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September 12, 2022

Residential Consumer Intervener Association
c/o Midgard Consulting Inc.
Suite 828 – 1130 W Pender Street
Vancouver, B.C.
V6E 4A4

Attention: Mr. Peter Helland, Director

Dear Mr. Helland:

Re: FortisBC Energy Inc. (FEI)

Revised Renewable Gas Program Application – Stage 2 (Application)

Response to the Residential Consumer Intervener Association (RCIA) Information Request (IR) No. 2

On December 17, 2021, FEI filed the Application referenced above. In accordance with the amended regulatory timetable established in British Columbia Utilities Commission Order G-165-22A for review of the Application, FEI respectfully submits the attached response to RCIA IR No. 2.

If further information is required, please contact the undersigned.

Sincerely,

FORTISBC ENERGY INC.

Original signed:

Diane Roy

Attachments

cc (email only): Commission Secretary
Registered Parties

APPLICATION SECTION 2: PROGRAM HISTORY AND EVALUATION

37.0 Reference: Exhibit B-30, FEI Response to RCIA IR 1, IR 1.1

At the above noted location FEI states:

"In particular, the willingness of participants to pay for RNG appears to be more related to the price differential between conventional natural gas and RNG, as opposed to the cost of RNG in isolation."

37.1 Please provide an estimate of the price elasticity of demand for the differential price between conventional natural gas and RNG.

Response:

FEI presented evidence in the 2015 BERC Rate Methodology Application[1] regarding the elasticity of demand in response to the differential price between conventional natural gas and RNG. In that application and proceeding, FEI demonstrated that when the price premium for RNG exceeded approximately $7/GJ, new customer additions fell markedly.

In this Application, FEI has provided the results of customer surveys that it undertook to assist in gauging customers' willingness to pay for Renewable Gas at different price premiums versus conventional natural gas (see Appendix B of the Application). As FEI notes in Section 5.8 of the Application, while survey results of this kind provide some directional insight into customers' thinking on price, there can be a gap between customers' responses to a survey and the act of enrolling for a service that will cost them more. The survey results nonetheless confirm that customers are less willing to purchase Renewable Gas as the price premium increases.

FEI does not have further data or evidence that would provide a clearer view regarding the elasticity of demand in response to differential pricing. In particular, inherent data limitations make it impractical to perform a robust analysis that could serve as the basis for Renewable Gas price-setting. A price elasticity study requires demand and price data reflecting market forces with consumer demand being driven by the pricing of competitive options. This type of market data is not currently available for RNG as FEI's existing service offering is only voluntary. Due to the various BERC rate setting mechanisms, the price for RNG service has not been allowed to rise and fall with demand, and therefore has never been based on market forces.

[1] FEI Application for Approval of Biomethane Energy Recovery Charge (BERC) Rate Methodology, August 28, 2015.

38.0 Reference: Exhibit B-30, FEI Response to RCIA IR 1, IR 1.2

At the above noted location FEI states:

"As the Renewable Gas production market grows in line with demand, FEI expects that technological advances will lower production costs."

38.1 Please provide a forecast of Renewable Gas production market growth and production costs.

<u>Response:</u>

The scope of this proceeding only encompasses evaluating the short term (5 years) forecast supply of RNG. However, the BC Renewable and Low-Carbon Potential Study, discussed in the response to BCUC IR1 1.1, provides an in-depth evaluation of the market potential and costs of renewable and low-carbon gases in BC to 2030 and 2050 under different scenarios.

39.0 Reference: Exhibit B-30, FEI Response to RCIA IR 1, IR 2.3

At the above noted location FEI provides the following table:

Table 1: Natural Gas Short Run and Long Run Elasticity Values

	Short Run (SR) Values			Long Run (LR) Values		
	SR Min	SR Reference Case	SR Max	LR Min	LR Reference Case	LR Max
Residential	-0.030	-0.278	-0.670	-0.100	-0.380	-0.880
Commercial	-0.055	-0.205	-0.530	-0.125	-0.350	-0.990
Industrial	-0.067	-0.709	-3.680	-0.142	-0.700	-0.700

39.1 Could this table or a similar one (produced by a similar research exercise) be used for renewable gas? Please discuss why or why not.

