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April 9, 2021

Sent via email/eFile

FEI - UPDATED DSM EXPENDITURES 2021 TO 2022 EXHIBIT A-3

Ms. Diane Roy
Vice President, Regulatory Affairs
FortisBC Energy Inc.
16705 Fraser Highway
Surrey, BC V4N 0E8
gas.regulatory.affairs@fortisbc.com

Re: FortisBC Energy Inc. – Application for Updated Demand Side Management Expenditures for the period covering from 2021 to 2022 – Project No. 1599197 – Information Request No. 1

Dear Ms. Roy:

Further to your March 19, 2021 filing of the above-noted application, enclosed please find British Columbia Utilities Commission Information Request No. 1. In accordance with the regulatory timetable, please file your responses on or before **Wednesday, April 21, 2021**.

Sincerely,

Original signed by:

Patrick Wruck
Commission Secretary

/dg
Enclosure



FortisBC Energy Inc.

Application for Updated Demand Side Management Expenditures for the period covering from 2021 to 2022

INFORMATION REQUEST NO. 1 TO FORTISBC ENERGY INC.

**1.0 Reference: Exhibit B-1, p. 4
Ratepayer Impact**

On page 4 of the FortisBC Energy Inc. (FEI) Application for Updated Demand Side Management (DSM) Expenditures for the period covering from 2021 to 2022 (Application), with respect to the Innovative Technologies Program Area, FEI states:

There was also concern expressed that, while more study is needed, increased program expenditures for deep retrofits and heat pumps could impact lower income customers and renters through rates, and that efforts need to be maintained to ensure fair access to benefits of DSM for these groups.

1.1 Please provide an estimated rate impact of the incremental expenditure request for 1) the Innovative Technology Program Area, and 2) the overall DSM portfolio in 2022.

1.1.1 Please clarify whether FEI considers deep retrofits and/or heat pumps may be available to low income customers and/or renters in future, should these programs prove to be viable.

**2.0 Reference: Exhibit B-1, p. 6
Portfolio Expenditures**

In Table 4-1 of the Application, FEI outlines the 2021 and 2022 Program Area expenditures (plan vs revised forecast).

2.1 Please clarify whether Table 4-1 includes any unspent amounts from previous years which have been rolled over to 2021 for any of the Program Areas. If so, please provide the amounts in this table.

2.2 Please confirm, or explain otherwise, that based on the revised forecast for 2021 and 2022, FEI does not anticipate any funding transfers greater than 25 percent of the Program Area budgets for Program Areas other than Commercial, Industrial and Innovative Technologies.

**3.0 Reference: Exhibit B-1, pp. 9–10
Commercial Program Area**

On page 9 of the Application, FEI states:

The main factors driving the lower than originally forecast commercial expenditures and savings in 2021 and 2022 are as follows:

- FEI has experienced lower than expected participation in the Prescriptive Program furnace replacement and kitchen incentive offers due to lower market

demand. This trend is expected to continue in 2021 and 2022;

...

- FEI has experienced lower than expected participation in the Rental Apartment Efficiency Program due to restricted on-site activities at some buildings due to COVID-19 and lower than anticipated demand from small property management companies. This trend is expected to continue in 2021 and 2022.

Table 5-1 shows the 2021-2022 Commercial Program Area expenditures by program. For the Prescriptive Program, non-incentive expenditures in the revised forecast are \$800,000 in 2021 and \$700,000 in 2022, compared to \$3,046,000 and \$3,653,000 respectively in the DSM Plan.

- 3.1 Please explain FEI's understanding of the reasons for the lower market demand in the Prescriptive Program.
- 3.2 Please provide further explanation of why FEI considers the trends observed in the Prescriptive Program and Rental Apartment Efficiency Program are expected to continue in 2021 and 2022.
- 3.3 Please explain the significant decrease in non-incentive spending in the Prescriptive Program in the revised forecast.
- 3.4 Please discuss if FEI considers there are any actions that could address the lower than expected demand for the Prescriptive Program and Rental Apartment Efficiency Program, and whether such actions would involve an increase in non-incentive expenditures.

