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September 21, 2022

Commercial Energy Consumers Association of British Columbia
c/o Owen Bird Law Corporation
P.O. Box 49130
Three Bentall Centre
2900 – 595 Burrard Street
Vancouver, BC
V7X 1J5

Attention: Mr. Christopher P. Weafer

Dear Mr. Weafer:

Re: FortisBC Energy Inc. (FEI)

Annual Review for 2023 Delivery Rates (Application)

Response to the Commercial Energy Consumers Association of British Columbia (CEC) 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 CEC 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. Reference: Exhibit B-2, page 12

> ## 2.2 INFLATION FACTOR CALCULATION SUMMARY
>
> In the MRP Decision, the BCUC approved an I-Factor using the actual CPI-BC and BC-AWE indices from the previous year and the actual labour weighting based on the most recent completed year of actuals. FEI uses inflation data from July through June and Statistics Canada Table 18-10-0004-01 for CPI-BC and Table 14-10-0223-01 to determine AWE-BC. The supporting Statistics Canada tables are provided in Appendix A1. The latest available month of April 2022 for AWE-BC has been used as a placeholder, as results to June 2022 have not been released by Statistics Canada. Once results for these periods are available, this placeholder will be replaced with actuals and included in an Evidentiary Update or Compliance Filing.

1.1 When does FEI expect to file its Evidentiary Update/Compliance Filing?

Response:

FEI does not typically file an Evidentiary Update unless an event arises or a significant change is required to the revenue requirement due to, for example, an error discovered during the IR process. If such a situation were to arise, FEI would file the Evidentiary Update prior to the workshop so that the BCUC and interveners have an opportunity to ask questions on the changes/updates.

FEI will file its Compliance Filing to the 2023 Annual Review subsequent to the issuance of the BCUC's decision. FEI generally files the Compliance Filings to the annual reviews within a week of the decision being issued.

2. Reference: Exhibit B-2, page 15

> Gross customer additions is a forecast of new customers attaching to the gas distribution system. It comprises both new construction activity and conversions from other fuels to natural gas. In developing the forecast, FEI has assumed that the market capture rate for new construction is likely to retreat somewhat versus previous years due to the continued impacts of building policies, building codes, and strong financial incentives provided for home electrification. FEI has also assumed that conversion activity is likely to be reduced versus previous years due to both strong financial incentives for home electrification and rapidly rising financing costs. The forecast for 2023 has been undertaken by reviewing information contained in FEI's customer relationship management system (leads, connection requests, timing of connection requests, etc.) along with interactions with builders, developers, and contractors. FEI uses market information such as building permits, forecast housing starts and completions as well as any knowledge of policy or building code changes that may affect specific municipalities. The impact of a rapid increase in inflation and financing costs is creating greater uncertainty in the forecast of gross customer additions, which will be corrected in subsequent years with the BCUC approved true-up mechanism.

2.1 Please provide FEI's quantified estimates of the impact of building policies and building codes on FEI's gross customer additions.

<u>Response:</u>

There are many factors that influence gross customer additions. These factors include building regulations, policy, and incentives for electrification, but also include such factors as the cost of financing, or net migration into BC. Accordingly, FEI is unable to disaggregate and quantify the impact of changes to building policies and codes on gross customer additions.

Overall, FEI expects gross customer additions in 2022 to reach approximately 16,000, a decrease of approximately 4,000 gross additions from 2021. FEI believes that much of this decrease is a result of municipal building policies on greenhouse gas emissions such as Greenhouse Gas Intensity (GHGi) targets for new buildings, requirements for new construction to use only electricity, as well as provincial and municipal financial incentives to use electric equipment.

FEI believes that if municipalities and/or the Province continue to enact building regulations which include stringent GHGi targets, requirements to use electricity, or other restrictions such as NOx levels, then gross customer additions will be adversely impacted absent a gas based service offering (such as the proposed Renewable Gas Connections service) that can meet the requirements. In effect, the gas system would not be able to attach any newly built premises among building types affected by GHGi targeting in municipalities or regions that adopt stringent GHGi targets.

2.2 Does FEI expect that renewable natural gas can ultimately be used to meet building policies and building codes? Please explain, and please provide any estimates FEI has as to when the declining situation may reverse.

Response:

While FEI expects that renewable natural gas (RNG) could be used to meet building policies and building codes, FEI's plans to reverse the situation require the approval of the Renewable Gas Connections service that FEI has proposed in its Comprehensive Review of the Renewable Gas Program Application,[1] which is currently under review with the BCUC. If approved, the new service could be available January 1, 2024.

2.3 Please elaborate on the impact of inflation and why it can be expected to impact customer additions. Please quantify the impact of inflation if possible.

Response:

Inflation can be expected to impact customer additions as increasing costs may effectively shrink the budgets of potential customers which, in turn, can deter them from incurring the costs of new construction, attaching to the gas system or undertaking a conversion to gas. Inflation includes increased costs for materials and labour, as well as increased financing costs, as fiscal and monetary authorities take policy actions to suppress inflation such as through escalation in the Bank of Canada's policy interest rate. The Consumer Price Index (CPI), as tracked by Statistics Canada rose 8.1 percent on a year-over-year basis in June of 2022 and 7.6 percent in July. In contrast, according to Statistics Canada's Labour Force Survey for July of 2022, the average hourly wages of employees were up 5.2 percent on a year-over-year basis.

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

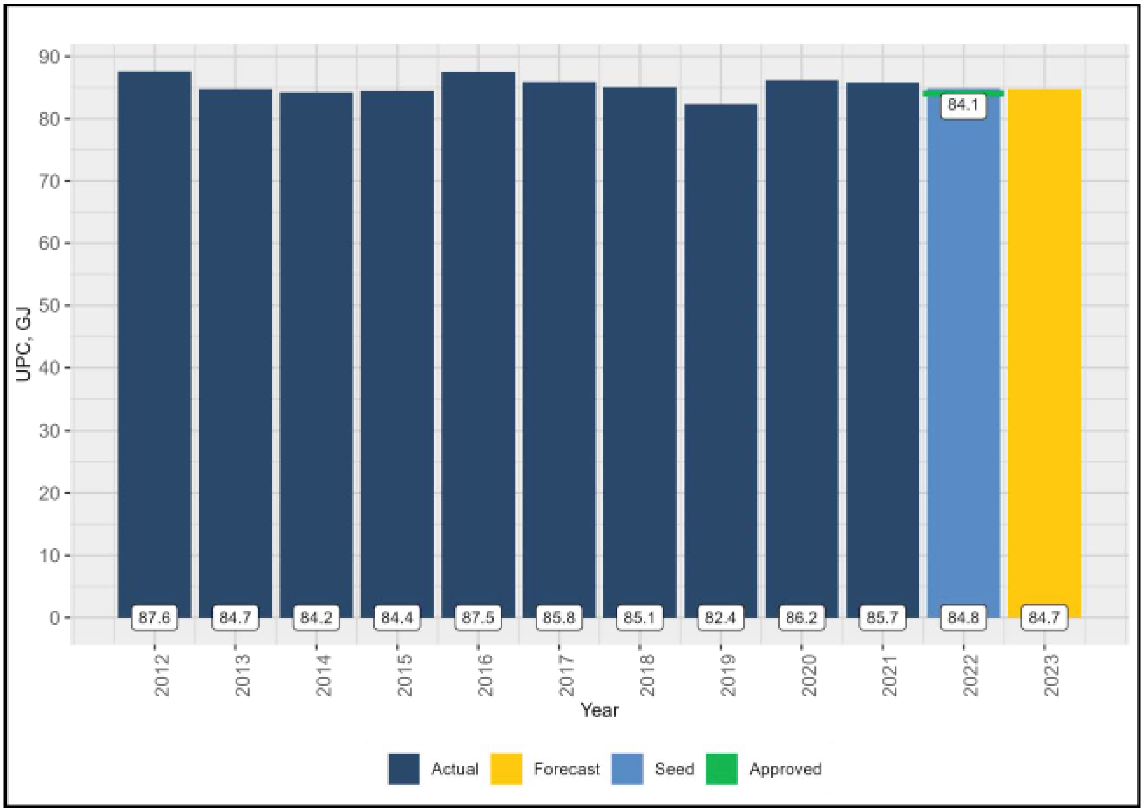
3. Reference: Exhibit B-2, page 20-21 and Exhibit B-2, Appendix A3, pages 8 and 9

3.3.1.2 Residential UPC

The residential UPC forecast was developed using the ETS method with the most recent 10 years of historical weather-normalized UPC, described in Appendix A3.

As shown in Figure 3-3, the residential UPC is forecast to decrease by approximately 0.1 GJ in 2023F compared to 2022S.

Figure 3-3: Rate Schedule 1 UPC



5.1 THE EXPONENTIAL SMOOTHING METHOD

FEI develops its use rate forecasts based on ten years of annual use rates by region and rate class. The UPC values are weather-normalized using the process set out in section 2 above.

The ten years of data is used to calculate the UPC forecast using ETS, as implemented in Microsoft Excel.

ETS is implemented as both a formula and "wizard" in Excel 2016. Intermediate calculations and steps are not exposed or reproducible. Microsoft has not published, and is unlikely to publish, the specific algorithms and procedures used in its software.

The UPC method for Lower Mainland RS 1 (residential) is demonstrated below. All residential and commercial use rate forecasts in all regions are developed using the same method.

5.1.1 Lower Mainland RS 1 UPC Example

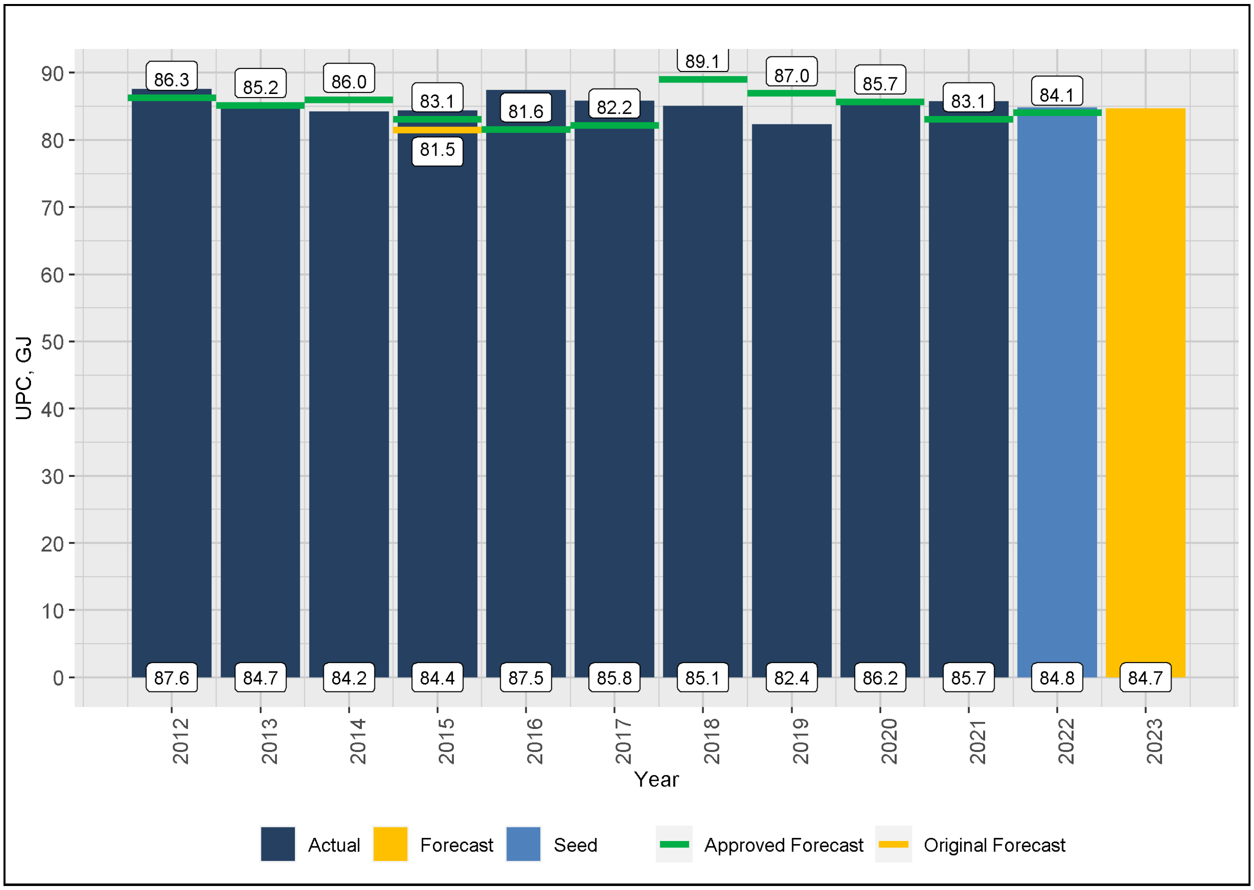
The forecast UPCs for Lower Mainland RS 1 were calculated as follows:

3.1 Please provide Figure 3-3 with the original Forecast for each year, and the Approved for each year.

Response:

The following figure is a revised version of Figure 3-3 with the original and approved forecasts shown for each year. Note that in all years other than 2015 the original and approved forecast are the same, so the yellow "Original Forecast" bars are hidden by the green "Approved Forecast" bars.

Revised Figure 3-3: Original and Approved Forecasts



3.2 Please provide FEI's views as to the factors that influence residential UPC.

Response:

FEI believes that the residential UPC is and will continue to be influenced by many factors including customer behavior, economic activity, DSM, government policies (such as environmental policy), new technology, housing formations, increased appliance efficiency, improvements in building envelopes, increases in the number of appliances used, changes in how appliances are used, and the number of people in a home. These factors and any others that influence residential UPC are all captured intrinsically in the historical actual data used to develop the forecast. Weather is not included in this list because the FEI weather normalization process factors out impacts from weather prior to the development of the forecast.

3.3 Please explain whether or not there are significant differences in the trends for UPC for different regions, or whether the regions generally follow the same trends, and please provide examples.

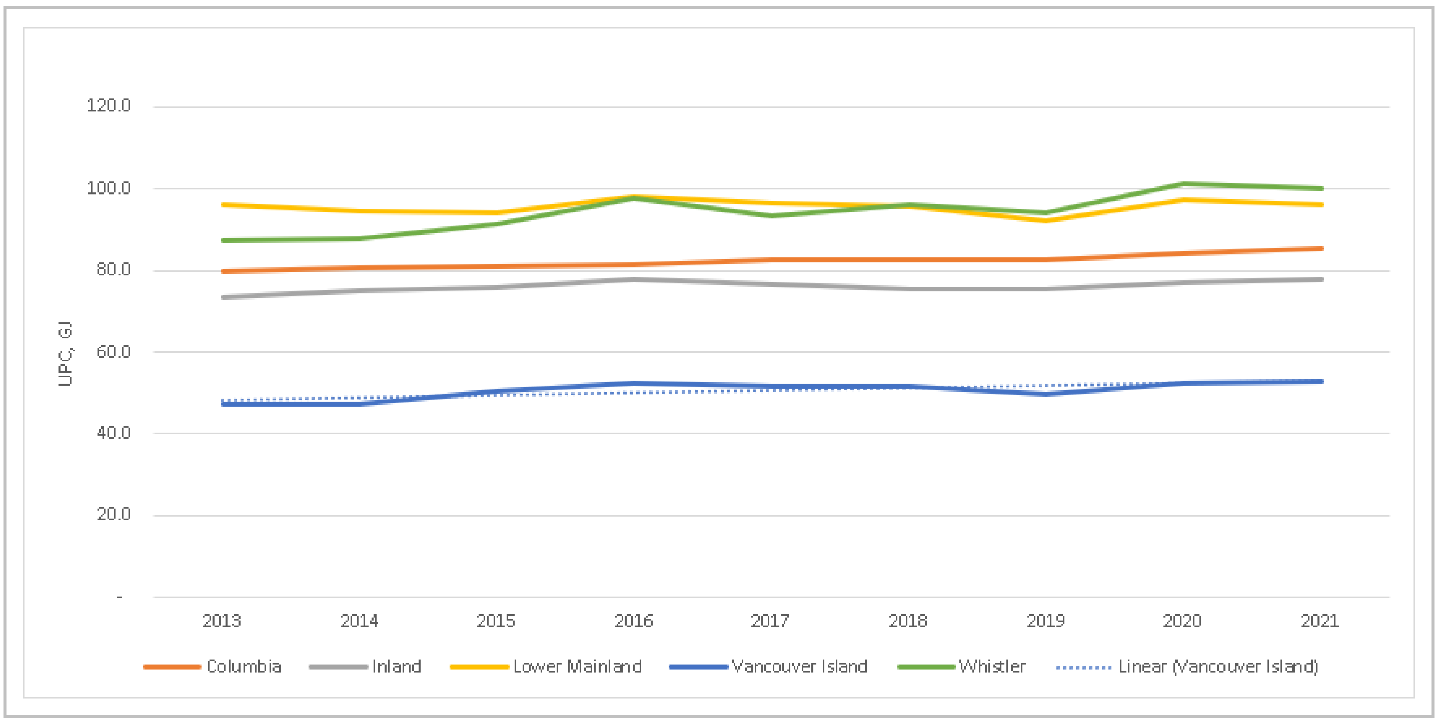
3.3.1 To the extent the regional trends for residential UPC are different, please provide any views that FEI has on why this may be occurring.

Response:

The residential use rates for all regions are generally following the same slight upward trend.

The following figure shows the historical weather normalized use rates for the Columbia, Inland, Lower Mainland, Vancouver Island and Whistler regions.

Figure 1: Weather-Normalized Residential UPC for Columbia, Inland, Lower Mainland, Vancouver Island and Whistler Regions



To investigate the presence of a trend, the slope from a simple linear regression was calculated for each region. A sample linear regression line (dotted) is shown in the above figure for Vancouver Island.

The results of the trend analysis are shown in the following table as an annual change in the UPC in both GJ and percent.

1 **Table 1: Annual Change in UPC**

Year	Columbia	Inland	Lower Mainland	Vancouver Island	Whistler
2013	79.9	73.6	96.0	47.3	87.3
2014	80.5	75.1	94.7	47.1	87.6
2015	80.9	76.1	94.2	50.5	91.3
2016	81.5	77.8	98.2	52.6	97.7
2017	82.8	76.7	96.4	51.5	93.5
2018	82.6	75.6	95.8	51.6	96.3
2019	82.8	75.3	92.1	49.7	94.2
2020	84.4	77.0	97.3	52.3	101.5
2021	85.6	78.1	96.3	52.7	100.3
Trend (regression slope) GJ/yr	0.66	0.33	0.05	0.57	1.64
Trend, percent	0.8%	0.4%	0.0%	1.1%	1.6%

2

3 The following table summarizes the conclusions that can be drawn for each region.

4 **Table 2: Trend Analysis by Region**

Region	Trend
Lower Mainland	UPC trend is virtually flat with only a very slight upward trend
Columbia, Inland	UPC trend is increasing at less than 1%/yr
Vancouver Island	UPC trend is increasing at 1.1%/yr
Whistler	UPC trend is increasing at 1.6%/yr

5

6 The trends shown above are not significantly different enough to enable FEI to speculate on
7 causes.

8

4. Reference: Exhibit B-2, page 23

4.1 Please confirm that the Forecast and Approved for 2022 would have been calculated using the substantial increase that occurred in 2018.

Response:

Confirmed. The 2022 Forecast (which became the 2022 Approved) commercial net customer additions were developed using actual customer additions from 2018, 2019 and 2020.

4.2 Does FEI expect that the policies and legislation impacts identified for the residential sector are also applicable in causing the downward trend for commercial customers? Please explain why or why not.

Response:

To a certain degree, FEI can confirm that the policies and legislation impacts identified for the residential sector are also applicable to commercial customers. However, FEI considers these impacts to be limited to larger multi-family dwellings, as even though these buildings receive service under a commercial rate class, for building permitting purposes they are subject to building policies and legislation applicable to residential buildings. A reduction in the number of large multi-family buildings attaching to the gas system would appear as a reduced number of net new attachments from commercial customers.

FEI does not have the information to determine whether policies and legislation applied to the residential sector are also contributing to reduced commercial customer additions. Commercial customer additions in a given year are a result of many factors in many industry segments that may be both compounding and offsetting. Current Small Commercial Rate Schedule (RS) 2 customers operate in 179 industry sectors, while Large Commercial RS 3 customers operate in 159 industry sectors and RS 23 customers operate in 75 industry sectors. These sectors, and the commercial enterprises that may or may not choose to take service within them, are all affected differently by many different factors. In addition, one-time or infrequent events (e.g., recessions) also impact commercial customers and sectors in different ways.

FEI expects that potential commercial customer totals will continue to be influenced by many factors that may have affected customer additions in the past, including economic activity, DSM, government policies (such as environmental policy), new technology, housing formations, etc. The current methods fully account for all these intrinsic factors.

4.3 Please provide FEI's view as to the potential impact of COVID-19 & the supply chain disruptions, with substantial cost increases, on the commercial sector customer additions forecast.

