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April 18, 2023

Commercial Energy Consumers Association of British Columbia
c/o Owen Bird Law Corporation
P.O. Box 49130, Three Bentall Centre
2900 – 595 Burrard Street
Vancouver, BC V7X 1J5

Attention: Christopher P. Weafer

Dear Christopher P. Weafer:

Re: FortisBC Energy Inc. (FEI)
Revised Renewable Gas Program Application – Stage 2 (Application)
Response to Commercial Energy Consumers Association of British Columbia (CEC) Information Request (IR) No. 1 on FEI's Rebuttal Evidence to City of Vancouver (CoV)

On December 17, 2021, FEI filed the Application referenced above. In accordance with the amended regulatory timetable established in Exhibit A-47, FEI respectfully submits the attached response to CEC IR No. 1 on FEI's Rebuttal Evidence to CoV.

If further information is required, please contact the undersigned.

Sincerely,

FORTISBC ENERGY INC.

Original signed:

Sarah Walsh

Attachments

cc (email only): Commission Secretary
Registered Parties

FortisBC Energy Inc. (FEI or the Company) Revised Renewable Gas Program Application – Stage 2 (Application)	Submission Date: April 18, 2023
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1 1. **Reference: Exhibit B-65, Rebuttal to CoV et al, A4**

Q4: The permanence of the Renewable Gas Connections service is a theme in the evidence of the Municipal Interveners. For example, the City of Victoria states in response to BCSEA-CoVictoria IR1 2.1 (Exhibit C9-5) that “FEI has not provided evidence that the rate can be made permanent and not subject to change by later Commission panels”. As another example, on page 5 of its evidence (Exhibit C9-3), the District of Saanich indicates that “RNG was not to be considered as a carbon pollution standards compliance pathway...based in concerns about the permanence, and ability to verify permanence, of the supply of renewable energy to a building.” How does FEI respond?

A4: FEI's Renewable Gas Connections service is designed to be permanently attached to the building. This is set out in FEI's proposed terms and conditions of service, as discussed in FEI's response to BCUC IR1 2.1 (Exhibit B-17).

Even though the BCUC is not bound by precedent, FEI's proposal provides a high level of certainty that the Renewable Gas Connections service would indeed be permanent for the life of the building. Please refer to FEI's response to CoR IR1 3.2 for a discussion of why it is highly unlikely that a future BCUC panel would ever change the permanent nature of

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the service. This is due to, amongst other factors, the reliance that would be placed on the permanent nature of the service by customers. If there were a change to the service in general in the future, existing Renewable Gas Connections customers at that time would need to be grandfathered to preserve their 100 percent Renewable Gas service.

In fact, the evidence of the Municipal Interveners underscores FEI's point. For example, as set out in their evidence, if the permanent nature of the service to a Renewable Gas Connections customer were to be changed, the building owner/ occupant and the City would face "cost risks and/or possible liability regarding non-compliance with GHG emission reduction commitments or future regulations"¹ and "long-term failure to meet GHG emissions reduction targets."² These are factors that any future BCUC panel would need to consider before changing the permanent nature of the service to a particular customer. Given that the BCUC must regulate in the public interest and must take into account factors such as the reliance placed on the permanent nature of the service, FEI cannot foresee circumstances in which it would be just and reasonable for the BCUC to change the permanent nature of the service provided to Renewable Gas Connections customers.

For this reason, the municipalities have entirely mischaracterized the issue. By focusing on the fact that the BCUC is not bound by precedent, they have incorrectly identified the BCUC as a source of uncertainty to the permanence of the service. However, the more accurate point of view is that the terms of the Renewable Gas Connections service may not be changed without BCUC approval. As such, the BCUC will be an objective regulatory guardian and steward of the permanence of the Renewable Gas Connections service that will protect and preserve the public interest.

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4 1.1 Please confirm that rates for all services are subject to change as costs and
5 benefits change over time.

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7 **Response:**

8 Confirmed.

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1.2 Please confirm that a change by the Commission regarding the permanence of the service would likely only occur if there were very few customers.

Response:

It is difficult to speculate on the circumstances which could trigger a review of the permanence of the service. FEI does not expect the BCUC to amend the permanence of the Renewable Gas Connections service regardless of the number of customers taking service.

1.3 Please explain whether or not the Commission could act independently of FEI to discontinue a service (i.e., without an application by FEI).

Response:

While the BCUC could initiate a proceeding to discontinue the proposed Renewable Gas Connections service without an application by FEI, FEI would have the right to fully participate in that proceeding and the BCUC would need take into consideration the reliance placed on the permanent nature of the service in making any determination.

