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March 15, 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)

Biomethane Energy Recovery Charge (BERC) Rate Methodology – British Columbia Utilities Commission (BCUC) Decision and Order G-133-16 Compliance Filing – BERC Rate Assessment Report

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

On August 12, 2020, FEI filed the Application referenced above. In accordance with BCUC Order G-35-21 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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| 11 | A. SUMMARY OF REPORTING REQUIREMENTS | |
| 12 | 1.0 Reference: SUMMARY OF REPORTING REQUIREMENTS | |
| 13 | Exhibit B-1, Section 1, Table 1, p. 2 | |
| 14 | Compliance reporting requirement | |
| 15 | On page 2 of FortisBC Energy Inc.'s (FEI) Biomethane Energy Recovery Charge | |
| 16 | (BERC) Rate Methodology Assessment Report (Report), FEI states that: | |
| 17 | FEI is directed to file a comprehensive assessment report for Commission | |
| 18 | approval at the earlier of the application by FEI for a transfer of biomethane | |
| 19 | inventory from the BVA to the MCRA or four years after the date of issue of this | |
| 20 | decision, whichever comes first (Assessment Report). <u>In the event FEI commits</u> | |
| 21 | <u>all available supply through the Long-Term Contract offering prior to the earlier of</u> | |
| 22 | <u>these two events, FEI is directed to file the Assessment Report at that time.</u> | |
| 23 | [Emphasis added] | |
| 24 | 1.1 Please confirm, or otherwise explain, that FEI committed all available supply | |
| 25 | through the Long-Term Contract offering prior to the earlier of these two events. | |
| 26 | 1.1.1 If confirmed, please clarify why FEI did not file the Report at that earlier | |
| 27 | time. | |
| 28 | | |
| 29 | <u>Response:</u> | |
| 30 | Not confirmed. FEI did not commit all available supply through the Long-Term Contract offerings | |
| 31 | prior to either: | |
| 32 | (a) A transfer of biomethane inventory from the BVA to the MCRA; or | |
| 33 | (b) Four years after the date of issue of the Decision. | |

| | |
|---|------------------------------------|
| FortisBC Energy Inc. (FEI or the Company) Biomethane Energy Recovery Charge (BERC) Rate Assessment Report (Report) | Submission Date: March 15, 2021 |
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1
2 Each year a portion of the available RNG supply is also sold to mass market, Short-Term BERC
3 rate customers. The annual committed Long-Term Contract volumes are less than the total
4 available supply. Therefore, it was not necessary for FEI to file the Report at an earlier time.

5

1 **B. BERC RATE METHODOLOGY**

2 **2.0 Reference: BERC RATE METHODOLOGY**

3 **Exhibit B-1, pp. 3–4, 6, 8**

4 **Price of the Short Term and Long Term BERC Rates**

5 On pages 3 to 4 of the Report, FEI states:

6 In the 2015 Application, FEI proposed a floating BERC Rate based upon a fixed
7 premium on conventional natural gas, and a lower priced option for customers
8 willing to enter into long-term agreements with FEI that met certain volume and
9 term commitments. The Decision approved the two options proposed by FEI: the
10 Short Term BERC Rate and the Long Term BERC Rate. The Short Term BERC
11 Rate is equal to the BCUC [British Columbia Utilities Commission] approved
12 January 1st Commodity Cost Recovery Charge (CCRA Rate) each year, plus the
13 approved Carbon Tax rate, plus a premium of \$7.00 per gigajoule (GJ). The Long
14 Term BERC Rate is set at a \$1.00 discount to the Short-Term BERC Rate...

15 On page 6 of the Report, FEI states:

16 The reduction in customer additions towards the end of 2019, as shown in Figure
17 1 above, was due to a temporary closure of the Biomethane Program to new
18 participants as RNG [Renewable Natural Gas] supply was oversubscribed. This
19 situation was due to a number of factors, including increased enrolment of
20 residential and small commercial customers, increased enrolment and volume
21 from large long term contract customers, and variability in the expected timing
22 and volume of RNG delivered from new supply projects during this time. [footnote
23 omitted]

24 2.1 Please discuss in what ways, if any, the price of the Short Term BERC Rate and
25 Long Term BERC Rate may have contributed to oversubscription of the available
26 RNG supply.

27 2.1.1 Does FEI consider the over subscription of the available RNG supply to
28 be an indication that the price of the Short Term BERC Rate and/or
29 Long Term BERC Rate was set too low? Please explain why or why
30 not.

31 2.1.2 To what extent does FEI believe government policies may have
32 contributed to oversubscription of the available RNG supply?

33
34 **Response:**

35 The oversubscription of the RNG program is due in part to the increase in demand, but is
36 primarily due to the lag in supply compared to forecast.

1 The current Short and Long Term BERC rates successfully increased customer demand for
2 enrollment in the RNG program. However, the BERC rate cannot be considered in isolation.
3 Government policies, such as limitations on GHG emissions, renewable energy requirements,
4 clean fuel standards, and clean power purchases, have also led to increased demand from
5 large volume customers. From a volume perspective, the majority of the increased requests for
6 RNG come not from mass market customers, but from large volume customers seeking to
7 achieve their GHG reduction objectives.

8 During this same period, several events occurred which resulted in the supply of biomethane
9 not materializing as forecast. While FEI had hoped to have several new suppliers online during
10 this timeframe, only one new biomethane project, the City of Surrey's Biofuel facility, became
11 operational in the summer of 2018. This project underwent a delayed ramp up period in
12 biomethane production, and as yet is still not able to produce the full 120,000 GJ/year output
13 that was originally forecast. Further, other supply projects that FEI anticipated would be
14 completed during the period were delayed. Finally, FEI's existing suppliers experienced events,
15 such as digester issues and mechanical failures, which adversely affected their ability to supply
16 RNG to FEI. The net result is that the incremental increase in overall actual biomethane supply
17 did not match FEI's forecast over the period.

18
19
20
21 2.1.3 Please discuss whether the use of a more dynamic pricing structure
22 than the current BERC Rate methodology would have allowed FEI to
23 generate greater revenues.
24

25 **Response:**

26 It is possible that a dynamic pricing structure may have generated greater revenues, although a
27 dynamic pricing structure is more conducive to a program where there are larger volumes of
28 supply available and a greater number of sophisticated customers. FEI is currently analyzing
29 pricing mechanisms as well as market factors that could affect the willingness of customers to
30 pay different rates for RNG, as part of its work on the comprehensive review and assessment of
31 the RNG Program.

32
33
34 On page 8 of the Report, FEI states:

35 The demand for long term access to large volumes of RNG is also driven by
36 factors that are specific to particular industries or customers. These drivers
37 include GHG [greenhouse gas] emissions reduction targets, the price of long
38 term RNG compared to alternatives, and environmental initiatives from different
39 levels of government...

| | |
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1 FEI continues to monitor these drivers of demand for large volumes of RNG and
2 may propose RNG Program modifications in the future if required to ensure the
3 long term balance of supply and demand.

4 2.2 Does FEI believe that modifications to the Biomethane Program are also
5 warranted in light of the existing oversubscription of RNG supplies. Please
6 discuss.

7
8 **Response:**

9 FEI's comprehensive review and assessment of the RNG program, including an assessment of
10 the various drivers of demand that FEI has recently observed, will consider whether or not
11 modifications to the program are warranted to suit current market realities. Factors such as
12 updated government objectives, regulations, and changing customer preferences could indicate
13 that a change to the Biomethane Program is required to effectively serve the market on a go
14 forward basis. The existing oversubscription, if looked at in isolation, does not necessarily lead
15 to a belief that program modifications are required, as a small increase in supply volumes would
16 have negated the need to curtail new customer enrollments. The existing oversubscription is
17 primarily the result of a mismatch in the ramp up time of new RNG supply versus the demand
18 for RNG.

19

3.0 Reference: BERC RATE METHODOLOGY

Exhibit B-1, pp. 6, 12

New RNG supply

On page 6 of the Report, FEI states that there has been “variability in the expected timing and volume of RNG delivered from new supply projects during this time” and notes that the in-service date of the approved City of Surrey Biofuel Facility was delayed by over a year and “took longer than anticipated to deliver expected volumes of RNG.”

Table 2, reproduced below, presents FEI’s contracted RNG supply projects.

Table 2: Contracted RNG Supply Projects

| | 1 | 2 | 3 | 4 |
|----------|--|-----------------|----------------------|-------------------------------------|
| | Project | Contract Status | BCUC Approval Status | Anticipated Start Date (Month-Year) |
| Existing | Fraser Valley Biogas | Contracted | Approved | N/A |
| | Seabreeze Farms | Contracted | Approved | N/A |
| | Kelowna Landfill | Contracted | Approved | N/A |
| | Columbia Shuswap Regional Dist. | Contracted | Approved | N/A |
| | City of Surrey | Contracted | Approved | N/A |
| | Contract Max Annual Volume (TJ/Yr) | | | 529 |
| Future | Expected Annual Volume (TJ/Yr) | | | 310 |
| | Proportion of Total Expected Volume | | | 5.3% |
| | Tidal Stormfisher | Contracted | Approved | Aug-20 |
| | Project #1 | Contracted | In Progress | Sep-20 |
| | Lulu Island Waste Water | Contracted | Approved | Dec-20 |
| | Faromor | Contracted | Approved | Jan-21 |
| Future | Dicklands Farm | Contracted | Approved | Sep-21 |
| | Lethbridge Biogas | Contracted | Approved | Sep-21 |
| | Bradham Hamilton | Contracted | Approved | Sep-21 |
| | Tidal Niagara | Contracted | Approved | Dec-21 |
| | City of Vancouver | Contracted | Approved | Dec-21 |
| | Project #2 | Contracted | In Progress | Dec-21 |
| | Bradham Napanee | Contracted | Approved | Jan-22 |
| | Matter | Contracted | Approved | Mar-22 |
| | REN Energy | Contracted | Approved | Jul-22 |
| | GSE | Contracted | Approved | Dec-22 |
| | Contract Maximum Annual Volume (TJ/Yr) | | | 7,307 |
| | Expected Annual Volume (TJ/Yr) | | | 5,493 |
| | Proportion of Total Expected Volume | | | 94.7% |
| | Grand Total Maximum Annual Volume (TJ/Yr) | | | 7,836 |
| | Grand Total Expected Annual Volume (TJ/Yr) | | | 5,803 |

3.1 Please provide an update on the anticipated start dates for the RNG supply projects listed in Table 2.

Response:

Please refer to Tables 1 and 2 below for an updated summary of existing and future RNG supply projects, as well as Total Expected RNG from 2020 to 2024. The updates are highlighted in green.

The project type and province location, have also been included in Table 1 below.

Table 1: Contracted RNG Supply Projects (Updated)

| | Project | Type | Province | Contract Status | BCUC Approval Status | Anticipated Start Date (Month-Year) | Contract Max Annual Volume (TJ/Yr) | Proportion of Total Max Contract Volume (%) | Expected Annual Volume (TJ/Yr) | Proportion of Total Expected Volume (%) |
|----------|-------------------------------------|------------------------|----------|-----------------|----------------------|-------------------------------------|------------------------------------|---|--------------------------------|---|
| Existing | Fraser Valley Biogas | Farm Digester | BC | Contracted | Approved | N/A | 91 | 1.1% | 67 | 1.1% |
| | Seabreeze Farms | Farm Digester | BC | Contracted | Approved | N/A | 120 | 1.4% | 90 | 1.5% |
| | Kelowna Landfill | Landfill | BC | Contracted | Approved | N/A | 118 | 1.4% | 62 | 1.0% |
| | Columbia Shuswap Regional Dist. | Landfill | BC | Contracted | Approved | N/A | 40 | 0.5% | 16 | 0.3% |
| | City of Surrey | Organics Processing | BC | Contracted | Approved | N/A | 160 | 1.9% | 75 | 1.2% |
| | Tidal Stormfisher | Organics Processing | ON | Contracted | Approved | N/A | 237 | 2.9% | 180 | 2.9% |
| | Quadrogen (Previously "Project #1") | Landfill | BC | Contracted | Approved | N/A | 80 | 1.0% | 60 | 1.0% |
| | Total Existing (TJ/Yr) | | | | | | 846 | 10.2% | 550 | 9.0% |
| Future | Lulu Island Waste Water | Waste Water Treatment | BC | Contracted | Approved | Mar-21 | 40 | 0.5% | 40 | 0.7% |
| | Faromor | Farm Digester | ON | Contracted | Approved | May-21 | 120 | 1.4% | 60 | 1.0% |
| | Dicklands Farm | Farm Digester | BC | Contracted | Approved | Jul-22 | 160 | 1.9% | 100 | 1.6% |
| | Lethbridge Biogas | Farm Digester | AB | Contracted | Approved | Sep-21 | 474 | 5.7% | 225 | 3.7% |
| | Bradam Hamilton | Carbon Energy Recovery | ON | Contracted | Approved | Dec-21 | 1,500 | 18.1% | 1,125 | 18.3% |
| | Tidal Niagara | Landfill | ON | Contracted | Approved | Dec-21 | 694 | 8.4% | 675 | 11.0% |
| | City of Vancouver | Landfill | BC | Contracted | Approved | Dec-21 | 298 | 3.6% | 250 | 4.1% |
| | Project #2 | Landfill | BC | Contracted | In Progress | Dec-22 | 104 | 1.3% | 78 | 1.3% |
| | Bradam Napanee | Carbon Energy Recovery | ON | Contracted | Approved | Jul-22 | 1,500 | 18.1% | 1,125 | 18.3% |
| | Matter | Farm Digester | BC | Contracted | Approved | Mar-22 | 100 | 1.2% | 75 | 1.2% |
| | REN Energy | Wood Biomass | BC | Contracted | Approved | Jul-22 | 1,200 | 14.5% | 900 | 14.7% |
| | GSE | Hydrogen Reduction | ON | Contracted | Approved | Dec-22 | 800 | 9.7% | 600 | 9.8% |
| | EPCOR | Waste Water Treatment | AB | Contracted | Approved | Mar-22 | 280 | 3.4% | 210 | 3.4% |
| | Walker RNG | Farm Digester | ON | Contracted | Approved | May-22 | 160 | 1.9% | 120 | 2.0% |
| | Total Future (TJ/Yr) | | | | | | 7,430 | 89.8% | 5,583 | 91.0% |
| | Grand Total Volume (TJ/Yr) | | | | | | 8,276 | 100.0% | 6,133 | 100.0% |

Table 2: Total Expected RNG Supply Volumes 2020-2024 (Updated)

| Year | Expected Total RNG Supply (TJ) |
|------|--------------------------------|
| 2020 | 250 |
| 2021 | 770 |
| 2022 | 3,740 |
| 2023 | 5,100 |
| 2024 | 5,583 |

For ease of reference, FEI provides further explanation below on the changes to the tables.

Table 1 is a snapshot of FEI's current BCUC approved projects and their respective volumes at the time of writing. Table 2 represents the anticipated ramp up of the expected volumes from the snapshot of existing and future supply projects projected to 2024. Based on FEI's experience, the expected volumes will change over time due to variations in the actual versus projected timelines and operational variation from the different projects.

1 The expected volumes from existing projects and future projects have changed in the table
2 since the Report was filed. These changes are summarized below.

3 ***Existing Projects Expected Volume***

4 When the original table was filed in the BERC Assessment Report, FEI expected the volumes
5 from the existing projects at that time to reach 310 TJ in 2021. Since then, two projects (Tidal
6 Stormfisher and Quadrogen) have come into operation and are now considered existing
7 projects. This increases the overall expected supply from existing projects to 550 TJ which is
8 shown in Table 1.

9 FEI further anticipates that more projects will come into operation later in 2021. This will
10 increase the expected volume from existing projects to approximately 770 TJ by the end of
11 2021. This is the expected total RNG supply for 2021 which is presented in Table 2 above. FEI
12 notes that this volume has been reduced from 950 TJ (as had been indicated in the report) due
13 primarily to the delays in the anticipated start date of projects in Table 1.

14 ***Future Projects Expected Volume***

15 When the original table was filed in the Report, FEI expected the volumes from future projects at
16 that time to reach approximately 5,493 TJ. Since then, Tidal Stormfisher and Quadrogen have
17 come into operation and are existing supply as indicated in Table 1 above. Additionally, new
18 projects (EPCOR and Walker RNG) have been added to future supply. Furthermore, some of
19 the future projects have delayed the anticipated start date. This changes the expected volumes
20 from future projects and the ramp up in expected volumes in Table 2, where FEI now anticipates
21 the expected supply to reach 5,583 TJ by 2024.

22
23
24
25 3.2 Please describe the factors that contributed to the delay in the in-service date of
26 the City of Surrey Biofuel Facility.
27

28 **Response:**

29 Through discussions with the City of Surrey and its facility operator, FEI understands that the
30 delay in the in-service date of the Biofuel Facility was primarily due to an issue with the
31 construction of the digester foundation encountered during the commissioning of the facility.
32 The issue required time-consuming remediation during the initial commissioning of the facility.
33 The repairs took place during summer 2017 through to spring 2018. The facility underwent final
34 commissioning and came into service in summer 2018. The total approximate delay in start-up
35 compared to the original schedule was about fourteen months.

3.2.1 Does FEI anticipate similar delays to the anticipated start dates for the RNG supply projects listed in Table 2? Please explain why or why not.

Response:

FEI expects some delays, but cannot accurately predict the length or nature of delays for the projects listed in Table 2.

FEI has experienced delays in the start date for several projects since the filing of the Report. These delays have occurred for a variety of reasons, but were primarily due to the COVID-19 pandemic in 2020. Through discussions with suppliers, FEI understands that delays have occurred largely in two areas.

First, the pandemic affected the ability for projects to proceed with commissioning. Travel restrictions and local health and safety measures have limited personnel from accessing project facilities to commission the projects into service. The following projects were impacted by this circumstance:

- Tidal Stormfisher
- Quadrogen
- Lulu Island Waste Water
- Bradam Hamilton
- Bradam Napanee

Second, the pandemic affected the lead times for equipment orders for biogas production and upgrading. This has delayed the arrival of equipment to the project site. Faramor is the first project to be impacted by this occurrence.

While there have been delays for several projects, FEI has not taken on any material risks associated with these project delays. FEI anticipates that more projects will experience delays due to the pandemic; however, it is difficult to assess the impact of this due to ongoing restrictions which are affecting regions differently.

3.2.2 Please discuss what impact, if any, FEI anticipates the COVID-19 pandemic will have on the start dates of the RNG supply projects listed in Table 2.

Response:

Please refer to the response to BCUC IR1 3.2.1.

3.2.3 Please describe any mitigation measures FEI has implemented to minimize impacts to the Biomethane Program resulting from delays to the in-service dates of the RNG supply projects FEI has contracted with.

Response:

FEI has been proactive in implementing various mitigation measures to reduce the risk of delayed in-service dates; however, FEI does not have direct control over the timelines for the majority of the approved projects.

The most significant direct mitigation measure FEI has taken is to contractually obligate counterparties to complete their projects within a certain time-frame. If the supplier does not meet this time-frame, FEI has the ability to terminate the agreement. To date, FEI has not terminated a contract for this reason given the focus is to increase all viable sources of biomethane supply.

In addition, FEI has attempted to contract with a variety of suppliers both in BC, and out of province, to increase the availability of supply. Contracting with a greater number of suppliers in and outside of BC increases the likelihood of supply being brought into service at different stages, and increases overall volume of supply delivered. For example, if three projects are contracted to deliver equal volumes of supply, the impact of one project being delayed is less significant compared to a scenario where there is only one project with the same volume.

As another risk mitigation measure, FEI is identifying suppliers with existing biogas facilities (digesters) that either have existing biomethane production or wish to repurpose facilities for the production of biomethane. These suppliers may facilitate projects being brought forward with greater certainty and more quickly. An example of repurposing an existing facility is Lethbridge Biogas, which is converting their existing plant from using biogas to produce electricity. Lethbridge will convert their facility by adding biogas upgrading technology to produce biomethane. This will deliver biomethane much sooner than a project which is still in its conceptual stage.

The timeline estimates provided in Table 2 are conservative and FEI will continue to monitor program curtailments to manage demand in accordance with supply. FEI will release new supply to customers once new supply projects have proven that they can deliver biomethane reliably.

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3.3 Please discuss whether FEI's concerns regarding the management of biomethane inventory have lessened as a result of FEI's decision to enter into contracts for notional delivery of RNG from outside of British Columbia, rather than physical delivery.

Response:

The addition of contracts for notional delivery (no matter their location) and the timing of those projects helps provide diversity of supply and will therefore help with the management of RNG inventory.

In the short term, FEI was able to accept notional delivery in 2020 providing some immediate relief to the shortfall of supply.

In the longer term, FEI believes that securing additional sources of RNG from a diversified group of suppliers (both notionally from outside of BC and within BC) will provide greater reliability of RNG supply. FEI has witnessed supply interruptions from its current suppliers due to both foreseeable events, such as scheduled maintenance, and to unforeseeable events such as digester contamination and mechanical failure. FEI expects that it will see a similar trend from suppliers outside of BC. Despite potential supplier interruptions, a greater number of suppliers should result in a smaller variance between the forecasted supply volume and the actual volume of RNG.

On page 12, FEI states that:

The expected volumes indicated in the table take into account FEI's experience that, on average, new RNG supply projects typically take time to ramp up their production to the maximum RNG volumes.

3.4 Given that Table 2 considers the time it takes for projects to ramp up, is Table 2 a snapshot of FEI's contracted RNG supply situation at a specific point in time?