Response:

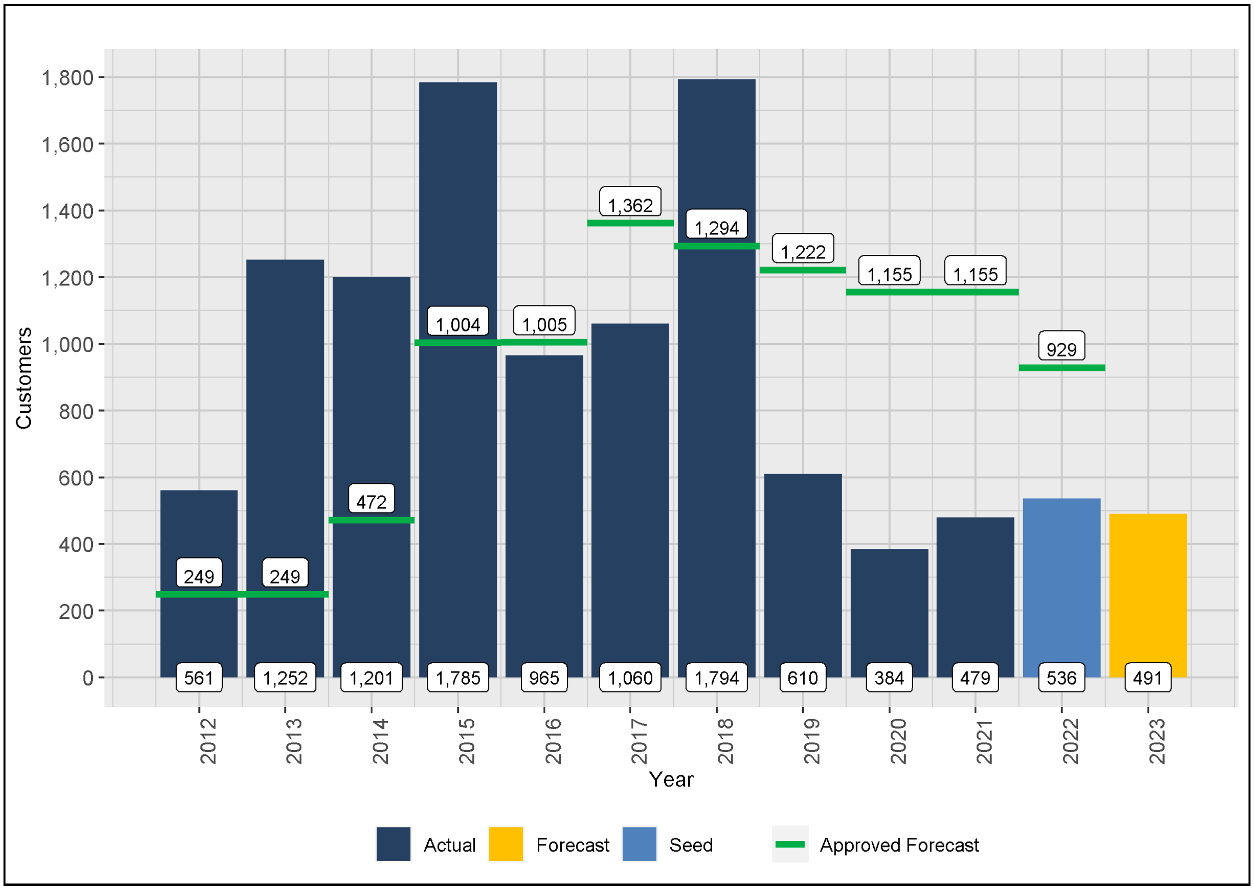
As noted in Section 3.3.2.1 of the Application, as a result of the number and diverse nature of the industry segments represented by potential commercial customers, FEI is unable to provide an assessment of the impact from any single factor on commercial customer additions. FEI did note in Section 3.3.2.1 that the COVID-19 pandemic likely had impacts on many commercial segments that resulted in lower customer additions. Please also refer to the response to CEC IR1 4.2.

4.4 Please provide the Forecast and Approved for each year for Commercial Net Customer additions.

Response:

The following figure is a revised version of Figure 3-6 with the Forecast and Approved amounts for each year. Please note that in all years the Forecast and Approved are the same, so the green "Approved Forecast" bar represents both.

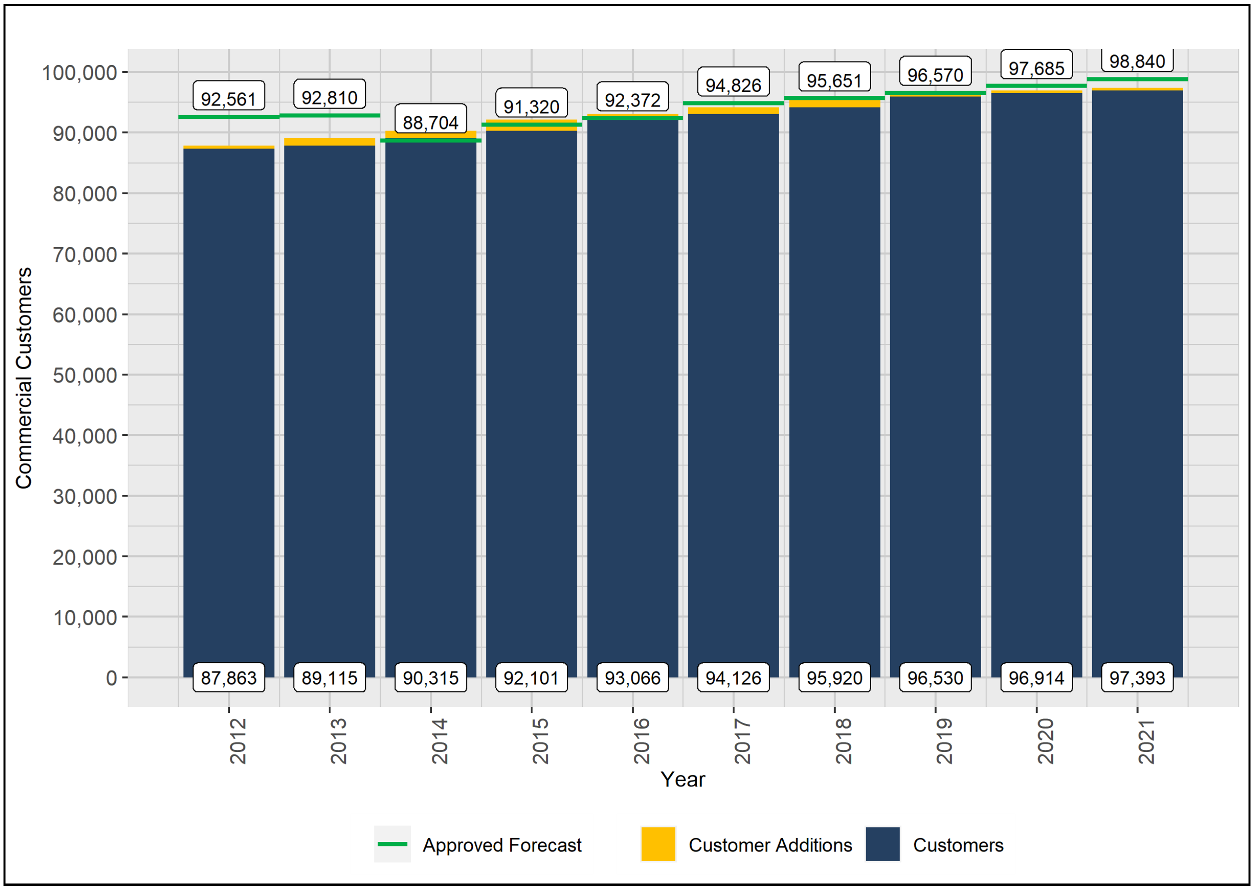
Revised Figure 3-6: Forecast and Approved Commercial Net Customer Additions



Due to the method used to forecast commercial customer additions where the forecast is reliant on the three prior years of customer additions, forecasts prepared from 2019 to 2022 have included the period of more robust growth that ended in 2018. As a result, the variances shown in the revised Figure 3-6 above from 2019 to 2022 are larger.

However, when these additions are considered at a similar scale to the total commercial customer count, the true magnitude of both the additions, and therefore the variances, are shown to be much smaller. Figure 1 below shows the commercial customer additions (yellow bars) in a stacked bar chart, along with the approved forecast values.

Figure 1: Commercial Customer Additions and Total Commercial Customer Count



5. Reference: Exhibit B-2, pages 27-28

3.3.3 Industrial Demand

The 2023F demand for industrial customers was forecast using the Industrial Survey.

For the 2023 Forecast, customers responded to the survey in May and June of 2022. The survey was launched as close as possible to the filing date to mitigate potential variances in the forecast. The survey needed to be completed by June 21, 2022 to allow sufficient time for internal review of the results, loading of data in FEI's Forecasting Information System (FIS), preparing the forecast and drafting the Application. Since the survey requires approximately five weeks to complete, it was launched on May 16, 2022.

As shown in Table 3-1 below, the response rate achieved in 2022 was 50.2 percent of industrial customers, representing approximately 90.4 percent of industrial volumes. There was no reply from 48.0 percent of industrial customers who received the survey after three reminder notifications; this group represents only 9.3 percent of the industrial demand. Surveys could not be delivered to 1.8 percent of the industrial customers due to issues such as incorrect email addresses; this group represents 0.3 percent of the total industrial demand.

Table 3-1: Industrial Survey Response Rates

2022 Industrial Survey	Description	Customers	Demand
Survey Completed	The survey was delivered and completed.	50.2%	90.4%
Survey delivered but not completed	The survey was delivered, but after three follow-up emails was not completed.	48.0%	9.3%
Survey undeliverable	The survey was not deliverable. This can be a result of invalid email addresses, faulty email servers etc.	1.8%	0.3%
Total		100.0%	100.0%

5.1 Please provide the data for 2019, 2020, and 2021 for Table 3-1.

Response:

Survey data for 2019, 2020 and 2021 is shown below for both customers and demand.

Updated Table 3-1: Industrial Survey Response Rates for 2019, 2020 and 2021

Industrial Survey Response Rates		Customers			Demand		
Status	Description	2019	2020	2021	2019	2020	2021
Survey Completed	The survey was delivered and completed.	49.0%	46.7%	47.9%	89.1%	89.3%	90.0%
Survey delivered but not completed	The survey was delivered , but after three follow-up emails was not completed.	43.0%	44.5%	47.1%	9.5%	9.5%	9.2%
Survey undeliverable	The survey was not deliverable. This can be a result of invalid email addresses, faulty email servers etc.	8.0%	8.8%	5.0%	1.4%	1.2%	0.8%
Total		100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

5.2 Did FEI conduct personal follow-up, such as by telephone, to those industrial customers who did not reply to the email survey? Please explain.

Response:

Yes. Consistent with past surveys, after the second reminder email was sent out, there were still several customers that had not responded to the survey. Key account managers were provided a list of non-responding customers and attempted to personally connect with these customers, normally by telephone. Not all customers are contacted, and the emphasis is to connect with larger volume customers. FEI does not have statistics to show what percentage of the personally contacted customers eventually responded as the survey database system was not designed to track such interactions.

To permit time to collect and analyze the survey results prior to filing the Application, the survey was closed on June 21. At that time, 50.2 percent of customers, representing 90.4 percent of the industrial demand, had responded.

5.3 Please confirm that FEI has some form of correct contact information for those customers whose emails proved to be incorrect.

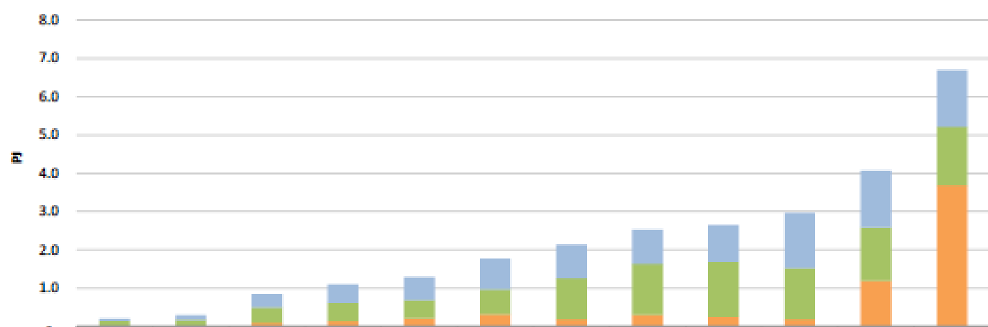
5.3.1 Please explain whether or not FEI undertook to utilize the form(s) of communication that FEI did have in order to seek survey responses from those whose email information was incorrect or missing.