Response:

As RNG is a new product with relatively few producers and consumers, it is not possible to use the values in the table to perform an elasticity exercise for RNG. Please also refer to the response to RCIA IR2 37.1.

40.0 Reference: Exhibit B-30, FEI Response to RCIA IR 1, IR 3.1

At the above noted location FEI provided the following table:

Table 1: Renewable Gas Acquisition Cost

		2015	2016	2017	2018	2019	2020	2021
Direct RG Acqusition /Production Cost	$000	1,922	2,985	3,389	5,630	5,361	6,392	19,266
Direct RG Administration	$000	185	696	771	1,314	470	1,776	2,261
Total	$000	2,107	3,681	4,160	6,944	5,831	8,167	21,526
Purchase Volume	TJ	132.6	133.7	153.8	323.1	315.2	306.0	790.0
$/GJ	$/GJ	15.89	27.53	27.05	21.49	18.50	26.69	27.25

40.1 Has FEI studied/examined the volatility of the $/GJ price of renewable gas indicated in the above table? Please discuss FEI's views on the reasons for this volatility.

Response:

The volatility of the $/GJ price of RNG identified in the above table is primarily a function of the wide range of costs associated with a relatively small volume of RNG and small number of projects over the period shown in the table. FEI expects such volatility to reduce in the future as more projects begin providing RNG and supply volumes increase.

40.2 Does FEI expect the trend of volatile renewable gas pricing to continue into the future? Please discuss.

Response:

Please refer to the response to RCIA IR2 40.1.

At the above noted location FEI states:

"Conversely, FEI believes that customers who feel strongly about taking action on climate change, or those with firm and committed GHG emission reduction targets, are more likely to seek alternative forms of low carbon intensity energy, instead of reverting to conventional natural gas, as the price of Renewable Gas increases relative to the alternatives."

40.3 Given the qualification restrictions of the proposed RNG program (e.g., renewable gas available at new meters), please comment on the socio-economic barriers that these restrictions will place upon people wishing to either reduce energy costs and/or minimize GHG emissions.

Response:

Contrary to the premise of the question, FEI considers the revised Renewable Gas Program to be comprehensive in that there are three different services by which sales customers can receive RNG. The Renewable Gas Connections service (which FEI clarifies is for new service lines, not new meters) is only one aspect of the Program. The revised Renewable Gas Program also includes a continuation of FEI's voluntary offering, through which customers may elect to receive various blends of RNG depending on their desire and economic capability for reducing GHG emissions. The third method of delivering RNG to customers is by blending RNG for all sales customers through the Renewable Gas Blend service.

FEI has designed these three concurrent and complementary services under the Renewable Gas Program so that all procured RNG by FEI can be delivered to FEI's customers without concern for stranded supply. From a socio-economic perspective, customers would have their current voluntary option where customers can manage their costs by selecting the blend of RNG that meets their needs. The Renewable Gas Connections and Renewable Gas Blend services allow FEI to deliver the RNG supplies it is enabled under the GGRR to acquire, while also allowing it to meet provincial and local government mandates, without concern as to whether the Voluntary Renewable Gas service will ultimately drive enough demand to reach supply-demand balance.

In contrast, the absence of the proposed Renewable Gas Program, including the Renewable Gas Connections service, would result in significant socio-economic barriers. In particular, customers would only have one energy option (electricity) to meet their respective energy needs in response to local and provincial GHG emissions reduction policies. The loss of energy choice would also require expensive equipment replacement, downstream modifications to hot air or water distribution and higher operating expenses, and the process of changing energy sources could potentially be adversely impacted by continued supply chain challenges and a lack of skilled trades capable or available to perform the retrofitting to customers' homes and businesses. These higher costs can have a more adverse impact on lower income customers, as well as the tenants of rental properties.

