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October 18, 2010

British Columbia Hydro and Power Authority
Regulatory Compliance & Filings
16th Floor – 333 Dunsmuir Street
Vancouver, BC
V6B 5R3

Attention: Joanna Sofield, Chief Regulatory Officer

Dear Ms. Sofield:

Re: Terasen Utilities (comprised of Terasen Gas Inc., Terasen Gas (Vancouver Island) Inc. and Terasen Gas (Whistler) Inc.) 2010 Long Term Resource Plan

Response to the British Columbia Hydro and Power Authority ("BC Hydro") Information Request ("IR") No. 1

On July 15, 2010, Terasen Gas filed the Application as referenced above. In accordance with Commission Order No. G-146-10 setting out the Regulatory Timetable for the review of the Application, the Terasen Utilities respectfully submit the attached response to BC Hydro IR No. 1.

If there are any questions regarding the attached, please contact the undersigned or Ken Ross at (604) 576-7343 or ken.ross@terasengas.com for further information.

Yours very truly,

on behalf of the TERASEN UTILITIES

Original signed:

Diane Roy

Attachment

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

Natural Gas Forecasts

1.0   Reference: Exhibit B 1 Appendix B 2

1.1   Please provide a yearly resolution table for the total Terasen Utilities service area that provides a 20 year forecast (for the Reference Case) of average (use per customer) residential customer demand, average (use per customer) residential peak day customer demand and the imputed load factor. Please provide in separate tables before and after Energy Efficiency and Conservation (EEC) initiatives.

Response:

TGI analyzes peak day demand for the entire core rate class as they represent the firm customers to whom we are obligated to provide energy. The Terasen Utilities are in the process of researching new methodologies to disaggregate the core peak day demand into different rate classes.

Included in Attachment 1.1 is the requested data outlining average (use per customer) customer demand (in GJ), average (use per customer) peak day customer demand (in GJ) and the imputed load factor for the 20 year forecasting period for the core rate class in each of the Reference, High and Low natural gas demand cases.

Please note that EEC savings are not applicable in the TGW service area as TGW has not offered EEC programs as of yet.

1.2   Please repeat the above calculation for the total load in each of the residential, commercial and industrial customer classes for each of the Reference, High and Low natural gas demand cases. Please provide in separate tables before and after EEC.

Response:

Please refer to the response to BCH IR 1.1.1.

Greenhouse Gas (GHG) Targets/Natural Gas Usage

2.0   Reference: Exhibit B 1 page 62: Terasen Utilities state "The total transportation sector fuel usage was 370 PJ in 2007 as shown by category in Figure 3 4. Of this total, the target markets that TGI has identified make up 290 PJ. TGI expects natural gas demand from its new NGV solutions to grow to 30 PJ or 6.5% of this total market by 2030."

2.1   Do Terasen Utilities have a more aggressive scenario for natural gas fleet vehicles that will provide more support in advancing the British Columbia Government's legislated GHG targets set out in subsection 2(g) of the Clean Energy Act? If not, please explain why Terasen Utilities do not have such a scenario, including addressing the potential barriers such as up front capital costs.

Response:

Given that the present market share for NGVs in BC is extremely small and that there are a variety of market drivers that will influence the adoption rate of NGVs, it is difficult to predict the market penetration rates over time. The Terasen Utilities has outlined three potential scenarios for adoption of NGVs in the LTRP. The scenarios provided address barriers to adoption such as initial capital cost. For example, the scenarios include discussion of the use of incentive programs to offset the incremental cost of NGVs to users. Other scenarios are of course possible including ones where higher rates of adoption are achieved; however, the strategies being applied to address the barriers would be largely the same particularly in the short term as efforts are made to encourage initial adopters of NGV technology. The Terasen Utilities will monitor the actual rates of adoption and may need to adjust forecasts of adoption rates (either up or down) in subsequent Resource Plans.

