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May 26, 2021

British Columbia Utilities Commission  
Suite 410, 900 Howe Street  
Vancouver, B.C.  
V6Z 2N3

Attention: Mr. Patrick Wruck, Commission Secretary

Dear Mr. Wruck:

**Re: FortisBC Energy Inc. (FEI)**

**Section 71 of the *Utilities Commission Act* (UCA) and British Columbia Utilities Commission (BCUC) Rules for Natural Gas Energy Supply Contracts**

**Filing of a Biomethane Purchase Agreement (BPA) between FEI and SHELL NORTH AMERICA (CANADA) INC. (SHELL) (Application)**

**Response to the British Columbia Utilities Commission (BCUC) Information Request (IR) No. 1**

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On April 29, 2021, FEI filed the Application referenced above. In accordance with BCUC Order G-157-21 setting out the Regulatory Timetable for the review of the Application, FEI respectfully submits the attached response to BCUC IR No. 1.

If further information is required, please contact the undersigned.

Sincerely,

**FORTISBC ENERGY INC.**

***Original signed:***

Diane Roy

Attachments

cc (email only): Registered Parties

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## **A. LEGISLATIVE AND REGULATORY FRAMEWORK**

### **1.0 Reference: FOREWORD**

#### **Exhibit B-1, Footnote 1, p. 1**

#### **RNG and Biomethane**

On page 1 of the Biomethane Purchase Agreement [BPA] between FEI and Shell North America (Canada) Inc. pursuant to Section 71 of the Utilities Commission Act and BCUC Rules for Natural Gas Energy Supply Contracts (Application) FortisBC Energy Inc. (FEI) states:

RNG or Renewable Natural Gas is interchangeable with the term “biomethane” for this Application. In previous regulatory decisions, FEI and the BCUC have used biomethane and RNG, while the [Greenhouse Gas Reduction Regulation] GGRR uses the term renewable natural gas.

1.1 Please provide the statutory definition of “Renewable Natural Gas” in the following Jurisdictions:

1.1.1 British Columbia; and

1.1.2 The United States of America.

#### **Response:**

There is a definition of “biomethane” in the *Carbon Tax Act*, [SBC 2008] Chapter 40. Section 1 of the *Carbon Tax Act* states: “biomethane” means methane produced from biomass. This is consistent with part a. of FEI’s Additional Evidence regarding the definition of RNG. It is irrelevant if there are any such statutory definitions in the US as the terms in the SHELL BPA have the meaning given to them in the contract. FEI is purchasing the actual RNG molecules produced by the upstream seller’s facility; FEI is not purchasing conventional natural gas plus environmental attributes. Delivery of the purchased RNG is by displacement. Please refer to the additional evidence filed by FEI in conjunction with these IR responses for further discussion of the delivery process.

1.2 Please provide the statutory definition of “Biomethane” in the following Jurisdictions:

1.2.1 British Columbia; and

1.2.2 The United States of America.

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1    **Response:**

2    Please refer to the response to BCUC IR1 1.1.

3

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6           1.3    Please provide the statutory definition of “Environmental Attribute” in the  
7                   following Jurisdictions:

8                   1.3.1    British Columbia; and

9                   1.3.2    The United States of America.

10

11   **Response:**

12   Please refer to the response to BCUC IR1 1.1.

13

14

15

16           1.4    Please explain if the definition of RNG implies natural gas with an attached  
17                   environmental attribute.

18                   1.4.1    Please discuss whether the RNG/Biomethane retains its definition and  
19                           the associated environmental benefits if the environmental attribute is  
20                           separated from the natural gas.

21

22   **Response:**

23   Please refer to the response to BCUC IR1 1.1.

24

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**2.0 Reference: LEGISLATIVE AND REGULATORY FRAMEWORK**

**Exhibit B-1, Section 1.0, p. 2**

**GGRR Related to RNG**

On page 2 of the Application FEI provides the amendment to the GGRR:

On March 21, 2017, the LGIC issued OIC 161/2017 approving an amendment to the GGRR related to RNG as follows:

(3.7) A public utility's undertaking that is in the class defined in subsection

(3.8) is a prescribed undertaking for the purposes of section 18 of the Act.

(3.8) The public utility acquires renewable natural gas

(a) for which the public utility pays no more than \$30 per GJ [gigajoule], and

(b) that, subject to subsection (3.9), in a calendar year, does not exceed 5% of the total volume of natural gas provided by the public utility to its non-bypass customers in 2015.

2.1 Please explain why FEI believes that purchasing RNG and the associated environmental attributes from other jurisdictions (i.e. outside of British Columbia) satisfies the GGRR's direction to "acquire" RNG.

**Response:**

The meaning of "acquire" in the GGRR is broad. The meaning of "acquire" is set out in section 29 of the Interpretation Act. The Interpretation Act states that, in an enactment, "acquire" means "to obtain by any method and includes accept, receive, purchase, be vested with, lease, take possession, control or occupation of, and agree to do any of those things, but does not include expropriate."

The word "means" in the definition of "acquire" in the Interpretation Act signals that this is what is referred to as an exhaustive definition. That means it displaces any other meaning of "acquire" in ordinary usage. In other words, when interpreting the GGRR, one must use the definition of "acquire" in the Interpretation Act, not any other definition. The definition is extremely broad - essentially any method of obtaining a thing, including purchasing, except expropriation.

