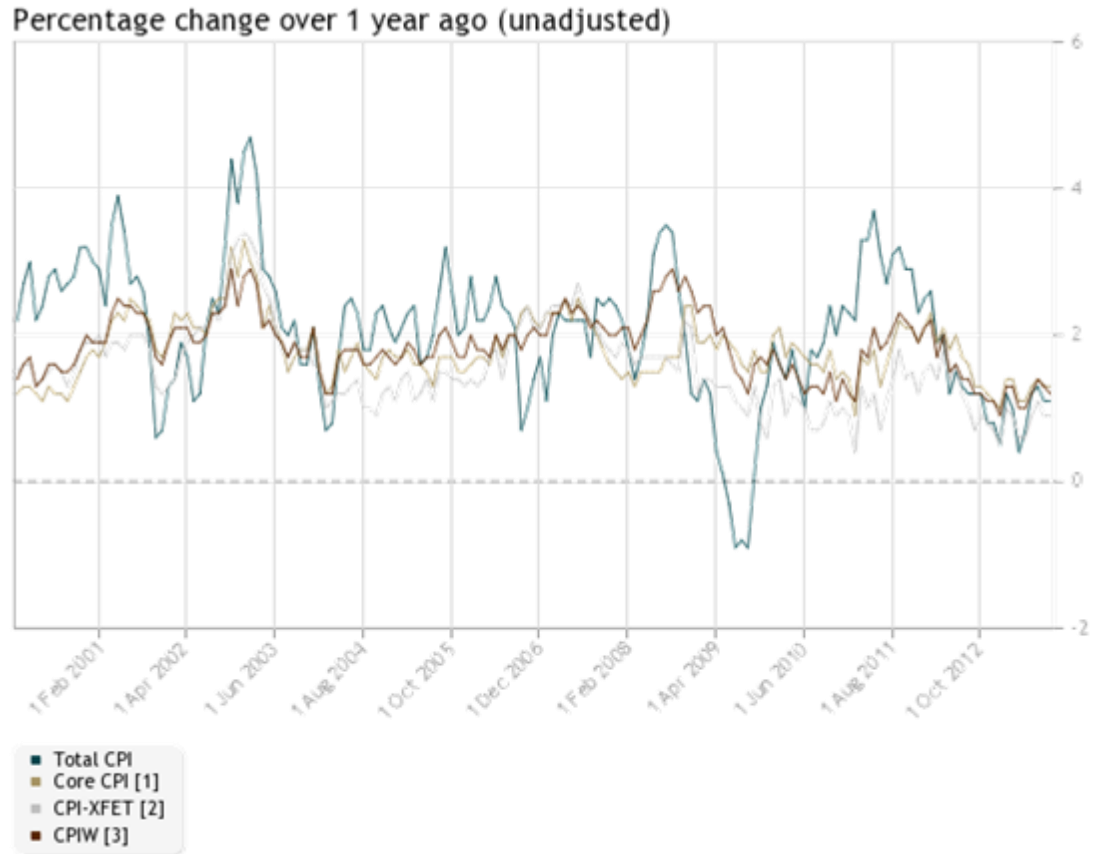
11

12

13            22.2    As the forecasts for the BC and Canadian economy have been trimmed recently  
14                   isn't it the case that inflation is considerably lower than the company is showing?  
15                   Please comment and provide recent data on inflation to support views.  
16

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1



2

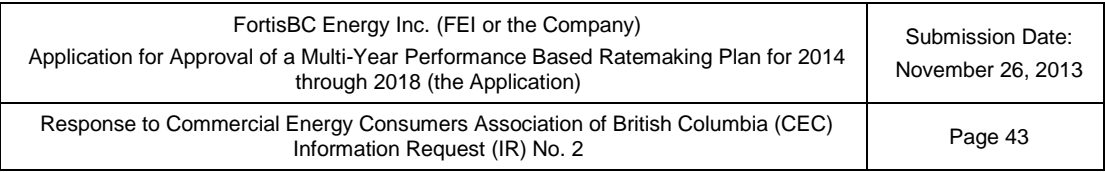
3

4 **Response:**

5 This IR has been identified as relating to the PBR Methodology and will be submitted with the  
6 PBR Methodology IR responses.

7

8



Any incremental revenue generated by the ES&ER department will be captured in delivery revenue or in other revenue. Such revenue items will be re-forecasted each year, and thereby customers will receive the benefits of the department's efforts in this regard in the following year.

Furthermore, as described on pages 78-79 of the Application, through the Annual Review process FEI has proposed that FEI will bring forward any proposals for the funding of incremental resources in support of load growth initiatives identified during the course of the PBR period.

23.1 If the ES&ER is being rebased annually will the benefits for the year versus forecast for rate setting be available to FEI shareholder as cash or is there a deferral account to true up this revenue?

The ES&ER department is not being “rebased” annually. The ES&ER department’s costs are included in the 2013 Base O&M for the O&M formula.

The response to CEC IR 1.41.1 referred to the incremental **revenues** generated by the activities of the ES&ER department. The incremental revenues created by the department generally would arise in margin revenue or other revenue, both of which are subject to annual re-forecasting. Therefore, customers will receive the full benefits of the incremental revenue in the following year when they are included in the revenue forecast for that year. If FEI achieves actual incremental revenue that is not included in the forecast for that year (other than in the RSAM rate classes where margin impacts of use rates are fully returned to or recovered from customers), the amount will be shared equally between the customer and shareholder through the earnings sharing mechanism proposed in this Application.

7 Of the Company's operations, the ES&ER department is oriented towards generating  
8 incremental revenue. While there are other departments in the Company's operations that have  
9 revenues embedded in their O&M, for these groups, revenues are primarily related to "cost  
10 recovery" activities. The ES&ER department focuses on identifying and implementing new

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23.2 Please provide a list of departments with cost recovery, provide total cost recovery historically for 5 years and the forecast of cost recovery for 2014 to 2018.

**Response:**

Provided below is a list of departments with cost recoveries from 2008 to 2012 actual and 2013 projection. The Corporate department totals represent amounts that are applicable to many departments, such as the Shared Services fees with FEVI and FEW, and are described more fully in Section C3.16 of the Application.

As discussed in Section C3.1 of the Application, the 2014 through 2018 O&M forecast represents a high level forecast of future trends and upcoming challenges and therefore a breakdown by department is not available. Please refer to Appendix F6 of the Application, the Operations & Maintenance Resource View, line 15 Recoveries and Revenue for the total cost recoveries forecast from 2014 – 2018.

**Cost Recoveries (\$ thousands)**

Department	2008 Actual	2009 Actual	2010 Actual	2011 Actual	2012 Actual	2013 Projection
Operations	(3,346)	(3,008)	(3,870)	(3,502)	(3,146)	(2,519)
Customer Service	(1,599)	(1,289)	(1,368)	(983)	(1,170)	(2,497)
Energy Solutions & External Relations	(62)	(94)	(275)	(130)	(84)	(50)
Energy Supply & Resource Dev	(215)	(217)	(219)	(219)	(227)	(223)
Information Technology	(174)	(174)	(146)	(158)	(192)	(111)
Engineering Services & PM	(51)	(84)	(119)	(109)	(107)	(106)
Operations Support	(1,196)	(1,358)	(1,421)	(1,676)	(1,950)	(1,122)
Facilities	(2,483)	(2,525)	(2,602)	(2,639)	(2,887)	(1,610)
Environmental Health & Safety	-	-	-	(58)	(54)	-
Finance & Regulatory Services	(4)	(5)	(8)	(4)	(4)	-
Human Resources	(10)	5	(0)	(0)	(20)	-
Corporate	(5,014)	(6,122)	(8,651)	(8,692)	(10,847)	(10,817)
<b>Total</b>	<b>(14,155)</b>	<b>(14,870)</b>	<b>(18,680)</b>	<b>(18,169)</b>	<b>(20,689)</b>	<b>(19,055)</b>

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1    **24    Reference: CEC 1.42.1**

9    Customer additions and design day demand forecasts are the key drivers of the O&M and  
10   capital costs incurred by FEI in serving its customers. As existing customers' peak load  
11   requirements change along with new customer additions the timing for when new capacity is  
12   needed may be impacted and for when incremental operations and maintenance would be  
13   required.

2

3            24.1    Please explain why peak load and customer additions would drive incremental  
4                   operations and maintenance needs.

5

6    **Response:**

7    This IR has been identified as relating to the PBR Methodology and will be submitted with the  
8    PBR Methodology IR responses.

9

10

11

12            24.2    Please provide the number of new customers per year as a % of the total  
13                   customer base for the last five years and for the future 5 years.

14

15    **Response:**

16    This IR has been identified as relating to the PBR Methodology and will be submitted with the  
17    PBR Methodology IR responses.

18

19

20

21            24.3    Please provide the total costs of capital additions directly required for customers  
22                   versus the total rate base for the last 5 years and for the future 5 years.

23

24    **Response:**

25    This IR has been identified as relating to the PBR Methodology and will be submitted with the  
26    PBR Methodology IR responses.

27

28

29



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24.4 Please provide the peak demand requirement for the system for the last 5 years and the forecast peak demand for the future 5 years.

**Response:**

This IR has been identified as relating to the PBR Methodology and will be submitted with the PBR Methodology IR responses.

24.5 Please provide the capital upgrades required on the system for the last 5 years and for the future 5 years as forecast.

**Response:**

This IR has been identified as relating to the PBR Methodology and will be submitted with the PBR Methodology IR responses.

Please refer to the response to CEC IR 1.42.2 below for a discussion of revenue requirement impacts overall. It is important to recognize that when customers are added there are both direct and indirect costs added to the system. If the prices and technology for providing service to added customers were the same as the average embedded costs in rates it would be reasonable to talk about fixed costs that decline with added output. They are not because embedded costs are a function of prior period prices and technology. Costs are added at today's prices and technology that exceed the costs in rates whether it is O&M or capital. New customers impact cost at the marginal cost for today not the embedded cost in rates as implicitly assumed in the question. If marginal nominal cost exceeds the embedded costs, O&M costs increase by the nominal marginal cost. As FEI notes, customer count is a proxy for both capacity and customers. This is appropriate for the O&M adjustment because the largest part of growth in output is related to small customers who can be served with the smallest size of pipe and the associated costs.

24.6 Please confirm that, while the above discussion is true with respect to incremental costs and embedded costs, the percentage of fixed costs in the system will influence the degree to which rate increases are required versus having a system with all variable costs linearly related to customer count.

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1 **Response:**

2 This IR has been identified as relating to the PBR Methodology and will be submitted with the  
3 PBR Methodology IR responses.

4  
5  
6  
7  
8  
1 Administrative costs for Finance, Human Resources, Governance and Corporate Administration  
2 are temporarily fixed and average cost would decline with increasing number of customers. But  
3 these costs will increase with general inflation from year to year.

9 24.7 Please confirm that it is not necessary for these costs to increase from year to  
10 year with general inflation, particularly if they are run more efficiently and  
11 continue to take advantage of the economies of scale and scope possible with a  
12 company of the nature of FEI?

13  
14 **Response:**

15 This IR has been identified as relating to the PBR Methodology and will be submitted with the  
16 PBR Methodology IR responses.

17  
18  
19  
20 24.8 In BCPSO 1.18.1 the cost drivers for O&M are discussed and related to customer  
21 counts, capacity and peak demand, while the assertion is made that they are not  
22 related to throughput. Please discuss why FEI does not have rates, which relate  
23 to the cost drivers of capacity and peak demand for customers.

24  
25 **Response:**

26 This IR has been identified as relating to the PBR Methodology and will be submitted with the  
27 PBR Methodology IR responses.

28  
29  
30



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24.9 If FEI had rates which related better to their cost drivers would there be a potential for reductions in the uses of those cost drivers and a consequent reduction in costs and participating customer bills as well as potential moderation in rates?

**Response:**

This is a rate design question, and is not a question that should be dealt with in a revenue requirement determination and PBR proceeding.

FEI disagrees with the premise of the question. FEI's rates are based on a well-established rate design methodology that takes into consideration system design, customer costs and throughput. FEI does not believe there is much to be gained in amending its rate design as proposed in the IR to consider different cost drivers. Further the price elasticity studies done in past rate design proceedings for FEI in the Inland Natural Gas 1987 Rate Design, BC Gas 1993 and 1996 Rate Designs showed that for small volume customers (residential and commercial) the elasticity of demand was extremely inelastic. Evidence filed in the FEU 2012 Amalgamation, Common Rates and Rate Design proceeding confirmed these earlier findings. On the basis of these studies for these types of customers the establishment of rate structures based on the drivers discussed would have little impact on the driver or the demand for gas. In addition, it is FEI's belief at this time that it is more expensive to have metering and measurement processes that can measure various drivers applied to a more complex rate structure than what is currently done. FEI also believes its current rate design aligns with government policy in BC, in that the volumetric rate design provides stronger price signals to encourage energy conservation and efficiency. There would be many rate design issues for careful study before establishing rate structures of the nature suggested in the question, which would mark a significant departure from the volumetric / basic monthly charge rate design that FEI has employed for decades.

B&V adds the following response.

Better price signals through rate designs that track costs better may or may not result in lower use and lower costs since the marginal cost for energy would decline and fixed costs would increase. There may be more uses for either gas or electricity that become more economic under more economically efficient rates. The rate design of competing energy sources such as electricity may also influence the customer response to a more economically efficient rate structure for gas.

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24.10 Please provide a full description of everything FEI has done to establish conservation rates?

**Response:**

This is a rate design question, and is not a question that should be dealt with in a revenue requirement determination and PBR proceeding.

In FEI's rate design proceedings going back to the 1980s the Company has addressed conservation among other rate design objectives that are considered in establishing various rate schedules, rate structures and level of rates. This is unlikely to change when FEI files rate design applications in the future. Further, the conservation has been occurring (i.e. customer use rates have declined) within the context of volatile natural gas commodity market prices and as old appliances are replaced with more efficient new appliances. Also in response to government policy changes FEI has expanded its DSM programs to promote energy efficiency and conservation.

24.11 Please confirm that when FEI filed rate applications for 2010 to 2011 and 2012 to 2013 that a number of cost drivers had little to do with customers/capacity or peak load requirements but were related to accounting changes, regulatory changes, and other non-system related issues.

**Response:**

This IR has been identified as relating to the PBR Methodology and will be submitted with the PBR Methodology IR responses.

24.12 Please provide the quantitative analysis of the cost and rate increases provided in those RRA applications defining and quantifying the drivers for costs, which were filled by FEI.

**Response:**

This IR has been identified as relating to the PBR Methodology and will be submitted with the PBR Methodology IR responses.

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1     **25     Reference: CEC 1.42.2**

21     Economies of scale may be defined as declining long-run average cost curves under the  
22     assumptions of fixed technology and input prices. Cost curves relate costs to units of output  
23     typically measured as throughput. As we have shown, throughput is not a relevant measure of  
24     output for delivery service. Instead, the measure of output is capacity and customers. Thus,  
25     under the economic definition of economies of scale, cost would decline as the number of  
26     customers and capacity increased for fixed technology and input prices. Since we are  
27     measuring utility costs over periods when both input prices and technology have changed the  
28     result is an upward shift in the long-run cost curve as the result of adding customers and  
29     capacity even in the presence of economies of scale. This is always a confusing issue because  
30     the utility industry does benefit from economies of scale in the sense that increasing capacity of  
31     a pipeline from 2-inch to four-inch results in dramatically lower costs per unit of capacity (the  
32     scale economies concept). However, the revenue requirement would increase overall because  
33     both the first year revenue requirement and the nominal cost of the pipe would likely exceed the  
34     embedded cost of capacity reflected in current rates.

2

3            25.1     Please discuss whether or not the fact that capacity use per customer has  
4            declined and is declining, essentially frees up capacity to meet demand  
5            throughout the system without the need for expenditure on additional capacity. Is  
6            this a form of the economy of the scale of operation because there are common  
7            components of the system for most users allowing freed up capacity to be  
8            redeployed to new customer use without additional investment.

9

10     **Response:**

11     This IR has been identified as relating to the PBR Methodology and will be submitted with the  
12     PBR Methodology IR responses.

13

14

15

16            25.2     Does this 'capacity reduction related to throughput decline', as a fact, influence  
17            capital requirement potentials versus not having a declining use per customer?

18

19     **Response:**

20     This IR has been identified as relating to the PBR Methodology and will be submitted with the  
21     PBR Methodology IR responses.

22

23

24

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25.3 Please confirm that adding new customers to the system involves an incremental cost for the addition but very likely will not require upgrading of the entire system capacity.

**Response:**

This IR has been identified as relating to the PBR Methodology and will be submitted with the PBR Methodology IR responses.

25.4 Please confirm that the embedded rates carry embedded costs for the whole system and therefore have the potential to deliver as much in incremental revenue as the incremental cost of addition of the customer and where this is the case there can be limited pressure on rate increases required for customer additions.

**Response:**

This IR has been identified as relating to the PBR Methodology and will be submitted with the PBR Methodology IR responses.

25.5 Please provide a quantitative analysis of the above issues (declining customer capacity use and proportion of incremental cost for new customers to total embedded system costs) to determine the degree to which they moderate the cost drivers of customer count, capacity and peak load.

**Response:**

This IR has been identified as relating to the PBR Methodology and will be submitted with the PBR Methodology IR responses.

25.6 Would it be correct to say that at a minimum the relationship of costs to drivers should not be linear when there are other mitigating factors?

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1

2 **Response:**

3 This IR has been identified as relating to the PBR Methodology and will be submitted with the  
4 PBR Methodology IR responses.

5

6

7

8 25.7 Please identify all the other mitigating factors that moderate the FEI selected  
9 drivers of costs and provide analysis to determine the quantitative degree to  
10 which they may or could influence future cost projections.

11

12 **Response:**

13 This IR has been identified as relating to the PBR Methodology and will be submitted with the  
14 PBR Methodology IR responses.

15

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1     **26     Reference: CEC 1.42.3**

8     The question cannot be confirmed or denied. Given that systems do not experience uniform  
9     load increases or decreases, capacity constraints will move around based on the location on the  
10    system where these changes take effect. This occurs because even where there is a general  
11    load decrease driven by a decline in use per customer and flat customer growth, this will not  
12    occur equally everywhere on the system. Additionally, sections of the system still face  
13    significant local growth, like Surrey. As a result, it is true that a system facing these two  
14    scenarios would have different costs. It is also true that a system facing these two scenarios  
15    may need to continue to manage issues not related to customer growth. Further, it is true that  
16    use per customer has no impact on system costs in either case. The issues for the system  
17    costs are defined by customers and capacity on a design day.

2

3     26.1    Please consider that the assertions in this response cannot be true, stating that  
4     use per customer has no impact on system costs. An illustration of this fallacy  
5     comes from considering a situation where a customer attaches to the system and  
6     requires a capacity to serve of 1 unit but 10 other customers have reduced their  
7     requirements by 1/10<sup>th</sup> of a unit and therefore there are zero requirements for any  
8     upgrades to the system jointly serving these customers. Contrast this with the  
9     same customer addition requiring 1 unit of capacity to serve the customer's  
10    needs but each of the other 10 customers being served by the same joint system  
11    requires 1/10<sup>th</sup> more capacity to serve increased use of the system. In the latter  
12    case there can be system upgrade capital investments required and in the former  
13    case there may be no 'system upgrade' capital investments required. Was the  
14    response to the question predicated on the assumption that declining use per  
15    customer does not necessarily have to be related to a declining use of system  
16    capacity by the customer?

17

18     **Response:**

19     This IR has been identified as relating to the PBR Methodology and will be submitted with the  
20     PBR Methodology IR responses.

21

22

23

24     26.2    Please identify the percentage of declining use per customer that is accompanied  
25     by a declining requirement for capacity on the system versus the percentage of  
26     declining use per customer that occurs only off the peak requirement and  
27     therefore is not associated with capacity requirements.

28

29     **Response:**

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This IR has been identified as relating to the PBR Methodology and will be submitted with the PBR Methodology IR responses.

- Declining Use per Customer  
While FEI continues to attract new customers, there is a downward trend in average UPC for new customers, which is expected to continue over the forecast period. The average UPC has been declining due to factors such as, but not limited to, shifts in housing stock to higher density, multi-family dwellings, more energy efficient homes and appliances, together with tighter building thermal envelopes.

Exhibit B-1, Page 160

26.3 For the above explanations for declining use per customer please provide an explanation as to whether or not the specific type of cause for declining use per customer comes with decreased capacity requirements from the system or not relative to the average historical use per customer and their capacity requirements.

**Response:**

This IR has been identified as relating to the PBR Methodology and will be submitted with the PBR Methodology IR responses.

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1     **27     Reference: CEC 1.60.1**

8     As stated in the response to other IRs, the appropriate basis of comparison for the 2013  
9     Projected O&M is the 2013 Approved O&M. The 2013 Approved O&M was subject to a full  
10    hearing and the costs that were included in that figure are at an appropriate level to compare  
11    the 2013 Projections (and 2013 Base) that form the basis for the 2014 delivery rates. The 2010  
12    Actual O&M reflects a different set of accounting classifications between O&M and capital, and  
13    a different set of circumstances than 2013, including some organizational changes that FEI was  
14    not able to restate to be fully comparable.

2

3             27.1    Please confirm that the 2013 approved RRA for O&M was provided under the  
4                    assumption that it would be rebased the following year and that it was not  
5                    approved based on the assumption that it would become a base for a formulaic  
6                    projection for the next 5 years.

7

8     **Response:**

9     FEI cannot confirm this. Although the Company had not yet determined whether it would  
10    pursue a formula based PBR or a cost of service approach for its 2014 revenue requirements,  
11    FEI notes that on page 40 of its decision accompanying Order G-44-12, the Commission stated:

12                *"The Commission Panel further directs the FEU to file a Productivity Improvement Plan*  
13                *with their next revenue requirements application. **The Productivity Improvement Plan***  
14                ***may take the form of a proposal for PBR** which places emphasis on both-short term*  
15                *activities as well as long term, sustainable improvements."* [emphasis added]

16    Therefore, FEI cannot say with certainty what the assumptions of the Commission or other  
17    parties were at the time.

18

19

20

21             27.2    Please identify the total impact for each year of the accounting classification of  
22                    formerly operating costs to capital and or vice versa so that the impact on  
23                    historical comparisons can be made.

24

25     **Response:**

26    FEI has prepared this response by comparing 2010 to 2013 Projection, since this was the  
27    timeframe discussed in the preamble to this question.

28    The conversion from an IFRS basis of accounting to that of US GAAP was approved by the  
29    BCUC effective 2012 and reflected in the 2012-2013 RRA. This makes it difficult to perform a



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linear comparison of O&M between the post-2011 timeframe to the pre-2012 timeframe. The significant accounting change that occurred as a result of converting to US GAAP was the treatment of pension and OPEB costs.

On an incremental basis this drove an increase to 2012 O&M of \$6.383 million offset by a decrease to 2013 O&M of \$1.326 million which resulted in an incremental delivery rate impact of 1.0 percent and (0.2) percent respectively.

It should be noted that the accounting changes that were identified as a cost driver in the 2010-2011 RRA were consistent across the 2010 – 2013 timeframe and do not impair the year over year comparability during this period but do make comparisons prior to 2010 challenging.

In addition, although FEI is able to quantify accounting change impacts on a total basis, it is more difficult to identify the impact in individual departments, particularly for items that are included in labour/benefit loadings that also impact capital.

27.3 For each year over which the 7% increase in cost for 2010 to 2013 occurred please provide the inflation CPI for each year.

**Response:**

When compared against the 2010 actual O&M of \$206.518 million, the 2013 projection O&M of \$221.333 million reflects an increase of 7 percent.

During this time, the BC CPI as reflected in Appendix E1 was 2.3 percent for 2011 actual, 1.1 percent for 2012 actual and 0.9 percent for 2013 forecast for a total compound CPI for the period of 4.4percent.

The aggregate accounting change referred to in response to CEC 2.27.2 in the amount of \$5.057 million (\$6.383 million in 2012 offset by a reduction of \$1.326 million in 2013) contributes to an increase of 2.4 percent when compared to 2010 actual O&M.

This serves to demonstrate that the increase in O&M from 2010 in the amount of 7 percent, once adjusted for the accounting impact of converting to US GAAP, is in line with CPI for the same timeframe.

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27.4 Please provide Applied for RRA requests and the final commission approval for total RRA request for each year.

**Response:**

The Applied for RRA requests for O&M compared to the final Commission approval is reflected in the Table below.

**FEI Gross O&M (\$000's)**

	2011	2012	2013
Applied for as per RRA	219,149	230,189	241,103
Approved by BCUC	214,680	226,993	236,003
Delta	4,469	3,196	5,100

27.5 Given that many of the cost increases over this time frame were driven by other factors that the cost drivers of customer numbers, system capacity and peak load, please provide any understanding FEI has with respect to the potential over the next 5 years for similar costs to become a requirement for future years. Please quantify any such amounts expected.

**Response:**

In the response to CEC IR 2.24.12, FEI lists the cost drivers of incremental O&M increases that were identified in the 2010-2011 RRA and the 2012-2013 RRA. With the exception of 'Accounting Changes' which is captured within the Exogenous Factors category in this PBR proposal, FEI anticipates that these cost drivers will continue to drive incremental changes to future O&M.

It should be noted that the Codes and Regulations, Customer and Stakeholder Expectations, and Service Enhancements cost drivers are all impacted by customer numbers, system capacity, and peak load.

Codes and regulations become more stringent and drive system upgrades in cases where customer numbers drive increased population density, and as peak load and capacity demands on pipe increase.

Customer and stakeholder expectation and interaction increases with customer numbers.

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- 1 Service enhancements increase in proportion to customer attachments, as well as peak load  
2 and system capacity.
- 3 As can be seen in the response to CEC IR 2.24.12, these cost drivers account for approximately  
4 65 percent of the incremental O&M as filed in the 2010-2011 RRA and 2012-2013 RRA. To the  
5 extent any of the impacts of these drivers is known today, they have been included in FEI's high  
6 level forecasts included in Sections C3 and C4 of its Application.

7

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1     **28     Reference: CEC 1.61.1**

9     Over the period of 2009 through 2013, O&M cost increases averaged 3.7% per year. In  
10    comparison, from 2013 to 2018 under the PBR formula that will be used to set rates (refer to  
11    Table B6-5 in Exhibit B-1), the average increase is 2% per year.

12    Under the proposed PBR Plan, O&M annual percentage increases will in fact be lower than the  
13    2009 – 2013 period for rate setting purposes. This provides evidence of FEI's plan to control  
14    costs for the benefit of customers.

2

3           28.1    For the year 2009 to 2013, where O&M costs rose 3.7% per year, please provide  
4                    the year by year data by department as in C3-5.

5

6     **Response:**

7     Please refer to Attachment 81.2 provided in the response to BCUC IR 1.81.2.

8

9

10

11           28.2    Why is total 7% from 2010 to 2013 implying about a 2.27% per year increase  
12                    different from the 3.7% increase for 2009 to 2013. Was the difference related to  
13                    all increases in 2009 or is there some other explanation?

14

15     **Response:**

16     From 2010 to 2013, O&M is forecast to increase by a total of 7 percent, implying annualized  
17     increases of approximately 2.27 percent. This contrasts with the period from 2009 to 2013  
18     during which O&M is forecast to increase by 3.7 percent annually. The difference is attributable  
19     to year 2010 when O&M increased 7.6 percent over that of 2009. This increase was discussed  
20     and substantiated in detail in the 2010-2011 RRA.

21

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1    29    **Reference: CEC 1.62.1**

7    The 2013 projected deferral amount of \$10.285 million is described on page 151 of the  
8    Application.

2

3

4            29.1    Are the deferred amounts shown in the O&M projects part of the 2013 projected  
5                    costs or are they shown there for the purpose of comparison to approved totals?

6

7    **Response:**

8    The deferred amounts shown in the O&M projections are not part of the projected costs. These  
9    amounts are shown for the purpose of comparison to the approved totals and as described in  
10   response to BCUC IR 2.274.1.

11

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1     **30     Reference: CEC 1.63.1**

8     Besides the normal inflation for ongoing support and maintenance costs, the increase in non-  
9     labour expense is primarily due to the software licensing and support costs for the technologies  
10    associated with the Customer Care Enhancement project. The benefits of this project were  
11    identified in the CPCN.

2

3     30.1     Please provide the amounts required for the software licensing and support costs  
4     for the Customer Care project.

5

6     **Response:**

	2013 Forecast \$(000)
Software Licensing	\$725
Support	\$2,601
Total	\$3,326

7

8

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1    31    **Reference: CEC 1.64.1**

7    As stated on page 175 of Exhibit B-1, with respect to non-labour costs this business area is  
8    forecasting minor cost reductions resulting from the scheduled completion of the standardized  
9    locks and security devices upgrade described in the 2012-2013 RRA. Beyond this, non-labour  
10   cost pressures are expected to be offset by efficiency gains. This is further described on pages  
11   175 through 177 of the Application.

36   FEI expects these pressures to be offset somewhat by cost reductions associated with  
37   efficiency gains from productivity and integration improvements. These efficiency gains and any  
38   associated savings are uncertain at this time.

Exhibit B-1, Page 176

31.1   Please describe the type of productivity related efficiency gains anticipated.

**Response:**

Productivity opportunities may be identified and achieved over the 2014-2018 timeframe in the broad areas of people, processes, and tools. Any specific productivity-related efficiencies and the associated savings are uncertain at this time.

31.2   Please provide the type of integration improvements anticipated and why they may produce efficiency gains.

**Response:**

Integration opportunities may be identified and achieved over the 2014-2018 timeframe in the broad areas of people, processes, and tools. Any specific integration-related efficiencies and the associated savings are uncertain at this time.

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1     **32     Reference: CEC 1.65.1**

7     Operations Support's O&M non-labour costs are driven by codes, regulations and system  
8     reliability requirements identified both internally and in support of maintenance activities of both  
9     the Operations department and Customer Service billing operations. As such, any change in  
10    regulatory requirements, industry standards or internal standards that significantly influences  
11    Operations Supports may have a direct impact on the funding required on non-labour costs.

2  
3            32.1    Please identify the applicable codes, regulations and system reliability  
4            requirements that would have to be changed to impact the non-labour costs.

5  
6     **Response:**

7     Operations Support provides critical asset management, emergency response, system  
8     maintenance and vehicle fleet services. As such, there are a wide variety of applicable codes,  
9     regulations and system reliability requirements that have the potential to impact non-labour  
10    costs in the event of a change. Provided below are several examples of relevant regulation  
11    which can impact non-labour costs for Operations Support. Note the various codes and forms  
12    of regulation listed below are not to be considered an all-encompassing list but are provided as  
13    examples only.

14    A change to standard CSA Z662-11 adopted within the regulations associated with the *Oil and*  
15    *Gas Activities Act* enforced by the BC Oil and Gas Commission has the potential to impact  
16    Operations Support's non-labour costs, particularly if the change relates to emergency  
17    preparedness, level of preventive or corrective maintenance or equipment design. The type of  
18    costs which may be impacted include testing requirements, type and volume of maintenance  
19    materials, logistics, and training costs.

20    A change to the standard CSA B149 adopted within the Gas Safety Regulation of the BC *Safety*  
21    *Standards Act* and enforced by British Columbia Safety Authority can impact Operations  
22    Support's non-labour costs. The types of costs which may be impacted include the type and  
23    volume of maintenance materials, small tools or equipment and logistics costs.

24    Safety Code 6 enforced by Health Canada and the *Radiocommunication Act* and associated  
25    regulations enforced by Industry Canada could impact non-labour costs with respect to the  
26    maintenance and operations of FEI's radio communication network. A change in any of these  
27    two forms of regulation could result in increased 3<sup>rd</sup> party inspection frequency, an increased  
28    requirement of bandwidth spectrum licenses or additional maintenance requirements.

29    The *Electricity and Gas Inspection Act* and associated regulations enforced by Measurement  
30    Canada can have an impact on non-labour operating costs. Impacts to non-labour costs can be  
31    related to 3rd party meter testing services or meter and instrument testing requirements. Non-  
32    labour costs that can be incurred include maintenance materials, small tools and equipment,  
33    logistics, certification and training. Secondly, the requirements for meters to be approved for use



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1 by Measurement Canada can create circumstances such that there is a limited number of  
2 suppliers of products which can impact the non-labour cost for maintenance of meters.

3 A change to the National Safety Code adopted within the regulations under the BC *Motor*  
4 *Vehicle Act* governed by the BC Ministry of Transportation and Infrastructure and the Ministry of  
5 Public Safety and Solicitor General, could impact non-labour costs with respect to maintenance  
6 and operation of FEI's fleet. These costs may relate to various third party inspections, licensing  
7 and insurance required to remain in compliance.

8 Finally, changes to *Workers Compensation Act* and associated regulations, the *Environmental*  
9 *Management Act* and associated regulations or the BC *Transport of Dangerous Goods Act* and  
10 associated regulations as required by regulators, including WorkSafeBC, BC Ministry of  
11 Environment and BC Ministry of Transportation and Infrastructure can impact non-labour costs  
12 in Operations Support. These costs can arise from changes to equipment or procedural  
13 requirements around emergency response, for example, which can also require training  
14 associated with any new requirements or annual fees required to meet new regulation.

15

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1     **33     Reference: CEC 1.66.1**

10     Of the two new contact centres, the Prince George Contact Centre is owned and the Willingdon  
11     Contact Centre is leased. The increases in non-labour costs in 2012 are primarily driven by the  
12     addition of these two facilities. The costs for these facilities include the lease cost of the  
13     Willingdon Contact Centre and other costs to support the operations and maintenance of the  
14     two facilities such as janitorial, landscaping, security, snow removal, Heating/Ventilation/Air  
15     Conditioning maintenance, heat, light, natural gas, stationary, courier and postage.

2

3             33.1     Please confirm that the owned costs of the PG facilities are not in the non-labour  
4                     costs but are in depreciation accounts, interest costs, ROE costs and Tax costs  
5                     related to ROE.

6

7     **Response:**

8     Confirmed. All capital costs associated with putting the Prince George facility into service were  
9     capitalized and included in rate base. This results in depreciation expense, interest expense,  
10    return on equity and the calculation of income taxes all of which forms part of the cost of  
11    service.

12

13

14

15             33.2     Please provide the lease costs for the Willingdon Contact Centre.

16

17    **Response:**

18    The current lease costs for the Willingdon Contact Centre is \$1,819,761.60 per annum. The  
19    lease has scheduled rent increases in Year 3 – July 2013, Year 5 – July 2015, Year 7 – July  
20    2017, and Year 9 – July 2019.

21

22

23

24             33.3     What facilities are in the base 2010 2011 costs?

25

26    **Response:**

27    Neither the Prince George nor Willingdon Contact Centres are in the 2010 or 2011 base costs.  
28    The Prince George Contact Centre acquisition and Willingdon Lease possession began in 2010.  
29    Costs for the 2010 and 2011 period were recorded in a deferral account.

30

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1     **34     Reference: CEC 1.67.1**

6     Workplans for the EH&S department are comprised of several ongoing areas of focus that  
7     attract non-labour costs. Changing or new regulatory requirements often require evaluation by  
8     external consultants with unique subject matter expertise; the subsequent operational  
9     integration of any new requirements must be ensured. As the scope of work has increased, the  
10    EH&S group, with increased expertise due to the integration of the utility divisions, has been  
11    able to efficiently manage scope increases as required, resulting in non-labour costs being  
12    relatively flat from 2010 to 2013.

2

3           34.1     What is in the non-labour cost component?

4

5     **Response:**

6     The non-labour cost component includes items with which EH&S supports routine operational  
7     activities and the evaluation of new EH&S regulatory requirements, in addition to supporting  
8     corporate emergency response activities. Costs relate to the retention of external subject  
9     matter expertise (as required), industry association fees and costs of maintaining current  
10    knowledge on regulatory requirements, employee related expenses, and emergency response  
11    contractor fees.

12

13

14

15           34.2     Why did the costs decrease for 2011 to 2012 and then why did they increase in  
16                      2013?

17

18     **Response:**

19     In 2011, costs decreased from 2010 as external subject matter support relating to the  
20     implementation of new regulatory requirements around GHG emissions' reporting and  
21     verification was completed in 2010; that external support was not required to the same degree  
22     in 2011. Furthermore, the GHG tracking system was under development within the company in  
23     2010, and external subject matter expertise was retained to support the synchronization of the  
24     two different reporting formats. In 2011, internal staff was trained to manage the ongoing GHG  
25     reporting requirements.

26     Starting in 2012, and continuing into 2013, (as stated on page 186 of the application),  
27     environmental consulting work relating to the review of specific watercourse classifications was  
28     conducted. External consultants were also retained to provide support in the update of the  
29     company's Waste Manual that will be integrated for use across its operations.

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- 1 FEI notes that although the 2013 Projection for non-labour is higher than 2012, it still remains
- 2 \$111 thousand below the 2013 Approved.
- 3

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1     **35     Reference: CEC 1.68.1**

6     For the non-labour component, the Finance and Regulatory department is not forecasting any  
7     major pressures except for general inflation.

3             35.1     What is in the non labour component for the Finance and regulatory department?  
4

5     **Response:**

6     The non-labour component for the Finance and Regulatory departments mainly includes costs  
7     for BCUC assessments, auditor fees, management service charges from FHI, contractor costs,  
8     computer costs, membership dues, bank charges, training costs, supplies, and employee  
9     expenses.

10

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## 1 PART 2 – CAPITAL

### 2 36 Reference: Introduction, CEC 1.1.1 and CEC 1.11.5

10 The question asks about the use of "efficiency gain plans" and post implementation  
11 documentation of these plans. FEI uses other effective mechanisms, described in the  
12 Application, to encourage a productivity improvement culture that focusses on delivering cost-  
13 effective service. FEI provides a recap of its position on the subject of Productivity here to set  
14 the context to address a number of related questions contained in the CEC's Information  
15 Request number one.

4 The CEC summary of this response is that FEI does not have any specific project  
5 tracking to be able to determine if there are efficiency or productivity gains being  
6 achieved. FEI uses other methods to achieve productivity improvement, being to put the  
7 responsibility on department managers in terms of their budget commitments and  
8 specifically on management employee's personal performance plans to ensure  
9 accountability for a productivity improvement culture. There is an exception to this in the  
10 IT group where specific business cases are prepared for projects and Benefits  
11 Management systems are in place. There is also an exception with respect to meter  
12 recalls as shown in the application B-1, page 218, mains installation as shown in the  
13 application B-1, pages 231 and 232, service installations as shown in the application B-  
14 1, pages 237 and 238, and new meters installation as shown in the application B-1,  
15 pages 239 and 240. The questions below specifically deal with the capital budgets and  
16 their management.

17 36.1 Please identify any other exceptions within FEI, other than IT where business  
18 practices involve pre-project quantitative assessment, evaluation, implementation  
19 and post project tracking and evaluation of the project achievements.

#### 21 **Response:**

22 FEI does not agree with CEC's summary in the preamble above.

23 The prudent and efficient delivery of projects that maintain asset health for transmission and  
24 distribution assets is the responsibility of Engineering and the Project Management Office  
25 (PMO).

26 Pre-project quantitative assessment for sustainment capital expenditures involves an analysis of  
27 asset health to assess the safety, reliability and integrity of distribution and transmission  
28 systems. Assets that are no longer fit-for-purpose are scheduled for replacement or  
29 enhancements in the company's capital plans.

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Post project tracking evaluation involves assessing that the planned scope was completed on schedule, on or below budget, carried out safely, and that internal and external customer expectations were met. In most cases, the focus of the capital project is the replacement of the pipe. In these instances, the projects are evaluated using the criteria discussed.

Engineering and PMO continue to work on enhancing these processes with the desired outcome to improve transparency, allowing stakeholders to have a better understanding of how the Company's decisions will mitigate risks, improve performance and reduce non-essential costs. A common Asset Management Strategy is being developed across both the Gas and Electric businesses with the objective of continuing to improve capital investment decisions, planning, and execution.

Please also refer to the response to CEC IR 2.36.2.

36.2 Please confirm that for all others capital budgets, not excepted above, there is no expectation in FEI that productivity improvement needs to be measured or tracked and as such there is no accountability for productivity improvement except accountability to the soft subjective items included in budget documents and personal performance plans for managers.

**Response:**

For Sustainment and Other (excluding IT) capital, productivity improvements are measured financially by comparing actual capital spending and scope implemented to the approved capital amounts and scope. However, the nature and differences in the work makes it difficult to measure or track productivity improvements for this type of capital. Work and spending in these categories are not generally consistent and uniform and tend to be customized, depending on the conditions regarding the project. For example, a pipeline upgrade project may vary in scope and costs depending on the location of the project. For an office building project, the same challenge exists in measuring productivity. Recognizing the challenges and yet still having financial accountability for productivity improvement, FEI instead follows a broader approach to managing these categories of capital by managing and prioritizing total spending to minimize cost.

Productivity improvement for project type work is measured using different factors including:

- Preparing detailed capital plans well in advance with options identified and accurate cost estimates prepared;
- Ensuring sufficient lead time to manage procurement of resources;

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- Risk ranking projects to strike a balance between reliability and affordability.

Success in these activities will contribute to ensuring capital spending is carried out in an efficient manner.

36.3 Please provide all of the budget documents for the management of the capital for 2013, which specifically address any form of measured efficiency or productivity, other than subjective views of productivity or efficiency improvement.

**Response:**

Efficiency and productivity is not found in the budget documents themselves, but in the execution of the capital budget and also in the asset management process discussed in the response to CEC IRs 2.36.1 and 2.36.2.

36.4 Please provide all of the personal performance plans for managers for the management of capital for 2013, which specifically address any form of measured efficiency or productivity, other than subjective views of productivity or efficiency improvement.

**Response:**

It is not appropriate to provide individual employee performance plans due both to the personal nature of the performance plans and the number of people involved in managing capital in various parts of the organization. Broadly speaking, FEI's objectives in managing capital are to maintain or improve capital investment decisions aimed at:

- maintaining capacity of the distribution and transmission systems to meet existing and forecast load;
- ensuring safety, integrity and reliability of the distribution and transmission systems; and
- ensuring expenditures required for the installation of new mains, services, and meters, which are necessary to attach new customers to the gas distribution system, pass the main extension economic test (uneconomic results require contributions from customers for the planned main extensions to proceed).



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These high-level objectives cascade down to individual employee performance plans based on their specific area of responsibility.

