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May 16, 2022

Force of Nature Alliance
North Vancouver, B.C.

Attention: Ms. Laurie Parkinson

Dear Ms. Parkinson:

Re: FortisBC Energy Inc. (FEI)

Revised Renewable Gas Program Application – Stage 2 (Application)

Response to the Force of Nature Alliance (Force of Nature) Information Request (IR) No. 1

On December 17, 2021, FEI filed the Application referenced above. In accordance with the amended regulatory timetable established in BCUC Order G-103-22, FEI respectfully submits the attached response to Force of Nature IR No. 1.

In other proceedings,[1] the BCUC has set out its expectations regarding the appropriate style and substance of IRs under Rules 13.01-13.02 of the *Rules and Practice and Procedure*. In particular, the BCUC stated:

> The BCUC reminds all interveners that the purpose of IRs is not to enable the author of the IR to introduce evidence. The purpose of IRs is to elicit relevant information on the evidentiary record or to clarify or test existing evidence to contribute to a better understanding by the BCUC of the relevant issues in the proceeding. Any statements that are included in the preamble to an IR should be restricted to providing context for a question relevant to the proceeding submitted by the party to whom the IR is directed.
>
> Finally, whereas letters of comment are intended to provide for any member of the public to contribute views, opinions, and impact or potential impact, with respect to a matter before the BCUC, IRs must not be letters of comment.

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[1] In the matter of the *FEI Application for a CPCN for the Advanced Metering Infrastructure Project,* in its letter dated September 28, 2021 (Ex. A-15).

Force of Nature has provided preambles to information requests that contain a significant amount of content with which FEI takes issue. In many instances, the manner in which Force of Nature has framed its information requests appears to attempt to provide intervener evidence, which is procedurally improper. A preamble to an information request is not evidence and, as affirmed by the BCUC, its only purpose is to provide context for why the intervener is asking the question.

FEI has responded to the information requests by focusing on the questions themselves, rather than parsing and rebutting each preamble. However, FEI wishes to be clear that the preambles contain inaccuracies and characterizations that FEI does not accept. As such, FEI's silence regarding the content of a preamble should not be interpreted as agreement.

FEI will object to any attempt by Force of Nature to rely on the content of preambles to its information requests in final argument.

Finally, for convenience and efficiency, FEI has occasionally provided an internet address for referenced reports instead of attaching lengthy documents to its IR responses. FEI intends for the referenced documents to form part of its IR responses and the evidentiary record in this proceeding.
If further information is required, please contact the undersigned.

Sincerely,

FORTISBC ENERGY INC.

Original signed:

Diane Roy

Attachments

cc (email only): Registered Parties

1. Delivery of "100% RNG" to new buildings is notional (Fortis's term). Fortis has only one piping system to buildings. New or old, all buildings will get the same Biomethane: fracked gas mix delivered to them. Currently, RNG supply is about 0.3% of total gas demand, but FortisBC hopes to increase that to around 1% by 2024, 4% by 2028 and 11% by 2032. Yet Fortis is proposing 100% RNG to new homes to BCUC.;

   a) How can Fortis justify telling customers that their new house will receive 100% RNG, when they will not receive anywhere near 100% RNG?

   b) How does this advertising by Fortis align with truth in advertising laws?

   c) How does Fortis justify confusing the public with what appear to me to be lies?

   d) Will Fortis in future be penalized for not delivering to their customers the 100% RNG they promised?

   e) Should Fortis customers who were already promised 100% RNG have received rebates?

Response:

Please refer to the response to BCOAPO IR1 10.1 where FEI explains the receipt by displacement energy delivery model which enables customers to choose and purchase various blends of Renewable Gas. Receipt by displacement is a common practice in both gas and electric energy delivery systems.

Please also refer to the response to CEC IR1 44.2 where FEI describes the mechanism through which those enrolled under the Renewable Gas Connections service will be designated as receiving 100 percent Renewable Gas.

Please also refer to Appendix D-2 where FEI has included a copy of the General Terms and Conditions for gas service and the agreement and obligation for FEI to provide service.

2. Who will independently audit the % of RNG that Fortis supplies and charges its ratepayers for?

   Isotope testing would determine what % natural gas in Fortis's pipelines is from deep underground (traditional natural gas), vs is recently produced (RNG). Fortis should be reporting independently gathered test results to its customers on a monthly basis, along with monthly billing.

   To avoid the serious accusation of false advertising, will BCUC require that Fortis to pays for independent monthly isotope testing, and reports these results monthly to its customers?

Response:

Please refer to the response to BC Hydro IR1 2.4.

3. Even if FortisBC does manage to secure an 11% RNG supply by 2032, that won't be anywhere near enough to meet CleanBC's building-sector target of 64% GHG emissions reduction by 2030;

   a) How will Fortis meet CleanBC's building-sector target with RNG? Please show the math.

   b) What happens if Fortis's % RNG targets are not met – will there be penalties to Fortis?

   c) If Fortis's RNG target is not met, what will be the effect on the rate rider charged to customers?