In the SHELL BPA, FEI is acquiring RNG within the meaning of the definition of "acquire" because FEI is purchasing the actual renewable natural gas produced by the upstream seller's facility. There is no requirement in the Clean Energy Act or GGRR that the RNG must be produced in B.C. or that the actual RNG molecules must be physically delivered onto FEI's

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distribution system or consumed in BC. Importing any such requirement into the GGRR would be an error of law.

In its Decision and Order G-122-19, pp. 10-11, the BCUC confirmed that “acquire” has a broad meaning:

The Panel does not disagree that the accepted principles of statutory interpretation require that “acquire” be given a fair, large and liberal interpretation to accomplish the purpose of the GGRR and the CEA.

However, before considering the purpose of this legislation, the Panel must first consider the meaning of the term “acquire” as it is commonly used. The *Interpretation Act* states that “acquire” means to obtain by any method and includes: “...accept, receive, purchase, be vested with, lease, take possession, control or occupation of, and agree to do any of those things, but does not include expropriate.”

As noted earlier, the commodity relinquished or sold to FEI by the COV is raw biogas in the form of LFG, not RNG. RNG is only extractable following an additional upgrading process which entails initial capital expenditures and operating costs related to the Facilities over the life of the contractual arrangement, all of which must be taken into account in determining the overall cost of the RNG.

We turn then to the Cambridge Dictionary, which defines “acquire” as:

to obtain or begin to have something

Similarly, “obtain” is defined as:

to get something, especially by asking for it, buying it, working for it, *or producing it from something else*

**Given the accepted principles of statutory interpretation and these broad definitions, the Panel is satisfied that, when considered together, the process of purchasing and taking possession of raw landfill gas from the COV and upgrading it to RNG satisfies the meaning of “acquires renewable natural gas” in section 2(3.8) of the GGRR. [Emphasis in original, footnotes omitted.]**

Furthermore, the BCUC has previously considered the meaning of acquire in the context of an out-of-Province purchase of RNG and concluded that such a purchase satisfies the GGRR:

The Panel first considers whether FEI’s proposed purchase of RNG from the Projects satisfies the section 2(3.8) of the GGRR and that FEI has demonstrated it is acquiring RNG as opposed to some other form of commodity.

The Panel turns to Decision and Order G-122-19, and section 29 of the Interpretation Act, which defines the word “acquire” as:

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1 ...to obtain by any method and includes accept, receive,  
2 purchase, be vested with, lease, take possession, control or  
3 occupation of, and agree to do any of those things, but does not  
4 include expropriate;

5 The Panel notes that under the Tidal Energy BPAs, FEI has entered into an  
6 agreement whereby there is a contractual obligation for Tidal Energy to sell and  
7 for FEI to purchase RNG and agrees with FEI's submission that under the Tidal  
8 Energy BPAs, FEI contractually receives ownership of RNG in a manner  
9 consistent with the definition of acquire in section 29 of the Interpretation Act.

10 The Panel then considers whether the commodity acquired from Tidal Energy is  
11 "renewable natural gas" in the context of the GGRR. Under the Tidal Energy  
12 BPAs, the Panel notes that raw landfill gas and biogas is produced from the  
13 Projects. However, after an upgrading process at a third-party facility, RNG as a  
14 finished commodity is produced and it is RNG as a commodity that is purchased  
15 by FEI.

16 **Considering the above, the Panel finds that under the Tidal Energy BPAs,**  
17 **FEI will acquire renewable natural gas in a manner consistent with section**  
18 **2(3.7) to 2(3.9) of the GGRR.<sup>1</sup>**  
19

20 Subsequent to the above Decision, the BCUC has accepted many other out-of-province BPAs  
21 as being prescribed undertakings (Orders G-40-20, E-14-20, E-16-20, E-17-20, E-18-20, E-24-  
22 20 and E-28-20). The analysis by which the BCUC accepted these out-of-province BPAs is no  
23 different than the analysis of the SHELL BPA. In short, the fact that the RNG is sourced from  
24 the US has no consequence to the analysis of whether it is a prescribed undertaking under the  
25 GGRR.

<sup>1</sup> Appendix A to Order G-40-20, dated February 27, 2020, p. 6:  
[https://www.bcuc.com/Documents/Proceedings/2020/DOC\\_57421\\_G-40-20-Final-Order-Reasons-For-Decision.pdf](https://www.bcuc.com/Documents/Proceedings/2020/DOC_57421_G-40-20-Final-Order-Reasons-For-Decision.pdf)

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3.0 Reference: LEGISLATIVE AND REGULATORY FRAMEWORK

Exhibit B-1, Section 1.0, pp. 3–5

GGRR Annual Volume

On page 3 of the Application, FEI states:

FEI's expected total volume of annual RNG acquisitions from its RNG supply portfolio when all projects are operational, including the SHELL BPA, is approximately 6,900,000 GJs annually, which is well below the calculated maximum volume set out in section 2(3.8)(b) in the GGRR for FEI of approximately 8,900,000 GJs. The contractual maximum volume of RNG under the SHELL BPA is [REDACTED] GJs and the current maximum supply contracted by FEI totals [REDACTED] GJs annually<sup>5</sup>. The total maximum contracted RNG volume, if the SHELL BPA is accepted, would be [REDACTED] GJs annually. However, FEI's contractual maximum amounts do not reflect what FEI will actually acquire in a given year. FEI expects annual volumes of [REDACTED] GJs under the SHELL BPA and its total annual acquisitions are expected to be well below the GGRR maximum volume, as discussed in Section 1.1 below.