Additionally, as discussed in the response to CEC IR 2.36.2, productivity improvement for project type work is measured using different factors including:

- Preparing detailed capital plans well in advance with options identified and accurate cost estimates prepared;
- Ensuring sufficient lead time to manage procurement of resources;
- Risk ranking projects to strike a balance between reliability and affordability.

The performance plans of employees involved in managing projects reflect these factors.

The inclusion of a productivity improvement factor in FEI's PBR Plan provides a comprehensive productivity measurement that will require each department to consider continuous improvement, which is preferred to measurement of individual activity. Departments have a requirement to maintain or increase their outputs and activity levels while keeping cost increases below inflation on a per customer basis, which will result in a measured improvement in productivity. The result of this focus is evident and discussed in the departmental results and forecasts included in Section C3 of this Application and in the Productivity Focus and Organizational Performance discussion above that contains many actual examples of productivity achievements. FEI will continue to discuss productivity measures taken during the PBR Period at its Annual Reviews.

36.5 Please indicate whether or not FEI have been using a productivity improvement factor approach during the cost of service regulation period 2010 to 2013 and if so please provide the results of the use of this approach.

**Response:**

FEI has not been using a productivity improvement factor approach for capital expenditures similar to that proposed for the PBR Plan with a targeted productivity factor. Instead, FEI has been fostering a productivity focus throughout the organization, encouraging employees to improve productivity and realize efficiencies where they can.

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7 And as noted in Exhibit B-1, the result of this focus is evident and discussed in the departmental  
8 results and forecasts included in Section C3 of Exhibit B-1 and in the Productivity Focus and  
9 Organizational Performance discussion that contains many actual examples of productivity  
10 achievements in the past. For the reasons outlined, departments are not expected to formally  
11 document and quantify all productivity initiatives and related savings except in ad-hoc situations  
12 or situations where a capital investment is required (i.e. IT capital investment). As indicated in  
13 the response to CEC IR 1.11.5, business technology capital requests related to productivity  
14 improvements and enhanced customer service will only be funded provided they are supported  
15 by a benefits case in accordance with the IT Benefits Management practice as detailed in  
16 Exhibit B-1-1 Appendix C4.

36.6 Please confirm that for other capital investments, other than the ones listed above with specific metrics, there are no consistent productivity measurements, which is consistent with the statement that departments are not expected to formally document and quantify all productivity initiatives and related savings.

**Response:**

Please refer to the response to CEC IR 2.36.2.

36.7 Please confirm that for other than IT on an ad-hoc basis some of the other capital expenditures the company proposes from time to time, such as a new building facility, will have a number of metrics defining the service use requirements for the building and that these would usually be CPCN applications to the Commission.

**Response:**

The requirement to business case IT projects should not be considered “ad hoc”. A structured and repeatable business casing process has been operational for several years as detailed on page 460 of the Terasen Gas 2010-2011 Revenue Requirement Application. This IT project evaluation and justification process continued to evolve with the introduction of Project Portfolio Management as described on page 377 and 378 in the 2012-2013 RRA and furthermore with the Benefits Management practice as detailed in Exhibit B-1-1, Appendix C4.

As discussed in the response to CEC IR 2.36.1, for other capital projects related to distribution and transmission assets, the most common post project tracking evaluation used is assessing that the planned scope was completed on schedule, on or below budget, carried out safely, and that internal and external customer expectations were met.

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1     **37     Reference: CEC 1.2.1**

28     As outlined in that response, business areas identify and reflect achievable productivity  
29     opportunities in their budget requirements when preparing the detailed budgets for the year.  
30     Sustainable savings are reflected in future budget requirements. Additionally, productivity  
31     improvement objectives are embedded into personal performance plans of managers  
32     throughout the organization to ensure accountability for a productivity improvement culture.

2

3             37.1     Please confirm that FEI has no way of determining if the productivity  
4                     improvements have been sustained, because they are generally not measured  
5                     and or tracked.

6

7     **Response:**

8     Please refer to the response to BCUC IR 2.338.20.

9

10

11

12

13             37.2     Please confirm that productivity improvements may in some cases be used to  
14                     enable expenditures on other functions a department manage may feel is  
15                     appropriate.

16

17     **Response:**

18     Please refer to the response to CEC IR 2.6.3.

19

20

21

22

2     The FEI forecast of O&M and capital costs does not represent the appropriate benchmark for  
3     the company to be held to when determining whether or not new efficiencies have been  
4     achieved. The 2014 through 2018 O&M and capital forecasts included in the Application are for  
5     reference purposes only. They represent a high level forecast of future trends, challenges and  
6     capital priorities over the upcoming five years.

23

24             37.3     Please confirm that if capital forecasts are not an appropriate benchmark that FEI  
25                     is expecting that a formula driven capital requirement will be the FEI proposed  
26                     benchmark.

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**Response:**

Confirmed. It is the formula-based capital that will be used to set rates and establish the benchmark for FEI to aim to do better than. In other words, efficiency achievements will be measured against the formula-based capital amount rather than the five year forecast provided. The capital forecasts were prepared at a high level to allow the Commission and interested parties to understand the future trends, challenges and priorities over the upcoming five years.

Please also refer to the response to CEC IR 2.4.1.

37.4 Please advise if FEI currently uses a formula to determine its capital budgets and if so please provide the formula and its application and if not please describe whether or not the current method of setting capital budgets aligns with the high level forecast method used in the application for reference.

**Response:**

For 2012 and 2013, FEI did not use an overall formula approach similar to the PBR Plan to determine its capital budget requirements. However certain categories such as growth capital related to new customer additions and meter exchanges driven by forecasted meter exchange activity levels and included as part of sustainment capital were determined using a “formula” approach (i.e. forecast activity level multiplied by the forecast unit cost). This incorporated forecast levels of building starts, the mix of single family versus multi family, and FEI’s market share of new housing. Additionally, the forecast unit cost considered a historical rolling average of costs for mains, services and meters. For meter exchanges, the activity levels were determined with consideration for codes and regulations and the company’s progress within the meter recall program.

For the remaining capital, the forecast method used by FEI in the 2012-2013 RRA is a combination of project specific forecasts as well as a trending analysis that considers the rolling average of historic results as well as the remaining useful life of certain asset classes.

For the high level forecast included in the Application, the forecast in the outer years are based on high level assumptions and trending of information and assumptions where applicable.

The high level forecast has been provided for reference purpose only.

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1     **38     Reference: CEC 1.2.3**

23     New efficiencies may be found in a number of ways. In some cases the efficiencies will be found  
24     through discovery of better ways of doing the work with little or no incremental expenditure  
25     involved. In other cases, where incremental expenditures are required to achieve the new  
26     efficiencies the incremental costs may be either a capital or an O&M expenditure. In cases that  
27     involve a capital expenditure to achieve new efficiencies, the capital will be considered a normal  
28     rate base addition that will be recoverable in rates as capital additions are under conventional  
29     cost-of-service ratemaking. O&M expenditures to produce efficiency savings will also be  
30     recoverable, as they are under conventional cost-of-service ratemaking. The PBR changes the  
31     manner in which rates are determined (i.e. using formulas) in order to incent the Company to  
32     pursue efficiencies but the actual expenditures that are made will be recorded as utility  
33     expenditures in the normal fashion.

34     A key selling feature of PBR is that it extends the period before rebasing, which allows the utility  
35     to invest in measures and obtain a payback of the investment in circumstances where rebasing  
36     after a typical test period of one or two years would otherwise preclude the utility from  
  
1     recovering that investment. In short, it opens new possibilities for the utility to achieve  
2     efficiencies to the benefit of both the utility and customers.

5             38.1     In defining one of the reasons for an alternative to the Cost of Service regulation  
6                     FEI poses that an extended period before rebasing would allow the utility to  
7                     obtain a payback on investment. The CEC would like to explore why FEI may  
8                     want or need an extended period for a payback.

10     **Response:**

11     This IR has been identified as relating to the PBR Methodology and will be submitted with the  
12     PBR Methodology IR responses.

16             38.2     Please confirm that if the utility has not planned for an investment, including the  
17                     costs in its rate base and into its revenue requirements, such that its rates will  
18                     recover the costs the utility would be at risk for not recovering its cost if it made  
19                     an investment during such a period before it would have the opportunity to  
20                     incorporate the costs into its cost of service recovery (rebasings).

22     **Response:**

23     This IR has been identified as relating to the PBR Methodology and will be submitted with the  
24     PBR Methodology IR responses.



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38.3 Please confirm that for a longer period of regulation without cost of service rebasing the incentives to invest in anything not already allowed for in the cost recovery approach would lead to increased risks for the utility.

**Response:**

This IR has been identified as relating to the PBR Methodology and will be submitted with the PBR Methodology IR responses.

38.4 If the above description is not a correct description of this problem please provide additional description of the problem the company is referring to when it proposes a benefit to having a greater payback period.

**Response:**

This IR has been identified as relating to the PBR Methodology and will be submitted with the PBR Methodology IR responses.

38.5 Could this problem be overcome if the utility was able to place the costs of such investments into a deferral account for collection from customers in a later rebasing decision by the Commission?

**Response:**

This IR has been identified as relating to the PBR Methodology and will be submitted with the PBR Methodology IR responses.

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1           38.6   What would be required for such a deferral account to be established within a  
2                   Cost of Service regulatory context to avoid the negative incentive for investment?

3

4   **Response:**

5   This IR has been identified as relating to the PBR Methodology and will be submitted with the  
6   PBR Methodology IR responses.

7

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1     **39     Reference: CEC 1.9.3**

5     Specifically related to the outsourcing of meter reading services FEI does not believe that is  
6     could have achieved better results under a PBR than without a PBR. FEI's focus in providing  
7     services to customers is to achieve the highest quality of service at the lowest possible cost  
8     regardless of the regulatory mechanism.

3            39.1     If FEI could not have done better differently under either form of regulation than  
4                   what it is able to accomplish in a contract with a service provider, in this case  
5                   meter reading, would this be true for other contracts as well?

7     **Response:**

8     With all its contracted services, FEI works to provide the required quality of service in the most  
9     cost-effective manner. Where possible to achieve further efficiencies, FEI is committed to doing  
10    so. PBR is intended to allow the utility greater operational flexibility to seek out  
11    efficiencies. This is also true with respect to FEI's contracted services.

15           39.2     Please provide the total dollars spent and percent of total work done under third  
16                   party contracts for capital work for the previous years, 2010, 2011, 2012 and  
17                   2013 projected.

19     **Response:**

20    Please refer to the table below for the total dollars spent and percent of total work done under  
21    third party contracts for capital work for the requested years.

	2010 Actual	2011 Actual	2012 Actual	2013 Projection
Total Base Capital Dollars	82,365	95,662	102,591	123,781
Total Third Party Contracts for Capital Work	21,209	35,231	35,500	40,241
% of Third party contacts/Total Base Capital	26%	37%	35%	33%



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1     **40     Reference: CEC 1.9.4**

18     For the purpose of defining a significant contract, FEI chose the threshold of contracts issued for  
19     one (1) million dollars annually. Most significant contracts have an initial term with an optional  
20     contract renewal period. With respect to annual expenditure magnitudes FEI relies on historical  
21     values. Contractual values are estimates and may come in under one (1) million dollars in any  
22     given year based on operational demand. Please see the table below.

2

3             40.1     Are most of the FEI contracts dealing with capital work variable at least in part  
4                     such that the work to be done is assigned to the contractor by FEI and the  
5                     contract establishes terms and conditions for charging FEI for the work, so that  
6                     FEI still controls significant variable with regard to the efficiency of the work and  
7                     therefore the costs?

8

9     **Response:**

10     FEI's contracts are established through a procurement process. The contracts define the scope  
11     of work including FEI's standards, the price and the terms and conditions. How the work is  
12     completed is controlled by each contractor.

13

14

15

16             40.2     Does FEI have any contracts with third party providers of capital work that are  
17                     based on efficiency or productivity performance bonuses?

18

19     **Response:**

20     FEI negotiates contracts with volume pricing based on an "as and when required," basis. Bonus  
21     incentives work best with contracts that have defined end dates. The "as and when" required  
22     contracts are a better option for FEI as it allows flexibility based on demand with cost  
23     efficiencies built into the contract based on the pricing terms the market will bear at the time.

24

25

26

27             40.3     If FEI has such contracts please identify the contract circumstances, type of  
28                     contract and provide an excerpt of the efficiency or productivity terms and  
29                     conditions.

30

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1 **Response:**

2 Refer to the response to CEC IR 2.40.2.

3

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1     **41     Reference: CEC 1.11.1**

7     For the BC One Call processes, the savings are achieved through the reduction in ticket  
8     processing time required. The technology stream enhanced and integrated FEI technologies,  
9     and therefore enabled automation for some of the routine and time consuming processes/steps  
10    required in assembling the underground utility information packages required by the information  
11    requestors through BC One Call.

2  
3            41.1    Does the standardization of the work package process result in a reasonably  
4                   homogeneous set of work types increasing FEI's ability to manage the work more  
5                   systematically?  
6

7     **Response:**

8     Yes.

9  
10  
11  
12            41.2    Is the BC One Call process part of the capital costs FEI will record into rate base  
13                   or is it part of operating cost and or is some of the cost carried into capital  
14                   through overhead loading?  
15

16    **Response:**

17    The BC One Call processes are an O&M cost.

18  
19  
20  
21            41.3    When the process is improved by standardization such as is described, is there  
22                   any risk that the fixed nature of the automated process will result in higher costs  
23                   for some of the work packages?  
24

25    **Response:**

26    There is no risk that the automation will result in higher cost for some work packages. All work  
27    packages benefit from the automated process.

28  
29

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1  
2           41.4   Has the efficiency of the work done on the standardized work packages been  
3                   monitored to determine if the work is accomplished more efficiently?

4  
5   **Response:**

6   Yes, FEI continually monitors the efficiencies of the BC One Call processes.

7

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1    **42    Reference: CEC 1.11.2**

25    As indicated on page 175 of Exhibit B-1 Section C3.9.3 Engineering Services and Project  
26    Management Review, the total savings is estimated at \$600 thousand per year.

3            42.1    Has the \$600 thousand in savings resulted in a decrease in the budgets for the  
4                   full amount of the saving?

5  
6    **Response:**

7    The \$600 thousand O&M reduction is reflected in the 2013 Base. The reduction in O&M is  
8    shown in the Application on Table C3-2 and comprises a portion of the \$1.5 million in  
9    productivity (Sustainable Savings) shown on the Engineering Services & PM line of the table, as  
10   discussed on page 174, line 32 to page 175, line 4 of the Application.  
11

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**43 Reference: CEC 1.11.3**

43.1 How much capital was invested to improve the BC One Call process?

**Response:**

Please refer to the response to CEC IR 2.8.1.

43.2 Was a cost benefit analysis done before the investment was made and if so please provide the details of the planned cost benefit and the post project assessment of what was accomplished?

**Response:**

The cost benefit analysis was done before the investment was made. The details of the overall BC One Call Project, which included the Technology stream that is the subject of this IR, were described on pages 415 through 418 of the 2012-2013 RRA. At the time (on page 417), the total project benefits were estimated at \$540 thousand in annual sustainable O&M savings. Post project assessment confirmed the project benefits are \$600 thousand annual O&M savings and the source of this financial benefit is from the direct reduction of average ticket processing time.

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**44 Reference: CEC 1.11.4, Table C4-22 (forecast), Table C4-21 (historical) and Exhibit B-1-1 Appendix C4**

As discussed in Exhibit B-1, Application, Section C4.6.4.2, the Company intends on leveraging technology to improve productivity and service in a variety of ways for several key business areas throughout the PBR time period. It intends on driving this change through the list of Business Technology Transformation programs (the current list of programs has been provided in Exhibit B-1-1, Appendix C4). FEI will measure the expected benefits of these changes through the newly introduced Benefits Management practice as discussed in Exhibit B-1-1, Appendix C4.

**Table C4-22: Forecast IT Capital Expenditures (\$ thousands)**

	2013 Base	2014 Forecast	2015 Forecast	2016 Forecast	2017 Forecast	2018 Forecast
<b>IT Capital</b>						
Business Technology Transformation	5,941	5,940	5,940	5,940	5,939	5,938
Business Technology Enhancements	3,199	3,199	3,199	3,199	3,198	3,197
Infrastructure Sustainment	3,884	3,884	3,884	3,884	3,655	3,197
Desktop Infrastructure Sustainment	1,599	1,599	1,599	1,599	1,827	2,284
Application Sustainment	5,484	5,483	5,483	5,483	5,482	5,481
	20,107	20,105	20,105	20,106	20,102	20,098

**Table C4-21: Historical IT Capital Expenditures (\$ thousands)**

	2010 Actual	2011 Actual	2012 Actual	2013 Projection	2013 Approved
<b>IT Capital</b>					
Business Technology Transformation	3,655	5,099	2,193	6,300	5,850
Business Technology Enhancements	800	1,085	3,968	4,500	3,150
Infrastructure Sustainment	3,952	4,667	3,931	4,500	4,050
Desktop Infrastructure Sustainment	2,379	1,541	1,407	2,700	2,250
Application Sustainment	1,631	2,112	2,484	3,600	2,700
	12,418	14,503	13,983	21,600	18,000

B-1-1 Appendix C4

In response to the Directive above and as the next step in the adoption of Project Portfolio Management (PPM)<sup>2</sup> for IT capital investments, FEI has implemented a Benefits Management practice primarily for business technology transformation and business technology enhancement projects. Over the PBR Period, these categories of IT capital expenditures are expected to total approximately \$10 million annually. The other IT capital expenditure categories are in the nature of sustainment activities for existing information systems (the categories of infrastructure sustainment, desktop infrastructure sustainment, and application sustainment), which are evaluated more on managing risk to asset integrity and sustainability not necessarily on financial or productivity benefits.

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44.1 Please provide an estimate of net benefits achieved for the IT expenditures by year from 2010 to 2013.

**Response:**

Business Technology projects from previous years including 2010 to 2012 have supporting business cases and savings from projects executed in these fiscal years have been embedded in previous year actuals and the current year projections. However, the distinction between sustainment, enhancement and transformational categories as they relate to benefits was not defined and, therefore, net benefits cannot meaningfully be measured against costs for those years. For net benefits in 2013 refer to the response to BCUC IR 2.151.1.

44.2 Please provide an estimate of net benefits to be achieved for the ½ IT expenditures by year from 2014 to 2018 expected to contribute to enhancing productivity.

**Response:**

FEI has assumed that the “1/2” included in the question was an error.

It is challenging to predict at this time the net benefit expected to be achieved over the PBR period as the detailed list of Transformation and Enhancement projects within each of the Business programs have not yet been identified for 2014 to 2018. Examples of this type of work and associated benefits can be found in Table C4-1: 2013 Project Portfolio Benefits Exhibit B-1-1, Appendix C4. As each one of the discretionary projects in the subsequent Portfolios in 2014 to 2018 is approved, the project will be reviewed as described in Appendix C4.

44.3 What is the average expected life of benefits achieved from IT expenditures?

**Response:**

The typical period a benefit is monitored and reported upon within the Benefits Management practice is tied to the asset depreciation and expected end of life which is between 5 and 8 years.



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44.4 Would it be correct to say that to the extent the IT expenditures result in benefits being achieved the benefits would accrue substantially to the FEI customers provided the projects and the results are rebased into the rate decisions under a cost of service approach?

**Response:**

Yes, after rebasing both the costs and benefits of IT projects would accrue to customers under a cost of service approach. The duration of the costs and benefits would relate to the duration of the particular IT undertaking.

44.5 Would it be correct to say that FEI could share in the benefits of IT expenditures planned in rates but then not made to the extent the under spending has not been rebased?

**Response:**

In order to achieve the IT benefits it would be necessary to undertake the related capital expenditures. If the IT capital is not spent then the benefits would not be achieved. Under the PBR proposal to the extent that variances in IT capital expenditures and benefits achieved affect the resulting ROE, the variance is shared 50/50 via the ESM and these impacts may also be carried over under the ECM.

44.6 Please provide the approved amounts for IT for 2010, 2011, 2012.

**Response:**

The IT capital requested in the 2010-2011 and 2012-2013 RRAs for FEI was not broken down by the 5 sub-portfolios but there was a total amount allocated to IT Capital of \$18 million per year. It is only with the 2014-2018 process that FEI has moved to sub-portfolio forecasting.

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1     **45     Reference: CEC 1.11.5**

26     This is correct. FEI will continue to identify opportunities to leverage technology coupled with  
27     business process change and training in order to support productivity improvements and  
28     enhanced customer service. However, these Business Technology capital requests will be  
29     funded provided that they are supported by a benefits case in accordance with the IT Benefits  
30     Management practice as detailed in Exhibit B-1-1 Appendix C4. These requests will be  
31     assessed as candidates for execution based on priority within the Business Technology  
32     Portfolio.

2

3             45.1     Given that FEI will continue to look for opportunities to leverage IT technology,  
4                         would it be possible that FEI could have limited incentives if it were not possible  
5                         for FEI to get the capital investment into rate base because no funding was  
6                         available during the regulation determined period?

7

8     **Response:**

9     FEI will assess the new IT opportunities that arise during the PBR term in light of the business  
10    case of the particular IT project.

11

12

13             45.2     Please confirm that the Benefits Management practice incorporates assessment  
14                         of costs and benefits and if not please explain why not.

15

16    **Response:**

17    The benefits management practice as detailed in Exhibit B-1-1, Appendix C4 does incorporate  
18    cost and benefits within the Investment Analysis tools.

19

20

21             45.3     Please explain why it is important for FEI to have a cost benefit justification for  
22                         undertaking IT expenditures.

23

24    **Response:**

25    Cost benefit justification supports this investment decision-making to ensure resources are  
26    directed to the right IT expenditures. Benefits within IT capital investments will typically include,  
27    but are not limited to, improving public and worker safety, addressing potential shortcomings in  
28    customer service levels and driving O&M cost reductions or containment.

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1     **46     Reference: CEC 1.13.1 and CEC 1.13.2**

9

**Table 13.1: Productivity Improvements in HR**

Productivity Improvement	Associated Savings	Systems / Non-systems
Employee Express (automated time-entry technology)	\$152,000 based on reduction of two FTEs (plus additional savings recognized through cost avoidance of an additional time administrator)	Systems
Integration and redefining of roles in employee services, employee relations and employee development	\$561,000 based on reduction of four FTEs	Non-systems

10

2     8     FEI will have realized the benefits of this investment by 2014. If Employee Express had not  
3     9     been implemented, FEI would have had to incur annual costs from 2011 and beyond for labour  
4     10     and administrative costs.

4  
5     46.1     Does this mean that the benefits from the Employee Express (\$152,000) will be  
6     realized in 2014 and not in 2013?

7  
8     **Response:**

9     The benefits from Employee Express were realized in 2012 and 2013. The 2013 Base has  
10     already been adjusted for these benefits.

11

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1    **47    Reference: CEC 1.13.3**

21    No, at this time, there are no productivity improvement opportunities within the HR department  
22    that are ready to be implemented. However, the HR department at FEI is continually looking for  
23    opportunities to improve productivity, while continuing to meet service requirements, at the  
24    lowest reasonable cost. Process improvements at FEI follow an internal review and evaluation  
25    process prior to implementation to ensure the improvement makes prudent business sense.

2

3            47.1    Would the process described for achieving these benefits in the HR department,  
4                   specifically the 'internal review' and 'evaluation' to ensure the improvement  
5                   makes prudent business sense, be applicable to most productivity improvement  
6                   FEI might set out to make and if not why not?

7

8    **Response:**

9    Process improvement initiatives at FEI follow a similar general process of discussion, internal  
10   review and evaluation before approval and implementation. The duration of the review process,  
11   the steps required, including requirement for documentation of the initiative, and the people  
12   involved is dependent on the cost, complexity, and impact of the opportunity.

13

14

15

16            47.2    How long did the 'review' and 'evaluation' take and how long did the project  
17                   planning, implementation and wrap up assessment take.

18

19    **Response:**

20    The Employee Express project began in April 2011 and was completed in September 2011 in  
21    advance of the majority of Customer Service hires (approximately 300). Over the course of  
22    2012 the M&E group also moved to Employee Express, adding to the reduction of Time  
23    Administrators.

24

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1     **48     Reference: CEC 1.27.1**

17     All three categories were escalated using I-X formulas and there were incentives attached to  
18     Categories A and C, but not to Category B. The Category A incentives were unit cost-based,  
19     based on established target costs (\$/metre of main installed, \$ per service line and \$ per meter  
20     for measurement). The incentive for Category C was based on spending less than an overall  
21     lump sum allowance.

2

3             48.1     Why would it make sense for Category A, Mains, Services and Measurement, to  
4                     have its unit cost based incentives?

5

6     **Response:**

7     This IR has been identified as relating to the PBR Methodology and will be submitted with the  
8     PBR Methodology IR responses.

9

10

11

12             48.2     Do the unit cost based incentives essentially provide an assurance of completion  
13                     of a unit of service for each unit of expenditure?

14

15     **Response:**

16     This IR has been identified as relating to the PBR Methodology and will be submitted with the  
17     PBR Methodology IR responses.

18

19

20

21             48.3     Why was Category B, Transmission and Integrity Distribution, left out of the  
22                     incentives process at that time?

23

24     **Response:**

25     This IR has been identified as relating to the PBR Methodology and will be submitted with the  
26     PBR Methodology IR responses.

27

28

29

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1           48.4   How would the Category C, All Other Capital, Buildings, IT and other general,  
2                    spending be reasonably anticipated given that these types of decisions can  
3                    typically be discrete and require significant justification?

4  
5   **Response:**

6   This IR has been identified as relating to the PBR Methodology and will be submitted with the  
7   PBR Methodology IR responses.

8

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1     **49     Reference: CEC 1.27.2**

HISTORICAL FEI CAPITAL EXPENDITURES (\$ THOUSANDS)

	1997	1997	1998	1998	1999	1999	2000	2000
	Actual	Approved	Actual	Approved	Actual	Approved	Actual	Approved
Total Gross Base Capital Expenditures	80,368	71,564	73,213	87,017	82,593	79,500	88,428	87,343
	2001	2001	2002	2002	2003	2003	2004	2004
	Actual	Approved	Actual	Approved	Actual	Approved	Actual	Approved
Total Gross Base Capital Expenditures	72,778	76,017	72,671	N/A	81,186	87,528	91,644	85,378
	2005	2005	2006	2006	2007	2007	2008	2008
	Actual	Approved	Actual	Approved	Actual	Approved	Actual	Approved
Total Gross Base Capital Expenditures	95,409	90,611	83,591	97,985	73,158	101,570	89,998	99,660
	2009	2009	2010	2010	2011	2011	2012	2012
	Actual	Approved	Actual	Approved	Actual	Approved	Actual	Approved
Total Gross Base Capital Expenditures	90,968	94,208	86,287	93,511	103,610	93,597	108,421	116,408

Notes:

1. N/A - FEI withdrew the 2002 RRA Application, therefore approved base capital expenditures are not applicable for that year.
2. Base capital expenditures are not available for the years 1994 to 1996.
3. Base Capital Expenditures exclude CPCNs, retirements & CIAC.
4. 2010-2012 Approved figures have been provided for informational purposes only as PBR was not in effect for this period.

2

3     49.1     Please provide the reason for the over expenditure in 2011.

4

5     **Response:**

6     The higher spending in 2011 was forecast and discussed in the FEU's 2012-2013 RRA, and  
7     was mostly driven by higher Sustainment capital spending in that year. The reasons for the  
8     increase was mainly due to carryover projects that were not completed in the prior year and  
9     additional investments in sustainment capital that were identified through the LTSP's  
10    development, which was also discussed in the 2012-2013 RRA. Please refer to the response to  
11    BCUC IR 2.296.6.3 which discusses increased sustainment costs due to implementation of the  
12    LTSP.

13    In summary, the total actual spending for 2010 and 2011 of approximately \$189.9 million is \$2.8  
14    million or 1.5 percent higher than the approved total of \$187.1 million over the same period.

15

16

17

18     49.2     Please confirm that the PBR period 2004 to 2009 involved under expenditures on  
19     capital of over \$44 million.

20

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**Response:**

Upon review of the response to CEC IR 1.27.2, it was discovered that both the actual and approved amounts for 2004 through 2009 actual base capital expenditures were incorrect. FEI has provided an amended version of the table included in CEC IR 1.27.2 below. The difference for 2004 to 2009 between the formula-based (i.e. approved) and actual base capital expenditures are \$80 million.

FEI does not agree with the characterization of this difference as an under-expenditure.

FEI responded to the incentives inherent in the 2004-2009 PBR to find efficiencies and reductions in its O&M and capital expenditures. With respect to capital expenditures, this \$80 million reduction in spending meant that upon rebasing in 2010 the rate base was lower by this amount (net of any depreciation within the 6 year PBR term) and produced material ongoing benefits for ratepayers.

	1997 Actual	1997 Approved	1998 Actual	1998 Approved	1999 Actual	1999 Approved	2000 Actual	2000 Approved
Total Gross Base Capital Expenditures	80,368	71,564	73,213	87,017	82,593	79,500	88,428	87,343
	2001 Actual	2001 Approved	2002 Actual	2002 Approved	2003 Actual	2003 Approved	2004 Actual	2004 Approved
Total Gross Base Capital Expenditures	72,778	76,017	72,671	N/A	81,186	87,528	71,422	86,265
	2005 Actual	2005 Approved	2006 Actual	2006 Approved	2007 Actual	2007 Approved	2008 Actual	2008 Approved
Total Gross Base Capital Expenditures	77,400	91,530	85,204	98,945	74,399	102,557	90,084	100,654
	2009 Actual	2009 Approved	2010 Actual	2010 Approved	2011 Actual	2011 Approved	2012 Actual	2012 Approved
Total Gross Base Capital Expenditures	91,641	90,327	86,287	93,511	103,610	93,597	108,421	116,408

Notes:

1. N/A - FEI withdrew the 2002 RRA Application, therefore approved base capital expenditures are not applicable for that year.
2. Base capital expenditures are not available for the years 1994 to 1996.
3. Base capital expenditures exclude CPCNs, retirements and CIAC.
4. 2010-2012 Approved figures have been provided for informational purposes only as PBR was not in effect for this period.

49.3 Please provide an estimate of the benefit derived by the shareholder for the \$44 million under expenditure.



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1    **Response:**

2    As noted in the response to CEC IR 2.49.2, the corrected amount for the 2004-2009 capital  
3    difference is \$80 million. As noted in Section B4.2 of the Application (Exhibit B-1. Page 38), the  
4    reductions in capital spending below the formula-based amounts produced a shared benefit  
5    over the six year period of approximately \$50 million. Customers received 50 percent of this  
6    benefit, or approximately \$25 million, through the earnings sharing mechanism and after the  
7    PBR term the lower rate base value was incorporated in rates going forward. The lower rate  
8    base going forward produced sustained savings for customers in the order of \$10 to \$12 million  
9    per year through lower revenue requirements (Exhibit B-1, Page 38). FEI also received 50% of  
10   the benefit, or \$25 million, during the PBR term. Through the Efficiency Carry Over provisions of  
11   the 2004-2009 PBR, another amount of approximately \$11 million was received in the two years  
12   following the end of the PBR term (Exhibit B-1, page 36).

13

14

15

16           49.4    Please confirm that for the Cost of Service period 2010 to 2012 the total under  
17                    expenditures were over \$5million.

18

19    **Response:**

20    Confirmed.

21

22

23

24           49.5    Please provide an estimate of the shareholders benefit for the \$5 million under  
25                    expenditure.

26

27    **Response:**

28    It is possible that there was no shareholder benefit and there may have been a net cost to the  
29    shareholder from this capital spending below the approved capital expenditure levels in the  
30    2010-2012 period. The net benefit or cost to shareholder is highly dependent on the effect of  
31    capital cost allowance on the income tax calculations. If the reductions in capital expenditures  
32    were associated with asset classes with high capital cost allowance rates, there would be a  
33    corresponding increase in income taxes that can more than offset the rate base benefit to the  
34    shareholder. FEI believes that in total the net benefit or cost to the shareholder of this minor  
35    capital spending difference in 2010-2012 was immaterial.

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49.6 Please confirm that for the PRB period under expenditures were over \$12 million.

**Response:**

It is assumed that the question is asking about the 1998 through 2001 PBR, in which case it is confirmed that actual base capital spending over the four year period was approximately \$12 million less than the approved amount over the same period.

49.7 Please provide an estimate of the shareholder benefit for the \$12 million under expenditure.

**Response:**

The capital expenditure differences experienced in the 1998-2001 PBR period, as noted in CEC IR 1.27.2, were driven to a large degree by differences in activity levels. The 1999 -2001 period was characterized by dramatic price increases and volatility in natural gas commodity markets that affected all of North America, but was experienced most acutely in western North America. (This period is commonly referred to as the California energy crisis.) Customer additions for FEI fell off sharply in a manner that was not anticipated in the yearly revenue forecasts put forward in the Annual Reviews.

As was explained in the response to CEC IR 1.27.1, FEI was not successful in meeting the targets for the capital incentive mechanism in the 1998 -2001 PBR plan. As a result, FEI experienced rate base penalties in each year from 1998 through 2001 and residual penalties in the two years following. Consequently, from 1998 through 2001, FEI did not experience a shareholder benefit from the \$12 million capital under expenditure. In fact, the opposite occurred. As further explained in the response to CEC IR 1.27.1, there were several problems with the 1998-2001 capital incentive mechanism that led to FEI bearing a penalty for issues that proved to be beyond the Company's control.

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1           49.8   How can one distinguish between an over forecast or over provision for capital  
2                   expenditures by a formula and the efficient use of capital?  
3

4   **Response:**

5   This IR has been identified as relating to the PBR Methodology and will be submitted with the  
6   PBR Methodology IR responses.  
7  
8  
9

10  
11           49.9   Without a measure of the service provided for the capital expenditures how can it  
12                   be determined that capital is being used more efficiently?  
13

14   **Response:**

15   This IR has been identified as relating to the PBR Methodology and will be submitted with the  
16   PBR Methodology IR responses.  
17

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1     **50     Reference: CEC 1.28.1**

9     Appendix D4 to the Application summarized the evidence with respect to deferral of  
10    expenditures during the last PBR period. The evidence showed that FEI could not identify any  
11    instances of a deferral of capital spending during that time period. On this basis, FEI concludes  
12    that capital savings achieved during the past PBR period was sustained, and that the same  
13    experience is expected during the PBR period.

2

3           50.1    Please confirm that the identification of potential deferrals was related to capital  
4                    for which there is a known metric such as meter recalls.

5

6     **Response:**

7     The identification of potential deferrals was related to all capital.

8

9

10

11           50.2    Please confirm that there would be no way to know if there were deferrals of  
12                    capital in categories without a metric to determine if there was reduced service  
13                    as opposed to capital efficiency achieved.

14

15    **Response:**

16    Please refer to the response to CEC IR 2.49.8.

17

18

19

20           50.3    Please confirm that the \$44 million in under expenditure could also reflect that  
21                    the formula for capital simply provided an allowance for more capital expenditure  
22                    than was needed and therefore could be a windfall.

23

24    **Response:**

25    Please refer to the response to CEC IR 2.49.8. Any savings resulting from lower capital  
26    spending over the PBR period were shared equally with the ratepayers. Lower capital spending  
27    benefits customers no matter the source of the savings.

28

29

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50.4 Please confirm that there can be no permanent savings related to non-expenditure of funds that were never required to be expended.

**Response:**

FEI can confirm that there will be savings for ratepayers when there are lower expenditures as compared to what has been included in rates. FEI can also confirm that PBR provides incentives for a utility to discover new ways to reduce expenditures, through efficiencies, productivity improvements or otherwise. By discovering ways to reduce expenditures, what was once considered to be required to be expended, is no longer is required to be expended.

In the article in Attachment 50.4, Professor Weisman et al. provides a good explanation of why PBR provides more appropriate incentives than cost of service ratemaking. B&V adopts his explanation.

In the past, FEI has put forward reasonable and appropriate capital budgets which were scrutinized during the regulatory process to confirm the funding was required. Similarly, FEI now proposes a 2013 Base Capital that it believes is reasonable and appropriate and required.

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1     **51     Reference: CEC 1.28.2**

22     As stated in the response to CEC IR 1.28.1, the savings during the PBR Period are expected to  
23     come from permanent reductions, as opposed to deferrals. This is consistent with the past  
24     experience of PBR.

25     Considering the response to CEC IR 1.28.1 and the information provided in Appendix D4 with  
26     respect to benefits to customers of deferring capital expenditures, FEI does not see significant  
27     value in developing a guideline around the time period that would move a capital item from  
28     being a "deferral" to a "permanent savings" item. Benefits are generally provided to ratepayers  
29     in either case.

2

3             51.1     Please show the benefit of a permanent elimination of the need for a capital  
4                     expenditure versus the deferral of the timing of the expenditure of capital.  
5                     (Please use a \$1 million expenditure with a life of 10 years and a deferral of 5  
6                     years for timing.)

7

8     **Response:**

9     This IR has been identified as relating to the PBR Methodology and will be submitted with the  
10    PBR Methodology IR responses.

11

12

13

14             51.2     Please confirm that these two situations are very different in terms of the benefits  
15                     provided.

16

17    **Response:**

18    This IR has been identified as relating to the PBR Methodology and will be submitted with the  
19    PBR Methodology IR responses.

20

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**52 Reference: CEC 1.28.6**

33 If required to do so, FEI is able to calculate the extent to which ratepayers are benefitting from a  
 34 specific capital savings. However, since capital savings at a minimum provide benefits due to  
 1 the present value benefit, there should be no requirement to provide this information. Please  
 2 refer to Appendix D4 where FEI has provided an example of how the analysis would be  
 3 completed.  
 4 Detailed tracking of individual projects, while possible, is contrary to the intent of developing a  
 5 PBR Plan in the first place. A key purpose of PBR is to reduce the burden of regulatory  
 6 oversight and to structure formulas and incentive mechanisms in a fashion that aligns the  
 7 customer and utility interests.

52.1 Please confirm that this supposed relief from assessing the cost benefit of actions and tracking net benefits does not mean that FEI would be proposing to eliminate its IT Benefits Management and that in fact this process will be kept.

**Response:**

The Benefits Management Practice created in 2013 will not be eliminated. It will continue to be used throughout the PBR in order to inform discretionary business technology project investment decision making as it was used in the 2013 Project Portfolio.

52.2 Please confirm that FEI is aware that there is a positive case for cost benefit assessment and for tracking achievement of benefits in the understanding of good business practices and prudent management.

**Response:**

FEI agrees there are benefits associated with cost benefit assessment and tracking achievement of benefits in some situations. However, as indicated in the response to BCUC 2.338.20, benefits can still be achieved without tracking every activity that is performed and that has a cost associated with the activity. In determining what level of tracking is required, there needs to be consideration for the trade-off between the cost of tracking of benefits and the value of the information gained. In FEI's view, the costs of this detailed oversight approach outweigh the benefits. FEI has seen and provided evidence of its departmental managers taking responsibility for achieving productivity in their own areas of responsibility. The same benefits can be achieved without the requirement to accumulate and report on the various initiatives on a company-wide basis, as was demonstrated in FEI's last PBR.

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1     **53     Reference: CEC 1.43.1**

21     For most ongoing projects, FEI does not employ probabilistic estimating techniques due to the  
22     higher costs that would be incurred (with little offsetting benefit). Instead, project costs are  
23     typically single-value estimates with a contingency. This estimating method is straightforward to  
24     apply and relies on professional judgement and historical costs from similar completed projects.  
25     Since the vast majority of FEI capital projects are recurring in nature, this is a cost-effective  
26     method of developing project estimates. The estimates used for capital planning are either to  
27     AACE Class 5 or 4 degree of accuracy depending on the nature and timing of the project.

2

3             53.1     Please confirm that estimating a single value with Class 5 and Class 4 cost  
4             estimating with contingencies for 5 year capital planning will provide greater risk  
5             of error in defining capital expenditure need than a 2 year plan including a higher  
6             percentage of Class 3 estimates.

7

8     **Response:**

9     FEI agrees that regardless of the planning period, whether five or two years, less accurate cost  
10     estimates provide a greater risk of error; however, to complete a Class 3 estimate requires  
11     extensive preparation and planning with associated costs. Completing Class 3 estimates for all  
12     sustainment capital projects and programs would not be in the best interests of the customers.  
13     Assuming a two year plan and the time required to prepare a Class 3 estimate it is conceivable  
14     that FEI could be initiating a project with an estimate that is more than two years old and would  
15     bear little relevance to the market and/or scope compared to the time that it was developed. It  
16     is also possible that changing priorities could result in deferral of the project, resulting an even  
17     more out of date estimate and requiring re-estimating the project with associated costs.

18     It is in the best interests of customers to continue to develop resource requests based on a  
19     reasonable estimate (i.e. Class 4 or 5) and continue to manage costs at the time of execution.

20



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1     **54     Reference: CEC 1.44.2**

21     What FEI can confirm is that, if FEI is successful in implementing process improvements and  
22     achieving productivity gains, *"efficiency in the capital expenditure implementation processes of*  
23     *the company could lead to less capital expenditures being undertaken"*.

2

3             54.1     Would FEI be able to identify and track the savings related to such an increase in  
4                     the efficiency of a capital due to implementation of process improvements.

5

6     **Response:**

7     A number of factors make it difficult to determine savings for any such process improvements.  
8     Variables such as differences in the specifics of the different jobs, changes in pricing for  
9     resources from year to year and regional cost differences (e.g. Lower Mainland may cost more)  
10    make the comparison difficult. For example, as highlighted in Exhibit B-1, page 235, the  
11    geographical mix of service line installation costs is 33 percent higher in the Metro region  
12    municipalities versus Fraser Valley region municipalities. Factors like this make even the  
13    comparison of costs and tracking of savings for "repeatable" activities such as service  
14    installations difficult.

15    As a result, FEI view is that capital productivity improvements and their sustainment should be  
16    measured and tracked at the highest level. Please refer to the response to CEC IR 2.49.9.

17

18

19

20             54.2     Does FEI have any plans to improve its capital expenditure processes and if so  
21                     what are they?

22

23     **Response:**

24    As noted in this Application and previous applications, FEI has implemented a model for long  
25    term planning of sustainment capital (the LTSP). This implementation provides a valuable tool  
26    for FEI to identify and prioritize required sustainment projects and programs and will result in  
27    directing resources with confidence that the costs are warranted and appropriate.