41.0 Reference: Exhibit B-30, FEI Response to RCIA IR 1, IR 4.1

At the above noted location FEI states:

"FEI notes though that because RNG is the same molecule as natural gas, RNG can be stored and operate in the same way as conventional natural gas."

41.1 What (if anything) limits the quantity of RNG that can be stored by FEI?

Response:

RNG, like conventional natural gas, can be stored within any storage facility available to FEI. As further explained below, the only limitation to the quantity of RNG that can be stored by FEI is access to suitable storage facilities.

From a physical perspective, RNG (biomethane) and conventional natural gas are fungible methane-based molecules of energy. FEI procures its supply of RNG and conventional natural gas under specific supply contracts. Although FEI accounts for the quantities and costs associated with the procurement of RNG and conventional natural gas separately, FEI does not track the specific movement of the separately sourced energy upon taking custody of the molecules, as the RNG and conventional natural gas are comingled in the system and fungible. RNG inventory is not physically traced to specific pipelines or storage facilities, and therefore, all of FEI's available owned or leased storage assets may be used for storage of RNG.

41.2 Could FEI potentially use 100% of its storage for RNG storage?

Response:

Yes, please also refer to the response to RCIA IR2 41.1.

APPLICATION SECTION 3: EVOLUTION OF CLIMATE CHANGE POLICY

42.0 Reference: Exhibit B-30, FEI Response to RCIA IR 1, IR 6.1

At the above noted location FEI states:

"FEI is not aware of currently enforced GHGi limits for the replacement of old gas fired equipment."

42.1 Please confirm that it is FEI's understanding and expectation that residences with existing natural gas fired appliances will not be required to comply with new GHGi limits imposed by municipalities (i.e., the right to replace conventional natural gas appliances will be "grandfathered")?

a) If FEI has any reason to believe that this is not true, please discuss.

Response:

FEI is not aware of any current existing requirements imposed by local governments which impose a GHGi limit on residences with existing natural gas fired appliances. FEI is also not aware of any discussion that those residences that have gas fired equipment will be grandfathered.

Please refer to the response to BCUC IR2 48.3 and BCOAPO IR2 19.4 for a discussion of the City of Vancouver's proposals.

43.0 Reference: Exhibit B-30, FEI Response to RCIA IR 1, IR 9.2

At the above noted location FEI states:

"There are a variety of factors that may stop a local government from seeking to ban FEI's infrastructure, including public interest considerations, not having the support of its constituents, and jurisdictional issues."

43.1 Is FEI aware of any legal or statutory reasons that would prevent municipalities from banning FEI infrastructure? Please discuss.

Response:

It is FEI's legal position that there are both legal and statutory reasons that would prevent local governments from banning FEI infrastructure. The details of FEI's legal position in this regard are legally privileged and confidential.

44.0 Reference: Exhibit B-30, FEI Response to RCIA IR 1, IR 10.1

At the above noted location FEI states:

"A renewable gas program that assured permanence of GHG emission reductions for the life of the building, at a cost equivalent to other building archetypes, would provide equal access to marketplace for the homebuilder or homeowner."

44.1 What are the legal or technical barriers to FEI providing assurances of permanence?

Response:

There are no technical barriers to assuring the permanence of GHG emission reductions, as demonstrated by FEI's proposed Renewable Gas Connections service. The only current legal barrier that would prevent FEI from providing the permanence of GHG emissions reductions through the proposed Renewable Gas Connections service would be a decision by the BCUC to not approve the proposal. Please also refer to the response to City of Richmond IR1 3.2.

45.0 Reference: Exhibit B-30, FEI Response to RCIA IR 1, IR 11.1

At the above noted location FEI states:

"FEI is not able to isolate "buildings only" and as a result the following table contains the aggregate residential and commercial demand percentages for each municipality/community."

45.1 What percentage of FEI total gas consumption is residential and what percentage is commercial?

<u>Response:</u>

In 2021, 25 percent of FEI's total consumption was commercial and 35 percent was residential.