Furthermore, on page 5, Figure 1, FEI's chart shows the contracted amount, in grey, exceeds the Regulatory GGRR maximum limit, in green.

3.1 Please explain why FEI has agreed to a BPA purchase amount greater than the amount FEI expects to receive.

3.1.1 Please clarify the benefit of contracting a higher amount than what the facility is anticipated to produce.

**Response:**

FEI has contracted RNG based on either the maximum operating capacity of the plant, or the maximum amount a supplier is willing to contract to us. As a plant may not always be able to operate up to its maximum operating capacity, it is not expected that the maximum will be consistently delivered over the life of the contract. However, contracting for the greatest potential amount allows FEI to ensure that it is maximising the potential amount of RNG available for its customers.

3.2 If actual production data indicates that FEI does not anticipate receiving the fully contracted volume of RNG from its suppliers, please explain why FEI has not amended the contracts to better reflect actual volumes.

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**Response:**

Annual RNG production can change due to many factors such as population growth, change in feedstock, and plant outages. FEI has not amended contracts to reflect actual or expected volumes, as it wants to secure as much RNG as possible from each RNG plant, which includes the potential for the plant to produce RNG above expected or average amounts each year.

3.3 Please explain whether FEI considered the possibility of embedding optionality in its contracts to better align contracted volumes with actual supply.

**Response:**

FEI's goal is not to align contracted maximum volumes with actual supply, but to secure as much RNG as possible from each RNG plant.

3.4 If the Shell BPA is accepted, please clarify FEI's recourse in the case where the contract portfolio produces actual RNG volumes above the GGRR cap.

**Response:**

In the event that FEI were to acquire RNG in a calendar in an amount in excess of the maximum set out by section 2(3.8) (b) of the GGRR, FEI could seek to sell the excess RNG to other markets at the full cost of the RNG so that it would not count towards the maximum volume amount. Section 2(3.9) of the GGRR states that the maximum volume "does not include renewable natural gas acquired by the public utility that the public utility provides to a customer in accordance with a rate under which the full cost of the following is recovered from the customer: (a) the acquisition of the renewable natural gas; (b) the service related to the provision of the renewable natural gas."

3.4.1 Please discuss if FEI has the right to refuse delivery on any of the contracted volumes.



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**Response:**

FEI does not have the right to refuse delivery on any of the contracted volume that meets the criteria set out in the contract. FEI is obligated to purchase up to the maximum amount set out in its agreements.

3.4.2 Please explain if there a risk to non-bypass customer rates and how these risks are mitigated.

**Response:**

FEI understands this IR to be asking if there is risk to non-bypass customer rates in the case where the contract portfolio produces actual RNG volumes above the GGRR cap.

As discussed in FEI's Additional Evidence filed in conjunction with these IRs, Order in Council No. 306, dated May 25, 2021, amends section 2(3.8) of the GGRR so that there is now a much higher maximum RNG volume permitted to be acquired as a prescribed undertaking. Specifically, the volume cap is "15% of the total amount, in GJ, of natural gas provided by the public utility to its non-bypass customers in 2019, subject to subsection (3.9) and section 10."

There is no risk that FEI's current portfolio, including those BPAs currently before the BCUC, will exceed the maximum volume in the GGRR.

3.5 Please explain whether FEI contracts other fuels in a similar fashion, with an expectation of an actual supply shortfall.

**Response:**

The traditional natural gas market is many times larger than the RNG market and has evolved into a highly liquid market because there is a diversity of supply points. In the early days of natural gas production, it was not uncommon for contracts to be tied to physical well production, but the market has evolved as it has grown. Today, marketers and producers of natural gas are able to provide firm delivery contracts due to the large diversity of supply points.

In contrast, the RNG market is a developing market and still tied to the operation of single production plants. As a result, FEI is in a better position than each individual producer to manage swings in supply. FEI is seeking to manage swings in supplies from individual production plants by acquiring a portfolio of diverse RNG supply sources

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**4.0 Reference: PROJECT OVERVIEW**

**Exhibit B-1, Section 2.3, p. 8**

**Gas Electronic Data Interchange (GASEDI) Standard Form of Contract for the SHELL BPA**

On Page 8 of the Application, FEI states:

**Term of agreements, delivery point and quantities.** The Confirm sets out a minimum and maximum daily and annual volume which the supplier must meet. FEI has exclusive ownership of the biomethane up to the maximum annual amount.

4.1 Please confirm, or otherwise explain, that if the maximum annual amount is delivered, FEI will exceed the GGRR section 2(3.8)(b) 5% limit.

4.1.1 If confirmed, please discuss what actions will FEI take to ensure the maximum annual amount is not delivered.

**Response:**

Not confirmed. If the maximum contractual volume of the SHELL BPA is delivered FEI will not exceed the GGRR maximum. As noted above, the GGRR maximum volume has been raised to 15 percent of the total amount, in GJ, of natural gas provided by FEI to its non-bypass customers in 2019. Further, even if the GGRR limit were still 5 percent, it is highly improbable that FEI would ever receive maximum delivery under the SHELL BPA over an entire year and, over the same year, receive maximum delivery from all other BPAs over the entire year.