28    The LTSP has enabled the company to identify areas of focus with a longer term view that can  
29    help determine resourcing strategies. This longer term visibility of the labour requirement will  
30    allow the company to have the appropriate staff and contractor balance in consideration of the  
31    long term staffing requirements and demographics of the company. Significant efforts are  
32    ongoing to restructure the Project Management Office and Engineering to increase capacity,  
33    develop skills and improve the effectiveness of the work groups. One aspect of the changes is  
34    shifting some of the smaller projects to local personnel as opposed to the Project Managers,

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1 taking advantage of local knowledge and improving the ability to coordinate the activities at a  
2 local level.

3 A longer term view will allow FEI to cultivate resource requirements well in advance so that  
4 premiums are not paid.

5 In addition, longer planning lead times will allow for more coordination with municipalities and  
6 other utilities to promote construction cost sharing and reduced schedules that will minimize  
7 costs.

8 FEI continues to examine all aspects of identifying, planning and executing the work with the  
9 intent of ensuring all costs are appropriate and in the best interest of the customers.

10

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1     **55     Reference: CEC 1.44.3 and 1.44.4**

2                     **13     Meter Recall / Exchanges**

3                     55.1. Please confirm that all of the work in this category has a metric that can establish  
4                     the service provided.

5  
6     **Response:**

7     FEI is unsure of what metric CEC is referring to. Meter recall / exchange activity is driven by the  
8     meter recall activity and the Unit Cost.

9

10

11

12

13                     **16     Transmission System Reinforcements**

14                     55.2 Please confirm that for this type of work FEI will not be providing any appropriate  
15                     metric to demonstrate the provision of service.

16

17     **Response:**

18     FEI does not intend to provide any metric to demonstrate the provision of service for  
19     transmission and distribution system reinforcements and renewals. However, the recent  
20     implementation of the LTSP with the analysis of condition and associated risk assessment of  
21     the assets provides an ongoing internal measure of the effectiveness of the transmission  
22     sustainment efforts. As time progresses and work is identified and completed, it is reasonable  
23     to expect that the average risk will become lower. Similarly, addressing the projects or assets  
24     with higher risk will confirm that the funds are being spent where appropriate.

25     Due to the complex nature of analyzing the risks and developing an appropriate response from  
26     multiple possibilities, the LTSP results do not lend themselves to a simple metric, but will be  
27     effective in identifying trends that will confirm the success of the sustainment program and  
28     projects.

29     In addition to the LTSP, FEI's Integrity Management Program (IMP), a fundamental component  
30     to our corporate commitment to safe and reliable energy delivery to customers, is also a  
31     regulated requirement. The IMP organizational framework contains over 100 measures of  
32     performance in developing plans to manage potential hazards to our system, completion of  
33     preventive and monitoring activities, and hazard event and incident occurrences.

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1

2

3           55.3   If FEI will be using a metric for some components of this work please provide the  
4                   metric and the quantity of capital expenditure in the estimate that this would  
5                   apply to.

6

7   **Response:**

8   Please refer to the response to CEC IR 2.55.2.

9

10

11

12           **29   Distribution System Reinforcements**

13           55.4   If FEI can provide this metric please provide the metric and the total anticipated  
14                   expenditures to which it would apply for the future year's expenditure estimates.

15

16   **Response:**

17   Please refer to the response to CEC IR 2.55.2.

18

19

20           55.5   Please confirm whether or not FEI will be using this metric in the management of  
21                   its work of this type.

22

23   **Response:**

24   Please refer to the response to CEC IR 2.55.2.

25

26

27

28           **3   Distribution Mains and Service Renewals**

29           55.6   If FEI can provide this metric please provide the metric and the total anticipated  
30                   expenditures to which it would apply for the future year's expenditure estimates.

31

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1    **Response:**

2    Please refer to the response to CEC IR 2.55.2.

3

4

5

6            55.7    Please confirm whether or not FEI will be using this metric in the management of  
7                   its work of this type.

8

9    **Response:**

10   Please refer to the response to CEC IR 2.55.2.

11

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1     **56     Reference: CEC 1.44.5**

<u>Cost Structure</u> <u>(\$ per Service</u>		
<u>Category</u>	<u>Line</u> <u>Addition)</u>	<u>%</u>
Mains	\$ 828	30%
Services	\$ 1,643	60%
Meters	\$ 268	10%
<b>Total</b>	<b>\$ 2,739</b>	<b>100%</b>

2

3     56.1     Please break down the cost structure for each of the above into labour,  
4     equipment and materials components as applicable. Please add to the  
5     breakdown any other relevant expense category not provided in the question.

6

7     **Response:**

8     The reference provided above should read CEC IR 1.45.1. The requested information has been  
9     provided below.

<u>Cost Group</u>	<u>Mains (%)</u>	<u>\$828</u>	<u>Services (%)</u>	<u>\$1,643</u>	<u>Meters (%)</u>	<u>\$268</u>
COPE (planning)	17	\$ 141	9	\$ 148	14	\$ 38
IBEW (field)	13	\$ 108	31	\$ 509	35	\$ 94
Vehicles	3	\$ 25	4	\$ 66	5	\$ 13
Contractors	13	\$ 108	11	\$ 181	0	\$ -
Materials/Other	54	\$ 447	45	\$ 739	46	\$ 123
<b>Total</b>	<b>100</b>	<b>\$ 828</b>	<b>100</b>	<b>\$ 1,643</b>	<b>100</b>	<b>\$ 268</b>

10

11

12

13

14     56.2     Please confirm that labour inflation will be different than the costs associated with  
15     equipment and materials.

16

17     **Response:**

18     The inflation rate used to forecast unit costs for mains, services and meters was 2 percent and  
19     applied universally to all costs within the capital category. For mains and service, the majority of  
20     costs are internal labour and equipment and/or contractor labour and equipment and the  
21     estimated inflation rate of 2 percent reflects expected wage increases as well as expected  
22     contract inflation. The 2 percent inflation rate was also utilized to forecast the material  
23     component based on informal discussions with meter vendors as to expected pricing changes.  
24     The materials component of services and mains is relatively small and the 2 percent used in the  
25     forecast was considered reasonable for these types of materials.

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- 1 The 2 percent labour inflation is the wage inflation only and excludes the adjustments to base
- 2 labour rates arising from pension and benefits adjustments which are summarized in Table B6-
- 3 6, page 61 of the Application.
- 4 FEI will be managing the actual inflation realized as part of its challenge in achieving its capital
- 5 forecasts if it varies from the inflation used to calculate the capital formula included in rate
- 6 setting.
- 7

1    57    **Reference: CEC 1.45.3**

					2013 Base Less Insurance & OPEB (\$000s)
<u>Growth Capital Category</u>	<u>2010 Actuals (\$000s)</u>	<u>2011 Actuals (\$000s)</u>	<u>2012 Actuals (\$000s)</u>	<u>2013 Base (\$000s)</u>	
Mains	\$ 4,538	\$ 4,510	\$ 5,374	\$ 6,783	\$ 6,615
Services	\$ 13,874	\$ 14,423	\$ 17,423	\$ 13,471	\$ 13,126
Meters	\$ 1,905	\$ 1,699	\$ 1,403	\$ 2,197	\$ 2,141
Total	\$ 20,317	\$ 20,632	\$ 24,200	\$ 22,451	\$ 21,882
Service Line Additions	9,382	7,958	7,898	7,989	7,989
<u>Growth Capital Category</u>	<u>2010 Actuals (\$/service)</u>	<u>2011 Actuals (\$/service)</u>	<u>2012 Actuals (\$/service)</u>	<u>2013 Base (\$/service)</u>	2013 Base Less insurance & OPEB (\$/service)
Mains	\$ 484	\$ 567	\$ 680	\$ 849	\$ 828
Services	\$ 1,479	\$ 1,812	\$ 2,206	\$ 1,686	\$ 1,643
Meters	\$ 203	\$ 213	\$ 178	\$ 275	\$ 268
Total	\$ 2,166	\$ 2,593	\$ 3,064	\$ 2,810	\$ 2,739
<u>Growth Capital Category</u>	<u>2010 Actuals (%/service)</u>	<u>2011 Actuals (%/service)</u>	<u>2012 Actuals (%/service)</u>	<u>2013 Base (%/service)</u>	2013 Base Less insurance & OPEB (%/service)
Mains	22%	22%	22%	30%	30%
Services	68%	70%	72%	60%	60%
Meters	9%	8%	6%	10%	10%
Total	100%	100%	100%	100%	100%

57.1 Why did the cost of mains per service connection increase so significantly from 2010 to 2013?

**Response:**

There is no direct correlation of new mains costs to service connections. The mains costs are typically reviewed on a new mains cost per metre of main installed. Please refer to the Application, page 231, Table C4-15 for new mains unit costs from 2010-2012 as well as the Mains Unit Cost section.

Unit costs vary considerably from job to job, depending on location, conditions, workforce, diameter of pipe, municipal requirements including permitting and paving, workforce and length of main extension. The work is primarily outsourced to contractors. The unit costs reflect a different pool of mains jobs each year with unit costs ranging from \$30/metre to \$300/metre depending on the job characteristics. Typical cost pressures come primarily from contract inflation and municipal paving requirements.



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57.2 Why did the 2011 and 2012 services costs increase so dramatically and then decline back?

**Response:**

The services unit cost review including the reasons for the increases and subsequent decreases is provided in the Application, pages 233-237.

57.3 Why did the meter expense increase so significantly for 2013?

**Response:**

Please refer to the Application, page 239, Table C4-19 for new meter unit costs from 2010-2013 as well as the New Meters Unit Cost section with C4.5.4. The per meter unit cost in 2012 was \$297 with a projection of \$308 per meter and a 2013 Base of \$317 per meter. The increase from 2012 to 2013 projection is from labour and materials inflation; the change from 2013 projection to 2013 Base is due to the PST and pension adjustments summarized in Table C4-2, page 206.

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1     **58     Reference: CEC 1.70.1**

6     FEI is not able to provide data that is comparable to the one presented in Figure C4-1, page 209  
7     for the US Natural Gas Pipeline due to the following reasons:

- 8         • FEI operates transmission pipelines of various diameters and in recent history has not  
9         undertaken this work in a significant amount.
- 10        • Most of the transmission pipeline work consists of pipeline replacements that have been  
11        of very short length.
- 12        • Other activities such as pipeline valve assemblies and upgrades, and station upgrades  
13        are generally non-routine and the scope and complexity varies from site to site.

2

3             58.1     Please confirm that where FEI has no work that is measureable as in US stats for  
4                     cost per kilometer of transmission pipeline the work done is similar to custom  
5                     work done according to requirement of the particular need at the instant a  
6                     decision is made to do the work.

7

8     **Response:**

9     FEI confirms that it has no data similar to the US Statistics provided for cost per kilometer of  
10    transmission pipeline for the reasons noted in the response to CEC IR 1.70.1. FEI confirms that  
11    costs for transmission pipeline work completed by the Company would be reflective of the  
12    market costs at the time that the contract was awarded. Due to the effort required to accurately  
13    estimate pipeline jobs of any significant size or cost, to complete the required consultation  
14    processes and receive the necessary permits, there is typically a significant amount of time  
15    between the decision to proceed with the work and the actual contract award.

16

17

18

19             58.2     Please confirm in these circumstances it becomes more difficult to provide a  
20                     formula to drive an expectation or forecast of work needs and is much more  
21                     difficult to determine what level of service has been provided for the level of  
22                     expenditure.

23

24     **Response:**

25     This IR has been identified as relating to the PBR Methodology and will be submitted with the  
26     PBR Methodology IR responses.

27

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1     **59     Reference: CEC 1.71.1**

	2014	2015	2016	2017	2018
	Forecast	Forecast	Forecast	Forecast	Forecast
Total Meter Recall Activity	71,815	75,315	79,815	79,815	79,815

2

3             59.1     Please identify why the meter recall and exchange unit cost has declined over  
4                         the forecast period.

5

6     **Response:**

7     The reason for this decline is shown in Table C4-9 and was discussed on page 220 of the  
8     Application, where FEI noted that starting in 2014, the incremental meter recalls driven by  
9     compliance to new Measurement Canada standards were forecast at a lower per meter unit  
10    cost, bringing down the overall average unit cost. The changes brought about by this new  
11    compliance sampling standard affect only residential meters and are only incurred at existing  
12    residential premises; therefore the cost for administering the additional recalls is lower.

13

14

15

16             59.2     If there is a further breakdown and set of metrics required to understand this  
17                         category of expenditure in terms of unit costs please provide the data.

18

19    **Response:**

20    Based on FEI's response to CEC IR 2.59.1 and the unit cost information provided in Table C4-9,  
21    FEI does not believe any further breakdown is required.

22

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1     **60     Reference: CEC 1.71.2**

19     The category of "transmission system reinforcements" is very general and the total budget does  
20     not represent and cannot be converted to a number of kilometres. The category includes the  
21     following activities:

2

3             60.1     Does FEI put any of this work out to third party contractors to be completed for  
4                     the company?

5

6     **Response:**

7     Yes. FEI contracts transmission system reinforcement work where the capacity or skills are not  
8     available within the Utility.

9

10

11

12             60.2     If so please describe the contracts in terms of how FEI would track whether or  
13                     not the required work is done and done cost effectively.

14

15     **Response:**

16     Tracking of work completion is accomplished by a capital planning process that establishes a  
17     schedule for the work to be completed and through the use of an internal project management  
18     process and operations oversight. To ensure the work is undertaken in a cost effective manner  
19     a competitive bidding process is used to award the contracts which is supported by on-site  
20     inspections and expenditure monitoring and review.

21

22

23

24             60.3     Please advise whether or not FEI has contracted such work with bonus  
25                     performance terms for coming in under budget and if so please provide the  
26                     terms.

27

28     **Response:**

29     FEI has not contracted such work with bonus performance terms.

30

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1     **61     Reference: CEC 1.71.3**

14     The category of "distribution system reinforcements" is very general and the total budget does  
15     not represent and cannot be converted to a number of kilometres. The category includes the  
16     following activities:

2

3             61.1     Please confirm that FEI has no metric for this kind of work or if FEI does have a  
4                     metric for this kind of work please provide it for the years 2010 to 2013 and for  
5                     the forecast budget.

6

7     **Response:**

8     FEI confirms that there is no metric for distribution system reinforcements.

9

10

11

12             61.2     Does FEI contract any of this kind of work to third parties and if so, do any of the  
13                     contracts have performance bonuses for improved productivity and if so please  
14                     provide the relevant contract language for the terms and conditions for the bonus  
15                     provision?

16

17     **Response:**

18     Yes. FEI contracts distribution system reinforcement work where the capacity or skills are not  
19     available within the Utility.

20     FEI's contracts are established through a procurement process based on the third party market  
21     at the time. Contracts are reviewed on an annual basis. The contracts define the scope of work  
22     including FEI's standards, the rates and the terms and conditions. How the work is completed is  
23     controlled by each contractor, with FEI oversight. Current service contracts in place do not  
24     include performance bonus provisions.

25

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1     **62     Reference: CEC 1.74.1**

12     The realistic scenarios under which annual software costs could decrease would be a decrease  
13     in the number of licenses (less employees or less CPUs) or a change to the methodology under  
14     which the vendor calculates the annual fees. These decreases would be reflected in a lower  
15     annual cost and the resulting savings would be allocated proportionately to capital and O&M in  
16     accordance with the percentage allocations described in response to BCUC IR 1.165.5. As FEI  
17     proposes to maintain the same allocations between capital and O&M over the PBR Period, FEI  
18     does not foresee any situation where only capital savings would be achieved.

2

3             62.1     Given the potential for software upgrades and support and maintenance to be  
4                     related to scope decision issues, which FEI may control, is it possible that FEI  
5                     may also make decisions affecting software upgrade costs other than decisions  
6                     affecting the number of employees and CPUs?

7

8     **Response:**

9     Upgrade decisions are generally based on the requirement to stay current with related  
10    technologies. It is standard practice to ensure systems and technologies are compatible with  
11    each other through continual upgrading. FEI uses several interrelated and integrated systems  
12    and technologies from various vendors, and generally each vendor requires that technologies  
13    integrated or operating together stay current to take advantage of new functionality and  
14    features. Neglecting to upgrade one or more technologies could result in reliability issues.

15

16

17

18             62.2     Are some software costs dependent upon the version adopted by the company at  
19                     any given time?

20

21    **Response:**

22    Versions are driven by the requirement that all vendors associated with supporting a system or  
23    technology remain compatible. FEI does not control the lifecycle of technology and uses  
24    supported versions of software to ensure reliability.

25    For example, SAP requires being at a certain version to remain compatible with its Microsoft  
26    SQL database, Microsoft Windows Server operating system and the server infrastructure it  
27    resides on.

28    Please also refer to the response to CEC IR 2.62.1.

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62.3 Is it possible to skip certain updates and extending the life of software versions or upgrades the company is using?

**Response:**

Please refer to the responses to CEC IRs 2.62.1 and 2.62.2.

62.4 How does FEI manage the process of making software upgrades and how does it monitor the status of software in the company?

**Response:**

Upgrade schedules are provided by vendors. IT Managers are responsible for each system or technology. Managers apply upgrades based on maintaining support, performance and reliability of FEI systems and technologies. Status of systems and technologies are maintained in an architecture database so interdependency of systems and technologies can be considered when planning upgrades.

62.5 What is the total annual cost of software and software upgrades including the \$1.8 million capital and the O&M portion?

**Response:**

The total forecast annual cost for 2014 of the software and software upgrades is \$4.2 million, of which \$1.8 million will be capitalized under FEI's proposal.

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1     **63     Reference: CEC 1.75.1**

13     FEI utilizes a five year replacement model to determine which vehicles will need to be retired  
14     and replaced and is therefore only able to provide the information for five years; however the full  
15     transition from a leased to owned fleet will take 10 years to complete. The table below lists the  
16     number of vehicles that are scheduled for replacement over the next five years.

17

**Planned vehicle replacements 2014-2018**

Category	2014F	2015F	2016F	2017F	2018F
Number of Vehicles	45	48	45	47	43

2

3             63.1     Please confirm that the savings from the change from vehicle leases to vehicle  
4                   ownership will generate savings annually in the future for 2014 to 2018 and  
5                   through 2019 to 2023.

6

7     **Response:**

8     FEI completed an analysis on its current fleet of vehicles, with the review intended to ascertain  
9     whether FEI should continue to lease its vehicle fleet or transition to an owned fleet. FEI's  
10    analysis indicates that FEI should transition the vehicle fleet to an owned status as the current  
11    leased vehicles are retired. This option has the lowest present value cost of service  
12    (approximately \$3 million), and therefore a lower forecasted rate impact to customers. To  
13    facilitate the transition, as existing leased units are retired they will be replaced by units that are  
14    purchased. As discussed in response to BCUC IR 1.166.6, the present value savings as  
15    compared to the status quo was primarily due to the tax impacts. If the assumptions used in the  
16    analysis hold true, FEI expects these tax savings to continue to be generated until the transition  
17    to an owned fleet is complete (forecast in 2023).

18

19

20

21             63.2     Please explain why the change out is scheduled for 10 years when the asset life  
22                   is an expected 8 years?

23

24     **Response:**

25     On average, all vehicle types are expected to last 8 years. Depending on the type, some  
26     vehicles will last longer than 8 years such as medium and heavy duty trucks. These models are  
27     in service for a minimum of ten years before they are reviewed for replacement and as such are  
28     placed on a ten year lease term. Therefore the transition from a leased to owned fleet will take  
29     10 years to complete.



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13

63.3 Can the vehicles last longer than the expected 8 year life and would FEI keep them longer if they were serviceable?

**Response:**

Yes, vehicles may last longer than the expected 8 year life. Many factors are taken into consideration when an actual vehicle replacement decision is made. Factors such as suitability, ability to maintain adequate safety, age, condition, and compliance with regulations are reviewed when vehicles are near the end of their planned life cycle. Each replacement decision is evaluated on a unit-by-unit basis.

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1 **PART 3 – OTHER ISSUES**

2 **64 Reference: Exhibit B-8, CEC 1.3.2**

8  
9 3.2 The PBR plan does not provide for revenue generation being an aspect of the  
10 PBR plan, except as a flow through. Please confirm that revenue requirements  
11 determining customer rates are affected by both revenues and costs.

12  
13 Response:

14 Confirmed, subject to a slight refinement. Strictly speaking the revenue requirement is  
15 determined by the utility's costs. Customer rates, and in particular rate increases (from revenue  
16 deficiencies) or decreases (from revenue surpluses), are affected by both revenues and costs.  
17 Under the PBR, revenues are reforecast annually and flowed through. FEI will continue to  
18 consider any incremental revenue generation opportunities during the term of the PBR and  
19 these will be included in the revenue forecasts as appropriate.

3

4 64.1 Please confirm that FEI is referring to incremental revenue generation  
5 opportunities that arise from the ES&ER department activities.

6

7 Response:

8 The response is referring to incremental revenue as generated from the operation of the utility  
9 generally. Incremental revenue is not only generated from the ES&ER department, although  
10 much of it will be.

11 FEI explained its position on incremental revenue in Exhibit B-8, response to CEC IR 1.41.1,  
12 page 87 as follows:

13 *"Of the Company's operations, the ES&ER department is oriented towards generating*  
14 *incremental revenue. While there are other departments in the Company's operations*  
15 *that have revenue embedded in their O&M, for these groups, revenues are primarily*  
16 *related to "cost recovery" activities. ES&ER department focuses on identifying and*  
17 *implementing new service offerings which bring in incremental revenue. These include*  
18 *RNG, NGT, the development of new markets for LNG and CNG, such as remote*  
19 *communities the development of applications for the use of LNG and CNG, as well as*  
20 *increases in natural gas throughput from new large industrials. Furthermore, FEI is*  
21 *proposing an incentive program in the forecast period in order to encourage customers*  
22 *to switch to natural gas.*

23 *Any incremental revenue generated by the ES&ER department will be captured in the*  
24 *delivery revenue or in other revenue. Such revenue items will be re-forecasted each*  
25 *year and thereby customers will receive the benefits of the department's efforts in this*  
26 *regard in the following year.*

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Furthermore, as described on pages 78-79 of the Application, through the Annual Review process FEI has proposed that FEI will bring forward any proposals for the funding of incremental resources in support of load growth initiatives identified during the course of the PBR period.”

64.1.1 If not, please explain where these opportunities might arise.

**Response:**

Opportunities to generate incremental revenue are via normal business activities such as adding residential customers or adding of a new service or tariff offering to an incremental revenue opportunity driven by or in response to a change in market conditions such as those identified in CEC IR 2.64.2.

64.2 Please explain how incremental revenue generation opportunities are typically identified and evaluated by FEI as being worthwhile to pursue.

**Response**

These opportunities arise in response to evolving policy contexts and energy market conditions. FEI looks for opportunities in the market that will: (1) allow for better system utilization (e.g. NGT volume additions); (2) promote the cost-effective addition of new customers that can be added to optimize the system; (3) add new business that will mitigate risks to the system (e.g. RNG); and (4) expand the service area or line of products that will improve system utilization or spread overheads across a broader base. In this process FEI looks at issues such as:

1. The application of Government policy and FEI's intention to effectively implement the policy in the marketplace;
2. Changes in government regulations;
3. Changes in codes and standards;
4. Technology changes or changes in operation of particular pieces of equipment;
5. Optimization of plant utilization as an on-going process;
6. Customers' energy and service requirements and changes or trends related in the market; and
7. Demands on the system.

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1 There is ongoing and consistent effort within FEI to monitor and assess developments in the  
2 energy marketplace and changes in government policy to find effective ways to respond to such  
3 changes.

4  
5  
6  
7  
8 64.3 What incentives exist for staff or departments to identify revenue generation  
9 opportunities?

10  
11 **Response:**

12 Employee compensation, which is made up of base salary plus a short term incentive, is  
13 designed to reward the employees for overall performance. Performance objectives for  
14 individuals within a department and the department as a whole (through the manager's or  
15 director's performance objectives) include measures that support seeking out and developing  
16 revenue generation opportunities.

17  
18  
19  
20 64.3.1 If so, please identify what revenue generation opportunities or projects  
21 are under consideration and provide a high level quantification of the  
22 opportunities.

23  
24 **Response:**

25 Please refer to the response to CEC IR 2.64.4. Please also refer to the response to CEC IR  
26 2.65.2 regarding industrial customer opportunities.

27  
28  
29  
30 64.4 How many incremental revenue generation opportunities does FEI typically  
31 consider in a year, if any?  
32

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1    **Response:**

2    The number of opportunities considered and developed in a year is difficult to quantify. In  
3    practice, every addition of a customer (residential to commercial to industrial), or retention of a  
4    customer and every new service offered to a customer is a revenue generating opportunity.

5    Additional revenues flow fully to customers through the annual revenue forecasting process  
6    (and through the RSAM for the residential and commercial classes) and benefit all customers by  
7    increasing throughput on the system and offsetting loss of revenue in other areas. Customers  
8    will also receive back 50% of any un-forecast incremental revenues through the PBR earnings  
9    sharing mechanism (which would not occur under cost of service regulation).

10   With continued low gas prices, FEI has seen interest from large industrial customers. In any  
11   given year it is not possible to quantify the opportunities possible in this area as many factors  
12   influence the decision making of this customer group. While in the short term there are different  
13   challenges to overcome in the residential sector, FEI hopes that it will continue the upward trend  
14   in market share capture of new residential construction.

15

16

17

18           64.5   Did FEI develop any incremental revenue opportunities under the previous PBR  
19                   periods?

20

21   **Response:**

22   No, under the PBR mechanism there were no incremental revenue opportunities brought  
23   forward. FEI looked at a number of options but did not find any specific opportunities that met  
24   the intent of the incremental revenue generating component of that PBR. The period in  
25   question had relatively high natural gas commodity prices and volatility which limited the  
26   economics for incremental revenue possibilities associated with load growth. However, in spite  
27   of external challenges FEI worked diligently to attract new customers and established customer  
28   addition targets as a corporate objective. For example, FEI began its vertical subdivision  
29   initiative in this period. FEI also began its redevelopment of natural gas for transportation later in  
30   the 2004-2009 PBR term. FEI also applied for and received approval for new main extension  
31   (MX) provisions which allowed the Company to attach more economic customers than under the  
32   MX provisions that existed previously.

33

34

35

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1                    64.5.1    If so, please provide the number of incremental revenue opportunities  
2                                    and the total dollar value of the incremental revenue opportunities that  
3                                    were flowed through under the previous PBR terms.

4  
5    **Response:**

6    Please refer to the response to CEC IR 2.64.5.

7

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1     **65     Reference: Exhibit B-8, CEC 1.24.1 and Exhibit B-1, page 15**

15     Irrespective of the form of regulation, FEI is pursuing revenue growth opportunities in the natural  
16     gas for transportation sector, as well in the commercial and industrial sectors. These  
17     opportunities have a potential to produce increased throughput that will provide benefits for  
18     existing customers, however the success in these areas is not within FEI's control. As a non-  
19     controllable item FEI does not believe incentivizing revenues is appropriate in the PBR  
20     framework.

25     To meet customers' growing demand for alternate uses of natural gas, the Company has been  
26     developing the natural gas for transportation (NGT) and liquefied natural gas (LNG) markets  
27     and also supporting customer demand for renewable natural gas (RNG). Added load from  
28     these markets will help maintain the competitiveness of rates by increasing throughput on the  
29     gas delivery system. Similarly, on the industrial front, FEI has received interest in the  
30     development of new major industrial facilities that use natural gas as a feedstock. The  
31     Company is engaging these customers to explore the opportunities and benefits that could be  
32     achieved for the benefit of ratepayers if we were to deliver natural gas for them.

4             65.1     Please elaborate on the new major industrial facilities that use natural gas as a  
5                     feedstock from which FEI has received interest.

7     **Response:**

8     One such project that has become public is the proposed Pacific Energy Corporation (PEC)  
9     LNG project at the Woodfibre site near Squamish. In this case FEVI has a Development  
10    Agreement with this potential customer to complete the feasibility study (related to the Pipeline  
11    Reinforcement Project) and commence development work for providing natural gas  
12    transportation service to support a 2016-2018 in-service date. FEI is also affected by this project  
13    as the gas volumes must move across the FEI system before entering the FEVI system.

14    However, given the commercial sensitivity and confidentiality of these opportunities, as well as  
15    the preliminary nature of the discussions, FEI is only able to provide a very general response to  
16    other opportunities at this time. The nature of the new major industrial facilities for which FEI  
17    has received interest is either for petrochemical facilities that use natural gas as a feedstock or  
18    for LNG.

22            65.2     How many customers is FEI engaging with?

24    **Response:**

25    In addition to working with our existing customers and engaging with more than 10,000  
26    residential and commercial new customers annually, FEI is also involved with  
27    builder/developers and industrial customers. FEI is currently engaging with roughly five (5) new

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major industrial customers. These projects are in various stages of project feasibility and in some cases preliminary discussions. With respect to NGT, FEI is engaging directly with approximately 100 customers or potential customers, and through various industry associations (e.g. the BC Trucking Association) and working groups is engaging indirectly with in excess of 500 potential customers.

65.2.1 Please provide the expected demand and revenues that may be generated from each customer and provide an estimation as to when they may be expected to commence purchasing natural gas.

**Response:**

Given the confidentiality and commercial sensitivity, FEI cannot disclose the individual project sizes but combined they have requirements for approximately 500 - 750 TJ/day of capacity. These potential industrial customer projects take a number of years to develop and if they move ahead the potential expected in-service dates are around 2018 and beyond.

In addition to those projects, FEI is also looking at a potential phased project to expand the Tilbury LNG plant which could serve incremental demand on the system of between 30 and 300 TJ/day. The Pacific Energy Corporation (PEC) LNG project at the Woodfibre site, although an FEVI project, would also have requirements on the FEI system through the Wheeling Agreement in place with FEI and FEVI. The PEC LNG project could have firm demand requirements of up to 237 TJ/day with a 2016-2018 in-service date if the project was to move ahead.

65.2.2 Please identify the alternatives that the industrial facilities may be considering.

**Response:**

The project proponents are investigating the viability of projects within BC and have not disclosed to FEI whether there are any competing alternatives to the opportunities being considered in FEI's service territory. Overall, the advantages FEI can offer include being able to leverage existing infrastructure, the location of British Columbia relative to Asian markets, the



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price and quantity of gas available within the province, and FEI's ability to be a secure and reliable natural gas delivery provider.

65.2.3 Please confirm, or otherwise explain, that FEI does not believe that it can influence industrial customers in their purchase of natural gas as states in Exhibit B-1, page 15 'however the success in these areas is not within FEI's control'.

**Response:**

The reference to the quote in the question is Exhibit B-8, CEC IR 1.24.1.

It is within FEI's control and ability to present an effective argument for using natural gas in their proposed facilities. In addition FEI works with customers to ensure that barriers are reduced or eliminated for customers wishing to connect to the natural gas system, but ultimately it is the customer(s) that determine the overall viability of the project(s). Natural gas is just one input to the project economics and the customer must also consider other variables such as land costs, labour costs, acquisition of suitable sites, and electricity costs of options within BC and the same issues in any competing jurisdictions when determining their overall viability. Potential customers must also make ongoing assessments of the market for their products and decisions to proceed or not with a project will change with changes in the market outlook. FEI can try to support the success of these projects; however, FEI can only have influence in a portion of the overall project viability.

65.2.4 If so, please confirm or otherwise explain that there is no managerial incentives attached to securing additional industrial customers.

**Response:**

Overall compensation and job performance has an incentive attached to it, but performance is not specifically targeted to securing additional industrial customers.

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65.3 Which department is responsible for liaising with prospective industrial customers?

**Response:**

The Energy Solutions team works with new and existing customers to provide them with innovative energy solutions. Industrial energy solutions managers within the Energy Solutions department work with industrial and manufacturing customers to introduce them to products and services that will help them optimize their energy use. Industrial energy solutions managers also work on attaching new customers to the system and on load growth opportunities with existing customers.

65.4 Please provide the total budget for labour and non-labour that would be attributable to liaising with prospective industrial customers, the success of which is not within the company's control.

**Response:**

While many of the decision processes an industrial customer undertakes are outside of the control of the company (gas commodity costs for example), there are many other components which must be addressed by the utility for the industrial customer to successfully attach to the FEI system. These activities include negotiation of contract rates, customer site location, system upgrades and filing of a CPCN application, if required, or any other necessary applications to the Commission.

The specific costs attributable to liaising with prospective industrial customers are not tracked. Those staff members whose roles pertain to industrial customer account management and to liaising with prospective industrial customers, reside within the Energy Solutions group, and the labour and non-labour costs for this group (within the ES&ER department) are shown in Appendix F6 of the Application. As indicated in response to CEC IR 2.65.3, the Industrial Energy Solutions managers work with existing industrial and manufacturing customers to introduce them to products and services that will help them optimize their energy use while also working to attach new customers to the system and seeking load growth opportunities with our existing customers.

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65.4.1 Please confirm or otherwise explain that FEI also does not believe it can influence industrial customers in their purchase of RNG.

**Response**

FEI believes it can make a compelling argument for why an industrial customer would want RNG, but the economic decision is the customer's. Industrial customers are sophisticated customers that are able to determine their individual economic benefit, with many factors influencing their decision; RNG may or may not make business sense for particular customers.

65.5 What is the estimated and provide quantification as to the expected revenues and costs for that are anticipated from this prospective increase in load.

**Response:**

These opportunities are in early stages of project feasibility. FEI is not able to provide quantification as to the costs and expected revenues for the individual projects given the current preliminary stage of opportunities as well as the confidential nature and commercial sensitivity of the projects. In response to CEC IR 2.65.2.1, FEI indicated that combined the projects have the requirements for approximately 500 - 750 TJ/day of pipeline capacity. If for illustrative purposes only we assume a delivery toll of \$0.50-\$0.75/GJ the potential for annual revenues of all the projects combined could be in the range of \$90 to \$200 million dollars.

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1     **66     Reference: Exhibit B-8, CEC 1.55.1**

3            55.1   Please explain why if the industrial category has seen reductions in numbers of  
4                   customers for the last four years that this would not be expected to continue into  
5                   the 2014 to 2018 period.  
6

7     **Response:**

8     Unlike the residential and commercial forecasts, the industrial forecast is not the product of  
9     average UPC and accounts so the actual net industrial additions (whether positive or negative)  
10    are not material to the forecast. The fact that no net additions or reductions are shown in the  
11    forecast is a reflection of the survey methodology. Each current customer is surveyed and is  
12    expected to remain a customer for the duration of the forecast.

5            66.1   Please confirm, or otherwise clarify that the survey methodology (surveying  
6                   current customers) would reasonably determine whether or not a customer would  
7                   remain a customer for the PBR period, it would not predict additional customers.

9     **Response:**

10    The link to the industrial survey is sent by email to the appropriate contact at each existing  
11    industrial customer. The survey asks for a one year monthly survey and then the following four  
12    years as annual volumes. FEI reasonably assumes that if a customer indicates continued  
13    consumption through the survey period that at that point in time they intend to remain a  
14    customer. The survey is completed each year so any change in their plans will be picked up the  
15    following year and incorporated into the demand forecasts for setting the following year's rates.

16    The survey was not designed to forecast new industrial customers. It was designed to be sent to  
17    existing customers to gain an insight into their future demand. If an industrial operation is not a  
18    customer then by definition there is no one to send the survey to. Sending the survey to  
19    enterprises that are not customers would be expensive due to the research needed to collect  
20    even the most minimal data such as contact names and email addresses. Additionally asking  
21    them for their future gas consumption (given they are not a customer) would not likely be  
22    productive and result in wasted time by both FEI staff and the non-customer.

23    With respect to existing prospective industrial customers, as noted in response to the CEC IR  
24    2.65 series, new industrial customers take many years to go from being simply inquiries to  
25    contracted customers. There are many factors that influence a decision on whether or not to  
26    locate industrial facilities in the FEI service area, many of which are beyond the control of FEI.  
27    As such, FEI does not forecast potential or speculative industrial customers until such time that  
28    the customer has actually signed an agreement to be provided with service. FEI believes this is  
29    a prudent practice.

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66.1.1 If agreed, what actions, if any, has FEI undertaken to forecast new customers for the PBR period.

**Response:**

Consistent with prior filings, FEI does not forecast growth or decline in any of the industrial rate schedules. Please refer to the response to CEC IR 2.66.1.

New industrial customers are added to the forecast once they have a signed contract in place for transportation on the FEI system. New customers are asked to participate in the subsequent annual industrial survey. The industrial survey will be completed once per year for the duration of the PBR.

66.1.2 Please provide any information that FEI has available with respect to prospective new industrial customers and their expected load.

**Response:**

At this time FEI does not have any prospective or new industrial customers that need to be added to the forecast or survey prior to the update and survey that will be completed in 2014. If new customers develop prior to the 2014 update they will be added as required.

The volumes from industrial customers are potentially very large so it is important to wait until they are firm before adding them to the system and potentially skewing the rates paid by other industrial customers.

Please refer to CEC IR 2.65.2.1 for further information with respect to prospective new major industrial loads.

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1     **67     Reference: Exhibit B-8, CEC 1.59.1**

7     Many of the 2013 and 2014 Other Revenue Components listed in Table C2-1 are recoveries to  
8     offset business costs / charges associated with each item (i.e. Late Payment Charge,  
9     Connection Charge, and NSF Returned Cheque Charges). These Other Revenue Components  
10    primarily go toward recovery of the processing, servicing and/or implementation costs of these  
11    items. For a positive balance of recoveries versus cost, FEI reviews processes and procedures  
12    associated with these items on a regular basis to ensure guidelines for appropriate application  
13    and collection of these Other Revenue Components.

2

3             67.1     What are FEI's late payment charges and how are they applied?

4

5     **Response:**

6     Per FEI's General Terms and Conditions (GT&C), in the Standard Fees and Charges Schedule,  
7     the late payment charge is 1.5% per month (19.56% per annum) on the outstanding balance.

8     Section 21.1 of the GT&C states how the charge is applied:

9             **Late Payment Charge** - If the amount due for Service or Service Related Charges on  
10    any bill has not been received in full by FortisBC Energy or by an agent acting on behalf  
11    of FortisBC Energy on or before the due date specified on the bill, and the unpaid  
12    balance is \$15 or more, FortisBC Energy may include in the next bill to the Customer the  
13    late payment charge specified in the Standard Fees and Charges Schedule.

14

15

16

17

18             67.1.1     How many customers received late payment charges in 2013?

19

20     **Response:**

21     As of October 31, 2013, approximately 343,290 different customers received late payment  
22     charges (LPC).

23     In order to provide some context to the above number the following breakdown has been  
24     included.

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Amount of unique \$ LPC assessed	\$ LPC assessed	%	# Customers
\$1.00 or less	\$75,312.79	9.68%	127,834
\$1.01 to \$5.00	\$407,508.56	52.36%	193,864
\$5.01 to \$25.00	\$170,255.26	21.88%	19,431
\$25.01+	\$125,200.47	16.08%	2,161
<b>Total:</b>	<b>\$778,277.08</b>		<b>343,290</b>

1

2 A total of 321,698 customers had a late payment charge of less than \$5.00, which represents  
3 approximately 62.4 percent of the total amount of late payment charges assessed.

4

5

6

7 67.2 What are FEI's NSF Returned Cheque Charges?

8

9 **Response:**

10 The NSF fee is \$20.00 as outlined in the GT&C, Standard Fees and Charges Schedule S-1  
11 described as "Dishonoured Cheque Charge".

12

13

14

15 67.3 What is the processing cost to FEI for an NSF Returned cheque?

16

17 **Response:**

18 FEI's bank fee is \$5. The manual processing cost for return payment is approximately \$15.13  
19 per instance. Total FEI cost is \$20.13.

20

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1     **68     Reference: Exhibit B-11, 1.73.1**

17     The SCP Third Party Revenues, as described within the Application, consist of the revenues  
18     from the firm service capacity held by three parties. The forecast comprises the Northwest  
19     Natural Gas Co. (NWN) contract that is in effect until October 2020, the firm service capacity  
20     held by the FEI MCRA that the Company is seeking to continue for the duration of the PBR  
21     period, and the Spectra firm service capacity associated with the T-South Enhanced Service  
22     that is anticipated to be extended throughout the PBR period (please also refer to the response  
23     to BCUC IR 1.72.1).

2

18     Response:

19     If the agreement is extended, the incremental 4 MMscfd (91 MMscfd - 87MMscfd) has the  
20     potential to increase revenue by \$0.26 million per year assuming the full 91 MMscfd is fully  
21     contracted. As the incremental volume is offered effective November 1, 2014, the impact to the  
22     overall potential revenue for 2014 is approximately \$0.044 million (2 months of this incremental  
23     revenue). The revenues are a forecast and all variances are captured in the SCP Mitigation  
24     Revenues deferral account and amortized as part of future rates.

3     --

4             68.1     Please confirm that the increased revenue of \$0.26 million would occur until the  
5             expiry of Commission Order G-104 -13 on October 31, 2016, unless it were  
6             extended further.