3.4.1 If so, in what year does FEI expect the "existing" projects to reach the "expected annual volume" of 310 TJ (as opposed to their "contract maximum annual volume" of 529 TJ) and in what year does FEI expect the "future" project to reach the "expected annual volume" of 5,493 TJ (as opposed to their "contract maximum annual volume" of 7,307 TJ).

Response:

For an explanation of Table 2 including updates to expected volumes, please refer to the response to BCUC IR1 3.1.

3.5 For 2021, please provide the maximum contracted volume and expected annual volume for each project listed on Table 2, as well as any additional projects that FEI has contracted for after the filing date of the Report.

Response:

Please refer to Table 1 in response to BCUC IR1 3.1.

3.6 Please indicate whether FEI has now reached the maximum volume of approximately 8,900 TJs per year currently set in the Greenhouse Gas Reduction (Clean Energy) Regulation (GGRR). If not, please indicate how much room is left for new contracts.

Response:

No, FEI has not yet reached the maximum volume of 8,900 TJs per year. Please refer to FEI's response to BCUC IR1 3.10.

On page 13, FEI states that:

As shown by the Grand Total Expected Volume at the bottom of Table 2, when all of FEI's supply projects are completed and supplying RNG, FEI's expected annual supply volume is approximately 5,800 TJs per year. For newly completed supply projects, there can be a ramp-up period before the full expected annual volumes of RNG can be delivered. [Emphasis added]

3.7 When all FEI's supply projects are completed and delivering RNG, why would FEI's annual supply of RNG not be approaching the 7,836 TJ noted as the Grand Total Maximum Annual Volume in Table 2 instead of the Grand Total Expected Annual Volume of 5,800 TJ?

Response:

The maximum volume is a contractual volume often based on the maximum output an RNG plant could theoretically deliver. The actual or expected volume is based on what the plant could

actually produce, or reasonably be expected to produce, based on many factors including, but not limited to, feedstock availability, system capacity constraints, operating limitations or a forecast growth in volume over time, such as increased gas production at a landfill due to increased waste over time.

FEI's experience has shown that it is unlikely that a project will produce at the maximum rate year over year for the reasons stated above. It is the nature of these projects that the volumes produced are difficult to predict with absolute precision. Therefore, when forecasting expected annual volume from FEI's portfolio of supply projects as a whole, FEI does not expect that all projects would be producing at their maximum rates in any given year. In fact, it would be unlikely for that ever to occur.

3.8 In what year does FEI expect the projects listed in Table 2 to produce their "contract maximum annual volume"?

Response:

FEI does not expect every project to reach the contracted maximum annual volume.

Please also refer to the response to BCUC IR1 3.7 for further discussion of maximum annual volume.

3.9 Please revise Table 3 to show the entire ramp-up to arrive at the "grand total maximum annual volume" of 7,836 TJ shown in Table 2.

Response:

The maximum annual volumes and their ramp up period are difficult to represent in a table, as FEI does not expect all of the projects to reach maximum contracted annual supply. Further, if a project reaches the maximum in one year, it may not continue to meet the maximum in following years, as volumes are expected to vary over the life of the project.

The expected volume is the best way to represent how FEI expects the supply to increase until 2024.

3.10 In the event that projects are not expected to produce their "contract maximum annual volume" but rather produce the "expected annual volume", which of those

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1 two figures are imperative to ensuring that FEI remain within the existing GGRR
2 maximum volume?
3

4 **Response:**

5 Based on its experience, FEI does not expect its portfolio of supply contracts to consistently
6 produce RNG at the sum of the total maximum contractual volumes. Rather, given the nature of
7 production of RNG, the infancy of the supply market, and the technological development in the
8 renewables space, FEI expects that supply volume will continue to vary year to year. Therefore,
9 FEI's expected RNG volume from its supply portfolio is a more accurate measure of the amount
10 of RNG that FEI will be acquiring.

11 The concept of managing the RNG supply cap was explored in FEI's 2012 Application for
12 approval of a permanent RNG Program. At that time, FEI observed that actual supply of RNG
13 was consistently below contracted maximum volumes and the BCUC agreed that the total
14 contracted volume could be above the cap at that time. More specifically, when it established
15 the initial RNG supply cap of 1.5 PJ annually, the BCUC stated¹:

16 The Panel notes FEI's submission regarding lower than expected volumes from
17 existing supply contracts. Accordingly, when calculating the maximum amount
18 that can be contracted for the purpose of determining if the Supply Cap has been
19 reached, the Panel directs that the total contracted maximum amount must not
20 exceed 2 PJ.

21 FEI's current acquisitions of RNG fit within the GGRR maximum even if measured by the total
22 maximum contractual volumes, and FEI submits that how it will manage future RNG supply
23 acquisitions within the GGRR maximum volume amount should not be resolved in the abstract
24 in this proceeding. FEI will address how its future RNG acquisitions fit within the GGRR
25 maximum volume when it seeks the BCUC's acceptance of its energy supply contracts.

26

¹ Page 85 Decision, Biomethane Services Offering: Post Implementation Report and Application for the Approval of the Continuation and Modification of the Biomethane Program on a Permanent Basis.

4.0 Reference: BERC RATE METHODOLOGY

Exhibit B-1, p. 6

Impacts from the temporary closure of the Biomethane Program

On page 6 of the Report, FEI states:

The temporary closure of the RNG Program led to the steady erosion of the total number of customers enrolled, due to the ordinary level of customers exiting the program not being replaced by new participants. FEI expects that new RNG supply projects will begin delivering significant additional volumes of RNG beginning in late 2021, at which time FEI will again be actively engaged in enrolling new customers.

4.1 Please discuss any impacts FEI anticipates as a result of the temporary closure of the Biomethane Program, including but not limited to, impacts to customer engagement, awareness, and participation in the program.

4.1.1 Please describe any measures FEI has implemented, or plans to implement, to mitigate any negative impacts associated with the temporary closure of the Biomethane Program.

Response:

FEI has maintained engagement with residential customers as to future RNG supply projects and the role RNG plays in assisting customers in reducing their GHG emissions. Additionally, FEI's key account management team has maintained close contact with large customers across various key sectors including public and private healthcare, education, affordable housing, government, and municipal, since the temporary closure of the RNG program to keep these customers updated on the status of the future RNG supply.

RNG is a key pillar of FEI's 30by30 target to help reduce our customers' GHG emissions by 30 per cent by 2030. FEI's 30by30 communications in 2020 have included messaging that drives awareness in RNG and how FEI is working to bring on supply.

FEI has also kept the public informed about the various projects underway to bring on more RNG supply, including communications about the REN Energy Wood Waste project near Fruitvale, BC, and the FEI and City of Vancouver partnership to produce RNG at the City's landfill in Delta.

FEI plans to develop RNG program communications in anticipation of the program reopening. Future RNG program communications will aim to drive awareness among existing and prospective customers and encourage participation.

4.2 Please confirm, or otherwise explain, that the Biomethane Program is still closed to new participants.

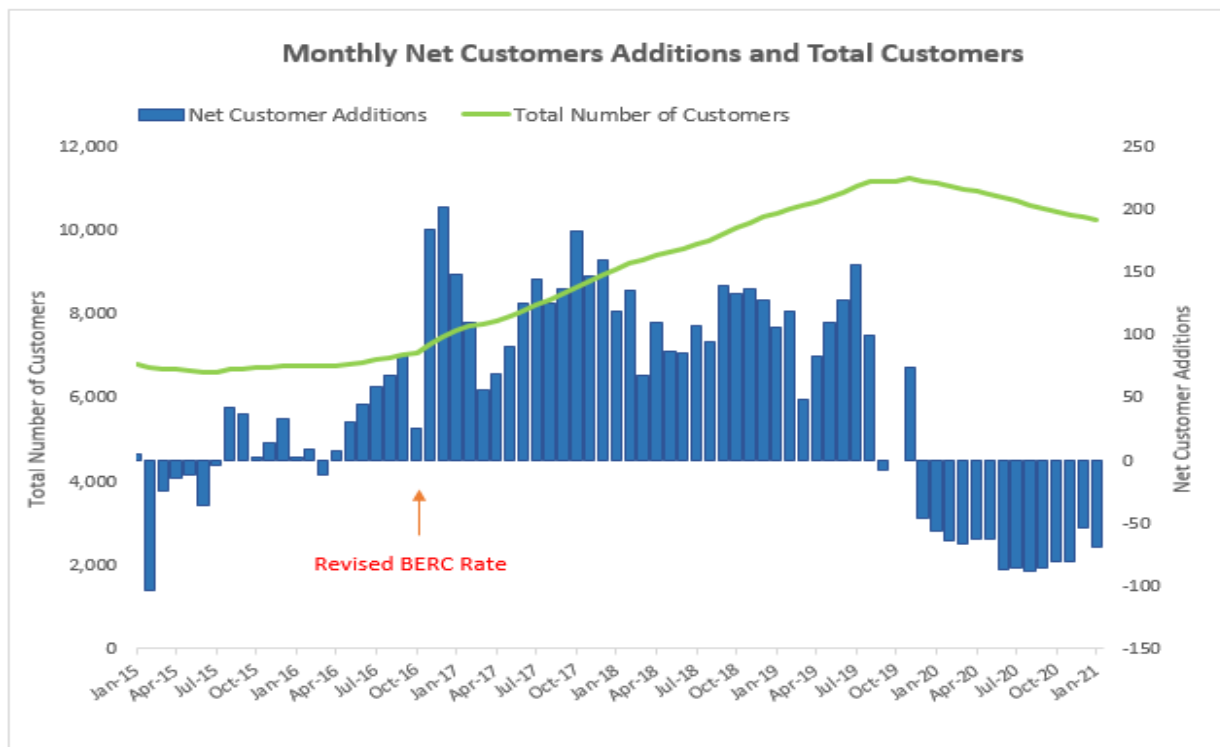
Response:

Confirmed.

4.3 Please update Figure 1 to include monthly data up to the end of 2020 or later, if available.

Response:

FEI has provided below an updated Figure 1 to the end of January 2021.



Note that, while the program was closed in August of 2019, the data shows customer enrolments occurring until November of that year. This occurred due to a limitation in FEI's Account Online system in that the option to sign up for RNG could not immediately be removed from Account Online, allowing some customers to enroll after the program closure. FEI's contact centre staff called each such customer individually to explain the situation, and subsequently manually un-enrolled each customer from the program.

4.4 Please indicate what is the ordinary rate of erosion, in a scenario where there is a steady supply.

Response:

Between the adoption of the current BERC rate and the temporary program closure in August 2019, the program did not experience an erosion in the total number of customers enrolled. During this period the monthly drop-offs were more than offset by new customer enrollments, in the range of approximately 50 to 200 monthly net customer additions. As noted in the preamble, since the program closure the net customer additions has been negative due to normal customer drop offs not being replaced by new participants.

The churn rate, rather than erosion rate, may be of interest². The average monthly churn rate for each year for mass market customers (Rate Schedule 1B), from 2016 to 2020, ranges from about 0.7 percent to 1.2 percent. FEI has not witnessed a significant increase since the closure of the program. Please also refer to the responses to BCSEA IR1 11.1 for a discussion of churn rates and BCUC IR1 16.1 for updated customer data.

4.4.1 Please discuss whether the COVID-19 pandemic has accelerated the rate of erosion of the total number of customers enrolled. If so, please indicate which types of customers have seen their rate of erosion accelerate the most under the pandemic.

Response:

FEI has not seen any significant increase in customer drop offs since the onset of the pandemic. More broadly, since the RNG program is still closed to new participants, FEI is not able to use customer enrolment data to gauge whether or not there has been any impact on demand for RNG among mass market customers.

² Churn Rate = No. of Customer drop offs / Average No. of customers.

5.0 Reference: **BERC RATE METHODOLOGY**

Exhibit B-1, p. 11

Carbon offset purchases

On page 11 of the Report, FEI states “In 2019, the total volume of RNG sold to meet customer demand was 315 TJs [terajoules]. The total RNG supply from existing RNG production facilities was 225 TJs.... The shortfall of 90 TJs between RNG supply versus RNG sold was fulfilled with the purchase of carbon offsets.”

5.1 Please provide (i) the purchase cost; and (ii) the ratepayer impact associated with the 90 TJs of carbon offsets purchased in 2019.

5.1.1 Please discuss how the cost and ratepayer impact of purchasing carbon offsets compares to the cost of purchasing RNG for the Biomethane Program.

Response:

The following response addresses BCUC IR1 5.1, 5.1.1 and 5.2.

Differences Between Purchasing Carbon Offsets and RNG

Purchasing carbon offsets requires the purchase of two separate components.

- The first is the actual offset component which includes the environmental attributes associated with the emissions reductions from where the offset was generated. The purchase is typically made based on the emissions reductions equivalent to one GJ of biomethane.
- The second requires the purchase of one GJ of conventional natural gas to which the environmental attributes are attached. An equal amount of conventional gas is transferred from the FEI MCRA at the prevailing commodity rate.

Combining these two components creates a GJ of natural gas with equivalent environmental attributes to one GJ of biomethane.

In comparison, when FEI purchases RNG, FEI purchases the molecules of biomethane and associated environmental attributes together.

Purchase Cost and Ratepayer Impact of Carbon Offsets

In 2019, carbon offsets equal to 90.7 TJs of conventional gas emissions were purchased to satisfy the shortfall between biomethane purchased by customers and the biomethane purchased from suppliers. The total combined cost of carbon offsets, conventional gas and ineligible carbon tax refund was \$866,500, resulting in a total cost of \$9.55 per GJ.

The ratepayer impacts specific to RNG sales result from the difference between the BERC rate and the costs of purchasing the biomethane. In this case, the 2019 BERC rate was \$10.287 per

1 GJ, and the average purchase price of the carbon offset equivalent gas was \$9.55 per GJ. This
2 resulted in recoveries in excess of costs of \$0.73 per GJ or approximately \$66,000. The
3 \$66,000 resulted in a small credit being embedded in FEI's BVA rate rider recovered from FEI's
4 ratepayers.

5 The cost of purchasing carbon offset gas is currently lower than the cost to purchase RNG. The
6 cost difference between the two causes the difference in the ratepayer impact. At times, the
7 cost to acquire carbon offset gas can be lower than the BERC rate. In contrast, over the past
8 few years, the costs to acquire RNG have been above the BERC rate.

9 The cost difference between the two is primarily driven by the fact that carbon offset gas and
10 actual biomethane are two different products. The cost paid to acquire biomethane is
11 negotiated and based on the capital investment and operating costs to produce
12 biomethane. The cost of carbon offset gas is based on the purchase price of carbon credits sold
13 in the market plus the costs of conventional natural gas. The quality, nature and availability of
14 offsets varies and are subject to market fluctuations with respect to cost. This is compared to
15 RNG where FEI has known, predictable, long-term, sources of supply.

16 FEI's current goal is to purchase and sell true RNG as a tangible, carbon neutral form of energy,
17 which customers can readily purchase on their bill. Currently, FEI only provides carbon offsets
18 as a compliance tool in the event supply is lower than demand and the need to balance the
19 difference when sales exceed inventory. Given the fact that FEI expects supply and demand to
20 rarely (or ever) match exactly, the purchase of carbon offsets to maintain the GHG emissions
21 reductions associated with RNG demand provides for an appropriate GHG balancing
22 mechanism.

23 FEI may consider the use of carbon offsets as a compliance tool to meet evolving emission
24 reduction goals in the future.

25
26
27
28 5.2 Please discuss the difference(s) between purchasing carbon offsets to meet
29 FEI's Biomethane Program commitments and purchasing RNG that is notionally
30 delivered to British Columbia.

31
32 **Response:**

33 Please refer to the response to BCUC IR1 5.1.

34
35
36

5.3 Please discuss whether it may be possible that customers (e.g. large volume customers) would request to recognize the carbon offsets for their own benefit. How would FEI address this request and have these requests occurred to date?

Response:

Carbon offsets are purchased solely to make up for shortfall in supply and cannot be used by customers for their own benefit. To date FEI has not had any requests of this nature.

For clarity, carbon offsets can only be applied to serve the demand of customers in RS 1B, 2B, 3B and 5B. These are firm rate schedules, and the use of purchased carbon offsets is allowable to make up for a shortfall in supply. When a shortfall exists, carbon offsets are combined with conventional gas and accounted for in the BVA such that it is equivalent to acquiring RNG. This process retires the carbon offset, and the environmental benefit becomes associated with the gas.

RS 1B and 2B are for residential and small commercial service respectively. Large volume customers participate in the RNG program via RS 3B, 5B and 11B. RS 11B is an interruptible RNG rate schedule, which does not allow for the purchase of carbon offsets to cover any shortfall in supply. If insufficient supply of RNG exists, FEI simply curtails service to large volume customers in RS 11B.

The RNG program and the associated tariffs are structured to pass on all environmental benefits through the rates and associated carbon tax credits to voluntary customers of the program. In RS 1B, 2B, 3B and 5B, this would include the benefit of purchasing offsets on behalf of customers and supplying a combination of conventional gas along with associated offsets in lieu of RNG in a supply shortfall situation. Any gas sold to customers under the program, be it RNG from a supplier or from combining conventional gas and carbon offsets, is considered carbon neutral, and carbon tax is not applicable for example. Therefore, all customers in the applicable rate schedules recognize the carbon offset benefits when they purchase RNG instead of conventional natural gas.

Given the construct described in the preceding paragraph, it would not be possible for larger volume customers in RS 3B or 5B to recognize the carbon offsets purchased by FEI for their own benefit. This is because the offsets would have been purchased by FEI on their behalf and retired. The environmental benefit would already have been attached to conventional gas and FEI could not pass on the benefits required to allow these customers to use them for their own benefit.

Please also refer to the response to BCUC IR1 5.1 for additional information on how carbon offsets are purchased.

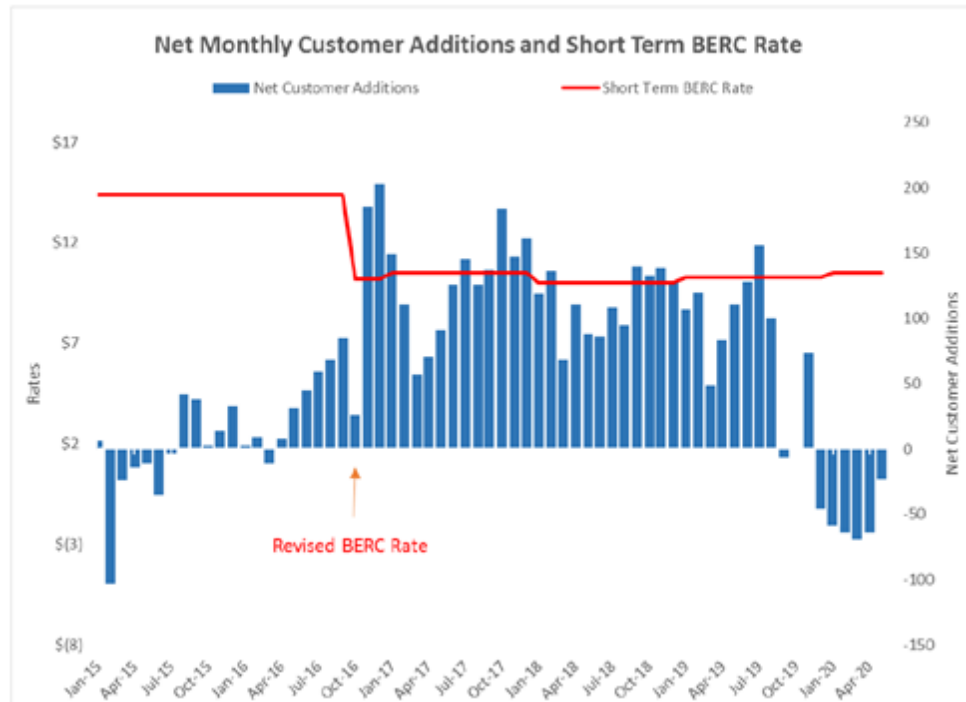
6.0 Reference: BERC RATE METHODOLOGY

Exhibit B-1, Section 2, p. 3 and Figure 2, p. 7

RNG premium under prior BERC rate methodology

FEI states that “[...] in 2015, the BERC Rate, and the associated premium as compared to conventional natural gas, had reached a point that discouraged customers from voluntarily enrolling in the RNG Program.”

