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October 4, 2023

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

Attention: Patrick Wruck, Commission Secretary

Dear Patrick Wruck:

Re: FortisBC Energy Inc. (FEI)
Revised Renewable Gas Program Application – Stage 2 (Application)
Response to the British Columbia Utilities Commission (BCUC) Information
Request (IR) No. 3 on Evidentiary Update

On December 17, 2021, FEI filed the Application referenced above. In accordance with the further regulatory timetable established in BCUC Order G-215-23, FEI respectfully submits the attached response to BCUC IR No.3 on Evidentiary Update.

If further information is required, please contact the undersigned.

Sincerely,

FORTISBC ENERGY INC.

Original signed:

Sarah Walsh

Attachments

cc (email only): Registered Interveners

FortisBC Energy Inc. (FEI or the Company) Biomethane Energy Recovery Charge Rate Methodology and Comprehensive Review of a Revised Renewable Gas Program (Application)	Submission Date: October 4, 2023
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A. GENERAL

1.0 Reference: INTRODUCTION

Exhibit B-89, Evidentiary Update to the Comprehensive Review and Application for a Revised Renewable Gas Program (Evidentiary Update), Section 1, p. 2

Clarification on timeline

On page 2 of the Evidentiary Update, FEI states:

Given the need to implement the Renewable Gas Blend as soon as possible, FEI is amending its approvals sought with respect to the Renewable Gas Blend to reflect the earliest practicable implementation date. Specifically, pursuant to sections 59 to 61 of the Utilities Commission Act, FEI requests all of the following approvals to be effective the first of the month at least two months after the date of the BCUC's final decision in this proceeding:

[...]

b) Approval of changes to the Voluntary Renewable Gas service, including changes to existing related Rate Schedules and renaming from Biomethane to Low Carbon Gas.

[...]

The Renewable Gas Connections and changes to the Voluntary Renewable Gas service will take more time to implement (approximately five months). Thus, FEI proposes that the effective date for the remaining approvals sought related to these new service offerings be proposed in a compliance filing subsequent to the decision, filed at least 30 days prior to implementation, and will include all the revised tariff pages for BCUC review, approval and endorsement. [Emphasis added]

1.1 Please clarify the effective date on which FEI would like to implement changes to the Voluntary Renewable Gas Service: (i) as soon as possible, i.e., on the first of the month of at least two months after the date of the BCUC's final decision; or (ii) about five months after a BCUC's final decision, with a date to be proposed in a compliance filing filed at least 30 days prior to implementation.

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1 **Response:**

2 As discussed in the Evidentiary Update,¹ FEI would like to implement the Renewable Gas Blend
3 service as soon as possible after the date of the BCUC's final decision. FEI anticipates that the
4 soonest it would be able to implement the Renewable Gas service subsequent to the BCUC's
5 final decision is the first of the month following at least two months after the date of the final
6 decision. The proposed changes to the Renewable Gas Blend service will also include related
7 housekeeping amendments to all of FEI's sales service Rate Schedules (including the existing
8 Voluntary Renewable Gas rate schedules, as referenced in approval b) in the preamble)² to reflect
9 implementation of the Renewable Gas Blend service, definitions, naming conventions and
10 associated rate rider changes – as were summarized on pages 27 and 28 of the Evidentiary
11 Update. FEI also proposes³ that the related blacklined tariff changes to FEI's GT&Cs and Rate
12 Schedules be submitted to the BCUC subsequent to the BCUC's Decision and final order in this
13 proceeding to ensure the tariff changes reflect directives in the decision.

14 FEI intended its reference to needing approximately five months to implement the Renewable
15 Gas Connections service and changes to the Voluntary Renewable Gas service to refer to the
16 implementation of the proposed new Rate Schedules. Specifically, the implementation of the
17 Permanent Connection Low Carbon (PLC) Rate Schedules (1PLC, 2PLC, 3PLC) and the Low
18 Carbon Gas Vehicle (VLC) service Rate Schedules (3VLC, 5VLC) will require approximately five
19 months for FEI to implement. Therefore, FEI proposed in the Evidentiary Update that the effective
20 date be approximately five months from the date of the BCUC's final decision, with an effective
21 date to be proposed in the compliance filing to be filed at least 30 days prior to implementation.
22 During this time period, FEI will need to implement changes to its customer information system to
23 enable the new Rate Schedules and provide training to customer service representatives to
24 support the new offerings. By proposing an exact effective date in the compliance filing, FEI will
25 be able to assess and determine the earliest date for implementation.

26
27

28
29 1.2 Considering the Evidentiary Update does not describe changes to the Voluntary
30 Renewable Gas service, please clarify any changes to this service that FEI is
31 seeking approval of as part of the Evidentiary Update.

32
33 **Response:**

34 FEI is not seeking any changes to the Voluntary Renewable Gas service as part of the Evidentiary
35 Update.

¹ Evidentiary Update (Exhibit B-89), pp. 2, 26-28, and Appendix A, Revised Draft Order.

² RS 1B, 2B, 3B, 5B, 7B, 11B and 46.

³ Evidentiary Update (Exhibit B-89), p. 28, lines 31-32.

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**2.0 Reference: CHANGES TO FEI'S TARIFF TO IMPLEMENT A MONTHLY BLEND
PERCENTAGE**

Exhibit B-89, Section 5.5, p. 26

Clarification on timeline

On page 26 of the Evidentiary Update, FEI states:

Considering that FEI must balance RNG [Renewable Natural Gas] supply and demand on a monthly basis as soon as practicable for the benefit of customers, FEI is amending its approvals sought, as outlined above in Section 1 of this Evidentiary Update, so that FEI can implement the Renewable Gas Blend service on the first of the month following at least two months after the date of the BCUC's final decision in this proceeding. FEI proposes that it will file an application for approval of the initial setting of the [Storage and Transport Low Carbon] S&T LC rider prior to its effective date and implementation. [Emphasis added]

2.1 Since FEI requests to implement the Renewable Gas Blend service on the first of the month at least two months after the BCUC issues its final decision, please clarify whether FEI expects to file the above-noted application and to obtain the BCUC's approval of such application within the two-month period between a BCUC decision and the implementation of the RG Blend program.

Response:

After the BCUC's approval of the Renewable Gas Blend service, including the mechanics of the S&T LC Rider, FEI's expectation is that the application to implement the service will not involve any new or substantive issues, but will be focused on confirming that FEI is implementing the service as approved. Accordingly, FEI expects that the application will be straightforward and can be quickly prepared, reviewed and approved.

2.2 Please state how much time FEI expects it will need for customer communication and billing system change.

Response:

FEI currently estimates that it will take approximately two months to implement the customer communication and billing system changes required to support the Renewable Gas Blend service.

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3.0 Reference: BACKGROUND TO THE CARBON TAX MATTER

Exhibit B-89, Section 2, pp. 4–5; Exhibit B-11, Application, p. 107

Clarification on FEI's inventorying practice

On page 4 of the Evidentiary Update, FEI states:

Where biomethane supply exceeds customer demand in a given monthly reporting period, FEI carries the surplus forward to a period when demand is higher than supply (which FEI refers to internally as “inventorying”), thereby balancing supply and demand over time. [Emphasis added]

On page 107 of the FEI Revised Renewable Gas Program Application – Stage 2 (Application), FEI states:

FEI proposes to use the LCG Account, which is the replacement account for the BVA [Biomethane Variance Account], as the regulatory mechanism to track all Renewable Gas Program supply costs and recoveries, and the associated volumes. Recoveries of Renewable Gas supply costs will be through two charges: the S&T LC rider and the LCG Charge.

3.1 Please confirm, or otherwise explain, that FEI has been inventorying through the Biomethane Variance Account to date and that this inventorying will be recorded in the proposed new Low Carbon Gas Account as described in Section 8 of the Application.

Response:

Confirmed. Quantities of RNG supply (purchases) and demand (sales) are tracked and reported through the Biomethane Variance Account (BVA), including inventorying any quantities of unsold RNG. Under the proposed revised Renewable Gas Program, any inventorying will be tracked and reported through the proposed new Low Carbon Gas Account (LCGA), as described in Section 8 of the Application.

On page 5 of the Evidentiary Update, FEI states:

On May 26, 2023, FEI received a letter from the Assistant Deputy Minister of the Policy and Legislation Division of the Ministry of Finance acknowledging FEI's practice of inventorying biomethane. In its letter, the Ministry commits to undertaking a detailed analysis of the issues identified by FEI as part of the February 2024 budget cycle and states that it will forward options to the Minister of Finance for consideration.

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While a legislative change recognizing the inventorying of biomethane for the purpose of recovering carbon tax refunds remains FEI's objective and may ultimately be recommended by the Ministry, the Ministry has not committed to making such a change.

3.2 Please clarify whether FEI would file another application with the BCUC to address the accounting treatment of the residual supply and demand imbalances and/or to reverse changes sought in this Evidentiary Update on a go-forward basis should the Ministry of Finance introduce a legislative change to the *Carbon Tax Act* to recognize FEI's practice of inventorying.

Response:

FEI will need to consider any legislative change before making any decisions regarding future applications to the BCUC. If the Ministry of Finance introduces a legislative change to the *Carbon Tax Act* that recognizes and supports FEI's practice of inventorying biomethane for carbon tax reporting and filing purposes, then FEI would consider whether having the ability to change the blend on a monthly basis continues to offer any benefits for managing the program. Retaining the ability to change the blend on a monthly basis does not require FEI to do so, but may offer benefits in managing inventory from time to time.

Regardless of any legislative change, FEI does not anticipate filing an application with the BCUC to address the accounting treatment of residual supply and demand imbalances, as these imbalances only affect the amount of carbon tax refund the Province provides FEI on behalf of its customers.

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4.0 Reference: CHANGES TO FEI'S TARIFF TO IMPLEMENT A MONTHLY BLEND PERCENTAGE

Exhibit B-89, Section 5.5, p. 28; Section 5.3, Table 5-1, p. 17

Clarification on FEI's General Terms and Conditions (GT&Cs)

On page 28 of the Evidentiary Update, FEI states:

For clarity, the percentage of Low Carbon Gas determined by FortisBC Energy each month for the purpose of the Blended Low Carbon Gas service may differ from the blend of Low Carbon Gas forecast by FortisBC Energy each year for rate setting purposes.

4.1 Please confirm that FEI illustrated the above-noted difference in Table 5-1 of the Evidentiary Update entitled "Example of the Difference in the Volume of Renewable Gas Received When Calculating Blend Percent Monthly vs. Annually."

4.1.1 If not, please explain what the clarification in the GT&Cs is referring to and provide an example.

Response:

Confirmed.

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B. EVIDENTIARY UPDATE AMENDMENTS

5.0 Reference: AMENDMENTS TO THE APPLICATION TO IMPLEMENT THE SOLUTION

Exhibit B-89, Section 5, p. 11

Implication of various approval scenarios

On page 11 of the Evidentiary Update, FEI states:

As discussed above, FEI is modifying its proposed Renewable Gas Blend service to set the percentage blend of RNG provided to all Sales Customers on a monthly basis so that FEI can closely match monthly RNG supply and demand and thereby maximize the carbon tax refund it can receive from the Province. In this section:

1. FEI describes how adjusting the RNG blend percentage on a monthly basis can closely match forecast RNG demand.
2. FEI describes how there remains the possibility for residual supply and demand imbalances in a month and, as such, FEI is seeking approval to account for carbon tax credits granted to customers for which the Province does not provide a refund to FEI in the LCGA [Low Carbon Gas Account].
3. FEI describes how setting the RNG blend on a monthly basis affects the RNG and the carbon tax credit a customer receives compared to the annual blend percentage purposed in the Application.
4. FEI estimates the effect on customer bills due to the setting of a monthly blend compared to the annual blend percentage proposed in the Application.
5. FEI sets out the amendments to its tariffs required to implement the proposed Renewable Gas Blend service.

5.1 Please discuss how FEI's proposed amendments to the Renewable Gas Blend offering would be impacted if the BCUC were to (i) only approve the Renewable Gas Blend offering (and reject the Renewable Gas Connections and Voluntary Renewable Gas offerings) or (ii) only approve the Renewable Gas Blend and Voluntary Renewable Gas offerings but reject the Renewable Gas Connections offering.

Response:

Neither of the scenarios noted would affect the proposed amendments to FEI's Renewable Gas Blend service as described in the Evidentiary Update.

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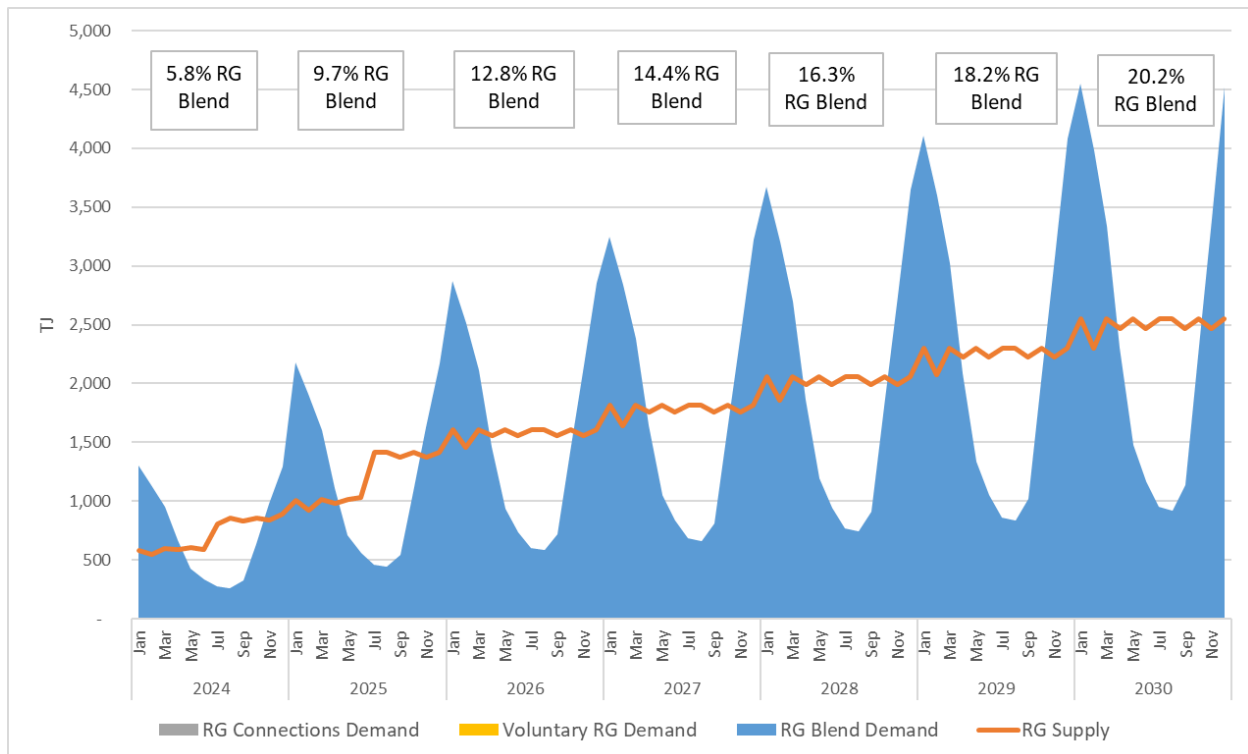
5.2 Please provide updated Figures 5-3 to 5-17 to account for these two potential outcomes and provide a narrative that highlights the changes between these outcomes.

Response:

Scenario (i): if the BCUC were to only approve the Renewable Gas Blend Service (and reject the Renewable Gas Connections and Voluntary Renewable Gas Services)

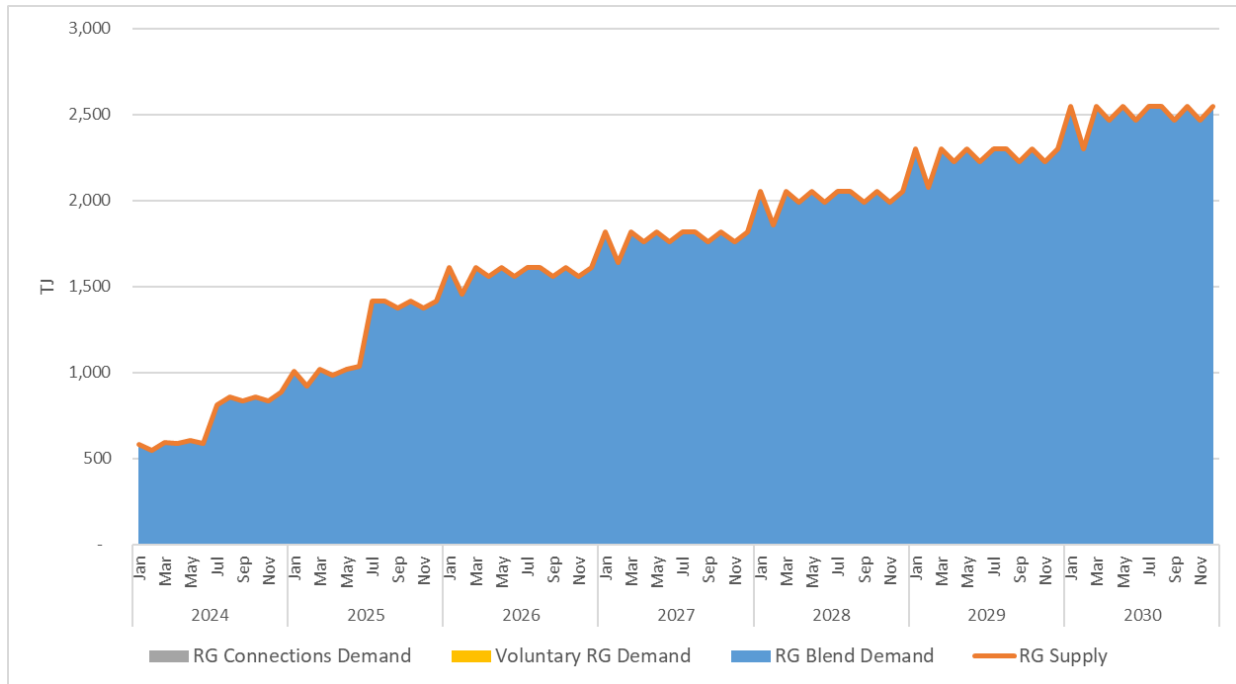
The following figures reflect the approval of FEI's Renewable Gas Blend service only, as updated with FEI's Evidentiary Update. Assuming supply does not change from the Evidentiary Update and only the Renewable Gas Blend service is approved, all Renewable Gas would be delivered through FEI's Renewable Gas Blend service. As a result, the percent Renewable Gas blended annually or monthly increases.