7

8     Response:

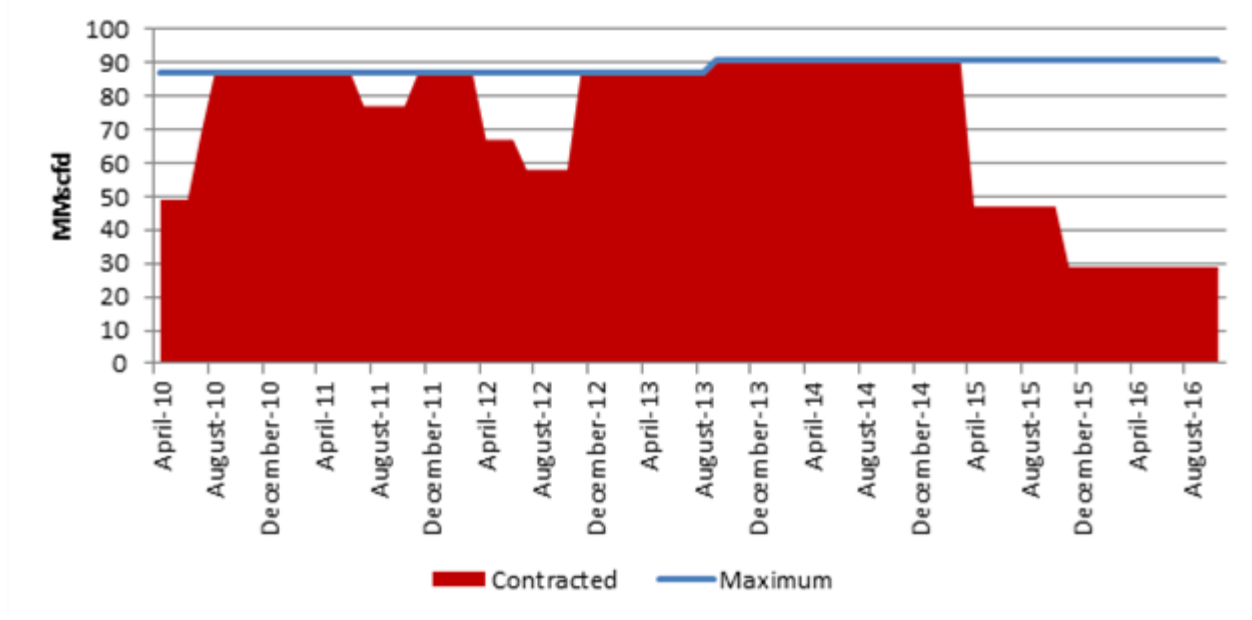
9     If the 91 MMscfd remains fully contracted, FEI would receive the increased revenue of \$0.26  
10     million until the expiry of Commission Order G-104-13 on October 31, 2016.

11     Spectra only contracts for firm service on FEI's system for capacity that matches the contracted  
12     capacity under its T-South Enhanced Service offering. As can be seen from the figure below, at  
13     this time the 91 MMscfd of available T-South Enhanced Capacity is only fully contracted until  
14     April 1, 2015. FEI will continue to work with Spectra to encourage shippers to continue to fully  
15     contract the capacity as it becomes available; however there is no guarantee that it will remain  
16     fully contracted throughout the period.



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**Figure: T-South Enhanced Maximum and Firm Contracting Levels April 2010-October 2016**



68.2 Please confirm that FEI would seek to extend the terms to the end of the PBR period.

**Response:**

Yes, prior to the expiry of the current agreement, FEI would endeavor to extend the firm service agreement with Spectra as it continues to deliver benefits to FEI customers. Any extension would be dependent on Spectra continuing to offer the T-South Enhanced Service, which in turn would require support by Spectra and its shippers. An extension of the transportation agreement between FEI and Spectra would also require approval by the Commission.

68.2.1 If so, would FEI likely seek further increases in the maximum volume?

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1    **Response:**

2    No, not under an extension of the same agreement. The 91 MMscfd represents the maximum  
3    physical capacity available on FEI's existing system between Kingsvale and Oliver to flow gas  
4    from west to east. An increase in throughput would require an expansion of FEI's transmission  
5    system including a pipeline loop of that segment. FEI continues to believe the potential for a  
6    future expansion of the system between Kingsvale and Oliver is good, and any third party firm  
7    transportation arrangements that would be required to support that expansion would be  
8    determined at that time.

9

10

11

12

13                               68.2.1.1     If yes, please identify the volume increases that FEI might  
14   seek.

15

16    **Response:**

17    Please refer to the response to CEC IR 2.68.2.1.

18

19

20

21               68.3     Would FEI seek possible rate changes?

22

23    **Response:**

24    FEI will review the potential for changes in the demand charges paid by Spectra as part of any  
25    future contract extension negotiations.

26    With respect to FEI rate impacts for the PBR period, the SCP revenue forecasts will be updated  
27    each year during the annual review process. Although the revenue forecast has basically been  
28    held flat for the 2014-2018 period, if something changed FEI would include that in the annual  
29    review filing as well as any rate impacts of increases/decreases in the forecast SCP revenues.

30

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1     **69     Reference: Exhibit B-11, BCUC 1.71.1**

15     The \$25 connection fee and the historical move ratio remain unchanged between the 2012  
16     Approved and 2012 Actual figures. However, in 2012 there was a large decrease from the  
17     forecast number of average customers, resulting in the decrease of Connection Charge revenue  
18     from \$2,662 thousand to \$2,390 thousand.

2

3             69.1     Please provide the historical move ratio for the last 10 years.

4

5     **Response:**

6     The requested information is provided below. FEI does not have annual data for 2013.

Year	2004	2005	2006	2007	2008	2009	2010	2011	2012
Move Ratio	15.03%	14.29%	13.12%	13.20%	10.66%	11.15%	10.88%	10.68%	11.45%

7

8

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1     **70     Reference: Exhibit B-8, CEC 1.24.2**

- 1     consideration in PBR plan design. In the context of FEI's revenue decoupling mechanism and  
2     other extenuating circumstances with respect to revenues the approach taken is reasonable.

3             70.1   What are the extenuating circumstances with respect to revenues to which FEI  
4             refers? Please explain.

5  
6     **Response:**

7     The main extenuating circumstances from FEI's perspective are in three areas of external  
8     influence: (1) GHG emissions policy and legislation, (2) general trends in the building and  
9     construction industry, and (3) the regulatory hurdles and time lag involved in gaining approvals  
10    to undertake programs that would support new revenue generation.

- 11           1. GHG Emissions Policy and Legislation - Although more recent government policies and  
12           legislation (such as the Natural Gas Strategy, LNG Strategy and the GGRR) have been  
13           somewhat more supportive of natural gas use in BC the GHG emission reduction targets  
14           set out in the Clean Energy Act and other pieces of provincial legislation have resulted in  
15           some difficulties for FEI and the other gas utilities in promoting the use of natural gas in  
16           BC. Load growth opportunities for natural gas face extra scrutiny because of the  
17           potential conflict with the emission reduction objectives.
- 18           2. General trends in the building and construction industry – FEI has noted in many  
19           regulatory proceedings various general trends which tend to reduce natural gas use and  
20           make it more difficult for natural gas to be used for as many purposes in dwellings.  
21           These include: more energy efficient dwellings, the trend towards more multi-family and  
22           smaller footprint dwellings, codes and standards changes that affect gas use  
23           applications that, for example, impact the viability of gas water heaters, among other  
24           things.
- 25           3. Regulatory process for gaining approvals to undertake new programs. FEI has  
26           responded to externalities by proposing new programs such as natural gas for  
27           transportation and biomethane. The amount of regulatory process and, in some cases,  
28           the decisions rendered have hindered the timely implementation of certain programs.

29

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1     **71     Reference: Exhibit B-8, CEC 1.41.1**

7     Of the Company's operations, the ES&ER department is oriented towards generating  
8     incremental revenue. While there are other departments in the Company's operations that have  
9     revenues embedded in their O&M, for these groups, revenues are primarily related to "cost  
10    recovery" activities. The ES&ER department focuses on identifying and implementing new  
11    service offerings which bring in incremental revenue. These include RNG, NGT, the  
12    development of new markets for LNG and CNG, such as remote communities the development  
13    of applications for use of LNG and CNG, as well as increases in natural gas throughput from  
14    new large industrial customers. Furthermore, FEI is proposing to introduce an incentive program  
15    in the forecasted period in order to encourage customers to switch to natural gas.

2

3            71.1     If not all, what proportion of the ES&ER department is oriented towards  
4                    generating incremental revenue?

5

6     **Response:**

7     The ES&ER department is oriented to retaining and adding both customers and load. This  
8     results in retention of revenue as well as the potential to generate additional revenue. The  
9     various groups within the department all work towards generating revenue, to a greater or lesser  
10    degree, depending on the business orientation and priorities of each department, and therefore  
11    a proportional allocation is difficult to ascertain.

12    General and recent examples of activities aimed at customer retention and revenue generation  
13    by the groups within ES&ER are as follows:

14            • The Energy Solutions group manages key account contracts and billing issues with  
15               existing customers, as well as promotes the company's products and services including  
16               new applications for natural gas use in customer processes for load growth. An example  
17               of this is the promotion of the Vertical Sub-Division (VSD) and Piping-to-Suites product  
18               offerings in 2013 which saw an 85% increase in customers in the VSD sector.

19            • Market Development functions in the group have been responsible for new products and  
20               services such as natural gas for transportation to attract new customers and contribute  
21               to growth revenue, retain existing customers and revenue through the renewable natural  
22               gas product offering and through integrated energy systems for new and existing  
23               customers which contribute to incremental revenue. In addition, Market Development  
24               has introduced process improvements such as the online Home Energy Calculator  
25               (HEC) tool which enhances productivity by reducing direct customer interaction while still  
26               providing customers with the necessary guidance on the benefits of natural gas. Since  
27               the launch of the HEC tool at the start of 2013, FEI has seen an increase to date of  
28               online traffic to the tool by over 200%.

29            • The External Relations group is focused on maintaining and fostering relationships with  
30               key stakeholders such as communities, First Nations, key government ministries and

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business associations so has to garner support for FEI's projects and programs for existing and new customers.

- Clear and concise communications to the public from the Communications group is required to build the public trust necessary to retain and grow the customer base.
- The Energy Efficiency and Conservation group contributes to customer retention and growth by providing products and services that not only help customers use natural gas as efficiently and economically as possible but are also consistent with British Columbia's energy objectives. An example is the promotion of natural gas to oil or propane heated homes and incenting them to switch to cleaner burning natural gas through the applicable "Switch 'n' Shrink" rebate program.
- Other programs in development include a Trade Ally program that enlists natural gas contractors to promote natural gas appliances and offer financing to customers for their natural gas appliance purchases and installations through a bank's loan program so as to retain and attract new customers.

Please also refer to the response to BCUC IR 2.263.1 for activities of the Market Development group that are oriented toward growth.

71.2 Does FEI track incremental revenue to this department?

**Response:**

No, incremental revenue is not tracked to this department; rather it is tracked at the corporate level. Although ES&ER is the main generator of new opportunities, tracking to this department is not done because other departments, such as Customer Service, Energy Supply & Resource Development, Environment, Health & Safety or Finance & Regulatory Affairs also contribute (in varying degrees) to developing new revenue opportunities. However, due to requirements in regulatory approvals, incremental revenue of some products (NGT) is tracked separately.

71.2.1 If so, please provide the incremental revenue that has been determined to arise from this department's activities over the past 10 years.

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1    **Response:**

2    Please refer to the response to CEC IR 2.71.2.

3

4

5

6                   71.2.2    If not, why not?

7

8    **Response:**

9    Please refer to the response to CEC IR 2.71.2.

10

11

12

13               71.3    Could FEI reasonably characterize this department a 'profit centre'?

14

15   **Response:**

16   No. A profit centre is a distinct unit or department of a company that aims to generate revenue  
17   in excess of costs. The ES&ER department is an integral component of FEI, but not separated  
18   from the overall business operation. It operates as a cost centre where a budget is the  
19   controlling factor.

20

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1     **72     Reference: Exhibit B-1, page 153**

- 2
- 3     /
  - 4     8     • Energy Solutions
  - 5     9     • Energy Efficiency and Conservation
  - 6     10    • Communications and External Relations
  - 7     11    • Forecasting, Market and Business Development
  - 8     --

3            72.1    Would FEI agree that 'Business Development' is the primary group responsible  
4                            for developing new business opportunities?

6     **Response:**

7     No, that would not be correct under the assumption that new business opportunities are defined  
8     as initiatives to generate incremental revenues or new business opportunities designed to retain  
9     existing customers and load. The specific groups within the Energy Solutions & External  
10    Relations department include the following:

- 11            1. Communications
- 12            2. Energy Solutions
- 13            3. External Relations
- 14            4. Market Development
- 15            5. Energy Efficiency & Conservation to the extent that the group is responsible for program  
16                            design and operation for the High-Carbon Fuel Switching programs
- 17            6. Business Development

18

19    Every group is oriented to developing new business opportunities in either a primary or  
20    supporting capacity depending on the type of opportunity.

21

22

23

24            72.1.1    If not, please assign proportional responsibility for developing  
25                            incremental revenues to Energy Solutions, Energy Efficiency and  
26                            Conservation; Communications and External Relations and  
27                            Forecasting, Market and Business Development.

28



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**Response:**

The quantity of incremental revenue (the size of the opportunity) and the nature of the specific business opportunity affect the degree of participation by the various groups within ES&ER, as well as the involvement by other business units in the Company, so it would be difficult to apply a proportional responsibility to the groups within the ES&ER department. However three groups (Energy Solutions, Business Development and Market Development) have the most direct involvement in developing incremental revenue opportunities for the Company.

72.2 Please identify the approximate proportions of the ES&ER budget that are assigned to Energy solutions, Energy Efficiency and Conservation, Communications and External Relations, and Forecasting, Market and Business Development.

**Response:**

Please see Appendix F6 of the Application, Activity View (Page 2), which provides the requested breakdown of the ES&ER O&M budgets. The 2013 Projection and the 2014 Forecast breakdown has been provided below as a reference along with the proportions of each of the groups within the ES&ER department .

BCUC Reference	Particulars	2013 Projection (\$000's)	Proportion %	2014 Forecast	Proportion %
310-11	ES&ER Supervision	671	3.5%	700	3.0%
310-12	Energy Solutions	5,117	26.6%	6,009	25.8%
310-13	Energy Efficiency	301	1.6%	308	1.3%
310-14	Communications & External Relations	6,988	36.4%	8,609	37.0%
310-15	Forecasting, Market and Business Development	6,138	31.9%	7,649	32.9%
310-10	<b>Total ES&amp;ER</b>	<b>\$19,215</b>		<b>\$23,275</b>	

72.3 Does FEI expect the proportions to remain constant over the course of the PBR period?

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1  
2 **Response:**  
3 Generally, at this point in time FEI expects that the proportions will remain more or less similar  
4 to the current proportions. (Refer to the response to CEC IR 2.72.2.) However, as a PBR is  
5 designed to provide flexibility over the term of the agreement in leaving the business and  
6 organizational decisions up to management, changes to the ES&ER department may occur and  
7 proportions may change, in order to focus the company on the business strategies and  
8 priorities.

9  
10  
11  
12 72.4 If not, please explain how FEI expects they will change over the PBR period.

13  
14 **Response:**

15 Please refer to the response to CEC IR 2.72.2 and CEC IR 2.72.3.

16

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1     **73     Reference: Exhibit B-8, CEC 1.41.1**

20     Furthermore, as described on pages 78-79 of the Application, through the Annual Review  
21     process FEI has proposed that FEI will bring forward any proposals for the funding of  
22     incremental resources in support of load growth initiatives identified during the course of the  
23     PBR period.

2

3             73.1     Please identify any load growth or other proposals that were brought forward  
4                     during the previous PBR period that would contribute to revenue generation.

5

6     **Response:**

7     Please refer to the response to CEC IR 2.64.5.

8

9

10

11             73.1.1     Please provide a total of the funding that was requested and received  
12                     for incremental resources in support of load growth initiatives during the  
13                     previous PBR period.

14

15     **Response:**

16     Please refer to the response to CEC IR 2.64.5.

17

18

19

20             73.1.2     Please provide an estimate of the incremental revenue that was  
21                     generated as a result of the incremental resources requested/received.

22

23     **Response:**

24     Please refer to the response to CEC IR 2.64.5.

25

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1     **74     Reference: Exhibit B-8, CEC 1.23.2**

25     **Response:**

26     Regulatory efficiency is an inherent benefit of a PBR plan which helps the utility staff to shift  
 27     their focus from time and resource-consuming regulatory proceedings to focusing on providing  
 28     service to customers and on finding productivity opportunities that may eventually benefit the  
 29     company and its customers. In other words the incentive share of regulatory efficiency is not  
 30     separable from other PBR incentives and is embedded in the PBR overall incentives. FEI's  
 31     proposed earnings sharing mechanism shares all the PBR incentives among FEI and rate  
 32     payers on an equal basis.

2

3             74.1     Please provide clarification as to what 'resources' are being consumed, and how  
 4                     they may be distinguished from 'time' in the regulatory proceedings.

5

6     **Response:**

7     This response addresses the responses to CEC IRs 2.74.1 through 2.74.3.

8     In the context of O&M, the resources consumed referred to in the response to CEC IR 1.23.2  
 9     are primarily related to the time of employees in various departments throughout FEI. Although  
 10    these departments include Finance and Regulatory, for developing the financial models and  
 11    developing rate forecasts, every department in the company is involved in developing forecasts,  
 12    writing sections of applications and responding to information requests. For example, the  
 13    Finance and Regulatory department does not craft the descriptions of the activities of the  
 14    Distribution department, nor does it respond to IRs relating to these activities. There are also  
 15    external resources that are utilized in regulatory proceedings (external legal, expert witnesses  
 16    and consultants, Commissioner costs, PACA awards, administrative costs such as courier  
 17    expenses) that do not reside in O&M.

18    Refer to the responses to BCUC IR 2.292.1, 2.292.2 and 2.292.3 for a description of the costs  
 19    related to regulatory proceedings and how the PBR framework will not lead to savings as  
 20    compared to the Base O&M costs, but rather allow existing resources to refocus their efforts on  
 21    either completing other regulatory applications (in the case of Finance and Regulatory) or  
 22    running the business (in the case of other departments).

23

24

25

26             74.2     Please confirm that the regulatory efficiency being referenced would reasonably  
 27                     be expected to occur primarily in the Finance and Regulatory department.

28

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1    **Response:**

2    Please refer to the response to CEC IR 2.74.1.

3  
4

5

6                   74.2.1   If not confirmed, please identify additional department areas in which  
7                               regulatory efficiencies are expected to be obtained by reducing the 'time  
8                               and resource-consuming regulatory proceedings'.

9

10   **Response:**

11   Please refer to the response to CEC IR 2.74.1.

12  
13

14

15                   74.2.1.1.1   Please provide quantification of the number of hours and  
16                               associated costs that FEI estimates can be saved, and /or  
17                               redirected in each department identified as a direct result of  
18                               moving to PBR.

19

20   **Response:**

21   Please refer to the response to CEC IR 2.74.1.

22  
23

24

25           74.3    Please provide quantification of the time and resources that will be saved in the  
26                   Finance and Regulatory department as a direct result of undertaking PBR.

27

28   **Response:**

29   Please refer to the response to CEC IR 2.74.1.

30  
31

32

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74.4 Would FEI agree that regulatory savings achieved as a direct result of moving to the PBR process are not a productivity savings that is within FEI's control?

**Response:**

FEI confirms that these costs represent a reduction in the number and scope of regulatory proceedings under PBR as compared to a cost of service regime, rather than resulting from the use of fewer resources for the same scope of work. The efficiency of regulatory processes is largely out of the control of FEI, as the scope of the regulatory review and the number of IRs are determined by the Commission and customer groups. Even in a PBR regime, there is potential for costs to be significant, depending on the scope of Annual Reviews and associated reporting requirements.

As noted in the response quoted above, the regulatory efficiency benefit of a PBR Plan helps utility staff shift their focus from regulatory proceeding to finding productivity opportunities. The finding of productivity improvements is within FEI's control.

74.4.1 If not, please explain why not.

**Response:**

Please refer to the response to CEC IR 2.74.4.

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1     **75     Reference: Exhibit B-8, CEC 1.23.2**

1     Another smaller component of regulatory efficiency pertains to lower costs for hearings,  
2     including Commission hearing costs and intervener funding allowances. These costs are  
3     normally collected in deferral accounts and recovered in rates. Savings during the PBR in this  
4     category will flow 100% to customers through lower amounts being recorded in deferral  
5     accounts.

2             6

3             75.1     What are the expected savings to be achieved from the lower costs for hearing,  
4                     including Commission hearing costs and intervener funding allowances.

5  
6     **Response:**

7     These incremental external costs listed in the question are captured in deferral accounts, not in  
8     O&M. Please refer to the response to CEC IR 2.75.1.1 for potential savings.

9  
10

11  
12             75.1.1     Please provide a quantification of the savings and compare these to the  
13                     hearing costs, and intervener funding allowances that are expected to  
14                     accrue under PBR.

15  
16     **Response:**

17     In the last two-year revenue requirement, the regulatory hearing costs held in a deferral account  
18     totaled approximately \$1.6 million.

19     In comparison, under FEI's last PBR (from 2004 to 2009), incremental costs related to the  
20     Annual Review process varied by year. Generally, there were no incremental BCUC costs  
21     billed for the Annual Review process. Other annual costs (primarily PACA and legal costs)  
22     ranged from \$5 thousand to \$35 thousand, depending on the year and which parties elected to  
23     participate. FEI believes, however, that under the current regulatory environment, a similar level  
24     of regulatory savings related to Annual Reviews is unlikely to be realized.

25

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1     **76     Reference: Exhibit B-8, CEC 1.53.1**

13   FEI's 2010-2011 RRA was determined through a negotiated settlement, including an O&M  
14   reduction of \$3.1 million in 2010 and \$4.5 million in 2011 (before overheads capitalized) and a  
15   capital reduction of \$3 million in each of 2010 and 2011 (not including adjustments for the  
16   CPCN threshold).  
17   While the O&M reductions result in direct reductions to the FEI revenue requirements in those  
18   respective years, the capital reductions served to reduce the total FEI revenue requirement by  
19   approximately \$100 thousand in 2010 and by approximately \$300 thousand in 2011.

2

3           76.1   Please provide the total O&M requested by FEI for each of the years 2010 and  
4                   2011 from which the \$3.1 million was deducted in 2010 and the \$4.5 million was  
5                   deducted in 2011.  
6

7     **Response:**

8     The total O&M requested by FEI was \$209.6 million in 2010 and \$219.1 million in 2011. These  
9     equate to a 1.5 percent reduction in 2010 (\$3.1 million / \$209.6 million) and a 2.1 percent  
10    reduction in 2011 (\$4.5 million / \$219.1 million).

11

12

13

14           76.1.1   Please provide the percentage deductions for each year.

15

16    **Response:**

17    Please refer to the response to CEC IR 2.76.1.

18

19

20

21           76.2   What was FEI's total capital request for each of the years 2010 and 2011?

22

23    **Response:**

24    FEI's total request for regular capital expenditures, calculated on the same basis as the regular  
25    capital shown in Section C4 and excluding CPCN capital, was \$96.5 million in 2010 and \$96.6  
26    million in 2011.

27

28

29



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1           76.3    What was the total capital approved for the years 2010 and 2011?

2  
3    **Response:**

4    The total approved regular capital expenditures, excluding CPCN capital, was \$93.5 million in  
5    2010 and \$93.6 million in 2011. These differences between requested and approved of \$3.0  
6    million in 2010 and \$3.0 million in 2011 equate to a 3.1 percent reduction in 2010 (\$3.0 million /  
7    \$96.5 million) and a 3.1 percent reduction in 2011 (\$3.0 million / \$96.6 million).

8  
9  
10  
11           76.3.1   Please provide the percentage deduction for each of the year 2010 and  
12                    2011.

13  
14   **Response:**

15   Please refer to the response to CEC IR 2.76.3.

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1

2    **77     Reference: Exhibit B-8, CEC 1.53.1**

20    In the 2012-2013 RRA, the Commission ordered reductions of approximately \$3.2 million in  
21    2012 and \$5.2 million in 2013 related to the FEU's operating expenses (before overheads  
22    capitalized), of which FEI's portion was close to 100%, directly reducing the FEI revenue  
23    requirements in those respective years.

24    In regards to FEI capital reductions from the 2012-2013 RRA, \$2.9 million of net plant in service  
25    was disallowed for the Olympic Cauldron and a further \$400 thousand was disallowed for a  
26    mobile refueling station. However, factoring in one-time tax impacts in 2012, the total revenue

3

1    requirement impact was negligible for that year. In 2013, these capital reductions served to  
2    reduce the total FEI revenue requirement by approximately \$400 thousand.

4

5            77.1    Please provide the total O&M requested by FEI for each of the years 2012 and  
6                      2013 from which the \$3.2 million was deducted in 2012 and the \$5.2 million was  
7                      deducted in 2013

8

9    **Response:**

10    The total O&M requested by FEI for 2012 was \$230.2 million and for 2013 was \$241.1 million.  
11    This equates to a 1.4 percent reduction (\$3.2 million / \$230.2 million) in 2012 and a 2.2 percent  
12    reduction (\$5.2 million / \$241.1 million).

13

14

15

16            77.1.1    Please provide the percentage deductions for each year.

17

18    **Response:**

19    Please refer to the response to CEC IR 2.77.1.

20

21

22

23            77.2    What was FEI's total capital request for each of the years 2012 and 2013?

24

25    **Response:**

26    FEI's total regular capital expenditure request, excluding CPCNs, was \$118.5 million in 2012  
27    and \$125.3 million in 2013.

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77.3 What was the total capital approved for each of the years 2012 and 2013?

**Response:**

The total approved regular capital expenditures, excluding CPCNs, were \$116.5 million in 2012 and \$125.3 million in 2013. Therefore, \$2.0 million of regular capital expenditures were disallowed in 2012 (\$118.5 million - \$116.5 million) and no capital expenditures were disallowed in 2013. This equates to a 1.7 percent (\$2.0 million / \$118.5 million) reduction in 2012 and a zero percent reduction in 2013.

77.4 Please provide the percentage deduction for each of the years 2012 and 2013.

**Response:**

Please refer to the response to CEC IR 2.77.3.

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1     **78     Reference: Exhibit B-8, CEC 1.53.2**

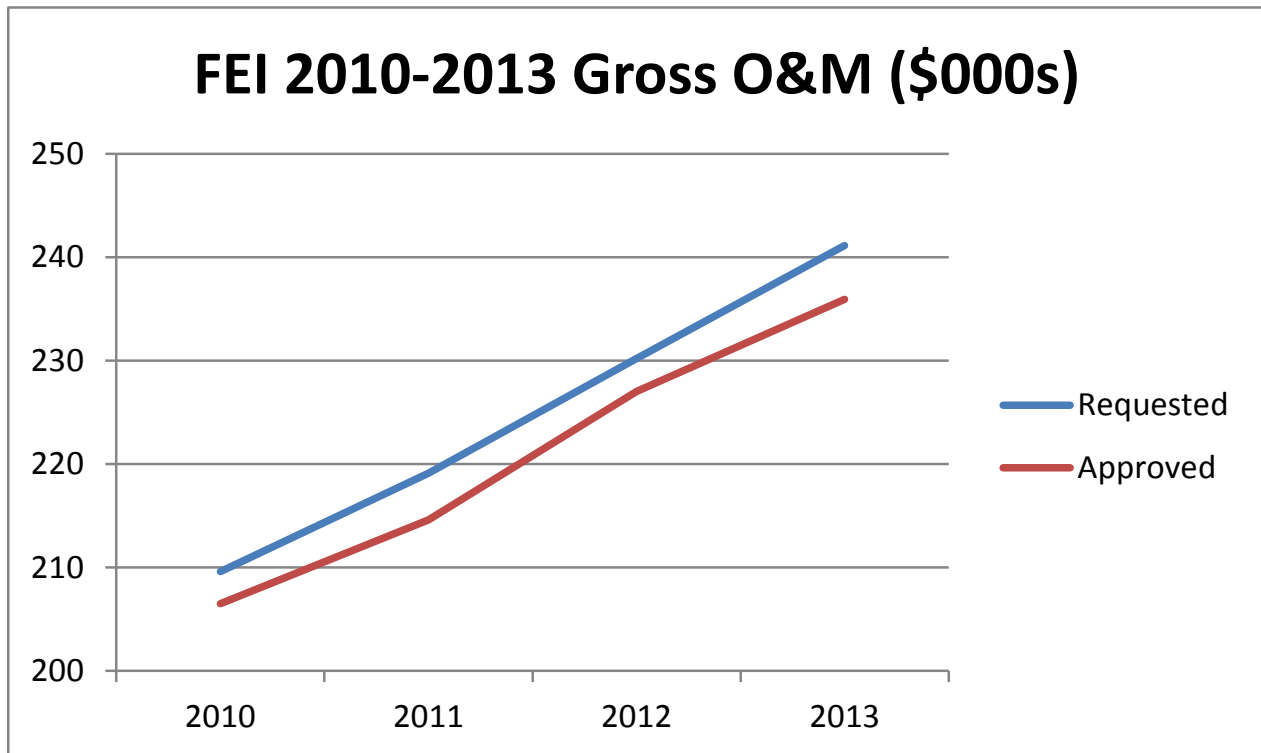
10     For the FEI 2010-2011 Revenue Requirement operating expense reductions discussed in the  
11     response to CEC IR 1.53.1, the average of the two years gross O&M reductions was  
12     approximately \$3.8 million. The average gross approved O&M for FEI in 2010-2011 was  
13     approximately \$211 million, meaning the FEI gross O&M request was reduced an average of  
14     about 1.8 percent due to the NSP. However, the graph above shows the total delivery revenue  
15     request and not the total O&M request. The average total approved delivery revenue for FEI in  
16     2010-2011 was \$547 million, meaning only approximately 0.7 percent of the non-bypass  
17     delivery revenue was related to the gross O&M reduction.

2

3             78.1     Please provide a graph depicting FEI's total O&M request and the total O&M  
4             approved for the period of 2010 through to 2013.

5

6     **Response:**



7

8

9

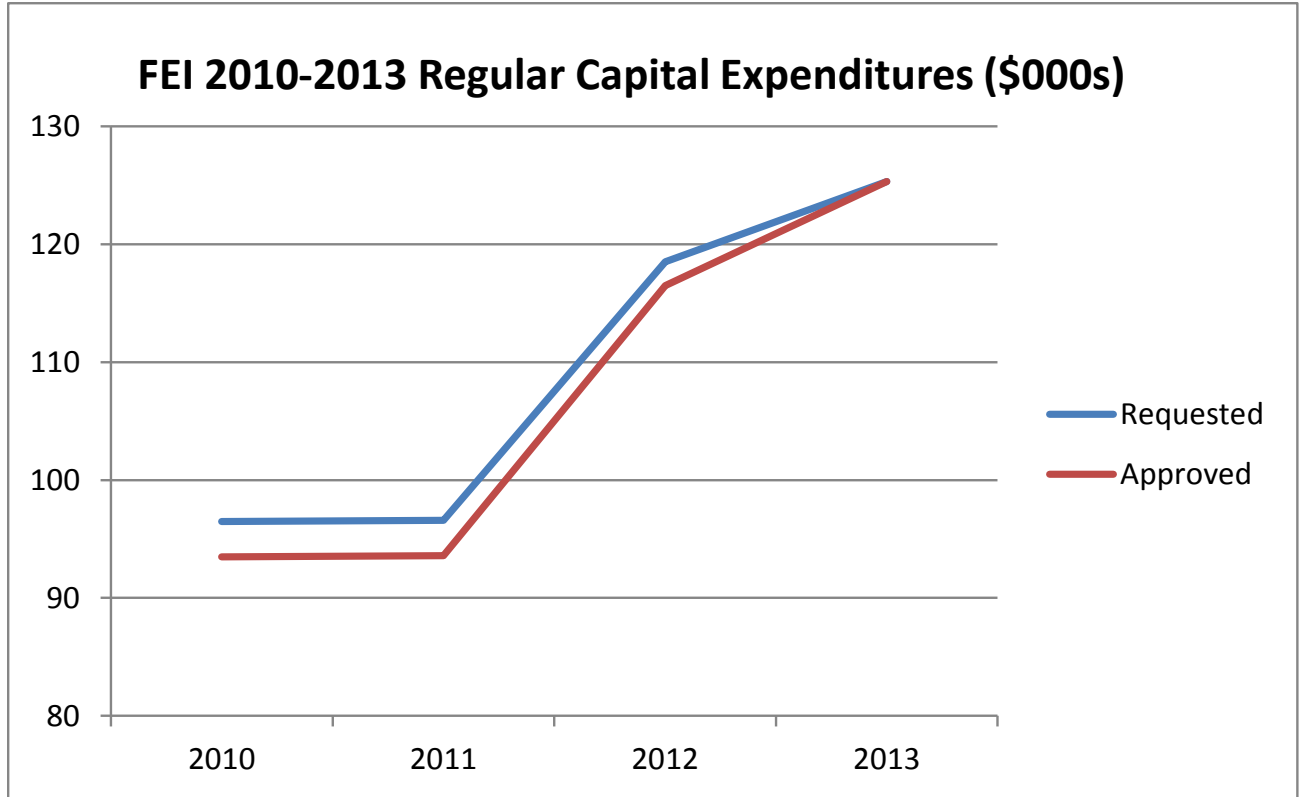
10

11             78.2     Please provide a graph depicting FEI's total capital request and the total capital  
12             approved for the period of 2010 through to 2013.

13

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1 **Response:**



2

3

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1     **79     Reference: Exhibit B-8, CEC 1.53.2**

10    For the FEI 2010-2011 Revenue Requirement operating expense reductions discussed in the  
11    response to CEC IR 1.53.1, the average of the two years gross O&M reductions was  
12    approximately \$3.8 million. The average gross approved O&M for FEI in 2010-2011 was  
13    approximately \$211 million, meaning the FEI gross O&M request was reduced an average of  
14    about 1.8 percent due to the NSP. However, the graph above shows the total delivery revenue  
15    request and not the total O&M request. The average total approved delivery revenue for FEI in  
16    2010-2011 was \$547 million, meaning only approximately 0.7 percent of the non-bypass  
17    delivery revenue was related to the gross O&M reduction.

23    Using the same logic and calculations for the FEI 2012-2013 Revenue Requirement operating  
24    expense reductions discussed in the response to CEC IR 1.53.1, the average of the two years  
25    gross O&M reductions were approximately \$4.2 million. The average gross O&M for FEI in  
26    2012-2013 was approximately \$231 million, meaning approximately 1.8 percent of the FEI gross  
27    O&M request was disallowed. To re-iterate however, the graph above shows the total delivery  
28    revenue request and not the total O&M request. The average total delivery revenue for FEI in  
29    2012-2013 was approximately \$596 million, meaning only approximately 0.7 percent of the non-  
30    bypass delivery revenue was reduced by gross O&M disallowed.

4           79.1    Please confirm that the FEI's requests for O&M and capital in its Revenue  
5                   Requirements hearings are based on its best predictions for the future and  
6                   forecast cost of service.

8     **Response:**

9     FEI confirms that in past cost of service based Revenue Requirement hearings, FEI's requests  
10    for O&M and capital were based on its best predictions for the future and forecast cost of  
11    service. In PBR formula Revenue Requirements, such as FEI has requested in this Application,  
12    O&M and capital are formula driven using a 2013 Base amount as discussed in Sections B6.2.4  
13    and B6.2.5 of this Application. Rate-setting amounts for 2014 through 2018 are the result of the  
14    formula calculations and not best predictions of future costs.

18           79.1.1   If not, please explain why not.

20    **Response:**

21    Please refer to the response to CEC IR 2.79.1.

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1           79.2    Would FEI agree that, based on the above information, FEI has on average  
2                    received reductions to its O&M requests in Revenue Requirement hearings of  
3                    1.8%?

4  
5    **Response:**

6    FEI would agree that, for the 2010 to 2013 revenue requirement periods, FEI received average  
7    reductions to its O&M requests of approximately 1.8 percent.

8  
9

10  
11               79.2.1   If not, please explain why not.

12  
13   **Response:**

14   Please refer to the response to CEC IR 2.79.2.

15  
16

17  
18           79.3    Please provide the total increase in O&M requested from 2010 to 2013 and the  
19                    total increase that was approved from 2010 to 2013, in both dollars and  
20                    percentages.

21  
22   **Response:**

23   The total increase in O&M requested from 2010 to 2013 was \$31.5 million (\$241.1 million -  
24   \$209.6 million) and the total increase in O&M approved from 2010 to 2013 was \$29.4 million  
25   (\$235.9 million - \$206.5 million). These equate to a 15.0 percent increase in O&M requested  
26   (\$31.5 million / \$209.6 million) and a 14.2 percent increase in O&M approved (\$29.4 million /  
27   \$206.5 million).

28  
29

30  
31           79.4    Would FEI agree that, based on the above information, FEI has typically  
32                    received reductions to its capital requests in Revenue Requirement hearings?

33

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1    **Response:**

2    FEI would agree that it has often received reductions to its capital requests in Revenue  
3    Requirement hearings. There was no reduction received in 2013.

4

5

6

7                   79.4.1    If not, please explain why not.

8

9    **Response:**

10   Please refer to the response to CEC IR 2.79.4.

11

12

13

14                   79.4.2    Please provide the total increase in capital that was requested from  
15                               2010 to 2013 and the total increase that was approved from 2010 to  
16                               2013 in both dollars and percentages.

17

18   **Response:**

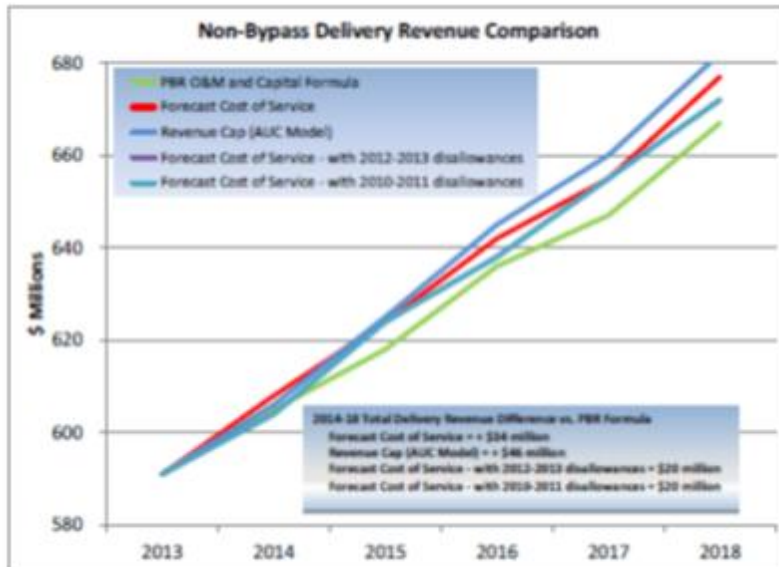
19   The total increase in regular capital expenditures requested from 2010 to 2013 was \$28.8  
20   million (\$125.3 million - \$96.5 million) and the total increase in regular capital expenditures  
21   approved from 2010 to 2013 was \$31.8 million (\$125.3 million - \$93.5 million). These equate to  
22   a 29.9 percent increase in regular capital expenditures requested (\$28.8 million / \$96.5 million)  
23   and a 34.0 percent increase in regular capital expenditures approved (\$31.8 million / \$93.5  
24   million).

25



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1     **80     Reference: Exhibit B-8, 1.53.3**



2  
3     80.1     Please confirm, or explain otherwise, that the two \$20 million figures shown in  
4     the lower box entitled '2014-18 Total Delivery Revenue Difference vs. PBR  
5     formula' indicates that Revenue Requirement under Forecast cost of service  
6     assuming disallowances, would be a total of \$20 million more than it would under  
7     the proposed PBR formula.

8  
9     **Response:**

10     Confirmed.

11  
12  
13  
14     80.2     Please provide the same graph, excluding the AUC model, but incorporating a  
15     single Forecast Cost of Service prediction with an annual 0.73% decrease in  
16     revenue requirement commencing in 2014.

17  
18     **Response:**

19     FEI has not provided the graph requested because a Forecast Cost of Service Prediction with a  
20     0.73 percent annual decrease in revenue requirement compared to 2013 would result in a  
21     cumulative revenue requirement decrease of \$282 million as compared to the proposed PBR  
22     formula. As the evidence in the Application demonstrates, there are real cost pressures on the

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Company, including such simple factors as inflation, creating the high level forecasted cost of service rate increases for 2014 through 2018 included in the Application. This request suggests that those pressures do not exist. The requested graph is not in fact a Forecast Cost of Service Prediction and adds no value to the proceeding record.

80.2.1 Please calculate and provide the Total Delivery Revenue Difference vs. PBR formula as above and identify the percentage difference.

**Response:**

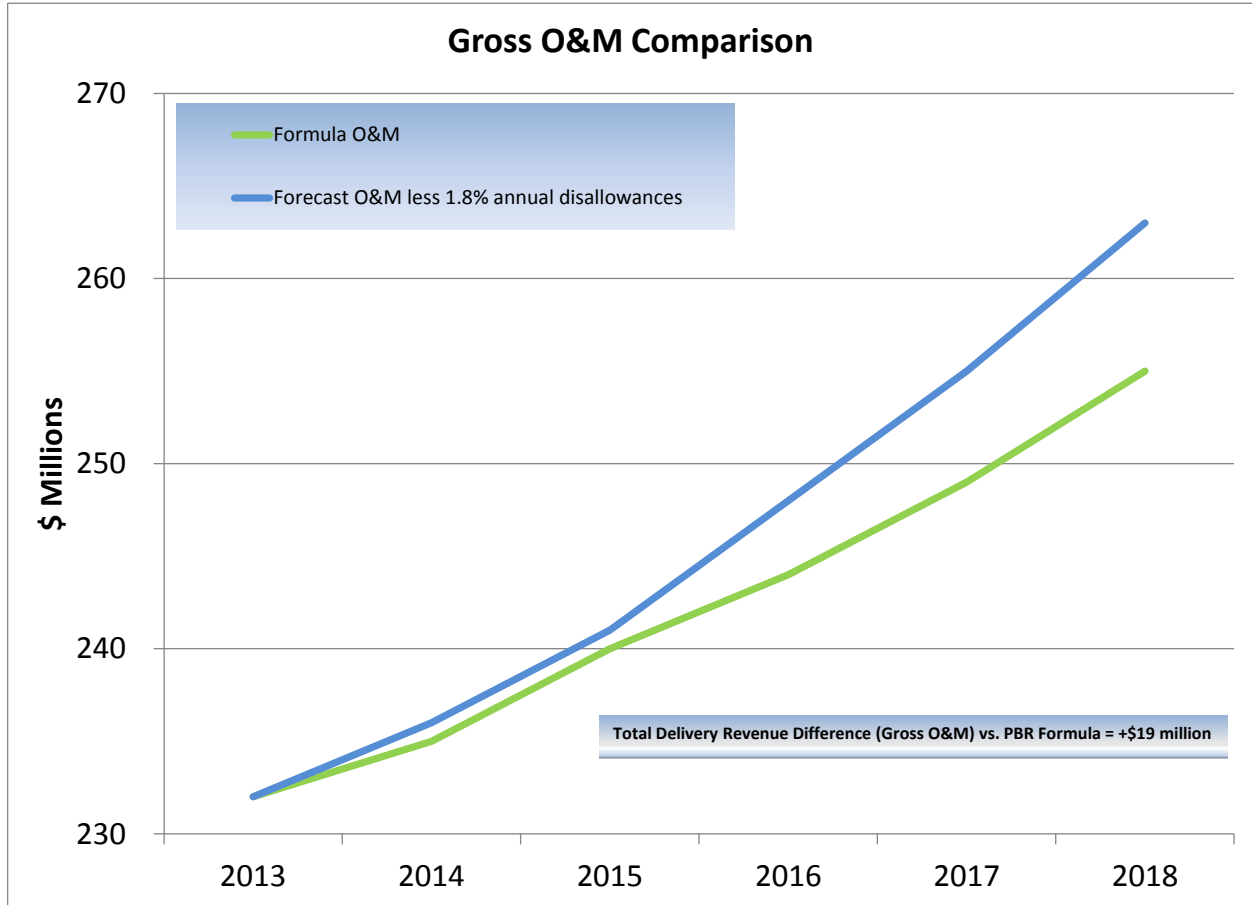
Please refer to the response to CEC IR 2.80.2.