Response:

Confirmed. FEI has other sources of contact information apart from the Industrial Survey website and used those sources to correct 29 of the initial 48 surveys that were returned as undeliverable. At the completion of the survey, only 19 customers representing 0.3 percent of the total industrial demand remained undeliverable.

6. Reference: Exhibit B-2, page 30 and page 30 and CTV News website https://www.ctvnews.ca/politics/touting-clean-energy-pm-trudeau-questions-business-case-for-exporting-liquefied-natural-gas-to-europe-1.6037556

Figure 3-11: Actual (A), Projected (P) and Forecast (F) Demand for CNG & LNG[14]



	2012A	2013A	2014A	2015A	2016A	2017A	2018A	2019A	2020A	2021A	2022P	2023F
RS 3/5/23/25/6P - CNG (NGT)	0.1	0.1	0.3	0.5	0.6	0.8	0.9	0.9	1.0	1.4	1.5	1.5
RS 46 - LNG (NGT)	0.2	0.2	0.4	0.5	0.5	0.7	1.1	1.3	1.4	1.3	1.4	1.5
RS 46 - LNG (Non-NGT)	-	-	0.1	0.1	0.2	0.3	0.2	0.3	0.2	0.2	1.2	3.7
Total CNG & LNG	0.2	0.3	0.8	1.1	1.3	1.8	2.1	2.5	2.7	3.0	4.1	6.7

The 2022 Projected demand of 4.1 PJ is 1.1 PJ higher than the 2021 Actual demand of 3.0 PJ, as shown in Figure 3-11 above. This increase is primarily related to the projected increase in LNG (Non-NGT) export deliveries by ISO containers in 2022.

For non-NGT LNG demand, the 2023 Forecast represents an approximate 2.5 PJ increase from the 2022 Projected volume. FEI continues to have ongoing discussions with multiple potential customers, as global demand for North American LNG remains high as a result of continued easing of COVID-19 pandemic restrictions, geo-political concerns with energy supply from Russia, and rising LNG costs in Asia. While discussions with these potential customers are ongoing, no firm commitments for non-NGT LNG have been made. The main barriers for this demand to materialize continue to be congestion in shipping, and at ports and terminals. However, potential customers remain optimistic that these barriers can be overcome and remain confident in their ability to take supply in 2022 and beyond. FEI expects to secure firm contracts in 2022 as the winter energy demand in Asia increases.

6.1 Please elaborate on the projected increase in LNG (non-NGT) export deliveries by ISO containers in 2022, and whether or not these can be considered as firm demand.

Response:

The increase in the LNG (non-NGT) exports is based on conversations with prospective customers and their prospects to deliver LNG from Tilbury to Asia this winter. At this time, FEI does not have any firm contracts to support this forecast; therefore, the forecast is not considered firm. FEI expects future ISO demand will be comprised of both firm and non-firm spot LNG offtake.

6.2 In what ways, if any, does FEI expect that the recent federal commentary regarding the 'LNG business case' could or will impact LNG sales for 2023 and into the future? Please explain.

Response:

FEI does not expect the recent federal commentary regarding the "LNG business case"[2] will impact LNG sales for 2023 and into the future. The referenced LNG business case broadly refers to shipping LNG to Europe from the east coast of Canada; however, this plan is currently not part of FEI's 2023 LNG sales forecasts, or future sales forecasts.

While there are the logistical difficulties associated with providing LNG shipments directly from the west coast of Canada to Europe, it should be noted that the Tilbury LNG facility, and other LNG projects on the west coast of Canada can support European gas markets through displacement. For example, the Tilbury LNG facility can provide LNG to Asia, which can displace LNG deliveries that would otherwise have been made to Asia from LNG sources closer to Europe, such as Qatar or the US gulf coast. The LNG supply from Qatar or the US gulf coast originally destined for Asia can then be used to supply additional LNG to Europe.

[2] https://financialpost.com/commodities/energy/oil-gas/trudeau-douses-excitement-over-east-coast-gas-exports-calling-business-case-weak.

7. Reference: Exhibit B-2, page 37

5.2.4.2 NGT Tanker Rental Revenue

Table 5-4 below shows the tanker rental revenue for each type of FEI-owned tanker based on the currently approved RS 46 tanker rental rates.

Table 5-4: LNG Tanker Rental Revenue ($ millions)

	2022 Approved	2022 Projected	2023 Forecast
Standard Tanker Rental Deliveries	240	132	96
Rate ($/Delivery)	$ 301	$ 302	$ 308
Sub Total ($ millions)	$ 0.072	$ 0.040	$ 0.030
Tridem Tanker Rental Deliveries	-	-	-
Rate ($/Delivery)	$ 360	$ 361	$ 368
Sub Total ($ millions)	$ -	$ -	$ -
Marine Equipped Tridem Tanker Rental Deliveries	1,688	1,592	1,728
Rate ($/Delivery)	$ 507	$ 509	$ 519
Sub Total ($ millions)	$ 0.856	$ 0.810	$ 0.897
Total Tanker Rental Revenue ($ millions)	**$ 0.928**	**$ 0.850**	**$ 0.926**

For the Standard tankers, the 2022 Projected rental revenue is forecast to be lower than the 2022 Approved mainly due to the reduction of rental deliveries projected in 2022. For 2023, FEI is forecasting the Standard tanker rental revenue to decrease from the 2022 level, primarily due to a reduction in LNG vehicles on the road, as the existing heavy duty LNG engines have been discontinued, and there is not expected to be a replacement until 2024-2025 at the earliest.

For Tridem tankers, the 2022 Approved rental revenue is zero since these tankers are primarily used for long haul deliveries in Canada, such as to the Yukon, and these tankers are not permitted in the US (due to weight restrictions in the US). FEI does not expect Canadian deliveries to occur outside of British Columbia and is therefore expecting the 2022 Projected and 2023 Forecast Tridem tanker rental revenue to be zero.

For the Marine tankers, the 2022 Projected rental revenue is forecast to be slightly lower than the 2022 Approved, as the number of rental deliveries decreased by 96. FEI expects that vessels which were previously delayed in their delivery will be commissioned in 2022 and 2023, resulting in an increase in 2023 Forecast deliveries. For 2023, FEI forecasts 136 additional marine tanker deliveries due to increased vessel consumption and additional vessels put into service.

7.1 Please elaborate on the discontinuation of heavy-duty LNG engines and the expected replacements.

<u>Response:</u>

Please refer to the response to BCUC IR1 8.2.

7.2 Why is there a line item for Tridem Tanker Rental Deliveries? Was this an historical source of revenue? Please explain.

Response:

The Tridem Tanker Rental charges were approved by Order G-85-16 as an amendment to Rate Schedule 46. FEI has one Tridem Tanker and was receiving rental revenue for it up until 2018. As referenced in the preamble above, the Tridem Tanker is a larger capacity tanker used for long haul deliveries within Canada (the Tridem Tanker is not permitted in the US). At the moment, FEI is not expecting Canadian deliveries outside of BC to occur in 2022 and 2023.

7.3 What efforts does FEI expect to undertake to maximize its LNG Tanker Rental Revenue in 2023?

Response:

FEI works to maximize LNG tanker rental revenue by regular engagement with its existing customer base and by working to attract new LNG Tanker Rental customers. These efforts are expected to be supported by the new higher horsepower LNG engine anticipated to be coming to market in 2024, as discussed in the response to BCUC IR1 8.2.

8. Reference: Exhibit B-2, page 40

> **5.3.2 Net Other Mitigation Revenue**
>
> The Company has been seeking, and will continue to seek, opportunities to contract the west to east capacity on the SCP.
>
> The forecast mitigation revenue for the SCP west to east capacity for 2023 is based on the current forward market price differentials for summer 2023. FEI forecasts generating net mitigation revenue in the amount of $0.002 million in 2023.
>
> The mitigation revenue generated from the SCP west to east capacity ties to market price differentials during the summer months and reflects the existing pipeline capacity within the region. The mitigation revenue forecast is net of the cost of using FEI gas supply resources, such as the Westcoast Energy Inc. Kingsvale South transportation capacity held in the midstream portfolio, to connect with the SCP system. The mitigation revenue net of the gas supply resource costs is allocated to Other Revenue.

8.1 Please provide further details of FEI's efforts to contract the west-to-east capacity on the Southern Crossing Pipeline.

<u>Response:</u>

FEI's success in contracting west-to-east capacity on the Southern Crossing Pipeline (SCP) is contingent upon the forward market price differentials between the Station 2, Huntingdon/Sumas and Kingsgate marketplaces. The current market conditions in the region (i.e., pipeline constraints) have caused the Huntingdon/Sumas market price to trade well-above the Station 2 and Kingsgate market for the winter (November to March) and summer (April to October) periods. Therefore, the mitigation value throughout the year has been through flowing gas supply east to west on SCP (i.e., towards Sumas).

FEI continues to monitor market conditions including these forward market prices and will seek contracting opportunities or execute shorter term purchases (i.e., monthly or daily) that requires west to east flow on SCP, if market conditions in the region change.

9. Reference: Exhibit B-2, page 43

6.2.1 New/Incremental System Operations, Integrity and Security Funding

In the MRP Decision (page 115), the BCUC directed FEI to provide in each Annual Review a breakdown and explanation of both annual and cumulative variances between forecast/actual and formula O&M related to the approved new/incremental System Operations, Integrity and Security funding, and quantify the variances attributable to the following areas: integrity management; maintaining system infrastructure; operations, compliance and safety; cyber security; data analytics; gas control; Canadian Energy Pipeline Association (CEPA) participation; and any other significant factors or miscellaneous items.

The table below shows the requested information, including the new/incremental funding in each category for 2021 Formula O&M, 2021 Actual O&M, and the resulting variances, as well as the Cumulative Forecast/Actual Variance for the first two years of the MRP.

Table 6-3: System Operations, Integrity and Security New/Incremental Spending ($ millions)

Line No.	Description	2021 Formula O&M[1]	Actual 2021 O&M	2021 Forecast/Actual Variance	Cumulative Forecast/Actual Variance[2]
1	Integrity Management	$ 1.426	$ 2.331	$ 0.905	$ 0.671
2	Maintaining System Infrastructure	$ 0.739	$ 0.790	$ 0.051	$ 0.064
3	Operations, Compliance and Safety	$ 0.634	$ 0.925	$ 0.291	$ 0.381
4	Cyber Security	$ 0.537	$ 0.537	$ -	$ 0.610
5	Data Analytics	$ 0.317	$ -	$ (0.317)	$ (0.624)
6	Gas Control	$ 0.687	$ 0.134	$ (0.553)	$ (1.217)
7	CEPA Participation	$ 0.739	$ 0.235	$ (0.505)	$ (0.745)
8	Other	$ -		$ -	$ -
9	Total	$ 5.078	$ 4.951	$ (0.127)	$ (0.861)

Notes to table:

[1] 2021 Formula O&M is the approved 2020 formula for incremental funding with Net Inflation factor applied (3.253%).

[2] Cumulative Forecast/Actual variance is the 2020 Actual variance plus the 2021 Actual variance.

For the first two years of the MRP, FEI spent $0.861 million less than the formula amount. Over the term of the MRP, FEI anticipates that the total new/incremental spending required in the combined categories of System Operations, Integrity and Security will be relatively close to the cumulative formula-based amounts, although there will continue to be variations from year to year.