Revised Figure 5-3: Monthly Renewable Gas Supply and Demand when the Blend Percent is set Annually

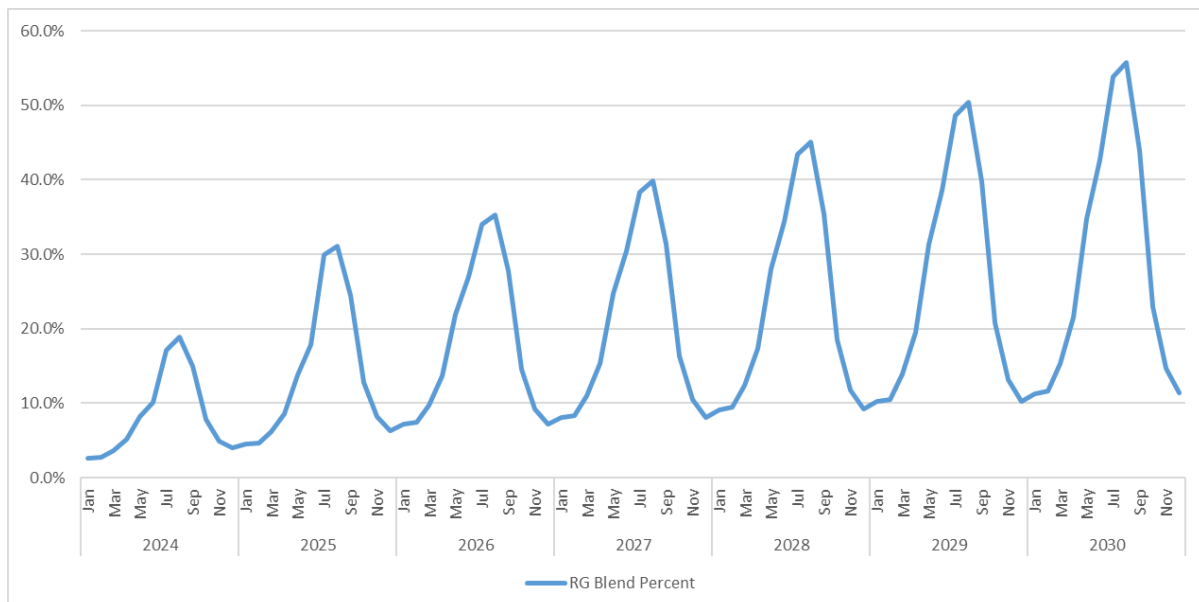


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Revised Figure 5-4: Monthly Renewable Gas Supply and Demand when the Blend Percent is set Monthly

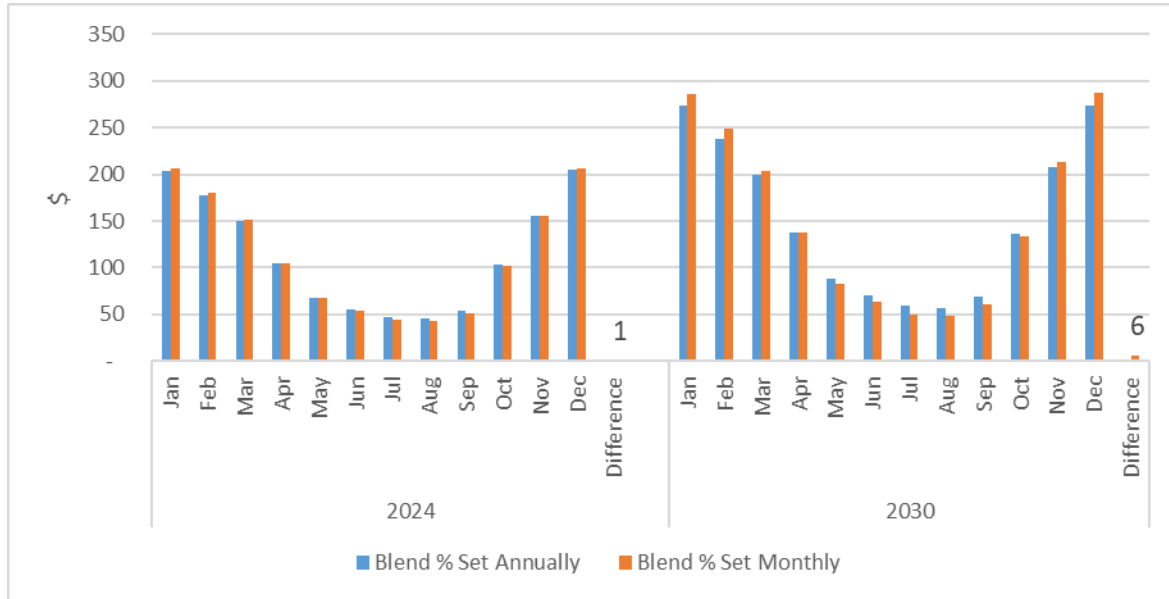


Revised Figure 5-5: Range of Blend Percent to Match Supply and Demand



<p style="text-align: center;">FortisBC Energy Inc. (FEI or the Company)</p> <p style="text-align: center;">Biomethane Energy Recovery Charge Rate Methodology and Comprehensive Review of a Revised Renewable Gas Program (Application)</p>	<p>Submission Date: October 4, 2023</p>
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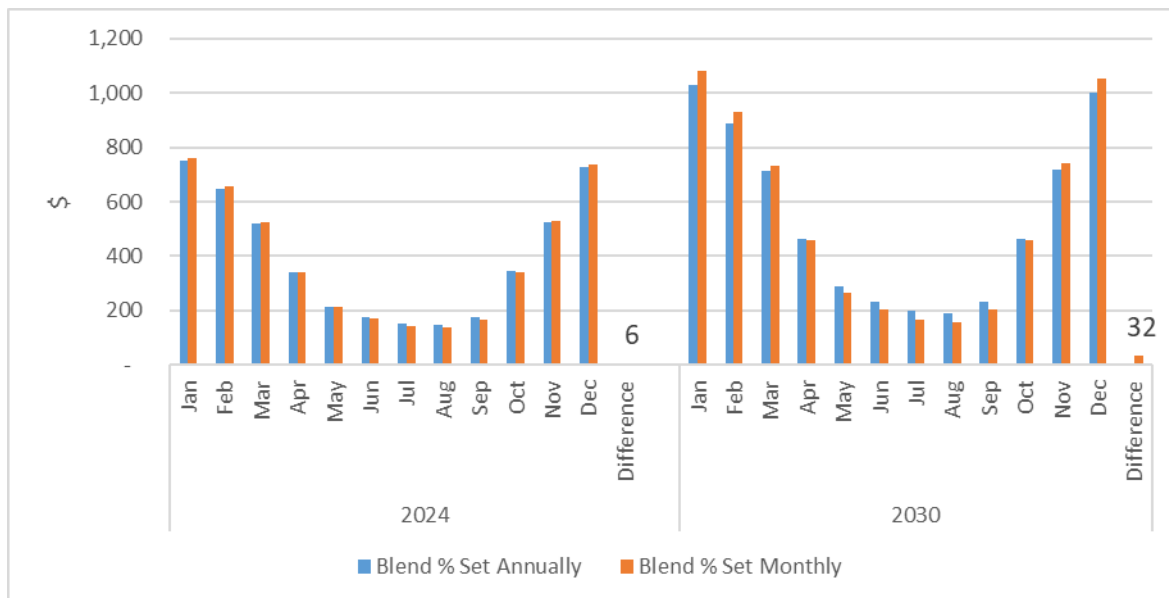
Revised Figure 5-6: Rate Schedule 1 Bill Comparison between Monthly and Annual Blend Percent Setting for RG Blend Customers for Years 2024 and 2030



Revised Figure 5-7: Rate Schedule 1 Bill Comparison between Monthly and Annual Blend Percent Setting for Voluntary RG Customers for Years 2024 and 2030

This figure was not reproduced because this scenario does not include a Voluntary Renewable Gas service as per the parameters of the question.

Revised Figure 5-8: Rate Schedule 2 Bill Comparison between Monthly and Annual Blend Percent Setting for RG Blend Customers for Years 2024 and 2030

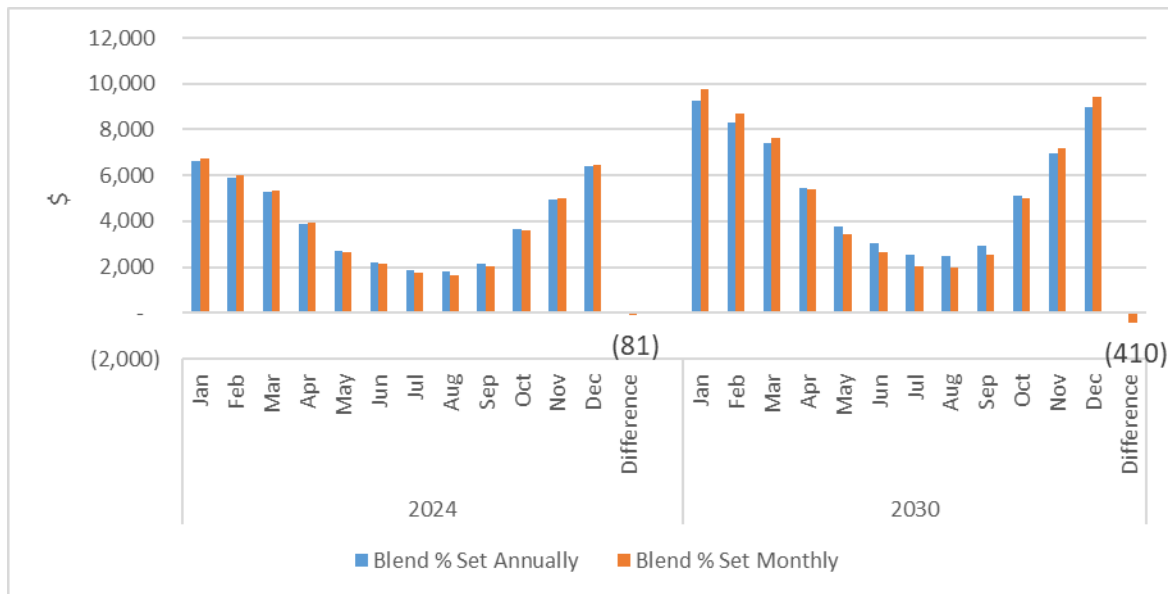


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Revised Figure 5-9: Rate Schedule 2 Bill Comparison between Monthly and Annual Blend Percent Setting for Voluntary Customers for Years 2024 and 2030

This figure was not reproduced because this scenario does not include a Voluntary Renewable Gas service as per the parameters of the question.

Revised Figure 5-10: Rate Schedule 3 Bill Comparison between Monthly and Annual Blend Percent Setting for RG Blend Customers for Years 2024 and 2030



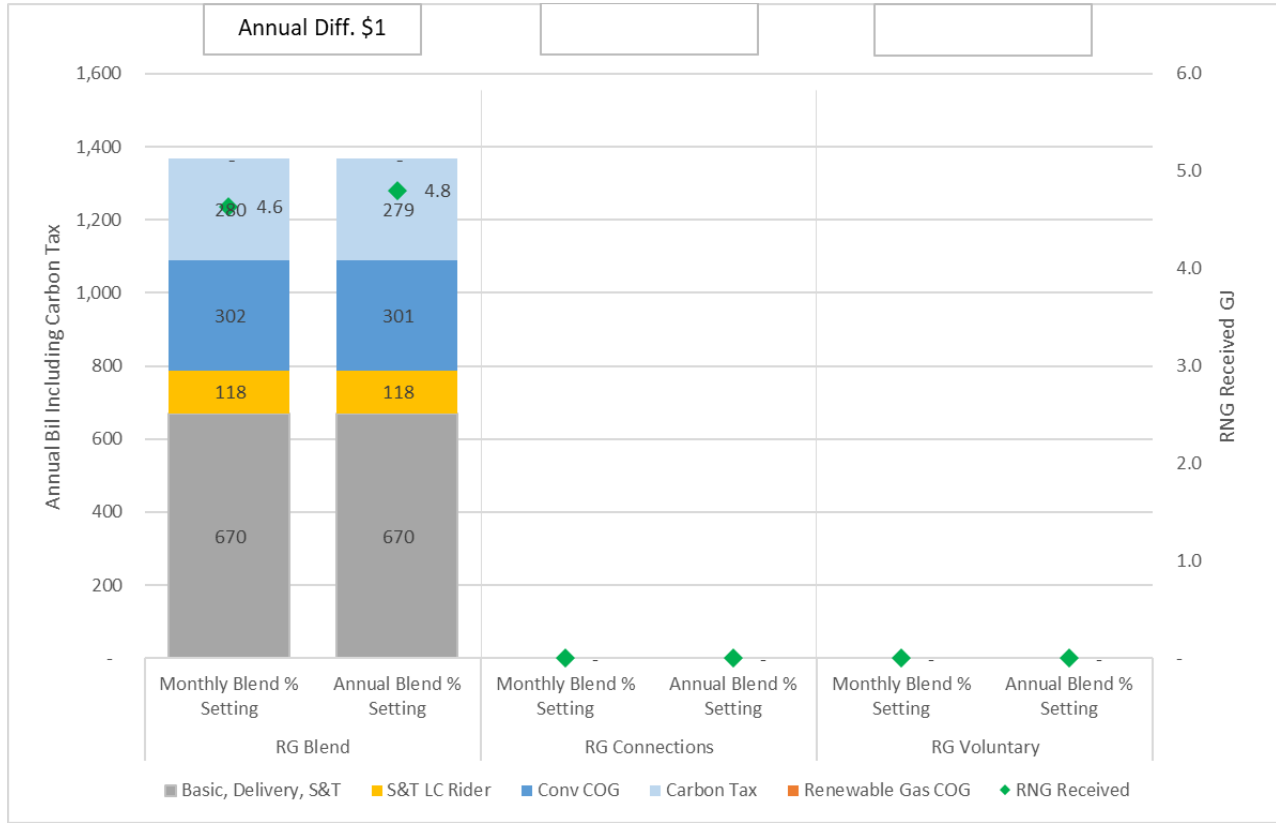
As shown in the figures above, there continues to be monthly variability as a result of setting the Renewable Gas Blend percentage on a monthly versus annual basis. The variability is not substantially different, monthly or in total, from FEI's Evidentiary Update. Any variability continues to be relatively small when compared to the total monthly customer bill.

Revised Figure 5-11: Rate Schedule 3 Bill Comparison between Monthly and Annual Blend Percent Setting for Voluntary RG Customers for Years 2024 and 2030

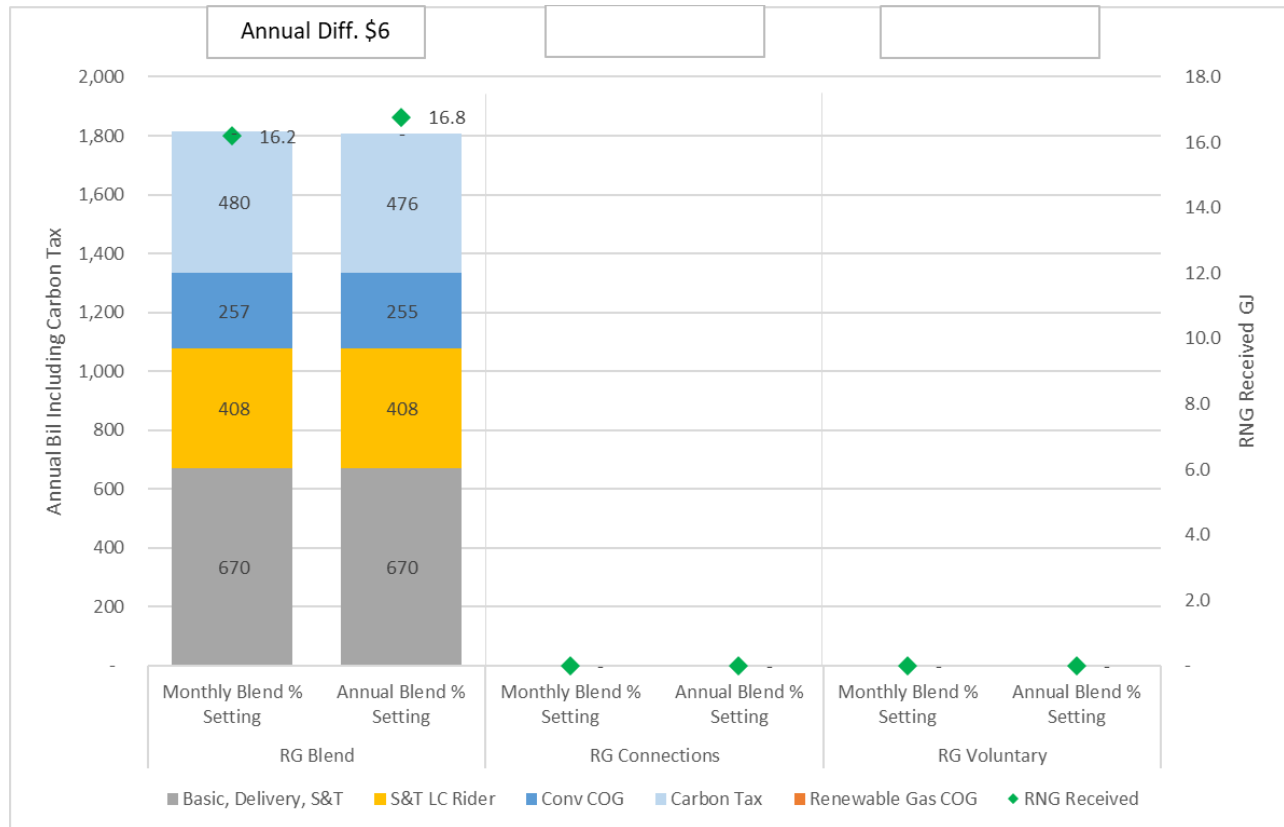
This figure was not reproduced because this scenario does not include a Voluntary Renewable Gas service as per the parameters of the question.

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1 **Revised Figure 5-12: Rate Schedule 1 Annual Bill Components Comparison for 2024**



1 **Revised Figure 5-13: Rate Schedule 1 Annual Bill Components Comparison for 2030**



2

3 An increase to the total annual customer bill when compared to the same figures in FEI's

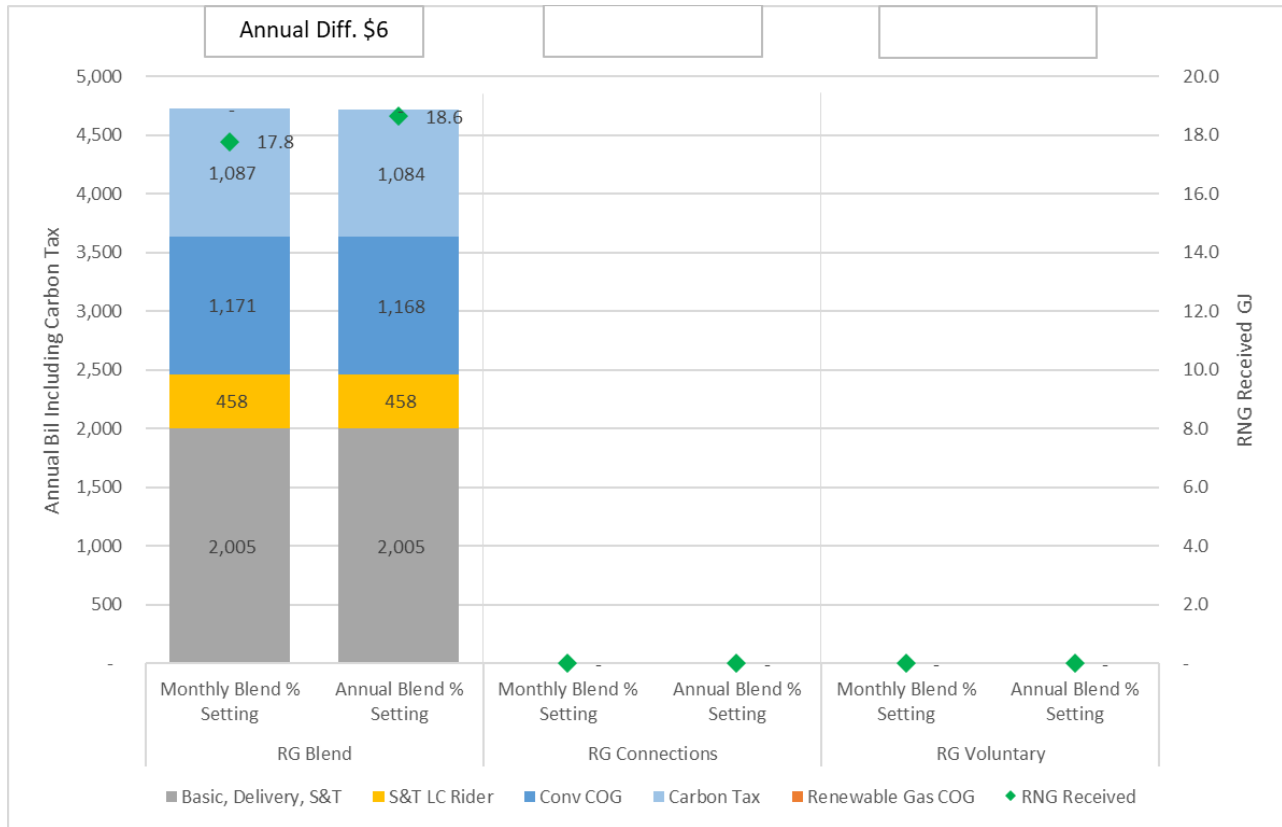
4 Evidentiary Update results from having no recoveries of RNG through the Voluntary Renewable

5 Gas service and having all RNG delivered and recovered through the Renewable Gas Blend

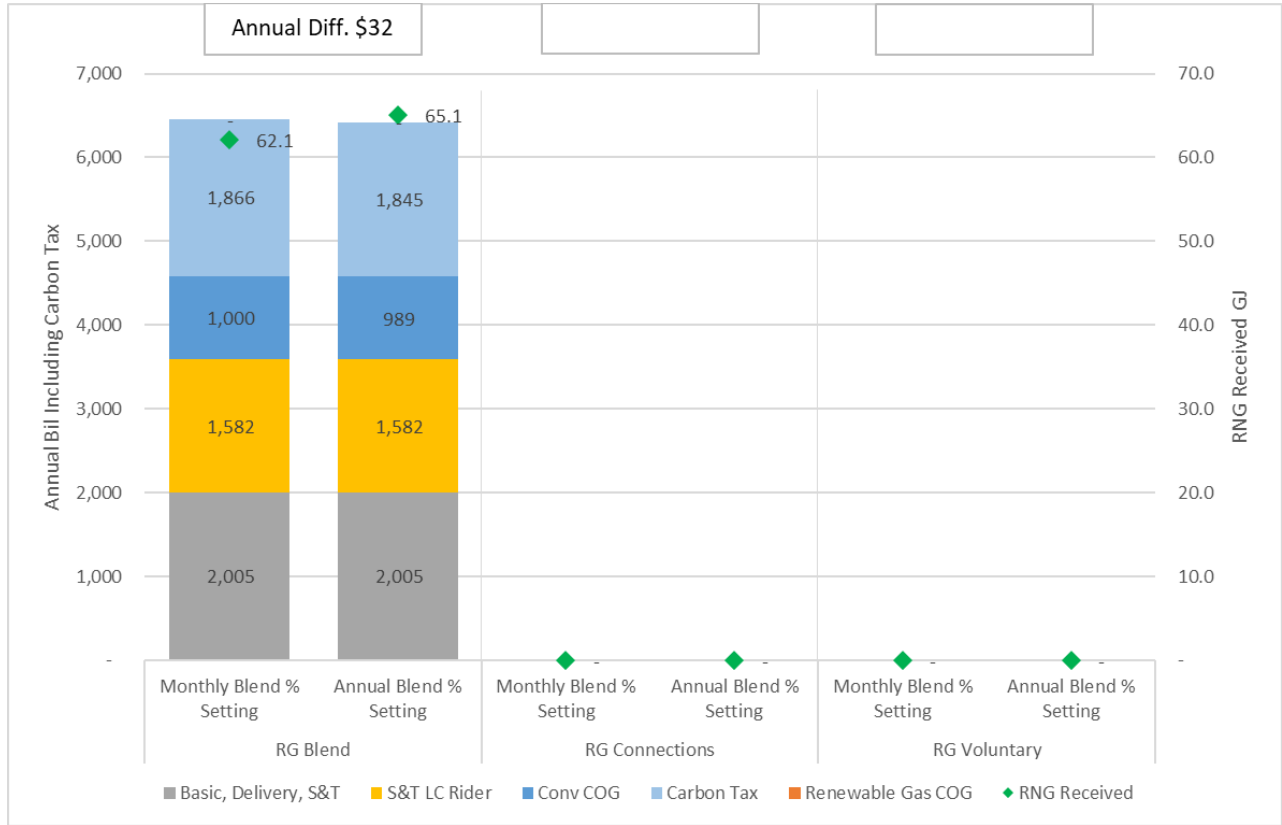
6 service. The Rate Schedule 1 annual bill is \$8 (0.6 percent) higher in 2024 and \$23 (1.3 percent)

7 higher in 2030.