1.4 Please provide any instances that FEI is aware of in which the Commission has acted independently of the utility to discontinue a service.

Response:

FEI has no knowledge of any such instances.

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1 2. **Reference: Exhibit B-65, Rebuttal CoV A5**

Q5: Another theme of the evidence of the Municipal Interveners is the need for a long-term “guarantee” of permanence. For example, in the response to BCSEA-CoR IR1 3.5 (Exhibit C26-12), the City of Richmond indicates that it would be amendable to using 100 percent RNG for new building if “the City could be satisfied that the ongoing use of RNG could be guaranteed over the long term”. Similarly, on page 5 of its evidence (Exhibit C26-8), the District of Saanich states, “if a system chosen today cannot be guaranteed to meet GHG emissions reduction standards in the long run, this risks long-term failure to meet GHG emissions reduction targets.” How does FEI respond?

A5: The municipalities have set up a false standard of a “guarantee over the long term” that is not possible for any distributed energy system to meet. Every energy system is subject to change in the long run. Electrical equipment could be replaced by gas equipment at some time in the future and vice versa. Further, the carbon intensity of electricity supply changes over time, as can the carbon intensity of the content of gas pipelines through the introduction of RNG and hydrogen. Moreover, bylaws, regulations and legislation

governing GHG emission targets and energy supply requirements are all subject to change due to changes in the priorities of governments, voter sentiment, technological developments and other circumstances. In this context, any “guarantee” of permanence is always a matter of degree only. For the reasons set out above, FEI’s proposed Renewable Gas Connections service provides a level of certainty and permanence of emissions reductions as high or greater than that of the provision of low emission electricity.

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3 2.1 Please confirm that, as of today, there are differing views as to the environmental
4 costs associated with hydroelectricity.

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6 **Response:**

7 Confirmed.

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1 **3. Reference: Exhibit B-65, Rebuttal to Cov A7 and A6**

- 1 **Q7: Can conventional natural gas be used under the opt-in Zero Carbon Step Code?**
- 1 **A7:** As shown in Figure 1 above, the opt-in Zero Carbon Step Code includes four emission levels (EL). EL-1 is a measure-only level, which means that the GHGI and the total GHGs are calculated and the values are reported. Conventional natural gas could be used for this level. The other three levels (EL-2, EL-3, and EL-4) are comprised of GHGI limits which cannot be exceeded. For these levels, if only conventional natural gas were to be used in the building's energy systems, the CO₂ emissions would exceed the GHGI limits.

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9.37.1.3. Compliance Requirements

1) Buildings conforming to the requirements of any of GHG Emission Levels EL-1 to EL-4 shall be designed and constructed to conform to one of the GHG emission compliance options in Table 9.37.1.3.

**Table 9.37.1.3.
Greenhouse Gas Emissions**
Forming part of Sentence 9.37.1.3.(1)

GHG Emission Level	GHG Emission Compliance Options			
	Maximum GHG Emissions by House, Expressed in kg CO ₂ /year	Maximum GHG Emissions by House ¹		Reduction of GHG Emissions by Energy Source of Building Systems ²
		Maximum GHGI of the House, Expressed in kgCO ₂ /m ² /year	Maximum GHG Emissions by House, Expressed in kgCO ₂ /year	
EL-1	measure only	measure only		N/A
EL-2	1050	6.0	2400	Energy sources supplying heating systems have an emissions factor ≤ 0.011 kgCO ₂ /kWh
EL-3	440	2.5	800	Energy sources supplying heating and service water heating systems have an emissions factor ≤ 0.011 kgCO ₂ /kWh
EL-4	265	1.5	500	Energy sources supplying all building systems, including equipment and appliances, have an emissions factor ≤ 0.011 kgCO ₂ /kWh

Notes to Table 9.37.1.3:

⁽¹⁾ Compliance for this option is demonstrated by meeting both the GHGI and the GHG emission requirements for each house.
⁽²⁾ Redundant or back-up equipment for the systems and equipment listed in Sentence 9.36.5.4 (1), is permitted to be excluded, provided it is equipped with controls and is not required to meet the space-conditioning load of the house.

2) The emissions factors associated with the use of energy utilities consumed by the *building's* systems shall be:
 a) 0.011 kg CO₂/kWh for electricity, and
 b) 0.180 kg CO₂/kWh for natural gas.

9.37.1.4. Greenhouse Gas Emissions Compliance Calculations

1) Calculations for greenhouse gas emissions compliance shall include:
 a) the energy sources for *building* systems described in Sentence 9.36.6.2.(1) using the emissions factors established in Sentence 9.37.1.3.(2), and
 b) modeled in accordance with Article 9.36.6.4.