9.1 Please provide the evidence contained in Table 6-3 back to the beginning of the MRP.

Response:

Please see the updated Table 6-3 below which also includes the breakdown of the actual O&M, formula O&M, and variances between actual and formula O&M for 2020, the first year of the MRP term.

Line No.	Description	2020 Formula Amount	Actual 2020 O&M	2020 Forecast/Actual Variance	2021 Formula O&M[1]	Actual 2021 O&M	2021 Forecast/Actual Variance	Cumulative Forecast/Actual Variance[2]
1	Integrity Management	$ 1.381	$ 1.147	$ (0.234)	$ 1.426	$ 2.331	$ 0.905	$ 0.671
2	Maintaining System Infrastructure	$ 0.716	$ 0.729	$ 0.013	$ 0.739	$ 0.790	$ 0.051	$ 0.064
3	Operations, Compliance and Safety	$ 0.614	$ 0.704	$ 0.090	$ 0.634	$ 0.925	$ 0.291	$ 0.381
4	Cyber Security	$ 0.520	$ 1.130	$ 0.610	$ 0.537	$ 0.537	$ -	$ 0.610
5	Data Analytics	$ 0.307	$ -	$ (0.307)	$ 0.317	$ -	$ (0.317)	$ (0.624)
6	Gas Control	$ 0.665	$ -	$ (0.665)	$ 0.687	$ 0.134	$ (0.553)	$ (1.217)
7	CEPA Participation	$ 0.716	$ 0.475	$ (0.241)	$ 0.739	$ 0.235	$ (0.505)	$ (0.745)
8	Other	$ -	$ -	$ -	$ -		$ -	$ -
9	Total	$ 4.918	$ 4.185	$ (0.733)	$ 5.078	$ 4.951	$ (0.127)	$ (0.861)

9.2 Please explain the underspending that led to the cumulative variance of $0.861 million.

Response:

The cumulative variance of $0.861 million is comprised of the 2020 variance of $0.733 million and the 2021 variance of $0.127 million.

FEI has explained the drivers of the variance between 2021 Formula and Actual system operations, integrity and security new/incremental O&M spending in Section 6.2.1 (pages 42-44) of the Application.

For 2020, the drivers of the variance between 2020 Formula and Actual system operations, integrity and security new/incremental spending were explained in Section 6.2.1 (pages 37-39) of FEI's Annual Review for 2022 Delivery Rates Application. FEI has provided an excerpt from that application below describing the reasons for the variances.

Excerpt from page 38 of FEI's Annual Review for 2022 Delivery Rates Application:

> Overall, total actual spending in 2020 was approximately $4.185 million, which is approximately $0.733 million lower than the 2020 Formula O&M amount. Areas with notable variances include Cybersecurity, Data Analytics, Gas Control and CEPA Participation.
>
> With regard to Cybersecurity, the additional $0.610 million in spending was for activities to enhance FEI's cybersecurity and business continuity programs. The funding was used to build out the governance and controls for operational technology in response to increasing cyber threats on operational systems, and to update the Company's business continuity plans for each business area in response to opportunities for improvement identified during the COVID-19 pandemic, as well as to improve overall resiliency.

Offsetting the increase in Cybersecurity were lower expenditures of approximately $0.906 million for Gas Control and CEPA participation. Contributing to the lower spend was the mid-year approval of the MRP, timing of the hiring of Gas Controllers, and timing of control room management improvements. The plan is to hire one net new Gas Controller per year and to coordinate the timing of the new hires with retirements of existing employees. FEI will proceed with implementing CEPA required control room management improvements in the coming months.

For the Data Analytics, the lower spending of approximately $0.307 million was primarily due to one-time labour savings from the timing of new hires. In 2021, new hires are expected that will reduce the variance.

9.3 Please provide estimates of the total cumulative formula amounts FEI references as being met over the term of the MRP.

Response:

The total cumulative formula amount would be the sum of the annual formula amounts over the five-year MRP term. The 2020 Formula amount, as provided in the response to CEC IR1 9.1, was $4.918 million and the 2021 Formula amount, as provided in this Application and in the preamble above, was $5.078 million. This amount will continue to be escalated by the annual Net Inflation Factor during the MRP term; however, notwithstanding this escalation factor, the annual formula O&M amount is approximately $5 million, which results in a cumulative formula amount for the MRP term of approximately $25 million ($5 million multiplied by the five-year MRP term).

Over the term of the MRP, FEI anticipates that the total new/incremental spending required in the combined categories of System Operations, Integrity and Security will be relatively close to the cumulative formula-based amounts of approximately $25 million, although there will continue to be variations from year to year.

Further, variations from time-to-time in spending for the different cost items and on an aggregate basis are not unusual. This is demonstrated by the fact that on a cumulative basis for years 2020 and 2021, of the seven cost items listed in Table 6-3, the actual spending for four of the items have exceeded the formula O&M with the remaining three underspending the formula amount, totaling to a cumulative variance of $(0.861) million.

While FEI has reported on the cumulative variance between formula and actual O&M spending in Table 6-3 in compliance with the BCUC's direction in the MRP Decision (page 115), FEI notes that O&M spending variances do not actually accumulate over the term of the MRP. The variances between formula and actual O&M are shared 50/50 with customers annually through the Earnings Sharing Mechanism. Please refer to the response to RCIA IR1 1.1 for further explanation.

9.4 During which years does FEI expect to essentially 'make-up' the existing under-spending?

Response:

There are three years remaining in the MRP term and FEI expects that during that time O&M spending will continue to increase in the categories shown in Table 6-3. FEI notes, for instance, that the overall amount of underspending in 2021 was much smaller than in 2020. FEI also expects that certain categories will continue to experience greater spending pressures than what was provided for in the Base O&M, while other categories may see lower spending. This is consistent with how FEI manages its overall formula O&M spending. Certain programs and functions have taken more time than initially anticipated to develop, such as in the Data Analytics and Gas Control areas. However, as explained on page 43 of the Application, FEI expects these areas to ramp up and the resulting O&M spending to increase as requirements and resources are developed. FEI will not have a complete picture of the cumulative actual versus formula O&M spending until the conclusion of the MRP term.

9.5 Please explain whether or not cumulative under-spending at the end of the MRP will eventually be returned to ratepayers.

Response:

Please refer to the response to RCIA IR1 1.1 for an explanation of how variances between formula and actual O&M are treated during the MRP term, including how any underspending (i.e., O&M savings) are shared 50/50 with customers. At the conclusion of the MRP term, the O&M level going forward will be determined considering the actual spending at that time.

9.6 Please explain whether or not FEI benefits from deferring funding from the early years to the later years of the MRP, and if so, please explain how and quantify the benefits to FEI.

Response:

FEI does not benefit from deferring funding in the early years to the later years of the MRP term. If FEI spends more than the amount included in Base O&M in the later years of the MRP term, the increased spending will impact the amount of earnings sharing (i.e., there will be less earnings sharing with customers) just as, in the reverse situation, decreased spending impacts the amount of earnings sharing through more earnings sharing provided to customers.

For clarity, FEI has not deferred spending/funding from early years to later years. The reasons that FEI has underspent in some categories of the new/incremental spending for System Operations, Integrity and Security O&M are due to factors such as the timing of new hires and the development of requirements to implement certain systems and programs. These factors have been explained in this Application and in previous annual review applications.

9.7 Please explain why FEI has not kept up with the anticipated spending in the early years of the MRP.

Response:

Please refer to the responses to CEC IR1 9.2, 9.4 and 9.6.

10. Reference: Exhibit B-2, page 49

> **6.3.3.2.1 INLAND GAS UPGRADES PROJECT**
>
> In 2020, the BCUC approved a CPCN for the IGU project (Order G-12-20). This project includes system modifications to allow for ongoing ILI of 11 laterals, pipeline replacement for 4 laterals, and installation of a pressure regulating station for 14 laterals.[30] As FEI explained in the CPCN proceeding, incremental operating costs are associated with both the ongoing ILI activities and pressure regulating station aspects of the project.[31]
>
> As the IGU project nears completion, laterals have been becoming available for ILI, beginning in 2022 (see Section 7.2.3.2 of this Application for further details). In 2022, FEI inspected two laterals using ILI, and although there remains some schedule uncertainty, FEI is projecting that approximately half of the 11 laterals where ILI capability will be provided will have their tool runs completed by 2023. Ongoing data assessments and analysis of the information collected from these newly ILI-capable pipelines is the most significant driver of the incremental O&M, as detailed in Appendix E of the IGU project CPCN application. Engineering resources are involved in the various steps, with the most significant effort occurring during the data analysis phase (Section 1.6 of Appendix E).
>
> For 2023, FEI is forecasting $0.300 million in incremental O&M resources associated with the IGU project. These costs are associated with performing engineering analysis of ILI data as well as planning and implementing operational responses (such as identifying future integrity digs, or other monitoring activities).

10.1 Please confirm that the $0.300 million in incremental O&M revenues was anticipated in the IGU Project CPCN and approved by the BCUC.

10.1.1 If not confirmed, please explain why not and why these incremental revenues were not anticipated but considered to be necessary to the project.

Response:

FEI assumes that the reference to "incremental O&M revenues" was intended to read "incremental O&M resources" (to be consistent with the cited preamble).

FEI confirms that incremental O&M resources were anticipated within the estimated costs of the IGU project. Please refer to the response to BCOAPO IR1 8.1 for an explanation of how these costs were anticipated and identified in the Inland Gas Upgrade (IGU) project CPCN application and in responses to IRs.

FEI does not confirm that these costs were explicitly approved by the BCUC in the IGU CPCN decision. Please refer to the response to BCOAPO IR1 8.2 for further explanation as to why such approval is not expected or required when granting CPCNs.

11. Reference: Exhibit B-2, page 49 and 50

6.3.3.2.2 COASTAL TRANSMISSION SYSTEM TRANSMISSION INTEGRITY MANAGEMENT CAPABILITIES PROJECT

In 2022, the BCUC approved a CPCN for the CTS-TIMC project (Order C-3-22). This project will provide the ongoing ability to run crack-detection EMAT ILI tools in 11 CTS pipelines, as well as the installation of a pressure regulating station on a single segment of one of the pipelines where crack-detection ILI is not possible.

As discussed in the CTS-TIMC CPCN application, FEI is also establishing a sustainable and ongoing process to allow FEI to periodically conduct a QRA on its transmission pipelines.[32] The

For 2023, FEI is forecasting $0.700 million in incremental O&M primarily associated with securing additional engineering resources to develop and implement the next QRA iteration. FEI will identify any incremental costs for further developing and implementing the QRA process in future rate applications, as well as incremental resources associated with the increased ILI program scope.

11.1 Please confirm that the $0.700 million in incremental O&M revenues was anticipated in the CTS TIMC Project CPCN and approved by the BCUC.

11.1.1 If not confirmed, please explain why not and why these incremental revenues were not anticipated but considered to be necessary to the project.

Response:

FEI assumes that the reference to “incremental O&M revenues” was intended to read “incremental O&M resources” (to be consistent with the cited preamble).

FEI confirms that incremental O&M resources were anticipated within the estimated costs of the CTS TIMC Project. Please refer to the response to BCOAPO IR1 8.1 for an explanation of how these costs were anticipated and identified in the CTS TIMC CPCN application.

FEI does not confirm that these costs were explicitly approved by the BCUC in the CTS TIMC CPCN decision. Please refer to the response to BCOAPO IR1 8.2 for further explanation as to why such approval is not expected or required when granting CPCNs.