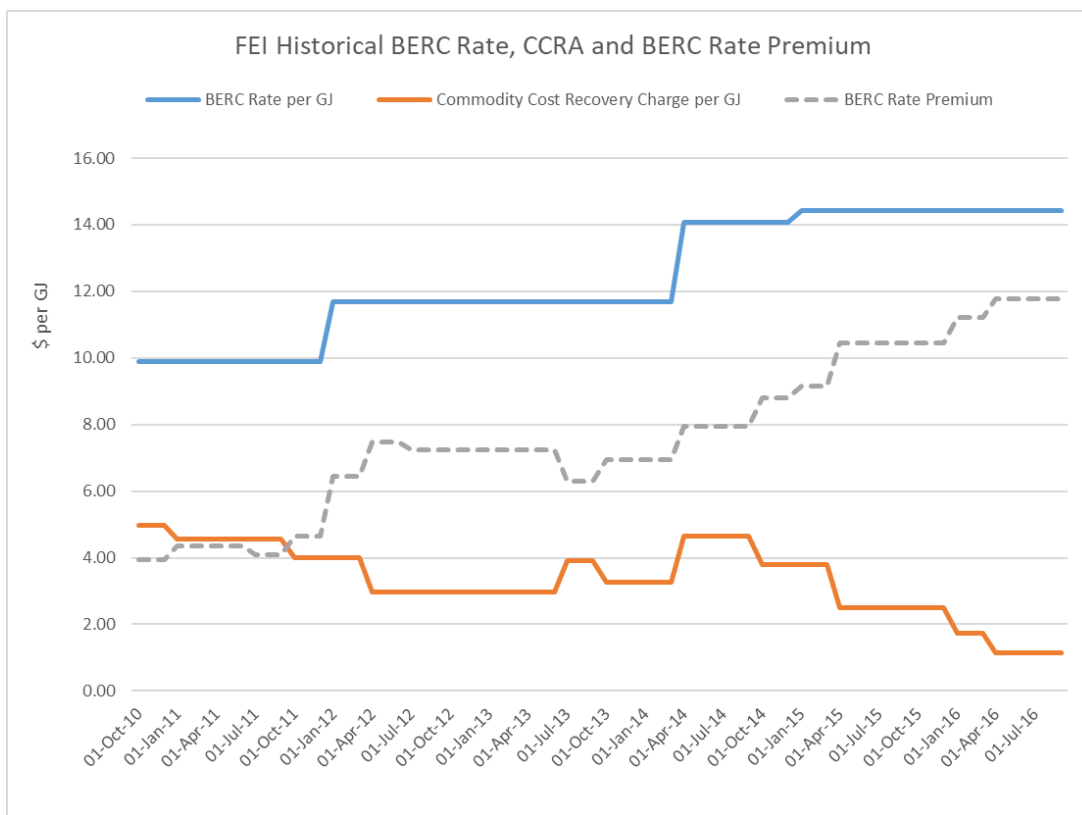
Figure 2: Monthly Net Customers Addition and Short Term BERC Rate



6.1 For each of the years leading up to the change in BERC rate methodology on October 1, 2016, please provide the level of the BERC rate and the associated RNG premium compared to conventional natural gas.

Response:

The following chart provides the requested information:



Note that BERC Rate Premium in this figure is calculated as the BERC Rate less the CCRA rate and applicable Carbon Tax.

6.2 Please confirm, or otherwise explain, that the BERC Rate prior to the change in methodology on October 1, 2016 was set at a level that recovered all RNG Program costs.

6.2.1 If so, please confirm, or otherwise explain, that the level of cross-subsidy from FEI's non-bypass customers to RNG customers is approximately in the range of \$4.00-\$4.50/GJ (i.e., the difference between the BERC Rate of about \$14.50/GJ prior to the change in methodology and the revised Short Term BERC Rate that oscillated between \$10.039/GJ \$10.54/GJ after the change).

Response:

Confirmed that, prior to the change in methodology on October 1, 2016, the BERC Rate was set at a level that was intended to recover all RNG Program costs.

To explain the impact on non-bypass customers, FEI provides the table below showing the rate impact of the BVA rate rider. The impact to non-bypass customers has been isolated to the

1 BVA rate rider³ amount embedded in the delivery charge and the balance of the BVA Balance
2 transfer deferral balance in rate base.

3 FEI has provided the table below summarizing the total BVA Balance transfer account balance
4 to be collected with the BVA rate rider and the estimated cost of service associated with the
5 BVA Balance transfer deferral account in rate base.

6 The cost of service of the BVA Balance transfer rate base account included in delivery rates is
7 based on the projected balance of the account and is included as part of FEI's annual review
8 filings. The projection includes prior year true-ups of variances between prior year forecast and
9 actual activity in the account, the balance transferred from the BVA, and a projection of current
10 years' recoveries through the BVA rate rider.

11 FEI also notes the BVA rate rider did not come into effect until January 1, 2018; therefore, the
12 table below shows no impact in 2017. FEI's Annual Review for 2018 Rates was the first year
13 FEI included the BVA Balance transfer account in rate base and the first year the BVA rate rider
14 was collected from non-bypass customers.

| ITEM | 2017 | 2018 | 2019 | 2020 |
|---|-------------|----------------|----------------|----------------|
| BVA Balance Transfer Projection from Annual Review \$000's | - | 3,830 | 2,633 | 2,761 |
| Estimated cost of Service Mid Year Rate Base \$000's | - | 147 | 102 | 103 |
| Total Recovered from non-RNG customers \$000's | - | 3,977 | 2,735 | 2,864 |
| Approved Rider 3 - BVA Rate Rider \$/GJ | \$ - | \$ 0.026 | \$ 0.018 | \$ 0.019 |
| Cost of service included delivery charge \$/GJ | \$ - | \$0.0008 | \$0.0005 | \$0.0005 |
| Total Cost per GJ paid by non-RNG customers | \$ - | \$ 0.03 | \$ 0.02 | \$ 0.02 |
| Bill Impact Average annual residential customer consuming 90 GJs | \$ - | \$ 2.41 | \$ 1.67 | \$ 1.76 |

15
16 The data shows that from 2018 through 2020 the annual bill impact to an average residential
17 customer consuming 90 GJs per year averaged to about \$2 per year. This includes the rider
18 amount and the rate base related costs of the BVA balance transfer deferral account.

19

³ The BVA rate rider recovers the cost in the BVA Balance transfer account.

7.0 Reference: BERC RATE METHODOLOGY

Exhibit B-1, Section 2.1.2, Figure 3, p. 9

Sales volumes

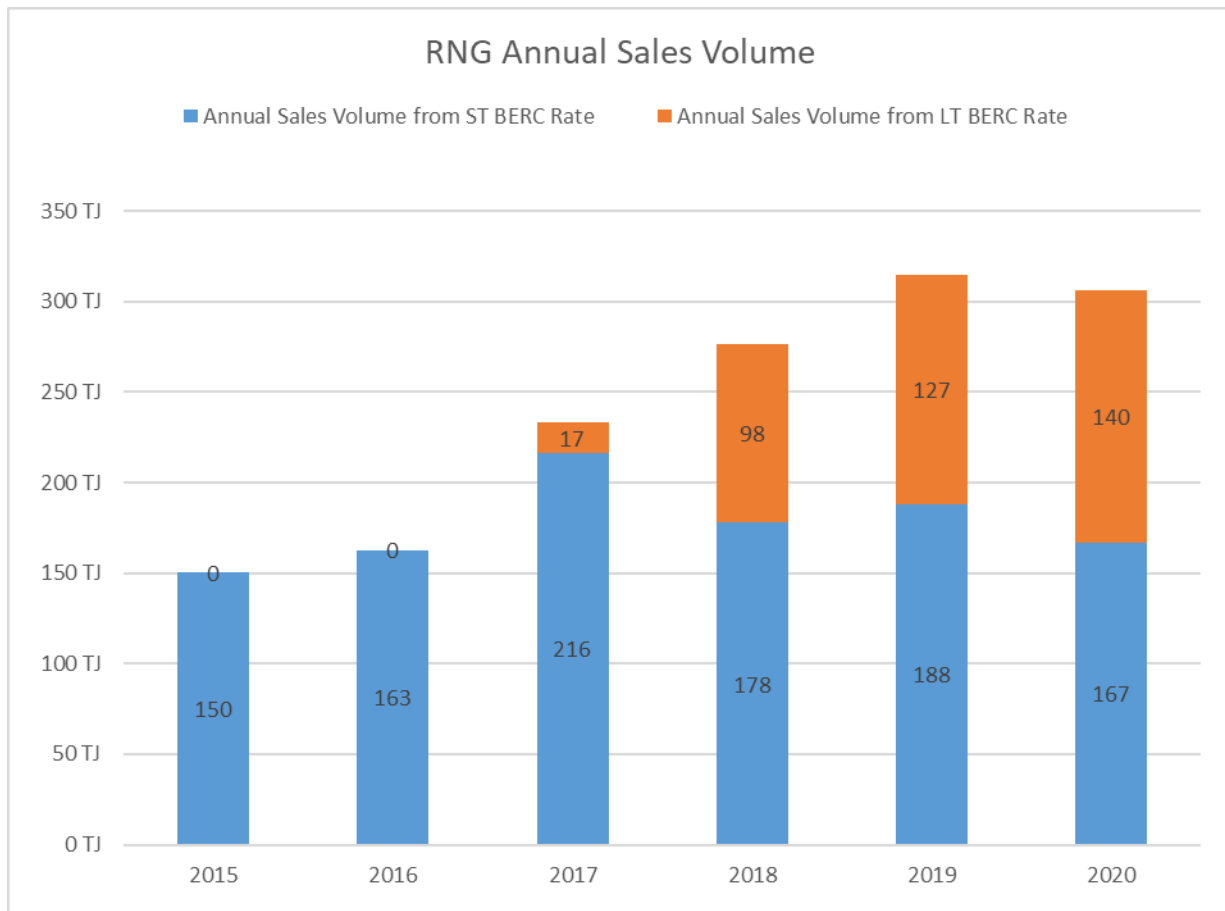
On page 9 of the Report, FEI states that:

The increase in short-term sales volumes in 2017, and the subsequent decrease in 2018, as shown in the blue bars in the figure above, is due to the migration of UBC [University of British Columbia] and City of Vancouver from the Short Term BERC Rate to the Long Term BERC Rate in 2017 and 2018. The short-term volumes sold in 2017 increased compared to 2016 when the City of Vancouver began consuming a significant volume of RNG.

7.1 Please update Figure 3 with 2020 data, if available.

Response:

The following updates Figure 3 with 2020 data.



7.2 In FEI's view, is the significant increase in demand from the City of Vancouver, starting in 2017, attributable to the lower BERC rate or is it the result of the City of Vancouver's climate action policies, which could have led to this large increase in demand even without a change in BERC rate?

Response:

The increase in COV's RNG demand beginning in 2017 is attributable to multiple factors, including the lower BERC rate and the city's climate action policies. Of note is the ongoing expansion of the COV's Neighbourhood Energy Utility (NEU), which is the city's primary consumer of RNG under the long term agreement, which requires 70 percent of its energy to come from renewable sources.

The NEU has been expanding its number of connected customers since 2017. The NEU experienced significant growth in 2018 when it added nine new customer buildings, which increased its connected customer base by approximately 24 percent. The NEU has continued to grow its customer base to the present day, with even more expansion planned to 2026.

Throughout its growth, the NEU is required and expected to carefully manage rates for its customer base. The short term BERC rate was an effective starting point, but given the NEU anticipated a need for larger volumes of RNG over time, the lower BERC rate of a long term agreement met that need.

It is also important to note that the NEU's energy source mix consists of sewage waste heat recovery, RNG and natural gas. In order to maintain a 70 percent mix of renewables⁴ for the NEU's energy sources as its customer base expands, the energy from these sources must also increase commensurately over time. As such, RNG supply security was a very important consideration as the NEU needed the ability to incorporate RNG volume increases in subsequent years of a contract. These volume increases are able to be specified within a schedule that forms part of a long term contract. Their waste heat recovery capacity did not offer this same flexibility as it could only be expanded at a future date through planned capital expenditures.

Given these factors, the lower BERC rate and RNG supply security acted as key drivers alongside climate action policies in the City's decision to execute a Long Term Biomethane Agreement.

⁴ Required by the city's climate policies.

8.0 Reference: BERC RATE METHODOLOGY

Exhibit B-1, Section 2.1.2, p. 9

Price elasticity

On page 9 of the Report, FEI states that:

The average volume of RNG sold per residential customer over the period has seen a modest increase since the revised Short Term BERC Rate was introduced. At the end of 2016, RNG sales volumes were approximately 60,500 GJs for approximately 6,968 residential customers, for an average volume per customer of approximately 8.7 GJs. By the end of 2017, the average volume per customer had increased to approximately 10.9 GJs and has remained above 10 GJ per customer since.

8.1 What is the price elasticity of RNG demand for residential customers (Rate 1B)?

Response:

The 2015 BERC Rate Application provided insight into the Residential customers' price preferences; however, FEI has not since conducted any price elasticity research for Rate 1B customers. FEI believes that customer willingness to pay is a question best addressed in the forthcoming comprehensive review and assessment of the RNG Program.

8.2 Please indicate if FEI also noticed a similar trend in the average volume of RNG sold per commercial customer over the same period (Rate 2B, 3B and 5B)?

8.2.1 What is the price elasticity of RNG demand for small and large commercial customers?

8.2.2 What is the percentage of RNG uptake for an average small and large commercial customer?

Response:

FEI has observed that the average volume of RNG sold per RS 2B customer similarly increased over the period in question. The average volume sold per RS 2B customer increased from approximately 50 GJ per year in 2016 to 78 GJ per year in 2017 and hit a high of 90 GJ per year in 2020. Note that this is when FEI's customer count for RS 2B ranged around 150 to 200.

A discussion of the average volumes of RNG sold per RS 3B and 5B customer does not provide any meaningful insight due to the limited number of participants in these rate classes, as well as the great variation in energy consumption that can exist from one customer to the next. The number of RS 3B customers was in the mid-teens in all years, and there has only ever been two RS 5B customers. Given the wide divergence in the total volume of conventional gas and RNG

1 consumed by these customers, and the limited number of participants, the timing of any one
2 customer's entry into the program can create a significant change in the average consumption
3 per customer.

4 FEI has not assessed the price elasticity of small and large commercial customers specifically.
5 FEI did provide evidence in the 2015 BERC Rate Application describing how the appropriate
6 premium for the RNG program was \$7 per GJ or less⁵, and how at prices which exceed this
7 level the number of RNG program additions declined markedly. FEI also demonstrated that the
8 optimum premium to maximize participation appeared to be \$6 per GJ based on customer
9 feedback. FEI has not conducted any price elasticity research since implementation of the
10 Decision in October 2016. FEI is conducting a comprehensive review and assessment of the
11 RNG Program, and believes that customer willingness to pay at various price points will be
12 discussed in that filing.

13 FEI understands the request for "*the percentage of RNG uptake for an average small and large*
14 *commercial customer*" to be asking for the average RNG blend selected by these customers.
15 The average blends for RS 2B, 3B and 5B customers are 24 percent, 32 percent and 100
16 percent, respectively.

17
18
19
20 8.3 What is the price elasticity of RNG demand for large volume interruptible sales
21 customers (Rate 11B Standard)?
22

23 **Response:**

24 FEI has not conducted price elasticity research for RS 11B Standard customers. FEI
25 hypothesizes that the price elasticity of RS 11B customers will be significantly influenced by
26 various factors that are specific to particular industries or customers, such as GHG emissions
27 reduction targets, the price of long term RNG compared to alternatives, environmental initiatives
28 from different levels of government in addition to the ability of an industrial customer to monetize
29 the green benefits. It may therefore not be possible to establish a meaningful price elasticity for
30 large volume interruptible customers as a whole. Regardless, FEI believes that customer
31 willingness to pay is best addressed in the forthcoming comprehensive review and assessment
32 of the RNG Program.

33
34
35
36 8.4 What is the price elasticity of RNG demand for long-term contract customers
37 (Long-term Rate 11B)?

⁵ Application for Approval of Biomethane Energy Recovery Charge (BERC) Rate Methodology (the Application), Section 5.2, pg 32.

1

2 **Response:**

3 FEI has not conducted price elasticity research for large volume, interruptible RS 11B
4 customers, either standard or long term. Please also refer to the response to BCUC IR1 8.3.

5

6

7

8 8.5 Please discuss whether the price elasticity of RNG demand could differ among
9 classes of customers due to factors such as the obligation for some customers to
10 meet GHG emissions reduction targets while others adopt RNG on a purely
11 voluntary basis, or that some customers have entered long-term contracts.

12

13 **Response:**

14 FEI agrees that price elasticity of RNG demand could differ among classes of customers due to
15 factors such as mandated GHG emissions reduction targets for some customers, while others
16 may adopt RNG on a purely voluntary bases. Other factors may include Clean Fuel Standards,
17 clean power purchase contracts, corporate renewable energy targets, monetization of green
18 credits, and municipal building code requirements. Customers who adopt RNG on a purely
19 voluntary basis may be more sensitive to the price of RNG whereas other customers who need
20 to meet GHG emission reduction targets for example might be less sensitive to the price of
21 RNG. As noted in the response to BCUC IR1 8.1, FEI believes a further discussion of
22 customers' willingness to pay is better addressed in the forthcoming comprehensive review and
23 assessment of the RNG Program.

24

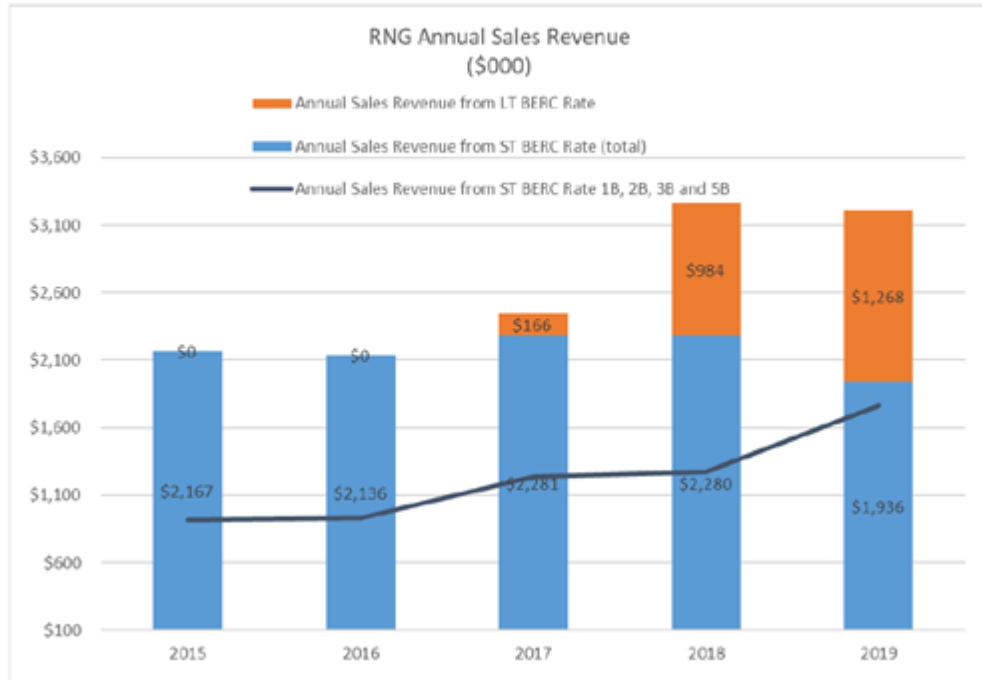
9.0 Reference: BERC RATE METHODOLOGY

Exhibit B-1, Section 2.1.3, Figure 4, p. 10

Total revenues

On page 10 of the Report, FEI states that:

Figure 4: Annual RNG Revenue by Short Term and Long Term Customers



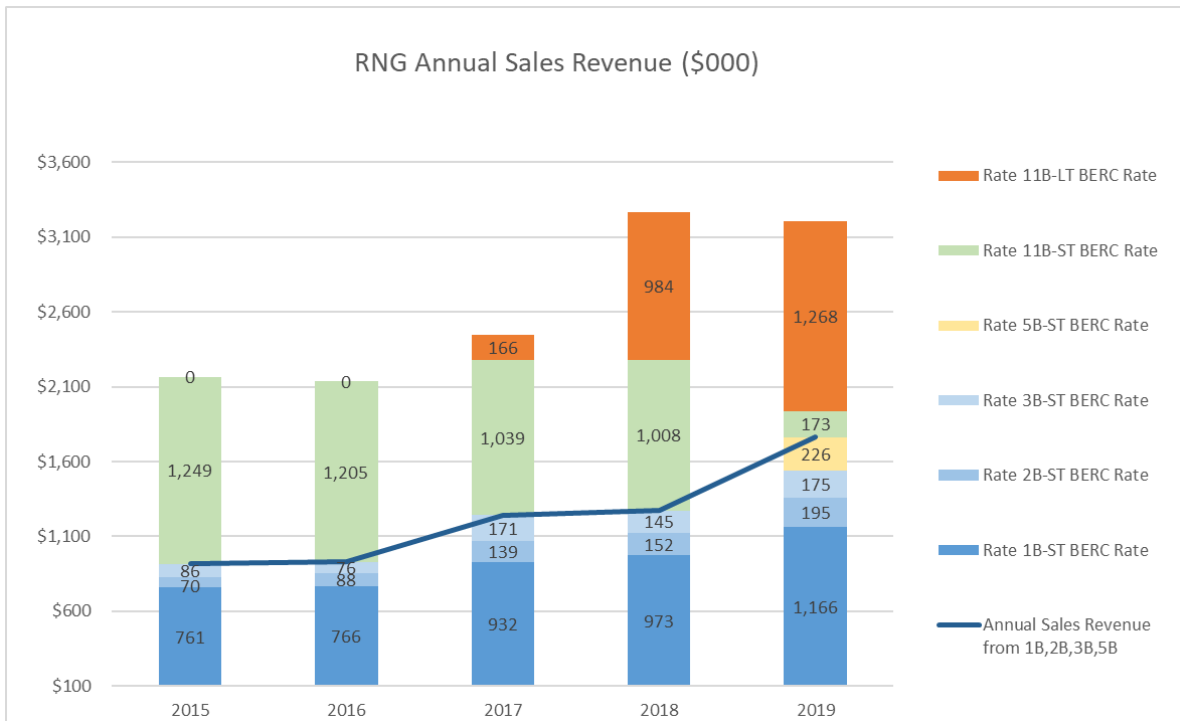
As shown in the black line in Figure 4 above, the total revenues generated from mass market residential and commercial customers (RS 1B, 2B, 3B and 5B) grew over the period as sales volumes and customer participation steadily increased.