Response:

Please refer to Section 6 of the Application where FEI explains how it is forecasting sufficient Renewable Gas supply to meet provincial GHG emission reduction targets. Please also refer to the response to BCUC IR1 1.1 for a further discussion of the amount of Renewable Gas required to meet the GHG emissions cap on natural gas utilities set out in the CleanBC Roadmap and the response to BCUC IR1 2.1 for a discussion of the sufficiency of supply to meet that target.

FEI does not know if there could be penalties for not meeting the target as the provincial government has not provided the design details on the GHG emissions target for gas utilities. At this time, it is also not possible for FEI to foresee what effect there would be on charges to customers if FEI did not meet the target. However, FEI is confident that it will secure sufficient Renewable Gas supply to meet provincial targets.

Finally, FEI clarifies that the CleanBC building-sector target mid-point is 61 percent as opposed to 64 percent, as quoted in the preamble.

4. All of FortisBC's 900,000-plus residential ratepayers – but not new buildings - will pay for the increased costs of boosting RNG supply and attributing the notional supply of "100% biomethane" to new buildings. This cost transfer to all ratepayers will be involuntary;

   Why should ratepayers who didn't request any RNG be charged for RNG?

Response:

FEI disagrees with the premise of this question that existing customers and not new buildings (FEI assumes this is meant to refer to new customers) will pay for increasing Renewable Gas volumes in FEI's supply mix and that there will be a cost transfer. Please refer to the responses to BCUC IR1 10.1, 13.2 and 16.2.

5. RNG (Biomethane) costs much more ($20-$30 per Gigajoule (GJ)) than the current $4 /GJ for the fracked kind). That cost will be passed along to ratepayers – at least $160 annually for 11% RNG;

   Federal carbon tax will rise to $170/tonne by 2030, adding another roughly $8/GJ to the cost of gas service. The average BC residence consumes ~90GJ of gas annually and will pay an extra $720 annually for year-round fracked-gas service containing very little RNG in the gas, making non-fossil electrical energy a far more cost-effective heating option;

   Please justify the average Fortis ratepayer being charged $720 extra/year for RNG that they didn't ask for, and won't receive.

Response:

FEI does not accept the figures set out in the preamble.

Please refer to the response to BCUC IR1 10.1 which describes how the objectives of the Renewable Gas Program are aligned in being responsive to government policies and customer needs to reduce GHG emissions. Please also refer to the responses to BCUC IR1 13.2, 16.2 and 17.1.

6. By 2024, over 70% of Fortis' RNG supply is to be purchased from outside BC – from Iowa, Pennsylvania, Ontario and Alberta. Adding to the unreality of a notional "100% RNG" supply to all new buildings, this gas is to be "notionally" supplied to BC (gas pipelines flow gas West to East, not vice versa). Instead, this will be an accounting entry benefitting pipeline operators - not an actual movement of RNG to BC. Revenues and environmental benefits will accrue to external jurisdictions capturing the biomethane – not to BC.;

   To me, this is an offset program masquerading as a RNG program.

Why is Fortis asking to charge all customers for RNG that will never be delivered to BC, so customers will never receive the RNG? This sounds like fraud to me.

Response:

FEI disagrees with the characterizations in the preamble. As described in the responses to BCUC IR1 34.2 and BCOAPO IR1 10.1, the Renewable Gas that FEI acquires from locations other than BC are received in BC via displacement. The displacement model for energy delivery is not distinct to Renewable Gas, but is used for transacting acquisition of conventional natural gas and also electricity.

7. Who will audit RNG production in Iowa, Ontario, and Pennsylvania?

   How will BC customers know they are paying for RNG that was ever produced (even if it never arrives here)?

Response:

Please refer to the response to BC Hydro IR1 2.4.

8. Paying for expensive RNG produced outside of BC amounts to a large externally controlled import cost passed on to BC ratepayers. In 2010, the BC Government passed the Clean Energy Act, requiring BCHydro (but not privately-owned FortisBC) to source all of its electrical energy supply from within BC. Double standard?;

   How will CER regulate the import of RNG that never arrives in BC?

Response:

The requirement noted in the question that BC Hydro "source all of its electrical energy from within BC" is a requirement for planning purposes, but is not a requirement for operational purposes. Under Part 1, section 6 of the *Clean Energy Act*, BC Hydro is required to achieve self-sufficiency by holding the rights to an amount of electricity that meets the electricity supply obligations solely from electricity generating facilities within BC. In practice, however, BC Hydro (through Powerex) engages in significant electricity trade and uses imports from the United States and Alberta to meet over 10 percent of annual electricity demand.

