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September 21, 2022

B.C. Sustainable Energy Association
c/o William J. Andrews, Barrister & Solicitor
70 Talbot Street
Guelph, ON
N1G 2E9

Attention: Mr. William J. Andrews

Dear Mr. Andrews:

Re: FortisBC Energy Inc. (FEI)

Annual Review for 2023 Delivery Rates (Application)

Response to the B.C. Sustainable Energy Association (BCSEA) Information Request (IR) No. 1

On July 29, 2022, FEI filed the Application referenced above. In accordance with the regulatory timetable established in British Columbia Utilities Commission Order G-240-22 for the review of the Application, FEI respectfully submits the attached response to BCSEA 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

1.0 Topic: 2023 Delivery Rate Increase

Reference: Exhibit B-2, Section 1.1 Introduction

On page 1, FEI states:

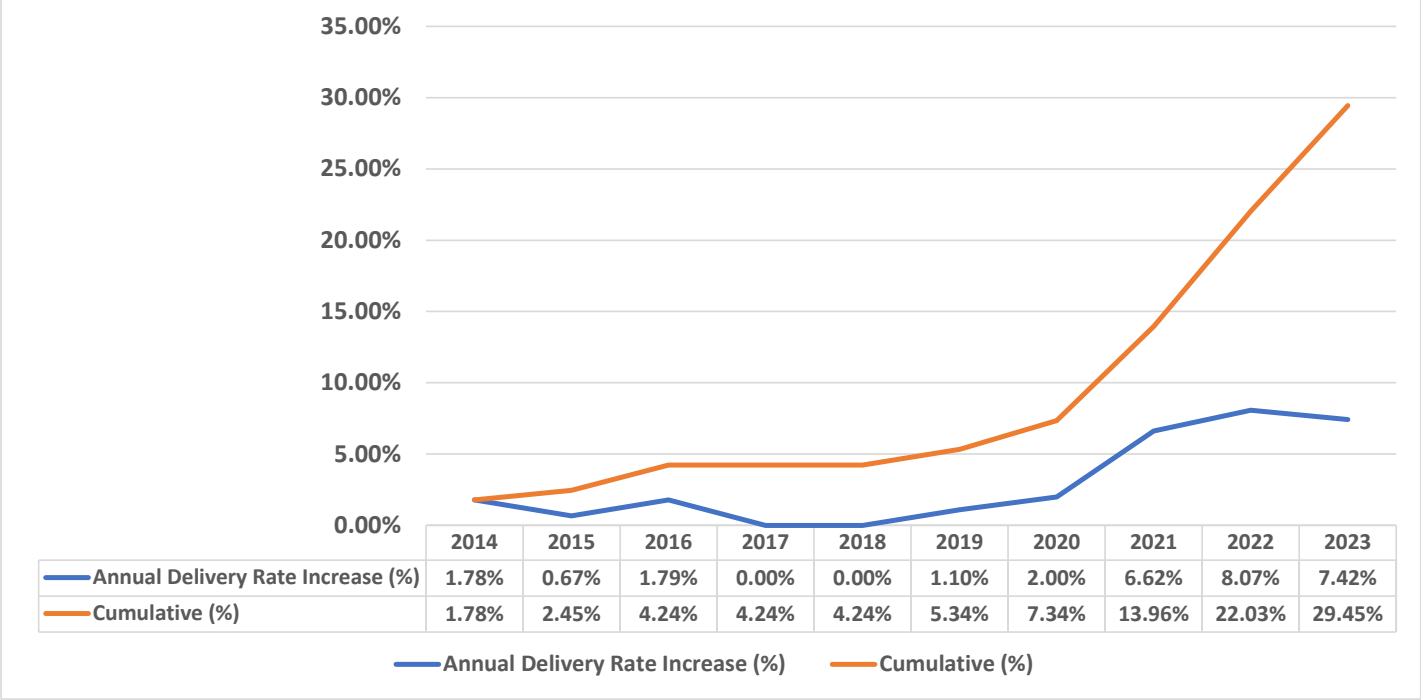
> "The proposed delivery rates for 2023 flowing from the approved formulas and forecasts set out in the Application, including returning the actual 2021 earnings sharing to customers, result in a 7.42 percent delivery rate increase from 2022 delivery rates. [underline added, footnote omitted]

1.1 Please provide a graph and table showing cumulative annual changes in delivery rates for 2023 (proposed) and nine previous years.

Response:

Please refer to Figure 1 below for the annual and cumulative delivery rate increases from 2014 to 2023 (proposed). FEI notes the average annual delivery rate increase over the 10-year period is approximately 2.95 percent (i.e., 29.45 percent / 10 years).

Figure 1: Annual and Cumulative Delivery Rate Increases from 2014 to 2023 (Proposed)



	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Annual Delivery Rate Increase (%)	1.78%	0.67%	1.79%	0.00%	0.00%	1.10%	2.00%	6.62%	8.07%	7.42%
Cumulative (%)	1.78%	2.45%	4.24%	4.24%	4.24%	5.34%	7.34%	13.96%	22.03%	29.45%

1.2 Please provide the percentage increase between 2022 and 2023 (proposed) for delivery rates including delivery rate riders. If there is a difference between

residential customers and other non-bypass customers, please explain why and provide separate responses.