Looking at other markets where NGVs have been adopted, it is possible that higher rates of penetration can occur. For example, the share of total vehicles in the following three countries shows that more aggressive scenarios are possible[1]:

Country	First CNG Station	Number of NGVs		NGV Market Penetration
		2001	2009	
Iran	1975	800	1,665,602	24%
Columbia	1985	12,000	300,000	11%
Pakistan	1985	320,000	2,300,000	52%

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[1] http://www.iangv.org/tools-resources/statistics.html

In Iran, a petroleum rich country, the high rates of adoption are linked to government policy to utilize natural gas for vehicles while exporting oil and oil products.[2]

To achieve such penetration levels as have been achieved in other jurisdictions would at a minimum require supporting government policies and vehicle incentive programs to help offset the 10% to 50% higher incremental cost of NGVs. These and other market drivers will be discussed in depth in the transportation fuelling service application that will be submitted by the end of 2010 to the BCUC. The use of biogas as a fuel for transportation can also support the provincial GHG reduction targets.

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[2] NGV Global News, August 5, 2009.
http://www.ngvglobal.com/iranian-cng-revolution-continues-1-5-million-ngvs-and-growing-0805

Terasen Utilities Residential End Use Model

3.0   Reference: Exhibit B 1 Appendix B 1, section 3.3.2 and Exhibit 12.7 indicates the number of people per 'household' declining.

3.1   Please provide a breakdown of Exhibit 12.7 by building type.

Response:

A breakdown by building type is provided below based on 2008 REUS. Please note that for FTN (Fort Nelson), 100% of the responses were SFD.

LML	SFD	MFD	VSD	TOTAL
Yes – changed in last two years	33.3%	0.1%	1.8%	35.2%
Yes – more people in the past	18.6%	0.0%	0.9%	19.5%
Yes – fewer people in the past	7.2%	0.0%	0.3%	7.6%
Yes – both fewer and more people in the past	7.2%	0.0%	0.6%	7.8%
Ratio of homes with more in the past to homes with fewer in past	2.6	1.0	2.6	2.6

INT	SFD	MFD	VSD	TOTAL
Yes – changed in last two years	27.5%	0.0%	0.8%	28.3%
Yes – more people in the past	15.6%	0.0%	0.4%	16.0%
Yes – fewer people in the past	6.3%	0.0%	0.2%	6.5%
Yes – both fewer and more people in the past	5.5%	0.0%	0.2%	5.7%
Ratio of homes with more in the past to homes with fewer in past	2.5	2.2	2.1	2.5

TGVI	SFD	VSD	TOTAL
Yes – changed in last two years	22.3%	0.8%	23.1%
Yes – more people in the past	11.5%	0.5%	12.0%
Yes – fewer people in the past	4.7%	0.2%	4.9%
Yes – both fewer and more people in the past	6.1%	0.1%	6.2%
Ratio of homes with more in the past to homes with fewer in past	2.4	2.8	2.4

TGW	SFD	VSD	TOTAL
Yes – changed in last two years	19.6%	8.8%	28.4%
Yes – more people in the past	9.3%	3.7%	13.0%
Yes – fewer people in the past	5.4%	2.8%	8.2%
Yes – both fewer and more people in the past	4.9%	2.3%	7.2%
Ratio of homes with more in the past to homes with fewer in past	1.7	1.3	1.6

FTN	SFD	TOTAL
Yes – changed in last two years	42.0%	42.0%
Yes – more people in the past	22.5%	22.5%
Yes – fewer people in the past	13.0%	13.0%
Yes – both fewer and more people in the past	6.5%	6.5%
Ratio of homes with more in the past to homes with fewer in past	1.7	1.7

3.2 Has the impact of basement suites in single family dwellings on natural gas consumption been considered in this analysis and if so, how?

Response:

The impact of basement suits in single family dwellings on natural gas consumption has not been considered as the REUS questionnaire did not address the issue of secondary suites in single family dwellings.