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**5.0 Reference: PROJECT OVERVIEW**

**Exhibit B-1, Section 2.2, p. 7**

**Project Location and Facilities**

On Page 7 FEI states:

SHELL has entered into an exclusive agreement to take all of the RNG produced [REDACTED] The Facility has an existing source of biogas and has been successfully producing and selling RNG since 2020. The Facility injects pipeline quality RNG into Mid-American Energy's distribution system. Shell will take ownership of the RNG at the injection point and deliver it to FEI at Huntingdon. The expected annual RNG that will be delivered to FEI is approximately [REDACTED] GJ/year.

5.1 Please explain why the name and location of the Facility are confidential.

**Response:**

SHELL requested that FEI keep the facility confidential until BCUC approval is received. It has been FEI's standard practice to allow the Sellers to keep the upstream sellers confidential in order to protect their commercial interests.

5.2 Please provide details on the feedstock for the production of biomethane.

**Response:**

The feedstock used for the production of biomethane at this facility consists of municipal biosolids, and commercial and industrial organic waste.

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**B. FEI-SHELL BIOMETHANE PURCHASE AGREEMENT**

**6.0 Reference: GASEDI BASE CONTRACT FOR SHORT-TERM SALE AND  
PURCHASE OF NATURAL GAS COVER SHEET**

**Exhibit B-1, Appendix A, pdf p. 15**

**Disclaimer and Term**

The Disclaimer for the BPA cover Sheet states:

DISCLAIMER: The purposes of this Contract are to facilitate trade, avoid misunderstandings and make more definite the terms of contracts of sale, purchase or exchange of natural gas. This Contract is intended for interruptible transactions or firm transactions of one year or less and may not be suitable for transactions of longer than one year.

6.1 Please explain the suitability of the cover sheet term for the submitted contract.

**Response:**

This agreement is based on the 2000 form of GasEDI, a Canadian gas energy industry standard form of agreement. The form of the GasEDI consists of four parts: the Cover Sheet, the General Terms and Conditions, the Special or Standard Conditions and the Confirmation. The first two, the Cover sheet and the General Terms and Conditions, are designed to be standard and unalterable. The "fill-in-the-blank" Cover Sheet captures essential information such as contact and banking information needed for the parties to transact. The second two parts of the standard form contract, namely the Special or Standard provisions and the Confirmation, contain the commercial terms such as price and quantity and contain any changes to the General Terms and Conditions negotiated by the parties.

The Cover Sheet contains a disclaimer that the GasEDI form of agreement is designed for short term transactions and may not be suitable for long term transactions. This is because most industry gas transactions are short term. However, it is not per se unsuitable for long term transactions.

FEI chose to base its off system biomethane agreements on the GasEDI because it is well understood by both FEI and by FEI's counterparties and it contains important contract terms relating to the delivery and transportation of gas. Using a standard form of agreement makes the agreement easier and quicker to negotiate.

FEI is not aware of a standard industry wide form of long term agreement. As a result, the negotiated Confirmation and FEI's Special or Standard Provisions amend and supplement the standard form General Terms and Conditions and make the form of GasEDI suitable for a long term purchase of biomethane such as the transaction being considered in this proceeding.

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7.0 Reference: TRANSACTION CONFIRMATION

Exhibit B-1, Appendix A, pdf pp. 25–26

Section 7 Supply by Displacement

Section 7 of the BPA states:

**Supply by Displacement.** The Seller's Affiliate will inject all Biomethane sold to the Buyer into the Mid-American Iowa System. The Parties acknowledge and agree that because Gas molecules are indistinguishable, interchangeable and comingled in the pipeline system, purchasers of conventional Gas or Biomethane generally do not physically receive or consume the same Gas molecules that they purchase from a specified source of production, this replacement of the Gas molecules purchased with other molecules being referred to as displacement. The Parties further acknowledge and agree that delivery of the product purchased and sold hereunder will be by displacement (as described in the preceding sentences) of the Biomethane produced from the Facilities with Gas produced elsewhere that upon delivery includes the Environmental Attributes associated with the Biomethane produced from the Facilities and, as a result, the product delivered by Seller hereunder constitutes Biomethane as defined herein.

7.1 Please explain whether there is a physical connection between Mid-America Iowa System and Huntingdon.

**Response:**

Yes. As discussed in FEI's Additional Evidence filed in conjunction with these IR responses, a clear physical connection exists between the pipeline system in Iowa where the RNG is produced and FEI's pipeline system in BC. The connection is from MidAmerican's Iowa Pipeline system, to Berkshire Hathaway's Northern Natural Gas Pipeline system, to TC Energy's Northern Border Pipeline system, to TC Energy's Foothills Pipeline system, to TC Energy's NGTL Pipeline system and then to the Westcoast Pipeline system to Huntingdon. The RNG will be delivered in the same manner as all other out-of-province agreements whereby RNG is injected into the natural gas system at the upstream seller's facility and delivered by displacement to FEI at Huntingdon.

7.2 Please describe the entire delivery process from injection into the Mid-American Iowa System to withdrawal by FEI at Huntingdon.

**Response:**

Please refer to the response to BCUC IR1 7.1 and FEI's Additional Evidence, part b.

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7.3 Please explain the difference between delivery by displacement, physical delivery, and notional delivery.