APPLICATION SECTION 5: WHAT CUSTOMERS NEED FROM A RENEWABLE GAS PROGRAM

46.0 Reference: Exhibit B-30, FEI Response to RCIA IR 1, IR 16.1

At the above noted location FEI states:

"The cost of gas for Renewable Gas Connection customers should be averaged with existing customers as proposed by FEI, just as would be true for new and existing transmission and distribution costs of serving customers. In an evaluation of cost causation and cost apportionment under Bonbright principles, it is important to recognize that every customer was a new customer when they joined the system, and they were not charged the "new" costs for the energy commodity, delivery or administrative functions they were "causing" when initiating service. If this were the case, FEI's residential delivery rates would need to be adjusted to remove the "Service Line Cost Allowance" for new residential services, and new residential connections would be made to pay the full incremental cost of their delivery service."

46.1 Please confirm that this statement claims that: Even though customers are receiving differentiate products (i.e., Conventional Natural Gas versus Renewable Gas), the cost of gas for Renewable Gas Connection customers should be averaged with existing conventional natural gas customers as proposed by FEI, just as would be true for new and existing transmission and distribution costs of serving customers who both receive the same electricity commodity.

a) If not confirmed, please restate this statement to include specific reference to the commodity being provided to each of the different customers.

<u>Response:</u>

The following response is provided by Concentric.

Not confirmed. Renewable Gas Blend and Renewable Gas Connections customers are not receiving differentiated products. As explained in the response to BCUC IR1 13.2, Renewable Gas Connections customers will be served by the same system and physically receive the same blend of natural gas containing Renewable Gas as existing natural gas customers. As explained in the response to BCUC IR1 13.3.2, there are no delivery-related cost of service differences between the new residential customer eligible for Renewable Gas Connections service versus existing customers, nor are there any functional service differences with respect to the supply of natural gas. Under FEI's proposal, a newly connected customer will not functionally receive 100 percent Renewable Gas at their service point. Instead, FEI will alter its supply mix to account for the fact that its obligation to this new customer must be accounted for with 100 percent Renewable Gas, whereas its obligation for existing customers must be accounted for with a blended supply that is composed primarily of natural gas and a much lower proportion of Renewable Gas. The difference between these otherwise identical customers is solely a function of policy.

46.2 Please provide support for classifying two differentiated commodities as being the same with respect to determining "new" costs with reference to the Bonbright principles.

Response:

The following response is provided by Concentric.

Please refer to the response to RCIA IR2 46.1. As discussed in the responses to BCUC IR1 13.2 and 16.2, FEI's proposed Renewable Gas Connections service satisfies the Bonbright principles, including the fair apportionment of costs, avoidance of undue discrimination, and sending efficient price signals.

47.0 Reference: Exhibit B-30, FEI Response to RCIA IR 1, IR 17.1

At the above noted location FEI states:

"New construction is not itself a meter identification basis. In order to be eligible for the Renewable Gas Connections service there must be a new service and meter. This includes an existing building (not currently connected to the gas service) requesting a service line and meter, because they have undertaken building retrofits that mean they require gas. It may also be a new residential building that requires a new service line and meter. In each of these scenarios, the meter would be designated part of the Renewable Gas Connections service, rather than a "new construction" designation."

47.1 Please confirm that a building with an existing meter than undergoes major renovation cannot qualify as a Renewable Gas Connection.

a) If not confirmed, please describe how they qualify.

Response:

Please refer to the response to BCUC IR2 54.1.

48.0 Reference: Exhibit B-30, FEI Response to RCIA IR 1, IR 18.2

At the above noted location FEI states:

"Builders do not have a specific expectation of "cost of service"; rather, they are focused on a home's construction and equipment costs."

48.1 Please compare and contrast the construction and equipment costs of a typical natural gas fired home versus an electrically heated (space heating and water heating) home.

Response:

Please refer to the response to BCUC IR1 13.6.

APPLICATION SECTION 7: PROPOSED RENEWABLE GAS PROGRAM

49.0 Reference: Exhibit B-30, FEI Response to RCIA IR 1, IR 24.2

At the above noted location FEI states:

"Connections service does not cause this proposed service to warrant different ratemaking treatment from the existing residential sales service. Fundamentally, charging "new" customers a different rate from "existing" customers represents an unreasonable form of discrimination which creates "acquired rights" and wealth entitlements for customers served off of existing service lines, even when those customers may be "new" to the system as well."