1 **Revised Figure 5-14: Rate Schedule 2 Annual Bill Components Comparison for 2024**



1 **Revised Figure 5-15: Rate Schedule 2 Annual Bill Components Comparison for 2030**



2

3 An increase to the total annual customer bill when compared to the same figures in FEI's

4 Evidentiary Update results from having no recoveries of RNG through the Voluntary Renewable

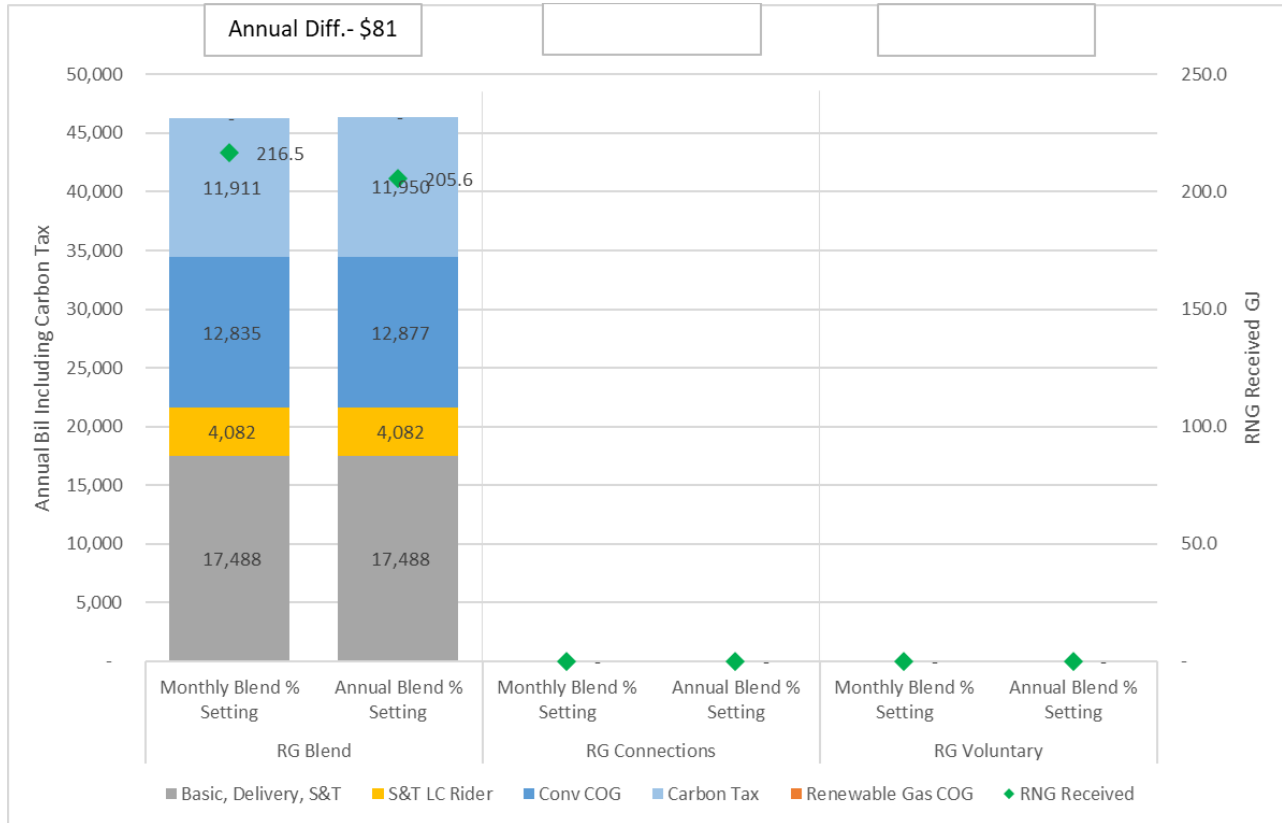
5 Gas service and having all RNG delivered and recovered through the Renewable Gas Blend

6 service. The Rate Schedule 2 annual bill is \$31 (0.7 percent) higher in 2024 and \$91 (1.4 percent)

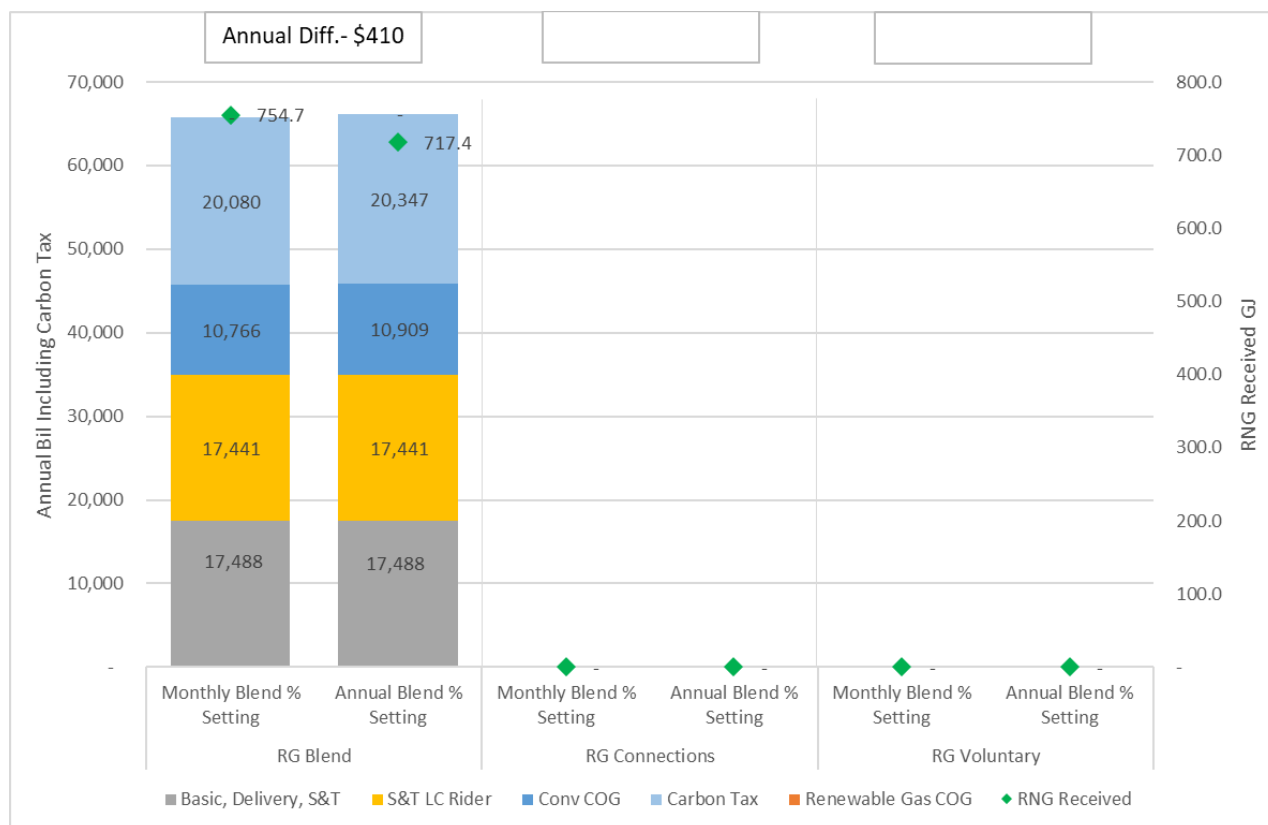
7 higher in 2030.

<p>FortisBC Energy Inc. (FEI or the Company)</p> <p>Biomethane Energy Recovery Charge Rate Methodology and Comprehensive Review of a Revised Renewable Gas Program (Application)</p>	<p>Submission Date: October 4, 2023</p>
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1 **Revised Figure 5-16: Rate Schedule 3 Annual Bill Components Comparison for 2024**



1 Revised Figure 5-17: Rate Schedule 3 Annual Bill Components Comparison for 2030



2

3 An increase to the total annual customer bill when compared to the same figures in FEI's

4 Evidentiary Update results from having no recoveries of RNG through the Voluntary Renewable

5 Gas service and having all RNG delivered and recovered through the Renewable Gas Blend

6 service. The Rate Schedule 3 annual bill is \$337 (0.7 percent) higher in 2024 and \$969 (1.5

7 percent) higher in 2030.

8 **Scenario (ii): if the BCUC were to only approve the Renewable Gas Blend and Voluntary** 9 **Renewable Gas services but reject the Renewable Gas Connections service**

10 The following figures reflect the approval of FEI's Renewable Gas Blend and Voluntary

11 Renewable Gas services, as updated with FEI's Evidentiary Update. Assuming supply does not

12 change from the Evidentiary Update, with the Renewable Gas Connections service not approved

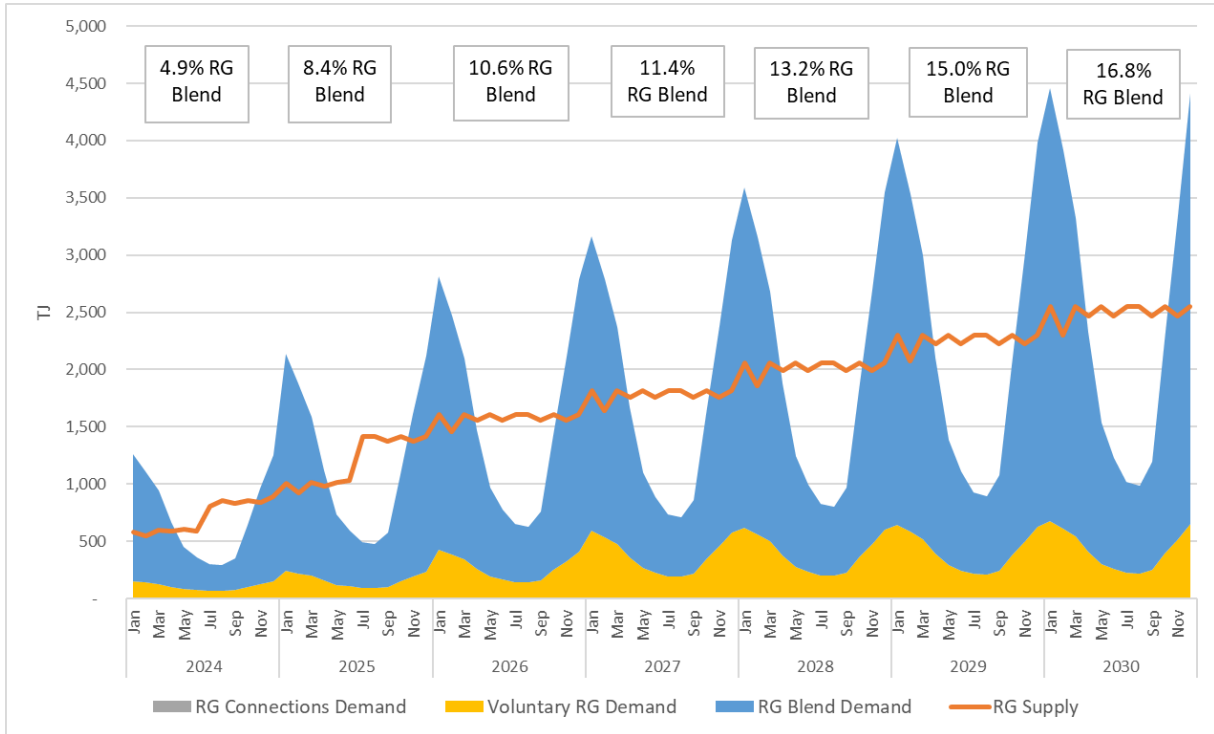
13 more Renewable Gas is delivered via FEI's Renewable Gas Blend service, consequently the

14 percentage of Renewable Gas blended annually or monthly increases when compared to FEI's

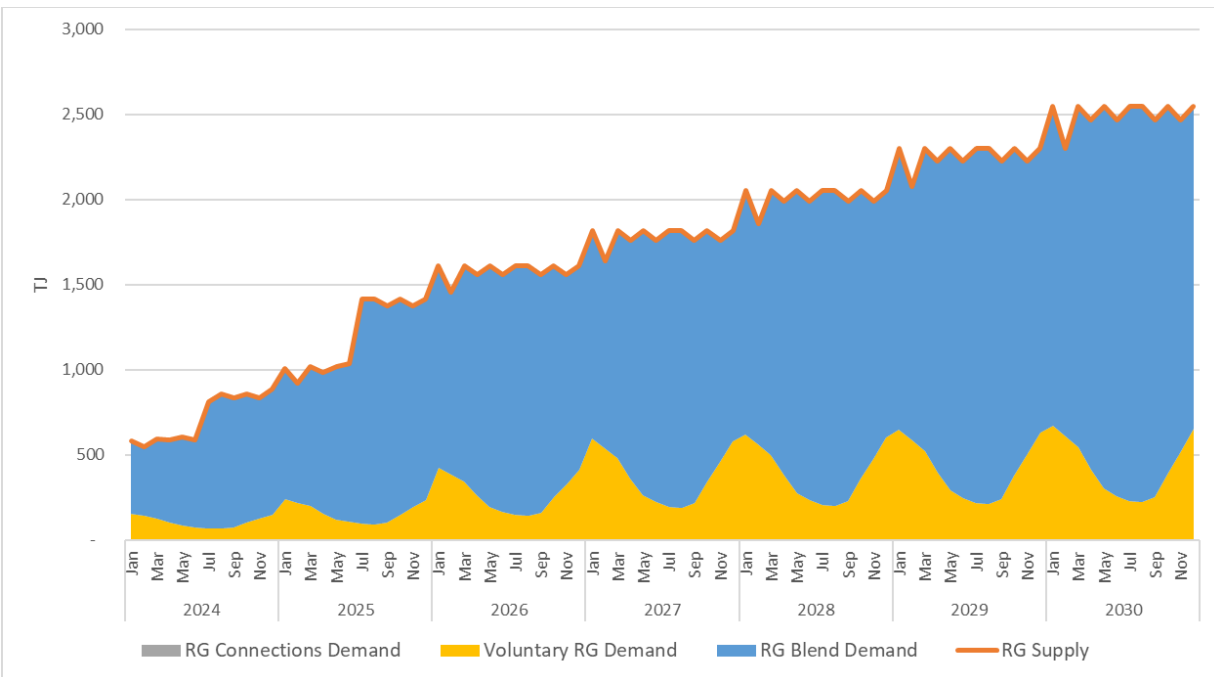
15 Evidentiary Update.

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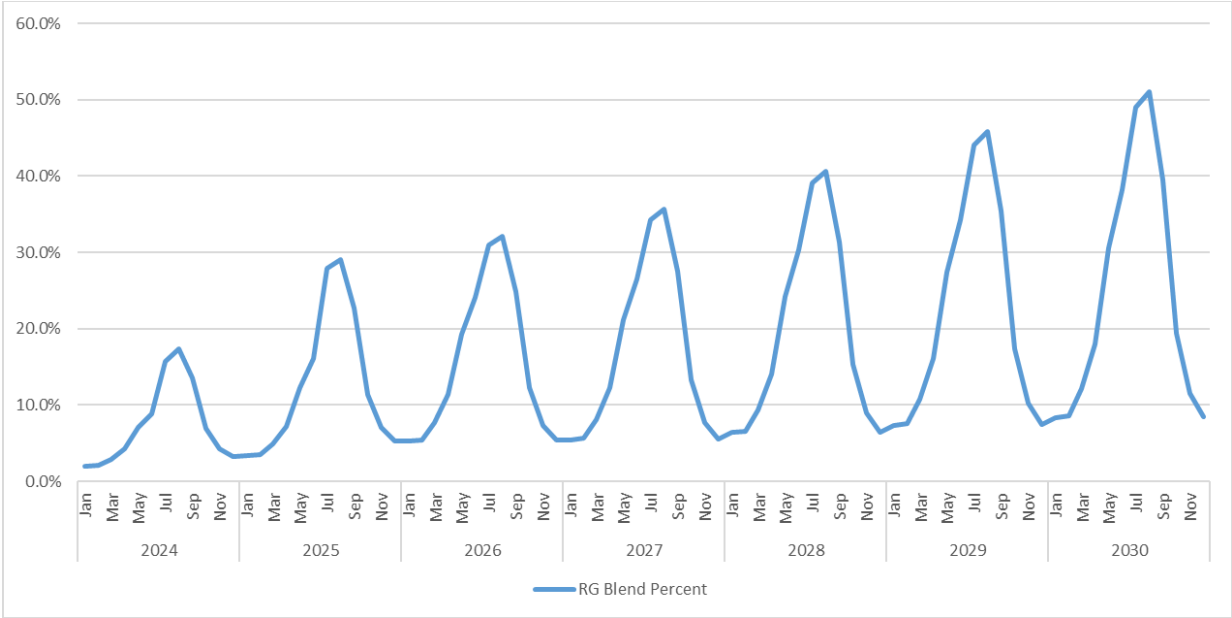
Revised Figure 5-3: Monthly Renewable Gas Supply and Demand when the Blend Percent is Set Annually