**Response:**

Physical delivery with respect to gas refers to having molecules present at a certain location for use. FEI receives the physical delivery of both RNG and conventional gas in different parts of the system.

Notional delivery and delivery by displacement are generally used interchangeably.

The notional delivery of conventional natural gas or RNG is part of supply transactions and commercial arrangements generally. For example, when other parties, such as customers or gas marketers bring their own supply to market hubs or interconnection points, all those natural gas molecules (whether conventional or RNG) are intermingled and are interchangeable. The actual gas molecules themselves are indistinguishable, not traceable, and exchangeable with all the other the gas molecules on the system given the end-use customer is consuming gas somewhere on the system, but not the molecules they or their marketers brought onto the system for their use. This makes all exchanges of natural gas molecules, whether conventional or RNG, notional based on delivery volumes injected versus volumes consumed by the end-use customer.

Notional delivery of conventional natural gas or supply by displacement is also common with storage agreements. FEI's gas contracting portfolio includes re-delivery or exchange agreements in-place with its contracted storage capacity at Mist (Oregon) and Jackson Prairie (Washington). These agreements allow FEI to receive gas at Huntingdon and FEI will then transfer (or notionally deliver) an equivalent amount of gas at the storage facility out of its account.

Displacement refers to the idea that there is one contiguous gas system across North America and that, when gas is injected somewhere on the system from a new location, less gas is injected somewhere else to provide the same volume to all the users on the entire system. The original source is displaced.

The RNG produced at the facilities in Iowa will cause an equivalent reduction in the amount of gas that generally flows West to East, thereby displacing conventional natural gas molecules and reducing the amount of conventional natural gas that is produced and injected into the system.

Please also refer to FEI's Additional Evidence, part b, for further discussion of delivery by displacement.

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7.4 Please confirm, or explain otherwise, that FEI receives the environmental attributes from the Biomethane facility.

**Response:**

Confirmed.

7.4.1 If confirmed, please provide specific detail of what the environment attributes are and by whom they are issued.

**Response:**

The environmental attributes acquired by FEI through the BPA are defined by the terms of the BPA. The environmental attributes are not issued by any entity. Having ownership of the environmental attributes enables the owner to claim the benefit of those attributes under legislative schemes or GHG reduction targets set up by governments or other entities.

7.4.2 If confirmed, please explain the legal status of such attributes in British Columbia.

**Response:**

FEI has the contractual right to the environmental attributes of the RNG acquired under the SHELL BPA. Contractually acquiring the environmental attributes may qualify FEI or its customers who purchase the RNG to receive credits or other benefits under legislative schemes, such as B.C.'s Low Carbon Fuel Standard, or other GHG reduction targets or goals of the customer.

7.4.3 If confirmed, please explain whether FEI uses the environmental attributes to offset its production of greenhouse gas in the province.

**Response:**

FEI does not currently use the environmental attributes from its RNG acquisitions to offset its production of greenhouse gas in the province.

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1  
2  
3  
4                   7.4.4     If confirmed, please clarify whether FEI sells these environmental  
5                                 attributes to other companies or entities.  
6

7     **Response:**

8     FEI does not sell the environmental attributes from its RNG acquisitions to other companies or  
9     entities, other than through the customers of its RNG program, who receive the environmental  
10    attributes a part of the purchase of the RNG.

11  
12  
13  
14                   7.4.5     If confirmed, please provide the correlation between GJ purchased and  
15                                 Environmental Attribute received by FEI.  
16

17    **Response:**

18    The environmental attributes are correlated to the carbon intensity of the RNG and the number  
19    of GJs purchased. Please refer to FEI's response to BCUC IR1 9.1.

20  
21  
22  
23  
24           7.5     Please confirm, or otherwise explain, that the environmental attributes remain  
25                    tied to the RNG volume purchased from the Shell BPA. In the response, please  
26                    provide a summary of reporting and requirements to ensure regulatory  
27                    compliance.

28                   7.5.1     If confirmed, please explain how the environmental attributes are linked  
29                                 to the supplied RNG and how they are retired by FEI.

30                   7.5.2     Please discuss whether a customer of FEI who purchases RNG from  
31                                 FEI can monetize any environmental attributes of that RNG.

32  
33    **Response:**

34    Whether the environmental attributes remain tied to the RNG volume purchased from the  
35    SHELL BPA would depend on what legislative scheme one were seeking to obtain the value of  
36    the environmental attributes of RNG. Currently, only customers that purchase RNG as a  
37    registered fuel under the BC Low Carbon Fuel Standard can monetize the environmental  
38    attributes. In the case of FEI's customers, today this is limited to those customers who purchase  
39    RNG in the natural gas for transportation market. The ability of customers to monetize RNG



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1 under the Low Carbon Fuel Standard first depends on FEI registering the RNG supply under the  
2 SHELL BPA with the Ministry pursuant to the Low Carbon Fuel Standard.

3  
4  
5  
6 In FEI's Application for BCUC acceptance of its contract with Tidal Energy, dated August  
7 8, 2019<sup>2</sup>, it is stated on page 11:

8 FEI will continue to evaluate out-of-province supply and expects to file additional  
9 out-of-province RNG supply agreements for BCUC acceptance. It is possible that  
10 FEI may use a different model with other counterparties that is more consistent  
11 with the renewal identification number (RIN) market in the United States where  
12 transportation costs are not managed in the same way as currently proposed in  
13 this application. FEI will ensure such a model provides traceability, emissions  
14 reductions and a contractual path to ensure that the emissions benefits can be  
15 passed onto FEI customers, similar to the RIN model which is monitored by the  
16 United States Environmental Protection Agency (EPA).

