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August 30, 2018

B.C. Sustainable Energy Association
c/o William J. Andrews, Barrister & Solicitor
1958 Parkside Lane
North Vancouver, B.C.
V7G 1X5

Attention: Mr. William J. Andrews

Dear Mr. Andrews:

Re: FortisBC Energy Inc. (FEI)

Project No. 1598946

2017 Long Term Gas Resource Plan (LTRGRP) (the Application)

FEI Information Request (IR) No. 1 to the B.C. Sustainable Energy Association and Sierra Club of British Columbia (BCSEA)

On December 14, 2017, FEI filed the Application referenced above. In accordance with the British Columbia Utilities Commission Order G-132-18 establishing a further Regulatory Timetable for the review of the Application, attached please find FEI IR No. 1 to BCSEA on the Evidence of James Grevatt, Energy Futures Group (Exhibit C2-7).

If further information is required, please contact Ken Ross at (604) 576-7343.

Sincerely,

FORTISBC ENERGY INC.

Original signed:

Diane Roy

Attachments

cc (email only): Commission Secretary
Registered Parties

DSM Infrastructure Deferral

1.0 Reference: DSM Infrastructure Deferral

Exhibit C2-7, pages 4-5

Empirical Examples

On pages 4 and 5 of Exhibit C2-7, Mr. Grevatt states:

FEI's perception that DSM demand measures are inherently too risky for planning purposes is not supported by Con Edison's successful experience in using DSM to defer infrastructure investments:

"…using DSM to defer projects bought time for demand uncertainty to resolve, leading to better capital decision making. Moreover, widespread policy and cultural shifts favoring energy efficiency may further defer some projects to the point where they are never needed…In fact, Con Edison has projected that in the absence of this program it would have installed up to $85 million in capacity extensions that may never be needed."

Mr. Grevatt thus describes one example of a utility (Con Edison) using DSM to defer electrical infrastructure investments.

1.1 Please confirm whether Con Edison has deferred any gas transmission infrastructure investments through gas DSM or Demand Response (DR) programs.

1.1.1 If yes, please provide details of the deferrals that have resulted from these programs.

1.2 In addition to Con Edison, please provide a list of gas utilities Mr. Grevatt is aware of in North America that have successfully deferred transmission infrastructure investment by reducing peak demand through DSM programs.

1.2.1 For each listed utility, please describe the details of the deferrals made and benefits accrued.

1.2.2 For each listed utility, please describe how similar and applicable the utility's operating and regulatory environment is to FEI's operations.

1.2.3 How many of the listed utilities, including Con Edison, are using Advanced Meter Infrastructure (AMI) with more granular hourly/daily measurement at customer premises to support their estimate of natural gas peak demand and infrastructure deferral?

1.2.4 Does Mr. Grevatt agree that AMI with more granular hourly/daily measurement at customer premises is important to validate the impacts of DSM programs on natural gas peak demand?

1.2.5 In the absence of granular data from AMI, how have the listed natural gas utilities validated the impacts of DSM on peak demand sufficiently to permit deferral of natural gas infrastructure? Please discuss any variances between planned benefits and benefits that were actually accrued.

2.0 Reference: DSM Infrastructure Deferral

Exhibit C2-7, pages 4, 8;

EB-2017-0127 / EB-2017-0128 – DSM Mid-Term Review Submission of Enbridge Gas Distribution Inc., Appendix D, pages 1, 3-5;

EB-2017-0127 / EB-2017-0128 – DSM Mid-Term Review Submission of Enbridge Gas Distribution Inc., Appendix E, pages 10, 11

Reliability Risk

On page 4 of Exhibit C2-7, Mr. Grevatt states:

Reliability risk can be addressed effectively. For example, a report produced by the Northeast Energy Efficiency Partnerships (NEEP) described Con Edison's use of binding contracts for demand reduction in the early 2000's:

For these early projects, the Company chose to contract out the acquisition of demand resources to energy service companies (ESCOs). To address reliability risks its contracts contained both "significant upfront security and downstream liquidated damage provisions", as well as rigorous measurement and verification requirements, including 100% pre- and post-installation inspections.