9.1 Please add another line to Figure 4 to show the total revenues generated from the Short Term BERC Rate 11B Standard.

9.1.1 Please confirm, or otherwise explain, that the decrease in revenues generated from the Short Term BERC Rate 11B Standard is solely due to the migration of UBC and the City of Vancouver from RS 11B to the Long Term BERC Rate.

Response:

FEI has provided an updated Figure 4 below. The graph has been updated to show the revenues of all rates classes over the period as part of the bars. The green sections of each bar represents the requested revenues from Short-Term BERC RS 11B Standard customers as requested in the question.



The decrease in revenues generated from the Short Term BERC RS 11B Standard is almost entirely due to the migration of UBC and the City of Vancouver from RS 11B to the Long Term BERC Rate, but not solely. This is because there was one smaller volume Standard RS 11B customer who ended their participation in July 2019 which also contributed to the decrease. Differences in weather from one year to the next may also have an effect; however, this is negligible compared to the effect of the shift of UBC and City of Vancouver, and therefore FEI has not performed any weather normalizing analysis. Due to the temporary closure of the RNG program, FEI did not enroll more customers under RS 11B.

9.2 Does FEI anticipate the migration of more customers currently taking RNG service under RS 11B Standard to the Long Term BERC Rate as more supply becomes available? Please discuss.

Response:

No, FEI does not anticipate more customers currently taking RNG service under the standard RS 11B to migrate to the Long Term BERC Rate as more supply becomes available. FEI has only 1 other subscriber potentially taking RNG under the standard RS 11B. This customer has not yet nominated any volumes for 2021, and, has not typically taken enough volume to meet the consumption requirement to access the long term contract option.

1 **10.0 Reference: BERC RATE METHODOLOGY**

2 **Exhibit B-1, p. 14**

3 **BERC rate methodology**

4 On page 14 of the Report, FEI states:

5 FEI believes that maintaining the current BERC rate methodology will be
6 essential to maintaining the interest of new customers enrolling in the RNG
7 Program in 2021 and increasing demand for this new RNG supply.

8 10.1 Please explain why FEI believes maintaining the current BERC rate methodology
9 is “essential to maintaining the interest of new customers enrolling in the RNG
10 Program in 2021...”

11
12 **Response:**

13 Until such time as FEI’s comprehensive review and assessment of the RNG Program is
14 completed, maintaining the current rate structures, which successfully improved customer
15 enrollment, is appropriate and is in the interests of new customers enrolling in the RNG Program
16 in 2021. At the time of writing of the Report, FEI was not in a position to provide or suggest
17 alternative offerings or changes to the BERC offerings and, barring additional information and
18 analysis, it would have been premature to change the nature of the program. Therefore
19 maintaining the interest of new customers enrolling is best accomplished by keeping the
20 program as is, until FEI’s comprehensive review and assessment of the RNG program.

21
22

23
24 10.2 Please explain what challenges, if any, FEI has faced with using the current
25 BERC rate methodology, and how FEI intends to address these challenges if the
26 current methodology is maintained.

27
28 **Response:**

29 FEI has not faced any challenges which are attributable strictly to the current BERC rate
30 methodology. The current BERC rate methodology has led to positive net growth in customer
31 participation as well as RNG sales volume and revenues. On the other hand, the current BERC
32 rate methodology may not be sufficient to properly address the RNG market conditions in the
33 coming years. For example, changes to Federal and Provincial emissions regulations and
34 changes to climate policy at the municipal level that set emissions targets for buildings may not
35 be well accounted for under the current BERC rate methodology. Moreover, other factors such
36 as a focus on environmental, social and governance (ESG) factors may play a role for larger
37 corporations to reduce emissions. A discussion of these factors is better addressed in the
38 upcoming comprehensive review and assessment of the RNG program.

10.3 Please discuss the learnings that FEI has experienced using the current methodology in the past few years, that could be applied to future years.

Response:

This question would be better addressed in the forthcoming comprehensive review and assessment of the RNG Program, when FEI has had the opportunity to assess how the market for RNG may take shape in the coming years. It is, however, possible at this point to provide some initial observations:

1. Mass market customers are price sensitive. While it is clear that the current BERC rate encouraged a steady increase in mass market customer enrollment, many mass market customers find that the price is a barrier to enrollment. An indication of this price sensitivity is that a large proportion of RS 1 customers are enrolled in the lower blends; that is, to manage the incremental cost they enroll at the 5% and 10% RNG blend levels.
2. There has been greater demand potential in the large volume customer market than had been anticipated. Large volume customers have different drivers than mass market customers, and also they differ from one large volume customer to another; however, price is also a consideration for this customer group. Government regulations on GHG emissions can provide the motivation to enroll in the RNG program. Regulations can also lead to different degrees of motivation, depending on how they are applied to, and the costs they impose on, different industries. Initial indications lead FEI to believe that these customers may, depending upon their particular circumstances, require a different rate than the current rate structure.

1 **C. SUPPLY/DEMAND BALANCING FOR THE RNG PROGRAM**

2 **11.0 Reference: SUPPLY/DEMAND BALANCING FOR THE RNG PROGRAM**

3 **Exhibit B-1, Section 3, p. 11**

4 **Interruptible sales (RS 11B)**

5 On page 11 of the Report, FEI states that:

6 In 2019, as demand was exceeding the available supply, FEI ceased accepting
7 new enrolments in the RNG Program and curtailed the volume of RNG available
8 for sale to large volume, interruptible RNG rate customers under Long Term
9 BERC Rate contracts served through Rate Schedule (RS) 11B.

10 11.1 In light of the steady erosion of the total number of customers enrolled due to the
11 temporary closure of the RNG Program, has FEI been able to reduce or eliminate
12 the need to curtail the volume available for sale to RS 11B customers? Please
13 discuss.

14

15 **Response:**

16 While there has been a small but steady erosion of mass market customer enrollment leading to
17 a somewhat reduced demand for RNG, the reduction in demand is not sufficient to eliminate the
18 need to curtail volume available for sale to RS 11B customers.

19 To illustrate, the combined RNG demand from the Long Term RS 11B customers in 2020 was
20 approximately 250 thousand GJs, as per their contracts. Under curtailment, these customers
21 were provided a little over half of their requested volumes. Consequently, the shortfall was well
22 over 100 thousand GJs. In contrast, the average residential customer consumes approximately
23 11 GJ/yr of RNG. Between August 2019 and January 2021 approximately 900 residential
24 customers left the program; therefore in mid 2020 the estimated erosion would have been
25 approximately 450 customers (½ of 900). This would have produced a demand savings of 450
26 x 11 = 4,950 GJ/Yr; not nearly enough to eliminate or even greatly ease the 100 thousand GJ
27 curtailment through late 2020 or into the start of 2021.

28

12.0 Reference: SUPPLY/DEMAND BALANCING FOR THE RNG PROGRAM

Exhibit B-1, Section 3, p. 11; Section 4.1, p. 14

Carbon offsets

On page 11, FEI states that:

In 2019, the total volume of RNG sold to meet customer demand was 315 TJs. The total RNG supply from existing RNG production facilities was 225 TJs. This represents a 28 percent increase in RNG supply over the 2018 total of 176 TJs. The shortfall of 90 TJs between RNG supply versus RNG sold was fulfilled with the purchase of carbon offsets.

On page 14, FEI states that:

In 2017 FEI sold more RNG than it had available, while there was a timing difference with its purchase of carbon offsets in 2018, which resulted in the negative opening value for January 1, 2018.

12.1 Please complete the following table:

| | | 2017 (actual) | 2018 (actual) | 2019 (actual) | 2020 (actual) | 2021 (forecast) |
|---|--|---------------|---------------|---------------|---------------|-----------------|
| A | Total RNG supply (TJ) | | | | | |
| B | Purchase of carbon offsets (TJ) | | | | | |
| C | Total RNG sales (TJ) [C = A + B] | | | | | |
| D | Average price of carbon offsets (S/GJ) | | | | | |

Response:

FEI presents the requested information in Table 1 below.

FEI has made a modification to the table to better represent the process FEI follows in a given year. FEI first accounts for total supply and total demand. In the event that there is more demand than supply, FEI purchases offsets and transfers an equal amount of conventional gas to make up the shortfall as indicated in the response to BCUC IR1 5.1.

The revised table below should be interpreted as follows.

- Item (B) represents the total RNG Sales (Demand) to customers.
- Item (C) represents the annual biomethane shortfall based on the difference between RNG supply (A) and RNG sales (B). This is the shortfall used to purchase carbon offsets. For example, in 2019 FEI purchased approximately 91 TJ of equivalent carbon offsets (as well as transferring 91TJ of conventional gas).

- Item (D) represents the average market price for carbon offsets converted to a dollar per GJ. Based on historical purchases to account for the shortfall in RNG supply, the range of price per GJ is approximately \$0.50 to \$1.50, and therefore FEI has assumed an average market price for carbon offsets of \$1.00.

Table 1: RNG Shortfall and Carbon Offset Purchase

| Item | | 2017 (Actual) | 2018 (Actual) | 2019 (Actual) | 2020 (Actual) | 2021 (Forecast) |
|----------|--|------------------|------------------|------------------|------------------|--------------------|
| A | Total RNG Supply (TJ) | 153.8 | 176.2 | 224.5 | 250.4 | 770 |
| B | Total RNG Sales (Demand TJ) | 233.1 | 276.2 | 315 | 306.2 | 345.1 |
| C | RNG Shortfall [A-B] (TJ) | -46.9 | -100 | -90.5 | -55.8 | 424.9 |
| D | Average price of carbon offsets (\$/GJ) | \$ 1.00 | \$ 1.00 | \$ 1.00 | \$ 1.00 | \$ 1.00 |

At the outset of 2017 there was an opening RNG supply surplus of 32.4 TJ, which when combined with purchases of 153.8 TJ and sales of 233.1 TJ resulted in shortfall of 46.9 TJ for 2017.

The forecasted RNG supply of 770 TJ for 2021 is contingent upon several new RNG supply projects being placed into service later in 2021. Also note that the RNG supply volume for 2021 has been reduced from 950 TJ in Table 3 of the Report, to 770 TJ in this response. This is due to several projects experiencing delays, and slower than anticipated ramp ups in production. For further explanation on updates to RNG, please refer to the response to BCUC IR1 3.1. If none of the new supply projects were to begin supplying RNG in 2021, FEI anticipates the total RNG available from its current suppliers would be approximately 350 TJ for the year.

The RNG demand for 2021 presented here is a value assuming curtailment remains in place for the year. If the new RNG supply projects begin supplying RNG as FEI currently anticipates, FEI will be in a position to ease or possibly entirely eliminate the curtailment. For reference, the total uncurtailed demand of FEI's current RNG customers for 2021 is approximately 494 TJ.

At present, FEI is not forecasting a need to purchase carbon offsets in 2021. This is however contingent on the success of the new RNG supply projects and the situation could change rapidly as we enter the later part of 2021.

12.2 Please confirm, or otherwise explain, that the 315 TJ referenced in the first quote above is a curtailed volume.

Response:

Confirmed.

12.3 For each of the years when carbon offsets were purchased, did FEI need to also curtail the contracted volumes of FEI's large volume, interruptible customers under Long Term BERC Rate contracts served through RS 11B? If so, by how much?

Response:

FEI has purchased offsets in each of the years 2017 through 2020.

Service to FEI's large volume customers was not curtailed in either 2017 or 2018 as FEI believed that new RNG supply projects would commence shortly and that the shortfall was relatively temporary. FEI did curtail RNG service to large volume interruptible customers under long term contracts in both 2019 and 2020 as it became apparent that the mismatch between supply and demand would last longer and be greater in magnitude than was originally believed. Curtailment began for all these customers at the same time, in August 2019, and resulted in them receiving between 55 and 62 percent of their requested demand for the year. In addition, in August 2019 enrollment was closed to customers in the firm rate schedules and currently remains closed.

Curtailment was maintained in 2020 and saw these same customers receive 55 percent of their requested demand for the year. Note that while the percentage of RNG delivered declined in 2020 versus 2019, the total volume of RNG delivered increased. The reduced percentage is attributable to increasing demand as specified in the long term contracts.

Service is curtailed to large volume interruptible customers in 2021; however, as new sources of supply commence it may be possible to ease or even eliminate the curtailment by the end of the year. Therefore, FEI is not yet in a position to specify the degree to which RNG service to these customers will be curtailed in 2021.

12.4 Please explain why FEI chose to purchase carbon offsets instead of increasing the curtailment of its large volume interruptible customers.

Response:

In 2019, when it became apparent that the new supplies of RNG would not materialize over the course of the year as anticipated, FEI took action by ceasing all sales of RNG to its large volume interruptible customers as soon it was feasible to do so. This action in effect represented a 100 percent curtailment of service starting in August of 2019 continuing through to January 2020. FEI could not reduce the RNG volume delivered to these customers any

| | |
|---|------------------------------------|
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1 further, as any RNG delivered to these customers to that point was already bought, paid for and
2 consumed by the customers. The residual shortfall of supply versus demand could therefore,
3 only be made up for by purchasing carbon offsets for the firm rate schedules.

4 In 2020, FEI treated all of its RNG customers equitably by reducing the volume of actual RNG
5 sold to each customer by similar amounts⁶. This entailed curtailing service to large volume
6 interruptible customers, with any unmet demand being served by conventional natural gas; and
7 maintaining service for all firm customers, with the difference between the available RNG supply
8 and the customers' demand for firm customers being covered by the purchase of carbon offsets.
9 This same approach has been adopted for 2021.

10

⁶ Small changes in the proportion of RNG delivered to the large volume customers can create large changes in the actual volume delivered to these customers relative to the total available supply. Achieving absolute parity between all customers is therefore not possible.

13.0 Reference: SUPPLY/DEMAND BALANCING FOR THE RNG PROGRAM

Exhibit B-1, Section 3, Figure 5, p. 14

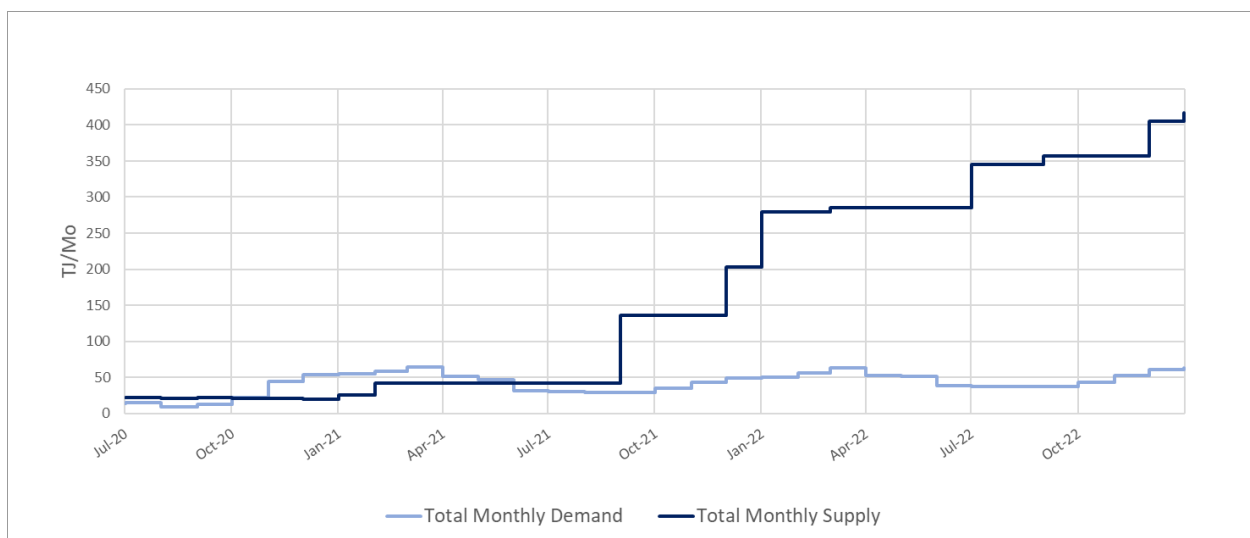
Monthly RNG supply and demand 2020–2022

13.1 Please update Figure 5 of the Report with monthly actual data until December 2020 or later, if available.

Response:

Figure 5 has been updated with the actual data to January 2021.

Figure 5: Monthly RNG Supply and Demand 2020-2022



Note that the figure has been updated with actual (i.e. curtailed) RNG demand, and actual RNG supply through to the end of January 2021. After January the figure shows the forecast RNG supply and forecast uncurtailed demand, as described in the Report⁷.

13.2 For the forecast portion of the graph, please explain if FEI has taken into consideration the supply and demand factors, such as the COVID-19 pandemic and its related impact on industry and the economy.

Response:

At this time FEI is not able to reasonably estimate the future impact, if any, that the COVID-19 pandemic may have on forecasted RNG demand. The program has been closed to new participants during the pandemic and FEI does not have good insight into the effect that COVID 19 may have on future demand for RNG. Therefore, the demand curve is comprised of the

⁷ Pg 13, lines 11 – 22.

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contracted volumes of large volume customers, and for firm customers includes an estimate for customer enrollment and drop offs based on what has been the typical churn for the program. Any other demand factors have not explicitly been considered.

For supply, the forecast portion of the graph shows FEI's estimate of the future supply of RNG provided by all the suppliers listed in Table 2 of the report. Here, FEI has used its best judgement to ensure that the timing of new supply availability, the production ramp up of suppliers, and the actual output of supply facilities (expected versus maximum volumes) are all reasonable, given FEI's experience to date. FEI anticipates that some projects will experience delays due to the pandemic; however, it is difficult to assess the full impact of this due to ongoing restrictions which are affecting regions differently. Forecasting supply project volumes and timing is dynamic and changes frequently as more current information is available on specific supply projects. As a result, a forecast today may be different than a forecast made one month from now. FEI monitors all supply projects regularly to better understand supply/demand balances and the effect changes in project timing will have on the availability of RNG for customers.

On page 14, FEI states that:

Although FEI has not permitted new participants to enrol in the RNG Program since 2019, a number of large volume customers have made their interest in RNG known to FEI. FEI is currently aware of up to 4 PJs of potential incremental demand for RNG from such customers.

13.3 Please elaborate on the reasons these large volume customers are interested to procure RNG from FEI, such as possible requirements to meet certain GHG emissions reduction targets from municipalities or the provincial government, or any other reasons.

Response:

Key reasons that large customers are interested in purchasing RNG include the need to be more environmentally sustainable while at the same time being financially sustainable. In many cases these customers are able to address their GHG emissions goals by leveraging existing mechanical systems without the need for potentially cost-prohibitive financial investments to implement completely new energy systems as a way to reduce emissions.

For example, some large volume customers are public service organizations like schools or hospitals, all of which are mandated by the provincial government to achieve carbon neutrality in their operations. In many cases, the most cost-effective way to reach such GHG emissions targets is by implementing DSM measures as well as purchasing RNG rather than by conducting extensive capital upgrades to, or replacement of, existing heating infrastructure.

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|---|------------------------------------|
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1 In some cases, large volume customers are municipal-owned facilities such as sewage or
2 waste-water treatment plants or arenas. Similarly, these facilities will often have GHG reduction
3 targets set out by the municipal government that must be met. DSM and RNG offer a cost-
4 competitive drop-in fuel pathway to achieving significant carbon emissions reductions without
5 the need for costly and complex capital replacements of existing mechanical systems.

6 For Transportation customers the key objective for purchasing RNG is to meet GHG emissions
7 goals. For example, Translink has an emissions reduction target of an 80% reduction by 2050
8 and over 300 Natural Gas buses fueled by renewable energy. Similar to buildings, cost also
9 plays a role in finding a solution. Natural Gas and RNG provide an alternative that can meet
10 both economic and emission reduction objectives.

D. BVA BALANCE, BERC RATES, CCRA RATE AND CARBON TAX

14.0 Reference: BVA BALANCE, BERC RATES, CCRA RATE AND CARBON TAX

Exhibit B-1, Section 4.1, Table 4, pp. 14–15; Exhibit B-10, Slide 16 in FEI Application for Approval of BERC Rate Methodology

Biomethane variance account balance

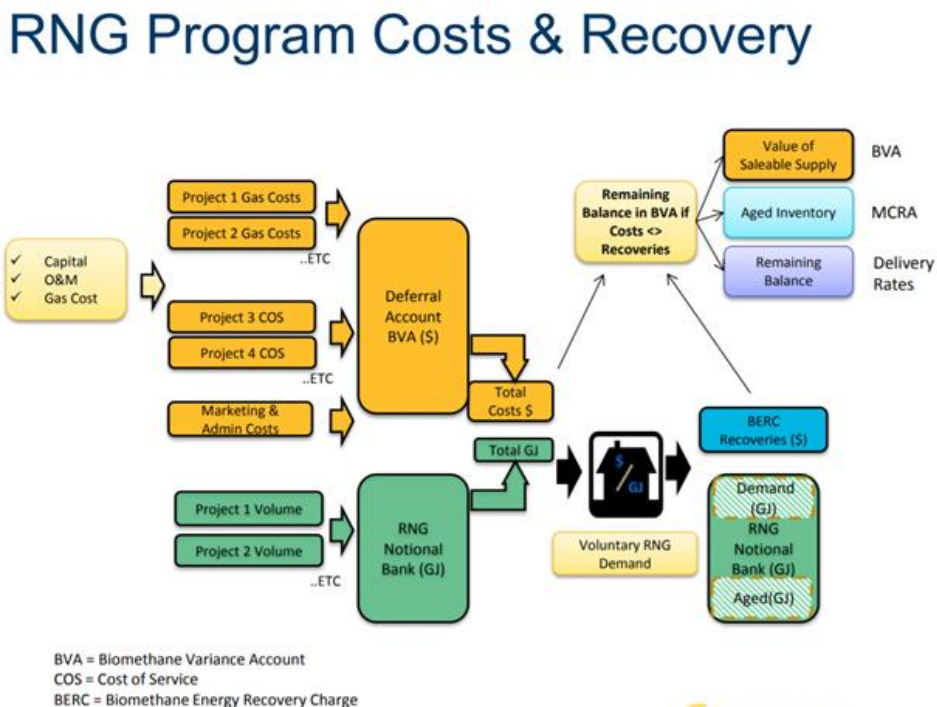
On page 15 of the Report, FEI presents the biomethane variance account (BVA) balances in Table 4:

Table 4: BVA Balance

| Item | 1-Jan-17 | 1-Jan-18 | 1-Jan-19 | 1-Jan-20 |
|-------------------------|----------|------------|----------|----------|
| The BVA balance (\$000) | \$ 341.0 | \$ (471.0) | - | \$ 1.5 |

On page 14, FEI states that “[i]n 2017 FEI sold more RNG than it had available [sic], while there was a timing difference with its purchase of carbon offsets in 2018, which resulted in the negative opening value for January 1, 2018.”