Response:

Please refer to the response to BCUC IR1 1.1 for the percentage increase in the average customer bills from 2022 to 2023 (proposed) for FEI's residential (Rate Schedule 1), commercial (Rate Schedules 2 and 3), and industrial (Rate Schedules 4 – 7) customers, including delivery rate riders. FEI notes the percentages are different between different rate classes due to a number of reasons:

- The consumption levels are different between the different rate schedules;
- The basic charges are different between each rate schedule;
- Rate Schedule 5 General Firm Service includes a demand charge per month while all other rate schedules only include a basic and variable delivery rate charge; and
- Not all delivery rate riders are applied to all rate classes. For instance, the RSAM rate rider is only applicable to Rate Schedules 1, 2, 3, and 23.

2.0 Topic: Island Generation

Reference: Exhibit B-2, Section 1 Approvals Sought, Overview of the Application and Proposed Process

On page 1, FEI states that the proposed increase in delivery rates for 2023 is due in part to "a decrease in demand primarily due to FEI's contract with BC Hydro Island Generation (IG) expiring in April 2022."

On page 28, FEI states:

> "… FEI's contract with BC Hydro Island Generation (IG) expiring in April 2022, … had a contract demand of approximately 16.4 PJ. BC Hydro IG is now included in the 2023F as a fully interruptible RS 22 customer with a forecast minimum contract demand of 12 TJ per month (or 1.2 PJ per year).

In its Application for a Revised Renewable Gas Program, FEI states on page 29 of Exhibit B-11:

> "The 2018 CleanBC Plan enabled gas utilities to reduce emissions by increasing the renewable content of their gas stream to 15 percent renewable content by 2030. Displacing 15 percent of the gas supply with Renewable Gas would increase the annual supply of Renewable Gas in FEI's system to approximately 30 PJs.
>
> The provincial government's approach with respect to the emissions of natural gas utilities was recently updated in the CleanBC Roadmap with the introduction of a GHG emissions cap. The cap, if introduced into legislation, will limit the overall emissions from the gas used by all customers of gas utilities including residential, commercial and industrial sectors. This is the first policy of this kind in Canada which places an obligation on gas utilities to reduce emissions on behalf of their customers. The cap, as laid out in the CleanBC Roadmap, is set at 6.11 Mt of CO2e per year at 2030. This represents a 47 percent reduction in GHG emissions from 2007 levels, and will require utilities to increase Renewable Gas content, increase investments in energy efficiency and employ other mechanisms to lower emissions. FEI expects that Renewable Gas content exceeding 15 percent will be required to meet this lower emission threshold by 2030. Details on the cap are under development; however, FEI sees the potential Renewable Gas supply requirements being between 45 and 65 PJs by 2030."

2.1 Does BC Hydro's switch from firm to interruptible gas service for Island Generation help FEI meet the forthcoming GHG Emissions Cap for Natural Gas Utilities?

Response:

FEI is engaging with the provincial government to inform the development of the GHG Emissions Cap for Natural Gas Utilities (the Cap). Based on the high-level direction provided on

the Cap in the CleanBC Roadmap, FEI understands that the Cap will apply to all emissions associated with the natural gas FEI delivers to customers in the buildings and downstream industry sectors, and would not include the Island Generation system. FEI therefore does not expect that interruptible gas service for Island Generation, or any decrease in their use of gas, will assist with compliance towards the Cap.

2.2 Does FEI expect that GHG emissions from the combustion of natural gas at Island Generation to produce electricity for BC Hydro would be allocated to BC Hydro, or to FEI, under the forthcoming GHG Emissions Cap for Natural Gas Utilities?

Response:

Please refer to the response to BCSEA IR1 2.1.

3.0 Topic: Methane Leak Detection

Reference: Exhibit B-2, Section 1.4.2 Productivity Initiatives

FEI is investigating the use of satellite-based infrared remote sensing technology ("Methane Leak Detection"). [Exhibit B-2, page 5]

3.1 To what extent does or will Methane Leak Detection contribute to reducing FEI's GHG emissions?

Response:

Currently, annual fugitive emissions on FEI's distribution system are calculated based on a per asset leak formula regardless of whether fugitive leaks on FEI's assets are actually present or not. Because of this, FEI believes the current distribution system fugitive emissions as calculated by a formula may be overstated as compared to the fugitive emissions determined using internal leak data as measured by leak surveys. The use of satellite technology will provide more accurate fugitive emissions data which FEI expects to be lower, demonstrating a reduction in emissions from the current reported figures. FEI does not have an estimate of this potential reduction at this time.

4.0 Topic: Paperless Billing

Reference: Exhibit B-2, Section 1.4.2 Productivity Initiatives

On page 7, FEI states: "At the start of 2021, FEI had approximately 463,000 customers choosing paperless billing as their preferred bill delivery method." As a result of "Paperless Billing Customer Campaigns," FEI says it "achieved an increase of approximately 47,000 customers choosing this option in 2021."

4.1 Please provide statistics on paperless billing on a percentage of customers basis.

Response:

At the end of 2021, approximately 49 percent of FEI customers were delivered their bills on a paperless basis. As of June 2022, the percentage increased to approximately 51 percent.

4.2 Does FEI see room for further growth in the proportion of customers choosing paperless billing?

Response:

Yes, FEI believes that there is room for further growth in the proportion of customers choosing paperless billing and FEI will continue to promote this option and consider how best to inform and encourage customers to take advantage of the opportunity.