The logic behind that decision was that there was a concern that home owners with secondary suites, especially non-conforming suites, would be unwilling to complete the survey if the issue was raised. The questionnaire asks about "Your Residence" so it was up to the respondent to determine if that meant their portion of the house if there was a secondary suite, or the complete house.

4.0   Reference: Exhibit B 1 Appendix B 1, section 2.1

4.1   This study has focussed on individual metered household units. Has Terasen Utilities done any similar studies over the last three years on metered whole residential buildings? If so, please submit the results to complete the view of residential natural gas load in the province.

Response:

No study similar to the 2008 REUS has been undertaken in the last three years on metered whole residential buildings. The Terasen Utilities is currently undertaking a Commercial End Use Study ("CEUS") as a component of a Conservation Potential Review. The CEUS will provide some information about bulk metered residential buildings. The information will be available in the first quarter of 2011.

5.0   Reference: Exhibit B 1 Appendix B 1, Exhibit 7.4

5.1   Why has the penetration of natural gas fired hot water tanks risen from 85 to 89 per cent?

Response:

The penetration of natural gas fuelled hot water tanks in the TGI service area has increased from 84.7% in 2002 to 90.1% in 2008. The 89% quoted in the question is for the TGI service area excluding the TGVI service area because it was not included in the 2002 end use study. There is no indication as to why the penetration rate for natural gas fuelled hot water tanks has increased; however, it is noted in the REUS commentary that some respondents had difficultly either identifying the fuel type or the water heater type, i.e. the water heater fuel was identified as natural gas and the type was described as storage tank without vent (which would indicate an electric heated tank). As additional data becomes available through ongoing research activities, the utilities will provide updates to the 2008 REUS results in case of any material changes.

6.0 Reference: Exhibit B 1 Appendix B 1, Exhibit 7.10

6.1 Please supply Exhibit 7.10 by building type.

Response:

Please see the tables included in Attachment 6.1.

7.0   Reference: Exhibit B 1 Appendix B 1, Exhibit 8.1

7.1   Is the saturation increase in main cooking appliances (ranges and tops), from 1993 (102) to 2008 (115) due to more secondary or basement suites, or to larger, more equipped, kitchens?

Response:

It is not possible to discern if either of these factors are drivers of the increased saturation in main cooking appliances (ranges and tops), from 1993 (102) to 2008 (115). Information about kitchen sizes or secondary suites was not captured in the 2008 REUS study or in prior end use studies conducted in 1993 and 2002.

Attachment 1.1

TGI Before EEC

Reference Case

Core Rate Class	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Daily UPC (GJ)	0.371	0.367	0.364	0.360	0.358	0.356	0.354	0.353	0.353	0.352	0.351	0.350	0.349	0.348	0.348	0.347	0.346	0.345	0.343	0.343	0.342
Peak Day UPC (GJ)	1.497	1.499	1.501	1.503	1.505	1.507	1.510	1.512	1.513	1.515	1.517	1.519	1.520	1.522	1.524	1.525	1.527	1.529	1.530	1.532	1.534
Load Factor	24.77%	24.48%	24.22%	23.99%	23.78%	23.62%	23.48%	23.36%	23.29%	23.21%	23.13%	23.06%	22.98%	22.89%	22.82%	22.73%	22.64%	22.56%	22.44%	22.37%	22.27%

Low Case

Core Rate Class	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Daily UPC (GJ)	0.370	0.365	0.360	0.356	0.352	0.349	0.346	0.344	0.342	0.340	0.338	0.336	0.334	0.332	0.331	0.329	0.327	0.325	0.323	0.321	0.319
Peak Day UPC (GJ)	1.496	1.498	1.500	1.502	1.504	1.506	1.508	1.510	1.511	1.513	1.515	1.516	1.518	1.519	1.521	1.522	1.524	1.526	1.527	1.529	1.532
Load Factor	24.71%	24.34%	24.00%	23.68%	23.40%	23.16%	22.94%	22.75%	22.61%	22.46%	22.31%	22.18%	22.03%	21.89%	21.75%	21.60%	21.45%	21.31%	21.14%	21.00%	20.83%