80.3 Please provide a graph separating out the O&M revenue requirement from 2013 to 2018 under PBR formula and a single O&M forecast cost of service revenue requirement assuming annual disallowances of 1.8%, commencing in 2014 and continuing through to 2018 applied cumulatively.

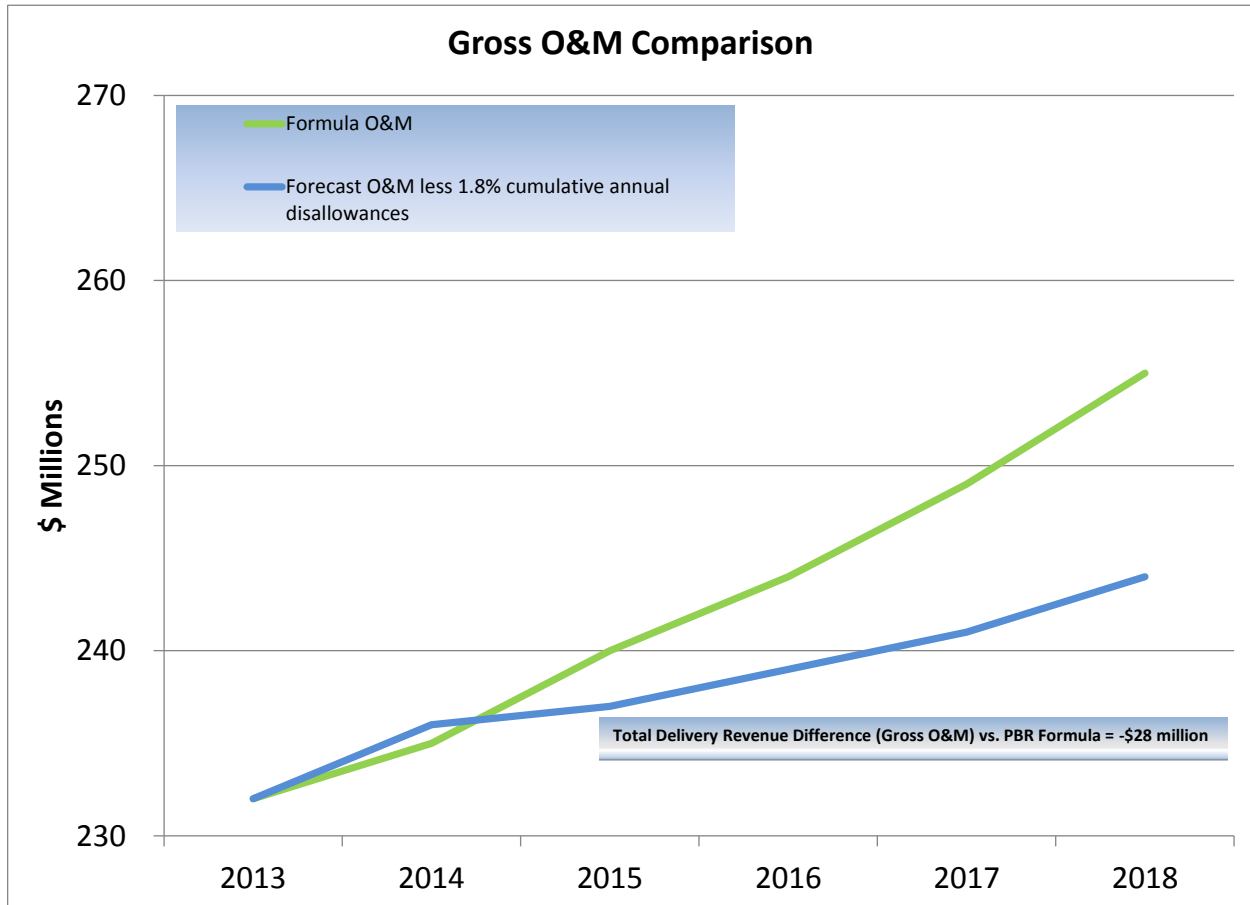
**Response:**

FEI has provided two graphs for this response. To explain the first graph, the Formula O&M line includes the Gross O&M under the formula approach as requested and included in this Application. The Forecast O&M less 1.8 percent annual disallowances line includes the Gross O&M under the forecast approach as included within this Application less 1.8 percent each year. Although it is not appropriate to apply disallowances cumulatively, to be responsive, FEI has provided a second graph which uses the same O&M formula line as the first graph, however, the Forecast O&M less 1.8% cumulative annual disallowances line applies the 1.8 percent reduction cumulatively, ranging up to a 9 percent reduction by 2018.

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80.3.1 Please calculate and provide the Total Delivery Revenue Difference (O&M) vs. PBR formula as above, and identify the percentage difference.

**Response:**

Please refer to the response to CEC IR 2.80.3 which shows that the Gross forecast O&M less 1.8 percent annual disallowances would be \$19 million more than the Gross O&M under PBR formula. The difference between the two scenarios is approximately 1.5 percent of the total O&M required over the PBR period.

The response to CEC IR 2.80.3 also shows that the Gross forecast O&M less 1.8 percent cumulative annual disallowances would be \$28 million less than the Gross O&M under PBR

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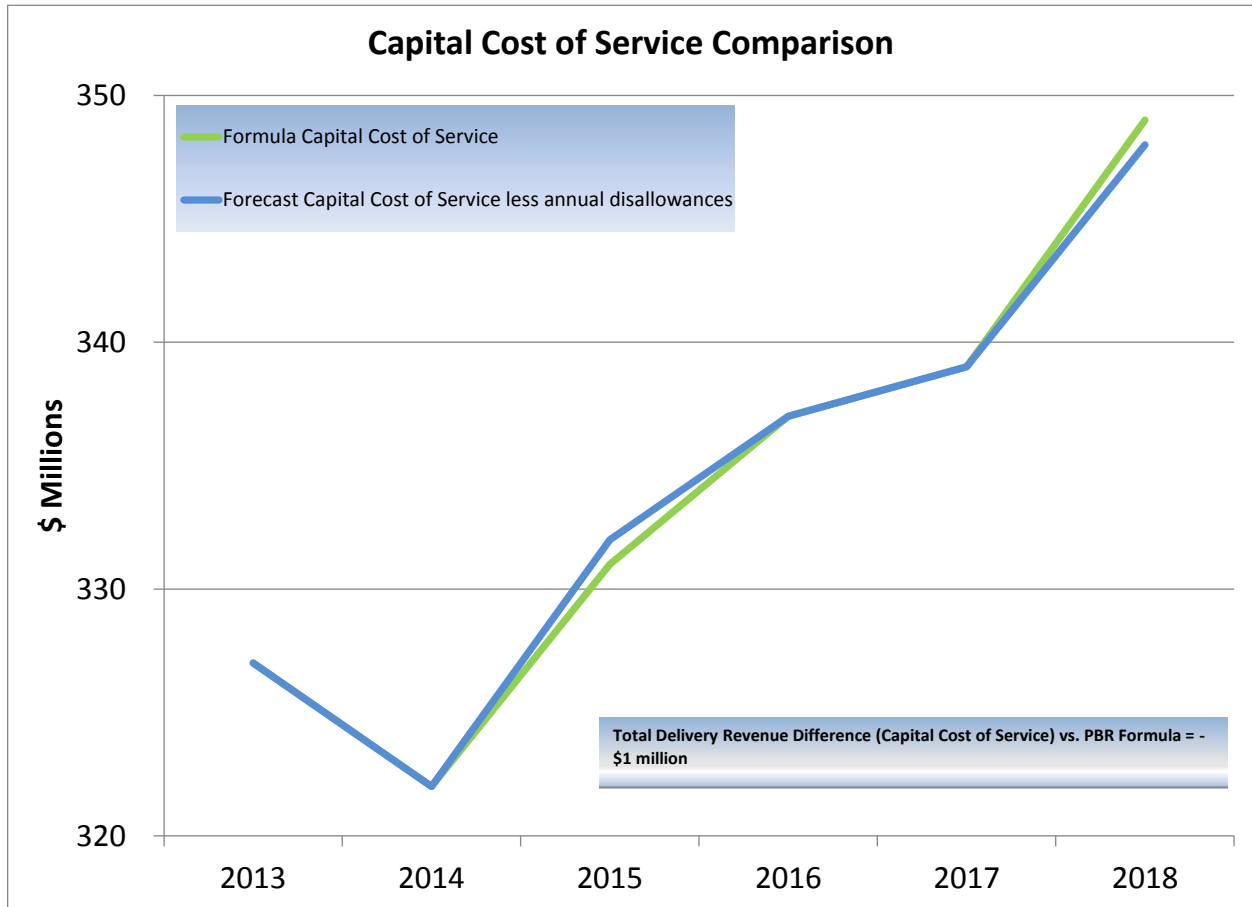
1 formula. The difference between the two scenarios is approximately 2.3 percent of the total  
2 O&M required over the PBR period.

3  
4  
5  
6 80.4 Please provide a graph separating out the Capital revenue requirement from  
7 2013 to 2018 under PBR formula and a single capital forecast cost of service  
8 revenue requirement assuming annual disallowances of 0.04% for the years  
9 2014 and 2015, and annual disallowances of 0.03% for the years 2016 through  
10 to 2018.

11  
12 **Response:**

13 The response to this question is not straight-forward in that capital spending impacts the  
14 revenue requirements in multiple ways including depreciation, rate base return and income  
15 taxes including the adjustment for depreciation and CCA. Specifically, the impacts of  
16 depreciation and CCA on the tax calculation may vary depending on the type of capital  
17 disallowed. To simplify this response, FEI has provided the depreciation and earned return  
18 amounts, which directly relate to capital, embedded in the financial schedules filed with the  
19 Sept. 6<sup>th</sup> Evidentiary update under both the formula and forecast approach. The forecast  
20 amounts are reduced by the requested disallowances as suggested in this question.

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1

2

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1     **81     Reference: Exhibit B-8, CEC 1.50.1**

10     For the Customer Service related SQLs which include telephone service factor (emergency and  
 11     non-emergency), first contact resolution, billing index and meter reading accuracy, these metrics  
 12     collectively represent approximately \$45 million of customer service O&M costs. However,  
 13     assignment of costs to the individual SQL measures is difficult to determine as most of the  
 14     customer service related metrics also depend on other areas and departments as well.

Performance Measure	Indicator	Annual Costs	% of Total Annual Costs
Emergency response time	Percent of calls responded to within one hour	~\$4 million (O&M)	1%
Meter exchange appointment	Percent of appointments met for meter exchanges	~\$28 million (O&M and Capital)	8%

2  
 3     81.1     Would FEI be able to reduce its annual cost of approximately \$4 million by  
 4     increasing the Emergency response time to two hours?

5  
 6     **Response:**

7     Reducing the emergency response time to two hours does not reduce the amount of emergency  
 8     activity. The approximately 22,000 annual gas emergency calls (hit lines, gas odour, firecalls,  
 9     etc) would still need to be responded to and rectified as they are today and the costs of  
 10     completing this work would remain largely the same.

11     There would be some standby savings by reducing or eliminating one or two person towns (i.e.  
 12     100 Mile House) within a two hour response time of an alternate emergency resource location  
 13     such as a regional centre (i.e.Kamloops;) however, these would be partially offset by the greater  
 14     travel times coupled with the increased risk of a two hour response time.

15  
 16

17  
 18     81.1.1     If yes, please provide an estimation of the annual O&M expense that  
 19     FEI would save by increasing its response time to two hours.

20  
 21     **Response:**

22     Please refer to the response to the CEC IR 2.81.1.

23  
 24

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1  
2           81.2   Please identify what portion of the costs of the Meter exchange appointment  
3                   metrics are Capital and what proportion are O&M.

4  
5   **Response:**

6   Approximately 85 percent of the meter exchange program costs are Capital and 15 percent  
7   O&M.

8  
9  
10  
11           81.2.1   Please confirm, or otherwise explain that of the approximate \$28 million  
12                   in Meter Exchanges that includes O&M and Capital, only the O&M was  
13                   accounted for in the reference to the \$45 million in customer service  
14                   O&M costs; and that the capital costs would be added to the O&M  
15                   costs.

16  
17   **Response:**

18   Approximately \$3 million of the total \$28 million identified for meter exchanges is accounted for  
19   as O&M, with the majority of this funding for industrial meter exchange activities. The \$45  
20   million reference in the pre-amble is separate and is for customer service O&M costs.

21



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1     **82     Reference: Exhibit B-1, page 152 and Exhibit B-1-1 Appendix D7 page 7**

5     **Response:**

6     FEI's results to June 2013 are provided in the table below.

Performance Measure	Indicator	Benchmark	June 2013 YTD
Emergency response time	Percent of calls responded to within one hour	95%	97.5%
Meter exchange appointment	Percent of appointments met for meter exchanges	95%	96.9%
Telephone service factor (Emergency)	Percent of emergency calls answered within 30 seconds or less	95%	95%
Telephone service factor (Non Emergency)	Percent of non-emergency calls answered within 30 seconds or less	70%	70.5%

2

30  
31     Table D5-6: Recent historical results for Telephone Service Factor

Type of Call	2010	2011	2012	Current benchmark	Proposed benchmark
Emergency	99.2	96.5%	96.5%	92.2%	95.0%
Non Emergency	77.2	74.7	76.2	75.0%	70.0%

3

4     82.1     Please provide the historical results for the telephone service factor for the period  
5     of 2004 to 2010.

6

7     **Response:**

8     The TSF for emergency and non-emergency queues for the period of 2004 to 2010 has been  
9     provided below.

	2004	2005	2006	2007	2008	2009	2010
Non - Emergency	78%	77%	78%	77%	74%	77%	77%
Emergency	98%	99%	99%	98%	98%	98%	99%

10

11

12

13     82.2     Please explain what changes occurred that the telephone service factor dropped  
14     by approximately 5% to 70.5% over a six month period when it had stayed near  
15     to or above 75% from 2010 to 2012.

16

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1    **Response:**

2    FEI schedules staff according to expected call volumes and predicted arrival patterns. During  
3    the first quarter of 2013, non-emergency calls struggled in meeting the target due to higher than  
4    expected call volumes and different call arrival patterns than anticipated in January. In reaction  
5    to this, two new classes of CSRs were hired, trained and made available for calls by the end of  
6    March. Although this metric was lower than target at 67 percent in the first quarter, customers  
7    did not see extended wait times as the average speed of answer was 42 seconds for the period.

8  
9

10

11           82.3   What if any savings did FEI achieve by allowing the Telephone service (non  
12                   emergency) factor to drop below 75%.

13

14    **Response:**

15    Exact savings amounts that can be attributed to a lower TSF are difficult to calculate. However,  
16    a reasonable estimate is that FEI achieved savings of approximately \$25 thousand in labour  
17    over what would have been spent to answer the call volumes that actually materialized within  
18    service levels. These savings were captured in the Customer Service deferral account to be  
19    returned to customers.

20

21

22

23           82.4   If none, does FEI anticipate that it will achieve savings in the future by continuing  
24                   with a lower telephone service response?

25

26    **Response:**

27    As discussed in the Application Section 3.5.4, FEI estimates that a reduction in service levels  
28    from 75 percent to 70 percent will result in approximately \$50 thousand in annual savings  
29    beginning in 2014.

30

31

32

33           82.5   If FEI anticipates future savings as a result of lower telephone service factor  
34                   results, please quantify.

35

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1 **Response:**

2 Please refer to the response to CEC IR 2.82.4.

3  
4

5

6 82.6 Did FEI receive any customer complaints or changes in customer satisfaction  
7 that it can attribute to the reduction in the non-emergency telephone service  
8 response?  
9

10 **Response:**

11 No, FEI did not experience any reductions in customer satisfaction or increase in complaints  
12 attributable the TSF score being below the current target. Despite the fact that the TSF was  
13 slightly below the current target, the average speed of answer for all non-emergency calls  
14 during the period was 37 seconds. This shows that even if the call was not answered within 30  
15 seconds, customers were not experiencing long wait times.

16  
17

18

19 82.6.1 If yes, please provide an overview of the customer satisfaction with  
20 metrics as available.  
21

22 **Response:**

23 Please refer to the response to CEC IR 2.82.6.

24  
25

26

27 82.7 Does FEI expect that the Telephone Service Factor (non-emergency) will return  
28 to 75% or above prior to the approval of a benchmark change?  
29

30 **Response:**

31 FEI is focused on providing a stable and acceptable level of performance with respect to the  
32 telephone service factor. Each month, the current target is set at 75 percent for non-emergency  
33 calls. In order to target a yearly average of above 75 percent when the June YTD result was  
34 70.5 percent, the target would need to be revised to 80 percent for the remainder of the year,

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1 which would require a higher FTE than was budgeted for. At this time, FEI is forecasting a year  
2 end TSF of approximately 72 – 73 percent.

3

4

5

6 82.7.1. If not, please explain why not.

7

8 **Response:**

9 Please refer to the response to CEC IR 2.82.7.

10

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1     **83     Reference: Exhibit B-1, page 152 and Exhibit B-8 CEC 1.51.1**

17     Service Level Changes

18     During 2013, the Company is planning on revising the service levels for non-emergency calls in  
19     the gas contact centres from 75 percent of calls answered in 30 seconds to 70 percent of calls  
20     answered in 30 seconds. This change will align the service levels between the gas and electric  
21     operations allowing for a better comparison between the two. In addition, there will be a labour  
22     savings associated with this change in the amount of approximately \$50 thousand per year  
23     starting in 2014.  
24

2

5     Response:

6     FEI's results to June 2013 are provided in the table below.

Performance Measure	Indicator	Benchmark	June 2013 YTD
Emergency response time	Percent of calls responded to within one hour	95%	97.5%
Meter exchange appointment	Percent of appointments met for meter exchanges	95%	96.9%
Telephone service factor (Emergency)	Percent of emergency calls answered within 30 seconds or less	95%	95%
Telephone service factor (Non Emergency)	Percent of non-emergency calls answered within 30 seconds or less	70%	70.5%

3

Performance Measure	Indicator	Benchmark	June 2013 YTD
Emergency response time	Percent of calls responded to within one hour	95%	97.5%
First contact resolution	Percent of customers who achieved call resolution in one call	78%	81%
Billing index	Measure of customer bills produced meeting performance criteria	5	1.92
Meter reading accuracy	Number of scheduled meters that were read	95%	89%
All injury frequency rate	Informational indicator – 3 year rolling average of lost time injuries plus medical treatment injuries per 200,000 hours worked		2.89
Public contact with pipelines	Informational indicator – 3 year rolling average of number of line damages per 1,000 BC One Calls received		9
Customer satisfaction index	Informational indicator		8.3

4

1

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83.1 How frequently does FEI track its results with respect to performance measures?

**Response:**

Results of the proposed SQI performance measures are available on a monthly basis except for the Customer Satisfaction index and the All Injury Frequency rate measures where the results are available on a quarterly basis.

For the Public Contact with Pipelines and All Injury Frequency rate measures, while the current year-to-date results are available monthly and quarterly respectively, the three year rolling average for comparison will not be available until the completion of the current year.

83.1.1 Please provide bi-annual results for the last 10 years if available.

**Response:**

The following table provides the historical semi-annual results where available for the past ten years for the proposed suite of service quality indicators.

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1

Service Quality Indicator	2004 Q2 YTD	2004 Year End	2005 Q2 YTD	2005 Year End	2006 Q2 YTD	2006 Year End	2007 Q2 YTD	2007 Year End	2008 Q2 YTD	2008 Year End	2009 Q2 YTD	2009 Year End	2010 Q2 YTD	2010 Year End	2011 Q2 YTD	2011 Year End	2012 Q2 YTD	2012 Year End
Emergency response time - 95 percent of calls responded to within one hour	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	97.7%	n/a	97.7%	n/a	97.9%	n/a	97.4%
Meter exchange appointment activity	94.6%	93.5%	95.5%	94.3%	94.7%	94.1%	93.6%	93.5%	94.8%	94.5%	87.7%	94.7%	95.3%	94.2%	96.7%	96.5%	96.4%	96.5%
Telephone service factor (Emergency) - 95 percent of calls answered in 30 seconds or less	97.3%	97.9%	99.2%	98.8%	99.0%	98.6%	98.2%	98.4%	98.3%	98.3%	98.3%	98.3%	99.7%	99.2%	98.8%	96.5%	96.0%	96.5%
Telephone service factor (Non-Emergency) - 95 percent of calls answered in 30 seconds or less	77.3%	77.5%	77.5%	76.9%	77.8%	78.2%	77.2%	76.9%	74.8%	73.8%	76.7%	76.7%	77.2%	77.2%	74.8%	74.7%	75.4%	76.2%
First contact resolution	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	69%	n/a	72%	n/a	77%	n/a	75%	n/a	78%
Bill index	2.00	1.93	1.90	1.97	0.83	0.77	2.73	2.30	9.30	7.53	5.23	3.75	1.67	2.40	n/a	0.24	n/a	3.01
Meter reading accuracy - number of scheduled meters read	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
All injury frequency rate - 3 year rolling average	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	2.32	n/a	2.27	n/a	2.08
Public contacts with pipelines - 3 year rolling average	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	26	n/a	22	n/a	18	n/a	16
Customer satisfaction index	n/a	75.3%	76.6%	77.2%	77.0%	77.9%	78.5%	79.3%	80.0%	79.7%	80.0%	80.1%	79.4%	80.0%	79.9%	79.3%	80.1%	78.9%

\* Historical data for some metrics are not available as they may not have been previously tracked and/or reported the same way as is for the proposed.

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83.2 Please confirm that call answer refers to the ability for a customer to speak directly with a customer service representative, who would most likely be able to resolve their issue rather than forwarding the customer on.

**Response:**

Not confirmed. The telephone service factor is the percentage of calls answered in thirty seconds or less and is not related to transfers or resolution of the concerns. First contact resolution is a better measure to identify how often the customer's issue is resolved on the first call.

83.3 Please explain why it is important for the gas and electric operations to be readily comparable.

**Response:**

The Company continues to make efforts to align and integrate the Gas and Electric operations, enabling efficiencies to be realized and increasing its organizational capacity. Similar to the efforts aligning the different Gas and Electric scorecards starting 2012, a common set of SQIs, with some differences recognizing the nature of the Gas and Electric operations, has been developed aligning the SQI focus of the Gas and Electric operations. This in turn will create for consistency in processes and priorities and contribute to more consistent delivery of service quality for the benefit of customers.

83.4 Please explain the discrepancy between the discussion referencing a service level of '75% of calls answered in 30 seconds' in Exhibit B-1, with the SQI Benchmark Telephone service factor (non-emergency) of 70% referenced in Exhibit B-8, CEC 1.51.1.

**Response:**

FEI clarifies that with respect to the non-emergency TSF, the benchmark being used for 2013 is 75 percent.



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83.5 What is the average wait time for the 29.5% of non-emergency calls not answered within 30 seconds?

**Response:**

FEI does not store the data required to complete this calculation. However, the average speed of answer for all non-emergency calls during the period of January 2013 to June 2013 was 37 seconds. This shows that even for those customers whose call was not answered within 30 seconds, they were not experiencing lengthy wait times.

83.6 Please confirm that FEI has a reasonable expectation of meeting the service quality indicators consistently throughout the PBR term.

**Response:**

FEI is committed to maintaining the service quality at acceptable levels throughout the PBR term. However one should also consider the possibility of exogenous and non-controllable factors that may lead to temporary and infrequent decline in some SQI results.

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1 **84. Reference: Exhibit B1-1-1, Appendix D7 page 11**

5 Following is a summary of the recent historical billing-index calculation versus the benchmark.

6  
7

Table D5-9: Recent historical results for billing-index

2010	2011	2012	Benchmark
2.40	0.24	3.01	5

8

9 FEI proposes to retain the current benchmark of 5.

2

3 84.1 Please explain why the 2011 results were unusually low and what activities FEI  
4 undertook to remedy the results, if any.

5

6 **Response:**

7 FEI clarifies that a lower result is desirable and therefore no actions were taken to remedy the  
8 situation. Regarding the 2011 results, FEI does not have detailed information explaining the  
9 results as the information is unavailable from its previous outsource provider.

10

11

12

13 84.2 Why did FEI establish a Benchmark of 5, when its historical results have been  
14 significantly lower?

15

16 **Response:**

17 As stated in Section 3.2.3, Appendix D-7 of the Application, the billing index is a composite  
18 index with three components:

- 19 • Billing completion with a 99.9% benchmark
- 20 • Billing timeliness with a 95% benchmark
- 21 • And billing accuracy with a 95% benchmark

22

23 The individual benchmarks for billing completion, timeliness and accuracy are therefore set at a  
24 high threshold.

25 A review of billing composite index formula indicates that if FEI achieves or exceeds the  
26 benchmark in all of the individual billing indices, it will attain a composite billing index of 5 or  
27 lower. Therefore lower historical results (lower than 5) demonstrate that FEI has been able to  
28 achieve its three benchmarks.

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4           84.3    Would FEI request to lower the Benchmark if it is unable to achieve the  
5                    Benchmark?

6

7    **Response:**

8    FEI has been able to achieve the benchmark in the past as historical results have been lower  
9    than the benchmark (lower than 5).

10

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1     **85     Reference: Exhibit B-8, CEC 1.51.3**

5  
6           51.3    Would FEI expect to improve service in the absence of PBR? Please explain  
7                   why or why not.  
8  
9     Response:  
10    In the absence of a PBR agreement, FEI would still look to improve the performance of the  
11    service quality indicators within the agreed acceptable level of overall cost to our customers as  
12    becoming more customer focused is a key business objective for the Company.

2

3           85.1    Please confirm or otherwise explain that FEI would expect to see the same level  
4                   of performance in the SQI measures under either PBR or not under PBR.

5

6     **Response:**

7     As stated in Section 1, Appendix D-7 of the Application “maintaining a high-level service quality  
8     is important to the long-term success of the Company”. Therefore, FEI expects to provide the  
9     same level of service quality at the agreed acceptable level of overall cost to customers under  
10    either PBR or not under PBR.

11

12

13

14           85.2    If not confirmed, please provide a range that FEI would consider as acceptable

15

16     **Response:**

17    Please refer to the response to CEC IR 2.85.1.

18

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1     **86     Reference: Exhibit B-1, page 152 and Exhibit B-11, BCUC 1.93.3**

28     Hours of Operation

29     The Company is planning on reviewing its core operating hours to ensure alignment with  
30     customer needs, to promote the use of self-serve options and to reduce operating costs during  
31     the PBR Period.

32  
33     Despite any changes made to the general hours of operation, emergency calls will still be  
34     answered 24 hours per day, 7 days per week as they are today.

17  
18             93.3     Please explain what the hours of operation for the contact centre are now and  
19                             how FEI would potentially change these operational hours.

20  
21     Response:

22     Currently, the hours of operation for non-emergency calls at the contact center are 7 am to 8 pm  
23     Monday to Friday and 9 am to 5 pm on Saturdays. FEI is evaluating closing one hour earlier on  
24     weekdays and looking at various options for Saturday. Potential cost savings will be evaluated  
25     against customer impact including looking at what other contact options are available to  
26     customers during the hours that the contact center is closed. The general hours of operation for  
27     emergency calls will remain 24 hours per day, 7 days per week.

4             86.1     What are the total cost savings that would be generated by closing at 7 pm on  
5                             weekdays? Please breakdown by labour and non-labour.

7     Response:

8     As discussed in the Application, hours of operation is one thing that FEI is looking at to promote  
9     self-serve options and reduce operating costs during the PBR period. As this evaluation has not  
10     yet occurred, this information is not available at this time.

14             86.2     Does FEI expect that a reduction in the hours of service would likely impact the  
15                             wait time for customer calls during service hours? Please explain why or why  
16                             not.

18     Response:

19     The planned analysis will include determining what staffing changes (if any) will be required  
20     during the open hours to ensure that service targets are maintained. This analysis has not  
21     taken place yet.

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86.2.1 If so, does FEI expect that the SQL with respect to non-emergency calls will be impacted?

**Response:**

Please refer to the response to CEC IR 2.86.2.

86.2.1.1 If so, does FEI intend to track the wait time for calls?

**Response:**

FEI already tracks wait times for customers and uses those to calculate the TSF. No changes to reporting are anticipated as a result of changing hours of operations, should FEI decide to change them.

86.3 What proportion of calls does FEI receive between 7 pm and 8 pm, and between 7 am and 8 am?

**Response:**

The number of calls received at these times can fluctuate seasonally. However, to date in 2013 FEI received approximately 2.5 percent of overall call volumes between 7am and 8am and approximately 2 percent between 7pm and 8pm. A more detailed review of the types of calls and seasonal differences will be undertaken during the evaluation process.

86.4 What options is FEI considering for changing the hours on Saturday?

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1    **Response:**

2    As this review has not yet taken place, FEI has not established what options it might consider  
3    for changing the hours of operation on Saturday.

4

5

6

7           86.5   What proportion of customer contacts occur on Saturdays, as opposed to during  
8                   the week?

9

10   **Response:**

11   The number of calls received on Saturday can fluctuate seasonally. However, to date in 2013  
12   FEI received approximately 5 percent of overall call volumes on Saturday. A more detailed  
13   review of the types of calls and seasonal differences will be undertaken during the evaluation  
14   process.

15

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1    **87      Reference: Exhibit B-11, BCUC 1.120.2**

1    Please refer to Attachment 120.2 for copies of FEI's corporate scorecards and SQI results for  
2    the years 2008-2012.

3            87.1    The CEC did not locate Attachment 120.2. Please provide a copy of the  
4                    Attachment and/or link

5  
6    **Response:**

7    Attachment 120.2 was filed and marked as Exhibit B-11-1 in this proceeding and is available on  
8    the BCUC website at the following link:

9    [http://www.bcuc.com/Documents/Proceedings/2013/DOC\\_35487\\_B-11-1\\_FEI-Response-to-BCUC-](http://www.bcuc.com/Documents/Proceedings/2013/DOC_35487_B-11-1_FEI-Response-to-BCUC-IR1_Attachments.pdf)  
10 [IR1\\_Attachments.pdf](http://www.bcuc.com/Documents/Proceedings/2013/DOC_35487_B-11-1_FEI-Response-to-BCUC-IR1_Attachments.pdf)

11  
12

13  
14            87.2    Please identify those SQI measures in which FEI has consistently exceeded the  
15                    proposed Benchmark for the period 2008-2012, and explain why FEI did not set  
16                    the Benchmark at the level which it achieved over this period.

17  
18    **Response:**

19    For the period 2008 – 2012, the Billing Index (previously called Index of Customer bills Not  
20    Meeting Criteria) and the Meter Exchange Appointment Activity metrics were the only two  
21    measures where FEI consistently exceeded the existing benchmark (i.e. exceeded defined as  
22    better results), and that have been included in the proposed suite of SQIs for the PBR Plan.

23    The rationale for keeping the benchmark the same for the Billing Index is provided in the  
24    response to CEC IR 2.84.2.

25    The benchmark for the Meter Exchange Appointment Activity measure was increased to 95.0%  
26    from the previous benchmark of 92.2 percent. Please refer to page 7 of Appendix D7 Service  
27    Quality Indicators for discussion.

28



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1 **88 Reference: Exhibit B-8, CEC 1.21.1**

5 **Response:**

6 In the 2012 review of the scorecard measures, four measures were retained including Customer  
7 Satisfaction, Regulatory Performance, Net Earnings and Recordable Vehicle Incidents. Two  
8 new measures, All Injury Frequency Rate (AIFR) and Public Contacts with Pipelines were  
9 added replacing the previous measures of Recordable Injuries and Public Safety. The new  
10 AIFR measure represented a more comprehensive safety performance indicator by comparing  
11 total medical aids and lost time injuries relative to hours worked (i.e. per 200,000 hours worked),  
12 whereas the previous measure Recordable Injuries reported just the number of injuries. The  
13 new Public Contacts with Pipelines measure focused on a key aspect of public safety, public  
14 contact with buried pipelines. The previous Public Safety measure was assessed dependent on  
15 the safety related SQIs. Three of the previous measures, Base Capital, Credit and Collections  
16 and Wellness were removed from the corporate scorecard and are instead now managed at the  
17 departmental level. The remaining measure O&M per customer is now incorporated into the  
18 Net Earnings measure.

19 Please also refer to the response to BCUC IR 1.19,1 for further discussion of the changes to the  
20 scorecard measures.

2

3 88.1 Please provide further details with respect to the Base Capital, Credit and  
4 Collections and Wellness measures; including what performance levels FEI has  
5 achieved in each measure over the last 5 years.

6

7 **Response:**

8 Below is a summary of the scorecard results from 2008 to 2011 included in the response to  
9 BCUC IR 1.120.2. In 2012, these three measures were no longer included on the corporate  
10 scorecard. During the four years, the company performed consistently well on all three metrics.

<u>Measure</u>	<u>Units</u>	<u>2008</u>		<u>2009</u>		<u>2010</u>		<u>2011</u>	
		<u>Actual</u>	<u>Target</u>	<u>Actual</u>	<u>Target</u>	<u>Actual</u>	<u>Target</u>	<u>Actual</u>	<u>Target</u>
Base Capital	\$ millions	115.4	124.8	107.7	116.5	98.9	111.8	114.9	127.1
Credit and Collections	bad debts %	0.24%	0.35%	0.29%	0.35%	0.18%	0.35%	0.32%	0.35%
Wellness	days lost	5.1	5.6	5.3	5.6	4.0	5.3	4.5	4.8

11

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1     **89     Reference: Exhibit B-8, CEC 1.80.2 and ECE 1.80.1**

Program Area	Total 2013 January 1 to June 30 Expenditures (\$000s)
Residential	3,638
Low Income	588
Commercial	3,104
Industrial	204
Innovative Technologies	157
Conservation Education & Outreach	693
Enabling Activities	2,527
<b>Total</b>	<b>10,911</b>

2

Program Area	Total 2013 Forecast Expenditures (\$000s)	2013 Approved Expenditures (\$000s)	Variance (\$000s)
Residential	11,204	10,623	581
Low Income	1,100	4,969	(3,869)
Commercial	6,940	12,708	(5,768)
Industrial	900	1,756	(856)
Innovative Technologies	1,092	1,502	(410)
Conservation Education & Outreach	2,200	4,016	(1,816)
Enabling Activities	4,500	n/a	4,500
<b>Total</b>	<b>27,936</b>	<b>35,574</b>	<b>(7,638)</b>

3

4            89.1     Please rationalize, by program area the Total 2013 Forecast in Expenditures for  
5                   2013 with the Actual January 1, 2013 to June 2013 spending in that the spending  
6                   in several areas is considerably less than half that of what is Forecast at the  
7                   midway point in the year, and the Total spending is less than 40% of the  
8                   Forecast.

9

10     **Response:**

11     Rather than provide rationalizations for actual and forecast expenditures as of end-June 2013,  
12     FEU has updated its Total 2013 Actual and Forecast expenditures for the January 1, 2013 to  
13     September 30, 2013 period as displayed in the table below.

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Program Area	Total 2013 January 1 to September 30 Expenditures (\$000s)	Total 2013 Forecast Expenditures (\$000s)
Residential	6,197	10,087
Low Income	816	1,056
Commercial	4,772	6,313
Industrial	220	915
Innovative Technologies	252	829
Conservation Education & Outreach	1,144	2,349
Enabling Activities	3,490	4,192
<b>Total</b>	<b>16,891</b>	<b>25,741</b>

Four program areas (Residential, Industrial, Innovative Technologies, and Conservation Education and Outreach) list actual year-to-date expenditure totals as of the end of September which are less than 75 percent of what they have forecast for the entire 2013 year. Explanations for each of these program areas is listed below.

- Residential:** The Furnace Replacement Pilot Program and “Give your Furnace/Fireplace Some TLC” – Service Campaign expenditure payouts will be incurred mostly in the later part of 2013 due to payment processing logistics. In addition, the LiveSmart BC program payouts are a lag in payment due to the NRCan and Ministry of Energy file transfer process.
- Industrial:** The EEC Industrial program area payment schedule is linked to the date participants commission energy efficiency projects and submit energy audit reports. The FEU estimate to pay incentives to three Technology Retrofit program participants and 10 Industrial Energy Audit program participants in the last quarter of 2013. These payments will make up the bulk of the Industrial program area expenditures for 2013.
- Innovative Technologies:** The actual versus forecasted expenditures for the Innovative Technologies Program area are not equally realized throughout the year across all activity areas such as pilots and prefeasibility studies. Rather the timing of when those expenditures are realized correlate directly with the program stage of the pilot life cycle. There are four stages of a pilot life cycle of which the timing to complete each stage varies based on pilot scope and M&V requirements. The four stages that FEU has identified are: (1) Program Planning (2) Program Development, (3) Program Implementation, and (4) Evaluation and Reporting. Less expenditures are realized during the program planning and development stage while more expenditures are realized during the program implementation and evaluation stage which includes installing M&V equipment and issuing customer rebates. It is important to note that the Innovative Technology process of ‘filtering out’ technologies that may pose a high risk or be deemed unfeasible occurs during the stages of least program expenditures. FEU

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1 anticipates that expenditures for the remainder of the fiscal will be attributed to pilots  
2 being executed in the program implementation stage.

- 3 • **Conservation Education and Outreach (CEO):** The October to December period is  
4 when CEO realizes a bulk of its expenditures as activity is increased due to a fall energy  
5 literacy campaign, the remaining Med-Large Commercial Education Sessions, school  
6 partnerships for 2013-2014, and Energy Champion partnerships for 2013-2014.

7  
8  
9  
10 89.2 Please reforecast the Total 2013 Expenditures for EEC based on all information  
11 available to the Company as of October 2013.

12  
13 **Response:**

14 Please refer to the response to CEC IR 2.89.1.

15

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1     **90     Reference: Exhibit B-8, CEC 1.80.1**

11    **Low Income**

12    The forecast underspend in the Low Income area is due to the Energy Conservation Assistance  
13    Program (ECAP). The original 2013 expenditure forecast included furnaces in the ECAP  
14    program. However, furnaces are currently not being included; therefore not as many incentive  
15    dollars are being distributed in 2013 as originally envisioned. The intention is still to incorporate  
16    furnaces into the ECAP program. The main reason they have not been included yet is because  
17    both program partners (FEU and BC Hydro) reached the end of their business case timeline  
18    recently and therefore have spent some time and resources re-visioning the overall delivery of  
19    the ECAP program. This has delayed the inclusion of furnaces into the program.

20    Note also that FEU now has a better understanding of what the appropriate budget amount  
21    should be for the Low Income program area and has therefore revised its expenditure request  
22    accordingly in its EEC Plan 2014-2018.

2

3           90.1   What proportion of the \$3,869,000 underspent was directly related to unspent  
4               incentive dollars?

5

6     **Response:**

7     The following response addresses the responses to CEC IR 2.90.1 to 2.90.9.

8     Approximately 64 percent of the projected underspent funding is attributable to unspent  
9     incentive dollars.

10    An estimated 95 percent of the variance between projected 2013 spending and the 2013  
11    approved expenditures is attributable to the underspend in ECAP. And, as mentioned in  
12    response to CEC IR 1.80.1, this is due to furnaces not yet being included in ECAP. An  
13    additional factor that contributed to the variance is the fact that the low income sector has been  
14    harder to engage in ECAP than originally anticipated which has led to fewer participants in the  
15    program.

16    FEU expects that the enhancements being made to the program including the integration of gas  
17    furnaces, and the involvement of more customers from the FBC customer base will all aid in  
18    improving participation in the program in coming years and this will lead to greater investment in  
19    low income energy efficiency programming.

20    Furnaces have always been intended to be included in ECAP; however, furnaces have never  
21    been implemented in the program offering due to the reasons stated in response to CEC IR  
22    1.80.1. FEI expects that furnaces will be implemented in ECAP before the end of the first  
23    quarter of 2014.

24    Integrating furnaces in to the ECAP program has involved engaging staff and consultants to  
25    define installation requirements, developing scope of work, researching best practices and

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ensuring the requirements under the BC Safety Authorities and other authorities having jurisdiction are being met. Therefore the monthly savings that accrue from a delay in incorporating furnaces in to the ECAP program is primarily the incentive savings and this is a function of anticipated demand and installation rates. At the time of writing this response, our best estimate of incentive savings is \$30 thousand per month.

The goals behind re-visioning the overall delivery of the ECAP program included: updating the program assumptions, extending the ECAP program in to the PowerSense service territory, integrating new measures (specifically gas furnaces) in to the ECAP program, and ensuring a fair distribution of the program administration between the three utility partners (FEU, FBC and BC Hydro). The ECAP program is a substantial investment and for this reason we felt it was important to facilitate a program design work shop to gain the insights of key low income stakeholder groups. Further program insight was gained by leveraging the expertise of consultants that have worked on similar programs in other jurisdictions. These costs totaled approximately \$54 thousand and the Low Income Program manager spent approximately 120 hours on this work.

The ECAP program is changing in several ways:

- ECAP is being expanded to include FBC customers
- The administration of the program is being spread across all three utility partners (formerly BC Hydro was the central administrator)
- Barriers to participation are being reduced such as expanding the acceptable documentation for income verification.
- Low Income apartment buildings will be able to qualify for a simplified version of the ECAP program (formerly apartments were only serviced by the ESK program)

The majority of the reduction in requested expenditures is a result of revised participation estimates for the ECAP program. Initially, FEU had a target for the ECAP program of 2,400 participants per year. Now that the ECAP program has been in market for approximately 1.5 years, we have a better understanding of the likely participation in the program going forward. FEU is expecting approximately 900 participants in 2013. Even with furnaces being included in the program in the coming years, we expect that the budget requested will be sufficient.