On slide 16 of Exhibit B-10 in FEI Application for Approval of BERC rate methodology, FEI presents the following diagram, where it states that there will be a remaining balance in the BVA if costs are higher or lower than recoveries:



14.1 Please revise Table 4 by adding the BVA balance for 2021.

1 **Response:**

2 A revised version of Table 4, providing the data for 2021, is attached below. The revised
3 version of Table 4 also includes a minor correction, amounting to \$(0.3), to the 1-Jan-18 BVA
4 balance shown in the table to reconcile to the balance reported in the 2017 and 2018 BVA
5 Status Reports.

| Item | 1-Jan-17 | 1-Jan-18 | 1-Jan-19 | 1-Jan-20 | 1-Jan-21 |
|-------------------------|----------|------------|----------|----------|----------|
| The BVA balance (\$000) | \$ 341.0 | \$ (471.3) | \$ - | \$ 1.5 | \$ - |

7 The following table provides a continuity schedule including the opening balances, additions,
8 reductions (BERC recoveries), balance transfers from the BVA to the BVA Balance Transfer
9 account and closing balances reconciling the BVA Balance in Table 4 with the BVA Balance
10 Transfer in Table 8.

| Item | (Amounts shown in \$000) | 2016 | 2017 | 2018 | 2019 | 2020 |
|--------------------------------------|--------------------------|------------|------------|------------|-----------|-----------|
| BVA Opening Balance, Jan 1 (Table 4) | | \$ 1,784.3 | \$ 341.0 | \$ (471.3) | \$ - | \$ 1.5 |
| Additions | | 3,680.8 | 4,160.2 | 6,944.4 | 5,831.2 | 8,167.1 |
| Reductions | | (2,147.1) | (2,450.5) | (2,771.3) | (3,204.0) | (3,152.9) |
| BVA Balance Transfer (Table 8) | | (2,977.0) | (2,522.0) | (3,701.8) | (2,625.6) | (5,015.7) |
| BVA Closing Balance, Dec 31 | | \$ 341.0 | \$ (471.3) | \$ - | \$ 1.5 | \$ - |

14.2 Does a negative BVA balance in 2018 due to carbon offsets imply that carbon
offsets are lower cost than procuring RNG for FEI?

18 **Response:**

19 No, the negative BVA balance shown in Table 4, at 1-Jan-18, does not imply that carbon offsets
20 are lower cost than procuring RNG, but rather reflects that there was a negative inventory of
21 biomethane recorded at the end of 2017, similar to how the BVA balance shown in Table 4, at
22 1-Jan-17, reflects the value of biomethane inventory at the end of 2016.

23 During 2017, the quantity of biomethane sold exceeded the quantity of biomethane available for
24 sale. The balancing of this 2017 inventory shortfall, accomplished through the purchase of
25 carbon offsets to create replacement RNG, was delayed and not booked to the BVA until 2018.

14.3 For each year that FEI purchased carbon offsets, how does the average price of
carbon offset compare with FEI's actual cost of supplying RNG to customers (in
\$/GJ)?

1 **Response:**

2 Please refer to the responses to BCUC IR1 5.1, 12.1 and BCOAPO IR1 9.2. Carbon offset gas
3 is less costly on a \$/GJ basis than RNG. For example, in 2019 the combined cost of a GJ
4 equivalent for carbon offset gas was \$9.55, which includes the average market cost of \$1.00 per
5 GJ for the offset purchase, FEI's cost of conventional gas transfer, and the cost of the lost
6 carbon tax.

7
8
9
10 14.4 Please explain how the BVA balance on January 1, 2019 was exactly zero and
11 near zero on January 1, 2020, when FEI sells RNG at a BERC rate that is set at
12 a level lower than that required to recover the cost to procure the RNG.

13
14 **Response:**

15 The balances shown in Table 4 are the opening balances in the BVA after the year end transfer
16 of any under recovered biomethane supply costs out of the BVA via the BVA Balance Transfer
17 Mechanism.

18 At the end of 2018, the under recovered biomethane supply related costs were transferred out
19 of the BVA and there was no unsold biomethane inventory, resulting in a BVA opening balance
20 of zero dollars (and zero inventory) at January 1, 2019.

21 At the end of 2019, the under recovered biomethane supply related costs were transferred out
22 of the BVA and there was a small inventory of unsold biomethane, resulting in a BVA opening
23 balance of approximately 1.5 thousand dollars (and a 147 GJ inventory of biomethane) at
24 January 1, 2020.

25
26
27
28 14.5 Please provide a table with the average age of inventory balances for each year
29 since the implementation of the Short Term and Long Term BERC Rate.

30
31 **Response:**

32 The table below provides a summary of the average age of inventory balances for each
33 calendar year since the implementation of the Short Term and Long Term BERC rates. Note
34 that the Short Term and Long Term BERC rates became effective October 1, 2016, while the
35 2016 average age of inventory shown in the table is based on the full calendar year's activity.

| Item | 2016 | 2017 | 2018 | 2019 | 2020 |
|--|------|------|------|------|------|
| Average age of inventory balances (<i>in months</i>) | 3.3 | 0.3 | 0.2 | 0.3 | 0.3 |

| | |
|---|------------------------------------|
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15.0 Reference: BVA BALANCE, BERC RATES, CCRA RATE AND CARBON TAX

Exhibit B-1, Section 4.2, Tables 5–8, pp. 15–16; BCUC Decision in the FortisBC Application for Approval of a Multi-Year Rate Plan for the Year 2020-2024 (Decision), Footnote 245,⁸ p. 70

Short Term and Long Term BERC Rate, BVA balance transfer rate base deferral account

15.1 Please revise Table 5 on page 15 of the Report, by adding the Short Term and Long Term BERC Rate for 2021.

Response:

The following provides an update for Table 5.

| Item | 1-Oct-16 | 1-Jan-17 | 1-Jan-18 | 1-Jan-19 | 1-Jan-20 | 1-Jan-21 |
|--------------------------|-----------|-----------|-----------|-----------|-----------|-----------|
| The Short Term BERC Rate | \$ 10.209 | \$ 10.540 | \$ 10.039 | \$ 10.287 | \$ 10.535 | \$ 11.830 |
| The Long Term BERC Rate | \$ 10.000 | \$ 10.000 | \$ 10.000 | \$ 10.000 | \$ 10.000 | \$ 10.830 |

15.2 If the BERC rate methodology is maintained for the foreseeable future as proposed by FEI, what would happen if the Short Term BERC Rate dipped lower than the \$10/GJ floor price of the Long Term BERC Rate?

Response:

In the Decision, Directive 4 states that long term contracts shall be subject to a Minimum Contract Strike Price of \$10 per GJ. If the Short Term BERC Rate dipped lower than the \$10 per GJ floor price, the Long Term BERC Rate will continue to be set at the Minimum Contract Strike Price of \$10 per GJ, resulting in no discount from the Short Term BERC Rate, and could result in a Long Term BERC Rate that is higher than the Short Term BERC Rate. It would be unlikely that such a scenario would in fact ever materialize, as the pricing of natural gas in the market along with higher carbon tax levels will likely result in a Short Term BERC rate higher than the Long Term Rate.

15.3 Please revise Table 6 on page 15 of the Report by adding the CCRA Rate for 2021.

⁸ https://www.bcuc.com/Documents/Decisions/2020/DOC_58466_2020-06-22-FortisBC-MRP-2020-2024-Decision.pdf.

1 **Response:**

2 The following updates Table 6 with the CCRA Rate for 2021.

| Item | 1-Jan-17 | 1-Jan-18 | 1-Jan-19 | 1-Jan-20 | 1-Jan-21 |
|---------------------|----------|----------|----------|----------|----------|
| CCRC Rate (per Gj) | \$ 2.050 | \$ 1.549 | \$ 1.549 | \$ 1.549 | \$ 2.844 |

3
4

5

6

7 15.4 Please revise Table 7 on page 16 of the Report by adding the carbon tax rate for
8 2021.

9

10 **Response:**

11 The following updates Table 7 with the Carbon Tax rates for 2021.

| Item | 1-Jan-17 | 1-Jan-18 | 1-Jan-19 | 1-Jan-20 | 1-Jan-21 |
|------------------------|----------|----------|----------|----------|----------|
| The Carbon Tax (\$/GJ) | 1.4898 | 1.4898 | 1.7381 | 1.9864 | 1.9864 |

12
13

14

15 15.5 Please revise Table 8 on page 16 of the Report by adding the BVA balance
16 transfer rate base deferral account for 2021.

17

18 **Response:**

19 The following updates Table 8 for the BVA Balance Transfer for 2021.

| Item | 1-Jan-17 | 1-Jan-18 | 1-Jan-19 | 1-Jan-20 | 1-Jan-21 |
|---|----------|----------|----------|----------|----------|
| The costs transferred from the BVA to the BVA balance Transfer rate base deferral account (\$000) | 2,977.0 | 2,522.0 | 3,701.8 | 2,625.6 | 5,015.7 |

20
21

22

23 15.6 Please clarify the relationship between this deferral account and the BVA
24 balances presented in Table 4.

25

26 **Response:**

27 FEI provides the following clarification.

FEI has two approved deferral accounts related to the biomethane program - the Biomethane Variance Account (BVA) and the Biomethane Balance transfer account. Footnote 245, referenced in the preamble, includes a reference to the 'BVA rider deferral account'. This is incorrect and it should have referenced the 'BVA Balance transfer account'.

The BVA captures all the operating and capital related costs of the RNG program and also all the BERC recoveries from the sale of RNG. At the end of the year, the balance in this account less an adjustment for the actual ending RNG inventory is transferred to the BVA Balance transfer deferral account.

Table 4 in the BERC Rate Report shows the opening balance of the BVA by year, and the costs shown represent the opening value of RNG inventory at the effective BERC rate. FEI summarizes the relationship between the deferral accounts as follows:

1. BVA – Non-rate base account captures the annual operating and capital related costs for the RNG program and also the sales (recoveries) of RNG. The balance of costs in excess of BERC recoveries and unsold inventory at year end is transferred to the BVA Balance transfer deferral account.
2. BVA Balance transfer deferral account – This rate base account holds the transferred costs of the RNG program in excess of BERC recoveries and ending inventory. The amount is recovered from all non-bypass customers via delivery rate rider 3.

In its Decision dated June 22, 2020, the BCUC states in footnote 245 on page 70:

The BVA transfer mechanism records all capital and operating costs for FEI's renewable natural gas program (RNG Program) in the BVA and the balance in the BVA is then recovered from biomethane customers through the Biomethane Energy Recover Charge (BERC). Any unrecovered BVA balance is transferred to the BVA Rider deferral account and recovered from non-bypass customers through the BVA rider (Exhibit B-1, p. C-112).

- 15.7 Please clarify the relationship between the BVA balance transfer rate base deferral account and the BVA Rider deferral account.

Response:

Please refer to the response to BCUC IR1 15.6 where FEI clarifies that the reference to a BVA Rider deferral account was an error, and should have been a reference to the BVA Balance transfer deferral account.

15.8 Please provide a table showing the annual balance in the BVA rider deferral account from the date of implementation of the new BERC rate methodology to date.

Response:

FEI has provided the continuity of the BVA Balance transfer deferral account below. The ending balance shown is the actual ending balance in the deferral⁹.

| BVA Rider Deferral Account Continuity (millions) | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 |
|---|-------------|-------------|-------------|-------------|-------------|-------------|
| Beg Balance | - | 2.20 | 4.07 | 3.17 | 2.47 | 3.40 |
| Current Years BERC Recoveries | - | - | (3.61) | (2.62) | (2.73) | (0.82) |
| Year End Balance Transfer from BVA | 2.20 | 1.87 | 2.70 | 1.92 | 3.66 | - |
| End Balance | 2.20 | 4.07 | 3.17 | 2.47 | 3.40 | 2.59 |

FEI notes that 2021 only includes BERC recoveries collected year-to-date February 28, 2021.

⁹ The table shows actual values, but the amounts transferred into the BVA Balance transfer account from the BVA are shown in the Annual Review filings on a forecast basis. The forecasted transfers are trued-up to actuals in subsequent Annual Review filings.

1 **E. MONTHLY CUSTOMER DATA FOR THE PERIOD JANUARY 1, 2016 TO JANUARY**
2 **1, 2020**

3 **16.0 Reference: MONTHLY CUSTOMER DATA FOR THE PERIOD JANUARY 1, 2016**
4 **TO JANUARY 1, 2020**

5 **Exhibit B-1, Section 5, p. 16; Appendix A, Tables 1 and 2, pp. 1–2**

6 **Monthly net customer addition and cumulative total customers**

7 16.1 Please update Table 1 and Table 2 in Appendix A to include monthly data up to
8 the end of 2020 or later, if available.

9
10 **Response:**

11 The updated tables follow.

1

Table 1: Number of Customers by Rate Classes and by Offering

| Date | Short-term | | | | | | Long-term |
|--------|----------------|----------------|----------------|----------------|-------------------|----------------|----------------|
| | Rate 1B | Rate 2B | Rate 3B | Rate 5B | Rate 11B Standard | Total | Rate 11B |
| | # of customers | # of customers | # of customers | # of customers | # of customers | # of customers | # of customers |
| Jan-16 | 6,630 | 125 | 11 | 0 | 4 | 6,770 | 0 |
| Feb-16 | 6,637 | 127 | 11 | 0 | 4 | 6,779 | 0 |
| Mar-16 | 6,624 | 128 | 11 | 0 | 5 | 6,768 | 0 |
| Apr-16 | 6,630 | 130 | 11 | 0 | 5 | 6,776 | 0 |
| May-16 | 6,661 | 130 | 11 | 0 | 5 | 6,807 | 0 |
| Jun-16 | 6,705 | 131 | 11 | 0 | 5 | 6,852 | 0 |
| Jul-16 | 6,764 | 131 | 11 | 0 | 5 | 6,911 | 0 |
| Aug-16 | 6,832 | 131 | 11 | 0 | 5 | 6,979 | 0 |
| Sep-16 | 6,918 | 130 | 11 | 0 | 5 | 7,064 | 0 |
| Oct-16 | 6,942 | 132 | 11 | 0 | 5 | 7,090 | 0 |
| Nov-16 | 7,111 | 146 | 13 | 0 | 5 | 7,275 | 0 |
| Dec-16 | 7,305 | 154 | 14 | 0 | 5 | 7,478 | 0 |
| Jan-17 | 7,448 | 158 | 15 | 0 | 5 | 7,626 | 0 |
| Feb-17 | 7,558 | 159 | 15 | 0 | 5 | 7,737 | 0 |
| Mar-17 | 7,615 | 159 | 15 | 0 | 5 | 7,794 | 0 |
| Apr-17 | 7,685 | 158 | 16 | 0 | 5 | 7,864 | 0 |
| May-17 | 7,767 | 166 | 17 | 0 | 5 | 7,955 | 0 |
| Jun-17 | 7,894 | 165 | 17 | 0 | 5 | 8,081 | 0 |
| Jul-17 | 8,036 | 168 | 17 | 0 | 5 | 8,226 | 0 |
| Aug-17 | 8,158 | 172 | 17 | 0 | 5 | 8,352 | 0 |
| Sep-17 | 8,296 | 171 | 17 | 0 | 5 | 8,489 | 0 |
| Oct-17 | 8,481 | 171 | 17 | 0 | 4 | 8,673 | 1 |
| Nov-17 | 8,625 | 175 | 16 | 0 | 4 | 8,820 | 1 |
| Dec-17 | 8,781 | 180 | 16 | 0 | 4 | 8,981 | 1 |
| Jan-18 | 8,900 | 180 | 16 | 0 | 4 | 9,100 | 1 |
| Feb-18 | 9,035 | 181 | 16 | 0 | 4 | 9,236 | 1 |
| Mar-18 | 9,104 | 181 | 15 | 0 | 4 | 9,304 | 1 |
| Apr-18 | 9,216 | 181 | 14 | 0 | 4 | 9,415 | 1 |
| May-18 | 9,301 | 184 | 14 | 0 | 4 | 9,503 | 1 |
| Jun-18 | 9,380 | 191 | 14 | 0 | 4 | 9,589 | 1 |
| Jul-18 | 9,487 | 192 | 14 | 0 | 4 | 9,697 | 1 |
| Aug-18 | 9,577 | 197 | 14 | 0 | 4 | 9,792 | 1 |
| Sep-18 | 9,719 | 195 | 14 | 0 | 4 | 9,932 | 1 |
| Oct-18 | 9,848 | 198 | 14 | 1 | 4 | 10,065 | 2 |
| Nov-18 | 9,982 | 202 | 14 | 1 | 4 | 10,203 | 2 |
| Dec-18 | 10,108 | 205 | 14 | 0 | 4 | 10,331 | 2 |
| Jan-19 | 10,215 | 203 | 16 | 0 | 4 | 10,438 | 2 |
| Feb-19 | 10,330 | 208 | 16 | 0 | 4 | 10,558 | 3 |
| Mar-19 | 10,379 | 207 | 16 | 1 | 4 | 10,607 | 3 |
| Apr-19 | 10,462 | 206 | 17 | 1 | 4 | 10,690 | 3 |
| May-19 | 10,573 | 206 | 17 | 1 | 4 | 10,801 | 3 |
| Jun-19 | 10,700 | 208 | 17 | 1 | 3 | 10,929 | 3 |
| Jul-19 | 10,844 | 220 | 17 | 1 | 3 | 11,085 | 3 |
| Aug-19 | 10,942 | 222 | 17 | 1 | 3 | 11,185 | 3 |
| Sep-19 | 10,935 | 221 | 17 | 2 | 3 | 11,178 | 3 |
| Oct-19 | 10,939 | 219 | 17 | 1 | 2 | 11,178 | 3 |
| Nov-19 | 11,014 | 218 | 17 | 1 | 1 | 11,251 | 3 |
| Dec-19 | 10,968 | 213 | 17 | 2 | 1 | 11,201 | 3 |
| Jan-20 | 10,915 | 213 | 17 | 2 | 1 | 11,148 | 3 |
| Feb-20 | 10,856 | 208 | 17 | 2 | 1 | 11,084 | 3 |
| Mar-20 | 10,794 | 203 | 16 | 2 | 1 | 11,016 | 3 |
| Apr-20 | 10,731 | 202 | 16 | 2 | 1 | 10,952 | 3 |
| May-20 | 10,669 | 201 | 16 | 2 | 1 | 10,889 | 3 |
| Jun-20 | 10,582 | 201 | 16 | 2 | 1 | 10,802 | 3 |
| Jul-20 | 10,498 | 200 | 16 | 2 | 1 | 10,717 | 3 |
| Aug-20 | 10,412 | 198 | 16 | 2 | 1 | 10,629 | 3 |
| Sep-20 | 10,326 | 198 | 16 | 2 | 1 | 10,543 | 3 |
| Oct-20 | 10,247 | 197 | 16 | 2 | 1 | 10,463 | 3 |
| Nov-20 | 10,167 | 196 | 16 | 2 | 1 | 10,382 | 3 |
| Dec-20 | 10,115 | 196 | 16 | 1 | 1 | 10,329 | 3 |
| Jan-21 | 10,045 | 195 | 16 | 3 | 1 | 10,260 | 3 |

