ERICA HAMILTON
COMMISSION SECRETARY
Commission.Secretary@bcuc.com
web site: http://www.bcuc.com

LETTER L-34-14

SIXTH FLOOR, 900 HOWE STREET, BOX 250
VANCOUVER, B.C. CANADA V6Z 2N3
TELEPHONE: (604) 660-4700
BC TOLL FREE: 1-800-663-1385
FACSIMILE: (604) 660-1102

Log No. 47342, 33312

VIA EMAIL
gas.regulatory.affairs@fortisbc.com

June 19, 2014

Ms. Diane Roy
Director, Regulatory Affairs - Gas
FortisBC Energy Inc.
Surrey, BC V4N 0E8

Dear Ms. Roy:

Re: FortisBC Energy Inc. and FortisBC Energy Vancouver Island Inc.
2013 Main Extension (MX) and Vertical Sub-division Reports

The British Columbia Utilities Commission (Commission) acknowledges receipt of the 2013 Main Extension (MX) and Vertical Sub-division Reports (Report) submitted by FortisBC Energy Inc. (FEI) and FortisBC Energy Vancouver Island Inc. (FEVI) (collectively, the Companies). Considering the 2013 MX Report results, including the five year results for the 2008 mains extension year, which appear to show a significant under-recovery of those mains extension costs, and the Commission's observations on the Companies' forecasting methods and security and ratepayer protection policies, the Commission seeks comment on the Companies' main extension performance and policies before deciding how to proceed.

Specifically, the Commission requests the Companies and interested parties to provide comments to the Commission, on or before July 15, 2014, on the items outlined on page 5 of this Letter.

Background

On July 31, 2007, pursuant to the *Utilities Commission Act*, Terasen Gas Inc. (TGI) and Terasen Gas (Vancouver Island) Inc. (TGVI), predecessors to FEI and FEVI, jointly filed an application to amend the Terms and Conditions of each utility's Tariff with respect to charges for system extensions and customer attachment and connections (Application).

On December 6, 2007, by Order G-152-07, the Commission issued its Decision on the Application. In its Decision, the Commission Panel directed TGI and TGVI to file with the Commission on an annual basis, within 90 days of calendar year end, a main extension report containing certain information.

On March 27, 2014, FEI and FEVI jointly submitted to the Commission their 2013 MX Report, which includes results based on 5 years of data for 2008 main extensions.

The Commission acknowledges that the Companies are currently engaged in a stakeholder review of their main extension policies. However, it appears that the Companies' process includes neither a review of the Companies' performance, nor a review of the specific concerns that the Commission notes below. The Commission also believes a more timely review process is appropriate.

Overview of Issues

On August 18, 2010, TGI and TGVI filed a revised 2009 MX Report in which they affirmed "…the results of the main extensions at the end of the five-year time period is the appropriate time to determine the appropriateness of the forecasts developed at the time of the main installation request…" (Revised TGI and TGVI 2009 MX Report, p. 15). As the 2013 MX Report includes results for 2008 main extensions at the end of the five-year time period, the Commission considers it time to determine the appropriateness of the Companies' main extension forecasts.

> "The Profitability Index [PI] is the ratio of the discounted present value of all forecast net cash inflows over twenty years divided by the discounted present value of the capital costs of attaching customers in the first five years of the main extension. While there are many components factored into the calculation of this ratio, the following formula provides a summary of the major components:
>
> $$\text{P.I.} = \frac{\substack{\textbf{Net Present Value of Net Cash Inflows} \\ \text{(Delivery Margin + Connection Fees – O\&M - System Improvement Charge – Property Tax – Income Tax)}}}{\substack{\text{(Mains, Services, Meter Costs)} \\ \textbf{Net Present Value of Capital Costs}}}$$
>
> Accompanying the MX Test formula are the following FEI and FEVI MX Test threshold criteria that have been approved by the Commission under Order No. G-152-07:
>
> - If an individual PI is 0.8 or greater, the system extension can proceed without the need for a customer contribution.
> - If the PI is less than 0.8, a customer contribution is required to bring the PI up to the 0.8 threshold, before the system extension can be built.
> - An aggregate threshold PI of 1.1 is to be used for the portfolio of main extensions completed on an annual basis." (2012 MX Report, p. 10)

A PI of less than 1.0 indicates that the net present value of the net cash inflows (actual net cash inflows in the reporting period plus the forecast net cash inflows) over twenty years is less than the discounted present value of the actual capital costs of attaching customers in the first five years.