The CER regulates the use of pipelines, energy development and trade (i.e., export and import activities) for the general Canadian public interest. The CER regulates the import of RNG into

Canada in the same manner that it regulates natural gas imports because the method FEI undertakes to acquire RNG supply is similar to acquiring conventional natural gas.

9. Fortis could be collecting RNG from more landfills in the Southern BC, RNG that BC customers would actually receive. Fortis says they will collect RNG from a landfill for a city of 20,000 or more. Squamish BC put out a bid for methane from the Squamish Landfill, and Fortis didn't respond. So to protect the climate, Squamish burns the methane instead.

   Why is Fortis avoiding collecting methane from local landfills that fulfill its size requirements, and instead asking to charge customers for RNG produced in Iowa etc that customers will never receive?

Response:

FEI is actively working with landfills in BC as sources of methane and continuously evaluates projects, balancing the location of supply with the associated cost, as these costs are ultimately borne by customers. FEI recently received approval from the BCUC in relation to two projects in BC: (1) investment in a project in Prince George at the Foothills Landfill; and (2) a supply contract for the Capital Regional District to provide biomethane to FEI from the Hartland Landfill.

While population size (and associated landfill size) is one factor in determining whether a landfill gas project is viable, it is not necessarily sufficient in and of itself. Other factors include: landfill gas collection rates; distance to a pipeline; system capacity; and other factors that may increase the cost of a project. In particular, projects in smaller communities may have a combination of factors making proposed projects uneconomical with the current GGRR price maximum. However, the size of a landfill is not always a barrier to development and FEI has been an advocate for, and pioneer of, smaller sized landfill projects in North America. This is a reality given the relatively low number of large landfills in BC. For example, FEI has worked with the Regional District of North Okanagan on a similar size landfill project, developing a business case for the project after receiving a government grant. In 2012, FEI also developed the second producing RNG project in the Province with the Regional District of North Okanagan in Salmon Arm.

Finally, for clarity, RNG from outside the Province is delivered to BC by displacement, in the same way as conventional natural gas, which is an efficient delivery mechanism. This is similar to the delivery of electricity in electricity markets across North America.

10. RNG is not the carbon-neutral gas Fortis claims it to be. RNG is the same molecule as biomethane, which is the same molecule as methane: CH4. So burning RNG (Biomethane) releases the same amount of carbon as burning methane.

    a) On what basis does Fortis claim RNG is carbon neutral?

    b) Is there an Environmental Assessment of the entire process of RNG production planned to review Fortis's claims of RNG being carbon neutral? If not, why not?

Response:

As FEI explained in Section 6.3.1.1 of the Application (page 76), the carbon neutrality of RNG is already accepted by the provincial government. FEI's acquisition of RNG is authorized under the GGRR and *Clean Energy Act.* Biomethane is also exempt from the carbon tax under the *Carbon Tax Act*, and RNG has been accepted as a low-carbon fuel under the BC-LCFS.

RNG captured from organic waste is a carbon-neutral fuel source because the combustion of RNG does not introduce any net carbon dioxide emissions to the atmosphere. Please refer to the response to CEC IR1 3.2, which elaborates on the carbon neutrality of RNG. Please also refer to the responses to the City of Richmond IR1 12 series, which discuss the emission factors of RNG.

11. The RNG that FortisBC plans to "notionally" import will be manufactured from industrial digestion of cattle-poop, wood-waste etc. This material would not produce methane if left to degrade naturally (aerobically). Methane and RNG (CH4) are 86 times worse for global warming (over a 20 year period which is when we are trying hard to reduce emissions) than is CO2. Making more methane than nature does is the opposite of the environmental need to reduce emissions by "keeping it in the ground". In addition, most natural gas pipelines move the gas through the pipeline via pneumatic valves that release a puff of natural gas when the valve functions. So piping natural gas = fugitive emissions (methane lost into the air).

    a) In 2019, the Federal Government, the BC government, and the 3 Metro North Shore municipalities that I keep an eye on declared a climate emergency. During a climate emergency, why should Fortis be allowed to fund production of new methane?

Response:

The methane that is used to produce RNG is not "new methane" but is methane that it is already in the carbon cycle and that would otherwise be flared or released into the atmosphere. Tools, such as GHGenius, which calculate the carbon intensity of an RNG supply source, account for

the impact of the fuel on the carbon cycle. If a project has a carbon intensity of less than zero, it is reducing carbon in the cycle.

To illustrate, FEI provides the following examples of different sources of RNG and how they do not contribute to the carbon cycle and in some cases further reduce the carbon cycle.

During the spring and fall, direct application of manure onto land is allowed in many areas. However, during other times of the year, manure may be stored in open pits or storage tanks. When stored in this way, anaerobic conditions develop and methane is produced. By switching these open manure storage vessels to covered anaerobic digestion systems, most of this methane is captured rather than being released into the atmosphere as it otherwise would.

