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September 24, 2020

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. 1599112

System Extension Fund (SEF) Pilot Program Compliance Filing and Application for Approval of the SEF on a Permanent Basis (the Application)

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

On June 29, 2020, FEI filed the Application referenced above. In accordance with the British Columbia Utilities Commission Order G-198-20 setting out the Regulatory Timetable for the review of the Application, FEI respectfully submits the attached response to BCSEA IR No. 1. The IR responses reflect the evidentiary update filed concurrently with these responses.

If further information is required, please contact the Jason Wolfe, Director, Energy Solutions at 604-592-7516.

Sincerely,

FORTISBC ENERGY INC.

Original signed:

Diane Roy

Attachments

cc (email only): Commission Secretary
Registered Parties

1.0 Topic: Impact of SEF on New Connections

Reference: Exhibit B-1, p.2

"Since inception of the SEF pilot program, 541 customers have received funding from the SEF, allowing them to benefit from being able to connect to the natural gas system when they otherwise might not have been able to do so." [p.2]

1.1 Does FEI have any insight into how many of the new customers who received funding from the SEF would not have connected to the natural gas system in the absence of financial assistance from the SEF? If so, please provide the information.

Response:

FEI does not have any insight into how many new customers who received funding from the SEF would have connected in absence of the program.

FEI notes that the central purpose of the SEF is to promote equity among customers connecting to the natural gas system by reducing the cost of the CIAC payable by some homeowners who are located farther from existing mains and wish to connect.

1.2 Can FEI tell from historical data whether the annual number of homeowners outside of Vancouver who obtained new service has increased following introduction of the SEF? If so, please provide the information. If not, please explain why this information is not available.

Response:

In general, FEI observed a steady increasing trend in the number of residential customer additions commencing around 2010 through to 2018. For example, new residential customer additions outside of the Vancouver area grew from approximately 5,500 annually in 2012 to a maximum of approximately 12,700 per year in 2018. There are many factors that contribute to customer growth including economic conditions and related housing starts, and the efforts of the FEI Energy Solutions team working with customers and developers. It is not possible to speculate as to whether, or to what extent, the SEF may have been a factor influencing the number of homeowners outside of Vancouver who decided to obtain service as a result of the SEF program.

2.0 Topic: Rate Impact Analysis

Reference: Exhibit A2-1, FEI Rate Impact Analysis Report, Table 2, pdf p. 9; Exhibit A2-1, Appendix A, pdf p. 21

On p.3 (pdf p.21) of Appendix A, Rate Impact Analysis Results, of the June 2020 FEI Rate Impact Analysis Report (Exhibit A2-1), FEI states:

> "The results of the 2017-2019 RIA are shown in Table 3. It show [sic] a moderate average cost per GJ increase of 0.73 percent or 3 cents per GJ for existing customers, from the system extension activities during this three year period."

Table 2, FEI Rate Impact Analysis Comparison, in the June 2020 FEI Rate Impact Analysis Report (Exhibit A2-1) is reproduced for convenience:

Table 2: FEI Rate Impact Analysis Comparison

	2008-2014 7 Years	2015-2019 5 Years	2017-2019 3 Years
Average Cost per GJ with Growth	$ 4.16	$ 4.17	$ 4.17
Average Cost per GJ without Growth	$ 4.22	$ 4.21	$ 4.14
Rate Impact per GJ	$ (0.06)	$ (0.04)	$ 0.03
Percentage of Rate Impact	-1.4%	-1.1%	0.7%

2.1 Please confirm, or otherwise explain, that Table 2 provides the results of the System Extension Rate Impact Analysis method approved by the Commission in 2016.

Response:

Confirmed.

2.2 Please confirm, or otherwise explain, that the results shown in Table 2 are for customers of all types and not merely customers who received funding from the SEF.

Response:

Confirmed.

2.3 Please provide a rate impact analysis for the customers who received funding under the SEF in 2017-2019.

Response:

The following table provides the results for those customers added under the SEF program. Even with the additional funds paid as a result of the SEF program, adding the SEF customers provided overall savings to existing customers. Note that the analysis does not include potential future customer additions to the SEF main extensions during the 5-10 year MX addition window, which could result in further savings to existing customers.