49.1 Please confirm that under proposed RNG program, that FEI is proposing that all infrastructure other than the fuel is identical between RNG and conventional natural gas customers.

Response:

Confirmed. FEI's infrastructure is the same for RNG and conventional natural gas customers. For clarity, FEI's revised Renewable Gas Program continues to use a displacement energy model, reflecting the physical reality of gas delivery in British Columbia and North America more broadly. Please also refer to the responses to BCUC IR1 13.2, 16.2, 23.3, 29.2.1, and CEC IR1 33.5.

49.2 For RNG customers, please explain why a "differentiated commodity" (i.e. RNG) should have the same fuel price as conventional natural gas along, making reference to the Bonbright principles (i.e. to the specific Bonbright principle being cited).

Response:

The following response is provided by Concentric.

Please refer to the response to RCIA IR2 46.2.

50.0 Reference: Exhibit B-30, FEI Response to RCIA IR 1, IR 26.3

At the above noted location FEI states:

> "Renewable Gas customers are paying the full all-in cost of the Renewable Gas. FEI is proposing that, through the three offerings in this Application (i.e., the Renewable Gas Connections, Renewable Gas Blend and Voluntary Renewable Gas services), all costs are recovered from those customers receiving Renewable Gas. Renewable Gas costs are not recovered from customers who do not receive Renewable Gas."

50.1 Please confirm that Renewable Gas Connections are not paying their full all-in costs of the Renewable Gas, but rather collectively Renewable Gas Connections, Renewable Gas Blend and Voluntary Renewable Gas services are together paying the full all-in cost of the Renewable Gas.

a) If not confirmed, please explain how each of these three customers are individually, and standalone, paying for the full all-in cost of the Renewable Gas that they use.

Response:

Confirmed. Please refer to the responses to BCUC IR1 10.1 and RCIA IR2 40.3.

51.0 Reference: Exhibit B-30, FEI Response to RCIA IR 1, IR 27.1

At the above noted location FEI states:

"Please refer to Section 3.5 and Appendix A of the Application for evidence relating to how GHGi targets set in certain cities have limited customer choice of energy supply in new buildings. The lack of permanence in FEI's existing Renewable Gas Program offering, combined with GHGi targets that cannot be met with conventional natural gas, means that customers must select electricity as their source of energy."

51.1 Please explain why Fortis cannot create a standalone renewable gas product that has permanence.

<u>Response:</u>

FEI considers that its proposed Renewable Gas Connections service is a standalone Renewable Gas product with permanence. Please refer to the response to BCOAPO IR1 10.1 for a discussion of receipt by displacement.

52.0 Reference: Exhibit B-30, FEI Response to RCIA IR 1, IR 31.1

At the above noted location FEI states:

"As discussed in the responses to BCUC IR1 13.2 and 16.2, and RCIA IR1 16.1, FEI's proposal is consistent with long-standing ratemaking principles, including Bonbright, the BCUC's practices supporting average cost pricing, the NEB's policy regarding no acquired rights, and standard rate-setting approaches applied by the BCUC and throughout North America."

52.1 Please explain how having two different fuel commodities (1% RNG blend, and 100% RNG blend) meets the Bonbright principle of cost causation for input fuel cost when the two commodities are priced the same, but have materially different input fuel costs?

Response:

The following response is provided by Concentric.

Please refer to the responses to RCIA IR2 46.1 and 46.2.

53.0 Reference: Exhibit B-30, FEI Response to RCIA IR 1, IR 34.8

At the above noted location FEI states:

"Under the revised Renewable Gas Program proposed in the Application, there are no costs shifted to non- participants. All customers bearing a cost of Renewable Gas will receive Renewable Gas."

53.1 Please provide annual renewable gas fuel cost shifts between the different connection types within the renewable gas program.

Response:

Please refer to the response to the City of Richmond IR1 1.3.