Similarly, moving organic wastes from landfills (which have a methane leakage rate of ≥25 percent) to a dedicated anaerobic digester increases the overall capture of methane, and diversion of that methane from the atmosphere to displace conventional natural gas sources. By capturing this methane and injecting it into the gas system, FEI is putting this methane to a productive use.

b) Has Fortis included fugitive methane emissions in its statement that biomethane is carbon neutral?

Response:

Please refer to the response to the City of Richmond IR1 12.4 where FEI provides the life cycle emissions for RNG from source to burner tip, including production, processing, transport (including compression), storage (i.e., compression), fugitive emissions, operations and maintenance of the pipeline.

12. Several BC municipalities have recognized the need for urgent climate action and have augmented the BC Building code with local GHG intensity measures and low-carbon energy system (LCES) options. These stiffer regulations have incented new-home builders to install low-carbon space and water heating, replacing gas furnaces and hot water heaters. As FortisBC cannot meet these standards with its current supply of mostly-fracked fossil gas, it has chosen to fight them rather than change its product to be truly low-carbon energy;

a) Will Fortis suggest to developers that municipalities with GHGI intensity measures and/or low carbon energy systems (LCES) should accept RNG in their regulatory low carbon pathway?

Response:

FEI has designed the Renewable Gas Connections service to meet local government targets and GHGi intensity requirements for buildings. FEI believes that Renewable Gas is critical to meeting local and provincial emission reduction targets and will, therefore, work with government (including municipalities), customers and developers to ensure the proposed Renewable Gas Program and its associated role as part of a low carbon pathway are understood and incorporated into building designs and codes.

FEI has initiated a dialogue with many local governments regarding its proposed offerings, and has received a number of letters of support. Further, as described in Section 3.6.3 of the Application, many local governments have played a key role in partnering with FEI to increase the supply of Renewable Gas and, over the last few years, FEI has integrated increasing volumes of Renewable Gas into its system working with various local governments. Local governments have also partnered with FEI on several of their facility's upgrade projects, including several million dollars in conservation and energy efficiency incentives to local governments in the last three years.

b) At least 5 Southern BC municipalities are acting on Federal and BC climate emergency proclamations by actively working to reduce their carbon emissions via GHG intensity measures/and or low carbon pathways (LCES). What effect will Fortis's RNG proposal have on these municipalities' emissions?

Response:

FEI's proposals in the Application will provide another method of permanent emissions reduction for all customers. FEI outlines the potential effect of increased Renewable Gas quantities through its proposed Renewable Gas Blend service in Section 7.4.1.1 of the Application.

For example, the City of Vancouver currently consumes approximately 10 million GJ of gas annually. The addition of 1 percent Renewable Gas into the gas supply would displace approximately 100 thousand GJ of conventional natural gas and the associated emissions reduction. In aggregate, an emission reduction of this kind equates to 2,200 detached homes switching to zero emission heating, but without the need to change out equipment. Moreover, assuming all FEI sales customers consume approximately 140 million GJ a year, a one percent Renewable Gas Blend would mean 1.4 million GJ of conventional natural gas being displaced.

These emission reductions can occur rapidly, at scale, and with no required investment of time, effort or equipment upgrade on the part of customers. There is also no need for additional provincial or local government regulation at the building level, or for changes in infrastructure on the part of customers or FEI.

13. As part of its submission, FortisBC wants BCUC to allow it to rename biomethane to "Low-Carbon Gas" (LCG). As both fracked "natural" gas and RNG (Biomethane) are each 75% Carbon, this aspiration is a distortion of Orwellian proportions.

a) How can Fortis claim in truth that RNG is "low carbon" gas? RNG has exactly the same number of carbon atoms per mole or per BTU as natural gas. This is indisputable. Fortis must stop publically claiming that RNG is "low carbon".

Response:

Please refer to the response to Force of Nature IR1 10a.

b) Is there a "Cradle to Grave", i.e. a full systems (production to combustion) Environmental Assessment planned for RNG production to review Fortis's claim of RNG being "Low Carbon"? If not, why not?

Response:

A "cradle to grave" analyses is conducted for each supplier of RNG using GHGenius as a life cycle carbon intensity model. GHGenius is the prescribed life cycle analysis model from the provincial *Renewable and Low Carbon Fuel Requirements Regulation*.

Please also refer to the response to the City of Richmond IR1 12 series.

14. a) Who across BC is modelling, measuring and auditing fugitive emissions from landfills that Fortis collects RNG from, to be sure all the environmentally dangerous GHG methane is collected?

b) Will these measures be a required condition of operating an RNG facility?

Response:

Landfill emissions are regulated by the BC Ministry of Environment and Climate Change Strategy. FEI and host landfills meet, and will continue to meet, all emissions reporting requirements.