	RIA Results for 2017-2019 Growth Related to Customers Under SEF Program
Average Cost per GJ with Growth	$4.1682
Average Cost per GJ without Growth	$4.1678
Rate Impact per GJ	-$0.0004
Percentage of Rate Impact	-0.01%
Average Savings per Customer	8 cents per customer per year

3.0 Topic: System Impact of SEF

Reference: Exhibit B-1, Exhibit B-1, pp.2-3;

In the Application, FEI states: "Not only have these new customers [who received funding from the SEF] benefited from their natural gas service, all of FEI's natural gas customers have also benefited from the increased volume throughput from these new customers, <u>making the overall system more economic and efficient for all customers</u>." [Exhibit B-1, pp.2-3, underline added]

3.1 Please comment on whether the underlined statement is contradicted by the results shown in Table 2.

<u>Response:</u>

The underlined statement is supported by the results in Table 2, for two reasons.

First, the results in Table 2 reflect the impact of *all* of the changes approved per BCUC Order G-147-16, to FEI's system extension policies, not just the effect of the SEF. In addition to the creation of the SEF, the order approved an annual update to the service line cost allowance and changes to the parameters of FEI's Main Extension Test as follows: the use of a longer discounted cash flow term; the use of a longer customer addition term in certain circumstances; a sliding scale overhead rate; and the discontinuation of applying energy efficiency credits. The results shown in Table 2, therefore, do not provide any insight into the specific effect of the SEF on the economic performance of the natural gas system, but rather describe the effect of all the approved changes.

Second, as indicated in FEI's Rate Impact Analysis (RIA) Report, the above noted changes were approved in the context of an earlier RIA that demonstrated that existing customers were benefiting significantly from new customers added as a result of FEI's main extension test and customer connection polices at the time. The changes were, therefore, intended to achieve a more equitable balance between the interests of new and existing customers. As FEI notes in the RIA Report[1], the findings in Table 2 are as expected at this particular point in time of the economic life of the assets, given that all the new MX Test parameters were in effect, but not all of the expected load has materialized. The RIA looks at a relatively short portion of the economic life of the assets and is thus a conservative analysis. It does not include all the load and customer attachments likely to occur over the useful life of the assets, nor in all the potential attachments to the particular portion of main over its life. The results of the updated RIA in Table 2 show that the approved system extension policy changes are working as intended. New customers now face reduced barriers to access natural gas, while existing customers are not being exposed to upward rate pressures as a result.

[1] Rate Impact Analysis Report, June 29, 2020, p. 5.

4.0 Topic: Fuel Switching

Reference: BCUC Decision and Order G-147-16, page 51.

In Decision and Order G-147-16, the Commission directed FEI to include information regarding the SEF in its annual MX [mains extension] Report including "Switches from higher greenhouse gas sources to natural gas (e.g. propane, oil, diesel, gasoline etc…)."

4.1 Please provide information on "Switches from higher greenhouse gas sources to natural gas (e.g. propane, oil, diesel, gasoline etc…)" for the SEF for 2017 to 2019 and total.

Response:

Please refer to the response for BCUC IR1 2.1.

4.2 Please provide a chart detailing the expected GHG reductions or increases that the SEF program produced during the 2017-2019 period, and for the period 2020 to 2040, taking into account conversions of space heating to natural gas from electricity, cord wood, wood pellets, oil, diesel and gasoline (for all purposes, including space heating and all other appliances).

Response:

In FEI's 2015 System Extension Application Decision and Order G-147-16, FEI was directed to track the number of customers who switched to natural gas from higher GHG emitting fuel, and to include this information in its annual MX report to the BCUC. FEI has done so and can confirm that there are customers who switched from higher GHG emitting fuels as discussed in the response to BCUC IR1 2.1. However, this information is not, in itself, sufficient to provide a reliable response to the question. The net effect on each SEF participant's GHG emissions is highly dependent upon additional factors such as:

1. The specific fuel type mix in their homes prior to, and after conversion;
2. The number and type of appliances in their homes prior to, and after conversion; and
3. Their behaviour towards energy, and their fuel consumption prior to, and after conversion.

FEI does not have access to this type of customer-specific information, which would be required to provide a calculation of the expected GHG emission changes that the SEF program produced during the 2017 to 2019 period. As a result, providing a forecast without this type of information would be highly speculative and unreliable.

4.3 Please provide a chart detailing the expected GHG reductions or increases that the SEF program will produce if all SEF eligible participants were to participate in the SEF program, if the Commission approves this application, for the period 2020 to 2040, taking into account conversions from electricity, cord wood, wood pellets, oil, gasoline and diesel (for all purposes, including space heating and all other appliances).