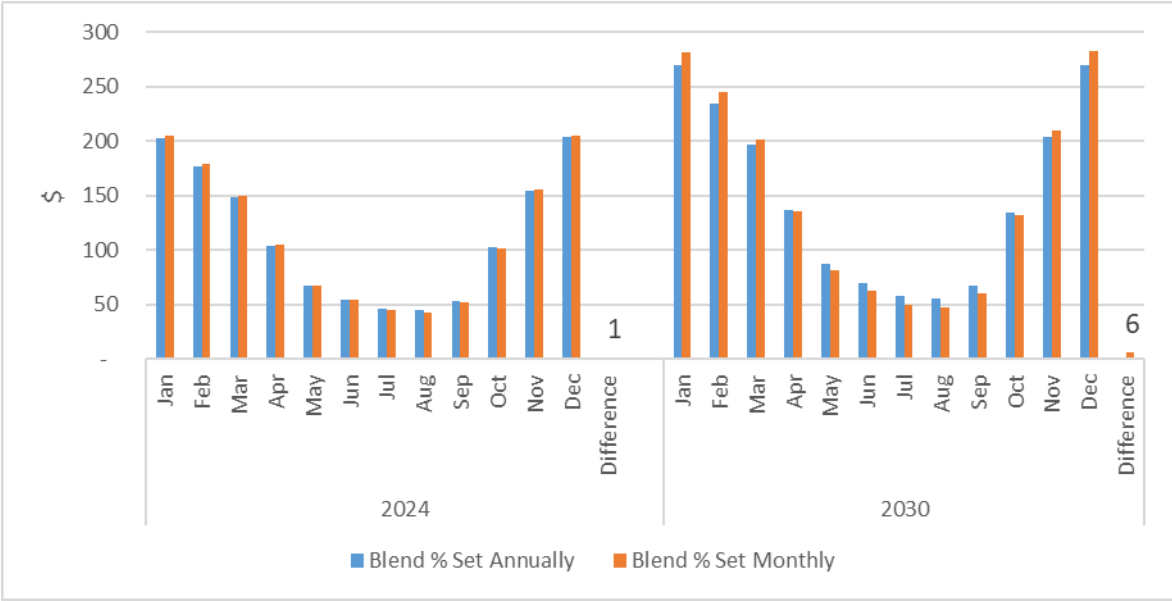
Revised Figure 5-4: Monthly Renewable Gas Supply and Demand when the Blend Percent is Set Monthly



1 **Revised Figure 5-5: Range of Blend Percent to Match Supply and Demand**

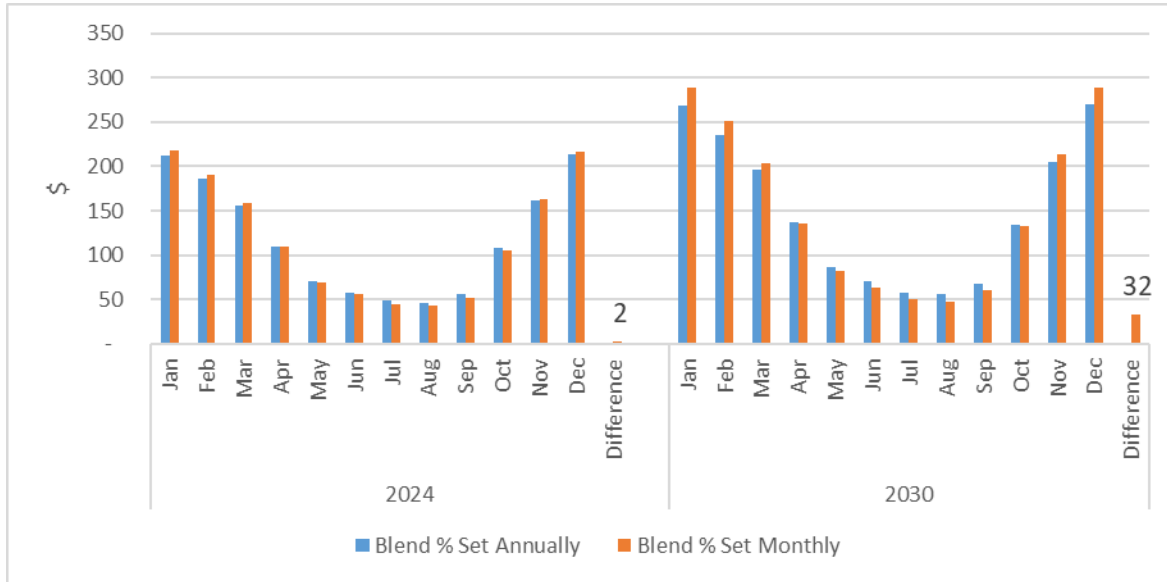


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3 **Revised Figure 5-6: Rate Schedule 1 Bill Comparison between Monthly and Annual Blend Percent**
4 **Setting for RG Blend Customers for Years 2024 and 2030**

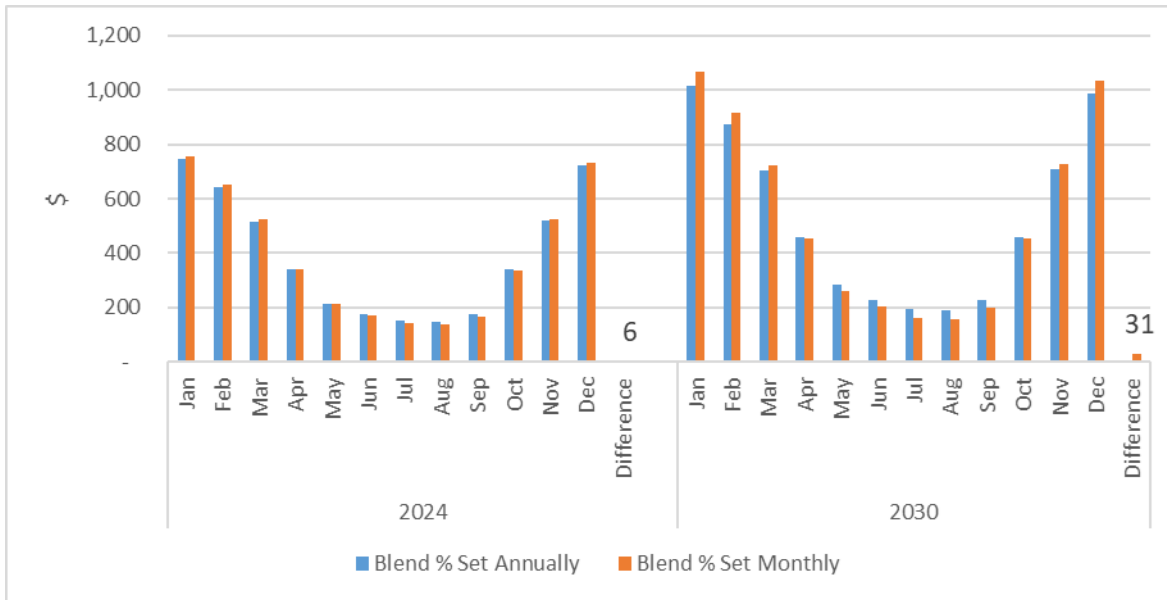


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Revised Figure 5-7: Rate Schedule 1 Bill Comparison between Monthly and Annual Blend Percent Setting for Voluntary RG Customers for Years 2024 and 2030

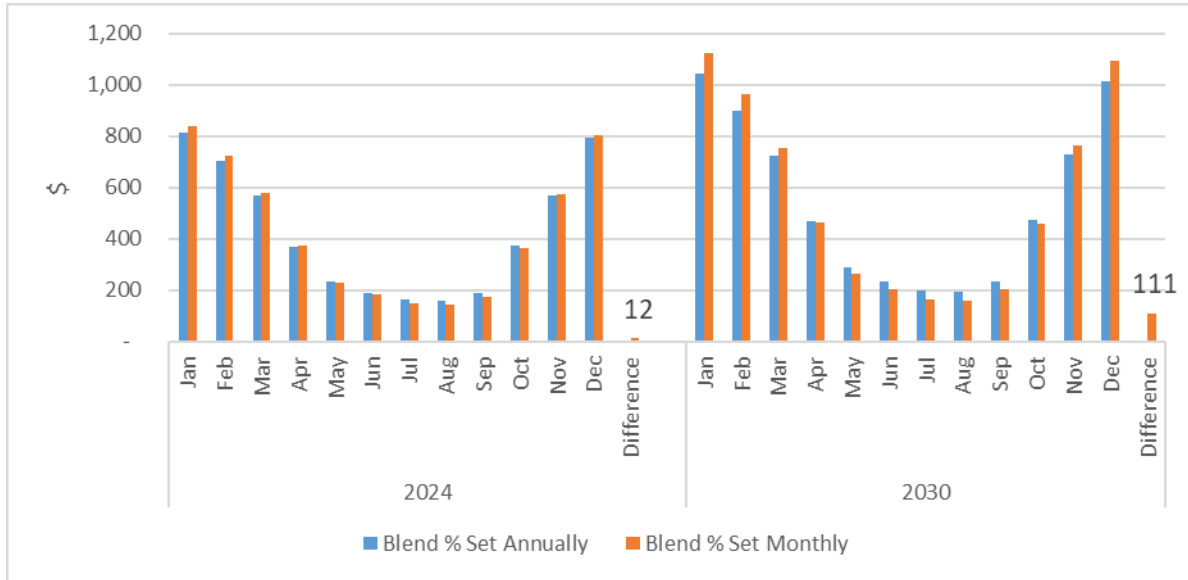


Revised Figure 5-8: Rate Schedule 2 Bill Comparison between Monthly and Annual Blend Percent Setting for RG Blend Customers for Years 2024 and 2030

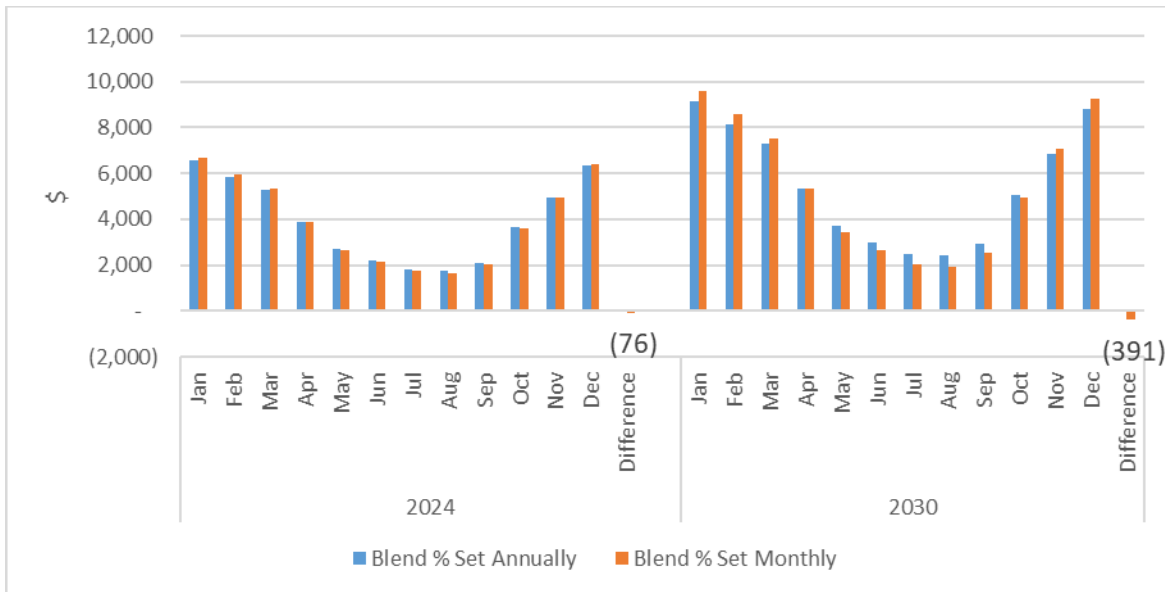


<p>FortisBC Energy Inc. (FEI or the Company)</p> <p>Biomethane Energy Recovery Charge Rate Methodology and Comprehensive Review of a Revised Renewable Gas Program (Application)</p>	<p>Submission Date: October 4, 2023</p>
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Revised Figure 5-9: Rate Schedule 2 Bill Comparison between Monthly and Annual Blend Percent Setting for Voluntary Customers for Years 2024 and 2030

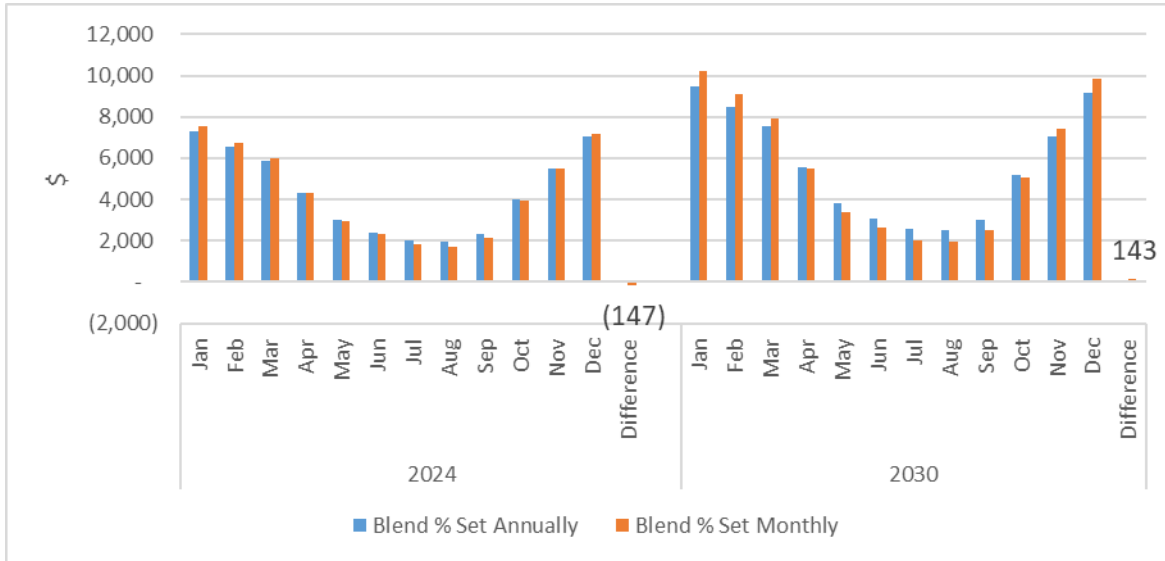


Revised Figure 5-10: Rate Schedule 3 Bill Comparison between Monthly and Annual Blend Percent Setting for RG Blend Customers for Years 2024 and 2030



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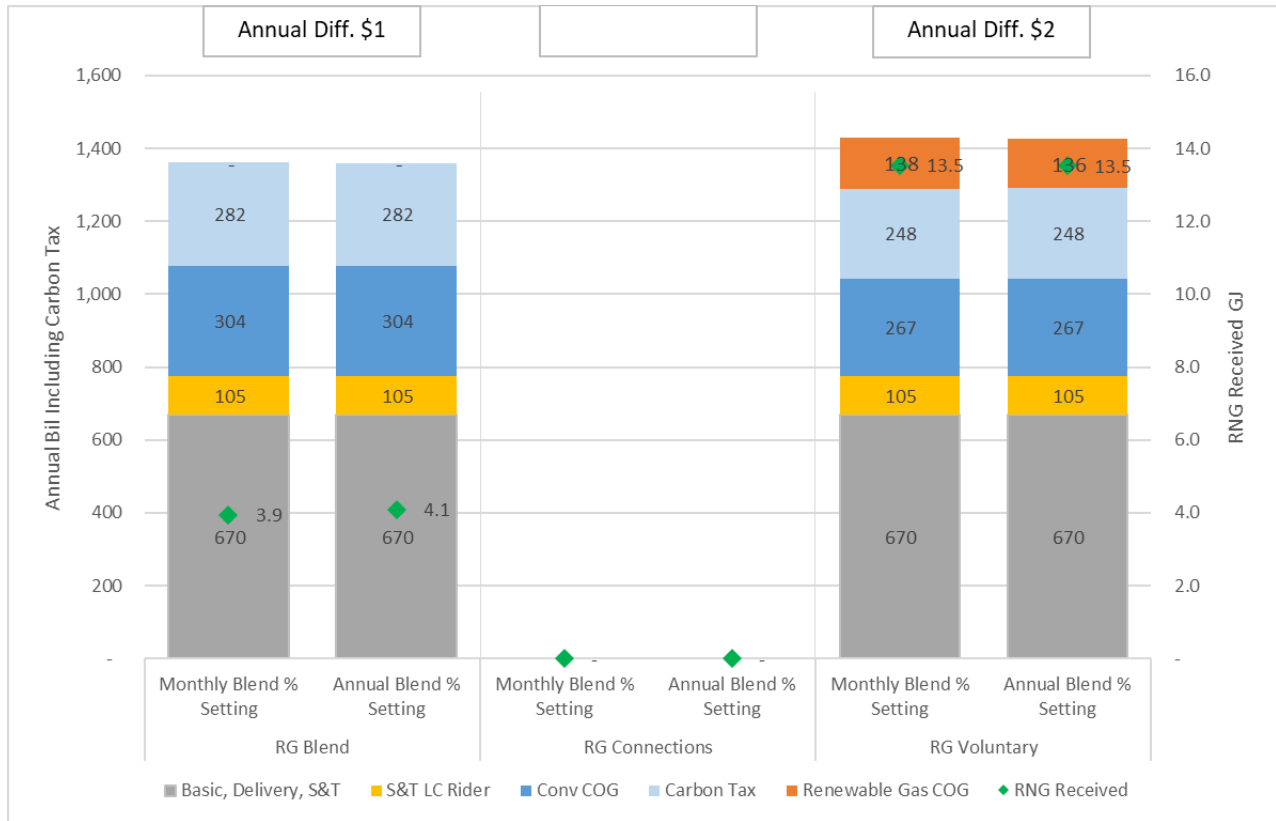
**Revised Figure 5-11: Rate Schedule 3 Bill Comparison between Monthly and Annual Blend
Percent Setting for Voluntary RG Customers for Years 2024 and 2030**



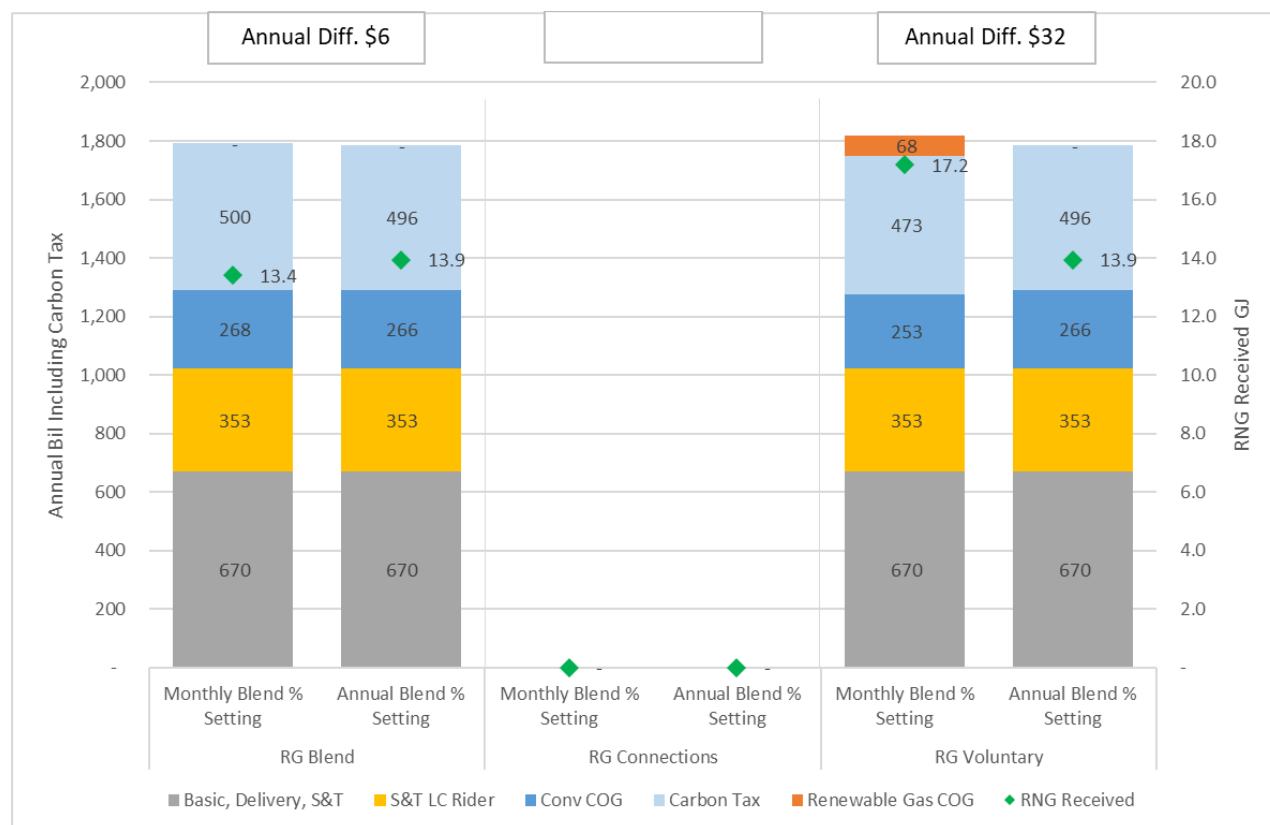
As shown in the figure above, there continues to be monthly variability as a result of setting the Renewable Gas Blend percentage on a monthly versus annual basis. There is not a substantial difference, monthly or in total, from FEI's Evidentiary Update. Any variability continues to be relatively small when compared to the total monthly customer bill.

