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May 16, 2022

Creative Energy Platforms Inc.
Suite 1 – 720 Beatty Street
Vancouver, B.C.
V6B 2M1

Attention: Mr. Rob Gorter

Dear Mr. Gorter:

Re: FortisBC Energy Inc. (FEI)
Revised Renewable Gas Program Application – Stage 2 (Application)
Response to the Creative Energy Vancouver Platforms Inc. (Creative Energy)
Information Request (IR) No. 1

On December 17, 2021, FEI filed the Application referenced above. In accordance with the amended regulatory timetable established in British Columbia Utilities Commission Order G-103-22, FEI respectfully submits the attached response to Creative Energy IR No. 1.

For convenience and efficiency, FEI has occasionally provided an internet address for referenced reports instead of attaching lengthy documents to its IR responses. FEI intends for the referenced documents to form part of its IR responses and the evidentiary record in this proceeding.

If further information is required, please contact the undersigned.

Sincerely,

FORTISBC ENERGY INC.

Original signed:

Diane Roy

Attachments

cc (email only): Commission Secretary
Registered Parties

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A. SUPPLY AND ATTRIBUTES

1.0 Reference: Exhibit Table 6-1: Contracted RNG Supply Projects

Table 6-1: Contracted RNG Supply Projects								
1	2	3	4	5	6	7	8	9
Project	Type	Province/Status	BCUC Approved Status	Start/Anticipate & Start Date (Month-Year)	Contract Max Annual Volume (TJ/Yr)	Proportion of Total Max Contract Volume (%)	Expected Annual Volume (TJ/Yr)	Proportion of Total Expected Volume (%)
Existing	Fraser Valley Biogas	BC	Approved	Sep-20	91	0.3%	87	0.3%
	Columbia Shuswap Regional Dist.	BC	Approved	Jan-23	40	0.3%	36	0.2%
	Kelowna Landfill	BC	Approved	Jun-18	118	0.9%	62	0.6%
	Seabreeze Farms	BC	Approved	Feb-15	120	0.9%	90	0.9%
	City of Surrey	BC	Approved	Jul-18	180	1.2%	75	0.8%
	Tidal Stormfisher	ON	Approved	Aug-20	237	1.7%	180	1.8%
	Lulu Island Waste Water	BC	Approved	Jun-21	100	0.7%	40	0.4%
	Lethbridge Biogas	AB	Approved	Aug-21	475	3.5%	225	2.3%
	Shell Energy	SA	Approved	Aug-23	892	5.1%	518	5.3%
	Farmer Chis	ON	Approved	Oct-21	120	0.9%	60	0.6%
Total Existing (TJ/Yr)					2,153	15.9%	1,334	13.7%
Anticipated	Assai Energy	PA	Approved	Jan-22	1,600	11.8%	1,200	12.3%
	Dicklands Farm	BC	Approved	Jul-22	180	1.2%	100	1.0%
	Walker RNG	ON	Approved	Jul-22	180	1.2%	120	1.2%
	Tidal Niagara	ON	Approved	Aug-22	684	5.1%	675	6.9%
	Net Zero Waste	BC	Approved	Oct-22	173	1.3%	130	1.3%
	GrowTEC	AB	Approved	Oct-22	140	1.0%	80	0.8%
	Evergreen (Oshawa) Environmental	ON	Approved	Oct-22	390	2.9%	300	3.1%
	City of Vancouver	BC	Approved	Nov-23	298	2.2%	250	2.6%
	Matter	BC	Approved	Jul-23	100	0.7%	75	0.8%
	Tidal GSE	ON	Approved	Sep-23	800	5.9%	600	6.1%
	Delta RNG	BC	In Progress	Jan-23	1,200	8.8%	740	7.5%
	UPCOR	AB	Approved	Mar-23	280	2.1%	220	2.3%
	ROFFG	BC	In Progress	Mar-23	94	0.7%	80	0.8%
	Tidal Rockford	IL	Approved	Jun-23	841	6.2%	486	5.0%
	Bradam Hamilton	ON	Approved	Jul-23	1,500	11.1%	1,125	11.5%
	Capital Regional District	BC	Approved	Sep-23	280	2.1%	238	2.4%
	Bradam Nanaimo	ON	Approved	Oct-23	1,500	11.1%	1,125	11.5%
	RIN Energy	BC	Approved	Dec-23	1,200	8.8%	900	9.2%
Total Anticipated (TJ/Yr)					11,430	84.1%	8,434	86.3%
Grand Total Volume (TJ/Yr)					13,583	100.0%	9,768	100.0%

1.1 FEI identified ten projects that are “Existing” Contracted RNG Supply Projects. Please confirm that the majority of the Expected Annual Volume (TJ/Yr) for existing projects is sourced outside of British Columbia.

Response:

Confirmed.

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1
2
3
4 1.2 FEI identified 18 projects that are “Anticipated” Contracted RNG Supply Projects.
5 Please confirm that the majority of the Expected Annual Volume (TJ/Yr) for
6 anticipated projects is sourced outside of British Columbia.

7
8 **Response:**

9 Confirmed.

10
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13 1.3 Please provide the renewable natural gas verification standards that have been
14 confirmed for BC.

15
16 **Response:**

17 All projects in FEI’s supply portfolio must meet BC standards for RNG (i.e., must be injecting
18 pipeline quality gas derived from the decomposition of organic matter). Please also refer to the
19 response to BC Hydro IR1 2.4.

20
21
22
23 1.4 For each project in Table 6-1, please identify the auditor of the project reports.

24
25 **Response:**

26 Please refer to the response to BC Hydro IR1 2.4.

27
28
29
30
31 1.5 For each project in Table 6-1, please identify the applicable auditor and renewable
32 natural gas verification standards that have been confirmed.