High Case

Core Rate Class	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Daily UPC (GJ)	0.372	0.369	0.368	0.366	0.365	0.365	0.366	0.367	0.369	0.370	0.371	0.373	0.375	0.376	0.378	0.380	0.381	0.383	0.384	0.386	0.388
Peak Day UPC (GJ)	1.497	1.500	1.503	1.505	1.508	1.511	1.514	1.516	1.518	1.521	1.523	1.525	1.527	1.529	1.531	1.533	1.535	1.537	1.539	1.541	1.542
Load Factor	24.84%	24.64%	24.47%	24.32%	24.21%	24.18%	24.18%	24.21%	24.28%	24.34%	24.40%	24.48%	24.54%	24.61%	24.69%	24.76%	24.83%	24.90%	24.95%	25.04%	25.14%

TGI After EEC

Reference Case

Core Rate Class	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Daily UPC (GJ)	0.369	0.365	0.362	0.358	0.356	0.354	0.352	0.351	0.351	0.350	0.349	0.348	0.347	0.347	0.346	0.345	0.344	0.344	0.343	0.342	0.341
Peak Day UPC (GJ)	1.497	1.499	1.501	1.503	1.505	1.507	1.510	1.512	1.513	1.515	1.517	1.519	1.520	1.522	1.524	1.525	1.527	1.529	1.530	1.532	1.534
Load Factor	24.68%	24.34%	24.09%	23.85%	23.65%	23.48%	23.35%	23.23%	23.17%	23.08%	23.00%	22.93%	22.85%	22.77%	22.70%	22.63%	22.54%	22.48%	22.40%	22.33%	22.25%

Low Case

Core Rate Class	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Daily UPC (GJ)	0.368	0.363	0.358	0.354	0.350	0.347	0.344	0.341	0.340	0.338	0.336	0.334	0.332	0.331	0.329	0.327	0.325	0.324	0.322	0.321	0.319
Peak Day UPC (GJ)	1.496	1.498	1.500	1.502	1.504	1.506	1.508	1.510	1.511	1.513	1.515	1.516	1.518	1.519	1.521	1.522	1.524	1.526	1.527	1.529	1.532
Load Factor	24.62%	24.20%	23.86%	23.54%	23.26%	23.02%	22.81%	22.62%	22.48%	22.33%	22.18%	22.05%	21.90%	21.76%	21.63%	21.49%	21.35%	21.23%	21.09%	20.97%	20.81%

High Case

Core Rate Class	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Daily UPC (GJ)	0.370	0.367	0.366	0.364	0.363	0.363	0.364	0.365	0.367	0.368	0.370	0.371	0.373	0.374	0.376	0.378	0.380	0.382	0.383	0.385	0.387
Peak Day UPC (GJ)	1.497	1.500	1.503	1.505	1.508	1.511	1.514	1.516	1.518	1.521	1.523	1.525	1.527	1.529	1.531	1.533	1.535	1.537	1.539	1.541	1.542
Load Factor	24.74%	24.49%	24.33%	24.19%	24.08%	24.05%	24.05%	24.08%	24.15%	24.21%	24.27%	24.35%	24.42%	24.49%	24.57%	24.65%	24.73%	24.83%	24.91%	25.01%	25.12%

TGVI Before EEC

Reference Case

Core Rate Class	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Daily UPC (GJ)	0.318	0.311	0.304	0.298	0.292	0.287	0.283	0.279	0.276	0.274	0.271	0.268	0.265	0.263	0.260	0.258	0.255	0.252	0.250	0.247	0.244
Peak Day UPC (GJ)	1.137	1.143	1.149	1.153	1.157	1.161	1.163	1.163	1.165	1.168	1.168	1.168	1.166	1.164	1.163	1.162	1.160	1.158	1.156	1.155	1.153
Load Factor	27.94%	27.21%	26.49%	25.85%	25.27%	24.74%	24.29%	23.99%	23.71%	23.42%	23.18%	22.96%	22.75%	22.58%	22.37%	22.17%	21.96%	21.78%	21.58%	21.40%	21.20%