4.3 Does FEI experience significant amounts of churn with paperless billing (i.e., customers choosing to return to paper billing)?

Response:

FEI does not experience a significant amount of churn in paperless billing, with only approximately 5,000 customers choosing to return to paper bills every year. This represents less than approximately 0.5 percent of the customer base.

4.4 What does FEI see as the main impediments to customers choosing paperless billing. Which of these are amenable to action by FEI?

Response:

FEI believes that there are various reasons that could be impeding customers from choosing paperless billing, including the following:

- Awareness and interest;
- Security concerns around online access;
- Accessibility to reliable internet in some rural areas;
- Accounting requirements and practices for commercial and industrial customers requiring paper bills; and
- Customers using physical bills as payment reminders.

While FEI may not be able to directly address all of these potential impediments, FEI believes that customer awareness and interest and providing payment reminders will continue to be two areas that FEI can focus on and achieve success with.

4.5 What entities does FEI see as its peers for comparison regarding paperless billing? How does FEI's percentage of customers choosing paperless billing compare with FEI's peers?

Response:

FEI considers mid-size regulated Canadian energy utilities as its peers for comparison on paperless billing. Based on information from a recent utilities survey[1] showing 2021 paperless billing adoption numbers, the highest percentage of paperless billing observed was 56 percent and the lowest was 32 percent. FEI's paperless billing adoption stands at 49 percent as at the end of 2021.

[1] Chartwell 2021 Billing Utility Industry Survey.

5.0 Topic: Clean Growth Initiative

Reference: Exhibit B-2, Section 6.3 O&M Expense Forecast Outside the Formula; 6.3.5 Clean Growth Initiative – Biomethane O&M; 6.3.6 Clean Growth Initiative – Renewable Gas Development; 6.3.7 Clean Growth Initiative – NGT O&M; 6.3.8 Clean Growth Initiative – Variable LNG Production Costs

5.1 Please explain the term "Clean Growth Initiative." Is it simply descriptive of four categories of non-Formula O&M spending? Is it a program? How does "Clean Growth Initiative" relate to O&M spending on prescribed undertakings under the GGRR?

Response:

The term "Clean Growth Initiative" describes a category of non-Formula (i.e., Flow-through) O&M spending that includes expenditures related to Clean Growth activities that do not form part of FEI's Base O&M, either because they were specifically approved for Flow-through treatment in the MRP Decision, were not contemplated at the time of the MRP Application and therefore clearly do not form part of Base O&M, and/or are expenditures on prescribed undertakings under the GGRR.

As described in the 2020-2024 MRP Application (and approved as part of the MRP Decision, page 119, and Orders G-165-20 and G-166-20), during the MRP term FortisBC will forecast a number of O&M expenditures annually outside of the Formula, with the variances between forecast and actual amounts recorded in the Flow-through deferral account and returned to/recovered from customers in the subsequent year. One of these categories identified was the following:

> O&M (and the cost of service of related capital expenditures) to support the Companies' investments in a clean growth future. This category currently consists of NGT stations and tankers, variable LNG production, RNG, EV charging, but over the term of the Proposed MRPs either FEI or FBC may propose to include other initiatives in alignment with government policy.[2]

The category of Clean Growth Initiative O&M spending includes FEI's O&M spending on prescribed undertakings under the GGRR, though it is not exclusive to GGRR-related expenditures. For instance, the Variable LNG Production Costs O&M is included within the Clean Growth Initiative category due to the fact that LNG is part of FEI's investment in a clean growth future. As described in the above excerpt from the MRP Application, at that time, FEI had identified investments in its clean growth future as including LNG, RNG (biomethane) and NGT. Since that time, RNG (or biomethane) has been expanded to include a wider category of renewable gases, as reflected in the changes to the GGRR since the MRP Application. As a result, since the 2020-2021 Annual Review, FEI has included a new line item within the Clean Growth Initiatives category related to Renewable Gas Development. The expenditures for

[2] MRP Application, p. C-110.

Renewable Gas Development are required to support the continued growth of the renewable gas portfolio. These expenditures were not contemplated at the time of the MRP Application as, at that time, the concept of renewable gas under the GGRR was limited to RNG or biomethane. Accordingly, the specific expenditures (whether they be for internal or external resources) were not included within FEI's Base O&M.

6.0 Topic: Renewable Gas Development

Reference: Exhibit B-2, Section 6.3.6 Clean Growth Initiative – Renewable Gas Development

Table 6-9: Renewable Gas Development O&M shows Renewable Gas Development spending of $1 million, $1.75 million and $2 million for Approved 2022, Projected 2022, and Forecast 2023, respectively.

FEI states:

> "In order to support the continued growth of the renewable gas portfolio, including the incorporation of other renewable gases such as hydrogen, synthesis gas (syngas) and lignin, FEI requires resources within its Renewable Gas team to work on safety, codes and standards, and for feasibility work more generally." [p.51, underline added]

6.1 Please elaborate on the work being done with the Renewable Gas Development O&M spending.

Response:

FEI's response to CEC IR1 30.1 in the 2022 Annual Review provided a multi-year outlook on the expected work that will be required to develop new forms of renewable gas supply into the program, which includes additional activities related to technological innovation, project development, and other enabling activities. FEI continues to resource and undertake this work including the following specific activities that are currently underway and will advance through 2023:

- Progressing detailed modelling to examine technical feasibility, economic analysis, life-cycle carbon intensity and project requirements for new innovative ways to produce renewable gas supply at different scales utilizing various feedstocks in BC.
- Informing and supporting efforts to conduct further amendments on the *Greenhouse Gas Reduction (Clean Energy) Regulation* (GGRR) which would allow other tools to acquire a broader range of renewable and low-carbon gases.
- Participating in multiple NRCan gas industry working groups under the remit of the Canada Hydrogen Strategy to identify and address challenges and barriers to successfully deploy renewable and low-carbon hydrogen for heating.
- Supporting research and development institutions such as UBC, and working with gas industry peers, technical regulators and standards organizations to identify knowledge gaps and develop standards, procedures and approval pathways to integrate hydrogen into the gaseous energy supply.
- Collaborating with other operators in BC to advance a multi-year project to complete an in-depth technical assessment on the overall provincial gas system to determine requirements to blend and distribute hydrogen, and establish the necessary standards

regarding end-use impacts, customer and stakeholder education, and other organizational changes that will enable the safe distribution and customer end-use of hydrogen. This project is scheduled to be completed by 2025.

- Advancing project development on FEI's first hydrogen blending demonstration project in BC that is planned for 2024.
- Investigating feasible innovative pathways to develop large sale renewable and low-carbon hydrogen supply in BC. For example, FEI, Suncor and Hazer Group are planning to deploy the Hazer Groups innovative methane pyrolysis technology in a pre-commercial facility in BC that would produce approximately 0.3 petajoules per year low carbon intensity hydrogen from natural gas and clean electricity; the carbon would be captured as a solid graphite byproduct. Subject to positive results from ongoing technical feasibility work this project is planned to be in operation by 2026.
- Actively pursuing syngas and lignin development, which presents an opportunity to decarbonize industrial energy use by directly displacing natural gas in boilers and kilns. For example, FEI is working with a pulp and paper mill in BC to develop a first of a kind project to use lignin to partially displace approximately 0.5 petajoules per year onsite natural gas use and decarbonize their thermal processes and this project is planned to be in operation by 2024.
- Preparing multiple funding applications to various provincial and federal funding agencies for funding contribution to support and de-risk innovative supply projects and other market development activities for hydrogen, syngas, and lignin production and customer update of these new forms of renewable gas in BC.

Regarding the 2023 Forecast O&M for Clean Growth Initiative – Renewable Gas Development, FEI states:

> "The 2023 Forecast O&M is approximately $2.0 million, which is an increase from the 2022 Projected amount, and is related to requirements to continue work on project feasibility, safety, codes and standards, and business development. <u>In addition to the work identified above, FEI is seeing the need to support Indigenous groups that are exploring the production of renewable gases in their communities. FEI requires funding to hire internal resources to work with Indigenous groups on the evaluation of opportunities</u>. FEI expects the Renewable Gas Clean Growth Initiative to be an area that will continue to grow as FEI's supply of renewable gas increases to meet provincial targets." [p.52, underline added]

6.2 How much of the Forecast 2023 O&M for Clean Growth Initiative – Renewable Gas Development is related to internal resources to work with Indigenous groups

on the evaluation of opportunities for the production of renewable gases in their communities?

Response:

Please refer to the response to BCUC IR1 13.1.

6.3 Please discuss at a high level the types of opportunities for the production of renewable gases in Indigenous communities.

Response:

Please refer to the response to BCUC IR1 13.2.

On page 54, FEI states:

> "Contractor costs are for variable contractor services used for truck loading and support of production related activities. In 2022, it is expected that contractor costs will be similar to the 2022 Approved based on the anticipated work for the year. In 2023, higher contractor services are forecast due to inflation and may vary as the Company starts to reach full time operations." [underline added]

6.4 Please explain what is meant by "may vary as the Company starts to reach full time operations" in the passage quoted above.

Response:

The underlined phrase notes that contractor services may vary as the Tilbury 1A facility starts to reach full time operations.

Full time operations in this context is the point where the plant runs continuously all year with a short break (approximately 20 days) for maintenance activities. To date, full time operations have not been achieved as LNG sales have been impacted by the COVID-19 pandemic and the subsequent impacts to the global economy.

Contracting costs may not be consistent year-over-year as these costs are dependent on a number of factors that can differ from one year to the next. For example, in some years there may be a higher level of maintenance activity required to support production activities. These activities could be based on equipment condition or regulatory requirements which could drive different spending requirements.

7.0 Topic: Emissions Regulations Deferral Account

Reference: Exhibit B-2, Section 7.5.2.2 Emissions Regulations deferral account

The original rationale for the five-year amortization period of the Emissions Regulations deferral account is stated as follows:

> "In the FEI Annual Review for 2017 Delivery Rates Application, FEI requested and received approval through Order G-182-16 to amortize any additions to the [Emissions Regulations] account over a period of five years. In that Application, FEI stated 'This amortization period is appropriate given that FEI expects to continue to receive revenues which will vary depending on the number of credits FEI earns under the RLCFRR and the price at which FEI is able to sell those credits. The longer recovery period of five years will help smooth the rate impact on customers as these revenues are received from time to time.'" [p.84, underline added]

In the current filing, FEI requests approval to reduce the amortization period of the Emissions Regulations deferral account from five years to one year. FEI explains:

> "In this Application, FEI is requesting approval to change the amortization period of this deferral account from five years to one year. As of the end of the first quarter of 2022, the British Columbia Low Carbon Fuel Standard (BC-LCFS) has validated approximately 80,149 in carbon credits for FEI that have accumulated since 2019, with an approximate market value of $37.5 million. FEI anticipates monetizing those amounts through the sale of credits prior to the end of 2022. Given the significant dollar amount expected to be received and the time period that has already elapsed between when the credits were earned and validated, accelerating the return of these credits to customers is the appropriate measure to take and may serve to mitigate other rate pressures in the short-term, which will be beneficial to customers in the current market environment." [p.84, footnote omitted, underline added]

7.1 Please elaborate on the rationale for reducing the amortization period of the Emissions Regulations deferral account from five years to one year.