33
34 **Response:**

35 Please refer to the response to Creative Energy IR1 1.3.

36

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1 2.0 Reference: Exhibit B-9, Section 3.4.1

3	3.4.1 CleanBC Plan and Roadmap to 2030
4	In 2018, the provincial government released its CleanBC Plan aimed at reducing emissions while
5	creating jobs and economic opportunities. This plan laid out a path for BC to reach 75 percent of
6	the 2030 GHG reduction targets, with the remaining 25 percent reduction still to be determined.
7	FEI's target of 15 percent Renewable Gas (equating to approximately 30 PJs by 2030) came out
8	of the 2018 Clean BC Plan.
9	On October 25, 2021, the provincial government released the CleanBC Roadmap to 2030
10	(CleanBC Roadmap) as part of its commitment to achieve the provincially legislated GHG
11	reduction target of 40 percent below 2007 levels by 2030. ³⁹ A key aspect incorporated into the
12	CleanBC Roadmap is the sectoral emissions targets. The sector-by-sector approach is intended
13	to help the province meet its GHG emissions reduction goal by 2030 by introducing legislatively
14	enforced accountability measures. The key priorities identified in the CleanBC Roadmap
15	pertaining to these sectoral emissions targets include emissions reductions in the building,
16	transportation, and industrial sectors, including an emissions cap for natural gas utilities. The
17	policies in relation to each of these sectors along with the proposed increases to the carbon tax
18	are described below.
19	3.4.1.1 CleanBC Roadmap - GHG Reduction Standard: Emissions Cap for
20	Natural Gas Utilities
21	The 2018 CleanBC Plan enabled gas utilities to reduce emissions by increasing the renewable
22	content of their gas stream to 15 percent renewable content by 2030. Displacing 15 percent of
23	the gas supply with Renewable Gas would increase the annual supply of Renewable Gas in FEI's
24	system to approximately 30 PJs.
25	The provincial government's approach with respect to the emissions of natural gas utilities was
26	recently updated in the CleanBC Roadmap with the introduction of a GHG emissions cap. The
27	cap, if introduced into legislation, will limit the overall emissions from the gas used by all customers
28	of gas utilities including residential, commercial and industrial sectors. This is the first policy of
29	this kind in Canada which places an obligation on gas utilities to reduce emissions on behalf of
30	their customers. The cap, as laid out in the CleanBC Roadmap, is set at 6.11 Mt of CO ₂ e per year
31	at 2030. This represents a 47 percent reduction in GHG emissions from 2007 levels, and will
32	require utilities to increase Renewable Gas content, increase investments in energy efficiency
33	and employ other mechanisms to lower emissions. FEI expects that Renewable Gas content
34	exceeding 15 percent will be required to meet this lower emission threshold by 2030. Details on
35	the cap are under development; however, FEI sees the potential Renewable Gas supply
36	requirements being between 45 and 65 PJs by 2030.

2

3 2.1 Please confirm that FEI RNG volumes of 30, 45 and 65 PJs per year are possible

4 scenarios required in order to meet the objectives of the CleanBC Plan and

5 Roadmap to 2030.

7 **Response:**

8 Renewable Gas volumes of 30 PJ will enable FEI to meet the 15 percent Renewable Gas content

9 target set out in the CleanBC Plan, and the higher volumes of between 45 and 65 PJ, along with

10 other initiatives from FEI, will enable the utility to meet the objectives of the more recent CleanBC

11 Roadmap.

12 Please refer to the responses to the BCUC IR1 2 series for further discussion regarding

13 Renewable Gas volumes.

14

15

16

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2.2 Please provide forecast volumes for each of these scenarios in 2032 for Renewable Gas Connections and Voluntary Renewable Gas respectively, including all assumptions and reasoning.

Response:

As described in the above preamble, details regarding the proposed GHG emissions cap set out in the CleanBC Roadmap remain under development. Please refer to the responses to the BCUC IR1 2 series for a discussion of Renewable Gas supply potential. Please also refer to Figure 8-3 in the Application for a breakdown of the 30 PJ Renewable Gas volumes in 2030.

Further, FEI has provided a forecast of volume at 55 PJ (halfway between 45 PJ and 65 PJ) by 2030 which it developed to respond to BCUC IR1 42.2. FEI made the adjustment to reach 55 PJ of Renewable Gas supply in 2030 based on the supply curve included in the analysis supporting the Application. In the table below, FEI provides the resulting 2030 volume delivered to customers under the Renewable Gas Connections, Voluntary Renewable Gas and Renewable Gas Blend services for 30 PJ of Renewable Gas by 2030 and 55 PJ of Renewable Gas by 2030.

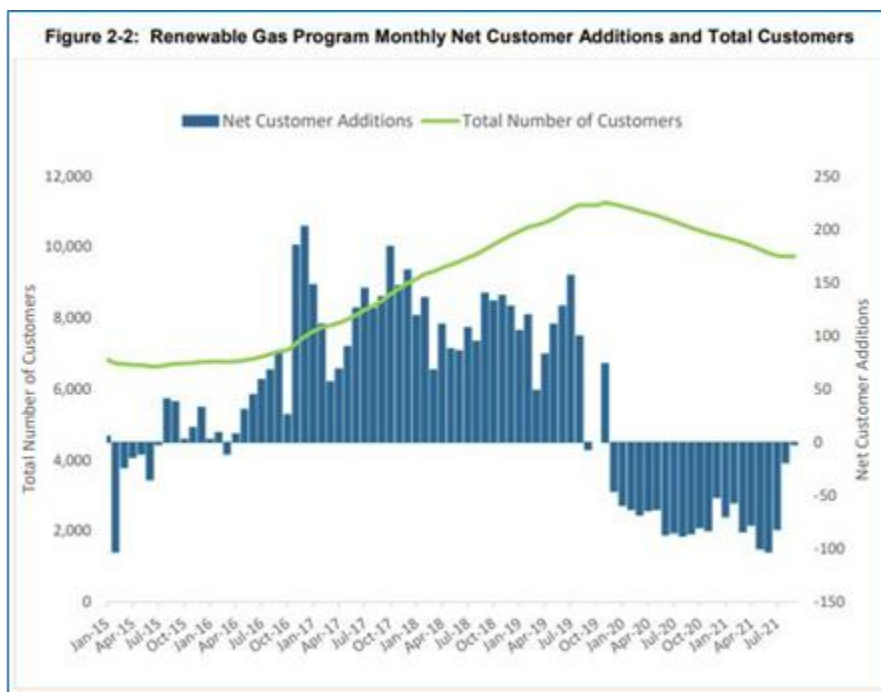
Table 1: Forecast of Renewable Gas by Renewable Gas Service Type

	PJ RG	PJ RG
RG Connections	11.8	11.8
RG Voluntary	6.4	6.4
RG Blend	11.8	36.8
Total	30.0	55.0

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1 B. DEMAND

2 3.0 Exhibit B-9, Figure 2.2



3.1 Figure 2-2 depicts RNG customer losses each month in 2020 and 2021. Does FEI expect continued attrition from the RNG program?

Response:

Please refer to the response to CEC IR1 6.2 where FEI describes that the drop in customers was due to the temporary closure of the program. Renewable Gas supply volumes increased in 2021 allowing FEI to re-open the program to new customer enrollments in November 2021. In the last two months of 2021 and the first two months of 2022 FEI saw new customer enrollments increase. The net customer additions over that period have been positive. FEI does not expect to see further attrition from the existing Renewable Gas Program.