Response:

Please refer to the response to BCSEA IR1 4.2. FEI does not have sufficient insight into various additional factors which affect each SEF participant's GHG emissions to be able to provide the requested information.

5.0 Topic: Fuel Switching

Reference: FortisBC website: https://www.fortisbc.com/rebates/home/connect-to-natural-gas-space-water-heating-rebates.

FEI provides incentive rebates for customers who replace wood stove, oil or propane space heating system with an eligible ENERGY STAR® high-efficiency natural gas furnace, boiler or combination heating and hot water system (https://www.fortisbc.com/rebates/home/connect-to-natural-gas-space-water-heating-rebates.)

5.1 Is a customer allowed to receive both funding under the SEF and a rebate under the Connect to Natural Gas program?

Response:

Under certain circumstances, customers who participate in the SEF are also eligible to receive a Connect to Gas Rebate. More specifically, Connect to Gas Rebates are only available to customers who meet all three of the following criteria:

1. Residential customers with an existing home. New construction is not eligible;
2. Customers who install qualifying appliances as listed on fortisbc.com/connecttogas; and
3. Customers must apply within 60 days of installation.

In addition, customers must also meet one or both of the following two criteria:

4. Customers who convert a primary home heating system, such as a furnace or boiler, from either wood or a higher GHG emissions fuel type such as oil or propane, to natural gas. Converting from electricity is not eligible; and/or
5. Customers who install a new direct-vent natural gas wall furnace that meets BC code requirement.

The Connect to Gas program assists participants with the upfront cost of converting their appliances in the home from higher GHGi emission fuel to natural gas. The SEF serves a different purpose. It provides funding to assist with the high cost of a main extension to promote equitable access to the natural gas system.

5.2 If SEF participants were permitted to receive a rebate under the Connect to Natural Gas program, how many SEF participants out of the total 541 participants in 2017-2019 received rebates for replacing:

a) a wood stove;

b) an oil space heating system; and,

c) a propane space heating system.

Response:

Out of the total of 544 SEF participants from 2017 through 2019, 20 also received rebates from the Connect to Gas program for replacing a wood stove, an oil space heating system or a propane space heating system. The table below provides the breakdown of replacements by fuel type.

	Number of Participants
Oil	16
Wood	4
Propane	0
Total	20

Please refer to the response to BCUC IR1 2.1 for additional information pertaining to customers who switch from higher GHG emitting fuel types.

6.0 Topic: Regional Conversion Customers

Reference: 2015 System Extension Proceeding, Exhibit B-3, FEI Response to BCUC IR 18.6.

In the 2015 System Extension Proceeding, FEI addressed SEF "conversion customers" in its response to Commission IR 18.6 as follows:

> "18.6 Are there specific regions that FEI expects will use the SEF more so than others? For example, would new customers in certain areas of Vancouver Island be expected to benefit more than customers in the Lower Mainland, Fraser Valley or Interior from the SEF? Please explain.
>
> **Response:**
>
> The Company anticipates that all regions of the province will benefit from the SEF. Specifically, conversion customers (i.e. those switching from one fuel to another in a pre-existing home) are most likely to access the SEF, if eligibility is met. The greatest conversion potential is on Vancouver Island although opportunities exist throughout the rest of the province as well." [pdf p.92]

6.1 Please provide a breakdown of SEF participants by "conversion customer" and non-conversion customer and total, by region and total, for 2017 to 2019 and total.

Response:

The following table provides a summary of SEF participants by "conversion" customer and "non-conversion" customer for 2017 to 2019:

Year	Conversion	Non-Conversion	Grand Total
2017	173	44	217
2018	125	42	167
2019	137	23	160
Grand Total	**435**	**109**	**544**

The following table provides a summary of SEF participants for 2017 to 2019 by three regions:

- Lower Mainland, Whistler, and Sunshine Coast;
- Interior, including any FEI service areas east of Hope; and
- Vancouver Island.

Years	Lower Mainland, Whistler, and Sunshine Coast	Interior	Vancouver Island	Grand Total
2017	114	56	47	217
2018	28	84	55	167
2019	11	61	88	160
Grand Total	**153**	**201**	**190**	**544**

The numbers in the table above provide information pertaining to the customers who actually accepted the SEF offer and proceeded with their main extensions. Among these customers, approximately 35 percent were from Vancouver Island. It is notable that when all homeowners in FEI's dataset are considered, including all those who participated in the SEF as well as those who declined the SEF offer, approximately 60 percent are from Vancouver Island.