Response:

Please refer to the response to BCUC IR1 22.3.

7.1.1 Is it no longer the case that "FEI expects to continue to receive revenues which will vary depending on the number of credits FEI earns under the RLCFRR and the price at which FEI is able to sell those credits"?

Response:

Please refer to the response to BCUC IR1 22.5.

7.1.2 Does FEI anticipate stable annual revenues from the sale of credits under the BC Low Carbon Fuel Standard in 2022 and the years following?

Response:

Please refer to the response to BCUC IR1 22.5.

7.2 What would be the impact on 2023 delivery rates of retaining the five-year amortization period for the Emissions Regulations deferral account?

Response:

Please refer to the response to BCUC IR1 22.3.

8.0 Topic: Renewable Gas Program

Reference: FEI Annual Review for 2022 Rates, Exhibit B-5, FEI Response to BCSEA IR 3.1, 3.2

In the Annual Review for 2022 Rates, FEI provided a useful update on the Renewable Natural Gas program (as it was then called.)

8.1 Please provide an update on FEI's Renewable Gas Program.

Response:

For 2022, FEI is forecasting that the total RNG delivered from the on-system and off-system biomethane facilities currently in operation will be approximately 2.0 PJ compared to about 0.75 PJ of RNG delivered in 2021. An additional approved supply project, currently under construction, may add a further 0.01 PJ in the last two months of 2022, which would increase the total forecast RNG delivered from operational biomethane facilities slightly.

In the period from September 1, 2021 to September 1, 2022, FEI received BCUC approval for nine new biomethane supply agreements. This brings FEI's current portfolio of operational biomethane facilities and approved biomethane projects to 31. The total maximum annual contractual volume of the current portfolio of projects is approximately 23.1 PJ.

FEI intends to file new applications with the BCUC for several additional biomethane supply agreements by the end of 2022, which may add an incremental 1.7 PJ to the expected annual volume. Based on currently operational projects and those expected to start delivering biomethane in 2023, FEI forecasts that the total RNG delivered volume in 2023 will be approximately 5.3 PJ compared to 2.0 PJ in 2022.

FEI re-opened its existing voluntary RNG Program to new enrollment in mid-October of 2021. Since that time customer enrollment has grown from approximately 9,500 prior to re-opening to approximately 10,600 as of September 2022. Total customer demand for RNG is expected to be approximately 1.4 PJ in 2022. However, several large volume consumers are actively evaluating a decision to purchase RNG and may enroll in the near future. The actual demand may therefore exceed the forecast demand by year end.

9.0 Topic: Employee Retention

Reference: Exhibit B-2, Section 13.2.2.4 Telephone Service Factor (Non-Emergency)

The 2022 Year to Date figure for Telephone Service Factor (Non-Emergency) is below the benchmark and the threshold. Related, the 2022 Year to Date figure for the informational Average Time to Answer is well above previous years' figures (i.e., worse.) On page 174, FEI states:

> "Customer Service is experiencing higher than expected levels of attrition, having lost 65 Customer Service employees in 2021."

9.1 Does FEI see its employee retention difficulties in Customer Service as an indication of a potential for having employee retention difficulties in other areas of the Company?

Response:

FEI does not see the higher-than-expected levels of attrition within Customer Service to necessarily be an indicator of retention difficulties across the Company. Historically, Customer Service has always trended higher in voluntary turnover than other parts of the business.

10.0 Topic: Gibsons Capacity Upgrade Project

Reference: Exhibit B-2, Section 1.2 Orders Sought; section 7.2.3.2.2 Gibsons Capacity Upgrade Project; Appendix C3 Gibsons Capacity Upgrade Business Case

FEI seeks acceptance, pursuant to section 44.2(3) of the UCA, of a capital expenditure schedule consisting of the capital expenditures for the GCU Project, as described in Section 7.2.3.2.2 and in Appendix C3." [page 2]

In Appendix C3, FEI introduces the Gibsons Capacity Upgrade Project as follows:

> "FEI is planning to construct the Gibsons Capacity Upgrade (GCU) project, which consists of the installation of a slow filling peak shaving Compressed Natural Gas (CNG) facility in Gibsons. Its purpose will be to create extra capacity in the system by generating and storing CNG during periods of low gas demand to supplement the system during periods of high demand. The purpose of the GCU project is to provide a cost-effective long-term capacity solution to address the current capacity shortfall in the Gibsons community. The total Class 3 cost estimate for the project is $12.194 million, which is below FEI's Certificate of Public Convenience and Necessity (CPCN) threshold. FEI is therefore seeking approval of the GCU as a Major Project in this Annual Review pursuant to section 44.2(3) of the Utilities Commission Act." [Exhibit B-2, pdf p.268]

FEI later states:

> "Currently there is insufficient inlet pressure available to the Gibsons District Station during FEI design conditions. FEI has been managing this shortfall through the current availability of higher than contracted heating values present in the natural gas network, and by contracting a CNG trailer to be available on short notice during winter months to supplement low inlet pressures at the Gibsons District Station." [Exhibit B-2, pdf p.269, underline added]

10.1 Please provide evidence that the capacity of the current IP pipeline to Gibsons is insufficient to meet current peak demand without temporary mitigation measures.