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1 **Revised Figure 5-12: Rate Schedule 1 Annual Bill Components Comparison for 2024**



1 **Revised Figure 5-13: Rate Schedule 1 Annual Bill Components Comparison for 2030**



2

3 For Renewable Gas Blend service customers, the annual bills are virtually equal when compared

4 to the same figures in FEI's Evidentiary Update. However, for Voluntary Renewable Gas

5 customers there is a small (1.5 percent) annual bill decrease in 2030 from receiving more

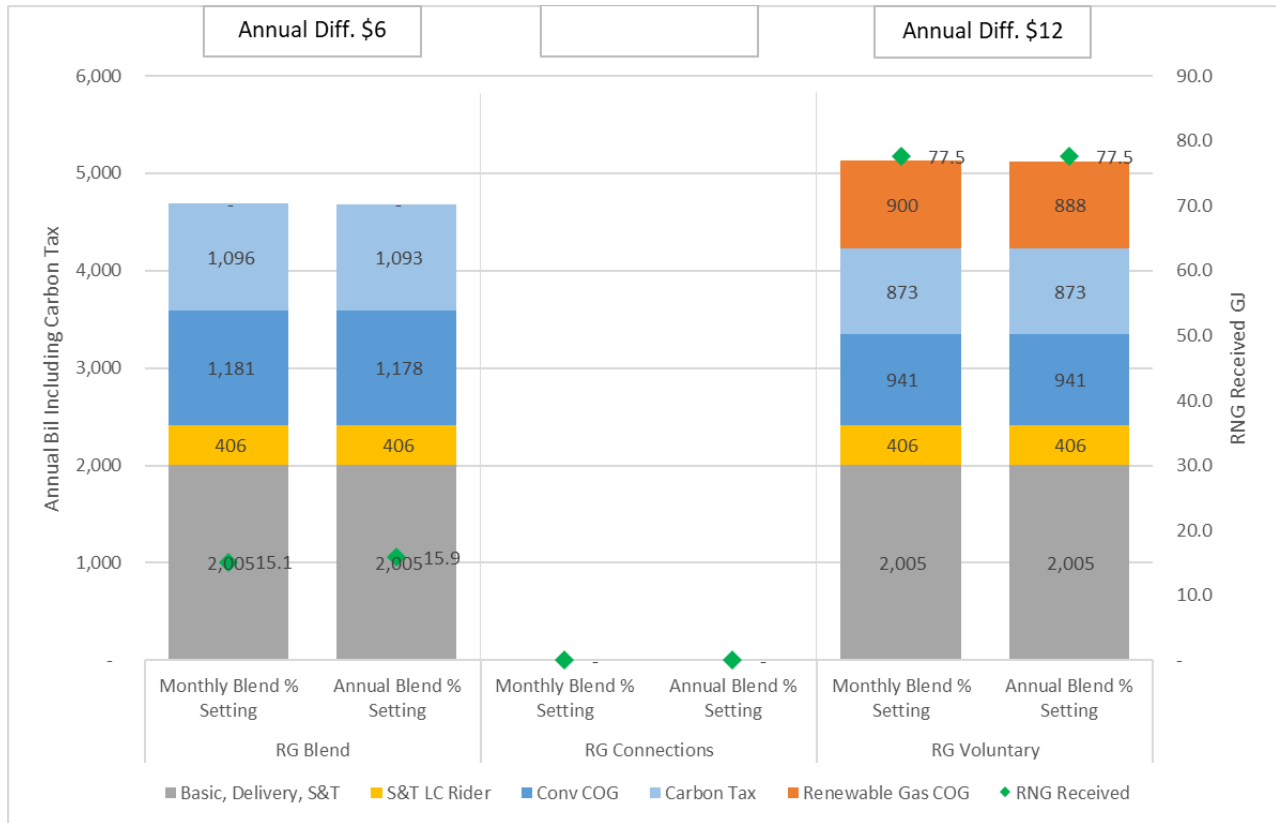
6 Renewable Gas through the Renewable Gas Blend service, due to no Renewable Gas being

7 taken up by Renewable Gas Connections customers, and not paying the premium applied to the

8 Voluntary Renewable Gas service.

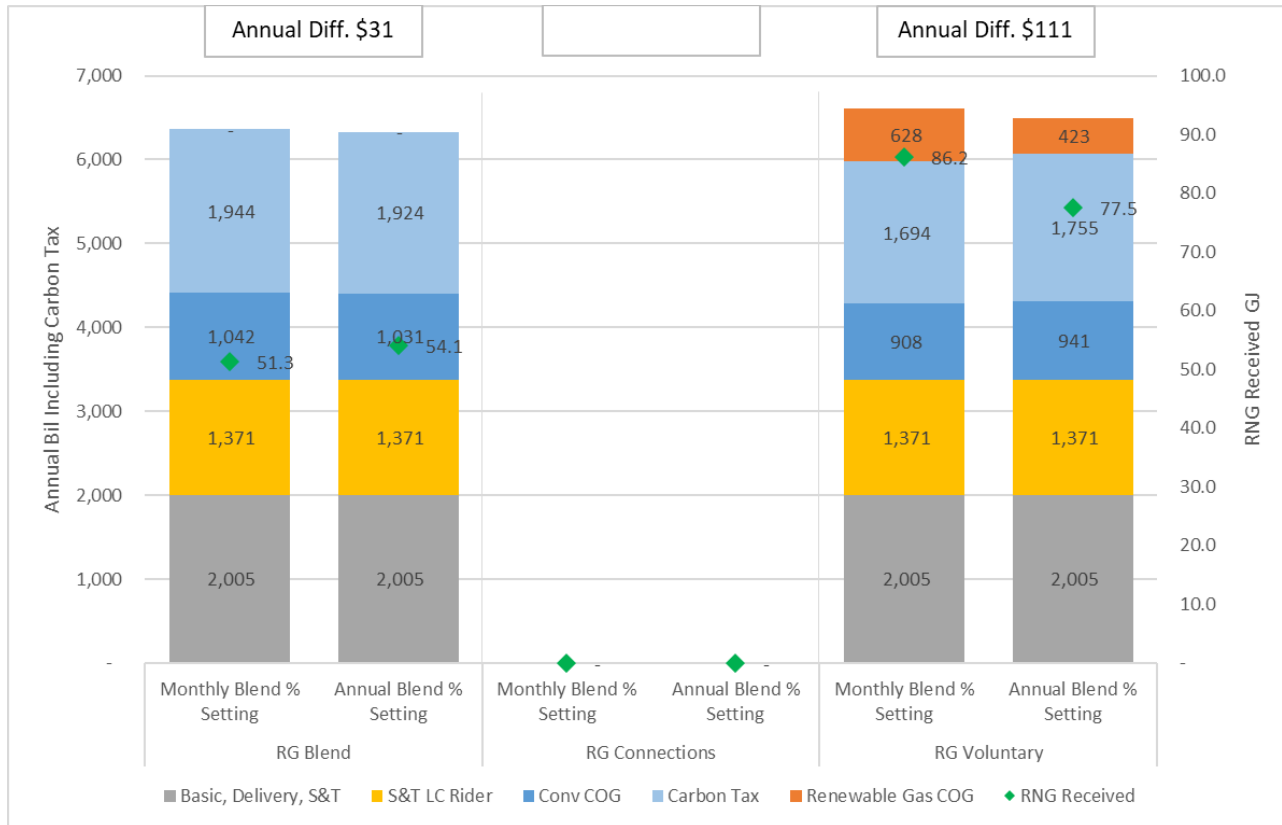
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1 **Revised Figure 5-14: Rate Schedule 2 Annual Bill Components Comparison for 2024**



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1 **Revised Figure 5-15: Rate Schedule 2 Annual Bill Components Comparison for 2030**



2

3 For Renewable Gas Blend customers, the annual bills are virtually equal when compared to the

4 same figures in FEI's Evidentiary Update. However, for Voluntary Renewable Gas customers

5 there is a small (1.7 percent) annual bill decrease in 2030 from receiving more Renewable Gas

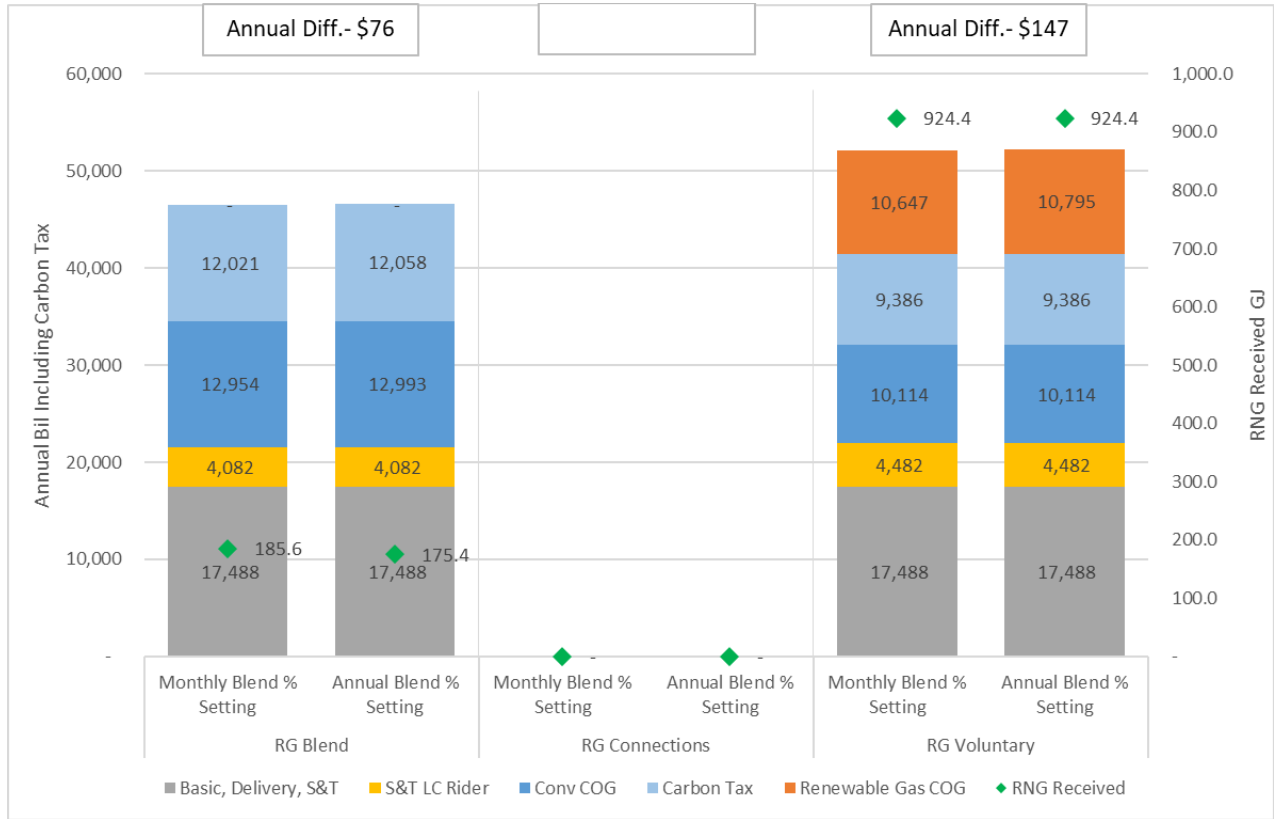
6 through the Renewable Gas Blend service, due to no Renewable Gas being taken up by

7 Renewable Gas Connections customers, and not paying the premium applied to the Voluntary

8 Renewable Gas service.

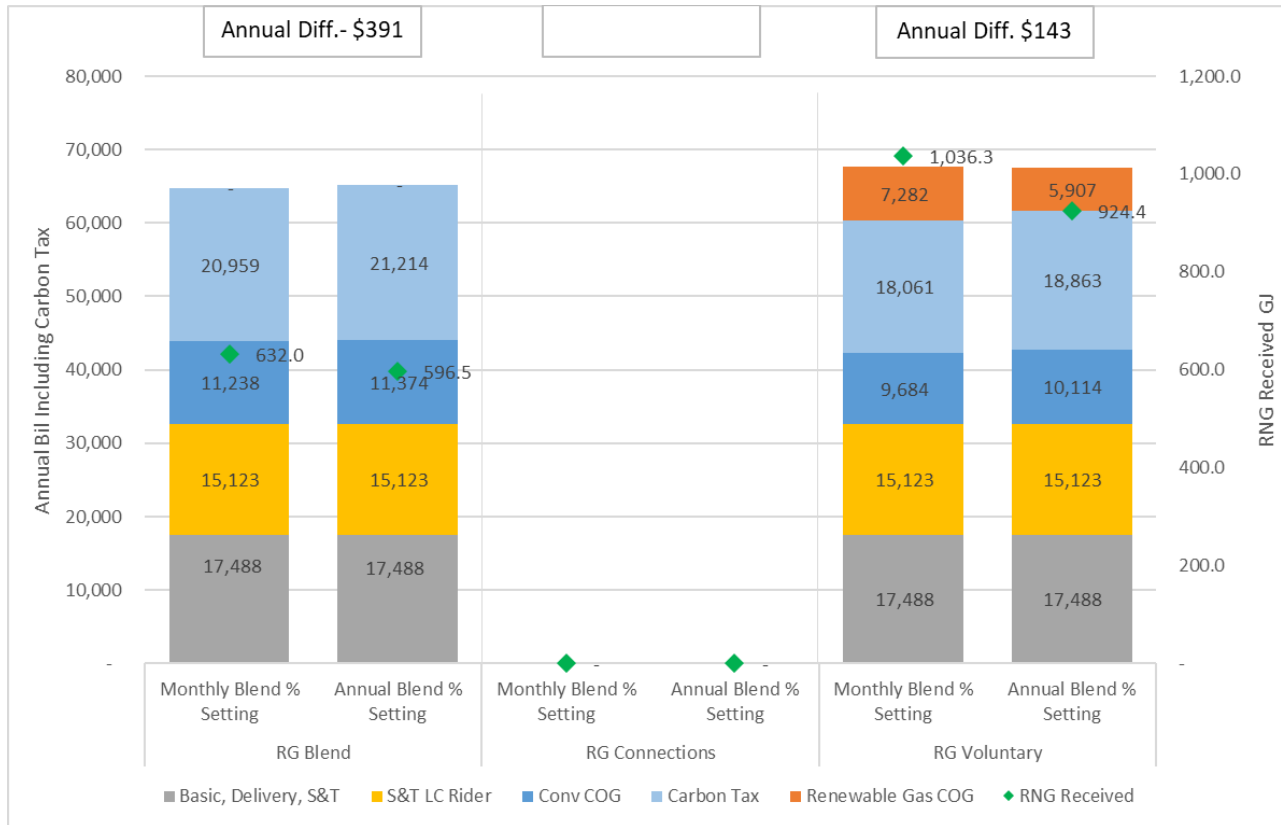
<p>FortisBC Energy Inc. (FEI or the Company)</p> <p>Biomethane Energy Recovery Charge Rate Methodology and Comprehensive Review of a Revised Renewable Gas Program (Application)</p>	<p>Submission Date: October 4, 2023</p>
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1 **Revised Figure 5-16: Rate Schedule 3 Annual Bill Components Comparison for 2024**



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1 **Revised Figure 5-17: Rate Schedule 3 Annual Bill Components Comparison for 2030**



2

3 For Renewable Gas Blend customers, the annual bills are virtually equal when compared to the

4 same figures in FEI's Evidentiary Update. However, for Voluntary Renewable Gas customers

5 there is a small (1.8 percent) annual bill decrease in 2030 from receiving more Renewable Gas

6 through the Renewable Gas Blend service, due to no Renewable Gas being taken up by

7 Renewable Gas Connections customers, and not paying the premium applied to the Voluntary

8 Renewable Gas service.

9

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1 **6.0 Reference: BACKGROUND REGARDING THE CARBON TAX MATTER**

2 **Exhibit B-89, Section 2, p. 4 and Appendix B, Ministry of Finance Tax**
3 **Bulletin, pp. 1 and 5–6; Exhibit B-87, p. 2**

4 **Further understanding of the Carbon Tax Matter**

5 On page 2 of Exhibit B-87, FEI states:

6 Since early 2022, FEI has been engaging with the Ministry with respect to receiving
7 confirmation that FEI's inventorying practice will not preclude it from recovering
8 carbon tax refunds from government on behalf of its customers. During this time,
9 FEI has communicated the merits and necessity of continuing its practice of
10 inventorying biomethane for blending into the gas system in subsequent reporting
11 periods where supply and demand are not equal.

12 FEI's engagement efforts with the Ministry resulted in a meeting in March 2023,
13 where the Ministry concluded that, under the *Carbon Tax Act*, FEI can only claim
14 a carbon tax refund for the lesser of the amount of biomethane credits provided to
15 customers in the monthly reporting period and the amount of biomethane that is
16 physically blended in the same reporting period.

17 6.1 Please clarify who initiated FEI's engagement with the Ministry of Finance with
18 respect to the Carbon Tax Matter and why this topic came up for discussion in
19 early 2022 considering FEI's biomethane program has been in place since 2010.

20
21 **Response:**

22 Prior to receiving confirmation in a meeting in March 2023 from the Ministry of Finance regarding
23 the Carbon Tax Ruling (received by email in December 2022 and copied below for reference),
24 FEI understood that the reference to blending of biomethane and natural gas in the *Carbon Tax*
25 *Regulation* could occur notionally at the time of sale.

26 Fundamentally, given the comingling of RNG in the natural gas system and the fungible nature of
27 the gas molecules, RNG is delivered notionally to customers. As confirmed by Bulletin CT001, an
28 eligible biomethane contract "specifies a notional biomethane content for the fuel you sell under
29 the contract." [Emphasis added.] Further, the Ministry of Finance had confirmed that biomethane
30 acquired outside of BC would qualify for a biomethane refund.

31 Therefore, given the notional nature of blending under biomethane contracts and that customers
32 receive carbon tax credits based on the notional delivery and consumption of biomethane, FEI
33 concluded that "blending" should also be interpreted as being notional rather than physical. FEI
34 also considered this aligned with the purpose and context of the carbon tax legislation to provide
35 carbon tax credits to customers purchasing biomethane.

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Nonetheless, on March 1, 2022, FEI initiated further engagement with the Ministry of Finance's Consumer Tax Branch, through a ruling request, to confirm FEI's understanding that blending of biomethane and conventional natural gas could occur at the time of sale. FEI sought certainty from the Ministry at this time due to:

- 1) FEI's need to grow and expand the existing RNG Program to meet the Province's evolving climate (GHG emissions) targets; and
- 2) FEI's expectation that the Province would follow the federal government's lead and tax carbon at \$170 per tonne CO₂e by 2030, as confirmed in the 2023 budget.

FEI expected the Ministry would agree with its interpretation of blending; however, as discussed in Section 2 of the Evidentiary Update, this was not ultimately the case. The text of the Ministry's ruling is copied below for reference, which acknowledges that the 'legislation does not specifically "speak" to when the biomethane is considered to be blended with the natural gas.'

Despite the Ministry's interpretation, FEI's proactive engagement with the Ministry regarding this matter has enabled FEI to bring forward potential legislative solutions to the Province, as well as develop the solutions to mitigate the potential rate impact to customers through this ongoing proceeding.

From: CTBTaxQuestions FIN:EX <CTBTaxQuestions@gov.bc.ca>

Sent: Wednesday, December 21, 2022 10:30 AM

To: Ahrendt, Stephen <Stephen.Ahrendt@fortisbcholdings.com>

Subject: [External Email] - FW: DRAFT Fortis Ruling

Thank you for your reply and the additional information. Our apologies for the extensive delay in responding.

As a general matter, please see [Bulletin CT 001 - Natural Gas and Biomethane Sellers](#).

Background

FEI is a retail dealer of natural gas. Unlike the situation with other fuels, there is no security scheme for natural gas. Rather, the carbon tax is collected on retail sales to purchasers, and retail dealers of natural gas must be registered with the Ministry for the purpose of charging, collecting, reporting and remitting the carbon tax due on their retail sales of natural gas.