12. Reference: Exhibit B-2, page 51, 52, and 101

6.3.6 Clean Growth Initiative – Renewable Gas Development

Table 6-9: Renewable Gas Development O&M ($ millions)

Line No.	Description	Approved 2022	Projected 2022	Forecast 2023	Reference
1	Renewable Gas Development	1.000	1.750	2.000	Section 11, Schedule 20, Line 21
2	Total	1.000	1.750	2.000	

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.

In May 2021, the Provincial government issued an amendment to the GGRR that forms the basis for FEI's acquisition of renewable gas. The amendment expanded the amount of renewable gas that can be acquired from 5 to 15 percent and enabled FEI to acquire hydrogen, syngas and lignin, in addition to biomethane. The policy initiatives expand the resources that are required to support renewable gas development.

For 2022, FEI projects to spend approximately $1.750 million, which is an increase of $0.750 million compared to the 2022 Approved amount. These costs are for activities and feasibility work related to developing the supply of renewable gases, including hydrogen, into the program. Such activities include investigating the feasibility of pursuing the development of facilities to produce renewable and low-carbon hydrogen, feasibility and system readiness assessments to distribute hydrogen, end-use impacts, and customer and stakeholder education that will enable the safe distribution and customer end-use of hydrogen. The 2022 Projected O&M costs include the addition of two incremental labour resources and the increased use of external consultants to successfully execute on planned activities to meet business goals and objectives. Actual expenditures in 2022 may vary from that projected depending on the timing of the completion of work required and renewable gas development opportunities.

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. 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. 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.

10.3.3 Clean Growth Innovation Fund (CGIF)

The collection of the $0.40 per month innovation rider commenced on August 1, 2020 and is forecast to collect $5.2 million in 2023.

Table 10-6 below shows the amounts collected and the amounts expended for clean growth projects since the inception of the Fund to the end of 2023. 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.

12.1 Please elaborate on how FEI's Clean Growth Initiative project differs from the Clean Growth Innovation Fund projects.

Response:

The Clean Growth Innovation Fund is intended to provide grant funding to third-party companies and organizations engaged in pre-commercial or early-stage commercial activities that will reduce costs or emissions in British Columbia.

The Clean Growth Initiative – Renewable Gas Development flow-through O&M expenses are related to development, feasibility, safety and education work related to the commercial deployment of renewable and low-carbon fuels. These costs include both internal resources and the use of external consultants, among other costs. Please refer to the response to BCUC IR1 13.1 for a breakdown and description of the 2022 Approved/Projected and 2023 Forecast expenses. Additionally, please refer to the response to BCSEA IR1 5.1 for further explanation of the category of "Clean Growth Initiatives" flow-through O&M.

12.2 Could FEI's requirements for internal resources be funded through the CGIF? Please explain why or why not.

Response:

No. The purpose and use of the funds recorded in the CGIF were detailed in the 2020-2024 MRP proceeding and approved by the BCUC in the MRP Decision (pages 155-156) and did not include the funding of FEI internal resources or FEI activities. More specifically, the CGIF is to be used only to provide grant funding to companies and other organizations engaged in pre-commercial and early-stage commercial development of innovations that could reduce emissions or costs in British Columbia.

13. Reference: Exhibit B-2, page 57

Table 7-2: Sustainment and Other Capital Expenditures, 2020-2022 Approved, 2023-2024 Original Forecasts ($ millions)

Line No.	Description	Approved 2020	Approved 2021	Approved 2022	Original Forecast 2023	Original Forecast 2024
1	Sustainment Capital (excl. CIAC)	111.530	112.944	117.106	119.663	124.533
2	Other Capital	49.770	49.916	46.474	46.403	45.351
3	Total	161.300	162.860	163.580	166.066	169.884

Table 7-3: Sustainment and Other Capital Expenditures, 2020-2021 Actual, 2022 Projected, 2023-2024 Updated Forecasts ($ millions)

Line No.	Description	Actual 2020	Actual 2021	Projected 2022	Updated Forecast 2023	Updated Forecast 2024
1	Sustainment Capital (excl. CIAC)	112.405	115.763	124.160	129.086	130.378
2	Other Capital	50.745	50.246	48.183	54.456	51.194
3	Total Capital	163.151	166.009	172.343	183.542	181.572

Table 7-5: Sustainment Capital Expenditures 2023 and 2024 ($ millions)

Line No.	Description	2023 Original Forecast	2023 Updated Forecast	2024 Original Forecast	2024 Updated Forecast
1	Customer Measurement	32.461	30.015	32.979	30.494
2	Transmission System Reliability & Integrity	45.792	47.937	47.355	49.573
3	Distribution System Reliability	12.486	15.141	22.031	17.659
4	Distribution System Integrity	28.924	35.993	22.168	32.651
5	Total Sustainment Capital (excl. CIAC)	119.663	129.086	124.533	130.378

As shown in Table 7-5 above, FEI's Updated Forecasts for sustainment capital have increased by $9.423 million in 2023 and $5.845 million in 2024 compared to the Original Forecasts. The required increases are primarily in the Transmission System Reliability & Integrity portfolio and the Distribution System Integrity portfolio, with FEI proposing to reduce the expenditures for the Customer Measurement portfolio in both 2023 and 2024, and the expenditures for the Distribution System Reliability portfolio in 2024 to offset some of the required increases in the other portfolios.

13.1 Please confirm or otherwise explain that FEI is seeking approval for an increase in 2023 expenditures, and not for the difference between 2022 Approved and 2022 Projected.

Response:

As the BCUC has not yet approved any forecast of regular sustainment and other capital expenditures for 2023 or 2024, FEI is seeking approval of the level of forecast sustainment and other capital to be incorporated in rates for the years 2023 and 2024; that is, for the total level of regular sustainment and other capital expenditures forecast, rather than just an "increase".

FEI is not seeking approval of the difference between 2022 Approved and 2022 Projected expenditures.

13.2 Please explain whether or not the ratepayers are ultimately responsible for all the actual costs, or if FEI bears some of the cost risk identified for sustainment capital.

Response:

FEI and customers share equally in any variances between forecast and actual sustainment capital costs, as these variances are subject to the Earning Sharing Mechanism (ESM) approved by the MRP Decision and Order G-165-20. In accordance with the approved ESM, 50 percent of the Return on Equity (ROE) related to the actual sustainment capital above or below the allowed ROE will be shared with customers.

14. Reference: Exhibit B-2, page 59

> In order to better understand the extent of the inflationary impacts that have affected North American utilities since 2020 and to compare the impacts on the industry with FEI's experience, FEI engaged Wood Mackenzie Supply Chain Consulting (Wood Mackenzie) to provide a market report on electric and gas utility transmission and distribution (T&D) markets from 2020 to 2022 and the anticipated impact until the end of 2024 (Wood Mackenzie Report). Wood Mackenzie identified an average escalation of 31.2 percent in capital costs for gas utilities between the period of the first quarter of 2020 and the first quarter of 2022. The Wood Mackenzie Report is based on the aggregated spend from utilities across North America, and incorporated over 150 indices which roll up to form the model for each category. Indices specific to BC have also been incorporated where appropriate, particularly around trades and other labour in the Province. This report has been included as Appendix C1.
>
> These inflationary pressures are seen, for example, in FEI's new Mains and Services (M&S) construction contract for construction work typically used for projects within the Distribution System Integrity portfolio[43]. FEI's M&S contract expired at the end of 2021 and, during the competitive bidding process for the new contract, market cost escalations similar in magnitude to those identified in the Wood Mackenzie Report became evident from all contractors. Major contributing factors to the increased rates in the new M&S construction contract include:
>
> - A new surcharge / rebate structure to mitigate fuel cost increases related to current fuel price increases and volatility. This was structured to allow for price reductions if fuel costs return to pre-early 2022 levels. These adjustments will be made on an annual basis;
> - CPI adjustments occurring on March 31 of each calendar year, with the M&S contract rates otherwise being held for the duration of the contract term. CPI adjustments will be based on the federal CPI rates published by the Bank of Canada. Based on current Bank of Canada projections, FEI expects these increases to be between 2 to 8 percent annually for the duration of the contract term; and
> - Increased labour costs associated with union-affiliated contractors. Labour rates across North America have increased by almost 12 percent from the first quarter of 2020 to the second quarter of 2022 as indicated by the Wood Mackenzie Report. As union agreements come up for renewal across British Columbia, some unions are proposing large labour rate increases. For example, negotiations with the BC General Employees' Union (BCGEU) are currently underway, with the BCGEU requesting 5 percent annual increases as well as cost of living protection. As such, increased labour rates are reflected in the new M&S contract where new union agreements have occurred.
>
> FEI has experienced significant inflationary pressures during the first three years of the MRP term and expects these pressures will continue into 2023 and to some extent into 2024. As shown in the Wood Mackenzie Report, it is expected that the average capital costs for gas utilities will remain close to the higher level of 2022 until the fourth quarter of 2024 and will not come back down to the 2020 level. This expectation also aligns with the Bank of Canada's July 2022 Monetary Policy Report[44] which projects that CPI is expected to hover around 8 percent in the third quarter of 2022 before decreasing to approximately 3 percent by the fourth quarter of 2023 and 2 percent in 2024.

14.1 Please provide the cost of the Wood Mackenzie Report commissioned by FEI.

Response:

The total cost of the Wood Mackenzie Report was $35 thousand. Of this, 78 percent was allocated to FEI and 22 percent was allocated to FBC. The cost was allocated between FEI and FBC based on the two companies' 2023 Forecast rate bases.

14.2 Does FEI ever commission works in conjunction with other utilities such that the information and costs are shared? Please explain why or why not.

Response:

Yes, where the opportunity provides value to FEI, is practical, time-permitting and confidentiality requirements are maintained, FEI commissions work in conjunction with other utilities (including its affiliate FortisBC Inc. (FBC)) to share information and costs with the intent to manage its costs prudently while obtaining the information required to meet its business needs.

Examples of joint work in the past where information and costs were shared include:

- Concentric Benchmarking Study for FEI and FBC that was prepared in support of FortisBC's 2020-2024 MRP Application;
- Conservation Potential Review (CPR) province-wide study completed in support of Demand Side Management (DSM) efforts by FEI and included BC Hydro and Pacific Northern Gas (PNG) as partners; and
- Joint development of a DSM management system/customer application portal, program development work and different activities and studies between FEI and FBC.

14.3 Please confirm or otherwise explain that the inflation identified by FEI exceeds that which is identified in the I-factor used for formulaic expenditures.

14.3.1 If yes, please comment on whether or not FEI considers the I-Factor calculation to remain as appropriate in light of the higher costs being experienced than those calculated using the I factor.

Response:

Confirmed. However, the inflation rates discussed in Section 7.2.1.1.1 of the Application are not comparable to the Inflation Factor (I-Factor). Please refer to the response to BCOAPO IR1 13.2 for a comparison between FEI's I-Factor and the inflation rates provided in the Wood Mackenzie Report, as well as an explanation for why the comparison is not appropriate. Please also refer to the response to BCUC IR1 3.3 for an explanation of why the I-Factor calculation remains appropriate.