17 7.6 Please explain FEI's approach to environmental attributes and compare it with  
18 the RINs monitored by the EPA.  
19

20 **Response:**

21 The FEI program is a renewable gas program that has a broader customer base than the EPA's  
22 Renewable Fuel Standard which is geared at transportation fuels only. FEI does not use the  
23 RIN system.

24 BC's Low Carbon Fuel Standard (LCFS) is similar to the California low carbon fuel standard.

25 FEI has adopted the BC LCFS standard for calculating the carbon intensity of renewable gas  
26 primarily as a means of ensuring that RNG can be sold under the BC LCFS which recognizes  
27 RNG as a low carbon fuel. The BC LCFS also recognizes other fuels such as liquid fuels that  
28 are lower carbon intensity than conventional liquid fuels.

29 RINs (Renewable Identification Numbers) under the EPA's Renewable Fuel Standard are a  
30 method of accounting for the renewable attributes of a renewable fuel. RINs are not recognized  
31 either by FEI or the BC LCFS, but the methodology used to calculate them is similar.

32  
33  
34  
35 7.7 Please explain how FEI's model for RINs is different to that of the EPA.  
36

---

<sup>2</sup> [https://www.bcuc.com/Documents/Proceedings/2019/DOC\\_55329\\_B-1-FEI-BPAs-TidalEnergy-App-Redacted.pdf](https://www.bcuc.com/Documents/Proceedings/2019/DOC_55329_B-1-FEI-BPAs-TidalEnergy-App-Redacted.pdf).

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1 **Response:**

2 Please refer to the response to BCUC IR1 7.6

3 FEI uses the BC LCFS criteria for calculating the carbon intensity of its renewable natural gas.  
4 It is based on the GHGenius model that was originally developed for environment Canada to  
5 recognize low carbon pathways.

6 RINs are a system developed for the EPA's Renewable Fuel Standard and are equivalent to  
7 making one US gallon of gasoline carbon neutral. It is based on the notion of having a ledger of  
8 attributes that can be accounted for once created (at a source) and retired once sold; it is  
9 nothing more than an accounting system specific to emissions reductions. The system  
10 recognizes different carbon abatement pathways in the transportation market in a similar way to  
11 the BC LCFS.

12

13

14

15 7.8 Please confirm, or otherwise explain that there are RINs associated with the  
16 biomethane purchased by FEI in the Shell BPA application

17 7.8.1 If confirmed, does FEI take possession of the RINs? Please discuss.

18 7.8.2 If confirmed, please explain the rules governing importation of RINs  
19 from the US to Canada and specifically British Columbia.

20 7.8.3 If confirmed, please explain what regulatory entity in Canada/British  
21 Columbia is responsible for the oversight of importation of RINs or  
22 renewable environmental credits and their accounting.

23 7.8.4 If confirmed, please describe the process for importing RINs from the  
24 United States of America to Canada/British Columbia.

25

26 **Response:**

27 Not confirmed.

28

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**8.0 Reference: TRANSACTION CONFIRMATION**

**Exhibit B-1, Appendix A, pdf p. 25**

**Section 5 Contract Quantity of Biomethane**

Section 5 (d) of Appendix A to the Application states:

Maximum Annual Quantity: [REDACTED] per Contract Year. Buyer, may, at its discretion, accept more than the Maximum Annual Quantity.

8.1 Please confirm this clause indicates that FEI can purchase more than the Maximum Annual Quantity.

8.1.1 If confirmed, please explain when FEI would need to purchase more than the Maximum Annual Quantity.

8.1.2 If confirmed, please explain how FEI expects to remain under the 5% GGRR limit if it is able to purchase more than the Maximum Annual Quantity, when purchasing the Maximum Annual Quantity would already exceed the 5% GGRR limit.

**Response:**

Confirmed. FEI may, at its discretion, purchase more than the Maximum Annual Quantity. FEI has always included this clause to allow for as much flexibility as possible to manage its supply portfolio. In any given year, FEI may need to purchase more than the contractual maximum to either meet demand or to make up for shortfalls in supply created by underperforming suppliers. Regardless, FEI would not purchase the additional volumes if it was at or near the GGRR maximum supply cap and today, FEI is well below the GGRR maximum supply cap of 15% of its supply, and does not expect to reach that volume in the near term.

8.1.3 If confirmed, please explain why FEI did not contract for a volume that it reasonably expects to receive if an option exists to purchase quantities above the contracted volume.

**Response:**

The clause is a standard addition to all agreements to allow suppliers some flexibility to increase volumes in any given year. This may be the result of something simple like additional feedstock leading to greater RNG production.