The FEU estimate that 55 percent of the projected 2013 Low Income expenditure will be attributed to incentives and the remaining 45 percent will be attributable to administration, communication, evaluation and ongoing program improvements. For an explanation of why Low Income programs tend to have a higher portion of non-incentive costs, please refer to FEI 2014-2018 PBR BCUC IR 2.375.6.2.

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90.2 Please provide a discussion of any additional factors that contributed to the variance with quantification.

**Response:**

Please refer to the response to CEC IR 2.90.1.

90.3 Were furnaces originally included in the ECAP program and then temporarily removed, or were they never included?

**Response:**

Please refer to the response to CEC IR 2.90.1.

90.4 When does FEI expect that furnaces will be included in the ECAP program?

**Response:**

Please refer to the response to CEC IR 2.90.1.

90.5 Please provide the monthly savings that accrue from a delay in incorporating furnaces into the ECAP.

**Response:**

Please refer to the response to CEC IR 2.90.1.

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90.6 Please provide quantification of the time and resources that were spent re-visioning the overall delivery of the ECAP program.

**Response:**

Please refer to the response to CEC IR 2.90.1.

90.7 In what ways has FEI revised the ECAP program? Please explain.

**Response:**

Please refer to the response to CEC IR 2.90.1.

90.8 Please provide further discussion on the 'better understanding of what the appropriate budget amount should be' particularly with respect to the nearly 50% reduction in requested expenditures in the Low Income Program.

**Response:**

Please refer to the response to CEC IR 2.90.1.

90.9 How much of the total Low Income Program expenditure is dispersed in incentives and how much is attributable to management of the program?

**Response:**

Please refer to the response to CEC IR 2.90.1.



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1    91    **Reference: Exhibit B-8, CEC 1.80 Question and 1.80.1 Response**

80.    **Reference: Exhibit B-2, page 2 (not numbered) and B1-1 Appendix I, Section 5.1, Page 17**

Program Area	Approved Expenditures (\$000s)		Requested Expenditures (\$000s)				
	2012	2013	2014	2015	2016	2017	2018
Residential	9,263	10,623	10,558	11,152	11,116	10,700	11,383
Low Income	4,969	4,969	2,629	2,822	3,042	3,247	3,483
Commercial	8,758	12,708	11,132	11,573	10,972	10,416	10,051
Industrial	1,072	1,756	1,912	2,357	2,662	2,983	2,983
Innovative Technologies	1,546	1,502	1,207	1,218	1,233	1,218	1,210
CEO	3,470	4,016	2,400	2,400	2,400	2,400	2,400
Enabling Activities**	n/a	n/a	4,515	5,015	4,420	4,420	4,365
<b>Totals</b>	<b>29,077</b>	<b>35,574</b>	<b>34,853</b>	<b>36,537</b>	<b>35,835</b>	<b>35,386</b>	<b>35,874</b>

\*\* included in Residential in 2012-2013

23    **Table 1-4: FEU EEC Expenditures - 2012 Actual, 2013 Approved and 2014-2018 Proposed<sup>7</sup>**

Program Area	Actual Expenditures (\$000s)	Approved Expenditures (\$000s)	Requested Expenditures (\$000s)				
	2012	2013	2014	2015	2016	2017	2018
Residential	11,204	10,623	10,558	11,152	11,116	10,700	11,383
Low Income	805	4,969	2,629	2,822	3,042	3,247	3,483
Commercial	4,863	12,708	11,132	11,573	10,972	10,416	10,051
Industrial	258	1,756	1,912	2,357	2,662	2,983	2,983
Innovative Technologies	294	1,502	1,207	1,218	1,233	1,218	1,210
CEO	2,200	4,016	2,400	2,400	2,400	2,400	2,400
Enabling Activities	4045*	n/a	4,515	5,015	4,420	4,420	4,365
<b>Totals</b>	<b>16,715</b>	<b>35,574</b>	<b>34,853</b>	<b>36,537</b>	<b>35,835</b>	<b>35,386</b>	<b>35,874</b>

24    \* The value for Enabling Activities for 2012 is in fact for Portfolio level activity

Program Area	Total 2013 Forecast Expenditures (\$000s)	2013 Approved Expenditures (\$000s)	Variance (\$000s)
Residential	11,204	10,623	581
Low Income	1,100	4,969	(3,869)
Commercial	6,940	12,708	(5,768)
Industrial	900	1,756	(856)
Innovative Technologies	1,092	1,502	(410)
Conservation Education & Outreach	2,200	4,016	(1,816)
Enabling Activities	4,500	n/a	4,500
<b>Total</b>	<b>27,936</b>	<b>35,574</b>	<b>(7,638)</b>

91.1 Please confirm or otherwise explain that for the last two years FEI has requested/received higher approved expenditure levels for most of its EEC programs while underspending.

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1    **Response:**

2    FEU confirms that FEI has spent less than the approved amounts in each EEC program area  
3    other than Residential where it exceeded the approved amount in 2012 and expects to slightly  
4    exceed the approved amount for 2013.

5    In general, the reasons for the underspend are:

- 6           • Time period for relatively new programs to ramp up
- 7           • Customer reluctance to invest in building and equipment upgrades in a time of relative  
8           economic uncertainty
- 9           • Low market costs for gas leading to longer payback periods

10   The Companies, however, are proposing no changes to the currently-approved financial  
11   treatment for EEC expenditure whereby \$15 million goes into rates every year, and the  
12   remaining actual EEC expenditure in any given year goes into a deferral account attracting  
13   AFUDC. This ensures that any forecast EEC expenditures above \$15 million that are not  
14   actually incurred are not recovered from customers.  
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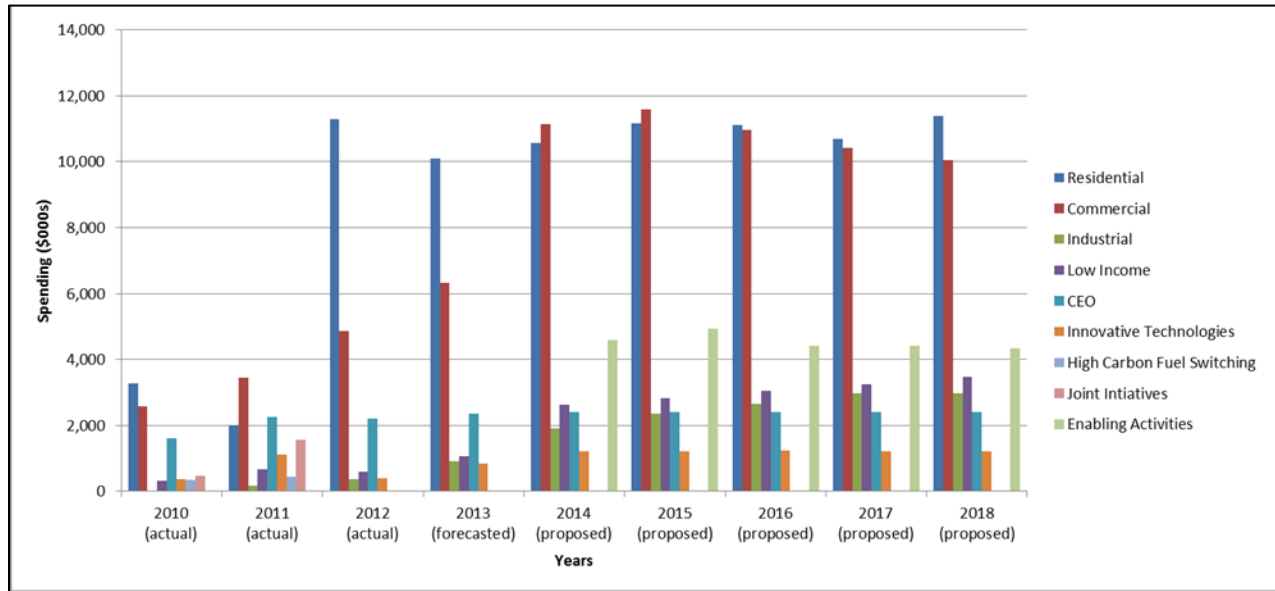
19           91.2 Please provide a chart depicting spending by each of the program areas by  
20           Actual 2010, Actual 2011, Actual 2012; Forecast Actual 2013, and proposed  
21           funding for PBR years.  
22

23   **Response:**

24   Please refer to the following chart. Please note the following:

- 25           • High Carbon Fuel Switching and Joint Initiatives only apply to 2010 and 2011 as they  
26           were removed/re-classified for 2012 and beyond.
- 27           • Enabling Activities has only been classified as a separate area for the 2014-18 period  
28           per the 2014-18 EEC Plan.
- 29           • To be consistent with Commission Orders G-6-11 and G-128-11, 2010 and 2011  
30           Innovative Technologies expenditures do not include natural gas vehicle incentives.

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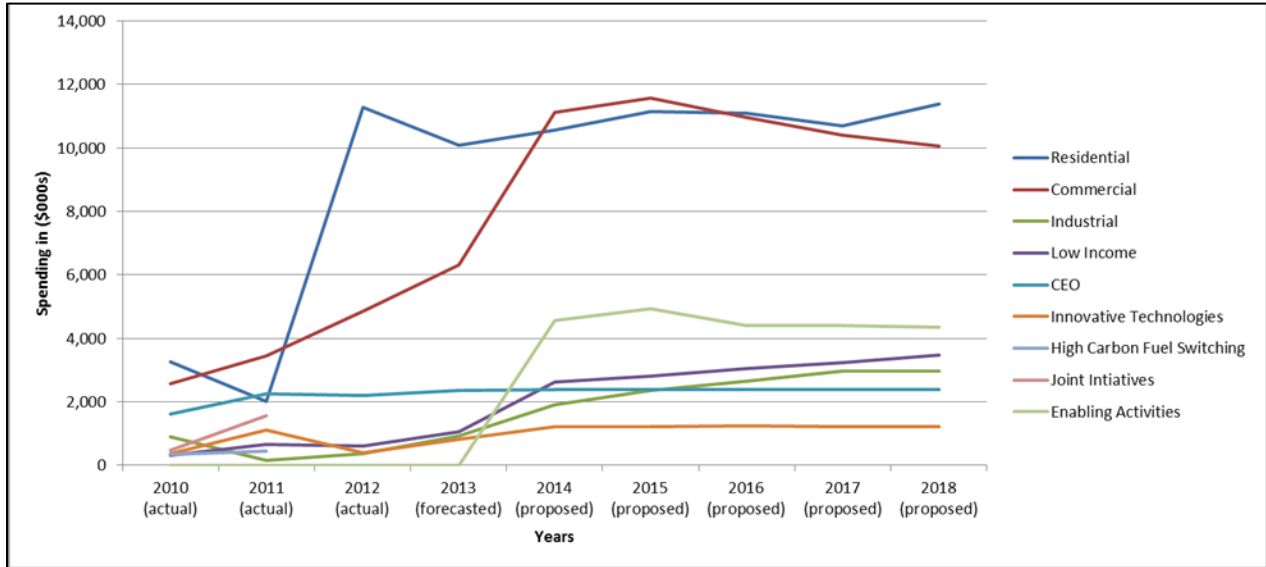
91.3 Please create a single graph for the above information with a separate line for each program area.

### **Response:**

Please refer to the following chart. Please note the following:

- High Carbon Fuel Switching and Joint Initiatives only apply to 2010 and 2011 as they were removed/re-classified for 2012 and beyond.
- Enabling Activities has only been classified as a separate area for the 2014-18 period per the 2014-18 EEC Plan.
- To be consistent with Commission Orders G-6-11 and G-128-11, 2010 and 2011 Innovative Technologies expenditures do not include natural gas vehicle incentives.

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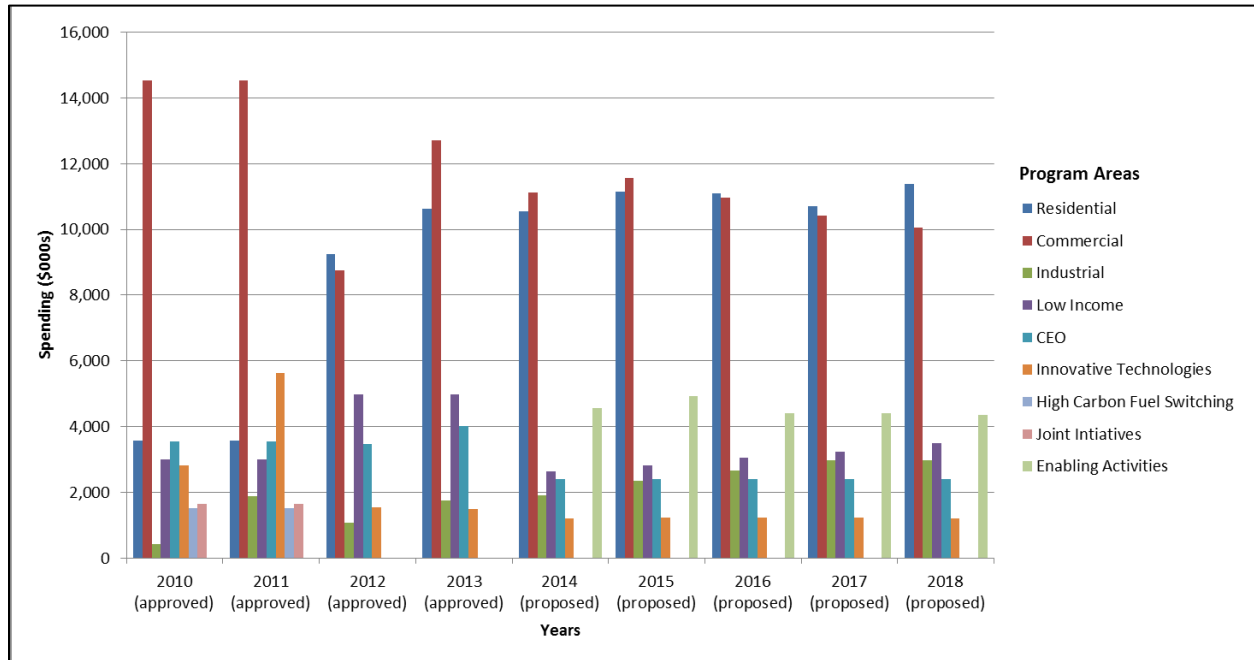


91.4 Please create a chart depicting Approved and or Proposed spending by each of the program areas for each of the years 2010 through to 2018.

**Response:**

Please refer to the following chart. Note that High Carbon Fuel Switching and Joint Initiatives only apply to 2010 and 2011 as they were removed/re-classified for 2012 and beyond. Note also that Enabling Activities has only been classified as a separate area for the 2014-18 period per the 2014-18 EEC Plan.

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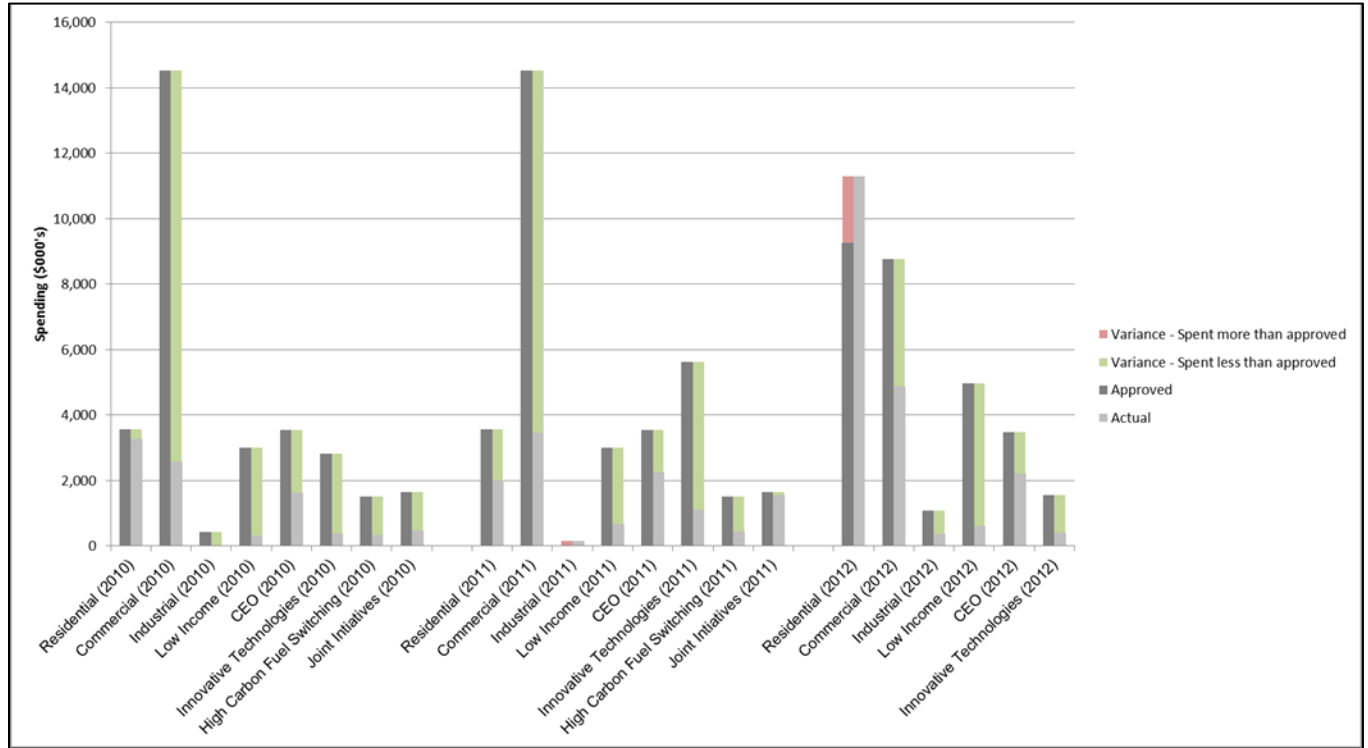
91.5 Please provide a similar chart of Total Forecast Expenditure and Approved Expenditures and Variances by program area for the years 2010, 2011 and 2012.

**Response:**

For this response, FEU has assumed that the CEC has requested here a comparison of Total Approved Expenditure and Actual Expenditures and Variances by program area for the years 2010, 2011 and 2012 as Total Forecast Expenditure and Approved Expenditures would be the same thing.

Please refer to the following chart for the comparison of Total Approved Expenditure and Actual Expenditures and Variances by program area for the years 2010, 2011 and 2012. Note that to be consistent with Commission Orders G-6-11 and G-128-11, 2010 and 2011 Innovative Technologies expenditures do not include natural gas vehicle incentives.

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1     **92     Reference: Exhibit B-8, CEC 1.80.1**

FEU had intended to bring the Commercial Custom Design Program to market as early as 2011, however due a number of competing priorities, and at certain points staffing constraints, this was not possible. While the New Construction version of the program was successfully launched in January of 2012 as a joint initiative with BC Hydro, the Retrofit program was not available until mid 2013. Projects in this program typically have long leads times as they must first perform detailed energy studies, and subsequently implement customized energy conservation measures. As such only limited expenditures are expected in this program in 2013.

The FEU's Continuous Optimization Program, launched in 2012 as a joint initiative with BC Hydro, will spend less than originally expected in 2013 largely due to a change in the Long Run Marginal Cost of electricity. This change has adversely affected the program's TRC score, leading BC Hydro to curtail new participation in the program and thereby significantly reducing forecasted expenditures in 2013 and in the coming years.

2

3             92.1     What was the total spending on the New Construction program for 2012 and  
4                     2013?

5

6     **Response:**

7     The following response addresses the responses to CEC IRs 2.92.1, 2.92.1.1, 2.92.2 and  
8     2.92.2.1.

9     The table below provides the requested information.

	2012 Actuals (\$000)	2013 Forecast (\$000)	2014 Budget (\$000)	2015 Budget (\$000)	2016 Budget (\$000)	2017 Budget (\$000)	2018 Budget (\$000)
Labour	\$ 2	\$ 10	\$ -	\$ -	\$ -	\$ -	\$ -
Non Labour	\$ 20	\$ 37	\$ 695	\$ 970	\$ 842	\$ 879	\$ 843
<b>Total</b>	<b>\$ 22</b>	<b>\$ 47</b>	<b>\$ 695</b>	<b>\$ 970</b>	<b>\$ 842</b>	<b>\$ 879</b>	<b>\$ 843</b>

10

11     Please note that the FEU do not forecast labour expenditures specific to individual programs  
12     and as such no labour expenses are presented for 2014-2018. Labour is considered a program  
13     area resource and is allocated amongst all commercial programs according to needs identified  
14     during any given time period. Actual recorded labour amounts are provided for 2012 while the  
15     2013 labour amount represents an estimate based on labour expenditures incurred to the end of  
16     September 2013.

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20             92.1.1     Please provide a breakdown by labour and non-labour.

21

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1    **Response:**

2    Please refer to the response to IR CEC 2.92.1.

3  
4

5

6           92.2   What is the total anticipated spending on the New Construction program annually  
7                   over the PBR period?

8

9    **Response:**

10   Please refer to the response to CEC IR 2.92.1.

11

12

13

14                   92.2.1   Please provide a breakdown by labour and non-labour.

15

16   **Response:**

17   Please refer to the response to CEC IR 2.92.1.

18

19

20

21           92.3   Please elaborate on the 'competing priorities' and 'staffing constraints' that  
22                   delayed New Construction portion of the program.

23

24   **Response:**

25   This response addresses the responses to CEC IRs 2.92.3, 2.92.4, 2.92.4.1, 2.92.4.2, 2.92.7,  
26   2.92.8 and 2.92.8.1.

27   The FEU began work on both the New Construction and Retrofit versions of the Program in the  
28   second half of 2010 and had originally intended to launch these programs as early as 2011. As  
29   noted, a number of competing priorities including but not limited to the items listed below  
30   delayed the launch of these programs:

31           1. The PSECA (Public Sector Energy Conservation Agreement) Initiative which occupied  
32             the bulk of the program manager's time from September 2010 to February 2011;



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2. Production of the 2010 EEC Annual Report in the first quarter of 2011, which required nearly full time attention over three months to produce;
3. Development of the 2012/2013 EEC Plan in September of 2011;
4. The 2012-2013 RRA regulatory process, including responding to IRs and providing support to the Oral Hearing process which occupied the program manager almost completely from October through January 2012;
5. Production of the 2011 EEC Annual Report in the first quarter of 2012;
6. Development through the first three quarters of 2012 and launch in September of that year, of the Efficiency a la Carte (Commercial Food Service) program.
7. In early 2012 BC Hydro indicated that collaboration on its Continuous Optimization program was a high priority. As a result a considerable amount of program development time was dedicated to completing a joint program agreement and rolling out two versions of continuous optimization (the full program as well as EnerTracker) in 2012;
8. In 2012 there was an increased emphasis on inter utility collaboration with FortisBC Inc. and, as a result, the commercial team worked together with its counterparts at FortisBC Inc. to design and roll out an On line Energy Advisor and online rebate application portal currently available to customers in the shared services territory (the south Okanagan);
9. Production of the Annual report 2012 in the first quarter of 2013; and
10. Production of the FortisBC EEC Plan 2014-2018 in the first quarter of 2013
11. Involvement in the regulatory process around the Companies' 2014-2018 PBR Application.

In August of 2009 the commercial program team consisted of two individuals, the Program Manager and the Marketing Coordinator, who were responsible for all program related duties including program design, incentive processing, program presentations at seminars and tradeshow, and fielding calls from customers among others. The original marketing coordinator accepted a new role in September 2010, resulting in a requirement to recruit and train a replacement. In recognition of the workload, two additional marketing coordinator positions were added to the commercial portfolio in 2011. In April of 2012 two out of three marketing coordinators accepted new positions in the company, while the third left on a maternity leave, leading to a requirement to recruit and train new staff. This effectively left the Program Manager as the only commercial team member for over 1 month in 2012.

Despite these competing priorities and constraints, the FEU negotiated and signed a program alignment agreement with BC Hydro for the Commercial Custom Design - New Construction

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1 program in July of 2011 and were able to bring the program to market in January 2012.  
2 Moreover, the Companies brought to market the Commercial Custom Design Program for  
3 Retrofit Projects in July of 2013.

4 The FEU do not believe that these same constraints and/or competing priorities will be a  
5 significant concern primarily because:

6 a) As of October 2012 the commercial team includes two Program Specialists, who  
7 function as mid-level program managers, and 3 Marketing Coordinators. The FEU  
8 believe that this arrangement is sufficient to address the work load and ensure continuity  
9 in case of staff turnover; and

10 b) The FEU are not planning any significant new program launches for commercial  
11 customers over the plan period.

12  
13  
14  
15 92.4 Will the competing priorities and 'staffing constraints' be completely resolved  
16 during the PBR period?

17  
18 **Response:**

19 Please refer to the response to CEC IR 2.92.3.  
20  
21

22  
23 92.4.1 If not, please explain why not.  
24

25 **Response:**

26 Please refer to the response to CEC IR 2.92.3.  
27  
28

29  
30 92.4.2 If yes, please explain what if any processes have been put in place to  
31 ensure the issues are resolved in the future.  
32

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**Response:**

Please refer to the response to CEC IR 2.92.3.

92.5 What was the total spending on the Retrofit program for 2012 and 2013?

**Response:**

This response addresses the responses to CEC IRs 2.92.5, 2.92.5.1, 2.92.6, and 2.92.6.1.

The table below provides the requested information.

	2012 Actuals (\$000)	2013 Forecast (\$000)	2014 Budget (\$000)	2015 Budget (\$000)	2016 Budget (\$000)	2017 Budget (\$000)	2018 Budget (\$000)
Labour	\$ 8	\$ 95	\$ -	\$ -	\$ -	\$ -	\$ -
Non Labour	\$ 74	\$ 102	\$ 1,621	\$ 2,974	\$ 1,965	\$ 2,052	\$ 1,965
<b>Total</b>	<b>\$ 82</b>	<b>\$ 197</b>	<b>\$ 1,621</b>	<b>\$ 2,974</b>	<b>\$ 1,965</b>	<b>\$ 2,052</b>	<b>\$ 1,965</b>

Please note that the FEU do not forecast labour expenditures specific to individual programs and as such no labour expenses are presented for 2014-2018. Labour is considered a program area resource and is allocated amongst all commercial programs according to needs identified during any given time period. Actual recorded labour amounts are provided for 2012 while the 2013 labour amount represents an estimate based on labour expenditures incurred to the end of September 2013.

92.5.1 Please provide a breakdown by labour and non-labour.

**Response:**

Please refer to the response to CEC IR 2.92.5.

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1            92.6    What is the total anticipated spending on the Retrofit program annually over the  
2                   PBR period?

3  
4    **Response:**

5    Please refer to the response to CEC IR 2.92.5.

6  
7

8  
9            92.6.1    Please provide a breakdown by labour and non-labour.

10  
11   **Response:**

12   Please refer to the response to CEC IR 2.92.5.

13  
14

15  
16           92.7    Please elaborate on the 'competing priorities' and 'staffing constraints' that  
17                   delayed the Retrofit program.

18  
19   **Response:**

20   Please refer to the response to CEC IR 2.92.3.

21  
22

23  
24           92.8    Will the competing priorities and 'staffing constraints' be completely resolved  
25                   during the PBR period?

26  
27   **Response:**

28   Please refer to the response to CEC IR 2.92.3.

29  
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32           92.8.1    If not, please explain why not.

33

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1    **Response:**

2    Please refer to the response to CEC IR 2.92.3.

3  
4

5

6           92.9   How long does FEI consider to be a 'long lead time'? Please explain in terms of  
7                   months.

8

9    **Response:**

10   This response addresses the responses to CEC IRs 2.92.9 and 2.92.10.

11   The definition of a "long lead time" is variable and depends much upon the nature of the energy  
12   efficiency project to be undertaken. While a period of 12 months would be considered long for  
13   the completion of a simple boiler upgrade, a more complex retrofit project can be expected to  
14   take as much as two years to complete, allowing time for initial engineering analysis, while a  
15   new construction project may take as long as 48 months, or in special circumstances such as  
16   the construction of a major hospital, longer still.

17   The Companies expect that major renovations will generally be completed within 18 months  
18   after a participant confirms their intention to proceed with a project, while the construction of  
19   new buildings will be completed within 36 months of confirmation of intention to proceed.  
20   Intention to proceed is confirmed after participants have submitted a detailed energy study or  
21   whole building energy simulation, and received a Capital Incentive approval letter from the FEU.

22  
23

24

25           92.10   What lead times, from the time it was under consideration to the time it was  
26                   implemented, would FEI expect that a customer of either of these programs  
27                   would require in order to participate?

28

29   **Response:**

30   Please refer to the response to CEC IR 2.92.9.

31  
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92.11 Would FEI agree that customers of programs with long lead times (such as New Construction and Retrofit) require the program to be maintained at a stable level for years in order to make the commitment to participate?

**Response:**

This response addresses the responses to CEC IRs 2.92.11 and 2.92.11.1.

The FEU believe that maintaining stable funding over a period of years is essential for commercial programs in general in order to encourage commercial customers to participate in the programs and implement natural gas conservation measures. The program terms and conditions are clear that the FEU's ability to ultimately provide incentives is contingent upon ongoing approval by the Commission. To date funding has been stable, and customers are increasingly taking advantage of the programs. If funding commitments were to become suspect, however, it is unlikely that commercial customers would adapt their operations to participate in the programs.

92.11.1 If not, please explain why not with examples.

**Response:**

Please refer to the response to CEC IR 2.92.11.

92.12 Would FEI agree that cutbacks to programs with long lead times would have longer lasting consequences than those with shorter lead times?

**Response:**

This response addresses the responses to CEC IRs 2.92.12 and 2.92.12.1.

The underlying problem created by "cutbacks" is uncertainty around either the availability or magnitude of funding which in turn could discourage customers from participating for fear that their efforts would not generate a sufficient return. The primary consequences then, from a DSM program management perspective, are the potential lost opportunities to encourage the implementation of natural gas conservation measures. It is difficult to authoritatively conclude that lost opportunities in programs with a longer lead time would have had a longer measure life

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1 than lost opportunities in programs with a shorter lead time. While many of the measures  
2 currently under review in the Commercial Custom Design Program – Retrofit have long  
3 measures lives, many others such as controls upgrades have estimated useful lives that vary  
4 from as little at 2 to as much as 15 years. Compare this with the Efficient Boiler program in  
5 which all participants have installed measures with an estimated life of 20 years. Even in the  
6 Commercial Water Heater and Efficiency a la Carte programs, measure lives are expected to be  
7 12 years. Thus in some cases, the consequences of cutbacks to programs with shorter lead  
8 times may in fact be longer lasting than to those with longer lead times.

9  
10  
11  
12 92.12.1 If not, please explain why not.  
13

14 **Response:**

15 Please refer to the response to CEC IR 2.92.12.  
16

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1     **93     Reference: Exhibit B-8, CEC 1.80.1**

13    **Industrial**

14    The main source of variance comes from the Technology Retrofit Program. The incentive  
15    payment structure for this program was changed to reduce the FEU's risks in each project as it  
16    originally paid each participant of the Technology Retrofit Program a single incentive payment  
17    once the project was commissioned. The FEU decided instead to pay out incentives in four  
18    installments based on the performance of each energy efficiency upgrade and link payments to  
19    actual savings measured each year for the first three years. Therefore, the incentive paid out to  
20    the Technology Retrofit Program's participants in 2013 will be lower than what was originally  
21    forecast. In addition, the FEU have also managed to reduce the Technology Retrofit Program's  
22    administration and evaluation costs while maintaining the planned level of customer service,  
23    and evaluation, measurement and verification.

2

3           93.1   Please quantify the incentive payments originally forecast and the reduced  
4           incentive payments that were and/or will be distributed in 2013.

5

6     **Response:**

7     For clarity, the FEU believe that the question refers to the Technology Retrofit program, and the  
8     tables below refer to that program only and not the whole Industrial program area forecasts.

9     The table below describes how the incentive payments would have been paid as originally  
10    forecast for the Technology retrofit Program for 2012 and 2013.

Project	2012 ('000)	2013 ('000)
Shell and tube heat exchangers <sup>1</sup>	\$684	\$316
Lime kiln chain system upgrade <sup>2</sup>	\$0	\$450
Rotary dryer upgrade <sup>2</sup>	\$0	\$375
<b>Total Forecast spend</b>	<b>\$684</b>	<b>\$1,141</b>

11    **Notes**

12    <sup>1</sup> The Shell and tube heat exchangers' project was commissioned in 2012. However, if FEU paid the \$1  
13    million estimated incentive fully on commissioning, it would have been divided into two amounts as the  
14    total approved budget for Technology Retrofit Program in 2012 was \$684,000.

15    <sup>2</sup> The Lime kiln chain system upgrade and Rotary dryer upgrade projects will be commissioned in 2013.

16

17

18    The table below provides the incentive payments that were and/or will be distributed in 2012  
19    and 2013.

Project	2012 ('000)	2013 ('000)
Shell and tube heat exchangers	\$250	\$127
Lime kiln chain system upgrade	\$0	\$94
Rotary dryer upgrade	\$0	\$225
<b>Total Forecast spend</b>	<b>\$250</b>	<b>\$446</b>



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The revised incentive payment structure has the advantage of spreading the incentive payments out over time, allowing the FEU to serve more industrial customers as Technology Retrofit program funds become available. Also, by linking incentives to savings performance, the Companies are able to reduce the ratepayers' risk of funding an underperforming energy efficiency project.

93.1.1 Does FEI anticipate that the incentives paid out will be lower overall, or will just be spread into 2014? Please explain with quantification and how long it will take for the incentive payments originally anticipated for 2013 to be dispersed.

**Response:**

FEU do not anticipate that the incentives will be lower, but that they will instead be spread over 3 years, with the first payment made shortly after each project's commissioning and the last installment made on the 3rd anniversary after the project's commissioning.

Table 1 below provides the original forecast of the estimated incentive payments for the Technology Retrofit Program's projects, commissioned in 2012 and 2013 (\$1,000).

**Table 1**

Project	Incentive Payments (\$000)	
	2012	2013
Shell and tube heat exchangers	\$1,000	\$0
Lime kiln chain system upgrade	-	\$450
Rotary dryer upgrade	-	\$375
<b>Total incentive per year</b>	<b>\$1,000</b>	<b>\$825</b>

Table 2 below provides the revised forecast of the estimated incentive payments for the Technology Retrofit Program's projects commissioned in 2012 and 2013.

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**Table 2**

Project	Commissioning year	Incentive Payments (\$000)					Total/project
		2012	2013	2014	2015	2016	
Shell and tube heat exchangers	2012	\$250	\$127	\$375	\$248	\$0	\$1,000
Lime kiln chain system upgrade	2013	-	\$225	\$225	\$0	\$0	\$450
Rotary dryer upgrade	2013	-	\$94	\$41	\$134	\$106	\$375
<b>Total incentive per year</b>		<b>\$250</b>	<b>\$446</b>	<b>\$641</b>	<b>\$383</b>	<b>\$106</b>	

93.2 Does FEI predict that the changes in incentive payment system will result in reduced customer participation? Please explain why or why not.

**Response:**

No. While the revised incentive payment structure may dissuade some customers who are highly sensitive to upfront investment cost from participating, the FEU do not currently anticipate reduced participation in the program.

This is because by spreading the incentive payments over time, the FEU can serve more industrial customers in any given year with the available pool of funds. Moreover, interest from the industrial sector remains strong and feedback from some industrial participants to date has indicated that the revised incentive structure has not had an adverse effect on their participation as spread incentives still represent an important aid to proceeding with energy efficiency projects.

93.3 If yes, please quantify the reductions in customer participation.

**Response:**

Please refer to the response to CEC IR 2.93.2.

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93.4 What proportion of the Industrial spending is accounted for by the Technology Retrofit program?

**Response:**

The Table below provides the percentage of the Industrial Program area spending attributable to the Technology Retrofit Program, for 2012 and 2013.

Programs	2012	2013
	Actual	Forecast
Technology Retrofit Program	75%	50%

93.5 Please identify the other programs in the Industrial program area and provide quantification of the spending.

**Response:**

The Table below identifies all the programs in the industrial program area and compares the approved budgets with actual spending by program for 2012 and forecast spending by program for 2013.

Programs	2012 ('000)		2013 ('000)	
	Approved	Actual	Approved	Forecast
Technology Retrofit Program	\$684	\$269	\$1,368	\$461
Energy Audit & Analysis Program	\$388	\$55	\$388	\$319
Process Heat Program <sup>1</sup>	\$236	\$20	\$472	\$8
Customer Energy Analysis <sup>2</sup>	\$0	\$5	\$0	\$0
Non-Program Specific Expenses	\$0	\$8	\$0	\$127
<b>TOTALS</b>	<b>\$1,308</b>	<b>\$358</b>	<b>\$2,228</b>	<b>\$915</b>

**Notes:**

<sup>1</sup> The Process Heat Program was moved to the Industrial Program area in 2012. Please refer to Exhibit B-1-1, Appendix I, Attachment I2, Table 9-4 for details

<sup>2</sup> The Customer Energy Analysis Program was closed in 2011. An outstanding invoice was paid in the first quarter of 2012.

<sup>3</sup> Any difference in total is due to rounding.

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93.6 Please provide a breakdown of the Industrial spending by labour and non-labour.

**Response:**

The Table below indicates the total Industrial program area spending divided by labour and non-labour for 2012 and 2013.

Type	2012 ('000)	2013 <sup>1</sup> ('000)
Labour	117	99
Non-Labour	358	220 <sup>2</sup>

**Notes:**

<sup>1</sup> As at September 30, 2013

<sup>2</sup> The Industrial Program area spending forecast for 2013 is \$915,000. Please refer to the response to CEC IR 2.89.1 for an explanation of the difference between the actual amount spent as at September 30, 2013 and the total forecast expenditure for 2013.

93.7 Please provide a breakdown of the Technology Retrofit spending by labour and non-labour.

**Response:**

The Table below indicates the Technology Retrofit Program spending divided by labour and non-labour for 2012 and 2013.

Type	2012 ('000)	2013 <sup>1</sup> ('000)
Labour	32	5
Non-Labour	269	127

**Notes:**

<sup>1</sup> as at September 30, 2013.

93.8 Please provide a discussion of the types of improvements that were undertaken in administration and evaluation and quantification of the reductions in costs that were achieved.

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**Response:**

The Table below provides a comparison between the approved budget and actual or forecast Technology Retrofit spending towards administration and evaluation in 2012 and 2013.

Programs	2012 ('000)			2013 ('000)		
	Approved	Actual	Reduction	Approved	Forecast	Reduction
Administration	\$153	\$1	<b>\$152</b>	\$153	\$5	<b>\$148</b>
Evaluation	\$50	\$15	<b>\$35</b>	\$50	\$21	<b>\$29</b>

In 2012 and 2013, The Technology Retrofit program administration and evaluation costs were less than originally planned. The aforementioned reduction was the result of the FEU working closely with participants to evaluate each facility's available control system, historical data and internal technical expertise to identify means to reduce costs associated with the measurement and verification of each project's savings. Industrial customers participating in the Technology Retrofit program had well trained personnel, reliable measurement equipment and data logging systems, and were able to provide detailed and accurate project feasibility studies.

Therefore, FEU were able to reduce costs associated with the procurement, installation and monitoring of measurement equipment and the hiring of consultants to validate savings. In addition, as participants provided detailed energy and mass balance historical data, FEU did not incur costs to measure and establish an energy baseline for each project, nor the costs to purchase and install measurement equipment.

93.9 Please confirm that these reductions will be continuous throughout the PBR period.

**Response:**

FEU will continue to make efforts to identify means to reduce costs associated to administer and evaluate the Technology Retrofit program without negatively affecting customer service quality, or the evaluation, measurement and verification processes.

However, as the cost reductions to date have been dependent upon the participants' sophistication, willingness and ability to work with the FEU to obtain accurate and reliable data, the FEU cannot guarantee such reductions during the PBR period as it is uncertain whether future participants will be able to offer reliable data logging systems or provide accurate historical data.

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1     **94     Reference: Exhibit B-8, CEC 1.80.1**

29     **Conservation Education and Outreach**

30     Several of the projects in this program area require consultation with program partners which  
31     has increased the development time. These partnerships have also lead to some cost  
32     efficiencies which has further reduced the expenditures required for Conservation Education  
33     and Outreach.

2

3             94.1     Which projects in this program required consultation with program partners and  
4                         what proportion of the Conservation Education and Outreach budget do they  
5                         represent.

6

7     **Response:**

8     For the purpose of this question, partnerships will be defined as organizations that have also  
9     contributed funding towards the program versus program partners that the CEO program area  
10    has a relationship with who are developing/delivering the program but not contributing funding.

11    The table below lists the projects, program partners, and budget.

12

**Table: Summary of CEO Partnerships in 2013**

CEO Initiative	Program Partners	Partners	Program Status	EEC CEO Forecasted Expenditures	Total Cost of Program
New Westminster Home Energy Efficiency Retrofit Pilot Program	Y	BC Hydro, City of New Westminster	currently in market	\$24,000	\$90,000
East Kootenay Community Energy Diet	Y	BC Hydro, Regional District of East Kootenay, and Columbia Basin Council	currently in market	\$10,000	\$109,810
Kootenay Energy Diet	Y	Natural Resources Canada, Columbia Basin Trust, FortisBC Inc. electric utility	currently in market	\$15,000	\$185,000
Okanagan Energy Diet	Y	BC Hydro, FortisBC Inc. electric utility	currently in market	\$17,000	\$107,000
Empower Me ethnic mentor outreach pilot program	Seeking	currently seeking program partners with BC Hydro, City of Richmond, City of Vancouver, and/or City of Surrey	currently in market	\$398,870	\$398,870
City of Surrey MURB Pilot Program	Y	City of Surrey and in discussions with BC Hydro	in development	\$10,725	\$59,300
Behaviour Program - Online Community Site	Seeking	only preliminary discussions with City of New Westminster, Burnaby Board of Trade, Shared Services of BC, and Climate Action Secretariat	currently not in market	n/a	n/a
<b>TOTAL</b>				<b>\$475,595</b>	<b>\$949,980</b>

13

14    The table above shows the community energy diets that have launched this year with CEO  
15    expenditures covering approximately 8%-15% of the program costs. If FEU were to deliver  
16    these types of programs without partners, the costs to FEU would increase considerably. With  
17    the community energy diets and the Empower Me program, the proportion of the partner  
18    programs represent approximately 22% of CEO forecasted expenditures in 2013 based on  
19    forecasted expenditures spend of \$2.2 million, and not the 2013 approved amount of \$4.016

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1 million. Although the Empower Me program is currently in market, FEU is still seeking partners  
2 to bring down the costs of the program. In addition, the City of Surrey MURB pilot program is in  
3 development and also seeking funding partners. Lastly, the costs for implementation of the  
4 Behaviour Program – Online Community Site are undetermined at this point as FEU has only  
5 recently started preliminary discussions with organizations such as City of New Westminster,  
6 Burnaby Board of Trade, Shared Services of BC and Climate Action Secretariat to share in the  
7 funding of this program launching within their organization.