Response:

Please refer to the response to BCUC IR1 33.1.

10.2 Did FEI examine demand-side measurements as a full or partial solution to the capacity shortfall in Gibsons? If so, why were DSM approaches rejected? If not, why not?

Response:

FEI has not examined demand side measures as a solution for addressing peak demand in Gibsons. While DSM measures are very effective in reducing annual demand, the ability of DSM programs to address peak demand is uncertain. FEI is exploring means to address peak demand reliably and verifiably through DSM, as discussed in FEI's 2022 Long Term Gas Resource Plan (LTGRP). However, such efforts to explore and verify the effectiveness of DSM programs on peak demand will take several years to implement. The capacity shortfall in the Gibsons system requires more immediate action. The GCU project provides tangible and verifiable support for peak demand that DSM programs directed at peak demand cannot currently provide.

In Appendix C3, FEI refers to "higher than contracted heating values":

> "Currently there is insufficient inlet pressure available to the Gibsons District Station during FEI design conditions. FEI has been managing this shortfall through the current availability of higher than contracted heating values present in the natural gas network, and by contracting a CNG trailer to be available on short notice during winter months to supplement low inlet pressures at the Gibsons District Station." [pdf p.269, underline added]

10.3 Please explain "the current availability of higher than contracted heating values present in the natural gas network" and why this would not be an ongoing resource to mitigate low inlet pressures at the Gibsons District Station.

Response:

Please refer to the response to BCUC IR1 33.5.

11.0 Topic: Facilities, Capex, Energy Efficiency and GHG Reductions

Reference: Exhibit B-2, Section 7.2.1.2.2 Facilities, Capital Expenditures to Support Energy Efficiency and GHG Reductions

On page 65, FEI states:

> "The Updated 2023 and 2024 Forecasts include $1.8 million in each year for expenditures that are specifically in support of energy efficiency and GHG reductions."

FEI states further:

> "Historically, the Facilities department has prioritized capital spending for capacity planning, end-of-life replacements, and meeting building codes and regulations. However, in light of the importance of addressing climate change, Facilities is now focusing on advancing climate action initiatives and strategies. Examples of advancements are installation of EV charging infrastructure, upgrading lighting to LED, completing energy audits to identify opportunities to inform capital planning, and incorporating energy efficiency components in long-term lease agreements." [p.65, underline added]

11.1 Please explain why $1.8 million in each of 2023 and 2024 for Facilities capital expenditures for energy efficiency and GHG reductions is a sufficient budget to enable FEI to meet its energy efficiency and GHG reduction objectives in the Facilities area.

Response:

FEI created an Energy Management Program to prioritize and advance energy efficiency and GHG reduction objectives in the Facilities area. The first steps of an Energy Management Program are to build momentum by implementing easy, high impact or low-cost energy management projects and creating the foundational pieces. Examples of foundational pieces being created are benchmarks and baselines, completing audits to identify and document opportunities, building an energy team, energy management assessments, and a strategic energy management plan. The Energy Management Program is an ongoing program and future capital expenditure forecasts (i.e., beyond 2024) will continue to include funding in this area. In 2023 and 2024, FEI will be working to advance the Program to the next steps and complete more complex projects in the future.

For 2023 and 2024, while momentum is being built and the foundational pieces of the Program are advancing, the forecast expenditures are sufficient to support energy efficiency and GHG reduction objectives in the Facilities area. After 2024, as FEI advances and progresses to the next step, it expects that increased capital expenditures will be necessary to support objectives.

11.2 Please provide a table comparing the forecast 2023 and 2024 Facilities capital expenditures for energy efficiency and GHG reductions capital spending before and after the Update.

Response:

There were no capital expenditures included in Other Capital in the Original Forecasts for 2023 and 2024 for energy efficiency and GHG reduction projects. Please refer to Table 1 below comparing between the Original Forecasts of zero and the Updated Forecasts of $1.8 million in each of 2023 and 2024.

Table 1: Original and Updated Forecasts of Capital Expenditures to Support Energy Efficiency and GHG Reductions ($ millions)

Description	2023 Original Forecast	2023 Updated Forecast	2024 Original Forecast	2024 Updated Forecast
Energy Efficiency and GHG Reductions (Other Capital)	$ -	$1.800	$ -	$ 1.800

12.0 Topic: BVA Rate Rider

Reference: Exhibit B-2, Section 10.3.1 BVA Rate Rider; BCUC Proceeding re FEI Revised Renewable Gas Program, Exhibit B-11, page 127

On page 100 of the Application, FEI states:

> "In summary, the 2023 BVA rate rider attributable to the cumulative December 31, 2022 transfers from the BVA is $0.132 per GJ recoverable from all non-bypass customers."