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**9.0 Reference: TRANSACTION CONFIRMATION**

**Exhibit B-1, Appendix A, pdf p. 27**

**Section 11 Environmental Attributes and Representations, Section 13 Carbon Intensity Report**

Section 11 on pdf page 27 of Appendix A to the Application states:

**11. Environmental Attributes and Representations.**

- (a) Seller represents and warrants that the Biomethane produced by the Facilities is generated through the anaerobic digestion of organic matter and the Environmental Attributes associated with such Biomethane are not supplemented, replaced in whole or in part with Environmental Attributes purchased or associated with any facility other than the Production Location.
- (b) Subject to Section 15(e), Seller represents that the calculated carbon intensity of the Biomethane shall be [REDACTED] grams of CO<sub>2</sub> equivalent or less per mega joule (gCO<sub>2</sub>e/MJ) and as soon as commercially reasonable after the Start Date, shall provide the Buyer with a report as described in Section 13 (*Carbon Intensity Reports* below) calculating the carbon intensity and the calculated carbon intensity of the Biomethane shall not exceed [REDACTED] gCO<sub>2</sub>e/MJ during the Term of the Contract.
- (c) Seller represents and warrants that, under the contractual agreement for the purchase of Biomethane between Seller's Affiliates and the Upstream Seller all Environmental Attributes that could be associated with the produced Biomethane at the time of delivery to Buyer are attached thereto and that neither the Biomethane nor the Environmental Attributes associated therewith have been sold more than once by either the Seller or, by the Upstream Seller, at any point between production and sale to Buyer whether by sales into carbon markets or otherwise.
- (d) Seller represents and warrants that Seller does not have and no third party has, any claim to the Environmental Attributes associated with the Biomethane purchased by Buyer under this Transaction Confirmation.
- (e) Seller represents and warrants that, up to the point of delivery to Buyer, neither the Environment Attributes nor the Biomethane have been used by Seller or the Upstream Seller to meet any federal, state, provincial or local renewable energy requirement, renewable energy procurement, renewable energy portfolio standard, or other renewable energy mandate.
- (f) Seller shall transfer to Buyer at the Delivery Point all Environmental Attributes, whether current or future, known or unknown at the time of delivery, associated with the Biomethane along with the transfer of title in the Biomethane. The parties acknowledge at the time of entry into this Transaction Confirmation, the Environmental Attributes are not individually represented by certificates, attestations, registration numbers or otherwise except as set out in Sections 13 and 15 of this Transaction Confirmation.

Section 13 states:

- 13. Carbon Intensity Report.** Seller shall provide Buyer with a report from the Upstream Seller by January 31 of each calendar year, certifying the carbon intensity of the Biomethane produced at the Facilities and delivered to the Buyer during the previous calendar year. The carbon intensity shall be calculated in accordance with the requirements of the government of British Columbia as set out in section 6(6) of the RLCFRA and shall be certified by the Upstream Seller's chief operating officer.

And furthermore, Section 6(6) of Part 3 of the *Renewable and Low Carbon Fuel Requirements Act* (RLCFRA) provides:

that if the director is: satisfied that the carbon intensity proposed by the producer accurately reflects the carbon intensity of the fuel, approve that carbon intensity for that fuel and publish that carbon intensity... on a publicly accessible website maintained by the ministry of the minister, the carbon intensity posted.<sup>3</sup>

Additionally, Section 11.04<sup>4</sup> of Part 2.1 of the Renewable and Low Carbon Fuel Requirements Regulations provides:

**Table**

COLUMN 1 Fuel	COLUMN 2 Carbon Intensity
	(g CO <sub>2</sub> e/MJ)
Renewable fuel in relation to diesel class fuel	98.96
Propane	75.35
Renewable fuel in relation to gasoline class fuel	88.14
Natural gas-based gasoline	90.07
LNG	112.65
CNG	63.64
Electricity	19.73
Hydrogen	96.82

9.1 Please confirm that the reason for a calculated carbon intensity “not to exceed” cap is for the purpose of compliance with BC’s RLCFRA.

9.1.1 If confirmed, why is the information confidential?

9.1.2 If not confirmed, then what is the purpose of the carbon intensity “not to exceed” limit?

**Response:**

Confirmed. FEI wishes to ensure its suppliers guarantee the carbon intensity of the RNG supply that FEI is purchasing.

However, the carbon intensity (CI) is also linked to the price and relative value FEI receives for RNG supply and FEI expects CI to play a role in its future overall emissions targets. FEI has adopted CI as a competitive factor in choosing RNG supply.

<sup>3</sup> [https://www.bclaws.gov.bc.ca/civix/document/id/complete/statreg/08016\\_01#part6](https://www.bclaws.gov.bc.ca/civix/document/id/complete/statreg/08016_01#part6)

<sup>4</sup> [https://www.bclaws.gov.bc.ca/civix/document/id/complete/statreg/394\\_2008#section11.04](https://www.bclaws.gov.bc.ca/civix/document/id/complete/statreg/394_2008#section11.04)

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Emissions targets will ultimately be based on a different measure than energy. In order to determine emissions reductions, CI is multiplied by energy. Further, to understand the relative cost of emissions reductions, the price per GJ of RNG needs to be considered. FEI currently uses the CI and price together to compare projects and determine which is ultimately a better economic value for its customers. It is for that reason it is kept confidential.

A sample calculation with illustrative numbers is provided here to help illustrate the value of emissions reductions.