Low Case

Core Rate Class	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Daily UPC (GJ)	0.317	0.309	0.301	0.294	0.287	0.281	0.275	0.270	0.267	0.263	0.259	0.255	0.252	0.248	0.245	0.241	0.238	0.234	0.231	0.227	0.224
Peak Day UPC (GJ)	1.140	1.151	1.160	1.167	1.174	1.181	1.186	1.189	1.193	1.197	1.199	1.200	1.200	1.199	1.199	1.199	1.199	1.198	1.196	1.195	1.196
Load Factor	27.80%	26.89%	25.99%	25.18%	24.45%	23.78%	23.18%	22.74%	22.34%	21.95%	21.61%	21.28%	20.98%	20.71%	20.41%	20.12%	19.82%	19.56%	19.27%	19.00%	18.69%

High Case

Core Rate Class	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Daily UPC (GJ)	0.320	0.315	0.309	0.304	0.299	0.295	0.292	0.290	0.289	0.288	0.286	0.285	0.283	0.282	0.281	0.280	0.278	0.277	0.275	0.274	0.272
Peak Day UPC (GJ)	1.134	1.137	1.140	1.141	1.142	1.143	1.144	1.143	1.143	1.144	1.144	1.142	1.139	1.136	1.134	1.132	1.130	1.127	1.125	1.122	1.118
Load Factor	28.20%	27.66%	27.11%	26.63%	26.21%	25.84%	25.54%	25.40%	25.27%	25.14%	25.05%	24.95%	24.87%	24.86%	24.78%	24.69%	24.60%	24.55%	24.46%	24.40%	24.36%

TGVI After EEC

Reference Case

Core Rate Class	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Daily UPC (GJ)	0.316	0.309	0.302	0.296	0.290	0.285	0.281	0.277	0.275	0.272	0.269	0.266	0.264	0.261	0.259	0.256	0.254	0.251	0.249	0.246	0.244
Peak Day UPC (GJ)	1.137	1.143	1.149	1.153	1.157	1.161	1.163	1.163	1.165	1.168	1.168	1.168	1.166	1.164	1.163	1.162	1.160	1.158	1.156	1.155	1.153
Load Factor	27.82%	27.02%	26.31%	25.67%	25.10%	24.58%	24.13%	23.84%	23.56%	23.28%	23.04%	22.81%	22.61%	22.45%	22.24%	22.05%	21.86%	21.69%	21.52%	21.35%	21.17%

Low Case

Core Rate Class	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Daily UPC (GJ)	0.316	0.307	0.299	0.292	0.285	0.279	0.273	0.269	0.265	0.261	0.257	0.254	0.250	0.247	0.243	0.240	0.236	0.233	0.230	0.227	0.223
Peak Day UPC (GJ)	1.140	1.151	1.160	1.167	1.174	1.181	1.186	1.189	1.193	1.197	1.199	1.200	1.200	1.199	1.199	1.199	1.199	1.198	1.196	1.195	1.196
Load Factor	27.68%	26.70%	25.81%	25.01%	24.28%	23.61%	23.02%	22.59%	22.19%	21.80%	21.46%	21.14%	20.83%	20.58%	20.28%	20.00%	19.72%	19.46%	19.20%	18.95%	18.67%

High Case

Core Rate Class	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Daily UPC (GJ)	0.318	0.312	0.307	0.302	0.298	0.294	0.290	0.288	0.287	0.286	0.285	0.283	0.282	0.281	0.280	0.278	0.277	0.276	0.275	0.273	0.272
Peak Day UPC (GJ)	1.134	1.137	1.140	1.141	1.142	1.143	1.144	1.143	1.143	1.144	1.144	1.142	1.139	1.136	1.134	1.132	1.130	1.127	1.125	1.122	1.118
Load Factor	28.09%	27.47%	26.93%	26.46%	26.05%	25.69%	25.38%	25.25%	25.13%	24.99%	24.91%	24.81%	24.73%	24.74%	24.65%	24.58%	24.51%	24.46%	24.40%	24.35%	24.33%