In December 2021, FEI filed an Application for Approval of a Revised Renewable Gas Program with the BCUC. In that Application, FEI states:

> "With the proposed changes to the Renewable Gas Program in this Application, particularly the mechanism to deliver Renewable Gas to all customers through the S&T LC rider, the BVA Balance Transfer account will no longer be required. FEI will retain its use throughout 2023 to close out the balances in the BVA Balance Transfer account[120] at the end of 2022. FEI will discontinue the use of this account after this time, and propose disposition of any residual balances in a future annual review or revenue requirements application.
>
> [120] The BVA Rate rider, used to recover the projected 2022 ending balance of the BVA Balance Transfer account, will be calculated in FEI's Annual Review for 2023 rates." [Exhibit B-11, page 127, underline added]

12.1 Has anything changed regarding the BVA Balance Transfer account and the BVA rate rider for 2023 between the December 2021 discussion in the Revised Renewable Gas Program Application and the Annual Review for 2023 Delivery Rates filing?

Response:

No. The BVA Balance Transfer account and BVA Rate Rider continue to operate for 2023 as approved. The proposed changes to the BVA Balance Transfer account and BVA rider as referenced in the preamble above are part of FEI's Revised Renewable Gas Program Application[3] which is still currently under review with the BCUC. If approved, these changes could be effective on January 1, 2024.

[3] Comprehensive Review and Application for a Revised Renewable Gas Program, filed on December 17, 2021.

13.0 Topic: Clean Growth Innovation Fund

Reference: Exhibit B-2, Section 10.3.3 Clean Growth Innovation Fund (CGIF); Table 10-6 Clean Growth Innovation Fund 2020-2023 Deferral Account Continuity; Table 10-7: Approved and Rejected Spending for Portfolios One through Four

13.1 In Table 10-6 Clean Growth Innovation Fund 2020-2023 Deferral Account Continuity, does Gross Additions refer to approved grants (regardless of whether the funds have been paid out yet)?

Response:

The Gross Additions in Table 10-6 of the Application reflect the actual/projected expenditures (i.e., funds that have been paid out for January 2020 through June 2022 and are expected to be paid out for July 2022 through December 2023), regardless of whether the grant has been approved yet or not. The total combined Gross Additions of approximately $6.1 million include amounts related to grants which have already been approved, and also grants which are not approved yet but are expected to be. Please also refer to the response to BCOAPO IR1 11.2.

13.2 Please explain AFUDC in Table 10-6.

Response:

FEI clarifies Table 10-6 of the Application should have said after-tax weighted-average cost of capital (WACC) return instead of AFUDC, which stands for Allowance for Funds Used During Construction. FEI also clarifies that the AFUDC rate equals the after-tax WACC rate, thus FEI inadvertently labelled it as "AFUDC" in Table 10-6 instead of "WACC Return". As approved in the MRP Decision and Order G-165-20, page 156, the Clean Growth Innovation Fund (CGIF) deferral account is approved as a non-rate base deferral account attracting a WACC rate of return. To further clarify, the amounts reported on that line in Table 10-6 are correct and would not change with the re-naming of the line.

With reference to Table 10-6, FEI states:

> "In total, $2.5 million in actual expenditures have been invested up to June 2022, with a further $1.1 million projected to the end of 2022, and $2.5 million for 2023." [page 101]

13.3 Please confirm, or otherwise explain, that the total of actual, projected and forecast CGIF expenditures for 2020 through 2023 is $6.1 million.

Response:

Confirmed.

13.4 Please explain how the total CGIF expenditures for 2020 through 2023 of $6.1 million relates to the Approved Spending of Approved Spending of $4.3 million for Portfolios 1 to 4 shown in Table 10-7.

Response:

FEI clarifies the $4.3 million shown in Table 10-7 includes Portfolios 1 to 4 only, while the $6.1 million of gross additions shown in Table 10-6 includes Portfolios 5 and 6. As shown in the response to BCOAPO IR1 11.2, approximately $1.8 million of the 2023 Forecast is for Portfolios 5 and 6. This makes the total of all portfolios (i.e., Portfolios 1 to 6) $6.1 million ($4.3 million plus $1.8 million).

13.5 Please confirm, or otherwise explain, that CGIF Rider Recoveries are running higher than Gross Additions (or Approved Spending).

Response:

Confirmed.

13.6 Does Table 10-6 indicate that for 2023 Forecast, CGIF Rider Recoveries at $5.158 million are roughly double Gross Additions at $2.5 million? If so, why is FEI not intending to make grants in 2023 that would approximately total the 2023 CGIF Rider revenues? Does FEI intend to increase the grants to revenue ratio of the CGIF in subsequent years?

Response:

Confirmed. However, please refer to the response to BCOAPO IR1 11.4 where FEI discusses increasing levels of future expenditures for the CGIF.

13.7 Does FEI anticipate any change in the targeted research areas for the CGIF in 2023?

Response:

FEI is satisfied with the overall mix of projects in the current CGIF portfolios. Nevertheless, FEI is working toward increasing the number of proposals it receives for BC-based carbon sequestration and utilization projects.

13.8 Does FEI have difficulty identifying qualifying projects for CGIF funding? Are there particular topic areas in which qualifying projects are scarce?

Response:

FEI is generally satisfied with the number and quality of proposals it has received during 2022. This is partly a result of an increased focus on relevant BC-based projects.

Please also refer to the responses to BCSEA IR1 13.7 and BCOAPO IR1 11.4.