[Price RNG (above conventional gas cost)] divided by [Reduction in CI] = price of tonne of emissions

Where Reduction in CI = Natural Gas CI – RNG CI

$[\$20 \text{ per GJ} - \$2/\text{GJ}] \div [0.064 \text{ tonneCO}_2\text{e/GJ} - 0.010 \text{ tonneCO}_2\text{e/GJ}] = \$330/\text{tonne CO}_2\text{e}$

Based on this calculation, it can be seen that lower CI projects result in a greater reduction in CI vs natural gas and therefore a lower price per tonne of emissions reduction.

9.2 Are the environmental attributes associated with this biomethane the same as the environmental attributes required by BC for RNG?

**Response:**

The RNG from the SHELL BPA has a CI that is low enough to qualify as a low carbon fuel under the BC Low Carbon Fuel Standard.

9.3 What is the allowable maximum “calculated carbon intensity” of RNG?

**Response:**

There is currently no maximum allowable calculated CI; however, the lower the CI, the greater the value of the RNG.

9.4 What are the limits of carbon dioxide intensity required for the content of RNG purchased under the GGRR?

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1

2 **Response:**

3 There are no limits in the GGRR related to carbon intensity.

4

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**10.0 Reference: Transaction Confirmation**

**Exhibit B-1, Appendix A, pdf p. 26**

**Section 10. Contract Price**

Section 10 on pdf page 26 of Appendix A to the Application states:

**10. Contract Price.**

- (a) Subject to subsection (b) below, the Contract Price payable for the Contract Quantity is [REDACTED] per GJ.
- (b) Subject to subsection (c) below, commencing from the November 1<sup>st</sup> occurring after the first anniversary of the Start Date and on every November 1<sup>st</sup> thereafter, the Contract Price will be increased by [REDACTED] over the previous year, each such increase effective for payments due for deliveries in the same November.
- (c) No adjustment will be made which results in the Contract Price payable by the Buyer exceeding the applicable of:
  - (i) the then current maximum RNG (supply purchase price approved by the British Columbia Utilities Commission; or
  - (ii) the maximum RNG supply purchase price established by the Province of British Columbia.

10.1 Please provide, in confidence if necessary, a breakdown of how the price per GJ was attained.

**Response:**

The price per GJ was a negotiated amount and includes transportation costs, although there is no specific transportation cost amount.

This is common for conventional natural gas purchase agreements where FEI is not necessarily privy to arrangements between parties like SHELL and their upstream suppliers.

For the SHELL BPA to be a prescribed undertaking, the price in the SHELL BPA only needs to be within the maximum price set out in the GGRR.

10.2 Please discuss whether the Shell BPA includes transportation costs.

10.2.1 If yes, please provide, in confidence if necessary, contracted or forecast transportation costs.

**Response:**

Please refer to the response to BCUC IR1 10.1.



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1     **C.     PUBLIC INTEREST**

2     **11.0   Reference:   Legislative and Regulatory Framework**

3                     **Exhibit B-1, Section 1.0, p. 2**

4                     **Public Interest**

5             On page 2 of the Application, FEI provides the amendment to the GGRR:

6                     On March 21, 2017, the LGIC issued OIC 161/2017 approving an amendment to  
7                     the GGRR related to RNG as follows:

8                     (3.7) A public utility's undertaking that is in the class defined in subsection  
9                     (3.8) is a prescribed undertaking for the purposes of section 18 of the Act.

10                    (3.8) The public utility acquires renewable natural gas

11                               (a) for which the public utility pays no more than \$30 per GJ  
12                               [gigajoule], and

13                               (b) that, subject to subsection (3.9), in a calendar year, does not  
14                               exceed 5% of the total volume of natural gas provided by the public  
15                               utility to its non-bypass customers in 2015.

16             11.1   Please discuss the competitive process FEI entered into when acquiring  
17                     biomethane from Shell.

18  
19     **Response:**

20     FEI has had multiple requests for expression of interest for RNG supply (RFEOI). These  
21     RFEOI's have enabled FEI to continuously establish a competitive price for RNG. In all of its  
22     contracts, FEI aims to get the most emissions reduction per GJ of RNG for the best price per GJ  
23     of RNG. This comparison ultimately results in a price per tonne of CO2e (carbon dioxide  
24     equivalent) reduction that FEI can use to compare the value of contracts in its portfolio. The  
25     SHELL BPA allowed FEI to obtain RNG at a price per tonne that was lower than FEI's portfolio  
26     average and presented FEI with the opportunity to acquire RNG in 2021, thus enabling FEI to  
27     open its customer program back up.

28

29

30

31             11.2   Please provide recent market data on RNG sales for benchmarking.

32

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1    **Response:**

2    While there is a competitive market for RNG, there is no index for RNG as there is for  
3    conventional natural gas.

4

5

6

7           11.3   Please compare recent market data on RNG sales against the contracted price in  
8           the Shell BPA.

9

10   **Response:**

11   Please also refer to the response to BCUC IR1 11.1.

12

13

14

15           11.4   If in the event the BCUC does not find the Shell BPA to be a prescribed  
16           undertaking, does FEI consider acceptance of the BPA to be in the public  
17           interest?

18               11.4.1   If so, why?

19               11.4.2   If not, why not?

20

21   **Response:**

22   The SHELL BPA is a prescribed undertaking and should be accepted on that basis. However,  
23   FEI submits that the SHELL BPA would be in the public interest in any case as FEI's  
24   biomethane program is needed to meet demand from FEI's customers for RNG, and is a key  
25   part of the Province's plan to meet GHG reduction targets.

26