3.2 If FEI expects growth in RNG demand from its customers, despite the attrition depicted in Figure 2-2, where does it expect this growth to come from?

Response:

As explained in the Application, FEI expects growth in demand for Renewable Gas, including RNG, from the sources depicted in Figure 8-3.

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3.3 If FEI does not attract new RNG customers, will existing customers be required to pay for the acquisition costs of new RNG supplies imposed by FEI?

Response:

FEI expects new Voluntary Renewable Gas customers to materialize. As noted in the response to BCUC IR1 26.1, there is significant opportunity in the large commercial and transportation sector. However, to the extent that new Voluntary Renewable Gas customers do not materialize, the acquisition cost of Renewable Gas will be recovered from all sales customers (i.e., those who purchase gas from FEI), through the Renewable Gas Blend service.

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1 **C. OFFSETS**

2 **4.0 Exhibit B-9, Section 8.7**

3 4.1 Section 8.7 of the Application invokes the use of Offsets as a mitigation strategy
4 to balance supply and demand. Has FEI purchased or used any carbon offsets in
5 respect of Renewable Natural Gas offerings?
6

7 **Response:**

8 Yes, please refer to the response to BCUC IR1 31.1 for the amount of offsets purchased by FEI
9 and associated pricing.

10
11

12
13 4.2 If the answer to the preceding IR is yes, please identify the source and cost of all
14 offsets used in respect of Renewable Natural Gas offerings.
15

16 **Response:**

17 Please refer to the response to BCUC IR1 31.1. All FEI offsets are sourced from Verified Carbon
18 Standard (VCS) or Climate Action Reserve rated projects from reputable carbon offset sellers.

19
20

21
22 4.3 Please identify the verification criteria and regulations relating to any offsets that
23 FEI has purchased or used in respect of Renewable Natural Gas offerings.
24

25 **Response:**

26 Please refer to the response Creative IR1 4.2.
27
28

29
30 4.4 Does FEI plan to source offsets from projects located outside of British Columbia
31 in respect of Renewable Natural Gas offerings in British Columbia?
32

33 **Response:**

34 Please refer to the responses to BCUC IR1 31.5 and City of Vancouver IR1 1.3.
35

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1 5.0 Reference – Biomethane Service Terms and Conditions, Section 28.3

<p style="text-align: right;">FORTISBC ENERGY INC. GENERAL TERMS AND CONDITIONS SECTION 28</p>	
<p>28. Biomethane Service</p> <p>28.1 Notional Gas</p> <p>Customers must recognize that the location of generation facilities will determine where Biomethane will physically be introduced to the FortisBC Energy System and that Customers receiving Biomethane Service may not receive actual Biomethane at their Premises, but may instead be contributing to the cost for FortisBC Energy to deliver an amount of Biomethane proportionate to the Customer's Gas usage into the FortisBC Energy System.</p> <p>28.2 Biomethane Physical Delivery</p> <p>Customers located in the vicinity of Biomethane generation facilities may receive Biomethane as a component of Gas in such proportion as FortisBC Energy determines in its sole discretion.</p> <p>28.3 Reduced Supply</p> <p>Customers must recognize that the production of Biomethane is subject to biological processes and production levels may fluctuate. Customers registered for Biomethane Service for applicable Rate Schedules 1B, 2B, 3B, 5B and 7B, agree that in the event that Biomethane production does not provide sufficient gas supply, FortisBC Energy may purchase Carbon Offsets at a price not to exceed the funding received from Customers registered for Biomethane Service.</p>	C/N

2

3 5.1 Where FEI is providing specific volumes of gas in order to meet the objectives of

4 the CleanBC Plan and Roadmap to 2030, if FEI is unable to secure supply of

5 renewable gas in order to meet the policy objectives, would FEI intend to purchase

6 Carbon Offsets in sufficient quantity to meet the policy objectives?

7 **Response:**

8

9 FEI is confident that it can secure sufficient volumes of Renewable Gas supply to meet the

10 objectives of the CleanBC Plan and CleanBC Roadmap to both 2030 and 2050. Please refer to

11 the responses to the BCUC IR1 2 series for a discussion of Renewable Gas supply potential.

12 Please also refer to the response to BCUC IR1 31.4 where FEI explains that carbon offsets may

13 continue to be used on occasion to balance monthly supply and demand.

14

15

16

17 5.2 What is the likelihood that offsets will need to be purchased at the indicative price

18 given current supply constraints? Please discuss.

19 **Response:**

20

21 To 2030, FEI does not believe that Renewable Gas to meet the objectives of the CleanBC

22 Roadmap will be supply constrained. In the long-term, FEI expects there to be a significant overall

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volume of Renewable Gas available in BC and does not expect to need to purchase carbon offsets.

Based on FEI's 30 supply contracts that have been accepted by the BCUC, contracted and approved volumes for Renewable Gas are expected to exceed 15 PJ in the next three to five years and grow beyond 18 PJ over time. Under the GGRR, FEI will continue acquire new supply of Renewable Gas and expects to reach 30 PJ before 2030. When the CleanBC Roadmap GHG emissions cap is implemented, FEI will grow the supply of Renewable Gas commensurate to the GHG reduction required (as discussed in the responses to the BCUC IR1 1 series). As outlined in the *BC Renewable and Low-Carbon Gas Potential Study*¹, in the Minimum Scenario, there is over 100 PJ of supply in 2050 and, in the Maximum Scenario, there is over 400 PJ of supply in 2050.

However, short-term constraints may exist because the development window for renewable and low-carbon gas projects is potentially longer than the timeline for an increase in demand. For example, there is the potential for significant demand to materialize in the short-term in the transport sectors like in marine shipping. Were this to transpire, FEI would favour a strategy of reducing deliveries to these customers to avoid the acquisition of offsets.

In addition to the transportation market, local, provincial and/or federal policies could continue to increase in stringency, driving even greater demand which may require strategies to manage Renewable Gas demand with the supply development timelines. FEI will continue to monitor these developments, and work to avoid the purchase of offsets wherever possible.

5.3 What is the likelihood that carbon offsets can be purchased within BC versus outside of BC, and in sufficient quantity and at the indicative price to meet the obligations, in either case?

5.4 Has the purchase of carbon offsets been confirmed as an acceptable approach to meeting policy requirements? Please explain, and indicate the policy requirements as applicable.

Response:

As explained in the response to Creative Energy IR1 5.2, FEI does not expect to need offsets.