2

1

Table 2: Churn Rate by Rate Classes and by Offering

| Date | Short-term | | | | | Long-term |
|--------|------------|------------|------------|------------|-------------------|--------------------|
| | Rate 1B | Rate 2B | Rate 3B | Rate 5B | Rate 11B Standard | Rate 11B Long Term |
| | Churn Rate | Churn Rate | Churn Rate | Churn Rate | Churn Rate | Churn Rate |
| Jan-16 | 1.2% | 7.2% | 27.3% | 0.0% | 0.0% | 0.0% |
| Feb-16 | 1.0% | 0.0% | 9.1% | 0.0% | 0.0% | 0.0% |
| Mar-16 | 0.9% | 0.0% | 9.1% | 0.0% | 0.0% | 0.0% |
| Apr-16 | 1.0% | 0.0% | 9.1% | 0.0% | 0.0% | 0.0% |
| May-16 | 1.2% | 1.6% | 9.1% | 0.0% | 0.0% | 0.0% |
| Jun-16 | 1.5% | 0.0% | 9.1% | 0.0% | 0.0% | 0.0% |
| Jul-16 | 1.4% | 0.8% | 9.1% | 0.0% | 0.0% | 0.0% |
| Aug-16 | 1.3% | 1.6% | 9.1% | 0.0% | 0.0% | 0.0% |
| Sep-16 | 1.0% | 0.8% | 9.1% | 0.0% | 0.0% | 0.0% |
| Oct-16 | 1.8% | 0.8% | 9.1% | 0.0% | 0.0% | 0.0% |
| Nov-16 | 1.4% | 0.7% | 8.3% | 0.0% | 0.0% | 0.0% |
| Dec-16 | 1.0% | 0.0% | 8.0% | 0.0% | 0.0% | 0.0% |
| Jan-17 | 1.1% | 1.4% | 7.7% | 0.0% | 0.0% | 0.0% |
| Feb-17 | 0.9% | 2.1% | 7.7% | 0.0% | 0.0% | 0.0% |
| Mar-17 | 1.0% | 2.8% | 7.7% | 0.0% | 0.0% | 0.0% |
| Apr-17 | 1.2% | 0.7% | 7.4% | 0.0% | 0.0% | 0.0% |
| May-17 | 1.3% | 0.0% | 7.1% | 0.0% | 0.0% | 0.0% |
| Jun-17 | 1.1% | 2.1% | 7.1% | 0.0% | 0.0% | 0.0% |
| Jul-17 | 1.5% | 1.4% | 7.1% | 0.0% | 0.0% | 0.0% |
| Aug-17 | 1.3% | 0.0% | 7.1% | 0.0% | 0.0% | 0.0% |
| Sep-17 | 1.0% | 0.7% | 7.1% | 0.0% | 0.0% | 0.0% |
| Oct-17 | 1.2% | 1.3% | 14.3% | 0.0% | 25.0% | 0.0% |
| Nov-17 | 1.1% | 0.0% | 14.8% | 0.0% | 0.0% | 0.0% |
| Dec-17 | 1.1% | 0.0% | 7.4% | 0.0% | 0.0% | 0.0% |
| Jan-18 | 0.9% | 2.0% | 7.4% | 0.0% | 0.0% | 0.0% |
| Feb-18 | 0.7% | 2.0% | 7.4% | 0.0% | 0.0% | 0.0% |
| Mar-18 | 1.0% | 2.6% | 15.4% | 0.0% | 0.0% | 0.0% |
| Apr-18 | 0.9% | 2.6% | 16.0% | 0.0% | 0.0% | 0.0% |
| May-18 | 1.3% | 0.0% | 8.0% | 0.0% | 0.0% | 0.0% |
| Jun-18 | 1.4% | 1.3% | 8.0% | 0.0% | 0.0% | 0.0% |
| Jul-18 | 1.3% | 0.6% | 8.0% | 0.0% | 0.0% | 0.0% |
| Aug-18 | 1.2% | 0.0% | 8.0% | 0.0% | 0.0% | 0.0% |
| Sep-18 | 1.0% | 2.5% | 8.0% | 0.0% | 0.0% | 0.0% |
| Oct-18 | 1.0% | 1.9% | 8.0% | 0.0% | 0.0% | 0.0% |
| Nov-18 | 1.0% | 2.4% | 8.0% | 0.0% | 0.0% | 0.0% |
| Dec-18 | 0.9% | 0.0% | 8.0% | 0.0% | 0.0% | 0.0% |
| Jan-19 | 1.1% | 3.6% | 7.4% | 0.0% | 0.0% | 0.0% |
| Feb-19 | 0.9% | 1.8% | 7.4% | 0.0% | 0.0% | 0.0% |
| Mar-19 | 1.1% | 3.0% | 7.4% | 0.0% | 0.0% | 0.0% |
| Apr-19 | 0.9% | 1.8% | 7.1% | 0.0% | 0.0% | 0.0% |
| May-19 | 1.0% | 1.8% | 7.1% | 0.0% | 0.0% | 0.0% |
| Jun-19 | 1.1% | 1.8% | 7.1% | 0.0% | 25.0% | 0.0% |
| Jul-19 | 1.0% | 1.7% | 14.3% | 0.0% | 0.0% | 0.0% |
| Aug-19 | 1.2% | 0.6% | 0.0% | 0.0% | 0.0% | 0.0% |
| Sep-19 | 0.8% | 0.6% | 0.0% | 0.0% | 0.0% | 0.0% |
| Oct-19 | 0.9% | 1.2% | 0.0% | 0.0% | 25.0% | 0.0% |
| Nov-19 | 0.7% | 1.7% | 0.0% | 0.0% | 0.0% | 0.0% |
| Dec-19 | 0.5% | 0.6% | 0.0% | 0.0% | 0.0% | 0.0% |
| Jan-20 | 0.6% | 1.8% | 0.0% | 0.0% | 0.0% | 0.0% |
| Feb-20 | 0.6% | 3.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Mar-20 | 0.6% | 3.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Apr-20 | 0.7% | 0.6% | 0.0% | 0.0% | 0.0% | 0.0% |
| May-20 | 0.7% | 0.6% | 0.0% | 0.0% | 0.0% | 0.0% |
| Jun-20 | 0.9% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Jul-20 | 0.8% | 0.6% | 0.0% | 0.0% | 0.0% | 0.0% |
| Aug-20 | 0.9% | 1.2% | 0.0% | 0.0% | 0.0% | 0.0% |
| Sep-20 | 0.9% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Oct-20 | 0.9% | 0.6% | 0.0% | 0.0% | 0.0% | 0.0% |
| Nov-20 | 0.9% | 0.6% | 0.0% | 0.0% | 0.0% | 0.0% |
| Dec-20 | 0.6% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Jan-21 | 0.7% | 0.6% | 0.0% | 0.0% | 0.0% | 0.0% |

2

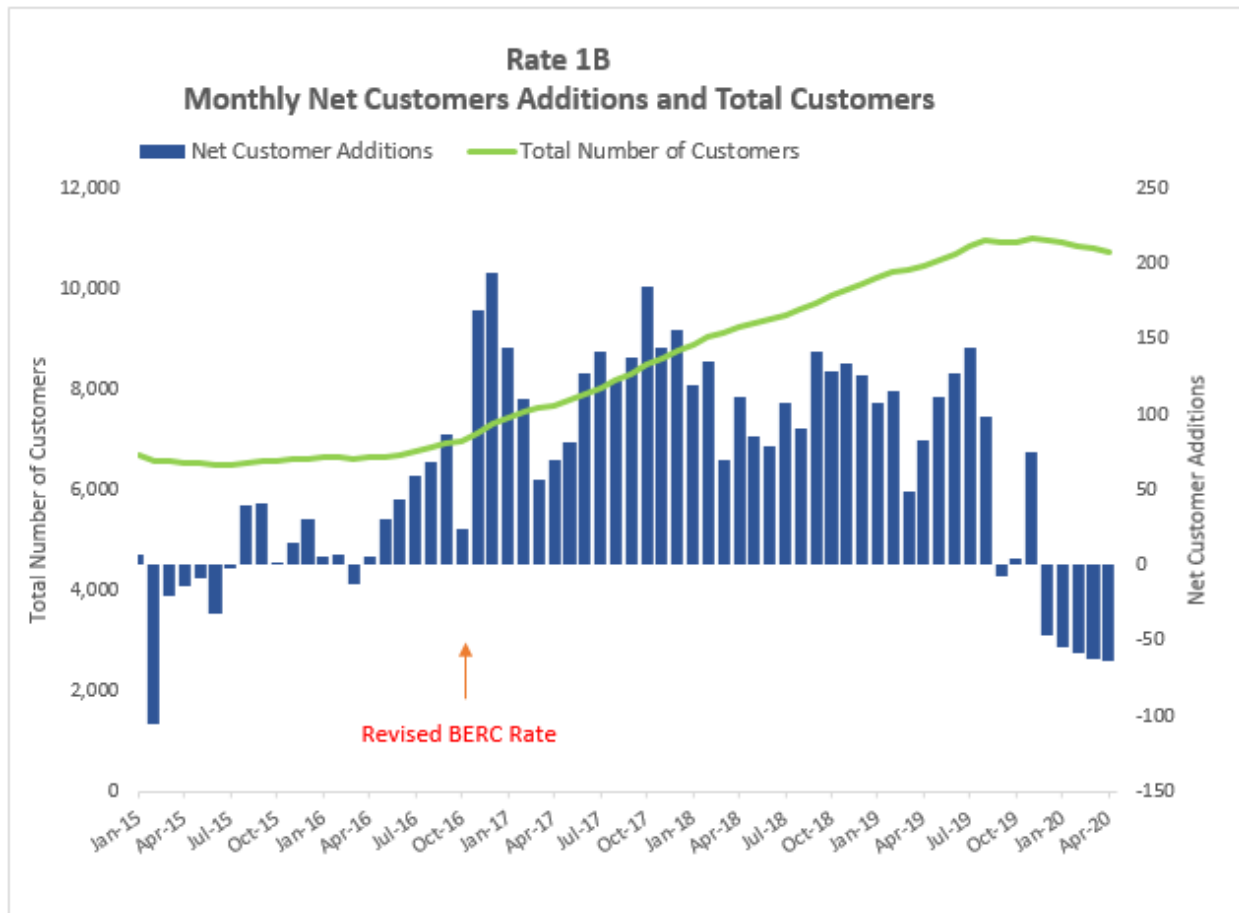
3

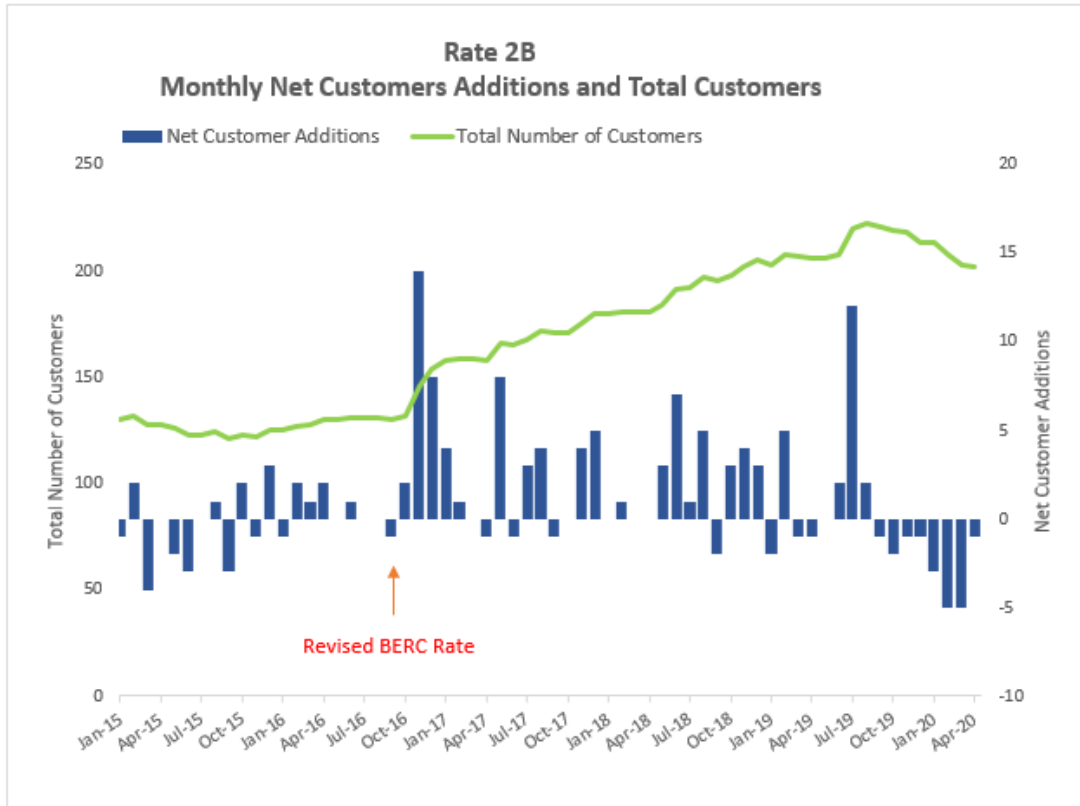
4

16.2 For each of the rate schedules, please provide a graph similar to Figure 1 on page 6 that would show monthly net customer addition and cumulative total customers.

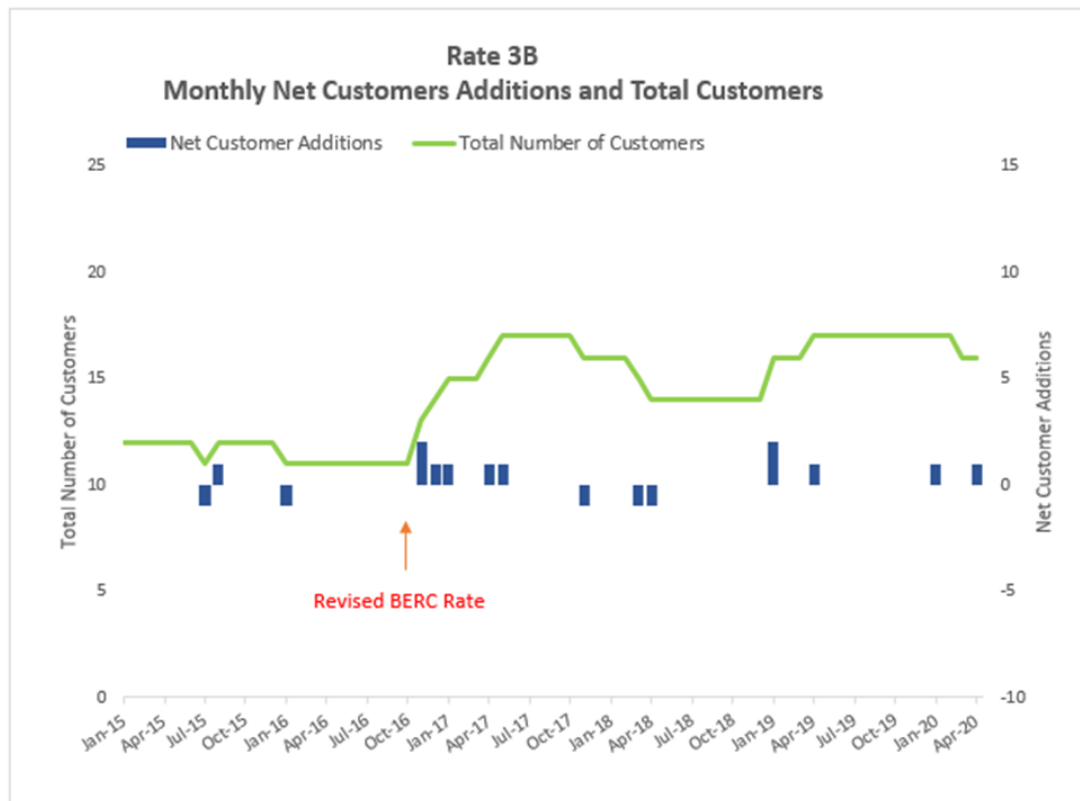
Response:

The requested figures follow.

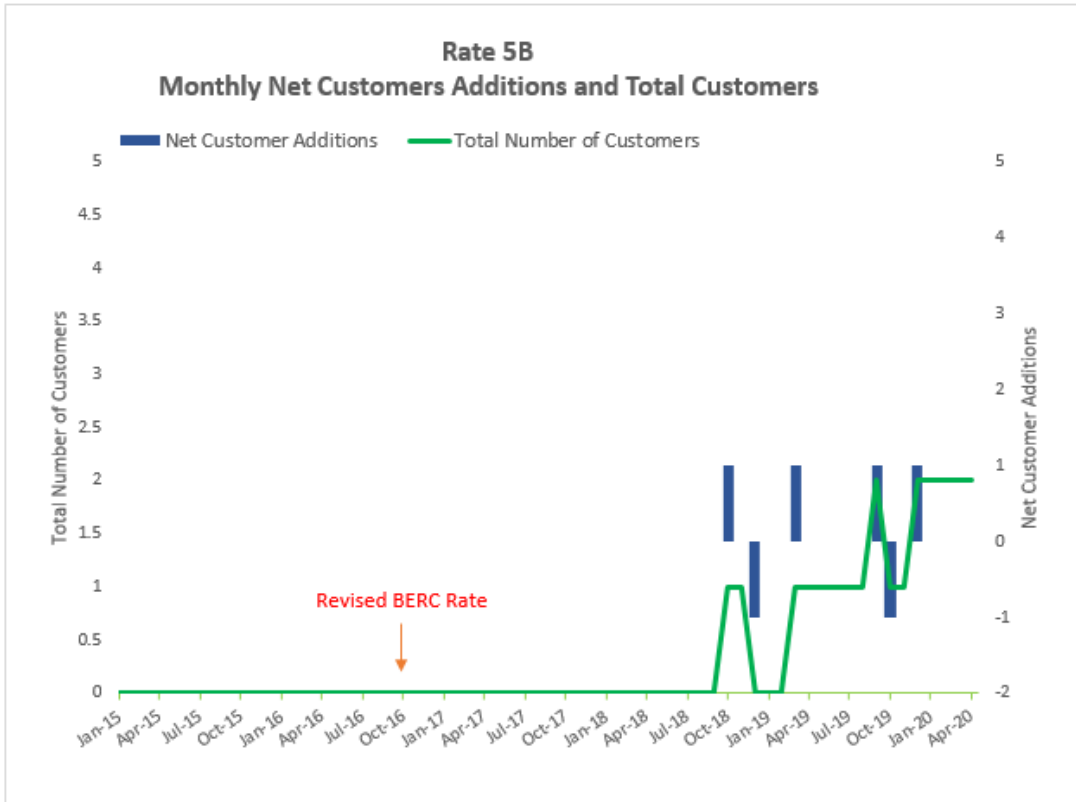




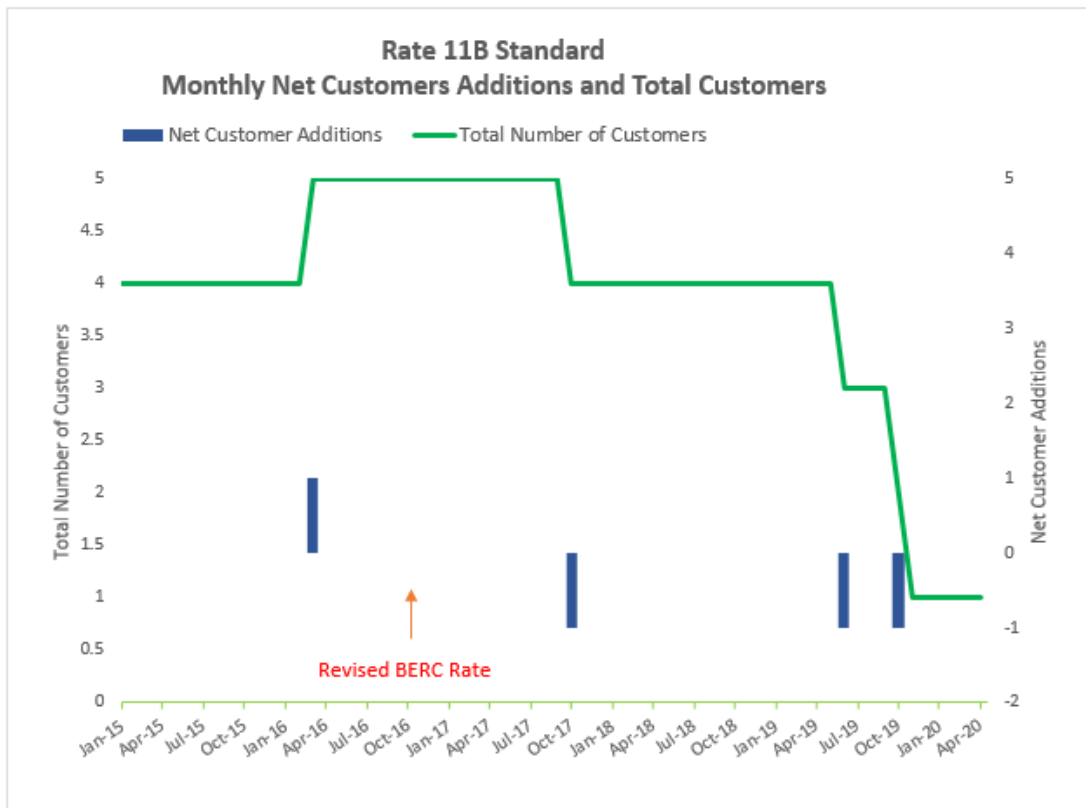
1



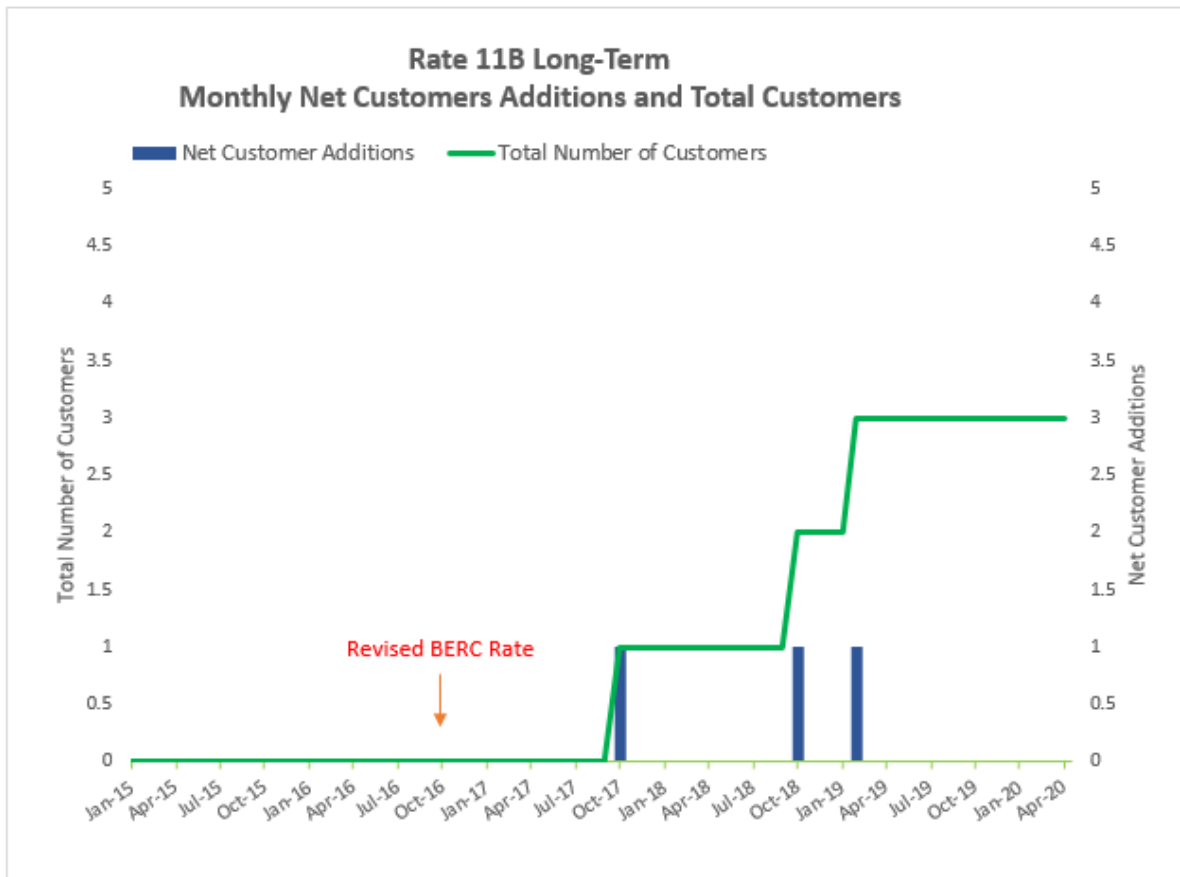
2



1



2



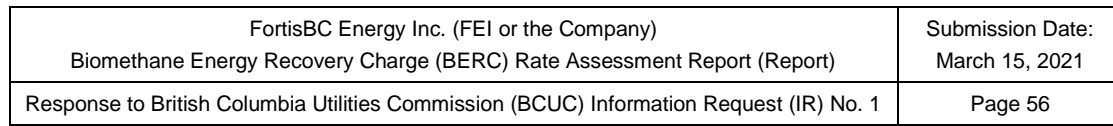
16.3 Please discuss if there are similarities or differences in trends of customer additions across the rate schedules.