FEI purchases biomethane to blend with natural gas. Biomethane is a renewable natural gas (RNG) that is considered less harmful to the environment. Biomethane is derived from a number of sources that generate "biogas" from the decomposition of organic materials. The resulting gas is then processed to remove excess quantities of carbon dioxide, water and contaminants. The resulting biomethane

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has properties indistinguishable from conventional natural gas and can be injected into natural gas pipelines and blended with natural gas, as FEI does.

To promote the use of biomethane, the [Carbon Tax Act \(CTA\)](#) provides biomethane with preferential treatment. Biomethane is specifically excluded from the definition of “fuel” under [section 1 of the CTA](#). Therefore, 100% biomethane is not subject to carbon tax at all. However, when blended with conventional natural gas, the carbon tax applies to the entire quantity of the natural gas/biomethane blend (the blend) if the proportion of biomethane in the blend is unknown (as is the case with FEI’s sales of natural gas). Persons may enter into a “biomethane contract” with their supplier (in this case, FEI). Biomethane contracts typically deem that anywhere from 5% to 50% of the blend is composed of biomethane (although deeming 100% of the gas received as biomethane is also possible).

Our understanding is that biomethane is more expensive than conventional natural gas, and that persons entering into a biomethane contract will pay a premium for the blend compared with a person who does not have a biomethane contract. This premium increases as the percentage of biomethane nominally purchased under a biomethane contract increases (according to [FEI’s website](#), a 5% biomethane blend is estimated to cost the average residential user about \$2 more per month). However, when blended with conventional natural gas, the CTA requires retail dealers to provide their customers with a “biomethane credit”. To receive the credit, customers must enter into a “biomethane contract” with their supplier. The credit to which the customer is entitled is proportional to the percentage of biomethane they have contracted to receive from their supplier. For example, if a customer has a biomethane contract providing, notionally, for 10% biomethane in their blend, the carbon tax will not apply to 10% of the natural gas/biomethane blend received. In short, the biomethane credit provided to purchasers partially offsets the higher cost of the blend.

As we understand matters, the biomethane is blended with natural gas in the pipeline that delivers the blend to all of the supplier’s customers – including those that do not have a biomethane contract at all. The actual biomethane any customer receives is entirely unknown – that is, the percentage of biomethane provided under the biomethane contract is entirely “notional”. The biomethane contract simply “deems” the customer who has entered into a biomethane contract to have received a certain percentage of biomethane in the blend that they purchase. Although the biomethane is injected into the pipeline for delivery to all customers, that does not necessarily mean that all customers receive the same amount of biomethane in the blend entering their premises. Further, the amount of biomethane actually injected into the pipeline may vary from day to day, week to week, etc.

Suppliers of natural gas blends containing biomethane may claim a deduction on their regular returns to account for the biomethane credits provided to their

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customers (this is claimed against the carbon tax that would otherwise be due on the entire volume of the blend sold). This is the most common approach, as it provides the retail dealer with the “rebate” automatically. However, suppliers may choose to remit all of the carbon tax due on the total volume of the blend sold and apply for a refund instead. You have asked specifically about claiming a refund. Notwithstanding that you have posed your ruling request in terms of FEI claiming a refund, our understanding is that FEI takes a deduction on their regular return for the biomethane credits provided to its customers. In any event, the basic application of the legislation remains the same in either case.

Based on the information you have provided, FEI’s acquisition of biomethane fluctuates from month to month, and over the course of the year – in particular, the need for biomethane (alongside the sale of the blend more generally) is much greater in cold months than in warm months.

FEI does not maintain a physical inventory of biomethane on hand to inject into the pipeline as the need arises. Rather, it “balances” the amounts acquired from producers in one (heavy) month against the (lower) volumes in another month. For example:

Period 1:

FEI actually injects 100 m3 of biomethane into the pipeline.

In period 1, FEI has biomethane contracts requiring the sale of 75 m3 of biomethane.

Therefore, in period 1, FEI has a notional “excess” inventory of 25m3 of biomethane.

This “excess” inventory, as you refer to it, is entirely notional. FEI has not built up an actual, physical inventory of 25m3. It has simply injected into its pipeline more biomethane than what is required to meet all of its biomethane contracts.

Period 2:

FEI actually injects 50 m3 of biomethane into the pipeline.

In period 2, FEI still has biomethane contracts requiring the sale of 75 m3 of biomethane.

Therefore, at the end of period 2, FEI has a notional “excess” inventory of 0 m3 of biomethane.

In this case, FEI has only acquired 50 m3 of biomethane from its suppliers in Period 2. However, FEI “balances its books” over the two periods by applying the notional surplus in Period 1 against the “deficit” in Period 2. The result is that over the two (or possibly more) reporting periods, the volume of biomethane actually acquired,

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physically, and that needed to fulfill its biomethane contracts, collectively, evens out.

Your Ruling Request

You have asked the following questions:

- 1) When does the blending of biomethane with natural gas occur?
- 2) May FEI employ biomethane acquired but not utilized in prior periods to calculate the biomethane refund in a current period?

Short Answers

- 1) The blending of biomethane occurs when the biomethane is actually, physically, injected into the pipeline during a reporting period.
- 2) No. FEI may only claim a refund (or take a deduction on its return) for the **lesser** of the biomethane actually injected into the pipeline during a reporting period, or the amount of biomethane deemed to be sold, collectively, under all of its biomethane contracts during a reporting period.

Analysis

Legislation and Policy

[Section 14.1 of the CTA](#) provides for a biomethane credit to persons with a biomethane contract with a retail dealer:

Biomethane credit

14.1 Subject to the regulations, a retail dealer of natural gas, on behalf of the government, must provide a credit to a purchaser at the prescribed time and in an amount determined in the prescribed manner.

[Section 22.3 of the Carbon Tax Regulation \(CTR\)](#) specifies that where a customer is required to pay the carbon tax, the retail dealer must provide a biomethane credit to its customers in proportion to the biomethane notionally supplied under the contract.

[Section 41 of the CTA provides that:](#)

- (3) A person who is required to file a return for tax or security under this Act may
 - (a) instead of submitting a written application under subsection (1) (a) [that is, a refund claim], submit, as part of the return, a claim for a refund for the reporting period to which the return relates, and
 - (b) **deduct the amount** of the refund claimed from the amount of tax or security required to be remitted or paid by the person.

[Section 14.2 of CTA](#) provides the following:

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Refund to retail dealer of natural gas

14.2 If the director is satisfied that

(a) a retail dealer of natural gas has provided a biomethane credit to a purchaser in respect of a sale,

(b) the retail dealer has remitted to the government the amount of tax payable in respect of the sale, without deduction for the biomethane credit, and

(c) the purchaser was entitled to receive the biomethane credit,

the director, subject to the regulations, must pay from the consolidated revenue fund to the retail dealer a refund of a portion of the tax remitted by the retail dealer in respect of the sale in an amount determined in the prescribed manner.

[Section 22.4 of the Carbon Tax Regulation \(CTR\)](#) specifies how a refund to a retail dealer is to be calculated in cases where a retailer dealer of a natural gas/biomethane blend provides a biomethane credit to their customer, but remits the carbon tax on the sale without making a deduction for the biomethane credit provided:

Refund amount

22.4 The amount of the refund payable to a qualifying retail dealer under section 14.2 of the Act in respect of tax remitted for sales made in each reporting period is the lesser of the following amounts:

(a) the sum of the biomethane credits provided by the qualifying retail dealer to qualifying purchasers for sales made during the reporting period;

(b) the amount equal to the total amount of biomethane that the qualifying retail dealer blends with natural gas in the reporting period for sale within British Columbia in respect of biomethane contracts multiplied by the tax rate for natural gas under the Act that applies at the time the biomethane is blended.

Application of Legislation and Policy

1) The legislation does not specifically “speak” to when the biomethane is considered to be blended with the natural gas.

However, for the purposes of section 22.4(b) of the CTR, the blending occurs when the biomethane is actually added to the pipeline with the natural gas. It only becomes blended – or mixed – with the natural gas at that time. It would not be possible to make a determination of when the blending occurred otherwise, unless some other time was specified by the legislation/regulations by way of a deeming provision. No other such time is specified.

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There is no definition of “blend” or “blends” in the CTA. Therefore, we must turn to the ordinary definition of the term to provide some guidance in this matter. Dictionary definitions of “blend” include:

- a mixture of different things or styles;
- to mix or combine things together;
- to mix or combine with something else, to make one substance;
- to prepare by thoroughly intermingling different varieties or grades
- to combine into an integrated whole

As such, a “blend”, or a “blending”, cannot be considered to have occurred until such time as two (or more) “ingredients” are mixed together. In the case of the blend of natural gas and biomethane, the blend is not created until the time when the biomethane is physically injected into, and mixed in, the pipeline carrying the blend to FEI’s customers.

- 2) The lesser of the actual volume of biomethane physically blended with the natural gas by FEI during a reporting period, or the amount required to fulfill, collectively, its biomethane contracts during a reporting period, is the relevant amount for the purposes of the deduction/refund available under section 41 of the CTA and 22.4(b) of the CTR.

Section 41 of the CTA and section 22.4(b) of the CTR limit any biomethane deduction/refund to the lesser of the amount of biomethane **actually blended** by the retail dealer with natural gas in a reporting period for sale within British Columbia (BC) to fulfill its biomethane contracts, or to the amount required collectively to fulfill its biomethane contracts. This is reflected on page 6 of [Bulletin CT 001 - Natural Gas and Biomethane Sellers](#), which states:

To recover the amount of the biomethane credit, you may deduct the amount of the credit provided from the amount of tax you are required to remit using Line 7b (Tax Adjustments – Other) on your Carbon Natural Gas Tax Return through your CNG account in eTaxBC. You are eligible for a credit equal to the sum of the biomethane credits you provide during the reporting period. However, regardless of the sum of the credits provided, you may only claim a credit to a maximum of the amount of biomethane you blend with natural gas in the reporting period multiplied by the tax rate for natural gas.

Based on our understanding of the information provided, FEI is proposing that their acquisition of biomethane from their supplier be considered – in a sense – notional as well. That is, using the above “accounting” discussed in the Background section, FEI proposes that if their biomethane contracts call for 75 m3 to be delivered to customers over each of two reporting periods, and their actual acquisition of biomethane over the two consecutive reporting periods totals 150

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m3, that it should not matter that the biomethane actually injected into their pipeline in Period 1 is 100 m3 and in Period 2 just 50 m3. However, FEI's proposition is incorrect, as the deduction/refund provisions are reporting period specific and do not provide for "averaging" across periods.

FEI may enter into separate notional biomethane contracts with different customers in any proportions and amounts. However, FEI cannot deduct tax on its returns (or claim a refund) for the biomethane credits provided to its customers that exceed the actual amount of biomethane that they blended with natural gas in that reporting period; nor can FEI claim a deduction/refund for the amounts of biomethane actually blended in a reporting period that exceed the collective amount under its biomethane contracts with customers.

The deduction/refund provisions specifically recognize that the amount of the biomethane the retail dealer actually blends with the natural gas may be more, or less, than the sum of the biomethane credits provided during the reporting period. The refund/deduction provisions state that the retail dealer may only claim the lesser of these two amounts. Therefore, to return to the nominal "accounting" example above:

- in Period 1, FEI has biomethane contracts totaling 75 m3, but physically blends 100m3 of biomethane with natural gas during that reporting period;
- in Period 2, FEI still has biomethane contracts totaling 75 m3, but only blends 50 m3 of biomethane with natural gas during that reporting period.

Therefore, applying the above analysis, FEI is only entitled to a deduction/refund on 75 m3 of biomethane during Period 1, and 50 m3 during Period 2.

This correspondence describes how the Ministry interprets the relevant tax provisions at the time of writing for information purposes only. This response may be impacted by variations in circumstance, subsequent changes to legislation or Ministry interpretations or subsequent court decisions. The Ministry is not responsible for updating this response if there are any subsequent changes to the law or the Ministry's interpretation of the law. This response is provided as an aid to understanding the legislation. To confirm the application of the legislation to your particular circumstances, you should consult the legislation and obtain independent legal advice.

Rulings and Interpretations Team
Ministry of Finance
www.gov.bc.ca/salestaxes

CTB Reference: 2002 7474X

Keywords: biomethane credits

Legislation: CTA sections 13.1, 14.1 and 41 ; CTR Part 4.1

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On page 4 of the Evidentiary Update, FEI states:

In March 2023, the Ministry confirmed that their interpretation of the *Carbon Tax Act* outlined in a recent ruling (Carbon Tax Ruling) was final.³ The Carbon Tax Ruling outlines the Ministry's interpretation that a retail dealer such as FEI can only claim a carbon tax refund for the lesser of the amount of biomethane credits provided to customers in the reporting period and the amount of biomethane that is physically blended in the same reporting period. [Emphasis added]

Footnote 3: Appendix B

Appendix B consists of a Ministry of Finance Tax Bulletin most recently revised in April 2023. On page 1 of the Bulletin, a note indicates that the revision bar (|) identifies changes to the previous version of this bulletin dated April 2022. Pages 5-6 of the bulletin describes the Biomethane Credit Program and how the biomethane credit is calculated. There is no revision bar (|) along this section of the bulletin, indicating there had been no changes to this part of the bulletin since the previous version of the bulleting in April 2022.

6.2 Please indicate in which version of the bulletin (i.e., month and year) the Biomethane Credit Program, including how the biomethane credit is calculated, as described on pages 5-6 of the April 2023 Bulletin (provided as Appendix B to the Evidentiary Update) appeared for the first time. Please provide a copy of that bulletin.

Response:

FEI has not retained copies of prior versions of Bulletin CT 001 *Natural Gas and Biomethane Sellers*; therefore, it is not certain which was the first version to include how the biomethane credit is calculated.

However, the wording in Bulletin CT 001 is not sufficient to address the Carbon Tax Matter because of the ambiguity associated with the definition of "blending". As a result, FEI proactively sought clarification of the definition of blending as discussed in the response to BCUC IR3 6.1. In the Carbon Tax Ruling, the Ministry acknowledged that the 'legislation does not specifically "speak" to when the biomethane is considered to be blended with the natural gas.'

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6.3 Considering that a description of how to calculate the biomethane credit was included at least since April 2022 in the Ministry's bulletin (or possibly before, depending on the response to the previous question) please clarify whether FEI was aware of the Carbon Tax Matter as early as when it was first explained in the Ministry's bulletin, or whether FEI discovered this issue only in March 2023 when the Ministry confirmed its interpretation of the *Carbon Tax Act*.

Response:

Please refer to the responses to BCUC IR3 6.1 and 6.2.

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1 **7.0 Reference: RENEWAL NATURAL GAS INVENTORY**

2 **Exhibit B-89, Section 3.2, pp. 4, 6–7**

3 **Mechanisms to reduce natural gas inventory**

4 On pages 6-7 of the Evidentiary Update, FEI states:

5 As of the date of filing, FEI has accumulated approximately 1.5 PJ [petajoules] of
6 inventory and is accumulating approximately 200 TJ [terajoules] of additional RNG
7 inventory each month.

8 FEI can employ mechanisms to reduce its existing inventory. The preferred
9 mechanism is that FEI sells this RNG inventory to its customers. While the existing
10 carbon tax legislation will effectively result in customers paying carbon tax on this
11 energy, FEI's customers will continue to be able to report or claim a reduction in
12 GHG [greenhouse gases] emissions. An alternative mechanism is that FEI can
13 utilize the existing approved UBPDA/CCRA [Unsold Biomethane Premium
14 Deferral Account/Commodity Cost Recovery Charge] method of inventory cost
15 recovery. The cost to customers is effectively the same as the preferred method,
16 with carbon tax being paid on the energy, however the customers could no longer
17 report or claim a reduction in GHG emissions.

18 While FEI will endeavour to use whichever mechanism provides the most benefit
19 for its customers when selling its existing RNG inventory, as discussed in Section
20 1 FEI wishes to ensure it has multiple methods to manage RNG inventory,
21 therefore FEI is no longer requesting approval to discontinue the UBPDA.
22 [Emphasis added]

23 On page 4 of the Evidentiary Update, FEI states:

24 In accordance with the *Carbon Tax Act*, FEI must provide biomethane customers
25 with a biomethane credit on their bill on behalf of the Province that is proportionate
26 to the amount of biomethane sold to each customer. This means that FEI is
27 required to provide biomethane credits on the bills issued to its RNG customers,
28 whether or not FEI is able to reduce its carbon tax remittances to the Province by
29 these amounts.

30 7.1 Under the preferred mechanism, please indicate what is the period over which FEI
31 expects to sell this accumulated RNG inventory to its customers.

32
33 **Response:**

34 FEI notes that it does not expect to sell its accumulated RNG inventory until the outcome of its
35 requests for legislative changes to the *Carbon Tax Act* are known, and FEI has not determined a
36 period over which it would sell the accumulated RNG inventory to its customers.

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FEI will consider the total volume of RNG inventoried and rate impacts to customers in determining the period over which FEI would sell accumulated RNG inventory to its customers.

7.2 Under both mechanisms, please confirm, or otherwise explain, that FEI would be selling its accumulated RNG inventory to its customers as conventional natural gas rather than as RNG.

7.2.1 If confirmed, please also confirm that this is why the carbon tax would be paid on this energy.

7.2.2 If confirmed, please indicate the price at which FEI would be selling this gas to its customers and also confirm that such price is less than the costs to supply this RNG in the first place.

7.2.3 Please quantify the under-recoveries FEI is expecting to incur on (i) its accumulated RNG inventory of 1.5 PJ; and (ii) on the monthly increases of 200 TJ.

Response:

Not confirmed. Under the preferred mechanism, FEI would sell RNG to customers as RNG. As such, customers would be able to report or claim a commensurate reduction in GHG emissions and FEI would provide customers with carbon tax credits as required by the *Carbon Tax Act*. However, as explained in the Evidentiary Update, FEI would not be able to claim a carbon credit refund from the Ministry for any volumes of RNG sold to customers which had previously been held in inventory. Rather, any carbon credits provided on the sale of these volumes to customers must be recovered from all sales customers through the S&T LC Rider.⁴

In contrast, under the alternative mechanism, FEI would be recovering the cost of its accumulated RNG inventory from customers in a different manner from the delivery of RNG. When transferring the RNG to FEI's MCRA and UBPDA,⁵ the RNG is split into two components. One component is the energy molecule that would be accounted for in the MCRA at the prevailing cost of gas rate (CCRA) and the other component is the environmental attribute that would be accounted for in the UBPDA. The costs transferred to the MCRA will be recovered when FEI sets its Storage and Transport rates each year and the costs in the UBPDA would be recovered through amortization.

⁴ This is the case because unrefunded carbon tax credits would be accounted for in the LCGA and would then be part of the calculation to determine the S&T LC Rider which is applied to all sales service customer bills.

⁵ By way of the UBPDA/CCRA mechanism.

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7.3 Please clarify whether FEI itself can claim a reduction in GHG emissions under either mechanism.

Response:

FEI assumes the question is referring to FEI's ability to claim a reduction in GHG emissions for carbon tax purposes.

FEI confirms that neither mechanism will allow FEI to claim a reduction in GHG emissions for carbon tax purposes. When FEI sells RNG to its customers, FEI is required to provide the customer with a biomethane credit. Further, under the UBPDA/CCRA method, FEI is unable to claim a biomethane credit on own-use RNG (i.e., RNG used for fuel gas).

Finally, reductions in GHG emission for the purposes of other government-administered emissions reduction programs are separate and distinct from those under the *Carbon Tax Act*.

7.4 Under the preferred mechanism, please explain how FEI would treat the under-recoveries and which customers would pay for them, and also provide an estimate of the customers' annual bill impact over the period during which FEI plans to sell this accumulated RNG inventory.

Response:

The only under-recovery related to the preferred mechanism, where FEI sells the RNG to its customers, is the possible un-refunded carbon tax credits. Please also refer to the response to BCUC IR3 12.3.

7.5 Under the alternative mechanism, please briefly describe how the existing approved UBPDA/CCRA will assist FEI in managing its inventory cost recovery. Please also provide a diagram showing the flow of costs and unsold biomethane through the various accounts (e.g., Biomethane Variance Account, Midstream Cost Reconciliation Account, etc.).

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Response:

The use of the UBPDA/CCRA allows FEI to clear out excess inventory in the BVA and recover some of the costs from FEI's sales service customers and some of the costs from all non-bypass customers. FEI provides an example below.