On page 8 of Exhibit C2-7, Mr. Grevatt cites the Ontario Energy Board (OEB), Decision and Order EB-2015-0049. As part of this order, the OEB approved a study scope proposed by Enbridge Gas Distribution, Inc. and Union Gas Limited (Enbridge & Union) whose purpose page 1 of Appendix D of EB-2017-0127 / EB-2017-0128 describes as follows:

[…] to evaluate the potential of DSM to avoid or defer (reduce) infrastructure costs through implementation of broad based or geo-targeted DSM to meet the forecasted hourly peak energy demand […]

EB-2017-0127 / EB-2017-0128 includes the executive summary of the study conducted by ICF Canada. On pages 3-5 of Appendix D, the executive summary's study highlights

that it appears possible some infrastructure investments may be reduced through the use of targeted DSM. However, numerous changes to energy policy and utility regulatory structure and utility planning processes would be required to facilitate the use of DSM to reduce infrastructure investments. The study concludes by stating:

[…] Overall, there is currently a fundamental disconnect between the limited risk acceptable to the Utilities in the facilities planning process and the lack of information on the ability of DSM to reliably reduce peak period demand that will need to be addressed before the Utilities would be able to rely on DSM to reduce infrastructure investment:

The lack of measured data on the actual impacts of DSM measures on peak period demand increases the risk (hence the cost) of using DSM to reduce infrastructure investments.

The lack of reliable program implementation cost data for geo-targeted DSM programs makes accurate cost comparisons between facilities and DSM unavailable.

The maximum market penetration rate for geo-targeted DSM programs limits the number of infrastructure projects where geo-targeted DSM programs should be considered as an alternative to infrastructure projects to low growth market areas.

As a result, additional research and additional hourly data by way of additional metered hourly reads (i.e. automated meter reading or infrastructure installation (AMI), as well as pilot studies to determine the cost effectiveness and implementation potential of DSM programs are necessary before the Gas Utilities would be able to rely on DSM to reduce new infrastructure investments as part of the standard facilities planning process […]

On pages 10 and 11 of Appendix E of EB-2017-0127 / EB-2017-0128, Enbridge and Union outline next steps for addressing the study findings and the OEB's order.

2.1 Please discuss your understanding of the measurement technology generally deployed and available in gas versus electric utilities and whether any differences are significant when considering the ability to measure impacts of DSM on peak demand?

2.2 Since Mr. Grevatt cites Ontario as an example to support his reasoning, does Mr. Grevatt agree that the Ontario case, including the associated ICF Canada study represents one of the better, if not the most, leading edge examples of DSM impacts on peak demand being explored in a gas utility?

2.2.1 Please confirm that the associated ICF Canada study represents the latest publicly available findings from the study scope approved by OEB Decision and Order EB-2015-00400049.

2.2.1.1 If the BCSEA-SCBC or Mr. Grevatt is aware of any more recent publicly available and relevant information in this proceeding, please provide it along with any source information indicating where on the public record this information can be found.

2.3 Please confirm that the mid-term review and study does not include a defined timeline for completing analysis that would result in providing the requisite data to support DSM as an alternative to natural gas infrastructure investment.

Reference Case DSM Savings Trajectory

3.0 Reference: Reference Case DSM Savings Trajectory

Exhibit C2-7, pages 9, 17

Integration of the BC CPR Analysis into the 2017 LTGRP

On page 9 of Exhibit C2-7, Mr. Grevatt states:

FEI relies on the Conservation Potential Review by Navigant Consulting Ltd, which rejects "Maximum Achievable Savings. […] The CPR provides estimates of energy savings potential in several categories, including Technical, Economic, and Achievable Market Potential, and does so under the Reference Case, Upper Bound, and Lower Bound scenarios.

The BC CPR includes a Market Potential under a single reference case only, whereas the 2017 LTGRP C&EM analysis provided a Reference Case, Upper Bound, and Lower Bound scenario, and the 2017 LTGRP C&EM section includes a sensitivity analysis which directionally demonstrates outcomes from varying incentive levels from the values assumed in the BC CPR.

On page 17 of Exhibit C2-7, Mr. Grevatt concludes that:

[…]The Reference Case savings in the LTGRP are based in the BC CPR's Market Potential Forecast, which is very likely to significantly underestimate the savings that FEI could be expected to achieve through programs that are designed to maximize savings. Analysis in the CPR of the "Maximum Achievable" savings potential would provide useful information for the BCUC to consider in its determinations regarding the DSM Expenditure Schedules that FEI has filed and will file in the coming years. Absent a fully fleshed out picture of the available savings it is unlikely that FEI will propose savings targets that will maximize the benefits to ratepayers.

3.1 Please identify by way of a page reference the BC CPR passage that explicitly rejects maximum achievable potential.

3.2 Please explain BCSEA-SCBC's view as to what, if any, provision in section 44.1 of the Utilities Commission Act requires FEI to provide analysis of "Maximum Achievable" savings as referenced in the above passage.

4.0 Reference: Reference Case DSM Savings Trajectory

Exhibit C2-7, pages 10, 11, 13

Definition of Optimized Program Design

On page 10 of Exhibit C2-7, Mr. Grevatt states:

All energy efficiency potential studies, including the BC CPR Market Potential Forecast, include numerous assumptions. Many of these assumptions materially impact the estimates of potential and may not reflect best practices for pursuing all cost effective energy savings. […] Even though this framing implies that the Market Potential forecast represents all cost effective savings, it clearly does not. Further, it is equally true and important to note that actual C&EM programs that are designed to maximize the amount of cost effective DSM savings captured may produce significantly more savings than is suggested by the Market Potential Forecast.