Response:

When looking at the data for RS 1B and 2B customers, both show a similar trend that reflects the shift the program experienced from having difficulty attracting new customers before the updated BERC rate, to being much more successful at attracting new customers after the updated BERC rate, up until the program was closed.

The data for customers in the larger volume rate classes provides no useful insight, as the number of enrolled customers is too small overall to be able to clearly pick out trends.

Comparing the customer additions across different rate schedules provides limited insight into any trends as the customer types begin to diverge significantly. A typical residential customer is not likely to be influenced by the same drivers, concerns, attitudes and beliefs as a transportation corporation or post secondary academic institution.



3 Exhibit B-1, Section 5, p. 16; Appendix A, Table 3, p. 3
4 RNG annual sales volumes

8 **Response:**

9 The updated Table 3 from Appendix A follows.

1

Table 3: RNG Sales Quantity by Rate Classes and by Offering

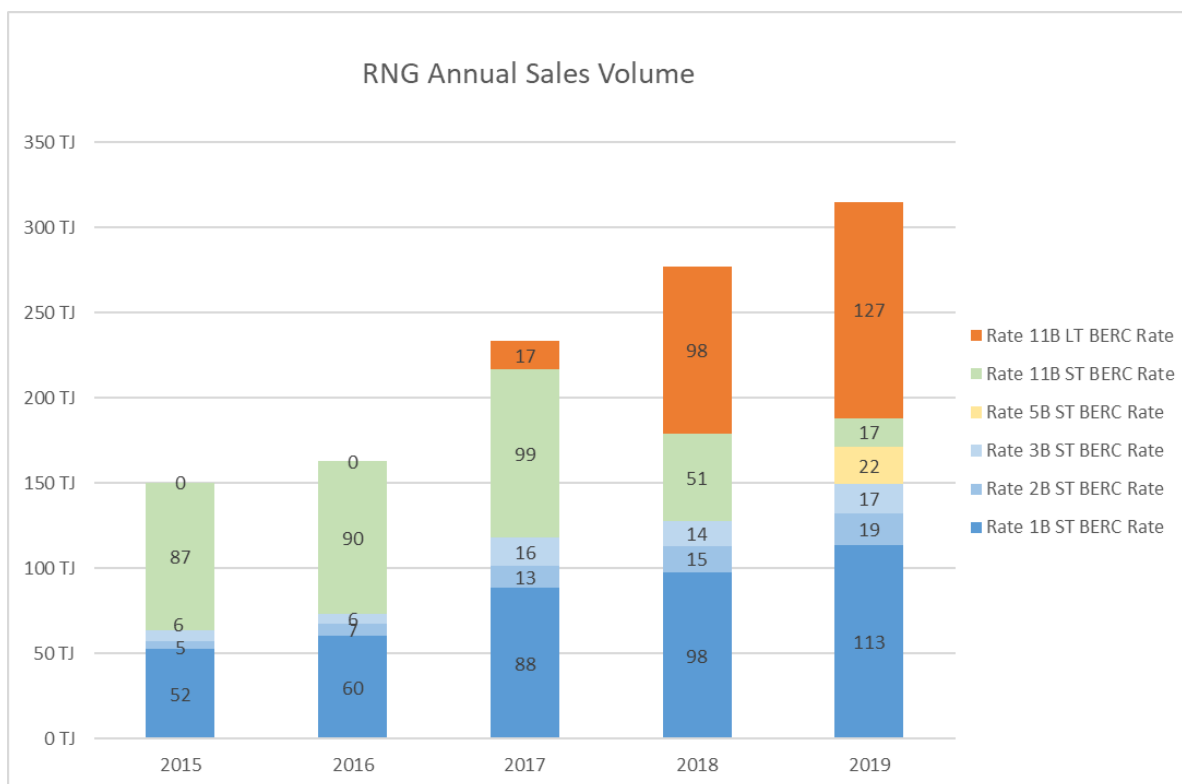
| Date | RNG Sales Quantity (TJ) | | | | | | | Total |
|--------|-------------------------|---------|---------|---------|----------|-----------------------|-----------------------|-------|
| | Rate 1B | Rate 2B | Rate 3B | Rate 5B | Rate 11B | Rate 11B Long term | Rate 30 Off System | |
| Jan-16 | 9.0 | 1.4 | 1.4 | 0.0 | 7.6 | 0.0 | 0.0 | 19.5 |
| Feb-16 | 7.0 | 0.6 | 0.3 | 0.0 | 7.5 | 0.0 | 0.0 | 15.4 |
| Mar-16 | 6.3 | 0.5 | 0.8 | 0.0 | 7.2 | 0.0 | 0.0 | 14.7 |
| Apr-16 | 3.3 | 0.6 | 0.4 | 0.0 | 7.3 | 0.0 | 0.0 | 11.5 |
| May-16 | 2.4 | 0.2 | 0.3 | 0.0 | 11.5 | 0.0 | 0.0 | 14.3 |
| Jun-16 | 1.9 | 0.2 | 0.2 | 0.0 | 7.0 | 0.0 | 0.0 | 9.3 |
| Jul-16 | 1.7 | 0.1 | 0.2 | 0.0 | 7.0 | 0.0 | 0.0 | 9.0 |
| Aug-16 | 1.6 | 0.2 | 0.2 | 0.0 | 6.9 | 0.0 | 0.0 | 9.0 |
| Sep-16 | 2.2 | 0.2 | 0.2 | 0.0 | 7.1 | 0.0 | 0.0 | 9.7 |
| Oct-16 | 4.5 | 0.4 | 0.3 | 0.0 | 7.3 | 0.0 | 0.0 | 12.5 |
| Nov-16 | 7.0 | 0.9 | 0.6 | 0.0 | 7.4 | 0.0 | 0.0 | 15.8 |
| Dec-16 | 13.6 | 1.5 | 1.0 | 0.0 | 5.8 | 0.0 | 0.8 | 22.7 |
| Jan-17 | 13.8 | 2.1 | 0.9 | 0.0 | 5.9 | 0.0 | 0.0 | 22.7 |
| Feb-17 | 11.6 | 1.6 | 0.7 | 0.0 | 7.6 | 0.0 | 0.0 | 21.5 |
| Mar-17 | 9.3 | 1.4 | 0.8 | 0.0 | 9.4 | 0.0 | 0.0 | 21.0 |
| Apr-17 | 6.7 | 0.6 | 1.5 | 0.0 | 11.3 | 0.0 | 0.0 | 20.1 |
| May-17 | 4.3 | 0.9 | 1.0 | 0.0 | 8.1 | 0.0 | 0.0 | 14.2 |
| Jun-17 | 2.6 | 0.4 | 0.4 | 0.0 | 7.6 | 0.0 | 0.0 | 11.0 |
| Jul-17 | 2.2 | 0.3 | 0.6 | 0.0 | 8.2 | 0.0 | 0.0 | 11.3 |
| Aug-17 | 2.0 | 0.3 | 1.0 | 0.0 | 6.5 | 0.0 | 0.0 | 9.8 |
| Sep-17 | 2.4 | 0.3 | 1.1 | 0.0 | 7.6 | 0.0 | 0.0 | 11.5 |
| Oct-17 | 7.1 | 1.0 | 1.6 | 0.0 | 5.0 | 5.9 | 0.0 | 20.5 |
| Nov-17 | 10.9 | 1.8 | 3.1 | 0.0 | 9.2 | 5.7 | 0.0 | 30.8 |
| Dec-17 | 15.4 | 2.5 | 3.6 | 0.0 | 12.3 | 5.0 | 0.0 | 38.8 |
| Jan-18 | 13.7 | 2.3 | 3.5 | 0.0 | 2.2 | 5.9 | 0.0 | 27.6 |
| Feb-18 | 14.3 | 2.5 | 1.1 | 0.0 | 15.9 | 5.9 | 0.0 | 39.7 |
| Mar-18 | 11.9 | 2.1 | 4.2 | 0.0 | 7.8 | 5.2 | 0.0 | 31.2 |
| Apr-18 | 7.8 | 0.9 | 1.0 | 0.0 | 8.9 | 0.5 | 0.0 | 19.1 |
| May-18 | 3.2 | 0.6 | 0.6 | 0.0 | 2.7 | 3.4 | 0.0 | 10.5 |
| Jun-18 | 3.1 | 0.4 | 0.4 | 0.0 | 2.5 | 5.9 | 0.0 | 12.3 |
| Jul-18 | 2.7 | 0.3 | 0.3 | 0.0 | 2.4 | 5.8 | 0.0 | 11.5 |
| Aug-18 | 2.4 | 0.5 | 0.3 | 0.0 | 2.0 | 5.4 | 0.0 | 10.6 |
| Sep-18 | 3.8 | 0.6 | 0.4 | 0.0 | 1.8 | 5.9 | 0.0 | 12.5 |
| Oct-18 | 8.0 | 1.1 | 1.0 | 0.0 | -0.1 | 9.5 | 0.0 | 19.4 |
| Nov-18 | 11.2 | 1.7 | 1.1 | 0.1 | 3.3 | 23.9 | 0.0 | 41.2 |
| Dec-18 | 14.7 | 2.3 | 0.7 | 0.1 | 1.9 | 20.9 | 0.0 | 40.6 |
| Jan-19 | 16.0 | 2.6 | 3.1 | 0.2 | 1.9 | 24.1 | 0.0 | 47.9 |
| Feb-19 | 18.7 | 2.9 | 0.9 | 0.6 | 5.3 | 19.4 | 0.0 | 47.8 |
| Mar-19 | 12.9 | 2.1 | 3.3 | 0.8 | 3.5 | 20.4 | 0.0 | 43.0 |
| Apr-19 | 8.0 | 0.7 | 1.4 | 0.6 | 1.6 | 18.9 | 0.0 | 31.3 |
| May-19 | 4.2 | 1.0 | 0.9 | 0.2 | 1.6 | 14.9 | 0.0 | 22.8 |
| Jun-19 | 3.2 | 0.4 | 0.7 | 0.1 | 1.4 | 13.8 | 0.0 | 19.5 |
| Jul-19 | 3.1 | 0.4 | 0.7 | 0.1 | 1.4 | 13.8 | 0.0 | 19.6 |
| Aug-19 | 2.9 | 0.4 | 0.4 | 2.5 | 0.2 | 1.4 | 0.0 | 7.8 |
| Sep-19 | 3.9 | 0.6 | 0.5 | 1.0 | 0.0 | 0.0 | 0.0 | 6.0 |
| Oct-19 | 10.2 | 2.0 | 1.9 | 1.9 | 0.0 | 0.0 | 0.0 | 16.0 |
| Nov-19 | 13.8 | 2.6 | 1.2 | 2.4 | 0.0 | 0.0 | 0.0 | 20.0 |
| Dec-19 | 16.6 | 3.1 | 2.1 | 11.6 | 0.0 | 0.0 | 0.0 | 33.4 |
| Jan-20 | 17.8 | 3.6 | 2.2 | -5.7 | 0.0 | 0.0 | 0.0 | 17.9 |
| Feb-20 | 15.5 | 3.0 | 2.0 | 3.0 | 0.0 | 23.5 | 0.0 | 46.8 |
| Mar-20 | 13.8 | 2.9 | 3.1 | 1.1 | 0.0 | 5.6 | 0.0 | 26.5 |
| Apr-20 | 9.3 | 1.2 | 0.7 | 3.8 | 0.0 | 10.8 | 0.0 | 25.8 |
| May-20 | 5.0 | 1.2 | 3.0 | 1.3 | 0.0 | 8.9 | 0.0 | 19.4 |
| Jun-20 | 4.1 | 0.7 | 0.8 | 1.1 | 0.0 | 7.5 | 0.0 | 14.3 |
| Jul-20 | 3.4 | 0.7 | 0.6 | 0.8 | 0.0 | 8.9 | 0.0 | 14.3 |
| Aug-20 | 2.7 | 0.4 | 0.4 | 0.7 | 0.0 | 5.4 | 0.0 | 9.5 |
| Sep-20 | 3.1 | 0.3 | 0.6 | 0.7 | 0.0 | 7.8 | 0.0 | 12.5 |
| Oct-20 | 8.3 | 1.3 | 0.9 | 1.8 | 0.0 | 9.2 | 0.0 | 21.6 |
| Nov-20 | 12.9 | 3.1 | 2.0 | 3.0 | 0.0 | 23.6 | 0.0 | 44.5 |
| Dec-20 | 15.4 | 3.2 | 2.6 | 3.5 | 0.0 | 28.5 | 0.0 | 53.1 |
| Jan-21 | 15.2 | 3.1 | 2.1 | 7.2 | 0.0 | 27.7 | 0.0 | 55.3 |

2

17.2 Please revise Figure 3 on page 9 that would show, for each bar, the breakdown of RNG annual sales volume by rate schedule.

Response:

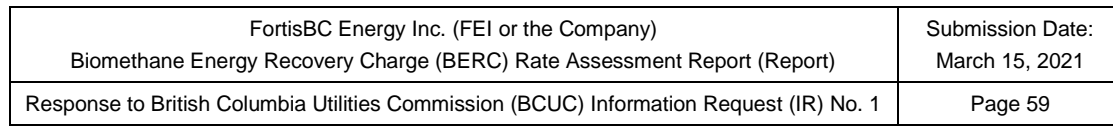
FEI has provided an updated Figure 3 below.



17.3 Please discuss if there are similarities or differences in trends of RNG annual sales volume across the rate schedules.

Response:

Regarding participation overall, it is possible to distinguish that sales volume has grown more quickly since the adoption of the current BERC rate. However, comparisons between rate schedules does not provide any meaningful insight due to the limited number of participants in the larger volume rate schedules and due to customer profiles, which differ greatly. Please also refer to the response to BCUC IR1 16.3.



3 Exhibit B-1, Section 5, p. 16; Appendix A, Table 4, p. 4; Figure 4, p.
4 10

6 18.1 Please update Table 4 in Appendix A to the Report to include monthly data up to
7 the end of 2020 or later, if available.

10 Updated Table 4 to Appendix A follows.

1

Table 4: RNG Sales Revenue by Rate Classes and by Offering

| Date | RNG Revenue (\$000) | | | | | | | Total |
|--------|---------------------|---------|---------|---------|----------|--------------------|--------------------|--------|
| | Rate 1B | Rate 2B | Rate 3B | Rate 5B | Rate 11B | Rate 11B Long term | Rate 30 Off System | |
| Jan-16 | 130.19 | 20.87 | 20.02 | - | 109.54 | - | - | 280.62 |
| Feb-16 | 100.56 | 8.85 | 4.30 | - | 108.43 | - | - | 222.14 |
| Mar-16 | 90.35 | 7.63 | 10.82 | - | 103.17 | - | - | 211.96 |
| Apr-16 | 47.33 | 8.52 | 5.62 | - | 104.89 | - | - | 166.36 |
| May-16 | 34.15 | 2.69 | 4.00 | - | 165.78 | - | - | 206.61 |
| Jun-16 | 27.34 | 2.42 | 3.57 | - | 101.12 | - | - | 134.46 |
| Jul-16 | 24.07 | 2.11 | 2.90 | - | 100.48 | - | - | 129.56 |
| Aug-16 | 23.16 | 3.37 | 3.19 | - | 99.70 | - | - | 129.42 |
| Sep-16 | 32.11 | 3.58 | 2.29 | - | 101.94 | - | - | 139.92 |
| Oct-16 | 46.31 | 3.74 | 2.79 | - | 104.67 | - | - | 157.52 |
| Nov-16 | 71.00 | 8.91 | 6.59 | - | 46.58 | - | - | 133.07 |
| Dec-16 | 139.29 | 15.61 | 10.26 | - | 59.14 | - | 11.20 | 235.49 |
| Jan-17 | 145.88 | 21.89 | 9.21 | - | 62.26 | - | 3.52 | 242.76 |
| Feb-17 | 121.92 | 17.10 | 7.17 | - | 80.22 | - | - | 226.42 |
| Mar-17 | 98.44 | 15.11 | 8.47 | - | 99.44 | - | - | 221.45 |
| Apr-17 | 70.87 | 6.32 | 15.53 | - | 118.79 | - | - | 211.51 |
| May-17 | 45.74 | 9.25 | 10.12 | - | 84.85 | - | - | 149.96 |
| Jun-17 | 26.95 | 3.72 | 4.63 | - | 80.15 | - | - | 115.46 |
| Jul-17 | 22.88 | 3.15 | 6.54 | - | 86.81 | - | - | 119.38 |
| Aug-17 | 21.22 | 3.14 | 10.05 | - | 68.77 | - | - | 103.18 |
| Sep-17 | 25.60 | 3.55 | 12.05 | - | 79.98 | - | - | 121.19 |
| Oct-17 | 74.98 | 10.27 | 16.70 | - | 54.35 | 59.16 | - | 215.46 |
| Nov-17 | 115.18 | 19.24 | 32.62 | - | 95.44 | 56.81 | - | 319.28 |
| Dec-17 | 161.89 | 26.05 | 38.13 | - | 128.37 | 50.00 | - | 404.43 |
| Jan-18 | 137.67 | 23.52 | 35.14 | - | 23.36 | 59.16 | - | 278.85 |
| Feb-18 | 144.04 | 24.65 | 26.21 | - | 158.89 | 59.16 | - | 412.95 |
| Mar-18 | 119.27 | 20.89 | 26.70 | - | 78.19 | 52.12 | - | 297.17 |
| Apr-18 | 78.75 | 8.83 | 9.87 | - | 88.91 | 5.48 | - | 191.85 |
| May-18 | 32.08 | 6.25 | 5.76 | - | 26.85 | 34.37 | - | 105.32 |
| Jun-18 | 31.00 | 4.29 | 4.25 | - | 25.12 | 59.16 | - | 123.82 |
| Jul-18 | 26.67 | 3.04 | 2.92 | - | 24.43 | 58.35 | - | 115.41 |
| Aug-18 | 24.38 | 4.73 | 3.12 | - | 20.27 | 53.88 | - | 106.38 |
| Sep-18 | 38.41 | 5.52 | 4.12 | - | 17.88 | 59.16 | - | 125.09 |
| Oct-18 | 79.89 | 10.92 | 9.76 | - | (0.70) | 94.90 | - | 194.76 |
| Nov-18 | 112.83 | 16.62 | 10.77 | 0.68 | 33.17 | 239.00 | - | 413.07 |
| Dec-18 | 147.73 | 23.20 | 6.84 | 0.50 | 19.09 | 209.25 | - | 406.62 |
| Jan-19 | 164.51 | 27.15 | 31.39 | 2.51 | 19.43 | 244.64 | - | 489.63 |
| Feb-19 | 192.71 | 29.49 | 8.76 | 5.77 | 54.80 | 197.85 | - | 489.38 |
| Mar-19 | 132.50 | 21.36 | 34.21 | 8.41 | 36.15 | 195.99 | - | 428.63 |
| Apr-19 | 82.24 | 7.39 | 14.64 | 5.89 | 16.86 | 189.33 | - | 316.35 |
| May-19 | 42.82 | 10.61 | 9.05 | 2.23 | 16.17 | 149.34 | - | 230.22 |
| Jun-19 | 32.55 | 3.65 | 7.06 | 1.26 | 14.06 | 138.34 | - | 196.93 |
| Jul-19 | 31.73 | 4.73 | 7.56 | 0.80 | 14.58 | 138.34 | - | 197.74 |
| Aug-19 | 30.20 | 4.46 | 4.07 | 25.75 | 1.58 | 13.82 | - | 79.89 |
| Sep-19 | 40.09 | 6.47 | 5.53 | 10.09 | (0.14) | - | - | 62.04 |
| Oct-19 | 104.97 | 21.02 | 19.03 | 19.39 | - | - | - | 164.41 |
| Nov-19 | 141.69 | 26.43 | 12.57 | 95.79 | - | - | - | 276.47 |
| Dec-19 | 170.31 | 31.91 | 21.60 | 48.56 | - | - | - | 272.38 |
| Jan-20 | 187.67 | 37.64 | 23.07 | (57.91) | - | - | - | 190.47 |
| Feb-20 | 162.86 | 31.50 | 20.65 | 31.12 | - | 234.59 | - | 480.72 |
| Mar-20 | 145.72 | 30.18 | 32.46 | 11.80 | - | 55.62 | - | 275.78 |
| Apr-20 | 98.31 | 12.68 | 6.89 | 40.54 | - | 107.61 | - | 266.03 |
| May-20 | 52.73 | 12.17 | 31.68 | 13.32 | - | 89.27 | - | 199.17 |
| Jun-20 | 43.33 | 7.10 | 8.87 | 11.54 | - | 75.30 | - | 146.15 |
| Jul-20 | 35.55 | 7.19 | 5.88 | 8.34 | - | 88.80 | - | 145.75 |
| Aug-20 | 28.82 | 4.08 | 4.25 | 6.87 | - | 53.62 | - | 97.64 |
| Sep-20 | 32.81 | 3.15 | 6.21 | 7.31 | - | 77.94 | - | 127.43 |
| Oct-20 | 87.37 | 14.07 | 9.92 | 18.85 | - | 92.48 | - | 222.69 |
| Nov-20 | 135.75 | 32.75 | 20.73 | 31.48 | - | 235.93 | - | 456.64 |
| Dec-20 | 161.78 | 33.32 | 27.27 | 37.21 | - | 284.86 | - | 544.44 |
| Jan-21 | 180.00 | 36.96 | 24.43 | 84.77 | - | 276.72 | - | 602.88 |