15. Reference: Exhibit B-2, page 62

> 7.2.1.1.4 FEI HAS EMPLOYED MITIGATION STRATEGIES TO LIMIT COST PRESSURES
>
> FEI has successfully implemented a number of mitigation strategies to limit the impact of cost pressures since 2020, thus allowing FEI to manage the overall cost increases. These mitigation strategies include:
>
> - Reprioritizing projects, or components of a project (e.g., final paving) that could be safely re-scheduled to 2023 to accommodate other project cost increases that could not be deferred. While FEI has delayed some work with flexible timing to accommodate the increased capital demands in the first three years of the MRP term, this has only mitigated part of the capital pressures due to the magnitude of market and other pressures;
> - Entering into long-term supply contracts for many commonly used materials and service providers (e.g., engineering consultants, construction contractors, etc.);
> - Competitively tendering large materials and services contracts to ensure competitive pricing. FEI routinely competitively bids work that does not fall within the scope of the M&S contract, and recently competitively bid the M&S construction contract to market;
> - Communicating with critical suppliers and contractors to discuss issues and mitigation strategies;
> - Negotiating collective agreements with unionized FEI employees that provide longer-term stability for internal labour rates); and
> - Optimally allocating construction work to internal or external construction crews as appropriate.
>
> Despite the mitigation strategies listed above, due to the magnitude of the overall inflationary pressure seen by the North American gas utility markets, as shown by the Wood Mackenzie Report, FEI has not been able to fully mitigate the cost increases.

15.1 Please provide an estimate quantifying the value of the savings achieved by FEI's mitigation measures.

Response:

FEI estimates that mitigation measures have resulted in savings of approximately $10 million in 2022; however, it is difficult to quantify the savings with a high level of precision.

In the responses to RCIA IR1 4.2 and 4.3, FEI provided information on the average costs on a unit basis of pipe and meters, and the associated year-over-year percentage change in the cost for each. The cost increases seen in these categories are smaller than the 52.5 percent material market increase shown in the Wood Mackenzie Market Report in Appendix C1.

16. Reference: Exhibit B-2, page 65

> **Capital Expenditures to Support Energy Efficiency and GHG Reductions**
>
> 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. These expenditures consist of projects that will result in reduced electrical and natural gas usage in FEI's facilities and/or will result in GHG emissions reductions. Where applicable, the planned projects are aligned with the ISO 50,001 Energy Management Standard, and enable FEI to prepare for the impacts of climate change and the transition to net-zero emissions. These planned projects will improve FEI's buildings' energy efficiency, support the adoption of electric vehicles, and contribute to efforts towards climate change and the Province's CleanBC Plan targets.
>
> FEI is pursuing energy management and GHG emissions reduction opportunities for its buildings as part of the Company's climate action initiatives, including energy management activities related to climate adaptation, mitigation, and resiliency for buildings. FEI also plans to install EV charging infrastructure at FEI's facilities for fleet use.
>
> 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.

16.1 Please provide FEI's spending to date related to the $1.8 million for energy efficiency and GHG reductions.

Response:

FEI clarifies the $1.8 million forecast related to energy efficiency and GHG reductions under FEI's Other Capital are for each of 2023 and 2024. There has been no spending to date related to the $1.8 million forecast for energy efficiency and GHG reductions in the Facilities area.

16.2 Please explain how these expenditures differ from FEI's DSM planned expenditures.

Response:

FEI Demand-Side Management (DSM) Plan expenditures are to support energy efficiency and conservation measures to reduce energy use among residential, commercial, and industrial customers. DSM Plan expenditures are governed by the *Demand-Side Measures Regulation*. FEI does not access funding from the FEI DSM Plan expenditures for its own facilities.

The $1.8 million forecast in FEI's Other Capital for energy efficiency and GHG reductions is for FEI's own facilities which include offices as well as infrastructure to support electric vehicles for use by internal fleets and employees.

17. Reference: Exhibit B-2, page 73

7.2.3.2.2 GIBSONS CAPACITY UPGRADE PROJECT

In addition to the approved projects described above, FEI is requesting acceptance under section 44.2(3) of the UCA of a capital expenditure schedule consisting of the capital expenditures for one new Major Project, the Gibsons Capacity Upgrade (GCU) project. This project is further described below and in Appendix C3.

In the MRP Application (Section 3.3.3, page C-77), FEI identified the GCU project as a Major Project (the GCU project was referred to as the FEI Sunshine Coast Capacity Upgrade project in the MRP Application). At the time of filing the MRP Application, FEI had anticipated that the GCU project would exceed the $15 million materiality threshold and would therefore be filed as a CPCN application at some point during the MRP term. However, through further refinement of the preliminary project scope and associated cost estimate, FEI was able to arrive at a lower cost solution which has resulted in the forecast project cost being lower than originally contemplated

in the MRP Application and below FEI's CPCN materiality threshold of $15 million. FEI is therefore filing for approval of the GCU project pursuant to section 44.2 of the UCA as part of this Application. FEI has included a detailed business case to support the project in Appendix C3 to this Application, which is summarized briefly below.

Table 7-13: Forecast of Expenditures for the GCU Project ($ millions)

Line No.	Description	Prior Years Actual	2022 Projected	2023 Forecast	2024 Forecast	Total
1	Preliminary Development (Deferred Costs)	0.978	-	-	-	0.978
2	Project Capital Costs	0.794	2.380	6.950	0.190	10.314
3	Subtotal	1.772	2.380	6.950	0.190	11.292
4	AFUDC	0.018	0.129	0.457	0.298	0.902
5	Total Project Costs	1.790	2.509	7.407	0.488	12.194

17.1 Please provide details of the changes in preliminary project scope which resulted in the project being lower cost than previously anticipated, and please elaborate on any different outcomes that are projected as a result of the change in scope.

Response:

Please refer to the response to BCUC IR1 34.1 for details on the changes in project scope and costs.

All alternatives considered as part of the GCU project meet the project objectives, and there are no different outcomes in terms of meeting the capacity need in this area resulting from the change in scope.

17.2 Please provide quantification of the major cost changes arising in the revised project scope.

Response:

Please refer to the response to BCUC IR1 34.1.

18. Reference: Exhibit B-2, Appendix C3, page 2 and page 11

> Since 1990, the Gibsons area has been serviced by a 20 km 88 mm Intermediate Pressure (IP) pipe that starts at the town of Sechelt (shown in the upper left corner of Figure C3-1 above). The IP pipe operates at 3,100 kPag which is the standard IP pressure for the Vancouver Island and Sunshine Coast system. 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.
>
> **2.3.2 Advantages**
>
> - Opportunity to implement new technology within FEI as a non-pipe solution to a capacity shortfall;
> - Minimizes amount of new pipeline required, and maximizes utilization of existing assets; and
> - Significantly lower cost than the other alternatives.

18.1 Please elaborate on the use of 'higher than contracted heating values present in the natural gas network'.

Response:

FEI clarifies that what it intended in reference to "contracted heating values" was the heating value associated with FEI's minimum gas quality specification. Gas meeting that minimum specification has a lower energy content than the heating value FEI uses for long-term planning or that is currently supplied in the system. Please refer to the response to BCUC IR1 33.5 for a discussion and elaboration on the variation in heating values present in the system.

18.2 Please elaborate on the benefits that may accrue from implementing new technology and how this might be used to benefit FEI and ratepayers in the future.

Response:

While CNG is not a new technology, the concept of a slow fill CNG peak shaving facility is a new application of this technology for FEI. As demonstrated in the financial analysis in Appendix C3, this solution provides significant capital cost savings when compared to the pipeline solutions in this location. This type of solution may be appropriate to implement elsewhere in the FEI system as capacity constraints arise. It allows for FEI to take advantage of seasonal fluctuations in gas consumption and increase capacity in high demand months without needing to install (in some cases) more expensive pipe looping projects. This may not be the case in every situation, but it could be the lowest cost solution in other locations as well.

Having a lower cost alternative will benefit customers by minimizing rate increases related to system capacity expansions. Benefits to FEI could include minimizing the amount of pipe installed in municipal roadways which minimizes the exposure to third-party damage, and expanding the technical knowledge of internal resources (Engineering, Asset Management, Operations and other groups).

18.3 Please provide the cost for a CNG trailer and the CNG fuel stored on the trailer.

Response:

The cost of a CNG trailer and associated CNG fuel in the trailer for the winter season is approximately $314 thousand in 2022 dollars. Costs for mobilizing/demobilizing the trailer, a pressure reduction system to inject the CNG into the system, and a compressor to allow FEI to refill the trailer for the duration of the winter season increases this cost to a total of approximately $882 thousand in 2022 dollars.

19. Reference: Exhibit B-2, page 87

> The 3-month T-Bill forecast for 2023 is 3.14 percent, which is a significant increase from the 0.47 percent approved in 2022. FEI is in a rising interest rate environment due to high inflation, Russia's invasion in Ukraine, and the removal of monetary policy actions that were prevalent during the initial years of the COVID-19 pandemic (i.e., 2020 and 2021). In addition, on July 13, 2022 the Bank of Canada completed its fourth rate hike of the year, raising the benchmark interest rate to 2.5 percent from 0.25 percent at the beginning of 2022 and signalling that more rate hikes will be announced in 2022. The market volatility is expected to persist given many ongoing elevated risk variables.

19.1 Please describe the many ongoing elevated risk variables referenced in the excerpt.

Response:

The many ongoing elevated risk variables that are expected to persist are the ones already referenced in the excerpt and are as follows:

- Removal of monetary stimulus (rate hikes and bond purchase tapering) driving significant increases in interest rates;
- Building inflation (and recession) concerns;
- Elevated geopolitical risks including "black swan" risk events such as the ongoing war in Ukraine;
- Investor cash outflows from fixed income given year-to-date returns; and
- Decreased liquidity.

Inflation has been a major concern in the Canadian economy over the course of 2022 with inflation reaching approximately 8 percent in July 2022,[3] a significant increase from the typical average inflation range of 1-2 percent over the last 20 years.

In the face of high inflation, the Bank of Canada raised its target for the overnight rate five consecutive times in 2022 (March, April, June, July, and September) from 0.25 percent at the beginning of the year to 3.25 percent as of September 7, 2022.

All of these factors have caused significant volatility in the debt capital markets this year. While credit spreads have proven resilient and recovered from mid-year highs, upward pressure on risk assets such as equities and corporate bonds are expected to continue amidst tightening financial conditions as discussed above.

These risk variables show no imminent signs of abating.

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3 https://www.bankofcanada.ca/rates/price-indexes/cpi/..

20. Reference: Exhibit B-2, page 94

> ## 10.2 Earnings Sharing
>
> In the MRP Decision (at page 82), the BCUC approved an earnings sharing mechanism from 2020 to 2024 whereby 50 percent of the achieved ROE above or below the allowed ROE will be shared with customers. Since FEI is unable to determine final earnings sharing until all items required for the ROE calculation are known, including the final rate base, there is a lag in when FEI distributes earnings sharing amounts. This is consistent with the calculations of formula O&M and growth capital, where the true-up of the formula inputs happens only once actuals are known. Thus, for 2023 delivery rates, it is the 2021 formula O&M, 2021 growth capital, and 2021 earnings sharing amounts that are calculated and impact rates in 2023.
>
> For 2023, FEI proposes to distribute a $0.377 million pre-tax credit ($0.275 million after-tax) to customers, comprised of:
>
> - The $0.122 million credit difference between the projected 2021 deferral account after-tax credit addition of zero embedded in 2022 delivery rates, and the actual 2021 deferral account after-tax credit addition of $0.122 million as provided in FEI's 2021 Annual Report to the BCUC;
> - The $0.132 million credit difference between the projected 2021 financing addition of $0.068 million credit[67] and the actual 2021 financing addition of $0.200 million credit, as provided in FEI's 2021 Annual Report to the BCUC;
> - The $0.014 million credit difference between the forecast 2022 financing addition of $0.035 million credit[68] embedded in 2022 delivery rates, and the projected 2022 financing addition of $0.049 million credit embedded in this Application; and
> - 2023 forecast financing of a $0.007 million credit.[69]
>
> FEI proposes to distribute $0.377 million to customers in 2023 as a reduction in 2023 revenue requirements through amortization of the projected 2023 opening after-tax balance and 2023 financing of $0.275 million in the MRP Earnings Sharing deferral account.
>
> As part of future rate filings, the actual earnings sharing for 2022 will be distributed to or collected from customers in a similar manner as described above, which will account for the actual 2022 ROE variance from approved.