TGW Before EEC

Reference Case

Core Rate Class	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Daily UPC (GJ)	0.707	0.703	0.700	0.698	0.694	0.689	0.685	0.683	0.681	0.677	0.675	0.675	0.673	0.671	0.670	0.670	0.669	0.667	0.666	0.666	0.665
Peak Day UPC (GJ)	2.729	2.711	2.703	2.693	2.679	2.662	2.650	2.641	2.635	2.622	2.617	2.612	2.608	2.600	2.598	2.596	2.594	2.587	2.585	2.583	2.582
Load Factor	25.91%	25.93%	25.90%	25.92%	25.89%	25.87%	25.84%	25.87%	25.84%	25.83%	25.81%	25.83%	25.81%	25.80%	25.78%	25.81%	25.79%	25.78%	25.76%	25.79%	25.77%

Low Case

Core Rate Class	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Daily UPC (GJ)	0.699	0.691	0.684	0.678	0.670	0.662	0.655	0.649	0.643	0.636	0.631	0.626	0.621	0.615	0.610	0.607	0.602	0.596	0.592	0.589	0.584
Peak Day UPC (GJ)	2.735	2.722	2.718	2.711	2.701	2.687	2.679	2.674	2.670	2.660	2.656	2.654	2.651	2.645	2.644	2.643	2.643	2.637	2.636	2.636	2.636
Load Factor	25.54%	25.38%	25.17%	25.02%	24.82%	24.63%	24.43%	24.29%	24.10%	23.92%	23.74%	23.60%	23.42%	23.26%	23.08%	22.95%	22.78%	22.62%	22.46%	22.33%	22.16%

High Case

Core Rate Class	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Daily UPC (GJ)	0.720	0.719	0.721	0.723	0.722	0.721	0.721	0.723	0.725	0.726	0.728	0.733	0.735	0.738	0.741	0.747	0.751	0.753	0.757	0.763	0.767
Peak Day UPC (GJ)	2.723	2.700	2.689	2.675	2.658	2.636	2.620	2.609	2.600	2.585	2.578	2.572	2.566	2.557	2.553	2.550	2.547	2.538	2.535	2.532	2.530
Load Factor	26.45%	26.65%	26.81%	27.02%	27.18%	27.35%	27.51%	27.73%	27.90%	28.08%	28.25%	28.48%	28.66%	28.86%	29.04%	29.28%	29.47%	29.67%	29.86%	30.11%	30.31%

TGW After EEC

Reference Case

Core Rate Class	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Daily UPC (GJ)	0.707	0.703	0.700	0.698	0.694	0.689	0.685	0.683	0.681	0.677	0.675	0.675	0.673	0.671	0.670	0.670	0.669	0.667	0.666	0.666	0.665
Peak Day UPC (GJ)	2.729	2.711	2.703	2.693	2.679	2.662	2.650	2.641	2.635	2.622	2.617	2.612	2.608	2.600	2.598	2.596	2.594	2.587	2.585	2.583	2.582
Load Factor	25.91%	25.93%	25.90%	25.92%	25.89%	25.87%	25.84%	25.87%	25.84%	25.83%	25.81%	25.83%	25.81%	25.80%	25.78%	25.81%	25.79%	25.78%	25.76%	25.79%	25.77%