2

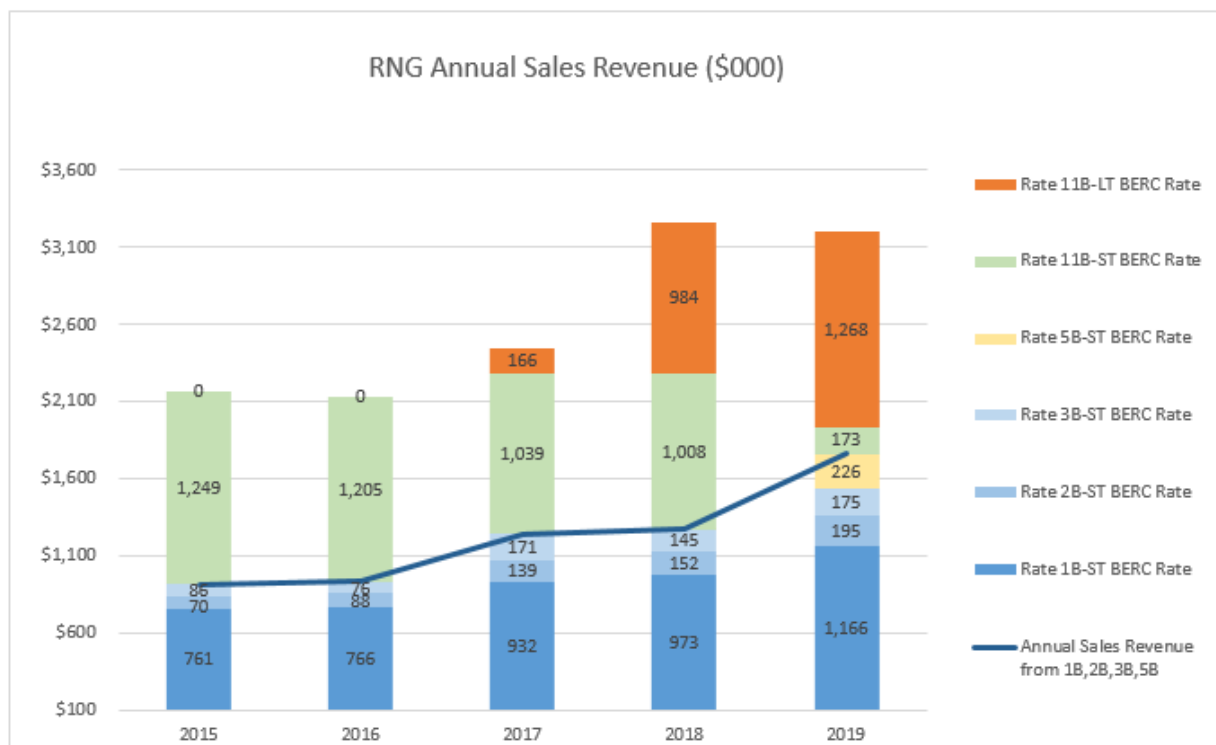
18.2 Please revise Figure 4 on page 10 that would show, for each bar, the breakdown of RNG annual sales revenue by rate schedule.

Response:

Figure 4, updated in the response to BCUC IR1 9.1 and included below, has been revised to show the RNG annual sales revenue by rate schedule. Please note when the individual Short Term BERC Rates are added together, there is a minor rounding difference when compared to the total Short Term BERC Rate totals shown in Figure 4 of the Report¹⁰.

Updated Figure 4 follows.

Figure 4: Annual RNG Revenue by Short Term and Long Term Customers



18.3 Please discuss if there are similarities or differences in trends of RNG annual sales revenue across the rate schedules.

¹⁰ Exhibit B-1, Section 2.1.3, p. 10.

| | |
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1 **Response:**

2 As with participation and sales volume, the trend is that revenues have grown more quickly
3 since the adoption of the current BERC rate. However, comparisons between rate schedules
4 does not provide any meaningful insight due to the limited number of participants in the larger
5 volume rate schedules and their differing profiles. Please also refer to the responses to BCUC
6 IR1 16.3 and 17.3.

1 **F. LONG-TERM CONTRACTS SUMMARY OF TERMS AND CONDITIONS**

2 **19.0 Reference: LONG-TERM CONTRACTS SUMMARY OF TERMS AND CONDITIONS**
3 **Exhibit B-1, Section 2, p. 4; Section 6, p. 16; Appendix B, Table 1, pp.**
4 **1–3**

5 **Summary of long-term contracts terms and condition for UBC**

6 On page 4, FEI states that “[t]he Long Term BERC Rate is set at a \$1.00 discount to the
7 Short-Term BERC Rate to reflect the benefits to FEI and its non-RNG customers,
8 including long-term revenue certainty, a more predictable load throughout the year, and
9 reduced marketing efforts required to reach this customer group.”

10 In Tables 1, 2 and 3 of Appendix B to the Report, FEI states that the rate escalation is:
11 “Annual Adjustment of the Contract Price equals: \$10 per GJ multiplied by 50% increase
12 of the Consumer Price Index (Canada) over the previous year.

13 19.1 Please clarify why the contract price is set at \$10 per GJ rather than set at the
14 Long-Term BERC Rate, which is \$1 discount from the Short-Term BERC Rate.

15
16 **Response:**

17 The contract price is set to the Long Term BERC Rate at the time of contract execution. Per the
18 provisions of the Biomethane interruptible sales agreement, after the initial year of service, the
19 contract price escalates in each subsequent year as described in the preamble, by 50 percent of
20 the previous year’s CPI (Canada), until the renewal period. At renewal, the contract price is
21 reset to the greater of:

- 22 (a) the Long Term Biomethane Service Charge – here defined as \$10/GJ in Appendix A to
- 23 the contract;
- 24 (b) the Adjusted Long Term Biomethane Service Charge – the Long Term Biomethane
- 25 Service Charge, as adjusted by the annual inflation factor described in the preamble; or
- 26 (c) the sum of: The BCUC approved January 1st Commodity Cost Recovery Charge per GJ;
- 27 the current British Columbia carbon tax applicable to conventional natural gas
- 28 customers; any other taxes applicable to conventional natural gas sales.

29
30 Note that the Long term BERC Rate is defined as the greater of either:

- 31 (a) the \$1 discounted rate from the Short Term BERC Rate; or
- 32 (b) the \$10 per GJ floor rate.

33
34 Until January 2021, the Long Term BERC Rate was at the approved \$10 per GJ floor rate since
35 the implementation of the Decision. This was attributable to the relatively low price of the short
36 term BERC rate, which is itself a function of the low price of conventional natural gas. The Long
37 Term BERC rate as of January 1, 2021 is \$10.83 per GJ, which is \$1 discount from the current

approved Short Term BERC rate of \$11.83 per GJ. If FEI were to sign a Long Term contract in 2021, the strike price would be \$10.83 per GJ.

19.2 Please clarify how the rate escalation works in relation to the Long-Term BERC Rate?

Response:

Please refer to the response to BCUC IR1 19.1.

19.3 Please provide a table showing the annual price in \$/GJ that UBC, the City of Vancouver, and Translink are billed for their purchase of RNG since the inception of their respective long-term contracts.

Response:

In the process of responding to this question FEI has discovered that the annual inflation adjustment described in the preamble has not been programed into FEI's billing system. Consequently, the 3 customers (UBC, City of Vancouver, Translink) listed have been billed at the rate of \$10/GJ since their enrollment into the program. FEI is now working internally to address the situation and establish a process to avoid a recurrence. FEI will be working directly with the customers to recover the unbilled amounts. The table below provides the rates at which these customers should have been billed, had the annual adjustment factor been applied:

| Customer | 2017 | 2018 | 2019 | 2020 | 2021 |
|-----------|----------|----------|----------|----------|----------|
| UBC | \$ 10.00 | \$ 10.08 | \$ 10.19 | \$ 10.29 | \$ 10.33 |
| CoV | | \$ 10.00 | \$ 10.12 | \$ 10.21 | \$ 10.25 |
| Translink | | | \$ 10.00 | \$ 10.10 | \$ 10.13 |

The following table from Statistics Canada¹¹ provides the average annual Consumer Price Index used to calculate the escalated rates in the table above:

| Year | 2016 | 2017 | 2018 | 2019 | 2020 |
|---------------|-------|-------|-------|------|------|
| CPI All-items | 128.4 | 130.4 | 133.4 | 136 | 137 |

¹¹ Accessed March 9, 2021 at: <https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=1810000501>.

19.4 Did FEI mean to describe “floor price” and “price adjustment after the 5th year” identically in Table 1 of Appendix B for UBC? If not, please revise as necessary?

| | |
|-------------|--|
| Floor Price | The higher of: (a) the Long Term BERC rate or (b) the sum of the following: (i) the approved January 1st CCRA RATE; (ii) carbon tax; (iii) any other taxes applicable to conventional natural gas sales. |
|-------------|--|

Response:

Yes, the “floor price” is defined as the “price adjustment after the 5th year” in the contract.

19.5 The description provided by FEI for “floor price” for the City of Vancouver and Translink does not seem to reflect what the floor price is. Please revise as necessary.

| | |
|-------------|---|
| Floor Price | the sum of the following: (i) the approved January 1st CCRA RATE in each year of the Renewal Term; (ii) carbon tax; (iii) any other taxes applicable to conventional natural gas sales. |
|-------------|---|

Response:

The description for “floor price” for the City of Vancouver and Translink should read as follows:

The higher of: (a) the Long Term BERC rate or (b) the sum of the following: (i) the approved January 1st CCRA RATE; (ii) carbon tax; (iii) any other taxes applicable to conventional natural gas sales.

Note that this is the definition of the “floor price” in the long term contracts. The \$10 per GJ floor price is known as the Long Term Biomethane Charge, and is provided in Schedule A of the contract.

19.6 If the Long-Term BERC Rate is \$10/GJ while the sum of the approved January 1 CCRA rate, plus carbon tax and all other applicable taxes to conventional natural gas is lower than \$10/GJ, please confirm, or otherwise explain, that UBC’s RNG price would be set at \$10/GJ.

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19.6.1 If confirmed, please clarify why a long-term contract customer such as UBC would not benefit from a \$1/GJ discount relative to the Short-Term BERC Rate when FEI benefits from having such long-term contract customers, as explained in the first quote above.

Response:

Confirmed. FEI discusses below how the Long Term BERC Rate is determined when negotiating a long-term contract, including how the rate was established for UBC.

Long Term BERC Rate

At the time a Long Term BERC Rate contract is signed, the rate is subject to the greater of:

1. Short Term BERC Rate (the sum of the Commodity Cost Recovery Charge, applicable carbon tax per GJ and \$7.00 premium) in effect as of January 1 at the time, less a \$1.00 per GJ discount; and
2. The minimum contract strike price of \$10.00 per GJ

Once a contract is executed and approved, the Long Term BERC Rate is not adjusted in the same way that the Short Term BERC Rate is on January 1 of each subsequent year during the agreement. Rather, the Long Term BERC Rate is subject to an annual inflation mechanism, typically based on the Consumer Price Index of Canada (CPI).

The one exception to this adjustment is for Long Term BERC Rate Agreements with a term greater than five years where the rate (adjusted for inflation) is lower than the current Short Term BERC Rate at that time.

These agreements are subject to a contract floor price, where if the Short Term BERC Rate is greater (beyond year five), then the Long Term BERC will be the greater of:

1. The Long Term BERC Rate (adjusted for inflation) and;
2. The Short Term BERC Rate applicable as of January 1 beyond year five of the agreement

UBC Long Term BERC Rate

At the time of contract signing, UBC's Long Term BERC Rate was set to the minimum contract strike price of \$10.00 per GJ, which was greater than the Short Term BERC Rate less a \$1.00 discount. UBC's rate is adjusted annually based on 50 percent of CPI. Furthermore, as UBC signed a 10-year agreement, their Long Term BERC Rate (adjusted for inflation) is subject to the contract floor price beyond year five.

UBC therefore does benefit from a \$1.00 per GJ discount over the Short Term BERC, subject to the limits of the minimum contract strike price, and the contract floor price beyond year five.

19.7 Please clarify what is referred to by the “Adjusted Long Term BERC Rate” for the City of Vancouver and Translink.

Response:

“Adjusted Long Term BERC Rate” refers to the “Adjusted Long Term Biomethane Service Charge”, which means the Long Term Biomethane Service Charge as adjusted annually through the rate escalation described in Tables 2 and 3.

19.8 Given FEI’s curtailment of its large volume interruptible customers, was FEI able to deliver:

- (i) the minimum annual quantity of 71 TJ to UBC?
- (ii) the minimum annual quantity shown in Table 2 of Appendix B to the City of Vancouver?
- (iii) the minimum annual quantity shown in Table 3 of Appendix B to Translink?

If not, please provide the curtailed volume delivered annually to each customer.

Response:

During the period of curtailed service, beginning in August of 2019, FEI has not been able to deliver the minimum annual quantities listed in the question to these customers. Note that the minimum annual quantities outlined in the contracts are per contract year, not per calendar year. The contract years can differ. For example, UBC’s Contract Year starts in July, the City of Vancouver’s in October, while Translink’s begins in February. The following provides the curtailed volumes delivered to these customers per contract year.

(i) UBC received the curtailed amount of 24 TJ in Year 3. For UBC, this is the only full contract year that falls within the curtailment period.

(ii) City of Vancouver received the curtailed amount of 61 TJ in Year 1 and 30 TJ in Year 2.

(iii) Translink received the curtailed amount of 29 TJ in Year 1 and 52 TJ in Year 2.

Year 4 for UBC and Year 3 for both the City of Vancouver and Translink are currently in progress. FEI is expecting new RNG supply projects to come on stream over the course of this year and therefore may be able to increase the amount of RNG available to all customers

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- 1 including City of Vancouver and Translink. As such, it is not definitive how much RNG the large
- 2 volume interruptible customers will receive by the end of their current contract years.

3

1 **G. CUSTOMER AWARENESS AND EDUCATION**

2 **20.0 Reference: CUSTOMER AWARENESS AND EDUCATION**

3 **Exhibit B-1, p. 17**

4 **Customer awareness campaign**

5 On page 17 of the Report, FEI states:

6 In 2016, FEI contracted a customer research company to garner a better
7 understanding of customer perceptions and knowledge of RNG... the research
8 identified certain customer segments that had a higher potential for program
9 participation. The customer research study provided insights into the
10 development of new customer outreach and awareness campaigns and delivery
11 of those campaigns through different media channels. This new campaign was
12 developed and launched into market in 2017...

13 20.1 Please explain what it means for a particular customer segment to have a “higher
14 potential for program participation.”

15

16 **Response:**

17 For a particular customer segment to have a “higher potential for program participation”
18 indicates that those customers have a higher level of interest in RNG and hence are more likely
19 to enroll in the program, and are willing to pay to participate in the program. In 2016 FEI
20 contracted a customer research company that conducted a study targeting FEI’s natural gas
21 customers (who were at the time not RNG customers) to better understand their familiarity with
22 the RNG program, level of interest in the RNG program and motivations and barriers to RNG
23 program participation.

24 Three target segments, RNG Enthusiasts, Eco-Friendly Millennials, and Eco-Friendly Gen Xers,
25 were identified as having high to moderate potential to participate in the RNG program: RNG
26 Enthusiasts, Eco-Friendly Millennials and Eco-Friendly Gen Xers. Each of these segments have
27 an interest in helping the environment – for example, nearly all RNG Enthusiasts and Eco-
28 Friendly Millennials surveyed agreed that “helping to create a better environment” positively
29 influences their opinion of RNG. Reasons cited for helping the environment as a motivator
30 include the belief that it is everyone’s duty to take care of the planet and future generations, and
31 that switching to carbon-neutral energy sources is necessary and the way of the future. The
32 2017 RNG campaign targeted the Eco-Friendly Millennial and Gen Xer customer segments
33 (RNG Enthusiasts represented a much smaller segment) to drive awareness and encourage
34 program participation. The goal of the campaign was to increase sign up for RNG and hence
35 maximize revenues for the program.

36

37

38

| | |
|---|------------------------------------|
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1 20.2 Please specify the customer segments that were identified as having a higher
2 potential for program participation.

3 20.2.1 For each customer segment identified, please describe the unique
4 factors or characteristics that are responsible for the higher potential for
5 program participation.
6

7 **Response:**

8 Please refer to the response to BCUC IR1 20.1.

9
10

11
12 20.3 Please explain whether FEI's 2017 outreach and awareness campaign targeted
13 customers that were likely to maximize revenues under the BERC rate
14 methodology.

15 20.3.1 If yes, please explain how.

16 20.3.2 If not, why not?
17

18 **Response:**

19 Please refer to the response to BCUC IR1 20.1.

20

21.0 Reference: CUSTOMER AWARENESS AND EDUCATION

Exhibit B-1, Section 7, Tables 9 and 10, pp. 17–18

Marketing metrics and expenditures

On pages 17 to 18 of the Report, FEI states that:

Once additional supply volumes become available to customers in 2021 and the RNG program reopens for customer enrolment, FEI will be able to relaunch its customer education and awareness campaigns to encourage increases in future enrolments as well as retain currently enrolled customers.

21.1 Please update Tables 9 and 10 to include data for the year 2020.

Response:

Updated Tables 9 and 10 have been provided below.

There was an error for the 2019 page views recorded in Table 9 of the Report; the correct number has been provided below.

Table 9: RNG Program Customer Participation and Marketing Metrics

| Year | Total RNG Customers As At December 31 | Unique Pageviews to RNG Program Page |
|------|--|---|
| 2016 | 7,478 | 16,388 |
| 2017 | 8,982 | 22,296 |
| 2018 | 10,333 | 11,943 |
| 2019 | 11,209 | 6,669 |
| 2020 | 10,328 | 6,610 |

Table 10: RNG Program Customer Awareness Expenditures

| Year | Expenditures (\$000s) | Description |
|------|--------------------------|---|
| 2016 | \$100 | Customer awareness messaging and customer research study |
| 2017 | \$246 | Development and launch of new awareness campaign into market |
| 2018 | \$151 | New creative continues on a scaled-back basis as indications are that demand will outstrip supply |
| 2019 | \$29 | Customer awareness efforts very limited due to closure of enrolment |
| 2020 | \$22 | Customer awareness efforts very limited due to closure of enrolment. |

| | |
|---|------------------------------------|
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21.2 Please provide an update on FEI's plans to relaunch its customer education and awareness campaigns, including a forecast of the RNG Program Customer Awareness expenditures once the program is relaunched.

Response:

As noted in the response to BCUC IR1 4.1, FEI is currently in the planning stage of the RNG program communications in anticipation of the RNG program re-opening to customers. At this point the timing and a forecast of program expenditures for this relaunch are yet to be determined.