Table 1: Transfer of RNG Volume and Dollars from the BVA using the UBPDA/CCRA Mechanism

Line No.	Particulars	Unit	Amount	Reference
1	BVA Inventory	TJ	1,500	Assumed for this example
2	Avg RNG Acquisition Cost	\$/GJ	24.00	Assumed for this example
3	Value of RNG Inventory in BVA	\$000	36,000	Line 1 x Line 2
4				
5	Current CCRA Charge	\$/GJ	4.00	Assumed for this example
6	Volume of RNG inventory transferred from BVA to MCRA	TJ	1,500	Line 1
7	Value transferred from BVA to MCRA and recovered from all Sales Service customers through their Storage and Transport Charge	\$000	6,000	Line 5 x Line 6
8	Value transferred from BVA to UBPDA and recovered from all non-bypass customers through a Rate Rider	\$000	30,000	Line 3 - Line 7
9	Total dollar amount transferred from the BVA	\$000	36,000	Line 7 + Line 8

As shown in the table above, volumes are transferred from the BVA (Line 6) to the MCRA at the prevailing CCRA rate (Line 7) and the balance of RNG costs are transferred to the UBPDA (Line 8). Pursuant to Order G-210-13, which approved this mechanism, FEI would be required to apply to the BCUC for this type of transfer. FEI has not made any application for such a transfer to date.

7.6 Please confirm, or otherwise explain, that the only difference between the two mechanisms is that customers would not be able to report or claim a reduction in GHG emissions under the alternative mechanism.

7.6.1 If confirmed, and since FEI states it will endeavour to use whichever mechanism that provides the most benefits for its customers when selling its existing RNG inventory, please describe the circumstances where FEI would have recourse to the alternative mechanism that is less beneficial to its customers.

Response:

Confirmed. While the cost recovery mechanisms are slightly different between using the UBPDA/CCRA mechanism and selling the RNG to FEI's customers, the main difference is that when using the UBPDA/CCRA mechanism the environmental benefits of the RNG are not able to be transferred to specific customers for use and, therefore, customers would not be able to claim

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1 that they acquired RNG or claim any associated environmental benefits (carbon tax credits or
2 otherwise).

3 As discussed in the Evidentiary Update and in the response to BCUC IR3 7.5, FEI has not used
4 the UBPDA/CCRA mechanism yet and does not intend to. However, if for some reason FEI
5 believed that the RNG had lost its environmental attributes due to the passage of time or some
6 other as-yet-undefined reason, then FEI would consider applying to the BCUC to transfer RNG
7 costs and volume from the BVA using the UBPDA/CCRA mechanism.

8

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**8.0 Reference: SUPPLY-SIDE MEASURES TO BALANCE RENEWABLE GAS
SUPPLY AND DEMAND**

Exhibit B-89, Section 4.1, pp. 8–9

Supply-side measures

On page 8 of the Evidentiary Update, FEI states:

The costs or benefits from the redirection of RNG will be accounted for in the LCGA (currently named the BVA).

8.1 Please clarify which supply-side measures would result in added costs for FEI and which supply-side measures would result in added benefits for FEI.

Response:

FEI will only be pursuing supply-side measures that benefit FEI and its customers. FEI expects any supply side measures that it pursues would result in reduced costs or net revenue for FEI, by reducing the volume of RNG that FEI acquires or by bringing in revenue from the redirection or resale of RNG outside of BC, or both.

On page 9 of the Evidentiary Update, FEI states:

Second, FEI is also exploring other mid- and long-term mechanisms to manage excess monthly supply, including:

- Mitigating volumes of RNG provided by a supplier in the short term, while ensuring FEI has the ability to increase supply volumes in the long term; and
- Shaping the RNG volumes provided by suppliers to better reflect the heat sensitive consumption patterns of FEI's customers (i.e., shaping supply to more closely align with demand).

8.2 Please clarify whether FEI is only exploring these mid- and long-term mechanisms to manage excess monthly supply when negotiating new biomethane purchase agreements with suppliers or whether it is also exploring these mechanisms with its current suppliers.

Response:

FEI has begun exploring mid- and long-term mechanisms with both existing and new suppliers. For example, on August 18, 2023, FEI signed an Amending Agreement with Archaea Energy

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1 Marketing to redirect RNG on a short-term basis, which was accepted by the BCUC by Order G-
2 253-23.

3
4

5

6 On page 9 of the Evidentiary Update, FEI states:

7 The [...] supply-side measures require no changes to the existing or proposed
8 Renewable Gas Program or any approvals sought in the Application. Rather, FEI
9 will undertake RNG mitigation activities in the ordinary course of business to match
10 RNG supply and demand, just as it undertakes similar mitigation activities to match
11 natural gas supply and demand. Until FEI receives approval of its revised
12 Renewable Gas Program whereby it can increase demand within BC for RNG
13 through the Renewable Gas Blend service, FEI's supply-side mitigation activities
14 will be the primary mechanism that FEI relies on to attempt to match supply and
15 demand monthly.

16 8.3 Please confirm, or otherwise explain, that FEI is requesting BCUC approval to
17 record the costs and benefits from the redirection of RNG to the LCGA.

18 8.3.1 If BCUC approval is not required, please explain why.
19

20 **Response:**

21 FEI does not believe that BCUC approval is required because the BVA (proposed to be renamed
22 the LCGA) is currently approved to capture the costs and recoveries from FEI's existing RNG
23 Program.⁶ Consequently, revenue from the sale of RNG, domestically or out-of-province, is and
24 will be accounted for in the BVA/LCGA. Additionally, if FEI were to redirect or resell RNG from a
25 supplier, the costs or recoveries of that transaction, which are caused by a transaction as a result
26 of FEI's RNG Program, will also be accounted for in the BVA/LCGA.

27 However, if the BCUC disagrees with the above, then FEI would request that the BCUC approve
28 the recording of the costs and benefits from the redirection or resale of RNG to the BVA/LCGA.

29
30

31

32 8.4 Please explain whether FEI still plans to have recourse to the supply-side
33 measures once (and if) it receives approval of its revised RNG Program whereby
34 it can increase demand for RNG through the Renewable Gas Blend service. If so,
35 please explain why.

⁶ Orders G-194-10 and G-210-13.

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Response:

Upon approval of the proposed revised Renewable Gas Program, FEI expects that it will continue to have recourse to some supply-side measures so that it will have complementary supply and demand side measures to better balance RNG inventories, thereby maximizing the recovery of carbon tax refunds from government on behalf of customers.

8.5 To the best of FEI's ability, please estimate the annual net costs to be recorded in the LCGA in the first five years or for the years when FEI is planning to use this practice, whichever is less, and provide the assumptions used. Please briefly describe the mechanism by which the LCGA balance is recovered and from which customers.

8.5.1 Please estimate customers' annual bill impact over the period during which FEI plans to use these supply-side measures or for five years, whichever is less.

Response:

FEI expects that its supply-side measures, including reselling or redirecting RNG outside of BC, will result in net revenue to be recorded in the LCGA. For example, under the Amending Agreement with Archaea Energy Marketing that was accepted by Order G-253-23, FEI estimates approximately \$60 million in benefits to customers. FEI also confirms that it has already realized close to \$5 million in benefits for customers under the amended agreement.

FEI is not able to estimate the net benefits or bill impact from any other supply-side measures beyond those estimated above in relation to the one commercial arrangement it has executed to date as the net benefits will depend on the terms of each distinct commercial arrangement.

Please refer to Section 8.2 of the Application for a discussion and example of how costs in the LCGA that are not recovered from Renewable Gas Connections and Voluntary Renewable Gas customers are recovered through FEI's proposed S&T LC Rider.

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1 **9.0 Reference: RENEWAL NATURAL GAS INVENTORY**

2 **Exhibit B-89, Section 3.2, pp. 6–7**

3 **Mechanisms to address the 200 TJ of additional RNG inventory each**
4 **month**

5 On pages 6–7 of the Evidentiary Update, FEI states:

6 As of the date of filing, FEI [...] is accumulating approximately 200 TJ of additional
7 RNG inventory each month.

8 9.1 Please indicate the timeframe for when FEI expects to accumulate approximately
9 200 TJ of additional monthly RNG inventory. Please clarify whether this monthly
10 figure would fluctuate given that FEI has multiple biomethane supply contracts.

11
12 **Response:**

13 As indicated in the Evidentiary Update, FEI was accumulating approximately 200 TJ of additional
14 monthly RNG inventory at the time of filing. This monthly figure will fluctuate with the monthly
15 variation in supply from its RNG suppliers and seasonal changes in the demand for RNG from its
16 customers.

17
18

19
20 9.2 Please clarify whether FEI plans to address the 200 TJ monthly increase in RNG
21 inventory that are currently accumulating with supply-side measures, or using
22 either mechanisms described in Section 3.2 to reduce natural gas inventory or
23 both. Please explain why.

24
25 **Response:**

26 FEI intends to make use of both supply- and demand-side measures, such as those described in
27 Section 3.2 of the Evidentiary Update to address the monthly increase in RNG inventory. Prior to
28 approval of the Application, FEI's sole means of avoiding the accumulation of inventory is by using
29 supply-side measures. However, the Renewable Gas Blend service will ultimately allow FEI to
30 employ demand-side measures to balance monthly RNG inventory.

31
32

33
34 9.3 Please explain which methods would be more costly for FEI customers: (i) supply-
35 side measures; or (ii) either of the mechanisms described in Section 3.2 to reduce
36 natural gas inventory.

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Response:

Either of the mechanisms described in in Section 3.2 of the Evidentiary Update (i.e., selling excess RNG inventory to FEI customers or using the existing UBPDA/CCRA method of inventory cost recovery) are expected to be more costly for FEI customers than supply-side measures.

Supply-side measures, which include reselling or redirecting RNG supply into markets outside of BC, can generate revenue to offset the cost of RNG acquisition if the RNG is sold for more than the cost of conventional gas per GJ. While FEI's customers would be financially better off, they would lose the ability to claim credit for carbon reductions from the volume of RNG that is resold or redirected (similar to the UBPDA/CCRA method).

In contrast, under both of the other mechanisms described in Section 3.2 of the Evidentiary Update, the full cost of the RNG acquisition would be directly recovered from FEI's customers, which would be more costly.

FEI has provided the following high-level example of the impact to customers from reselling RNG supply outside of BC. This example illustrates that FEI customers are better off from a cost perspective even if FEI is able to sell the RNG for only \$1 more than the cost of conventional natural gas per GJ. In reality, RNG may be sold for more than FEI's own acquisition cost, as has already been successfully done under FEI's Amending Agreement with Archaea Energy Marketing (please refer to the response to BCUC IR3 8.5).

Table 1: Example of Cost to Customers from Selling RNG Outside of BC

Line

<u>No.</u>	<u>Acquire 1 GJ RNG and Sell in BC</u>	<u>Amounts</u>	<u>Reference</u>
1	RNG Cost	\$ 24	Assumed
2	Carbon Tax Paid	3	Rounded for simplicity
3	Net Cost to Customers	\$ 27	Line 1 + Line 2
4			
5	<u>Acquire 1 GJ RNG and the Sell it outside of BC</u>		
6	RNG Cost	\$ 24	Line 1
7	Recoveries from selling RNG outside BC	(5)	-(Line 7 + 1)
8	Amount left in BVA to recover from FEI's customers	\$ 19	Line 6 + Line 7
9	Cost of Conv Gas because RNG was not delivered	4	Assumed
10	Carbon Tax Paid	3	Line 2
11	Net Cost to Customers	\$ 26	Line 8 + Line 9 + Line 10

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10.0 Reference: DEMAND-SIDE RENEWABLE GAS SUPPLY/DEMAND BALANCING

Exhibit B-89, Section 4.2, pp. 9–10

Demand-side measures

On page 9 of the Evidentiary Update, FEI states:

Specifically, for each month, FEI will determine a Renewable Gas Blend for all Sales Customers based on the forecast supply and demand for RNG for that month. This will enable FEI to sell its RNG supply to its customers in BC in an effort to maximize the carbon tax refund available for the benefit of customers. FEI notes that it still proposes to set the S&T LC rider annually based on a forecast overall blend it will provide to customers over the year. Continuing to set the S&T LC rider in this way will continue to ensure that no monthly bill volatility, with respect to the recovery of RNG costs, occurs from changing the Renewable Gas Blend percentage monthly. [Emphasis added]

10.1 Please clarify whether there will be monthly bill volatility due to the monthly fluctuations in the percentage of Renewable Gas Blend. If so, please describe the extent of such volatility in dollar and percentage values of the monthly bills for an average customer in each of Rate Schedule (RS) 1, RS 2, and RS 3.

Response:

As described in the preamble, FEI is not expecting any bill volatility due to the S&T LC Rider as it does not change on a monthly basis.

Monthly customer bills will, however, be different by setting the Renewable Gas Blend percentage on a monthly basis, when compared to FEI's original proposal in the Application to set the Blend annually. As discussed in Section 5.4 of the Evidentiary Update, these differences are due to changes in cost of gas from receiving different percentages of RNG each month and the impact that those differing RNG percentages have on net carbon tax. In particular, FEI's customers in Rate Schedules 1, 2 and 3 are weather sensitive and, therefore, tend to consume more energy for heating through the winter months. As a result, the bills of these customers are generally materially higher in the winter months than the summer months.

However, as illustrated in Figures 5-6 through 5-11 of the Evidentiary Update (Section 5.4), the monthly bill variability from setting the Renewable Gas Blend percentage on a monthly basis is small relative to the total customer bill.

To calculate an effective rate per GJ, FEI has divided the monthly bill by the GJ of energy forecast to be delivered in that month. FEI provides the requested information in Lines 5, 6, 11, 12, 17 and 18 of each of the tables below. These lines show the difference in the effective rate per GJ between setting the Renewable Gas Blend percentage annually versus monthly.

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While FEI has provided the requested comparison, it does not consider this to be an appropriate measure of volatility. FEI instead considers the month-to-month change in the effective rate, compared between methods, to be a more appropriate measure of volatility. As such, FEI has also included the month-to-month change in the effective rate per GJ and then calculated a standard deviation of those monthly changes on Lines 2, 4, 8, 10, 14 and 16 of each of the tables below.

Table 1: RG Connections and RG Blend Effective Rates per GJ, Dollar Difference, Percent Difference, Month-to-Month Effective Rate Change and Standard Deviation for 2024

Line No.	Blend & Connections	2024												Standard Deviation
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
1	RS 1 - Annual Blend %	15.5	15.6	15.9	16.5	17.9	18.8	20.0	20.3	18.9	16.6	15.8	15.5	1.1
2	Effective Rate/GJ change		0.0	0.3	0.6	1.4	0.8	1.3	0.3	(1.4)	(2.3)	(0.8)	(0.3)	
3	RS 1 - Monthly Blend %	15.8	15.8	16.1	16.6	17.8	18.5	19.2	19.4	18.3	16.5	15.9	15.7	0.9
4	Effective Rate/GJ change		0.0	0.3	0.5	1.2	0.7	0.8	0.1	(1.1)	(1.8)	(0.6)	(0.2)	
5	RS 1 - \$ Difference	0.2	0.2	0.2	0.1	(0.2)	(0.3)	(0.8)	(0.9)	(0.6)	(0.1)	0.1	0.1	
6	RS 1 - % Difference	1%	1%	1%	0%	-1%	-2%	-4%	-5%	-3%	-1%	0%	1%	
7	RS 2 - Annual Blend %	14.0	14.0	14.3	14.7	15.6	16.1	16.7	16.9	16.1	14.7	14.2	14.0	0.7
8	Effective Rate/GJ change		0.0	0.2	0.4	0.9	0.5	0.7	0.1	(0.8)	(1.4)	(0.5)	(0.2)	
9	RS 2 - Monthly Blend %	14.2	14.2	14.4	14.7	15.4	15.8	15.9	15.9	15.5	14.6	14.3	14.1	0.4
10	Effective Rate/GJ change		0.0	0.2	0.3	0.7	0.4	0.2	0.0	(0.5)	(0.9)	(0.3)	(0.1)	
11	RS 2 - \$ Difference	0.2	0.2	0.2	0.1	(0.2)	(0.3)	(0.8)	(0.9)	(0.6)	(0.1)	0.1	0.1	
12	RS 2 - % Difference	2%	2%	1%	0%	-1%	-2%	-5%	-5%	-4%	-1%	0%	1%	
13	RS 3 - Annual Blend %	13.0	13.0	13.1	13.2	13.5	13.6	13.9	13.9	13.7	13.3	13.1	13.0	0.2
14	Effective Rate/GJ change		0.0	0.1	0.1	0.3	0.2	0.2	0.0	(0.2)	(0.4)	(0.2)	(0.1)	
15	RS 3 - Monthly Blend %	13	13.2	13.3	13.3	13.3	13.3	13.1	13.0	13.0	13.1	13.2	13.2	0.1
16	Effective Rate/GJ change		(0.0)	0.0	0.0	0.0	0.0	(0.3)	(0.1)	0.0	0.1	0.0	(0.0)	
17	RS 3 - \$ Difference	0.2	0.2	0.2	0.1	(0.2)	(0.3)	(0.8)	(0.9)	(0.6)	(0.1)	0.1	0.1	
18	RS 3 - % Difference	2%	2%	1%	0%	-1%	-2%	-6%	-7%	-5%	-1%	0%	1%	

Table 2: Voluntary RG Effective Rates per GJ, Dollar Difference, Percent Difference, Month-to-Month Effective Rate Change and Standard Deviation for 2024

Line No.	Voluntary	2024												Standard Deviation
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
1	RS 1 - Annual Blend %	16.4	16.4	16.7	17.3	18.7	19.6	20.9	21.1	19.7	17.4	16.6	16.3	1.1
2	Effective Rate/GJ change		0.0	0.3	0.6	1.4	0.8	1.3	0.3	(1.4)	(2.3)	(0.8)	(0.3)	
3	RS 1 - Monthly Blend %	16.8	16.8	17.0	17.4	18.4	19.0	19.3	19.4	18.5	17.1	16.7	16.6	0.7
4	Effective Rate/GJ change		0.0	0.2	0.4	1.0	0.6	0.3	0.1	(0.9)	(1.3)	(0.4)	(0.2)	
5	RS 1 - \$ Difference	0.4	0.4	0.3	0.1	(0.3)	(0.6)	(1.5)	(1.7)	(1.2)	(0.3)	0.1	0.2	
6	RS 1 - % Difference	3%	3%	2%	1%	-2%	-3%	-7%	-8%	-6%	-2%	1%	1%	
7	RS 2 - Annual Blend %	15.4	15.4	15.6	16.0	17.0	17.4	18.1	18.2	17.4	16.1	15.6	15.4	0.7
8	Effective Rate/GJ change		0.0	0.2	0.4	0.9	0.5	0.7	0.1	(0.8)	(1.4)	(0.5)	(0.2)	
9	RS 2 - Monthly Blend %	15.8	15.8	15.9	16.1	16.6	16.9	16.5	16.4	16.2	15.8	15.7	15.6	0.3
10	Effective Rate/GJ change		0.0	0.1	0.2	0.5	0.2	(0.3)	(0.1)	(0.2)	(0.4)	(0.1)	(0.1)	
11	RS 2 - \$ Difference	0.4	0.4	0.3	0.1	(0.3)	(0.6)	(1.5)	(1.8)	(1.2)	(0.3)	0.1	0.2	
12	RS 2 - % Difference	3%	3%	2%	1%	-2%	-3%	-9%	-10%	-7%	-2%	1%	2%	
13	RS 3 - Annual Blend %	14.5	14.5	14.6	14.7	15.0	15.1	15.3	15.4	15.2	14.8	14.6	14.5	0.2
14	Effective Rate/GJ change		0.0	0.1	0.1	0.3	0.2	0.2	0.0	(0.2)	(0.4)	(0.2)	(0.1)	
15	RS 3 - Monthly Blend %	15	14.9	14.9	14.8	14.7	14.6	13.8	13.6	13.9	14.5	14.7	14.8	0.3
16	Effective Rate/GJ change		(0.0)	(0.0)	(0.1)	(0.2)	(0.1)	(0.8)	(0.2)	0.3	0.6	0.2	0.1	
17	RS 3 - \$ Difference	0.4	0.4	0.3	0.1	(0.3)	(0.6)	(1.5)	(1.8)	(1.2)	(0.3)	0.1	0.2	
18	RS 3 - % Difference	3%	3%	2%	1%	-2%	-4%	-10%	-12%	-8%	-2%	1%	2%	

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Table 3: RG Connections and RG Blend Effective Rates per GJ, Dollar Difference, Percent Difference, Month-to-Month Effective Rate Change and Standard Deviation for 2030