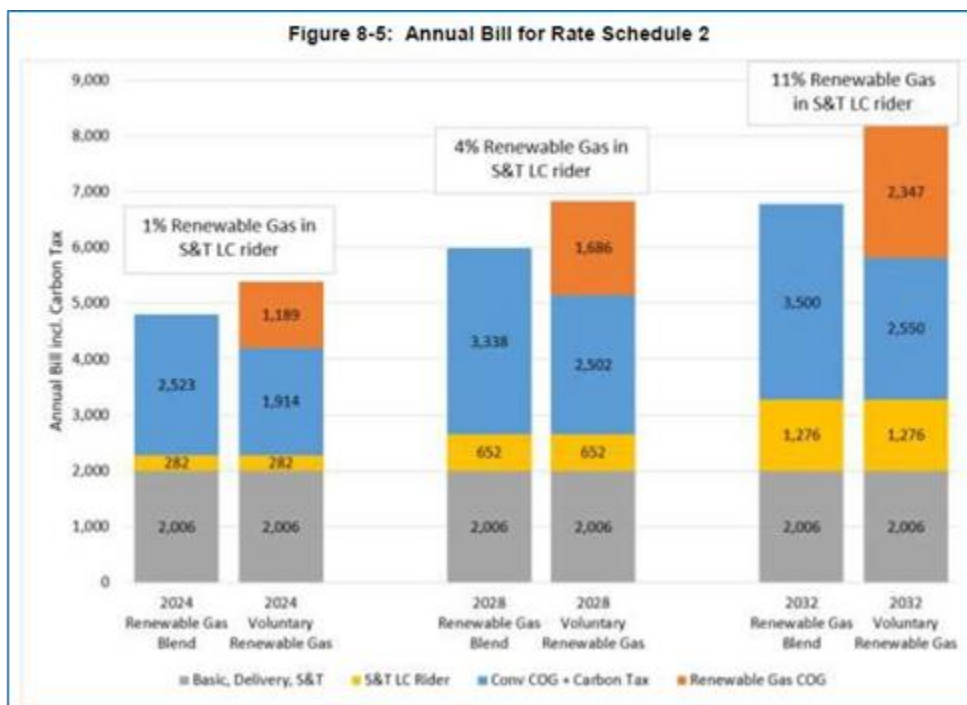
The provincial government has not provided direction on the applicability or qualification of carbon offsets to meet the targets set out in the CleanBC Roadmap, as such FEI cannot yet comment on which credits may qualify. However, FEI understands that the CleanBC Roadmap will be considering all compliance tools, including carbon offsets, to meet its goals. As policies like the GHG emissions cap for natural gas utilities are developed, and the potential role for carbon offsets is defined, FEI will explore available pathways to use offsets as part of its GHG abatement plans.

¹ https://www.cdn.fortisbc.com/libraries/docs/default-source/about-us-documents/renewable-gas-study-final-report-2022-01-28.pdf?sfvrsn=cb5ca1fd_0.

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1 D. RATES AND IMPACTS

2 6.0 Reference: Exhibit B-9, Figure 8-5



6.1 Please produce an expanded version of this figure showing the annual bill in 2032 for Rate schedule 2 for the scenarios where FEI is providing volumes of 30, 45 and 65PJ's of RNG per year respectively, using the volumes estimated in response to CEVP IR 2.2.

Response:

As discussed above in response to Creative Energy IR1 2.2, FEI has provided a forecast of volume at 55 PJ (halfway between 45 PJ and 65 PJ) by 2030 which it developed to respond to BCUC IR1 42.2.

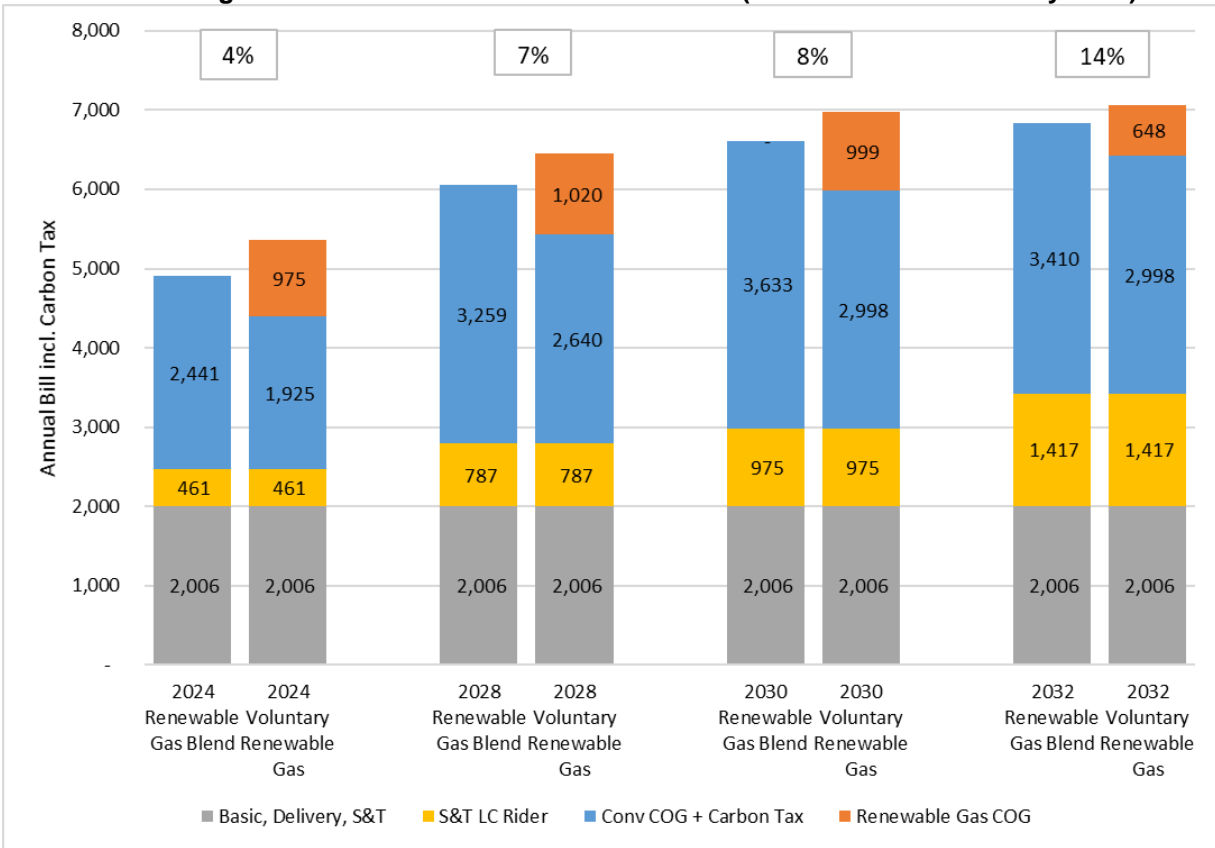
FEI has included below two figures. The first figure is a revision of the Corrected Figure 8-5 as provided in response to BCUC IR1 12.3.2, adding the year 2030. FEI added in the year 2030 because the analysis underlying Figures 8-4 through 8-6 in the Application assumes FEI reaches 30 PJ of Renewable Gas by 2030.