For the 2008 main extension year, the Companies report actual individual PIs and actual aggregate PIs below the minimum required thresholds of 0.8 and 1.1, respectively.

The Commission is concerned that the 2008 aggregate PI results over the five year period were below 1.0, indicating that existing ratepayers might be exposed to an undue cost burden as a result of the expansion of the distribution system to attach these new customers.

For ease of reference, the five year results for the 2008 main extension year provided in the Report are repeated below:

2008 SAMPLE MAIN EXTENSIONS PROFITABILITY INDEX (PI)			
FEI	Original Years 1-5 Forecast	Re-calculated PI with actual data	Variance %
Year 1 Year 2 Year 3 Year 4 Year 5	1.60	0.54	-66%
Years 1-5 Total	1.60	0.54	-66%

(2013 MX Report, p. 113)

2008 TOP 5 MAIN EXTENSIONS PROFITABILITY INDEX (PI)			
FEI	Original Years 1-5 Forecast	Re-calculated PI with actual data	Variance %
Trans-Canada Hwy	1.00	0.07	-93%
Juniper Road	1.70	0.00	-100%
Crystal Creek Drive	1.00	0.08	-92%
61A Avenue	1.38	0.59	-57%
Rio Drive	1.00	0.09	-91%
Years 1-5 Average	**1.22**	**0.17**	**-86%**

(2013 MX Report, p. 121)

2008 SAMPLE MAIN EXTENSIONS PROFITABILITY INDEX (PI)			
FEVI	Original Years 1-5 Forecast	Re-calculated PI with actual data	Variance %
Year 1 Year 2 Year 3 Year 4 Year 5	1.30	0.61	-53%
Years 1-5 Total	**1.30**	**0.61**	**-53%**

(2013 MX Report, p. 115)

2008 TOP 5 MAIN EXTENSIONS PROFITABILITY INDEX (PI)			
FEVI	Original Years 1-5 Forecast	Re-calculated PI with actual data	Variance %
Players Drive	1.55	0.24	-84%
French Road	1.22	0.16	-87%
Hutchinson Road	1.40	0.46	-67%
Sewell Road	1.03	0.48	-54%
Phillips Road	0.88	0.00	-100%
Years 1-5 Average	**1.22**	**0.27**	**-78%**

(2013 MX Report, p. 126)

The Commission has identified two areas of concern it believes are contributing to the gap between forecast PIs and actual PIs over this period. These are:

1) forecasting accuracy, and
2) security and existing ratepayer protection in the event that costs, attachments and/or consumption do not materialize according to forecast estimates.

1. Forecasting Accuracy

Forecasting accuracy refers to the accuracy of the inputs used in the forecast PI calculations. Inputs include, but are not limited to, main extension costs, number of attachments, timing of attachments, use per customer, and application of efficiency credits. Forecasting lower costs, a greater number of attachments, earlier attachments, and/or a higher use per customer than actual may result in a main extension meeting the main extension test with less (or no) contribution from the customer(s) than what the customer(s) should have contributed.

There have been main extensions where actual costs have been higher than the Companies' forecasts and this has contributed to actual individual PIs being lower than the required minimum threshold of 0.8, for example, Shawinigan Lake (2013 MX Report, Table 137, p. 105 and Table 147, line 1, p. 111) and Crystal Creek (2013 MX Report, Table 158, p. 118, Table 164, line 3).

There have also been main extensions where actual attachments have been fewer and later than the Companies' forecasts and this too has contributed to actual individual PIs being lower than the required minimum threshold of 0.8, for example, Juniper Road (2013 MX Report, Table 157, p. 117) and Rio Drive (2013 MX Report, Table 163, p. 120). The Companies have stated that the 2008 main extension year was impacted by the economic downturn and is why attachments did not materialize as forecasted (Revised TGI and TGVI 2009 MX Report, p. 1).

For almost every main extension, actual consumption (use) per customer has been significantly less than forecast (2013 MX Report, pp. 41-126). In the Executive Summary of the Report, the Companies state that actual consumption levels are consistent with new customers (2013 MX Report, pp. 1-2).