6.2 What proportion of SEF conversion customers were converting from a higher GHG fuel to natural gas?

Response:

Please refer to the response to BCUC IR1 2.1.

7.0 Topic: SEF Participation Rates

Reference: Exhibit B-1, p. 6 and p. 7.

"Since inception of the SEF pilot program, eligible homeowners have accessed between 27 to 39 percent of the $1 million funding. In 2019, after three full years in market, the SEF only saw 32 percent of its funding assistance accessed. At the same time, there have been many potential participants who expressed interest in participating but ultimately declined the SEF offer, primarily because their CIACs remained prohibitively high even after applying the SEF funding available to them." [page 6]

[…]

"As can be seen by Table 3, if FEI's proposed amendment to the SEF to allow up to 95 percent funding contribution to the CIAC were approved, the average homeowner's portion to the connection cost would be reduced to $336 in less dense areas service areas [sic] of the province, bringing it in much closer alignment with homeowners [sic] costs in the dense Vancouver area. This amendment would address the primary concern as expressed by eligible SEF pilot program participants who declined to proceed with their main extension and connection to FEI's natural gas system." [page 7]

7.1 Please clarify whether the SEF eligible participants who did not participate in SEF did not do so because their current fuel or energy source and/or appliances were a less expensive option than if they connected to the FEI natural gas network and installed natural gas appliances even with the SEF incentive.

Response:

Please refer to the responses to the BCUC IR1 6 series, for a discussion on why SEF eligible participants did not participate.

While operating costs for energy are generally a consideration when a homeowner is evaluating energy options, there are many other factors they may consider. In addition, homeowners likely consider their own financial circumstances; dwelling type; how they use energy and their typical energy consumption patterns; current energy source; whether upgrading or replacing appliances and equipment is necessary; types of appliances they are considering; ongoing operating costs of the energy system; and whether they are required to pay connection costs. All of these and other factors will have an impact on the total costs the customer must consider.

7.2 If available, please provide data as to the energy or fuel source that the SEF eligible participants who did not participate in SEF continue to use instead of natural gas.

Response:

FEI does not have access to this type of information.

7.3 Does FEI collect data regarding SEF eligible participants' ability to afford to pay CIACs, with and without SEF funding under the pilot program and if 95% funding is approved by the Commission, such as data regarding the property values and/or incomes of potentially available participants? If so, please provide that data, including a regional breakdown.

Response:

FEI does not collect personal data related to eligible participants' ability to afford to pay a CIAC, property values and/or incomes. SEF program eligibility requirements are not based on an individual's financial circumstances.

8.0 Topic: Proposed 95% of CIAC Maximum

Reference: Exhibit B-1, p.6; Table 2: SEF Pilot Program Results 2017-2019, p.5

"FEI is requesting approval to amend the funding rules for the SEF framework to allow the SEF to fund a maximum of 95 percent of the CIAC, as opposed to the current limit of 50 percent, with no change to the per customer funding cap of $10,000."

8.1 With reference to Table 2: SEF Pilot Program Results 2017-2019 [p.5], please provide a table showing how much SEF funding would have been provided if the maximum had been 95 percent of the CIAC and all eligible participants had participated.

Response:

Please refer to the response to CEC IR1 7.1.

8.2 If the Commission approves continuation of the SEF at a maximum of 95 percent of the CIAC, what will FEI do in the event that the SEF is oversubscribed in a given year?

Response:

In the event that the SEF funding requests received in a given year reach the $1 million maximum available funding, FEI will close the program to new participants until January 1 of the following year.

9.0 Topic: SEF Financial Results

Reference: Exhibit B-1

9.1 Please provide a financial table for the SEF showing the grants and operating expenses for 2017 to 2019 and total.

Response:

This response addresses BCSEA IR1 9.1 and 9.2.

Table 2 in the Application included details of the SEF funding provided by year for the 2017 to 2019 pilot program and has been simplified in the table below.

Year	Current Number of SEF Participants Funded	Current Amount of SEF Funded ($)
2017	217	265,950
2018	167	392,716
2019	160	321,537
Total	544	980,203

There are no incremental operating expenses for administering the SEF program as it is done by existing FEI employees who are already accounted for as part of O&M. These employees support all requests for gas service irrespective of whether any SEF is available or applicable.

9.2 If operating costs are not including in the SEF financial reports, please provide a separate estimate.

Response:

Please refer to the response to BCSEA IR1 9.1.