The second figure in this response starts with the Corrected Figure 8-5 provided in response to BCUC IR1 12.3.2, adds in the year 2030, and scales up volume to 55 PJ by 2030 as discussed above.

As requested in this IR, these two figures provide a bill impact for Rate Schedule 2 at the year 2030 when Renewable Gas supply volumes are at 30 PJ and 55 PJ respectively.

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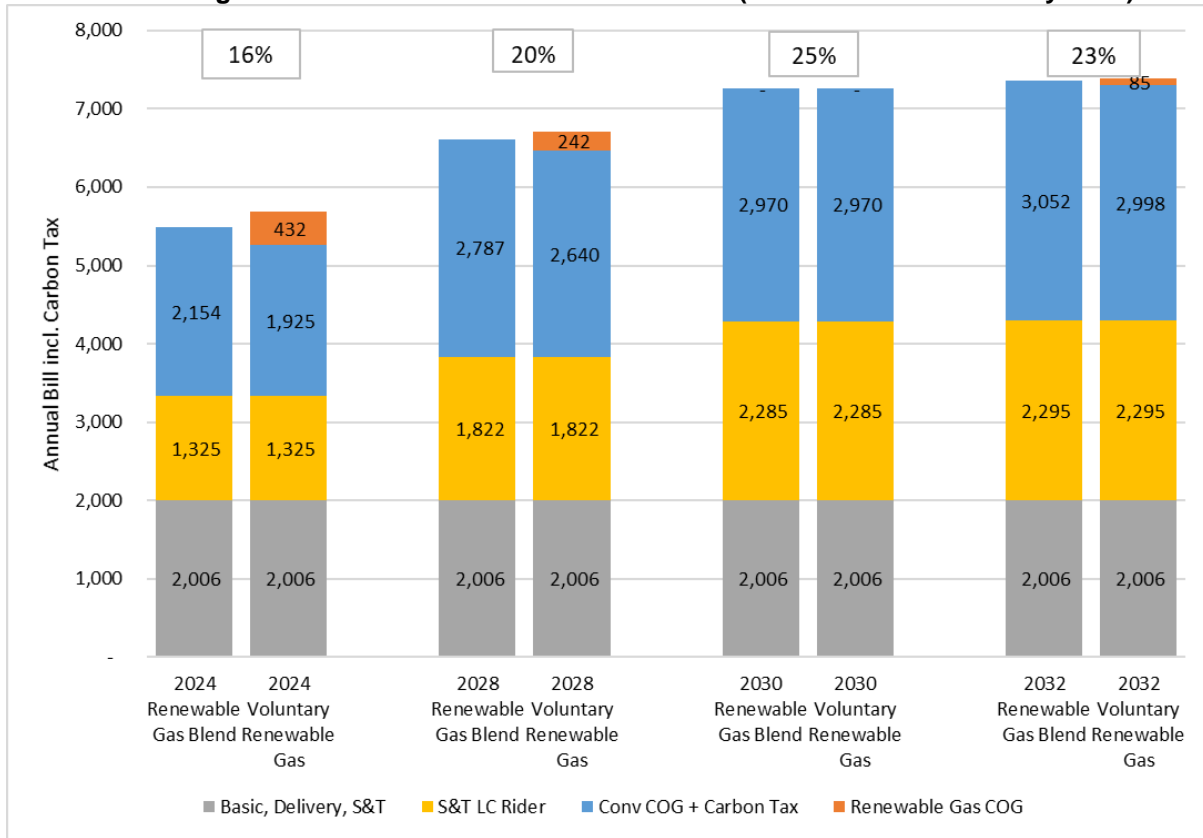
1 **Revised Figure 8-5: Annual Bill for Rate Schedule 2 (30 PJ Renewable Gas by 2030)**



2

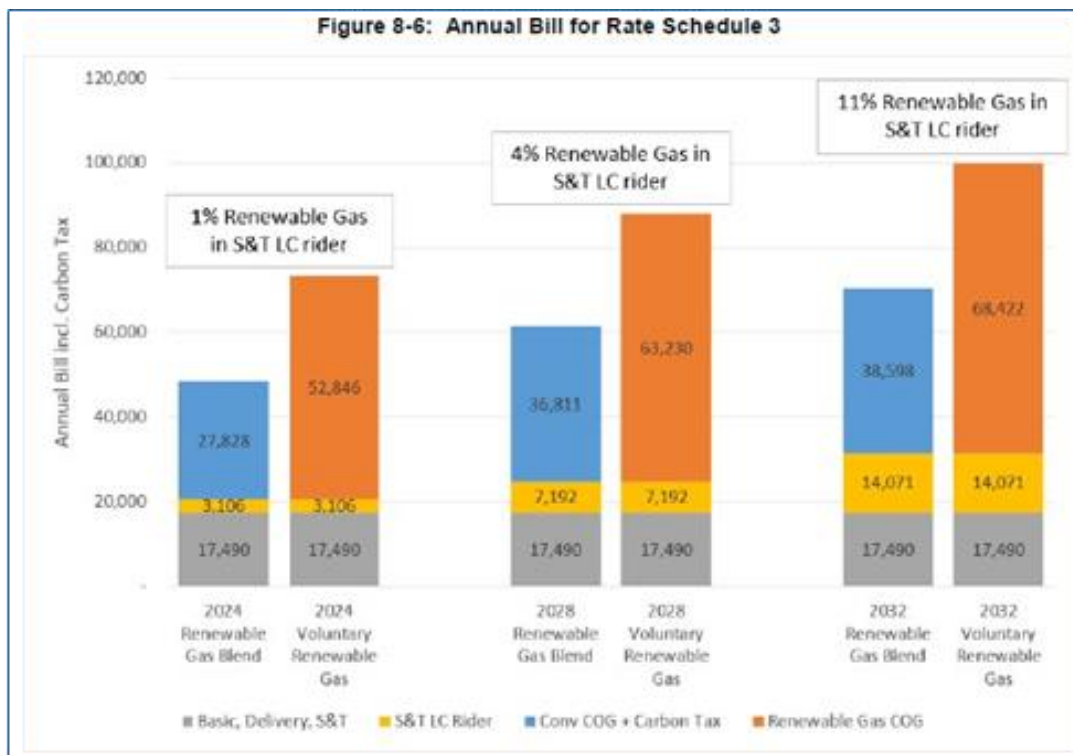
3

1 **Revised Figure 8-5: Annual Bill for Rate Schedule 2 (55 PJ Renewable Gas by 2030)**



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6.2 Please produce an expanded version of this figure showing the annual bill in 2032 for rate schedule 3 under the scenarios where FEI is providing volumes of 30, 45 and 65PJ's of RNG per year respectively, using the volumes estimated in response to CEVP IR 2.2.