8 An additional example of a program partner that is developing/delivering a CEO program but not  
9 contributing funding is the Vancouver Aquarium which launched the AquaGuide school program  
10 in 2013 targeting students in grades 7-12 on energy conservation. As this was a new program,  
11 it required longer development time but utilized the school education resources within the  
12 Vancouver Aquarium organization as opposed to FEU hiring a third party vendor to develop the  
13 program for the CEO program area.

14  
15  
16  
17 94.2 Please discuss and provide quantification of the cost efficiencies that FEI has  
18 achieved with respect to conservation education and outreach as a result of  
19 partnerships.  
20

21 **Response:**

22 Please refer to the table provided in the response to CEC IR 2.94.1 indicating the cost of the  
23 program from the CEO program area compared with the total cost of the program.  
24  
25

26  
27 94.3 What companies or individuals has FEI partnered with to achieve savings.  
28

29 **Response:**

30 In 2013, the CEO program area has partnered with FortisBC Inc. electric utility on several  
31 initiatives and programs ranging from print communications, to community events, and  
32 production items for both in shared services territory. In addition, the CEO program area has  
33 worked with internal departments to achieve further savings on various print communications,  
34 production items, and education funding support. Lastly, please refer to the response to CEC  
35 IR 2.94.1 for a list of additional external partners.

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94.4 Would FEI expect the partnerships to continue into and beyond the PBR period. Please explain for how long the partnerships would be expected to continue.

**Response:**

Yes, FEI expects the partnerships to continue into and beyond the PBR period. A Commission directive from the 2012-2013 RRA decision required CEO programs to increase collaboration with other utilities. The partnerships would be expected to continue until there are no longer any cost efficiencies attained through the partnerships.

94.5 Please explain if the cost efficiencies included reductions in labour, and if so, by how much.

**Response:**

No, the cost efficiencies reported here do not include any reductions in labour. To date, FEU has not been able to identify the reduction in EEC labour due to CEO partnerships for the purposes of reporting cost efficiencies.



3 15.1 Please explain the nature of the \$6 million in savings on the CCE project and  
4 quantify each of the significant reasons for the savings.

7 In a project of this complexity spanning a two year implementation window it is not unusual for  
8 the actual costs to be allocated to different cost categories as project needs change. The  
9 savings cannot be described in detail at a component level. The most significant areas of  
10 savings for the project related to internal labour and general consulting costs. These were  
11 achieved by identifying and retaining key resources throughout the project, which improved  
12 productivity and limited staff turnover. The project was implemented successfully with less staff  
13 than originally budgeted.

**Response:**

	Budget	Final
<b>Capital</b>		
Internal Labour	10,106	4,750
Consulting	37,702	34,450
Hardware	3,261	5,162
Software	6,180	7,684
Expenses	1,122	4,383
Facilities	14,498	14,359
	72,869	70,788
<b>Deferred O&amp;M</b>		
Internal Labour	9,210	7,379
Consulting <sup>1</sup>	29,983	21,769
Software		615
Expenses		3,069
Facilities		1,020
	39,193	33,852
Net Total	112,062	104,640
AFUDC	3,434	4,325
Grand Total	115,496	108,965

<sup>1</sup> Other than internal labour all of the other categories are combined.

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1  
2

3           95.2   How many staff members were originally budgeted and how many staff members  
4                   were ultimately used?

5  
6    **Response:**

7    This information is not available. Project staffing levels fluctuated significantly over the various  
8    phases of the project. Costs were tracked by project task or phase and not by individual  
9    participant.

10  
11

12  
13           95.3   Please compare the original staff budget figure and total staff allocated to the  
14                   final staff cost.

15  
16   **Response:**

17   Following is a comparison of the budget to final cost related to internal labour for the CCE  
18   project.

	<b>Budget</b>	<b>Final</b>
<b>Capital</b>	\$10,106	\$4,750
<b>Deferred O&amp;M</b>	\$9,210	\$7,379

19  
20

21  
22           95.4   What was the original consulting budget and what was the final consulting cost?

23  
24   **Response:**

25   Following is a comparison of the budget to final cost related to consulting for the CCE project.

	<b>Budget</b>	<b>Final</b>
<b>Capital</b>	\$37,702	\$34,450
<b>Deferred O&amp;M*</b>	\$29,983	\$26,473

26   \* This category includes expenses and any special resources required to provide the services including  
27   software and facilities.  
28

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1     **96     Reference: Exhibit B-8, CEC 1.15.2**

23     Response:

24     None of the savings in the CCE project were the result of the deferral of features and functions  
25     to be developed or added at a later date. The project delivered all of the functions and features  
26     expected in the initial project scope.

2

3             96.1     Please provide a copy of the initial project scope.

4

5     **Response:**

6     The CCE project scope is described in Section 2 of the Customer Care Enhancement Project  
7     Application for a Certificate of Public Convenience and Necessity (CPCN) to Insource Customer  
8     Care Services and Implement a New Customer Information System (CIS) submitted to the  
9     BCUC on August 28, 2009. Further detail related to the functional scope of the customer  
10    information system is provided in Appendix D – TGI Customer Information Systems RFQ  
11    attached to that CPCN application.

12

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1    **97      Reference: Exhibit B-8, CEC 1.16.2**

1    **Response:**

2    Specifically for the Customer Service department, over the term of the PBR, FEI will be  
3    evaluating new initiatives to determine the cost-benefit of each. Two examples of initiatives  
4    being considered are enhancements to the Company's customer portal and changes to the  
5    contact center hours of operation. At this time, the estimated savings and implementation dates  
6    for these initiatives have not been finalized.

2

3            97.1    Please provide an order of magnitude for the estimated savings from  
4                    enhancements to the Company's customer portal and changes to the contact  
5                    center hours of operation.

6

7    **Response:**

8    As the evaluation of changes to the hours of operation has not yet been completed, no order of  
9    magnitude of estimated savings is available.

10   With respect to changes to the Company's customer portal, high level benefits have been  
11   estimated at approximately \$250 thousand annually.

12

13

14

15            97.2    Are there other initiatives that are being considered? If so, please identify the  
16                    initiatives with any order of magnitude savings that are currently estimated.

17

18   **Response:**

19   Please refer to the responses to CEC IRs 2.15.1 and 2.17.3.

20

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1     **98     Reference: Exhibit B-1, page 4 and Exhibit B-8, CEC 1.6.1**

2             **Reference: Exhibit B-1, Page 4**

6     Section E provides the financial schedules filed in support of the 2014 delivery rates proposed in  
7     this Application. The proposed 2014 non-bypass delivery rates are approximately 1.7 percent  
8     lower than the existing 2013 interim rates. This decrease is due to two factors. The first is the  
9     impact of the Generic Cost of Capital Phase 1 Decision (GCCOC Decision) which decreases  
10    delivery rates by approximately 2.4 percent.<sup>2</sup> The second is a delivery rate increase of  
11    approximately 0.7 percent that results from the PBR Plan and demonstrates the continuing  
12    benefits of the Company's productivity and customer focus.

8     **Response:**

9     The reference provided in the preamble was from Exhibit B-1. On July 16, 2013 FEI provided  
10    an Evidentiary Update (Exhibit B-1-3) which replaced the above paragraph with the following:

11            Section E provides the financial schedules filed in support of the 2014 delivery rates  
12            proposed in this Application. The proposed 2014 non-bypass delivery rates are  
13            approximately 1.0 percent higher than the existing 2013 delivery rates. This delivery  
14            rate increase demonstrates the continuing benefits of the Company's productivity and  
15            customer focus.

4             98.1     Please explain how the Generic cost of Capital Phase 1 Decision as referenced  
5                        in the original Preamble factors into the 'approximately 1.0 percent higher' figure.

7     **Response:**

8     The Generic Cost of Capital Phase 1 Decision is not included in the 1.0 percent figure as it is  
9     already included in 2013 permanent rates that were used for comparison.

10    The original PBR Application filed June 10, 2013 included a comparison against interim 2013  
11    rates which did not include the cost of capital changes. As referenced in Exhibit B-1, Page 4, the  
12    proposed 2014 non-bypass delivery rates would decrease approximately 1.7 percent compared  
13    to 2013 interim rates. The changes in the cost of capital served to reduce rates 2.4 percent with  
14    an offsetting increase of 0.7 percent from the other items in the PBR Plan. As discussed in CEC  
15    IR 1.6.1, the 0.7 percent was amended to 1.0 percent in the July 16<sup>th</sup> Evidentiary Update.  
16    Additionally, the July 16<sup>th</sup> Evidentiary Update was amended to include a comparison against  
17    permanent 2013 rates, which already include the effects of the changes to the cost of capital.

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1     **99     Reference: Exhibit B-1, FEI Application page 81**

Mid-term Review and Off Ramps	A midterm assessment review was held prior to the end of the third year of the PBR (2006). Any party could request a Commission review of the PBR Plan if the achieved ROE (after earnings sharing) was more than 150 basis points above or below the allowed ROE.	are considered to be informational indicators. A midterm assessment review is proposed prior to the end of the third year of the PBR (2016). A review of the PBR Plan may be triggered by either a 200 basis point ROE variance above or below the allowed ROE, or sustained serious degradation of service quality as measured by the SQIs
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2  
3             99.1     What was the largest difference in ROE (after earnings sharings) above or below  
4                     the allowed ROE that occurred under the other PBR term and when did it occur?

5  
6     **Response:**

7     This IR has been identified as relating to the PBR Methodology and will be submitted with the  
8     PBR Methodology IR responses.

9  
10  
11  
12             99.2     Was the 150 point threshold reached under the earlier PBR period?

13  
14     **Response:**

15     This IR has been identified as relating to the PBR Methodology and will be submitted with the  
16     PBR Methodology IR responses.

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20             99.3     If so, under what years did it occur?

21  
22     **Response:**

23     This IR has been identified as relating to the PBR Methodology and will be submitted with the  
24     PBR Methodology IR responses.

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28             99.3.1     Did any party request a Commission review of the PBR plan, and what  
29                     were their results of the request?  
30

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1 **Response:**

2 This IR has been identified as relating to the PBR Methodology and will be submitted with the  
3 PBR Methodology IR responses.

4

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1     **100     Reference: Exhibit B-8, CEC 1.6.1 and Exhibit B-1, page 48**

18     In summary, it isn't the fact that the rates are increasing that shows the focus on customers and  
19     productivity, but rather the fact that the increase is only 1% given the overall circumstances.  
20     The 1% increase is the result of a number of influences affecting FEI's costs and revenues, but  
21     important among them are the controllable expenditures (O&M and capital). The base level of  
22     O&M in particular (including the proposed adjustment for sustainable savings) helps to keep the  
23     increase to 1%, which is less than half of the 2.31%<sup>1</sup> composite inflation for 2014.

2     **Table B6-3: BC AWE Forecasts for the PBR Period<sup>10</sup>**

BC Average Weekly Earnings Forecast	2014	2015	2016	2017	2018
AVERAGE	2.70%	2.70%	2.60%	2.60%	2.60%

3     Based on these tables, the 2014 BC-CPI and BC-AWE rates are forecasted to be 1.83 percent  
4     and 2.70 percent respectively. As such, FEI proposes to use an i-Factor of 2.31 percent  
5     (calculated as (45% x 1.83%) + (55% x 2.70%)) for 2014.

6     As part of the PBR Annual Reviews, FEI will update both the BC-AWE and BC-CPI rates (using  
7     the same sources referenced above) to determine the value of the i-Factor for the 2015 through  
8     2018 years. FEI proposes that the composite's weighting remain constant throughout the PBR  
9     Period.

10     100.1     Would FEI propose to maintain the weighting in the event that the proportion of  
11     labour to non-labour changes throughout the PBR period?

12     **Response:**

13     This IR has been identified as relating to the PBR Methodology and will be submitted with the  
14     PBR Methodology IR responses.



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1     **101     Reference:     Exhibit B-8, CEC 1.9.1 (Question and Response) and Exhibit B-11,**  
2                                 **BCUC 1.90.1**

9.     **Reference:     Exhibit B-1, Page 11**

15     In 2012, the Company was able to achieve a number of efficiency successes. These included  
16     significant annual savings of approximately \$9 million related to implementing a new manual  
17     meter reading contract. Starting in 2013, the new arrangement provides improved meter  
18     reading service at a lower cost than the previous arrangement.

7     **Response:**

8     The baseline assumed a continuation of services through 2012 utilizing the existing meter  
9     reading service provider and continuing to participate in joint meter reading with BC Hydro for as  
10     long as that synergy was available. These costs were applied for, tested and approved through  
11     the 2012-2013 RRA process based on the agreement in place at that time.

12     The \$ 9 million in savings will be achieved in 2013 based on the costs projected from the prior  
13     contract. The cost impact is as follows:

14	2013 Approved	\$19.696 million
15	2013 YE Forecast	<u>\$11.068 million</u>
16	2013 O&M Savings	\$ 8.828 million

26     90.2     Please explain how the \$8.6 million in O&M reduction from the signing of a new  
27             meter contract is an example/evidence of FEI "leveraging the Customer Care  
28             function to maximize productivity opportunities."

30     **Response:**

31     The signing of a new meter reading contract was made possible by the decision to insource the  
32     customer service functions. Prior to 2012, the meter reading contract was embedded in the  
33     general customer service contract and therefore there would have been no opportunities for FEI  
34     to go to the market for a new meter reading service provider.

6             101.1 Please confirm or otherwise explain that it cost nearly \$9 million less to  
7                     implement a new manual meter reading contract than to continue to participate in  
8                     a joint meter reading contract with BC Hydro.

10     **Response:**

11     Continued joint meter reading was no longer available as a consequence of BC Hydro's smart  
12     metering implementation, since manual meter reading was no longer needed. The \$9 million in  
13     savings was determined based on a comparison to the prior outsourcing agreement adjusted for  
14     standalone gas meter reading services. The saving was the result of negotiations with an  
15     alternate meter reading provider.

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101.2 Please provide further details as to how the manual meter reading contract achieved improved meter reading services.

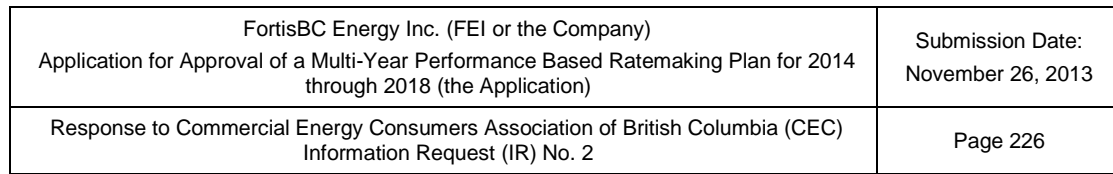
**Response:**

As part of the new meter reading contract FEI required that the provider implement current meter reading technologies with enhanced capabilities to support difficult to access locations. More importantly, the new pricing structure also supported the move from bi-monthly to monthly meter reading as the standard for all customers, a significant improvement in service quality

101.3 Please provide cost comparisons from the new meter reading contract with the old meter reading services to identify where savings occurred with quantifications of the cost of labour and non-labour.

**Response:**

The prior and current meter reading contracts are not directly comparable as it relates to the discrete areas of labour and non-labour. Both agreements were based on service transaction pricing (i.e. price per read). FEI has no insight into the composition of the vendor's internal costs, which contributed to the transactional prices in the agreements.



79.2.3 Where does actual compensation for FEI M&E employees, rank against the comparator group?

Band	Market Median Salary	Market Average Salary	FEI Actual Average Salary	FEI Average Salary as a % of Market Average Salary
5	144,800	145,500	141,220	97%
4	109,641	112,853	105,441	93%
3	89,651	90,431	86,740	96%
2	73,000	75,574	66,050	87%
1	61,438	64,583	55,303	86%

15

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1 **Response:**

2 The number of FEI employees in the five M&E salary bands are shown in the table below.

2013 M & E Salary Ranges	
Band	Number of Employees
5	35
4	122
3	180
2	82
1	23

3

4

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1    **103    Reference: Exhibit B-8, CEC 1.9.4**

17    **Response:**

18    For the purpose of defining a significant contract, FEI chose the threshold of contracts issued for  
19    one (1) million dollars annually. Most significant contracts have an initial term with an optional  
20    contract renewal period. With respect to annual expenditure magnitudes FEI relies on historical  
21    values. Contractual values are estimates and may come in under one (1) million dollars in any  
22    given year based on operational demand. Please see the table below.

Type of Service	Number of Contracts	Expiry Periods	Value Range*
Construction Services			
Mains and Services	3	expiry December 2014 with 1 option to renew for 24 months	\$3.6 - \$15.3 million
Paving	2	annual and May 2014 with 1 one year renewal option	\$700K - \$2.3 million
Flagging	1	expiry June 2015 with 3 one year renewal options	\$848K
Inline Inspection	1	expiry November 2013 with 1 three year renewal option	\$800K
Software & Maintenance Agreements	2	annually and May 2014 with 1 one year renewal option	\$1.3-\$2.1 million

2

Type of Service	Number of Contracts	Expiry Periods	Value Range*
Engineering Services	2	expiry December 2013 with 3 one year renewal options	\$1 - \$1.1 million
Leak Hazard Detection	1	expiry December 2014 with 2 one year renewal options	\$764K
Telecommunications	3	expiry September 2013 with 1 one year renewal option and December 2017	\$1.1 - \$4.5 million
Meter reading**	1	expiry December 2015 with 2 one year renewal options	\$11 million
Advertising	1	annually	\$2.4 million
Vegetation Management	1	expiry December 2014	\$650K
Fleet Maintenance	1	expiry 2017 with 1 one year renewal option	\$8.4 million
* estimated expenditure based on 2012 annual spend			
** new contract starting in 2013			

1

3

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103.1 Please provide further details explaining what factors will influence the almost than \$12 million difference in the 'value range' in each of the three mains and services contracts.

**Response:**

The range in value is driven by activity levels within the service territory of each of the contractors. The FEI contracts are in the lower mainland and the interior of British Columbia. The third contract is on Vancouver Island under FEVI and was included in error with the remainder of the table being confirmed to be correct.

The revised table follows.

Type of Service	No. of Contracts	Expiry Periods	Value Range*
Construction Services			
Mains and Services	2	expiry December 2014 with 1 option to renew for 24 months	\$5.8 - \$15.3 million
Paving	2	annual and May 2014 with 1 one year renewal option	\$700K - \$2.3 million
Flagging	1	expiry June 2015 with 3 one year renewal options	\$848K
Inline Inspection	1	expiry November 2013 with 1 three year renewal option	\$800K
Software & Maintenance Agreements	2	annually and May 2014 with 1 one year renewal option	\$1.3-\$2.1 million
Engineering Services	2	expiry December 2013 with 3 one year renewal options	\$1 - \$1.1 million
Leak Hazard Detection	1	expiry December 2014 with 2 one year renewal options	\$764K
Telecommunications	3	expiry September 2013 with 1 one year renewal option and December 2017	\$1.1 - \$4.5 million
Meter reading**	1	expiry December 2015 with 2 one year renewal options	\$11 million
Advertising	1	annually	\$2.4 million
Vegetation Management	1	expiry December 2014	\$650K
Fleet Maintenance	1	expiry 2017 with 1 one year renewal option	\$8.4 million
* estimated expenditure based on 2012 annual spend			
** new contract starting in 2013			

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103.2 Please provide further details explaining what factors will influence the nearly \$1.6 million difference in the 'value range' in each of the 2 paving contracts.

**Response:**

There are primary and secondary contractors in place for paving work. The work activity is driven largely by the level of construction completed and the value difference is based on the capacity of the primary contractor to do the work.

103.3 Please provide further details explaining what factors influence the nearly \$1 million difference in the 'value range' in each of the 2 software and maintenance agreements.

**Response:**

The 2 contracts are significantly different in their scope of work. One relates to FEI's desktop tools and operating systems, and the other is FEI's Enterprise Resource Planning system.

103.4 Please provide further details explaining what factors influence the \$3.4 million difference in the 'value range' in each of the 3 telecommunications contracts.

**Response:**

The 3 telecommunications contracts cover different scopes of service including mobile, infrastructure and support and internet/phone and LAN/WAN services.

103.5 The total of the significant contracts exceeding approximately \$1 million, identified by FEI total from \$32,544 million to \$50,144 depending upon the value range. Please identify the total value range for upcoming contracts that would not be included as 'significant' and identify how many of these contracts there are.

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1  
2 **Response:**  
3 FEI had 1,008 contracts in 2012 with a value of less than \$1 million dollars for a total value of  
4 \$86 million dollars. The overall number of upcoming contracts depends on the term of the  
5 contract, and the number of suppliers that are issued contracts. The value range cannot be  
6 determined at this time as pricing will be established through the procurement strategy for any  
7 future contracts.

8



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1    **104    Reference: CEC 1.6.1**

17    It is this 1% delivery rate increase that FEI references in this response.

18    In summary, it isn't the fact that the rates are increasing that shows the focus on customers and  
19    productivity, but rather the fact that the increase is only 1% given the overall circumstances.  
20    The 1% increase is the result of a number of influences affecting FEI's costs and revenues, but  
21    important among them are the controllable expenditures (O&M and capital). The base level of  
22    O&M in particular (including the proposed adjustment for sustainable savings) helps to keep the  
23    increase to 1%, which is less than half of the 2.31%<sup>1</sup> composite inflation for 2014.

2

3            104.1 Please confirm that this 1% increase in delivery rates would be subject to a  
4            number of changes from other sources during the time period.

5

6    **Response:**

7    This IR has been identified as relating to the PBR Methodology and will be submitted with the  
8    PBR Methodology IR responses.

9

10

11

12            104.2 Please provide a list of other sources of changes and the potential direction of  
13            the change.

14

15    **Response:**

16    This IR has been identified as relating to the PBR Methodology and will be submitted with the  
17    PBR Methodology IR responses.

18

19

20

21            104.3 Please confirm that this result is largely inherent in the forecast data and would  
22            be potentially available regardless of the regulatory methodology, although there  
23            would be some differences.

24

25    **Response:**

26    This IR has been identified as relating to the PBR Methodology and will be submitted with the  
27    PBR Methodology IR responses.

28

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1    **105    Reference: CEC 1.7.2**

7    FEI will continue to propose deferral accounts during the term of this PBR if required and as  
8    appropriate. The actual and forecasted balances for existing and new accounts will be adjusted  
9    each year during the Annual Review process while setting rates for the following year. These  
10    balances will affect the cost of service for rate setting purposes throughout the PBR period.

2

3            105.1 Please confirm that the implementation of new deferral accounts would be a  
4            source of changes to costs and rates under either Cost of Service or PBR  
5            methodology.  
6

6

7    **Response:**

8    This IR has been identified as relating to the PBR Methodology and will be submitted with the  
9    PBR Methodology IR responses.

10

11

12            105.2 Please describe whether or not, to the extent that deferral accounts reduced  
13            spending in a particular year, that FEI would be seeking to share in the effect  
14            (this may be a methodology question and can be left to the next round of  
15            questions if FEI likes).  
16

16

17    **Response:**

18    This IR has been identified as relating to the PBR Methodology and will be submitted with the  
19    PBR Methodology IR responses.

20

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1    **106    Reference: CEC 1.76.1**

8    Prior to 2010, which includes the 2004-2009 PBR period and the prior periods before that,  
9    depreciation commenced at the start of the year after the asset was placed into service. In 2010  
10   through 2013, depreciation commenced the month after the asset was available for service  
11   (which for FEI is the same as when the asset is placed into service).

2

3            106.1   When filing a revenue requirement what assumption does FEI make for when the  
4                   capital projects will come into service for the purpose of rate setting?

5

6    **Response:**

7    This IR has been identified as relating to the PBR Methodology and will be submitted with the  
8    PBR Methodology IR responses.

9

10

11

12            106.2   Please confirm that to the extent that projects are delayed in timing from the  
13                   assumption in the revenue requirements application that FEI's shareholder can  
14                   benefit in terms of increased profitability.

15

16    **Response:**

17    This IR has been identified as relating to the PBR Methodology and will be submitted with the  
18    PBR Methodology IR responses.

19

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1    **107    Reference: CEC 1.58.1**

9    For reference, the two tables provided in the IR response were revised in FEI's Evidentiary  
10    Update, dated July 16, 2013, marked as Exhibit B-1-3. However, this response uses the tables  
11    provided above as the reference points.

12    Doubling the projected levels of NGT sales would nearly double the gross margin collected  
13    through those gas sales. For rate schedule 16, FEI has estimated that the additional throughput  
14    attracts \$0.94 per GJ in incremental costs, therefore the net margin collected for each GJ sold  
15    would be \$3.18<sup>11</sup>. For simplicity, FEI has assumed no incremental costs for rate schedules 25.  
16    At a high level, each dollar FEI collects from an NGT Customer is a dollar that FEI would not  
17    have to collect from non-bypass customers. The table below shows the approximate annual  
18    and cumulative rate impact if FEI were able to double NGT related volumes for the term of the  
19    PBR.

Line	Particulars	Reference	2014	2015	2016	2017	2018	Total	
1	Rate 25 Volume supporting Table C1-9 (GJ)	Appendix H, Table H-13	400,303	483,734	558,869	633,015	633,015	2,708,735	
2	Rate 16 Volume supporting Table C1-9 (GJ)	Appendix H, Table H-14	1,341,319	1,778,349	2,187,326	2,555,744	2,555,744	10,418,481	
3									
4	<b>Assuming FEI doubles NGT related volumes</b>								
5	Rate 25 Volume incremental to Table C1-9 (GJ)	Line 1	400,303	483,734	558,869	633,015	633,015	2,708,735	
6	Rate 25 Delivery Rate (\$/GJ)	Pre G-75-13, Approved Rate	0.791	0.791	0.791	0.791	0.791		
7	Rate 25 Incremental Margin (\$000)	Line 5 x Line 6 / 1,000	292	354	439	463	463	1,980	
8									
9	Rate 16 Volume incremental to Table C1-9 (GJ)	Line 2	1,341,319	1,778,349	2,187,326	2,555,744	2,555,744	10,418,481	
10	Rate 16 Delivery Rate (\$/GJ)	Pre G-75-13, Approved Rate	4.12	4.12	4.12	4.12	4.12		
11	Rate 16 Incremental Costs		0.94	0.94	0.94	0.94	0.94		
12	Rate 16 Incremental Margin (\$000)	Line 9 x (Line 10 - Line 11) / 1,000	4,265	5,655	6,956	8,127	8,127	33,131	
13									
14	Total Incremental Margin (\$000)	Line 7 + Line 12	4,558	6,009	7,395	8,590	8,590	35,111	
15	Gross Margin at Existing Rates (\$000)	Section E and Appendix G1	605,962	632,386	637,227	641,945	645,067		
16	Incremental Rate Decrease from doubling NGT Volumes	Line 14 / Line 15	0.7%	1.0%	1.2%	1.3%	1.3%	5.5%	
17									
18	Note: 5.5% represents the cumulative rate decrease over the term of the PBR if FEI were able to double NGT related volumes								

107.1 Please update this response to reflect the Evidentiary Update.

**Response:**

As requested in CEC IR 1.58.1, the table below shows the approximate annual and cumulative impact if FEI were able to double NGT related volumes for the term of the PBR. The following table reflects information provided up to and including FEI's September 6, 2013 evidentiary update.

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<u>Line</u>	<u>Particulars</u>	<u>Reference</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>Total</u>	<u>Notes</u>
1	Rate 25 Volume supporting Table C1-9(GJ)	Appendix H, Tab H-13	155,000	305,400	399,400	471,400	471,400	1,802,600	
2	Rate 16 Volume supporting Table C1-9(GJ)	Appendix H, Tab H-14	356,000	803,000	1,277,000	1,697,000	1,697,000	5,830,000	
3									
4	<b>Assuming FEI doubles NGT related volumes</b>								
5	Rate 25 Volume incremental to Table C1-9(GJ)	Line 1	155,000	305,400	399,400	471,400	471,400	1,802,600	
6	Rate 25 Delivery Rate (\$/GJ)	Post G-75-13 Approved Rate	<u>0.675</u>	<u>0.675</u>	<u>0.675</u>	<u>0.675</u>	<u>0.675</u>		
7	Rate 25 Incremental Margin (\$000)	Line 5 x Line 6 / 1,000	105	206	270	318	318	1,217	
8									
9	Rate 16 Volume incremental to Table C1-9(GJ)	Line 2	356,000	803,000	1,277,000	1,697,000	1,697,000	5,830,000	
10	Rate 16 Delivery Rate (\$/GJ)	G-88-13 Approved Rate	6.50	6.50	6.50	6.50	6.50		
11	Rate 16 Incremental Costs		<u>0.94</u>	<u>0.94</u>	<u>0.94</u>	<u>0.94</u>	<u>0.94</u>		
12	Rate 16 Margin (\$000)	Line 9 x (Line 10 - Line 11) / 1,000	1,979	4,465	7,100	9,435	9,435	32,415	
13									
14	Total Incremental Margin (\$000)	Line 7 + Line 12	2,084	4,671	7,370	9,754	9,754	33,632	
15	Gross Margin at Existing Rates (\$000)	Section E and Appendix G1	<u>609,962</u>	<u>615,893</u>	<u>622,082</u>	<u>627,947</u>	<u>631,009</u>		
16	Incremental Rate Decrease from doubling NGT Volumes	Line 14 / Line 15	0.3%	0.8%	1.2%	1.6%	1.5%	5.4% <sup>1</sup>	

**Notes**

1: The 5.4% represents the cumulative rate decrease over the term of the PBR if FEI were able to double NGT related volumes

Commission Order G-88-13 directed FEI to increase Rate Schedule 16 (LNG Delivery) rate to \$6.50/GJ, causing FEI to revise down its NGT volume forecasts. Over the term of the PBR, the higher \$6.50/GJ FEI rate charge offsets the downward revision of volume for nearly a net zero effect to line 16 of the table. However, FEI discusses the longer term impact of Commission Order G-88-13 in its Evidentiary Update filed September 6, 2013 in Appendix H

107.2 Please confirm that if delivery rates were to increase by 1% as reflected in the answers to questions and the NGT were more successful that the above data shows that this would moderate rate increase substantially.

**Response:**

Confirmed. The NGT market provides an avenue for FEI to add volume to its existing system. By increasing volume on the existing FEI system, costs are spread over a larger base thereby reducing delivery rates all else being equal.

For the specific statement referenced in the IR to be true, FEI would have to grow the NGT business by twice the forecast as provided in the Evidentiary Update. On balance, as indicated in Table H-4 of the Evidentiary Update, LNG demand comprises about 78% of the cumulative demand by 2017.<sup>1</sup> In order to substantially grow the NGT business, LNG provides the greatest opportunity to achieve this objective. However, to grow the LNG business and in turn double the NGT business is a significant challenge given the barriers that are discussed in Section 4.1 of Appendix H of the Application, as revised by the Evidentiary Update.

<sup>1</sup> Class 8 Tractor demand = 1,247,000 GJ + Marine demand = 450,000 = 1,697,000 GJ out a total cumulative demand of 2,168,000 GJ = ~ 78% LNG demand as proportion of total NGT demand.

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107.3 Please confirm that the rate decreases from doubling the NGT as shown above are the cumulative impact and not the annual impacts to be aggregated into a cumulative rate increase reduction.

**Response**

Confirmed. The rate decreases shown on line 16 for all years (2014 – 2018) are cumulative. The 5.5 percent in line 16 in the Total column represents the effect of each cumulative year added up.

Based on the above table, and the assumption that FEI could double NGT related volume over the term of the PBR, by the year 2018 the NGT business could offset other rate increases by approximately 1.3 percent. (Line 14 Column 2018/Line 15 Column 2018).

107.4 Please comment upon whether or not the current pricing for this service is optimal for expansion of the service or whether or not the current NGT expected performance in the forecasts could be improved.

**Response:**

In Section 4.1 on page 9 of Appendix H of the Application, as revised by the Evidentiary Update, FEI commented on the impact of setting the Rate Schedule 16 (RS16) delivery rate at \$6.50/GJ, which is 53 percent higher than the proposed \$4.25/GJ delivery charge, pursuant to Order G-88-13. The higher delivery rate in combination with other determinations in Order G-88-13, such as daily balancing of LNG deliveries, RS16 program effective to December 31, 2019, and no firm storage capacity permitted to manage LNG deliveries, all pose significant hurdles and limit the potential growth of FEI's NGT program. FEI's forecast of cumulative LNG demand by 2017 is expected to comprise about 78% of the overall NGT demand, therefore the hurdles to develop the LNG market would have a proportionally higher impact on the overall success of the NGT program.

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107.5 Will FEI be proposing to the Commission in this proceeding ways in which the Commission could assist in increasing these benefits and thereby benefiting the FEI ratepayers and if not why not?

**Response:**

No. FEI's Application to Amend Rate Schedule 16 was FEI's proposal to increase these benefits for customers. FEI may make further proposals to increase benefits for customers in a future application.

107.6 Please provide a list of the most significant options FEI can consider for decreasing rates for FEI customers.

**Response:**

FEI is responding to this question with reference to NGT initiatives, which includes utilization for class 8 tractors, marine, rail, and high horsepower applications (HPP).

For clarity, FEI's position is that advancing NGT initiatives will help reduce the upward pressure on rate increases, and not necessarily decrease rates for all customers. As such, FEI believes that the most significant options available to it to help reduce the upward pressure on rates is to further advance the adoption of LNG as part of the overall NGT program.

LNG provides the biggest opportunity to increase the adoption of natural gas and increase throughput on FEI's system, which will help with reducing upward pressure on customer rates. In order to increase LNG adoption, FEI must maximize the utilization of its existing LNG facilities to provide sufficient LNG supply to the retail market.

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1 **108 Reference: CEC 1.58.3**

20

	Proposed Delivery Rate Change					
	2014	2015	2016	2017	2018	Total
Original Filing June 10th, 2013	-1.64%	1.54%	1.89%	0.87%	2.51%	5.17%
G-75-13 (Generic Cost of Capital)	2.26%	0.01%	0.01%	0.01%	0.01%	2.30%
G-88-13 (Natural Gas for Transportation Margin and Volume)	0.51%	-0.17%	-0.22%	-0.19%	0.00%	-0.07%
All Other Natural Gas for Transportation Updates	-0.21%	0.03%	0.00%	0.02%	0.02%	-0.15%
Other	0.04%	-0.25%	0.05%	0.13%	0.05%	0.03%
Evidentiary Update July 16th, 2013	0.97%	1.16%	1.73%	0.84%	2.59%	7.28%

BCSEA 1.20.1

21

	Revenue Deficiency/(Surplus), \$ millions					
	2014	2015	2016	2017	2018	Total
Original Filing June 10th, 2013	\$ (10.611)	\$ 9.962	\$ 12.390	\$ 5.810	\$ 16.751	\$ 34.302
G-75-13 (Generic Cost of Capital)	\$ 14.222	\$ 0.054	\$ 0.059	\$ 0.067	\$ 0.058	\$ 14.460
G-88-13 (Natural Gas for Transportation Margin and Volume)	\$ 3.212	\$ (1.105)	\$ (1.396)	\$ (1.212)	\$ 0.000	\$ (0.501)
All Other Natural Gas for Transportation Updates	\$ (1.318)	\$ 0.184	\$ (0.024)	\$ 0.102	\$ 0.104	\$ (0.953)
Other	\$ 0.564	\$ (1.670)	\$ 0.189	\$ 0.855	\$ 0.025	\$ (0.037)
Evidentiary Update July 16th, 2013	\$ 6.069	\$ 7.425	\$ 11.218	\$ 5.622	\$ 16.938	\$ 47.272

BCSEA 1.20.2

108.1 Please provide the meaning of these updates.

**Response:**

As explained in the cover letter for the Evidentiary Update filed July 16, 2013, these updates related to the following items:

1. As a result of Order G-75-13, FEI recalculated the 2013 delivery rates and amended its Revenue at Existing Rates for 2014 and future years.
2. As a result of Order G-88-13 and the resulting reduction in Natural Gas for Transportation (NGT) forecast volumes, FEI reduced its 2014 forecast of delivery margin volumes for Rate Schedules 16 and 25 by 1,230,422 GJ. This impact was partly offset by an increase in the Rate Schedule 16 delivery rate, so that the total effect on the 2014 delivery margin was a \$3.4 million decrease compared to the Application. In addition, FEI reduced its forecast of Overhead and Marketing Recoveries due to the lower NGT volumes by \$301 thousand. FEI also created separate deferral accounts for the Rate Schedule 16 application costs and incremental Rate Schedule 16 Costs & Recoveries, in accordance with Order G-88-13, with no effect on the revenue requirements.
3. FEI corrected the amortization of the Tax Variance Deferral Account in the financial schedules to one year in accordance with the approved amortization period.



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1 4. FEI corrected the Midstream Cost Reconciliation Account in the financial schedules to  
2 properly exclude Fort Nelson.

3 5. FEI included capital additions for the biogas upgraders (Kelowna and Salmon Arm) in  
4 the 2013 projection that had erroneously been excluded from the financial schedules.

5  
6 As is the normal course for revenue requirement filings made by the Company, several  
7 evidentiary updates are usually completed during the process in order to provide the other  
8 parties with updated information and important changes. The updates referenced in this IR  
9 would fall under this category.

10  
11  
12  
13 108.2 Are these revenue deficiencies and delivery rate changes opportunities which  
14 can be captured for the FEI customers to the extent the Commission is inclined  
15 to provide regulatory decisions which could benefit the FEI customers in these  
16 amounts?

17  
18 **Response:**

19 These are decisions that have already been rendered by the Commission. Please refer to the  
20 response to CEC IR 2.108.1.

21

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1    **109    Reference: Exhibit B-8, CEC 1.17.1**

8    For clarity, the capture rate is an after-the fact comparison of gas customer growth against a  
9    larger measure, in this case new housing construction, and in itself does not affect customer  
10    growth. The flattening of the declining customer growth could be due to many factors such as  
11    government policies, building codes and standards, energy and equipment costs, or FEI's  
12    continued promotion of the benefits of natural gas. While FEI is encouraged with the recent  
13    improvement, it is too soon to tell whether there is indeed a reversal of the declining customer  
14    growth trend that will persist in the coming years.

15    In general, there is greater uptake of natural gas as the preferred fuel choice in single family  
16    dwellings compared to multi-family homes as single family home owners may have more input  
17    deciding the kind of appliances installed in their homes. In contrast, appliances installed in multi-  
18    family units are often determined by the builder or developer who is more concerned with  
19    maximizing profits and therefore installs less expensive electric heating infrastructure and  
20    appliances in the units. This is despite the fact that natural gas appliances and equipment for  
21    space heat and hot water currently offer operating cost savings relative to electric appliances,  
22    and would help to lower home energy bills. If further densification of city centers continues to  
23    take place, and more multi-family units are built than single family homes, then FEI will have a  
24    continuing challenge in capturing new customers.

5            109.1 Would FEI agree that influencing the customer growth trend through the  
6            continued promotion of the benefits of natural gas is a long term undertaking and  
7            requires a long term investment?

9    **Response:**

10    Yes. Influencing the customer growth trend requires consistent and continuing effort.

14            109.1.1 If not, please explain why not.

16    **Response:**

17    Please refer to the response to CEC IR 2.109.1

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109.2 Would FEI agree that builders and developers are also highly responsive to customer demand, even if such demand includes more expensive fixtures such as granite or higher end-appliances?

**Response:**

While FEI is not a developer in the sense of the question, FEI understands that developers/builders will respond to consumer demand to the extent that a property will sell more quickly or at a higher margin.

It is also the understanding of FEI, from discussions with developers, that customers generally place higher value on items such as granite countertops than they do items that they cannot see (such as water heaters and furnaces).

However, notwithstanding this challenge, FEI has also been told directly by builders and developers that it is not their job to educate customers and create demand for gas appliances; it is the responsibility of FEI to do these things to increase customer demand for gas appliances.

109.2.1 If not, please explain why not.

**Response:**

Please refer to the response to CEC IR 2.109.2.

109.3 Would FEI agree that customer education as to the operating cost savings relative to electric appliances is key in driving customer demand for natural gas appliances?

**Response:**

FEI believes that one of the key methods to drive customer demand for gas appliances is to educate customers on the affordability of natural gas. However, there are many other channels that FEI must use to increase the saturation of gas appliances in developer/builder properties, as the capital cost of gas equipment is significantly higher than that of comparable electrical equipment.

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1

2

3 109.3.1 If not, please explain why not.

4

5 **Response:**

6 Please refer to the response to CEC IR 2.109.3.

7

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1    **110.    Reference: Exhibit B-8, CEC 1.17.2**

3    All marketing costs related to improving capture rates in new construction are within the  
4    approved O&M budgets for the referenced years. No additional expense was incurred. The  
5    impact on the capture rate numbers was achieved by focusing existing sales and marketing  
6    resources on the builder community and demonstrating the features and benefits of natural gas  
7    over competing forms of energy for space and water heating.

8    While the overall increase represents a relatively small increase in added customers compared  
9    to the overall customer base, the existing customers do benefit from additional throughput and  
10    improved utilization of the natural gas system. For example, the increase of capture rate from  
11    61% to 67% in 2011 and 2012 respectively represents an increase of 344 new customers. This  
12    will add new volumes to the system and over time will allow fixed costs to be spread over a  
13    larger volume, all else equal.

2

3            110.1 Please provide the marketing costs related to improving capture rates in new  
4            construction over the last 5 years as requested in CEC 1.17.2.