Line No.	2030												Standard Deviation
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
1	20.7	20.7	21.0	21.6	23.0	23.9	25.2	25.4	24.0	21.7	20.9	20.7	
2		0.0	0.3	0.6	1.4	0.8	1.3	0.3	(1.4)	(2.3)	(0.8)	(0.3)	1.1
3	21.6	21.6	21.6	21.5	21.5	21.5	21.6	21.6	21.5	21.4	21.5	21.6	
4		0.0	(0.0)	(0.1)	(0.0)	0.0	0.1	0.0	(0.1)	(0.1)	0.1	0.1	0.1
5	0.9	0.9	0.5	(0.1)	(1.5)	(2.4)	(3.6)	(3.8)	(2.5)	(0.3)	0.6	0.9	
6	5%	4%	2%	-1%	-7%	-10%	-14%	-15%	-10%	-1%	3%	4%	
7	19.1	19.1	19.4	19.8	20.7	21.2	21.9	22.0	21.2	19.8	19.3	19.1	
8		0.0	0.2	0.4	0.9	0.5	0.7	0.1	(0.8)	(1.4)	(0.5)	(0.2)	0.7
9	20.1	20.1	19.9	19.7	19.2	18.8	18.3	18.2	18.7	19.5	19.9	20.1	
10		(0.0)	(0.2)	(0.2)	(0.5)	(0.4)	(0.5)	(0.1)	0.5	0.9	0.4	0.1	0.4
11	0.9	0.9	0.5	(0.1)	(1.5)	(2.4)	(3.6)	(3.8)	(2.5)	(0.3)	0.6	0.9	
12	5%	5%	3%	-1%	-7%	-11%	-16%	-17%	-12%	-1%	3%	5%	
13	18.1	18.1	18.2	18.3	18.6	18.7	19.0	19.0	18.8	18.4	18.2	18.2	
14		0.0	0.1	0.1	0.3	0.2	0.2	0.0	(0.2)	(0.4)	(0.2)	(0.1)	0.2
15	19.1	19.0	18.7	18.2	17.1	16.4	15.4	15.2	16.3	18.1	18.8	19.1	
16		(0.0)	(0.3)	(0.5)	(1.2)	(0.7)	(1.0)	(0.2)	1.0	1.8	0.7	0.3	0.9
17	0.9	0.9	0.5	(0.1)	(1.5)	(2.4)	(3.6)	(3.8)	(2.5)	(0.3)	0.6	0.9	
18	5%	5%	3%	-1%	-8%	-13%	-19%	-20%	-13%	-2%	3%	5%	

Table 4: Voluntary RG Effective Rates per GJ, Dollar Difference, Percent Difference, Month-to-Month Effective Rate Change and Standard Deviation for 2030

		2030												Standard Deviatio
Line No.	Voluntary	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
1	RS 1 - Annual Blend %	21.0	21.1	21.4	22.0	23.4	24.3	25.6	25.8	24.4	22.1	21.3	21.0	1.1
2	Effective Rate/GJ change		0.0	0.3	0.6	1.4	0.8	1.3	0.3	(1.4)	(2.3)	(0.8)	(0.3)	
3	RS 1 - Monthly Blend %	22.6	22.6	22.3	21.8	21.5	21.5	21.6	21.6	21.5	21.7	22.3	22.5	0.3
4	Effective Rate/GJ change		(0.0)	(0.3)	(0.5)	(0.3)	0.0	0.1	0.0	(0.1)	0.1	0.6	0.3	
5	RS 1 - \$ Difference	1.5	1.5	0.9	(0.2)	(1.9)	(2.8)	(4.0)	(4.2)	(2.9)	(0.5)	0.9	1.5	
6	RS 1 - % Difference	7%	7%	4%	-1%	-8%	-11%	-16%	-16%	-12%	-2%	4%	7%	
7	RS 2 - Annual Blend %	20.1	20.1	20.3	20.7	21.7	22.1	22.8	22.9	22.1	20.8	20.3	20.1	0.7
8	Effective Rate/GJ change		0.0	0.2	0.4	0.9	0.5	0.7	0.1	(0.8)	(1.4)	(0.5)	(0.2)	
9	RS 2 - Monthly Blend %	21.6	21.6	21.2	20.5	19.2	18.8	18.3	18.2	18.7	20.3	21.2	21.6	0.8
10	Effective Rate/GJ change		(0.0)	(0.4)	(0.6)	(1.3)	(0.4)	(0.5)	(0.1)	0.5	1.6	0.9	0.4	
11	RS 2 - \$ Difference	1.5	1.5	0.9	(0.2)	(2.5)	(3.3)	(4.5)	(4.7)	(3.4)	(0.5)	0.9	1.5	
12	RS 2 - % Difference	8%	7%	4%	-1%	-11%	-15%	-20%	-21%	-16%	-2%	5%	7%	
13	RS 3 - Annual Blend %	19.2	19.2	19.3	19.4	19.7	19.8	20.0	20.1	19.8	19.5	19.3	19.2	0.2
14	Effective Rate/GJ change		0.0	0.1	0.1	0.3	0.2	0.2	0.0	(0.2)	(0.4)	(0.2)	(0.1)	
15	RS 3 - Monthly Blend %	21	20.7	20.1	19.2	17.2	16.4	15.4	15.2	16.3	19.0	20.2	20.7	1.3
16	Effective Rate/GJ change		(0.0)	(0.6)	(0.9)	(2.0)	(0.8)	(1.0)	(0.2)	1.0	2.7	1.2	0.5	
17	RS 3 - \$ Difference	1.5	1.5	0.9	(0.2)	(2.5)	(3.4)	(4.6)	(4.9)	(3.6)	(0.5)	0.9	1.5	
18	RS 3 - % Difference	8%	8%	4%	-1%	-13%	-17%	-23%	-24%	-18%	-2%	5%	8%	

Table 5: Summary of Change in Standard Deviation of Effective Rates for 2024

2024		Blend Percent set Annually \$/GJ	Blend Percent set Monthly \$/GJ	Difference \$/GJ	Change in Volatility when using Monthly Blend
RS 1	RG Connections and RG Blend	1.1	0.9	(0.3)	↓
	Voluntary RG	1.1	0.7	(0.5)	↓
RS 2	RG Connections and RG Blend	0.7	0.4	(0.2)	↓
	Voluntary RG	0.7	0.3	(0.4)	↓
RS 3	RG Connections and RG Blend	0.2	0.1	(0.1)	↓
	Voluntary RG	0.2	0.3	0.1	↑

Table 6: Summary of Change in Standard Deviation of Effective Rates for 2030

2030		Blend Percent set Annually \$/GJ	Blend Percent set Monthly \$/GJ	Difference \$/GJ	Change in Volatility when using Monthly Blend
RS 1	RG Connections and RG Blend	1.1	0.1	(1.1)	↓
	Voluntary RG	1.1	0.3	(0.8)	↓
RS 2	RG Connections and RG Blend	0.7	0.4	(0.2)	↓
	Voluntary RG	0.7	0.8	0.1	↑
RS 3	RG Connections and RG Blend	0.2	0.9	0.7	↑
	Voluntary RG	0.2	1.3	1.1	↑

On page 10 of the Evidentiary Update, FEI states:

As illustrated in Table 8-3 of the Application, the S&T LC rider will recover RNG costs from all Sales Customers by summing the associated costs not otherwise collected from other Renewable Gas Program participants and divides those costs by all of FEI's Sales Customers' volume.

10.2 Please confirm, or otherwise explain, that the costs not otherwise collected from other Renewable Gas Program participants are divided by the sales volume of both RNG and conventional natural gas.

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1

2 **Response:**

3 Confirmed. The costs not otherwise collected from Renewable Gas Program participants are
4 divided by the sales volume of both RNG and conventional natural gas to set the S&T LC Rider,
5 which is applied to both RNG and conventional natural gas on all sales service customers' bills.

6

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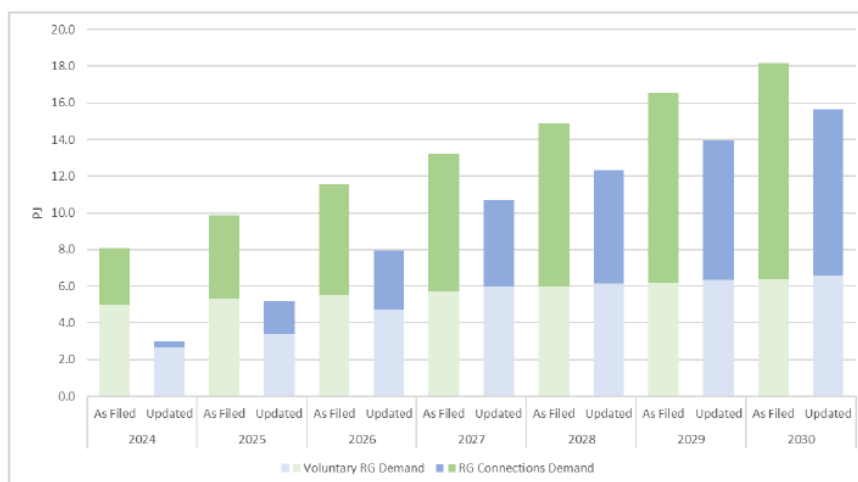
11.0 Reference: SETTING RENEWABLE GAS BLEND PERCENT MONTHLY

Exhibit B-89, Section 5.1, Figure 5-2, p. 13

Updated renewable gas demand forecast

On page 13 of the Evidentiary Update, FEI provides an updated forecast for RNG:

Figure 5-2: Updated Renewable Gas Demand Forecast



FEI also states:

FEI's updated demand for the Voluntary Renewable Gas and Renewable Gas Connections services for years 2024 to 2030 is predominantly based on a delay in the expected implementation of the proposals in this Application and a decline in RNG demand from the Transportation sector due to the BC Low Carbon Fuel Standard (BCLCFS) requiring that RNG must be produced in BC to be eligible for the BCLCFS and demand from the public sector¹⁴ has not materialized as anticipated.

Footnote 14: Hospitals, Universities, Municipal Buildings, Other government.

11.1 Please calculate the reduction in demand forecast for each year in Figure 5-2 and indicate the relative contribution (in percentage) of (i) the delay in the expected implementation of the proposals, (ii) a decline in RNG demand from the Transportation sector, and (iii) a decline in RNG demand from the public sector.

Response:

FEI provides the requested information in the table below.

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Demand Reduction	Units	2023	2024	2025	2026	2027	2028	2029	2030
Total	TJ	(6,583)	(8,452)	(8,057)	(6,955)	(5,925)	(5,945)	(5,939)	(5,906)
Program Delay	%	75.1	72.1	76.2	88.1	103.4	103.0	103.0	103.3
Transportation Sector	%	-1.1	3.9	4.9	6.6	8.4	10.3	11.8	13.1
Public Sector	%	24.8	25.9	21.2	7.8	-10.2	-11.5	-12.9	-14.4

The most significant contributor to the reduction in Renewable Gas demand is the delay in the expected implementation of the proposals in this Application. As shown above, the reduction in forecast demand from public sector organizations is also significant in the first half of the forecast period; however, FEI anticipates that this may reverse as 2030 approaches and these customers seek to achieve their GHG emission targets. Conversely, FEI's sales of RNG to NGV customers in 2023 slightly exceed what was forecast in 2021. Even so, FEI does not expect that there will be any significant additional growth in RNG demand from NGV customers until out-of-province RNG is recognized under the BC-LCFS, leading to net reductions in forecast demand for 2024 through 2030.

Please note that adding the percentages in the table will not sum to 100 percent due in part to changes in other areas of the forecast, such as the demand from the Voluntary Renewable Gas service customers that are not included in the above table, as well as rounding.

11.2 Does FEI know why the RNG demand from the public sector has not materialized as anticipated?

Response:

Based on conversations between FEI's Key Account Managers (KAMs) and public sector customers, the primary impediments to RNG adoption among public sector organizations appear to be:

- 1) A preference and/or drive to pursue capital investments, specifically in energy efficiency and electrification projects, as the primary means of reducing GHG emissions. In many cases, financial incentives from CleanBC and BC Hydro are made available to implement these kinds of capital projects. For example, financial capital incentives are available to public sector entities to undertake capital equipment upgrades, such as electric heat pumps. However, operating budgets have not increased to incentivize the use of RNG which, all things equal, results in higher operating costs. While it may be less costly overall for public sector buildings to use RNG rather than electricity (when looking at the combination of capital and operating costs), the above considerations make it less likely for these customers to use RNG.
- 2) Public sector organizations find it more cost-effective to purchase carbon offsets than to purchase RNG given the lack of incentives described above. While carbon offsets are

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1 typically not considered a desirable or long-term solution, they offer a less costly path for
2 budget-constrained organizations than purchasing RNG.

3

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12.0 Reference: RESIDUAL SUPPLY AND DEMAND IMBALANCES

Exhibit B-89, Section 5.2, pp. 16–17

Costs associated with the un-refunded carbon tax credits

On page 16 of the Evidentiary Update, FEI states:

Given the possibility for residual supply and demand imbalances, FEI is seeking approval to account for carbon tax credits granted to customers for which the Province does not provide a refund be accounted for in the LCGA.

12.1 Please indicate whether FEI has considered any other alternatives to address the possibility for residual supply and demand imbalances. If so, please describe these alternatives and explain why FEI rejected them. If not, please explain why not.

Response:

Yes, FEI considered the following other alternatives to address the possibility for residual supply and demand imbalances. FEI rejected the alternatives for the reasons described below.

- Adjusting the Renewable Gas Blend on a Shorter Interval:** To more accurately match the supply in the Renewable Gas Blend to customer gas demand, FEI considered adjusting the Renewable Gas Blend on bi-weekly, weekly and daily intervals. FEI determined that this alternative was not feasible as FEI's customer demand and supply forecasting tools are designed to produce monthly forecasts. Moreover, even assuming FEI's customer billing system could be adapted to bill customers for Renewable Gas blends that change on a shorter interval, FEI expects this would cause confusion for customers.
- Temporarily Discontinue the RNG Program:** Under this alternative, FEI would mitigate the impacts of carbon tax on its customers by temporarily discontinuing biomethane service until the practice of inventorying biomethane is enabled under carbon tax legislation. This would require FEI to sell all contracted volumes of RNG outside of the domestic market. FEI determined that this alternative was not feasible as many customers rely on RNG to achieve their GHG emission reduction targets and temporarily discontinuing the RNG Program would be inconsistent with the Province's GHG emissions reduction strategy, as set out in the CleanBC Roadmap. Moreover, FEI expects that temporarily discontinuing the RNG Program would create confusion for its customers and create doubt about the overall viability of the program, thus lowering confidence in RNG and jeopardizing the Province's GHG emission reduction objectives.
- Deferring the Recovery of Carbon Tax Credits:** Under this alternative, FEI would defer recovering carbon tax credit amounts in anticipation of amendments to the *Carbon Tax Act* allowing for the recovery of these costs. However, as explained in the Evidentiary Update, the Ministry of Finance has not committed to such amendments; therefore, FEI

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determined that it would not be prudent to defer recoveries of carbon tax credits in anticipation of a future change in tax policy.

On pages 16 to 17 of the Evidentiary Update, FEI states:

If FEI's forecast results in a residual imbalance whereby demand in a given month exceeds supply, then the Province will not provide a refund for the carbon tax credits granted to customers on the amount by which demand exceeds supply. To enable recovery of such amounts, FEI is proposing to account for un-refunded carbon tax credits in the LCGA to be recovered from all sales customers in a subsequent period when setting the S&T LC rider. Similarly, if the residual imbalance results in RNG supply exceeding demand in a given month, FEI will add any excess supply to its low carbon gas inventory. If this inventory is delivered to customers in a subsequent period, FEI will not be able to recover a carbon tax refund from the Province on behalf of its customers. Therefore, FEI proposes to account for any un-refunded carbon tax amounts in the LCGA to be recovered from all sales customers in a subsequent period when setting the S&T LC rider. [Emphasis added]

12.2 Please confirm, or otherwise explain, that adding these un-refunded carbon tax amounts in the LCGA will add to the overall costs of the RNG Program paid for by all sales customers.

Response:

Confirmed. When the Province does not refund carbon tax credits that FEI is required to grant to its customers pursuant to the *Carbon Tax Act*, the difference (i.e., un-refunded carbon tax amounts) is borne by all sales customers and increases the cost of the RNG Program.

12.3 To the best of FEI's ability, please provide an estimate or a range of estimates of the additional S&T LC rider that FEI will require to cover these un-refunded carbon tax amount in the first five years. If FEI is unable to forecast the un-refunded carbon tax amount, please provide a few scenarios with varying amounts of un-refunded carbon tax, along with their respective likelihood, as the basis for the requested calculations.

12.3.1 What percentage of bill impact do these increases in S&T LC rider represent for customers in RS 1, RS 2, and RS 3?

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Response:

As discussed in the Evidentiary Update, weather is expected to be the primary driver for monthly variances between RNG supply and demand. While FEI forecasts demand based on normal weather, in practice, warmer and colder weather will cause RNG demand to deviate from normal, potentially creating imbalances.

To account for the impacts of weather, FEI has used a weather-impacted demand forecast, derived from 15 years of actual usage and weather data. The results better reflect the range of impacts (i.e., as a result of higher consumption in the winters and lower consumption in the summers) that could occur over the 5-year analysis period. The following table sets out the unrefunded carbon tax amounts and their effect on the S&T LC Rider.

Table 1: RNG Supply & Demand Imbalances from Non-Normal (weather impacted) Consumption and Inventory Build-up and Subsequent Period Use

	2024	2025	2026	2027	2028
Carbon Tax refunds denied from Monthly Supply/Demand Imbalances (\$000)	-	-	1,412	13,926	29,702
Carbon Tax refunds denied from delivering Inventoried RNG (\$000)	33,667	33,900	40,430	10,005	6,054
Total unrefunded credits captured in LCGA (\$000)	33,667	33,900	41,842	23,931	35,756
Increase in S&T LC Rider (\$/GJ)	0.23	0.23	0.28	0.16	0.24
Increase in S&T LC Rider (%)	11%	9%	10%	5%	7%
<u>Annual Bill Increase from Higher Rider</u>					
Rate Schedule 1 (\$)	19	19	23	13	20
Rate Schedule 2 (\$)	73	74	91	52	78
Rate Schedule 3 (\$)	805	811	1,001	572	855
<u>Annual Bill Impact from Higher Rider</u>					
Rate Schedule 1 (%)	1%	1%	2%	1%	1%
Rate Schedule 2 (%)	2%	1%	2%	1%	1%
Rate Schedule 3 (%)	2%	2%	2%	1%	1%

Notes to Table:

- i) The analysis in the table incorporates the following assumptions:
- The Province does not amend the carbon tax legislation.
 - The BCUC approves FEI's proposal to adjust the Renewable Gas Blend percentage on a monthly basis, along with FEI's other approvals sought in this Application.
 - For simplicity, supply-side mitigation activities are not included; thus, any built-up inventory from supply being greater than demand will be delivered in the subsequent year and this RNG will not be eligible for a carbon tax refund from the Province.

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13.0 Reference: EFFECT ON BILLS FROM SETTING THE BLEND PERCENT ON A MONTHLY BASIS

Exhibit B-89, Section 5.4, Figures 5-12 to 5-17, pp. 22–26

Annual bill components comparison for 2024

The figures provided by FEI on pages 22 to 26 show that RS 1 customers will see an annual bill increase of between \$1 and \$2 annually in 2024 and between \$6 to \$27 in 2030, RS 2 customers will see an annual bill increase of between \$6 and \$12 in 2024 and between \$31 and \$89 in 2030, and RS 3 customers will see an annual bill decrease of between \$76 and \$147 in 2024 and between \$163 and \$392 in 2030.

13.1 Please explain why RS 1 and RS 2 customers will see annual bill increases because of the changes proposed in the Evidentiary Update while RS 3 customers will see annual bill decreases.

Response:

As discussed in Section 5.3 of the Evidentiary Update, the difference in a rate schedule's average annual bill from setting the blend percent on a monthly versus annual basis is dependent on the rate schedule's use rate and its impact on how much RNG a customer receives. These factors affect the mix of RNG and conventional natural gas a customer receives, and consequently, the net carbon tax paid – both of which affect a customer's bill.

For example, in 2030, Renewable Gas Blend service customers under RS 1 receive 0.5 GJ less RNG and 0.5 GJ more conventional natural gas, which causes a \$2 increase in the cost of gas and a \$4 increase in carbon tax (total \$6). Similarly, Renewable Gas Blend customers under RS 3 receive 35.6 GJ more RNG and 35.6 GJ less conventional natural gas, which causes a \$137 decrease in the cost of gas and a \$255 decrease in carbon tax (total \$392).