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4 3.1 Please explain how the 'design and construction' takes account of differences in
 5 individual use patterns, if at all.

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7 **Response:**

8 In the context of residential construction, the individual energy use patterns of the occupants are
 9 not taken into consideration as part of the building's design and/or construction. This contrasts

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1 with commercial construction, where the design (including energy modeling) and construction will
2 consider how the building will be used at a high level (e.g., that the building will be primarily used
3 for commercial office space, etc.). However, like residential construction, individual use patterns
4 are not considered.

5 FEI notes that energy use behaviours are often considered after construction and once the
6 building has been occupied in order to determine where energy use can be optimized.

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10 3.2 Please provide the supporting calculations showing that if only conventional
11 natural gas were used, the CO₂ emissions would exceed the GHGI limits.
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13 **Response:**

14 Please refer to the response to CEC IR1 3.3 Rebuttal CoV.
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18 3.3 What proportion of RNG would need to displace conventional natural gas in order
19 to comply with the GHGI limits?
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21 **Response:**

22 While FEI does not have specific modelling of RNG blends for the recently adopted opt-in Zero
23 Carbon Step Code, in preparing the Application, FEI modeled the RNG blend required to meet
24 various GHGI limits. In particular, Table A-8 in Appendix A to the Application shows the GHGI
25 levels with conventional natural gas and the estimated Renewable Gas percentage required to
26 meet the Step Code and GHGI targets of 3kg CO₂e/m² and 1kg CO₂e/m² for a sample of
27 residential homes.

28 In preparing this analysis, FEI took a sample of 201 participants in FEI's New Homes Program
29 and assumed these homes: (1) were required to meet a GHGI target in addition to the Step Code
30 level they achieved; and (2) had both gas space and water heating.¹ The last four columns in
31 Table A-8 show how the percent of Renewable Gas required to meet the GHGI target of either a
32 target of 3kg CO₂e/m²/year or 1kg CO₂e/m²/year would vary. For example, in this sample of
33 homes, the blend of Renewable Gas can range from between 86 percent to 100 percent in order
34 to achieve a 1kg CO₂e/m²/year level. This variability makes it extremely difficult to establish the
35 precise percentage of Renewable Gas required to meet a given local government regulation at

¹ Please refer to Table A-8 of Appendix A to the Application for all supporting assumptions.



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1 the design stage. Therefore, providing a service with 100 percent RNG ensures that FEI meets
2 local regulations and provides assurance to builders at the project planning stage.

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1 **4. Reference: Exhibit B-65, Rebuttal to CoV, A13**

Second, the Renewable Gas Connections service will consume *less* of customers' disposable income. The important point that is missing in the argument of the City of Vancouver and City of Richmond is that FEI will be acquiring RNG as part of its efforts to meet provincial GHG reduction targets and that all customers will bear the costs of these efforts, **with or without the Renewable Gas Connections service**. However, by preserving a gas service for new residential construction, all FEI customers will benefit from higher demand and lower rates compared to an alternative where FEI was not permitted to serve new residential construction customers⁵. Preserving a role for gas service will provide an option for low-income customers that cannot afford costly equipment changes. Further, by supporting a Diversified Energy Future, the Renewable Gas Connections service will help support an overall lower cost approach to reducing GHG emissions in the Province. Therefore, contrary to the Cities of Vancouver and Richmond, the Renewable Gas Connections service will leave customers, including low-income customers, better positioned to shoulder the costs of emission reduction requirements.

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3 4.1 Please confirm that a Diversified Energy Future also provides important security
4 benefits to businesses and households versus a non-diversified alternative, such
5 as complete electrification (i.e., during an electrical failure, natural gas heating and
6 cooking can still be operated).

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8 **Response:**

9 Confirmed. A Diversified Energy Future is more resilient than a non-diversified alternative such
10 as complete electrification. For example, there are a number of natural gas appliances that can
11 still be operated if there is no grid electricity, including but not limited to:

- 12 • Natural gas cooktops;
- 13 • Fireplaces that have a pilot light;
- 14 • Many commercial boilers, either without electricity altogether or with limited battery back-
15 up;
- 16 • On demand gas water heaters can be operated with a simple battery back-up;
- 17 • Most furnaces require electricity for ignition and fans but there are options for “black start”
18 furnaces that produce electricity sufficient to run the fans; and
- 19 • Natural gas back-up generators are used in both residential and commercial applications
20 to provide power when the grid electricity system fails. These systems can be configured
21 to meet some or all of a building’s electrical needs.

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