Response:

As discussed above in response to Creative Energy IR1 2.2, FEI has provided a forecast of volume at 55 PJ (halfway between 45 PJ and 65 PJ) by 2030 which it developed to respond to BCUC IR1 42.2.

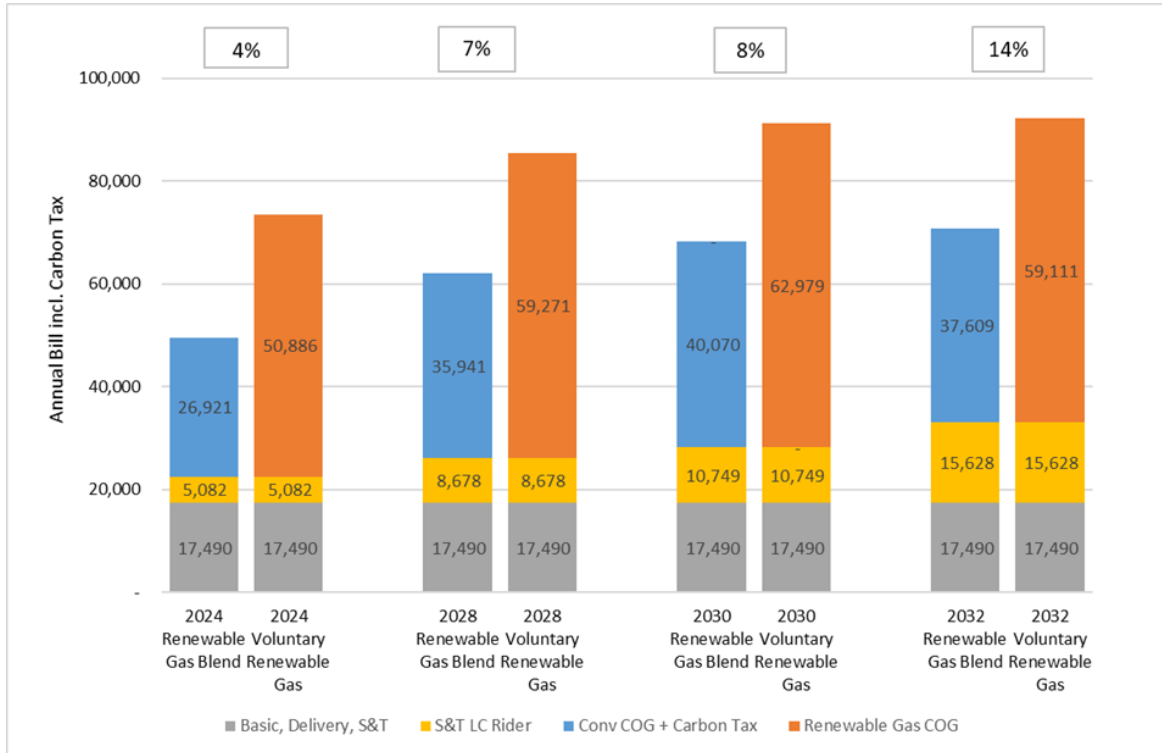
FEI has included below two figures. The first figure is a revision of the Corrected Figure 8-6 as provided in response to BCUC IR1 12.3.2, adding the year 2030. FEI added in the year 2030 because the analysis underlying Figures 8-4 through 8-6 in the Application assumes FEI reaches 30 PJ of Renewable Gas by 2030.

The second figure in this response starts with the Corrected Figure 8-6 provided in response to BCUC IR1 12.3.2, adds in the year 2030, and scales up volume to 55 PJ by 2030 as discussed above.

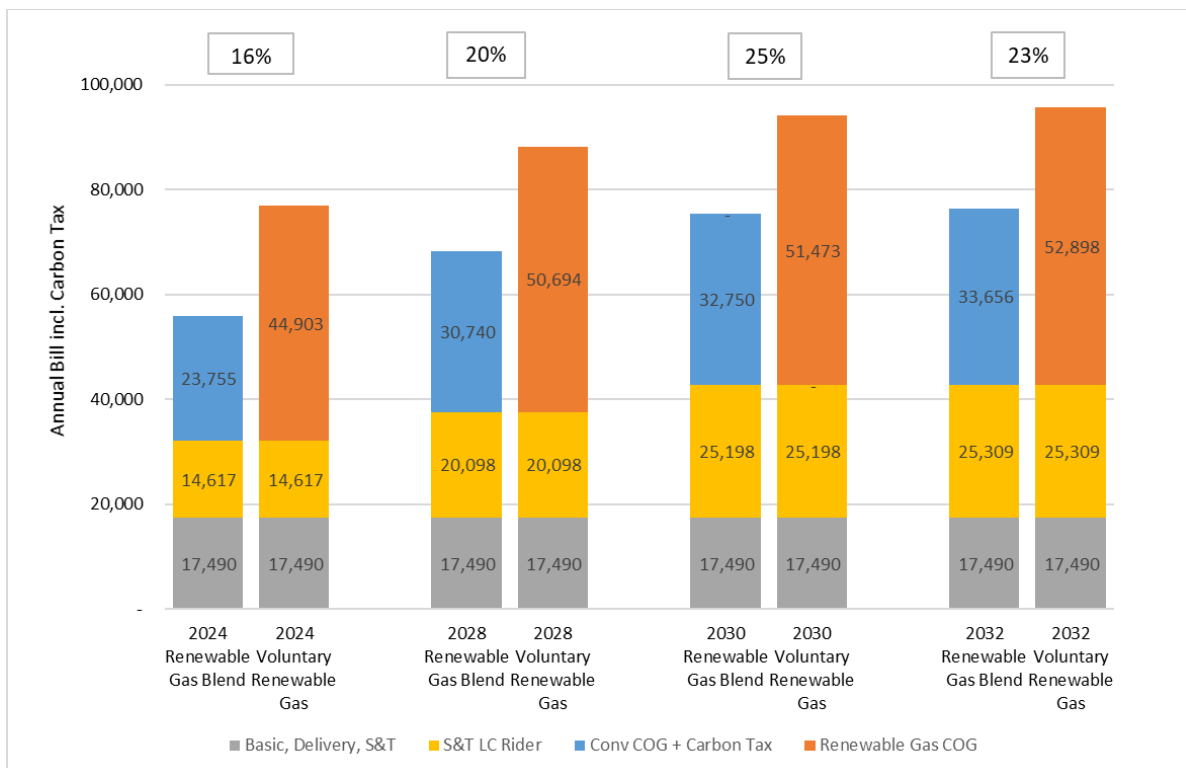
As requested in this IR, these two figures provide a bill impact for Rate Schedule 3 at the year 2030 when Renewable Gas supply volumes are at 30 PJ and 55 PJ, respectively.