On page 11 of Exhibit C2-7, Mr. Grevatt states:

[…] developing program outreach and messaging so as to maximize savings, coupled with an easy and effective participation process, can lead to increased savings by increasing customers' willingness to adopt high efficiency measures. However, such a delivery/incentive scenario is not presented in the LTGRP.

On page 13 of Exhibit C2-7, Mr Grevatt states:

When a conservation potential study underestimates the amount of cost effective savings that are available, either by failing to appropriately quantify certain measures, i.e., omitting opportunities outright, or by assuming non-optimized program designs [emphasis added] that are calibrated to past performance, the record of a proceeding may be insufficient to support a well-informed decision.

4.1 Please provide a list of objective criteria for determining, before program deployment, whether program design is optimized.

4.2 Please describe the media, key messages and processes for outreach and messaging that Mr. Grevatt feels would maximize savings.

4.2.1 What is the approximate cost to produce this level of outreach and messaging?

4.3 Please provide a list of objective criteria for determining, before program deployment, whether a program provides an "easy and effective participation process".

5.0 Reference: Reference Case DSM Savings Trajectory

Exhibit C2-7, pages 11-12

Prevalence and Achievement of Maximum Achievable Potential in Conservation Potential Studies

On page 11 of Exhibit C2-7, Mr. Grevatt states:

[…] unlike the BC CPR, many potential studies include an assessment of maximum achievable savings, which is generally understood to represent an upper bound to the amount of savings that programs that are designed with the intention of capturing all cost effective savings will achieve with high incentives and wide-reaching marketing and outreach campaigns.

Mr. Grevatt further provides the Assessment of Iowa's Energy Efficiency Potential as an example of such a practice.

5.1 How many North American jurisdictions prepare long-term (i.e. time horizon of ten years or more) conservation potential studies?

5.1.1 Please list the subset of these jurisdictions that include assessments of maximum achievable savings in their long-term conservation potential studies and persistently achieve such maximum achievable savings across their entire DSM portfolios in their program actuals?

5.1.2 Please list the subset of these jurisdictions that use individually optimized delivery and marketing mechanisms for each of their identified energy conservation measures as one of the inputs into maximum achievable savings?

5.1.3 On average, what incentive levels as a proportion of measure incremental cost and what marketing/outreach budget per expected DSM participant do these studies use to develop their maximum achievable potential?

5.2 Please describe the key design features that, prior to program deployment, define a "wide-reaching marketing and outreach campaign" versus an ordinary marketing and outreach campaign.

6.0 Reference: Reference Case DSM Savings Trajectory

Exhibit C2-7, pages 12 and 13 & Appendix B;

Testimony to Colorado Public Utilities Commission

On page 13 of Exhibit C2-7, Mr. Grevatt states:

In its final decision, the Colorado PUC rejected PSCo's proposed reduced savings goals based on PSCo's potential study, and declined to approve a non-unanimous settlement proposal of 400 GWh/year annual savings.

6.1 Please confirm that Mr. Grevatt's expert testimony to the Colorado Public Utilities Commission does not directly discuss natural gas energy savings potential.

6.2 Please confirm that Mr. Grevatt's expert testimony to the Colorado Public Utilities Commission does not include any information on how Colorado's Demand Side Management regulatory framework compares to British Columbia's framework.

7.0 Reference: Reference Case DSM Savings Trajectory

Exhibit C2-7, pages 15-16

2017 ACEEE State Energy Efficiency Scorecard

Mr. Grevatt states:

Reproduced below for convenience is Table 11 from ACEEE's State Energy Efficiency Scorecard, showing that for 2016 there were 14 U.S. states that achieved a greater percentage of natural gas savings than the 0.52% savings as a percent of sales that FEI expects to achieve in 2018.

Table 11, which Mr. Grevatt reproduced for convenience, displays 54 jurisdictions.

7.1 Please confirm that FEI's estimated 0.52% savings as a percent of sales falls within the top 30 percent of the 54 jurisdictions displayed in Table 11.

7.2 Please confirm that the 2017 ACEEE State Scorecard which is the basis for the natural gas conservation information in the United States does not provide data or information on the cost effectiveness of the natural gas savings reported.

7.3 Please confirm that the 2017 ACEEE State Scorecard which is the basis for the natural gas conservation information in the United States does not provide data or information on the space heating minimum energy performance standards in the jurisdictions of the reported natural gas savings.