The Companies explain:

> "Consumption is calculated by determining the annual usage estimates by appliance type derived from operational experience and the Companies' own Residential End Use Study ("REUS") for **existing** customers." (Emphasis added) (2013 MX Report, p. 11)
>
> "However, it is important to note that new customers' (**actual**) consumption patterns **differ from existing customers** due the adoption of current efficiency technology in housing and that the forecast levels used in MX Test represent the consumption levels of all existing customers on the Companies' distribution system who connected to the system..." (Emphasis added) (2013 MX Report, p. 1)

From the data provided in previous reports, the primary difference between new customers and existing customers is that new customers' consumption is less than existing customers' consumption (2011 MX Report, pp. 21-22). Forecasting new customer consumption based on existing customer usage estimates will result in inaccurate PI forecasts because new customers are expected to use less gas than existing customers.

It also appears that when the Companies forecast individual PIs, they are applying 10 percent and 15 percent efficiency credits to existing customer consumption levels (2013 MX Report, p. 12). If this is correct, it would act to further inflate consumption forecasts for new customers.

> "Customers who install both high efficiency gas fired space and water heating receive a credit of 10 percent of the volume otherwise used for both appliances." (2013 MX Report, p. 12)
>
> "Customers who install both high efficiency gas fired space and water heating appliances and attain a minimum of LEED^{TM} (Leadership in Energy and Environmental Design) General Certification receive a credit of 15 percent of the volume otherwise used for both." (2013 MX Report, p. 12)

Using existing customers' consumption estimates would tend to cause forecasts for new customers' net revenue and therefore forecasts for new customers' individual PIs to be overstated. Similarly, adding efficiency credits to existing customers' consumption estimates would tend to cause forecasts for new customers' net revenue and therefore forecasts for new customers' individual PIs to be further overstated. Overstating forecasts for new customers' individual PIs would tend to lead to overstating forecasts for new customers' aggregate PIs.

Therefore, to achieve actual individual PIs of at least 0.8 and actual aggregate PIs of at least 1.1, the forecast individual target PIs must be higher than 0.8 and the forecast target aggregate PIs must be higher than 1.1.

2. Security and Existing Ratepayer Protection

Section 12.6 of the Companies' General Terms and Conditions reads:

> "Contributions in Aid of Construction - If the economic test results indicate a Profitability Index of less than 0.8, the Main Extension may proceed provided that the shortfall in revenue is eliminated by contributions in aid of construction..." (2013 MX Report, Appendix B, Section 12.6, p. 12-2).

Section 12.10 of the Companies' General Terms and Conditions reads:

> "Security - In those situations where the financial viability of a Main Extension is uncertain, FortisBC Energy may require a security deposit in the form of cash or an equivalent form of security acceptable to FortisBC Energy." (2013 MX Report, Appendix B, Section 12.10, p. 12-3)

It is possible, had the Companies obtained sufficient contributions in aid of construction or other securities for main extensions where the actual costs were higher, attachments were fewer or later, and/or customer consumption was lower than forecasted, the potential exposure to existing ratepayers of an undue cost burden as a result of the expansion of the distribution system to attach new customers would have been mitigated.

Submissions Sought

Considering the 2013 MX Report results, including the five year results for the 2008 mains extension year, which appear to show a significant under-recovery of those mains extension costs, and the Commission's observations on the Companies' forecasting methods and security and ratepayer protection policies, the Commission seeks comment on the Companies' main extension performance and policies before deciding how to proceed. Specifically, the Commission requests the Companies and interested parties to provide comments to the Commission, on or before July 15, 2014, on the following:

1. What should be the scope and process for a more detailed review of the Companies' main extension performance and policies?

2. Comment on the Companies' security and ratepayer protection policies. What changes to these policies should be made, if any?

3. Comment on the Companies' forecasting performance. What changes to the Companies' forecasting methods should be made, if any?

4. Comment on the urgency of a review and what should the Companies and the Commission should do in the interim?

Yours truly,

Erica Hamilton

CG/cms

cc: Registered Interveners
FBC-PBR-2014-18-RI; FEI-PBR-2014-18-RI; TGVI-TGI-SyX&CPR-RI