5

6    **Response:**

7    This response addresses the responses to CEC IRs 2.110.1, 2.110.2 and 2.110.4.

8    There are a variety of activities and therefore costs related to improving capture rates in new  
9    construction over the last five years. Staff in the ES&ER department are the primary group  
10    responsible for these costs, however other departments play a marketing role in attaching  
11    customers to the system. However, the group does not stream and segregate costs specifically  
12    related to improving capture rates. Notably, staff groups do not separate O&M into specific  
13    initiatives as this would be an administrative burden with little or no benefit.

14    For the last five years of expenditure for the ES&ER group please refer to Table C3-17. Table  
15    C3-18 includes the forecasts for the ES&ER group.

16    Over the last five years there have been more specific activities designed to enhance the  
17    market capture beyond sales force efforts, many of which do not come with a marketing cost.  
18    These activities include:

- 19            • Process alignment of the construction services group to fulfill simple service requests  
20            within two weeks (a reduction of two weeks).
- 21            • Use of third party construction and housing start activity reports to better align our sales  
22            efforts.
- 23            • Changes to tariffs such as “Piping to Suites”, and individual meters for vertical  
24            subdivisions.
- 25            • Increased customer education.

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- Continued efforts to ensure the Main Extension test is sending the appropriate market signals.
- Education of Customer Service and Construction Service staff.

FEI believes this level of activity must be maintained at a minimum and possibly enhanced, to improve capture rates into the five year forecasted period. Further information related to capture rates can be found in the response to CEC IR 2.110.5.

110.1.1 Does FEI intend to increase or decrease or maintain the marketing budget related to new construction over the PBR period?

**Response:**

FEI expects to continue its efforts to attract and maintain customers throughout the PBR period and as such it is unlikely that there will be a decrease in either the effort or associated cost to attract customers; rather FEI expects the budget to remain similar to the existing budget. The Company believes that a long term sustained effort and strategy is required to both attract and retain customers in a more competitive energy environment. In addition to funding customer attraction efforts, the Company continues to seek new methods of attracting customers such as focusing on those who influence customer energy decisions in addition to education efforts aimed at end use customers directly.

110.2 Please provide with quantification.

**Response:**

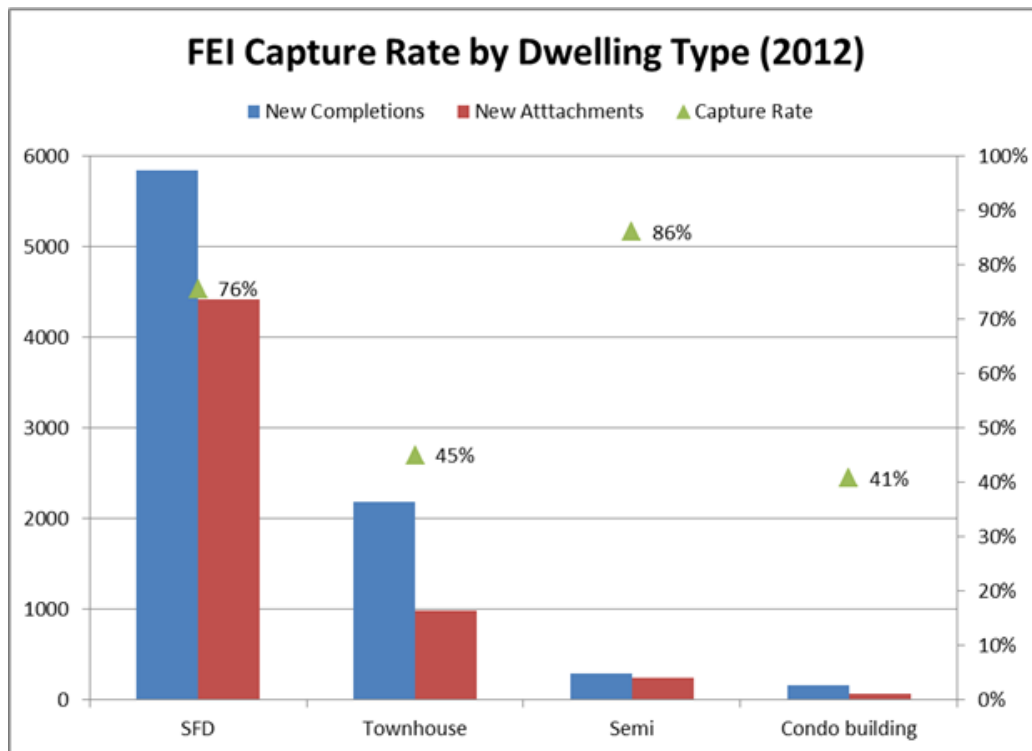
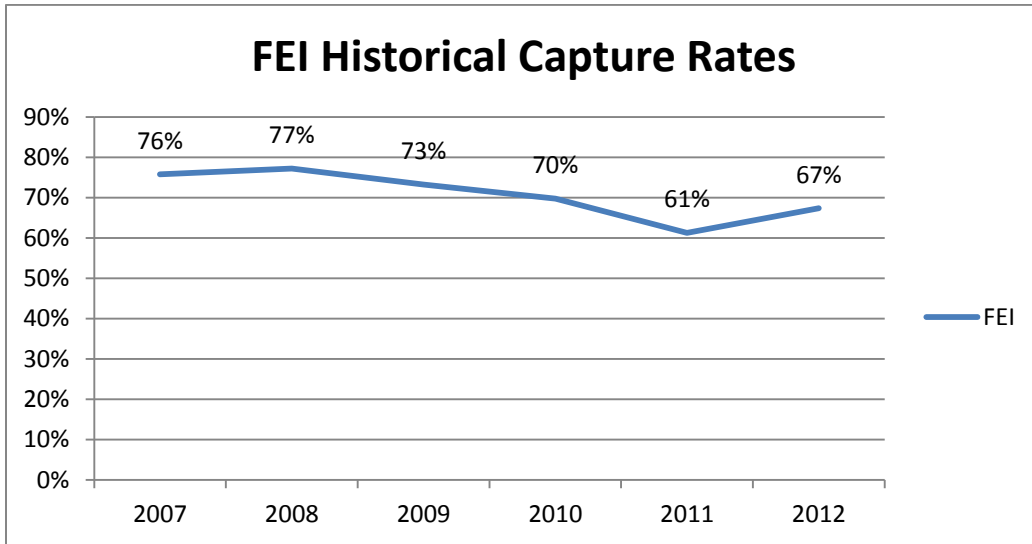
Please refer to response to CEC IR 2.110.1.

110.3 Please provide FEI's capture rates in new construction over the last 5 years.

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1 **Response:**

2 Please refer to the chart below for the overall capture rates from 2007-2012. Note that overall  
 3 capture rates change based upon the capture rates of different market segments (such as multi-  
 4 family versus single family). The first graph below shows the overall capture rate from 2007-  
 5 2012. The second chart shows the 2012 capture rate by dwelling/building type.



6  
7

8

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As the graph shows, FEI has been successful in the single family (SFD) and Semi-detached market place but less so in the condo and townhouse segment. As noted in other proceedings such as the GCOC, fewer SFDs are being built, while more townhouses and condos are being built. FEI has been proactive in addressing this market change by increasing its sales efforts with builders and developers, putting in changes to tariffs to encourage attachments (vertical subdivision individual metering, piping to suites), as well as new efforts to work with trade allies (contractors) to encourage the installation of gas equipment. Continued efforts are needed to ensure that the capture rates of not only SFD continue to improve but also that natural gas is used in townhouses and condos.

110.4 Please provide FEI's forecast of marketing expenditures related to improving capture rates over the PBR period.

**Response:**

Please refer to the response to CEC IR 2.110.1.

110.5 Please provide FEI's forecast of the new construction capture rates for each year over the PBR period.

**Response:**

FEI does not have a forecast of new construction capture rates for each year over the PBR period. At the annual reviews, as housing start data for the next year is available, the Company would be able to better forecast that coming year's expected capture rate. However, forecasting capture rates for the term of the PBR is not possible due to difference in housing mix, changes in the business environment, BCUC Main Extension framework and municipal changes that affect the broad housing market, specific housing start mix and the ability to economically attach customers.

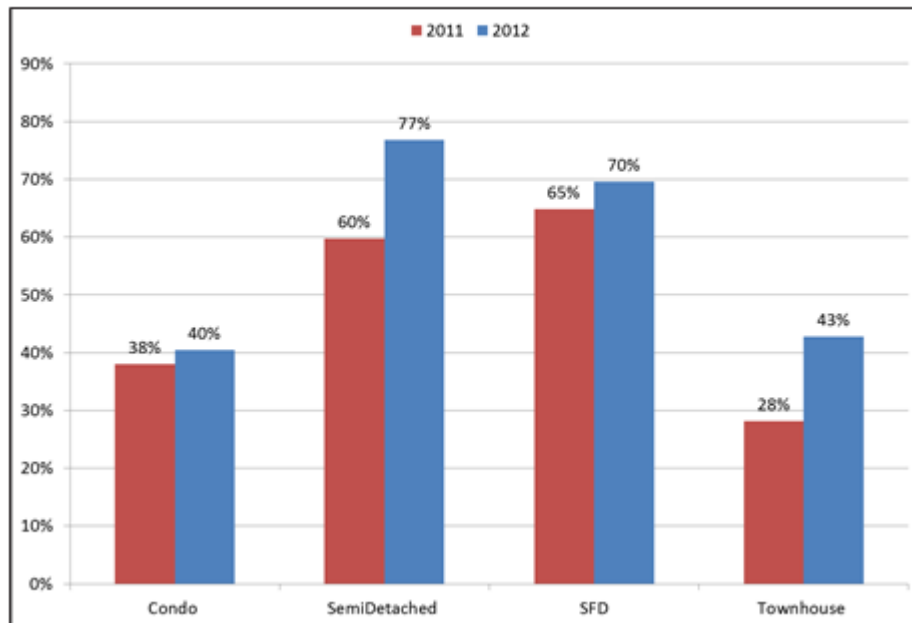
However, the Company expects to continue its efforts to attract new customers with the desire to see its overall capture rate increase. As the chart below indicates, customer capture rates have shown signs of recovery over the last two years. We expect the trend to continue in 2013, with five year targets being:



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- 1 • Condo's - 50%
- 2 • Semi-detached – 80%
- 3 • Single Family detached – 80%
- 4 • Townhouse – 50%

Capture Rate By Dwelling Type



110.6 Please explain whether or not FEI intends to track the capture rate with respect to the associated marketing costs over the PBR period.

**Response:**

FEI plans to track capture rates as it has done over the last five years. FEI also tracks marketing/Energy Solutions and External Relations costs and will continue to do so. However, as previously described, it is not only marketing costs that affect the ability of FEI to attract and retain customers. Internally, other departments, including operations and the contact centre, have an impact on capture rate. Externally, policy, codes and standards, the economy, housing stock and other factors all affect the ability of FEI to attract and retain customers.

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3

4 110.6.1 If not, please explain why not.

5

6 **Response:**

7 Please refer to the response to CEC IR 2.110.6.

8

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1 **111 Reference: Exhibit B-1, page 88, and Exhibit B-8, CEC 1.55.2**

15

**Table C1-2: Net Customer Additions**

	2009	2010	2011	2012	2013F	2014F	2015F	2016F	2017	2018F
Residential	4,822	6,524	4,994	4,475	4,315	4,594	4,955	5,085	4,972	4,806
Commercial	299	141	417	272	315	368	373	358	372	367
Industrial & Transportation	-31	-96	-67	-4	0	0	0	0	0	0
Total Net Additions	5,090	6,569	5,344	4,743	4,631	4,962	5,328	5,443	5,344	5,173

16

21 The recent recession experienced in 2008-2009 resulted in lower than expected customer  
 22 additions in both 2008 and 2009 followed by a modest recovery in 2010. Customer additions  
 23 continue to be very modest in 2012, at approximately 50% of the pre-recession level.

111.1 Please provide the forecast customer additions and the actual customer additions for 2007 and 2008.

**Response:**

Please see Appendix E3 Forecasting Models Live Spreadsheets for forecast and actual additions for residential and commercial customers. Actual industrial additions for 2007 and 2008 are -126 and -54 respectively. Industrial additions are not forecast and thus, the forecast are not available. The number of total industrial customers is held constant from the previous year assuming zero additions.

111.2 Please provide the forecast customer additions for 2009, through to 2012.

**Response:**

Please refer to the response to CEC IR 2.111.1.

111.3 What are the Actual Net Customer Additions to date for 2013 by customer group?

**Response:**

The actual net and gross additions by rate group through September 2013 are shown below:

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	Net Additions as of September 2013	Gross Additions as of September 2013
Residential	719	5070
Commercial	-200	412
Industrial	22	19

Customers are not added to the system evenly throughout the year. Each rate group (residential, commercial and industrial) has a seasonal pattern. In the case of residential and commercial rate classes most additions occur in the fourth quarter as a result of building completions and reconnections. The additions shown above through September are expected to grow considerably as the year end approaches.

Industrial customer totals normally peak in the summer and then decline as the year end approaches. We expect the +22 total in the above table to moderate back to near zero by the end of the year.

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1    **112    Reference: Exhibit B-8, CEC 1.1**

1    reflected in future budget requirements. Proposed departmental budgets are validated by  
2    comparing to both the approved level of funding and to the most recent year's spending.  
3    Additionally, productivity improvement objectives are embedded into personal performance  
4    plans of managers throughout the organization to ensure accountability for a productivity  
5    improvement culture. This process helps to ensure a continued focus on productivity over the  
6    long term and that rates are being managed effectively for our customers.

2

3            112.1 How far in advance does FEI develop its departmental budgets for internal  
4            approval?

5

6    **Response:**

7    FEI's practice is typically to develop department budgets in the fall of the year prior.

8

9

10

11

112.1.1 Please confirm that FEI does not undertake zero-based budgeting for its  
departmental budgets.

12

13

14    **Response:**

15    Not confirmed. Please refer to the response to CEC IR 2.112.1.3.

16

17

18

19

112.1.2 If not confirmed, please identify the years in which FEI undertook zero  
based budgeting.

20

21

22    **Response:**

23    Please refer to response to CEC IR 2.112.1.3.

24

25

26

27

112.1.3 Would FEI agree that a zero based budgeting approach does or could  
result in significant differences in departmental budget requirements.

28

29

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1 **Response:**

2 Zero based budgeting is one of many techniques employed by FEI in the construction of  
3 detailed department budgets

4 FEI employs a comprehensive approach in the preparation of the annual detailed department  
5 budgets. Techniques may include zero basing, trending and analysis as well as an assessment  
6 of emerging pressures and opportunities. Detailed budgets are then subjected to a top down  
7 analysis by senior executives to ensure that budgets align with the strategic direction of the  
8 Company, to ensure that productivity levels are being adequately challenged, and to ensure the  
9 impact on customer rates is reasonable and justified.

10 As with any budgeting process, in any line of business, the ability to accurately predict the future  
11 is not an exact science, and occasionally significant differences can occur. That occasional  
12 large differences do occur is testament to the fact the FEI is not ignoring safety, integrity and  
13 other critical issues, nor passing up productivity gains, in an effort to spend to budget.

14

15

16

17 112.2 Please explain if FEI tracks departmental performance over a single year or if it is  
18 tracked over a longer period as well.

19

20 **Response:**

21 FEI's typical approach is to track department performance over a single year. In cases where  
22 trends have been identified, FEI will often consider tracking performance against a rolling 3 or 5  
23 year average.

24 However, as a general rule, historical information will become less relevant with each year that  
25 passes. Changes on the political and economic front, changes within the industry, changes to  
26 corporate strategy, organizational changes, process changes, accounting changes, and  
27 productivity improvements all make meaningful comparison against historical metrics a  
28 challenge.

29

30

31

32 112.2.1 If tracked over a longer period, please provide the time frames over  
33 which departmental performance is tracked and explain the way in  
34 which performance is factored into managerial accountability.

35

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- 1 **Response:**
- 2 Please refer to the response to CEC IR 2.112.2.
- 3

**Attachment 50.4**

---



**Dennis L. Weisman** is Professor of Economics and a member of the graduate faculty at Kansas State University in Manhattan, Kansas, where he specializes in strategic behavior and government regulation, with an emphasis on incentive regulation. He is former Director of Strategic Marketing for SBC Communications Inc. and a research fellow with the Public Utility Research Center at the University of Florida.

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The authors thank Paul Carpenter, Peter Fox-Penner, and Alexis Maniatis for valuable comments. Opinions expressed in this article, as well as any errors or omissions, are the authors' alone. The authors can be reached at [weisman@ksu.edu](mailto:weisman@ksu.edu) and [jpfeifen@brattle.com](mailto:jpfeifen@brattle.com), respectively.

## Efficiency as a Discovery Process: Why Enhanced Incentives Outperform Regulatory Mandates

*Opponents of incentive regulation claim explicit rewards are unnecessary because utilities already operate under a "statutory obligation" to be efficient. But that view ignores that incentives are generally superior to mandates for eliciting performance gains, and that a firm cannot knowingly disavow and strategically withhold efficiencies it has yet to discover.*

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### I. Introduction

There has been a pervasive adoption of incentive regulation worldwide in both the electric power industry and the telecommunications industry.<sup>1</sup> In the U.S., at least 28 electric utility companies in 16 states operated under some form of broad-based incentive regulation in 2000–01.<sup>2</sup> Of the 28 identified electric utilities, 13 operate under some form of rate moratorium and 14 operate under price caps. Of the 28

incentive regulation plans, 21 contain earnings sharing provisions or simple dead bands.<sup>3</sup> The adoption of incentive regulation in the telecommunications industry is even more dramatic. In the course of just over 15 years, at least 48 U.S. states have changed the method of regulating dominant local exchange telephone companies from traditional, cost-of-service regulation to some form of incentive regulation (price caps, rate moratoria, or earnings sharing). Similar changes

in regulatory regime have occurred in Australia, Europe, and South America. Moreover, the trend in the U.S. has been clearly in the direction of pure price cap regulation—price cap plans without earnings sharing. In 1995, dominant local exchange carriers in the U.S. were subject to some form of earnings-based regulation (cost-of-service regulation or earnings-sharing regulation) in 35 states and pure price cap regulation in 9 states. In 2000, the corresponding values were 8 and 39, respectively.<sup>4</sup>

The speed with which incentive regulation has been adopted can be explained principally by the fact that it offers the prospect of superior performance gains that can benefit all key interest groups. Consumers can benefit from lower rates or slower rate increases; the regulated firm can benefit through enhanced profitability and pricing flexibility; the regulatory process can be streamlined; and competitors can enjoy more favorable terms of entry. In other words, incentive regulation represents a “win-win” proposition.<sup>5</sup>

Despite the widespread adoption of incentive regulation and increasing recognition of its attendant benefits, it is not uncommon in regulatory proceedings to encounter opposition to incentive regulation on grounds that utilities already have a “statutory obligation” to be efficient and, therefore, should not require additional rewards through incentive plans. At the crux of this argument are two key

misconceptions. The first misconception is that a “mandate” to be efficient will produce the same long-term benefits as properly structured “incentives” to be efficient. The second misconception is the belief that regulated firms may knowingly and strategically disavow opportunities to increase operating efficiency under traditional regulation in order to profit from such innovation under incentive regulation.

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The purpose of this article is to examine the basis for these misconceptions. There are two primary responses. First, motivating increased performance through incentives is generally superior to mandating desired performance levels. Second, the realization that efficiency is a “discovery process” necessarily implies that a regulated firm cannot knowingly disavow and strategically withhold what it has yet to discover. These two points—largely self-evident for those predisposed to favor incentive regulation—explain the important role that enhanced incentives play in generating dynamic efficiency

gains and in enhancing the performance of regulated firms.

## II. The Important Role of Incentives

The prominent role of incentives in a market economy is (i) to allocate scarce resources to their highest valued use; (ii) to elicit cost minimization and innovation; and (iii) to encourage firms to supply the products and services that consumers demand. Professor James Bonbright, a leading authority in the field of public utility regulation, explains the important role of market forces in fostering incentives to pursue such efficiency and overall performance:

Under unregulated competition, the price system is supposed to function in two ways with respect to the relationship between the price of the product and the cost of production. In the first place, the rate of output of any commodity will so adjust itself to the demand that the market price will tend to come into accord with production costs. But in the second place, competition will impel rival producers to strive to reduce their own production costs in order to maximize profits and even in order to survive in the struggle for markets. This latter, dynamic effect of competition has been regarded by modern economists as far more important and far more beneficent than any tendency of “atomistic” forms of competition to bring costs and prices into close alignment at any given point of time.<sup>6</sup>

These performance incentives fostered by competitive markets derive from the profit motive. The

quest for such profits ultimately benefits society as producers strive to supply the goods and services that consumers want at the lowest possible cost. In other words, the pursuit of enlightened self-interest by economic agents serves to benefit society in the aggregate as if their actions were guided by an “invisible hand.”<sup>7</sup>

The collapse of many centrally planned economies vividly demonstrates that market economies and their strong reliance on incentives are superior to mandates for fostering innovation, efficiency, and overall performance. For example, in recounting the fundamental flaws in the Soviet economic system, Yergin and Stanislaw observe that:

Already by the early 1970s, a fatal weakness was becoming clear in the system: It could not, for the most part, innovate. There was no reward, no reason to do anything new. In fact, there was a strong predisposition to avoid change of any kind, for change caused enormous bureaucratic headaches. The best thing was to keep doing what had been done before. In more advanced economies, innovation was essential to the promotion of economic growth. But in the Soviet system innovation was characterized mainly by its absence. And that applied to everything—whether it was small changes to make processes work better or the introduction of new products.<sup>8</sup>

While it is prudent to err on the side of caution in drawing wholesale comparisons between market economies and incentive regulation, there are clearly some noteworthy parallels. Prominent among these are the inability of

government or regulatory agencies to mandate efficient outcomes, even with the most detailed planning and supervision, and the importance of tangible rewards for motivating superior long-term performance through enhanced efficiency and innovation. The “five-year plans” in the former Soviet Union were notorious for both their level of detail and their inability to elicit performance. These plans were

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characterized by a virtually complete absence of meaningful incentives and rewards as the government attempted, unsuccessfully, to mandate rather than motivate performance.

It is generally accepted that a primary objective of economic regulation is to emulate a competitive market outcome. Professor Alfred Kahn, for example, observes that “the single most widely accepted rule for the governance of the regulated industries is regulate them in such a way as to produce the same results as would be produced by effective competition, if it were feasible.”<sup>9</sup>

The relevant model of competition to inform regulatory policy is not one of atomistic or perfect competition,<sup>10</sup> but rather one that evaluates and rewards the performance of regulated entities. While the task of evaluating the performance of the utility is inherently difficult in the absence of actual competition, the basic principle is straightforward: the utility’s performance is measured and rewarded or penalized based on predetermined, broad-based performance targets, such as the timely provision of quality service at capped prices. The roots of these ideas trace back almost a half a century and form the essence of the modern theory of incentive regulation as commonly practiced today.<sup>11</sup>

A voluminous amount of theoretical and empirical research concludes that incentive regulation is generally superior to strict cost-of-service regulation in emulating such a competitive market outcome.<sup>12</sup> This superior performance derives from the fact that incentive regulation, given the greater emphasis on prices rather than earnings, operates more like a *fixed price contract* in the sense that the regulated firm is limited in its ability to pass cost increases on to consumers in the form of higher rates. This contrasts with strict cost-of-service regulation that operates like a *cost-plus contract*. The result is that incentive regulation (including some forms of modified cost-of-service regulation)<sup>13</sup> provides stronger incentives that lead to superior performance gains in

numerous dimensions, including (i) use of least-cost technologies; (ii) efficient level of cost-reducing innovations; (iii) incentives to invest and operate efficiently; and (iv) efficient diversification into new markets.

The manner in which enhanced incentives lead to cost control and superior performance is illustrated by the following statement of a utility's chief financial officer concerning the merits of incentive regulation:

There are a couple items I think are very critical to the issue at hand. The most important has been the use of this [earnings sharing plan] in helping to change the culture of the Company . . . . [I]t's my job to beat on people about cost . . . . [But employees] said, every time we reduce costs, the Commission comes and takes it away. [T]hat's the way the cost-of-service model rate base regulation works, . . . that's a disincentive. And when we got this plan in place, I made speech after speech . . . Here's your opportunity, folks. This is as close to competition I can get you right now, but you make a dollar and we get to keep half of it. It goes to the bottom line. And again, regardless of whether I'm talking to a vice president or a pipefitter in one of our power plants, that's had an effect, and I've seen that effect . . . It's good for the shareholders and it's good for customers. I know that sounds trite, but that rings a bell when it comes to employees.<sup>14</sup>

This discussion of performance incentives should not be construed to imply that there is not an important role for mandates and obligations. To the contrary, in virtually every society and economic model it is necessary to impose certain mandates and

obligations—be it contract laws, safety regulations, and other basic legal and regulatory constraints. In fact, some of these mandates and obligations, such as patent laws and other intellectual property rights, are specifically designed to create strong incentives and rewards for innovation and superior performance.<sup>15</sup> In general, the role of such mandates and obligations takes the form of setting minimum standards for

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what is acceptable behavior rather than as a means to solicit superior performance. While such mandates and obligations can help ensure that certain minimum standards are met, robust incentives are required to elicit superior performance. This is the case simply because there is generally a wide "gap" between superior performance and performance that is considered merely acceptable.

The important role of incentives in eliciting performance gains has been validated in numerous venues covering many aspects of human interactions not only in how firms and consumers

interact in a market economy or how firms compensate their employees, but also how government can exact performance gains from its individual agencies and employees,<sup>16</sup> or even how sporting events motivate participating athletes.<sup>17</sup> This broad experience confirms that it is not the mandates or obligations, but the incentives created by the prospect of meaningful rewards and recognition, that are most effective in eliciting enhanced performance.

### III. Efficiency as a Discovery Process

The opposition to incentive regulation is not typically based on a lack of recognition that incentives can elicit superior performance and dynamic efficiency gains. Rather, opposition to incentive regulation often focuses on whether such incentives are needed. Not surprisingly, this opposition is seemingly strongest when the earnings that the regulated firm reports under incentive regulation exceed the level of earnings that would normally be expected under cost-of-service regulation.<sup>18</sup> The frequently voiced concern is that these higher profits necessarily come at the cost of higher prices to consumers.<sup>19</sup> And yet, the broad appeal of incentive regulation is precisely that the realized efficiency gains can benefit regulated firms and consumers alike. In other words, because incentive regulation is not a zero-sum

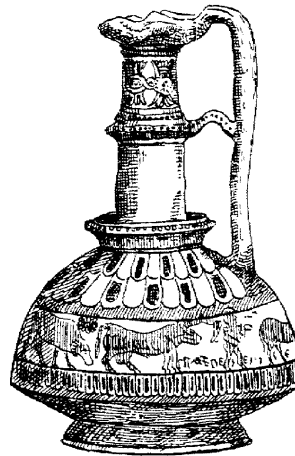


game, higher profits and lower prices need not be mutually exclusive.

In spite of the fact that incentive regulation can be a “win-win” proposition, some parties view incentive regulation as little more than a “scheme” used by utilities to increase their profits and earn windfall gains. These added profits may even be viewed as “bribes” to get utilities to do what they should be doing already. A common refrain is that because utilities have a “statutory obligation” to be efficient, any additional rewards for achieving efficient behavior through incentive regulation are unnecessary—and serve only to foster an inequitable distribution of efficiency gains between regulated firms and consumers. This line of argument would seem to suggest that any efficiencies realized by the regulated firm following the adoption of incentive regulation must imply that, under cost-of-service regulation, regulated entities either deliberately engaged in inefficient behavior or were able to “conceal” more efficient operating practices from regulators through their superior knowledge of operating conditions.<sup>20</sup>

While the possibility of such behavior cannot be ruled out *a priori*, this claim is incorrect as a general proposition. This is because the achievement of performance gains is first and foremost a “discovery process” in which more efficient operating practices and superior use of technology are learned over

time.<sup>21</sup> It is the recognition of this discovery process that leads to the conclusion that the efficiency gains realized under incentive regulation need not imply that the firm was knowingly inefficient under cost-of-service regulation. To the contrary, it is quite plausible that the firm under cost-of-service regulation was as efficient as it knew how to be.



To understand the manner in which enhanced incentives can stimulate this discovery process, it is instructive to examine what innovation is and precisely how it comes about. Although the mechanics of innovation are complex and not well-understood, innovation is usually thought of as the creation of a better product or process. If there is a consensus of thought on the innovation process it is that innovation requires highly motivated individuals willing to go beyond doing what has been tried previously, beyond following standard operating procedures, beyond using time-tested methods and technology. Innovation and discovery of new ways of doing things, new

technologies, or new applications based on existing technologies requires companies and individuals to question the *status quo*, to be creative, and to be willing to bear the significant risks associated with exploring new methods.<sup>22</sup> Of course, enhanced incentives in the form of meaningful rewards for successful discoveries are required to elicit such effort and risk-bearing.

In market economies, substantial rewards are provided for successful discoveries in the form of competitive advantage and the protection of intellectual property. For example, it is estimated that the overall rate of return for some 17 successful innovations in the 1970s averaged 56 percent.<sup>23</sup> In comparison, the average return on investment for all of American business over the last 30 years has been on the order of 16 percent. Despite these high rewards for innovators, however, there should be little doubt that innovation benefits the economy as a whole. In fact, today America enjoys more than half of its economic growth from industries that barely existed a decade ago.<sup>24</sup> This is consistent with recent findings of the White House Office of Science and Technology Policy estimating that more than half of U.S. economic growth since World War II was the result of innovation.<sup>25</sup>

These facts about the economic role of innovation clearly reinforce the aforementioned observations of Professor Bonbright, that economists generally view dynamic efficiency as being “far

more important" to consumer welfare than static or allocative efficiency. Such dynamic efficiency is achieved through incentives that reward the perpetual discovery of new, innovative methods that increase efficiency and increase overall performance. Clearly, innovation does not happen because market forces "bribe" companies or individuals to "reveal" what they know already. Rather, it is strong incentives that motivate innovators to exert significant efforts, question the status quo, and assume the risks it takes to discover and implement more efficient procedures, applications, and technologies.

In traditionally rate-regulated industries, however, incentives for such innovation are truncated, if not absent altogether. In fact, the traditional regulatory model provides, at best, weak incentives to discover new efficiencies by: (1) discouraging risk-taking and the application of new technologies through the potential disallowance of costs and investments associated with unsuccessful attempts to innovate; and (2) providing only very limited rewards, if any, for even highly successful innovations. The benefits of new, cost-reducing operating practices simply decrease a utility's "cost-of-service" and, as a result, often are appropriated quickly and passed on to customers in the form of lower rates. Moreover, the traditional regulatory model commonly disallows the recovery of the

performance incentive payments that regulated firms use in an attempt to motivate their employees.

With very limited potential rewards but significant disallowance risks, the traditional regulatory model strongly encourages the prudent use of tried-and-true operating practices and technologies. It thus provides



very limited incentives, if not explicit disincentives, to look beyond the status quo to discover and employ new, innovative operating practices and technologies. This is why the provision of enhanced incentives can stimulate a discovery process that enables regulated firms to become more efficient than they previously knew how to be. In the long term, this process can lead to dynamic efficiency gains and significant benefits for firms and their customers alike.

#### IV. Conclusions

Incentive regulation has supplanted traditional cost-of-service

regulation in the telecommunications industry and the regulation of electric utilities appears to be following a similar trend. Despite these significant changes in the nature of regulatory regimes, a frequent claim from parties opposed to the adoption of incentive regulation is that the regulated firm should not be rewarded for efficient performance because it is already subject to the statutory obligation to operate efficiently. This view of the world implicitly rests on the premise that the regulated firm knowingly disavows superior methods by which to enhance efficiency. What this view fails to recognize, however, is that (1) the incentives requisite to the *discovery* of superior methods by which to augment efficiency are not sufficiently pronounced under cost-of-service regulation; and (2) the regulated firm cannot knowingly disavow what it has yet to discover.

It is the recognition of efficiencies as a "discovery process" that largely explains the long-term benefits that incentive regulation offers over traditional cost-of-service regulation. Indeed, the transition to restructured, more competitive markets now underway in many traditionally regulated industries will require a different mindset for all parties involved in the regulatory process—one that recognizes the importance of enhanced incentives in promoting efficiency and long-term investment in what are arguably some of the most critical of infrastructure industries. It is in

this context that incentive regulation is poised to bridge the gap between fully integrated, regulated monopolies and a restructured, more competitive marketplace.■

#### Endnotes:

1. Incentive regulation can be defined as the implementation of rules that provide a regulated firm with strong incentives to achieve desired goals while granting significant, but not unlimited, discretion to the firm. In some sense, all types of regulation—including some forms of cost-of-service regulation—can constitute a form of incentive regulation. The common practice has been to limit the definition of incentive regulation to alternative forms of regulation that satisfy the above definition. These include price cap regulation, rate moratoria or rate freezes (which are also a form of price cap regulation), and various combinations that include earnings sharing. See DAVID E.M. SAPPINGTON AND DENNIS L. WEISMAN, *DESIGNING INCENTIVE REGULATION FOR THE TELECOMMUNICATIONS INDUSTRY* (Cambridge, MA: MIT Press, 1996), at 2. See also note 13 below.
2. David E.M. Sappington, Johannes P. Pfeifenberger, Philip Hanser and Gregory N. Basheda, *Status and Trends of Performance-Based Regulation in the U.S. Electric Utility Industry*, *ELEC. J.*, Oct. 2001, at 71–79.
3. A dead-band is a range of earnings within which no action is taken by the regulator—either to modify rates or to appropriate earnings.
4. See David E.M. Sappington, *Price Regulation*, in Martin Cave, Sumit Majumdar, and Ingo Vogelsang (eds.), *HANDBOOK OF TELECOMMUNICATIONS ECONOMIST* (Amsterdam: North-Holland, 2002), Table 2, Chap. 7, at 225–293.
5. The empirical evidence to date appears to support this claim. See, for example, Jaison R. Abel, *The Performance of the State Telecommunications Industry under Price-Cap Regulation: An Assessment of the Empirical Evidence*, NRRRI 00-14, National Regulatory Research Institute, Sept. 2000; and Chunrong Ai and David Sappington, *The Impact of State Incentive Regulation on the U.S. Telecommunications Industry*, *J. REGUL. ECON.*, forthcoming. Note, however, that the overall benefits of incentive regulation are perhaps less controversial than the distribution of those benefits between consumers and regulated firms. The regulated firm under incentive regulation typically bears greater risk in exchange for the prospect of a higher return. The realization of this higher return depends upon the regulated firm's ability to improve efficiency. In contrast, the gains to consumers, which include rate reductions or freezes, bill credits and infrastructure upgrades, are typically guaranteed up-front and thus independent of the actual performance of the regulated firm. This is an important distinction because there may be a temptation by some parties to point to the greater profitability of the regulated firm under incentive regulation as evidence of an inequitable distribution of the gains from incentive regulation. What this perspective fails to realize is that in a different state of the world in which the regulated firm did not perform well, consumers are shielded under incentive regulation from the rate increases that may attend earnings deficiencies under the traditional regulatory model. In other words, incentive regulation provides a type of "insurance" for consumers that derives from a less direct linkage between the regulated firm's rates and its actual costs.
6. JAMES C. BONBRIGHT, *PRINCIPLES OF PUBLIC UTILITY RATES* (New York: Columbia University Press, 1961), at 107.
7. ADAM SMITH, *THE WEALTH OF NATIONS* (New York: Modern Library, 1937) (originally published in 1776), at 423.
8. DANIEL YERGJIN AND JOSEPH STANISLAW, *COMMANDING HEIGHTS* (New York: Simon & Schuster, 1998), at 273.
9. ALFRED E. KAHN, *THE ECONOMICS OF REGULATION: PRINCIPLES AND INSTITUTIONS*, vol. I (New York: John Wiley & Sons, 1970), at 17. See also, Bonbright, *supra* note 6, at 107.
10. As Professor Joseph Schumpeter observed:  
  
In this respect, perfect competition is not only impossible, but inferior, and has no title to being set up as a model of ideal efficiency. It is hence a mistake to base the theory of government regulation of industry on the principle that big business should be made to work as the respective industry would work in perfect competition.  
  
See JOSEPH A. SCHUMPETER, *CAPITALISM, SOCIALISM AND DEMOCRACY* (New York: Harper & Row, 1942), at 106.
11. See, for example, Sappington and Weisman, *supra* note 1, Chap. 5.
12. See, for example, Sappington, *supra* note 4.
13. Cost-of-service regulation that explicitly rewards superior performance or that specifically allows for extended regulatory lags can also provide strong performance incentives. Such modified cost-of-service regulation, for example, may also employ lengthened regulatory lags similar to rate moratoria. Also note that the traditional regulatory model is not inconsistent with providing rewards for superior performance. Regulatory agencies generally have some flexibility to consider superior company performance or management efficiency as a "non-cost factor" in determining whether a utility's rates are within a just and reasonable range. The Federal Energy Regulatory Commission, for example, stated in its Order 414-A (July 29, 1998) that "the Commission will not lower a pipeline's ROE if its lower risk is the result of the pipeline's own efficiency . . . The record in this case makes it clear that Transco's positive market position is largely the result of the pipeline's relatively low rates in its market area . . . These are characteristics of a healthy company whose efficiency has enabled it to compete successfully in the market place and satisfy its customers." (*slip op.*, at 34–35).
14. Testimony of Donald E. Brandt before the Missouri Public Service

Commission, Transcript of Proceeding, Case No. EO-96-14, June 2, 1999, at 266–267.

15. It is interesting to note that intellectual property laws may give temporary monopolies (e.g., patent rights) to firms in competitive markets in order to provide “incentives and rewards” to encourage innovation, efficiency gains, and superior performance. Yet some argue that “incentives and rewards” to encourage innovation, efficiency gains, and superior performance for regulated monopolies are unnecessary because regulated firms already have the “obligation” to be efficient.

16. The importance of performance-based compensation within government agencies is broadly recognized. For example, the U.S. General Accounting Office (GAO) notes that “[i]f federal agencies hope to maximize their performance, ensure accountability, and achieve their strategic goals and objectives, they must, among other things, make effective use of incentives—whether monetary or nonmonetary—to motivate and reward their workforce . . .” (*Human Capital: Using Incentives to Motivate and Reward High Performance*. Statement of Michael Brostek, GAO/T-GGD-00-118, May 2, 2000, at 11–12). The importance of incentives is also recognized with respect to government agencies as a whole. For example, a recent report of the Missouri Energy Policy Task Force “recognizes that state agencies may be reluctant to become more efficient if those efficiencies result in a dollar-for-dollar reduction in their budgets.” (*Final Report of the Missouri Energy Policy Task Force Presented to Governor Bob Holden*. Northwest Missouri State University, Maryville, Missouri, Oct. 16, 2001, at 19). The Task Force recommended that these agencies be given efficiency incentives in the form of a shared savings program.

17. For example, studies found that: the performance of race car drivers increases with the absolute spread of prizes (Brian E. Becker and Mark A. Huselid, *The Incentive Effects of Tournament Compensation Systems*, ADMIN. SCI. Q., 1992, 37, at 336–350); golfers’

performance increases with higher prizes (Ronald G. Ehrenberg and Michael L. Bognanno, *The Incentive Effects of Tournaments Revisited: Evidence from the European PGA Tour*, IND'L & LABOR RELATIONS REV., 1990, 43, at 74–89); and an incentive pay scheme that shares part of the prize money in horse races with jockeys elicits much improved performance over giving jockeys a flat fee for riding (Sue Femie and David Metcalf, *It's Not What You Pay, It's the Way You Pay It: Jockey's Pay and Performance*, CENTREPIECE MAGAZINE, June 1996, 2).

18. Such a perception of “excess earnings” can make it very difficult for regulators to maintain the commitment to the terms of the incentive plan. However, as Professor David Sappington observes, the credibility of a regulator’s commitment is critical to the performance of incentive plans:

Absent credible rewards for superior performance and/or credible penalties for poor performance, the regulated firm will have little incentive to incur the effort costs that increase the likelihood of good performance.

See David E.M. Sappington, *Designing Incentive Regulation*, REV. IND'L ORG., 1994, 9, at 262–263.

19. A related concern is that regulators may face adverse political pressures should the regulated firm report higher earnings under incentive regulation. In other words, how does the regulator explain to part of his constituency that he is doing a “good job” as a regulator when the regulated firm reports a significant increase in earnings? See, for example, Dennis L. Weisman, *Superior Regulatory Regimes in Theory and Practice*, J. REGUL. ECON., Dec. 1993, 5 (4), at 364–365.

20. The formal economics literature may, in part, have contributed to this perception through its modeling of principal–agent relationships in which the “agent” has superior information to that of the “principal.” The inability of the principal to observe this information directly allows the agent to earn “information rents.” In other words, the agent must be “bribed” to

reveal this information. However, it is unclear whether this structure is merely a convenient modeling technique or actually reflects institutional reality. The discussion herein emphasizes discovery rather than concealment by the agent, though they need not be mutually exclusive.

21. Incentive regulation can also facilitate implementation of known efficiency measures because implementation of such measures can be associated with significant direct and indirect costs that are difficult to recover under traditional regulation. Such cost recovery can be difficult under traditional regulation because the regulated entity often bears the full costs of the efficiency measure but may have only limited ability to benefit from the measures as efficiencies are appropriated quickly through the regulatory process. In addition, the regulatory process generally does not consider indirect costs, such as the risks of using new technologies or the significant institutional strains associated with certain measures such as staff reductions.

22. As the great inventor Charles Franklin Kettering observed, the key to successful innovation is *intelligent failure*—failing in a manner that brings the innovator one step closer to the actual solution. For Kettering, failure was an indispensable part of the innovation process. See, for example, Mark Bernstein, *Charles Kettering: Automotive Genius*, SMITHSONIAN, July 1988.

23. *Industry Gets Religion*, ECONOMIST, Feb. 20, 1999 (Special Supplement on Innovation in Industry).

24. *Id.*

25. Richard M. Russell of the White House Office of Science and Technology Policy estimates that 52 percent of the nation’s growth since World War II had come through inventions. His statement that “unless we can protect intellectual property, we will not have invention” serves to highlight the importance of incentives in achieving such performance. See Warren E. Leary, *The Inquiring Minds Behind 200 Years of Inventions*, N.Y. TIMES, Oct. 22, 2002, at D4.