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1 **Revised Figure 8-6: Annual Bill for Rate Schedule 3 (30 PJ Renewable Gas by 2030)**



2
3
4 **Revised Figure 8-6: Annual Bill for Rate Schedule 3 (55 PJ Renewable Gas by 2030)**



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1 7.0 Reference: Exhibit B-9, Table 8-3

Table 8-3: Storage & Transport Low Carbon Rider Calculation			
Line No.	Particulars	Projected Amount	Forecast Amount Reference
1	RG Supply Price (\$/GJ)	\$ 24.00	\$ 23.00 Average price of all RG acquisitions
2	RG Purchased (TJ)	2,000	3,500 Projected/Forecast supply
3	Total RG Supply Cost (\$000)	\$ 48,000	\$ 80,500 Line 1 x Line 2
4	Supply and Contract Mgmt (\$000)	\$ 2,100	\$ 2,100
5	Total RG Cost (\$000)	\$ 50,100	\$ 82,600 Line 3 + Line 4
6			
7	RG Inventory in (TJ)		
8	Open	-	300 Prior Years Closing Balance
9	Additions	2,000	3,500 Line 2
10	Demand New Residential & Voluntary	(1,500)	(2,000) Projected/Forecast Demand
11	Supply available to Flow as LCG	500	1,800 Line 8 + Line 9 + Line 10
12	Renewable Gas through S&T Rider	(200)	(1,500) Projected Amount: Note 1; Forecast Amount: - Line 11 + Line 13
13	Close	300	300 Projected Amount: Line 11 + Line 12; Forecast Amount: Desired Inventory Buffer
14			
15	RG Inventory in dollars (\$000)		
16	Open Inventory at Avg Supply Cost	\$ -	\$ 22,600 Prior Years Closing Balance
17	Supply Cost	50,100	82,600 Line 3
18	Sales Revenue - New Residential and Voluntary	(22,500)	(34,000) Line 10 x Avg Price to New Res and Voluntary
19	Net Supply Cost	\$ 27,600	\$ 71,200 Line 16 + Line 17 + Line 18
20	Renewable Gas cost used to calculate S&T LC Rider	(5,000)	(64,300) Projected Amount: Note 2; Forecast Amount: - Line 19 + Line 21
21	Close	\$ 22,600	\$ 6,900 Projected Amount: Line 19 + Line 20; Forecast Amount: Line 1 x Line 13
22			
23	Storage and Transport Rider		
24	Renewable Gas cost used to calculate S&T LC Rider	\$ -	\$ 64,300 - Line 20
25	Sales Customer Volume (TJ)		150,000
26	Storage & Transport LC Rider (\$/GJ)	\$ -	\$ 0.43 Line 24 / Line 25
27			
28	Percent of Renewable Gas Blend for sales customers		1.0% - Line 12 / Line 25
29			
30	Note 1: The Projected Amount is the approved percent of RG embedded in customers gas demand		
31	from the prior year's Q4 Gas Cost Report multiplied by an updated projection of gas demand		
32	for the Projected year.		
33			
34	Note 2: The Projected Amount is the S&T LC rider approved in the prior year's Q4 Gas Cost Report multiplied		
35	by an updated projection of gas demand for RG (Line 10)		

2
3 7.1 Please provide calculations of the Storage and Transport Low Carbon Rate Rider
4 in 2032 under the scenarios where FEI purchases RNG volumes of 30, 45 and
5 65PJ's of RNG per year respectively; that is, using the volumes estimated in
6 response to CEVP IR 2.2.

8 Response:

9 FEI has provided the following table calculating an estimated Storage and Transport Low
10 Carbon rider assuming FEI is acquiring 30 PJ and 55 PJ of Renewable Gas by 2030 based on
11 the analysis supporting the responses to Creative Energy IR1 6.1 and 6.2 above.

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Table 1: Storage & Transport Low Carbon Rider Calculation

Line		30 PJ by 2030	55 PJ by 2030	
No.	Particulars	Amount	Amount	Reference
1	Renewable Gas Supply Price (\$/GJ)	\$ 24.16	\$ 24.16	Average price of all RG acquisitions
2	Renewable Gas Purchased (TJ)	30,000	55,000	Forecast
3	Total Renewable Gas Supply Cost (\$000)	\$ 724,850	\$ 1,328,892	Line 1 x Line 2
4	Supply and Contract Management (\$000)	\$ 4,468	\$ 4,468	
5	Total Renewable Gas Cost (\$000)	\$ 729,318	\$ 1,333,359	Line 3 + Line 4
6				
7	Renewable Gas Inventory in (TJ)			
8	Open	1,000	1,000	Prior Years Closing Balance
9	Additions	30,000	55,000	Line 2
10	Demand New Residential & Voluntary	(18,172)	(18,172)	Forecast
11	Supply available to Flow as Renewable Gas Blend	12,828	37,828	Line 8 + Line 9 + Line 10
12	Renewable Gas through S&T Rider	(11,828)	(36,828)	- Line 11 + Line 13
13	Close	1,000	1,000	Desired Inventory Buffer
14				
15	Renewable Gas Inventory in dollars (\$000)			
16	Open Inventory at Average Supply Cost	\$ 24,064	\$ 23,990	Prior Years Closing Balance
17	Supply Cost	729,318	1,333,359	Line 5
18	Sales Revenue - New Residential and Voluntary	(279,613)	(279,447)	Line 10 x Avg Sales Price to RG Connections and Voluntary RG
19	Net Supply Cost	\$ 473,769	\$ 1,077,902	Line 16 + Line 17 + Line 18
20	Renewable Gas cost used to calculate S&T LC Rider	(449,458)	(1,053,659)	- Line 19 + Line 21
21	Close	\$ 24,311	\$ 24,243	Line 5 / Line 9 x Line 13
22				
23	Storage and Transport Rider			
24	Renewable Gas cost used to calculate S&T LC Rider	\$ 449,458	\$ 1,053,659	- Line 20
25	Sales Customer Volume (TJ)	148,673	148,673	Forecast
26	Storage & Transport LC Rider (\$/GJ)	\$ 3.02	\$ 7.09	Line 24 / Line 25
27				
28	Percent of Renewable Gas Blend for sales customers	8%	25%	- Line 12 / Line 25