4.0 Reference: Exhibit B-1, p. 16 Gas Fired Heat Pumps

On page 16 of the Application, FEI states:

According to research conducted by Posterity Group (an energy efficiency engineering consultant organization), the energy savings potential of gas heat pumps across FEI's service territory is approximately 500,000 GJ per year attributed to equipment with efficiencies ranging from a 1.07 to 1.4 coefficient of performance (COP). FEI pilot trial data has also shown that gas heat pumps can maintain efficiencies greater than 100 percent throughout the year, even in cold temperatures. These efficiencies are particularly promising given the aspirational goals of the Pan-Canadian Framework on Clean Growth and Climate Change that require that all space and water heating technologies perform with efficiencies greater than 100 percent by 2035. Although electric resistance heating is 100 percent energy efficient, natural gas fired appliances with this performance level are either not commercially available today or have a low adoption rate.

- 4.1 Please clarify the difference in scope between the pilot trial data FEI has already obtained, and the proposed pilot project in 2021-2022 for which FEI is seeking additional funding. Please further explain what additional outcomes or learnings FEI anticipates from the 2021-2022 pilot.
- 4.2 Please clarify whether the statement "gas heat pumps can maintain efficiencies greater than 100 percent throughout the year" means the average efficiency over the year is greater than 100 percent, or the heat pumps maintain an efficiency greater than 100 percent at all times in the year.
 - 4.2.1 Please discuss whether the cold temperatures tested are comparable to the winter conditions observed in FEI's service area.

- 4.2.2 Please discuss whether there are any operational limitations of gas heat pumps in extreme cold weather.
- 4.3 Please outline the typical efficiency range of existing natural gas fired appliances.
- 4.4 Please clarify whether the intent of the pilot program is to replace/ supplement existing natural gas fired appliances, and/or existing electric heating systems.

**5.0 Reference: Exhibit B-1, pp. 16–17
Deep Energy Retrofits**

On page 16 of the Application, FEI states:

There has been an increased interest beyond what was originally anticipated from local governments and other stakeholders in pursuing deep retrofits that include a combination of window, envelope and mechanical upgrades to dramatically reduce GHG emissions within the existing building stock.

On page 17, FEI states:

A deep energy retrofit or ‘deep retrofit’ of a home or building is a retrofit in which the envelope and mechanical systems are improved such that there is a reduction in overall energy and GHG performance by at least 30 percent or more...

A deep retrofit approach encourages a comprehensive “home-as-a-system” or “building-as-a-system” approach, potentially leading to more comprehensive energy and GHG savings. From a program perspective, a Deep Energy Retrofit approach may allow FEI to achieve deeper engagement and higher levels of cost-effective savings...

FEI is requesting increased funding to support pilot-scale deep retrofits across residential and commercial rate customers to identify whether it is feasible and cost-effective to move a broader initiative forward. The pilot program will determine the practicality of a deep retrofit approach in BC.

- 5.1 Please discuss the significance of a 30 percent reduction in energy, or the rationale for this threshold to be classed as a “deep” retrofit.
- 5.2 Please discuss whether FEI’s current DSM portfolio includes programs containing any or all of the following offerings: window upgrades, envelope upgrades, and mechanical upgrades.
 - 5.2.1 If yes, please discuss why FEI requires a pilot project to understand the viability of a program which packages such offerings together.
- 5.3 Please explain FEI’s current understanding of window upgrades, envelope upgrades, and mechanical upgrades on an individual basis, with respect to: 1) equipment performance/ energy savings 2) cost-effectiveness, and 3) customer acceptance.
 - 5.3.1 With respect to 1) to 3) above, please describe how FEI anticipates a deep energy retrofit program may compare to a series of individual DSM offerings.
 - 5.3.1.1 Please discuss any uncertainties in this regard, and how FEI anticipates the pilot program will address such uncertainties.
- 5.4 Please explain further why the deep retrofit program is considered “innovative.”