Low Case

Core Rate Class	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Daily UPC (GJ)	0.699	0.691	0.684	0.678	0.670	0.662	0.655	0.649	0.643	0.636	0.631	0.626	0.621	0.615	0.610	0.607	0.602	0.596	0.592	0.589	0.584
Peak Day UPC (GJ)	2.735	2.722	2.718	2.711	2.701	2.687	2.679	2.674	2.670	2.660	2.656	2.654	2.651	2.645	2.644	2.643	2.643	2.637	2.636	2.636	2.636
Load Factor	25.54%	25.38%	25.17%	25.02%	24.82%	24.63%	24.43%	24.29%	24.10%	23.92%	23.74%	23.60%	23.42%	23.26%	23.08%	22.95%	22.78%	22.62%	22.46%	22.33%	22.16%

High Case

Core Rate Class	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Daily UPC (GJ)	0.720	0.719	0.721	0.723	0.722	0.721	0.721	0.723	0.725	0.726	0.728	0.733	0.735	0.738	0.741	0.747	0.751	0.753	0.757	0.763	0.767
Peak Day UPC (GJ)	2.723	2.700	2.689	2.675	2.658	2.636	2.620	2.609	2.600	2.585	2.578	2.572	2.566	2.557	2.553	2.550	2.547	2.538	2.535	2.532	2.530
Load Factor	26.45%	26.65%	26.81%	27.02%	27.18%	27.35%	27.51%	27.73%	27.90%	28.08%	28.25%	28.48%	28.66%	28.86%	29.04%	29.28%	29.47%	29.67%	29.86%	30.11%	30.31%

Attachment 6.1

Hot Water Fuel * Space Heating Fuels Crosstabulation

Building Type: SFD			Space Heating Fuels						
			DK	Electricity	Gas (natural gas or propane)	Oil	Other	Wood	Total
Hot Water Fuel	Electricity	Count	1	36	161	1	0	9	208
		% of Total	.1%	1.8%	8.1%	.1%	.0%	.5%	10.4%
	Gas (natural gas or propane)	Count	0	88	1617	1	3	11	1720
		% of Total	.0%	4.4%	80.9%	.1%	.2%	.6%	86.0%
	No hot water heater	Count	0	6	60	0	0	0	66
		% of Total	.0%	.3%	3.0%	.0%	.0%	.0%	3.3%
	Oil	Count	0	0	4	1	0	0	5
		% of Total	.0%	.0%	.2%	.1%	.0%	.0%	.3%
Total		Count	1	130	1842	3	3	20	1999
		% of Total	.1%	6.5%	92.1%	.2%	.2%	1.0%	100.0%

Hot Water Fuel * Space Heating Fuels Crosstabulation

Building Type: **Apartments/Condominiums***			Space Heating Fuels				
			DK	Electricity	Gas (natural gas or propane)	Other	Total
Hot Water Fuel	Electricity	Count	0	1	0	0	1
		% of Total	.0%	11.1%	.0%	.0%	11.1%
	Gas (natural gas or propane)	Count	0	1	3	0	4
		% of Total	.0%	11.1%	33.3%	.0%	44.4%
	No hot water heater	Count	0	2	2	0	4
		% of Total	.0%	22.2%	22.2%	.0%	44.4%
Total		Count	0	4	5	0	9
		% of Total	.0%	44.4%	55.6%	.0%	100.0%

* Individually metered units in apartments/condominiums. Due to the small sample size, the results should be treated with caution.

Hot Water Fuel * Space Heating Fuels Crosstabulation

Building Type: MFD			DK	Electricity	Gas (natural gas or propane)	Other	Wood	Total
					Space Heating Fuels			
Hot Water Fuel	Electricity	Count	0	7	8	0	0	15
		% of Total	.0%	4.9%	5.6%	.0%	.0%	10.6%
	Gas (natural gas or propane)	Count	0	11	110	0	0	121
		% of Total	.0%	7.7%	77.5%	.0%	.0%	85.2%
	No hot water heater	Count	0	0	6	0	0	6
		% of Total	.0%	.0%	4.2%	.0%	.0%	4.2%
Total		Count	0	18	124	0	0	142
		% of Total	.0%	12.7%	87.3%	.0%	.0%	100.0%