2

3

1 8.0 Reference: Exhibit B-9, Figure 2-1 and Figure 8-2

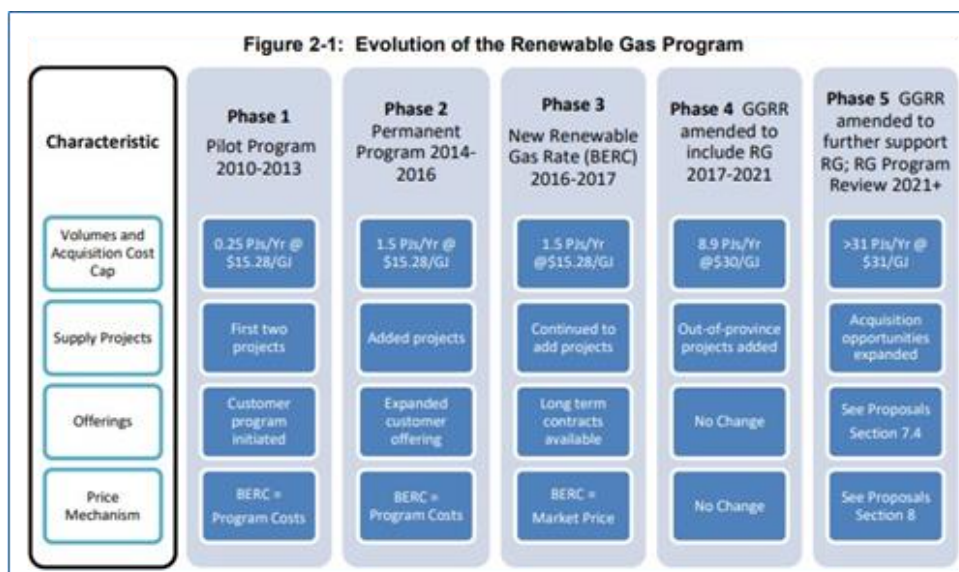


Figure 8-2: Example of LCG Charge, S&T Rider Recoveries and LCG Account

Example Assumptions:
 FEI purchases RG Supply **7,500,000 GJ**
 Cost per GJ (Supply & Acquisition Cost) **\$20**
 Total Cost **150,000,000**

CCRC **\$4**
 Premium **\$7**
 Carbon Tax (CT) **\$2**

Assume no NGV RG customers
 Assumes no RG supply buffer (i.e. no carryover from the prior year or remaining in the LCG Account)

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Forecast Total Gas Demand	100,000,000 A							
Total Gas Demand for FEI Sales Customers	100,000,000 A							
Forecast RG Demand								
RG Demand from RG Connections	500,000 B							
RG Demand from Voluntary Sales Customers	5,000,000 C							
RG Demand from T-Service Customers	1,000,000							
	6,500,000							
Remaining RG Supply	1,000,000 D							
RG Baseline to all Sales Customers	1.0% E/A							
Conventional Natural Gas for FEI Sales Customers	93,500,000 A-B-C-D							
Forecast RG Under Recoveries								
RG Demand from RG Connections	500,000	6	CCRC + CT	99%	2,970,000	10,000,000	7,030,000	
RG Demand from Voluntary Sales Customers	5,000,000	13	CCRC+Premium + CT	99%	64,350,000	100,000,000	35,650,000	
					67,320,000		42,680,000 E	
Under recoveries from RG Connections & Voluntary Sales Customers	42,680,000 F							
Remaining RG Supply	1,000,000							
Cost per GJ (\$)	20							
	20,000,000 G							
Total Under recoveries	62,680,000 F+G							
S&T LC Rider for All Sales Customers	\$ 0.63 G/A							
Recoveries via LCG Charge and S&T rider								
		Proportion Applicable to S&T Rider	S&T LC Recoveries (\$)	Proportion Applicable to LCG Charge	LCG Charge Recoveries (\$)	LCG Charge Recoveries (\$)	Total Recoveries (\$)	Total RG Volumes (GJ)
RG Demand from RG Connections	500,000	1%	0.63	99%	6	2,970,000	3,283,400	500,000
RG Demand from Voluntary Sales Customers	5,000,000	1%	0.63	99%	13	64,350,000	67,484,000	5,000,000
Remaining RG Supply for Sales Customers	1,000,000	100%	0.63	0%	0	-	626,800	1,000,000
Natural Gas for FEI Sales Customers	93,500,000	100%	0.63	0%	0	-	58,905,800	
RG Demand from T-Service Customers	1,000,000	n/a	n/a	100%	20	20,000,000	20,000,000	1,000,000
	101,000,000					87,320,000	\$ 150,000,000	7,500,000

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In Figure 8-2 of the Application (spanning pages 109-110 as we interpret the reference), FEI provides an example of the S&T LC Rider Recoveries applicable in the case of 7,500,000 GJ of renewable natural gas being procured at a price of \$20/GJ.

8.1 Under the same assumptions as provided for Figure 8-2, please provide an expanded version of Figure 8-2 that reports both the indicative annual average total \$ and \$/GJ delivered cost (broken out by the commodity, storage, transportation, delivery, carbon tax, and S&T LC Rider components etc. as applicable) of both conventional natural gas and renewable natural gas for each customer rate class within the noted customer groupings.

Response:

Figure 8-2 was developed as an illustrative example to demonstrate how the accounting entries will flow through the LCG Account. The other accounting entries for commodity, storage, transportation, and delivery charges, and carbon tax remain the same and FEI is not proposing any changes to those entries.

Please refer to Figures 8-4, 8-5 and 8-6 of the Application, which provide the impact of these various components on a customer's bill and how they impact individual customer groupings.

8.2 Please then provide an update to the response to the preceding IR 8.1 using the RNG acquisition volume, weighted average supply cost increase, and proposals referenced under Phases 4 and 5 in Figure 2-1.

Response:

For clarity, reference to "Phase 4" in Figure 2-1 encompasses the period from 2017 to 2021 under the existing RNG Program. As described in Section 7.2 of the Application, while the existing program has been successful to date, FEI has designed the revised Renewable Gas Program in response to federal, provincial and local government regulations and policies focused on reducing GHG emissions.

Reference to "Phase 5" corresponds to the proposals in this Application, and therefore, is a more meaningful and relevant analysis. FEI has provided the impact of these various components in Figures 8-4, 8-5 and 8-6 of the Application.