14.0 Topic: FEI GHG Emissions

Reference: FEI Annual Review for 2022 Rates, Exhibit B-5, FEI Response to BCSEA IR 6.1, 6.2, 6.3

14.1 Please provide an updated table showing FEI's annual reported estimated GHG emissions from the year 2009 through 2021.

Response:

Please refer to the following updated table with FEI's annual reported estimated GHG emissions from 2009 through 2021.

Table 1: Annual Reported Estimated GHG Emissions 2009-2021 (tCO2e)

Year	GHG Emissions Reported to ECCC using IPCC 4th Assessment (tCO2e)
2009	177,827
2010	171,059
2011	153,611
2012	150,647
2013	141,948
2014	140,507
2015	120,997
2016	126,612
2017	142,534
2018	123,509
2019	145,127
2020	121,452
2021	138,440

14.2 Please provide an update for 2021 and 2022 year to date on FEI's activities to control and reduce its GHG emissions.

Response:

FEI's day-to-day operational activities are designed to ensure the integrity of the natural gas system, assisting in the control and reduction of GHG emissions to the atmosphere. Examples of these operational activities include:

- fugitive leak detection surveys and repairs at compressor stations and LNG plants;

- maintenance-related activities such as pigging to monitor the integrity of the transmission pipeline;
- residential meter set redesign;
- replacement of end of life assets;
- use of CNG and EV for fleet vehicles;
- application of double block and bleed devices, vacuum technology, or flaring to reduce transmission pipeline blowdown for maintenance; and
- reduction in purge time for service line installations.

In addition, FEI conducted pilot projects / developed preliminary cost estimates in the 2021 calendar year to determine the feasibility and potential GHG savings with various programs. Examples of these programs include:

- Vancouver Island Pipeline Cycling Project; and,
- Feasibility of Electrification at Fraser Gate Station.

Regarding FEI's response to evolving methane emission requirements, FEI stated in its September 2021 response to BCSEA IR 6.3 in the FEI Annual Review for 2022 Rates:

> "FEI is currently developing proposals and generating cost estimates for meeting and/or exceeding BC OGC seal gas requirements at compressor stations. These cost estimates vary from location to location; however, class 5 estimates are approximately $3 million per site.
>
> Other measures under consideration include the application of satellite technology to measure fugitive methane emissions on assets along the distribution pipeline system. A trial of this technology in two regions has an estimated O&M cost of approximately $100 thousand."

14.3 Please provide an update on the methane emissions requirements and FEI's associated additional measures and O&M and capital compliance costs.

Response:

There are no additional methane emissions compliance requirements since FEI's response to BCSEA IR1 6.3 in the FEI Annual Review for 2022 Delivery Rates proceeding.

FEI has identified approximately $5.4 million in capital and O&M related expenditures (including seal gas recapture systems at two of FEI's compressor stations) to reduce methane related emissions by approximately 7,000 tCO2e/year. Funding for these projects will be allotted from

1 the annual O&M funding envelope (for O&M expenditures) and capital-related funding has been
2 included in FEI's updated 2023 sustainment capital forecast.

3

4

15.0 Topic: Okanagan Capacity Upgrade Project

Reference: Exhibit B-2

FEI filed an updated application for a CPCN for the Okanagan Capacity Upgrade Project in January 2021. Following three rounds of information requests, FEI indicated an intention to file an evidentiary update identifying temporary capacity mitigation measures that will need to be enacted for the winter of 2022/23. In February 2022, FEI supported a request for an adjournment by the intervener Penticton Indian Band due to ongoing productive engagement between FEI and PIB. Later in February 2022, the Panel issued Order G-48-22 adjourning the proceeding. On page 2 of the Reasons for Decision, the Panel explained:

> "In recent months, there have been numerous delays and extension requests to the regulatory process to facilitate further engagement between FEI and PIB. Further, there is a lack of clarity with respect to the precise timing and content of FEI's proposed evidentiary update, which may depend on the outcome of further engagement with PIB. Therefore, given the multiple extensions that have already occurred and further uncertainty regarding the next steps, the Panel determines it appropriate to adjourn the proceeding until FEI has filed its proposed evidentiary update. Accordingly, the Panel requests that FEI include a proposal for a further regulatory timetable in its evidentiary update, including but not limited to regulatory steps to finalize the scheduling of the Oral Hearing and comments on the CEC's request to access the Oral Hearing."

15.1 For information purposes, what is the status of FEI's Okanagan Capacity Upgrade Project? What is the status of FEI's ability to meet the peak demand of customers in the affected area in the winter of 2022/2023?

Response:

FEI is continuing to engage with PIB regarding the Okanagan Capacity Upgrade (OCU) Project.

With respect to FEI's ability to meet the peak demand of customers in the Okanagan areas for the winter of 2022/2023, FEI is currently taking mitigating actions to adjust the station setpoint at the Polson Gate Station in Vernon and the Kelowna #1 Gate Station in Kelowna. This will temporarily shift, to a certain extent, a portion of the demand in the West Kelowna / Peachland area for the winter period from the West Kelowna IP system (supplied by the Kelowna #1 Gate Station) to the Summerland TP lateral. FEI has also installed a full-size bypass at the Polson Gate station to be used if required under peak day conditions. By enacting these mitigating actions FEI will be able to moderate the expected low pressure conditions to meet the peak demand requirement in the affected areas of the Okanagan for the coming winter. However, as discussed in the OCU Application, the OCU Project is necessary for upcoming growth in the Okanagan areas.