20.1 Please identify the deferral account referenced in the first bullet point.

Response:

The deferral account referenced in the first bullet point is the MRP Earnings Sharing deferral account. All four bullet points describe activity in the MRP Earnings Sharing deferral account. The cumulative total of the adjustments described in the first three bullet points of $0.268 million credit ($0.122 million + $0.132 million + $0.014 million) can be found in Section 11, Schedule 12, Line 20, Column 2 of the Application (i.e., the ending 2022 balance of the MRP Earnings Sharing deferral account). The financing amount for 2023 of $0.007 million credit described in the fourth bullet can be found in Section 11, Schedule 12, Line 20, Column 4.

20.2 Please confirm that the bullet point values are all after-tax.

Response:

Confirmed.

20.3 Please elaborate further on the purpose and expectations of the financing additions difference identified in bullet point #2, and provide the calculation of $0.132 million credit.

Response:

The MRP Earnings Sharing deferral account was approved as a non-rate base deferral, attracting a weighted average cost of capital (WACC) return via the inclusion of carrying charges within the account, by Order G-162-14 (FEI notes that at that time, the deferral account was titled the "Earning Sharing Account"). The use of this account and the non-rate base classification with a WACC return was extended for the duration of the MRP term by Order G-165-20.

The $0.132 million credit is the true-up between the actual 2021 financing credit of $0.200 million recorded in the MRP Earnings Sharing deferral account compared to the $0.068 million financing credit that was projected for 2021 in the Annual Review for 2022 Delivery Rates.

The projected financing credit of $0.068 million was calculated using the 2020 actual ending balance in the deferral account and projected 2021 additions of zero, multiplied by the 2021 approved WACC rate. The calculation of the actual $0.200 million financing credit is more complex and uses not only the actual opening balance in the deferral, but mid-month actual additions to the deferral account to derive monthly financing amounts. This results in a difference between the projected and actual financing amounts within the deferral.

However, customers ultimately receive the full benefit of the actual 2021 financing amount of $0.200 million credit via the inclusion of the $0.068 million WACC credit in 2022 customer delivery rates and the further inclusion of the $0.132 million WACC credit in 2023 customer delivery rates.

20.4 Please elaborate further on the purpose and expectations of the financing additions difference identified in bullet point #3, and provide the calculation of $0.014 million credit.

Response:

The $0.014 million credit is the true-up between the projected 2022 financing credit of $0.049 million that is projected in the MRP Earnings Sharing deferral account in this Application compared to the $0.035 million financing credit that was forecast for 2022 in the Annual Review for 2022 Delivery Rates.

The forecast 2022 financing credit of $0.035 million was calculated using the 2020 actual ending balance in the deferral account, projected 2021 and forecast 2022 deferral account additions of zero, and 2021 projected credit of $0.068 million, all multiplied by the 2022 forecast WACC rate. The calculation of the 2022 Projected $0.049 million financing credit has been trued-up to include the 2021 Actual ending balance in the deferral account and 2022 Projected deferral account additions of zero, multiplied by the 2022 approved WACC rate. The resulting difference between the two calculations is the $0.014 million credit.

Customers will ultimately receive the full benefit of the actual 2022 financing amount over time as follows:

- the 2022 Forecast $0.035 million financing credit was included in 2022 customer delivery rates;
- the $0.014 million financing credit true-up between the 2022 Projected financing credit of $0.049 million included in this Application and the $0.035 million 2022 Forecast financing credit included in the Annual Review for 2022 Delivery Rates is included in 2023 delivery rates; and
- the true-up between the actual 2022 financing amount compared to the $0.049 million credit returned to customers so far will be included in 2024 delivery rates.

20.5 Please elaborate further on the purpose and expectations of the 2023 forecast financing of $0.007 million credit.

Response:

The $0.007 million credit is the 2023 Forecast financing credit in this Application. It is calculated using the cumulative true-ups described in the first three bullet points above of $0.268 million (i.e., the 2023 Forecast opening balance of the deferral account), and 2022 Projected and 2023 Forecast deferral additions of zero, multiplied by the 2023 Forecast WACC rate on a mid-year basis.

Customers will ultimately receive the full benefit of the actual 2023 financing amount over time as follows:

- the 2023 Forecast $0.007 million financing credit is included in 2023 customer delivery rates;
- the true-up between the 2023 Projected financing included in the Annual Review for 2024 Delivery Rates and the $0.007 million 2023 Forecast financing credit included in this Application will be included in 2024 delivery rates; and
- the true-up between the actual 2023 financing amount compared to the 2023 Projected financing in the Annual Review for 2024 Delivery Rates will be included in 2025 delivery rates.

21. Reference: Exhibit B-2, page 101

10.3.3 Clean Growth Innovation Fund (CGIF)

The collection of the $0.40 per month innovation rider commenced on August 1, 2020 and is forecast to collect $5.2 million in 2023.

Table 10-6 below shows the amounts collected and the amounts expended for clean growth projects since the inception of the Fund to the end of 2023. 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.

Table 10-6: Clean Growth Innovation Fund 2020-2023 Deferral Account Continuity ($millions)

	Actual 2020	Actual 2021	Actual Jan-June 2022	Projected July-Dec 2022	Forecast 2023
Opening Balance	**$ -**	**$ (0.791)**	**$ (3.816)**	**$ (5.545)**	**$ (6.739)**
Gross Additions	1.022	1.127	0.372	1.128	2.500
Rider recoveries	(2.099)	(5.093)	(2.567)	(2.552)	(5.158)
Tax	0.291	1.071	0.593	0.384	0.718
AFUDC	(0.005)	(0.130)	(0.127)	(0.154)	(0.422)
Closing Balance	**$ (0.791)**	**$ (3.816)**	**$ (5.545)**	**$ (6.739)**	**$ (9.101)**

To date, FEI has completed four portfolio reviews with approved spending of $4.3 million, with a further two portfolio reviews anticipated by year-end 2022. The fund approvals are generally focused on the production and delivery of renewable gases (renewable natural gas, syngas, hydrogen), carbon capture, as well as funding FEI's participation in broad low-carbon research activities such as the Low-Carbon Resource Initiative, which is a joint initiative between the Electric Power Research Institute and GTI Energy to accelerate the development and demonstration of low- and zero-carbon energy technologies.

21.1 Please explain if and when FEI expects future spending will match/offset the significantly increasing balance in the account.

<u>Response:</u>

Spending in 2023 is expected to increase to $2.5 million from $1.5 million in 2022 and FEI anticipates further increases in future years as it continues to expand the number of qualified proposals it is receiving. Please also refer to the responses to BCSEA IR1 13.6 and BCOAPO IR1 11.4.

22. Reference: Exhibit B-2, page 103

Table 10-7: Approved and Rejected Spending for Portfolios One through Four ($ millions)

	Portfolio 1	Portfolio 2	Portfolio 3	Portfolio 4	Total
Approved	$1.5	$0.5	$1.7	$0.6	$4.3
Rejected, Cancelled or Deferred	$0.2	$3.2	$1.8	$0.2	$5.4

"Rejected, Cancelled or Deferred" are proposals that did not meet the CGIF criteria from the outset, proposals that were approved and subsequently cancelled by one or more parties, and proposals that have merit but require further changes to meet the CGIF criteria. In some cases, Conservation and Energy Management (C&EM) Innovative Technologies has funded projects that were better aligned with its criteria as compared to the CGIF criteria.

22.1 Please provide brief descriptions of the projects that were rejected, cancelled, or deferred and please provide a brief statement as to why.

Response:

Projects that have been rejected are generally those that did not match the CGIF selection criteria (broadly speaking, the projects would not reduce costs for FEI customers and/or reduce emissions in BC) or that FEI did not believe had a valid business model. These projects have included:

- Proposals that make electricity from waste heat or pressure. These do not contribute to emissions reductions in BC.
- Proposals that only reduce the demand for natural gas for a specific end-use (these are referred to the Conservation and Energy Management Innovative Technologies team for potential funding).
- Proposals that would create medium and heavy-duty diesel/natural gas hybrid engines (these are not of interest to trucking companies).

Projects that have been deferred are ones that, while rejected, were sent back to the proponent for revisions that may make them eligible for CGIF funding. These projects have included:

- Combined Heat and Power projects that do not support 100 percent hydrogen as a fuel. Otherwise, these initiatives are simply creating electricity from waste heat without reducing emissions.

Cancelled projects are those that have been cancelled by the proponent. This has happened once with an industrial hydrogen blending project.

23. Reference: Exhibit B-2, page 149

> **12.2.1.3.2 O&M COST REDUCTIONS OFFSET INCREASED COSTS**
>
> The cost reductions that FEI achieved consist primarily of lower employee expenses, in part as a response to the travel restrictions, including in and out of Province travel, and the effect that the COVID-19 pandemic has had on social interactions. Employee expenses that were not incurred due to the COVID-19 pandemic include course fees, travel, meals and accommodation, Company function expenses, and employee hiring and relocation expenses.
>
> For the years 2020 and 2021, the reduced employee expenses were estimated at approximately $8.25 million.

23.1 Please further elaborate on the effect of COVID-19 on social interactions and the implications for FBC.

Response:

FEI has assumed this question was intended for FEI, not FBC, although the response would be similar.

Because of the need to maintain appropriate physical distancing during the COVID-19 pandemic, the opportunity to be in-person and the number of in-person social interactions between employees and customers and other stakeholders were limited. In response to requirements for physical distancing restricting social interactions during the COVID-19 pandemic, FEI introduced travel restrictions for its employees. Stricter rules were applied regarding the need and approval for travel, with VP approval at times required for travel to different locations inside and outside of the Province. This led to holding more business meetings remotely using Microsoft Teams instead of traditional in-person meetings that would have taken place with customers and with government, and for employee development, training and collaboration.

The limitation on social interactions and travel did not have a significant and noticeable impact on FEI's ability to operate and maintain its assets and service its customers, as evidenced by the overall performance of the suite of service quality indicators in 2021. It did, however, limit the use of a traditional channel for effective engagement and communication for FEI's employees and made FEI's business development, customer engagement and employee collaboration more challenging.

FEI provides natural gas service to over 1 million customers in 135 communities in British Columbia and has offices and sites throughout the Province. FEI also owns and operates approximately 50,000 km of natural gas lines in the Province. Due to the geographic footprint of its operations, some level of travel is required. With the physical distancing restrictions due to the COVID-19 pandemic removed, FEI's employees once again have the option to interact in-person in more situations, along with the ability to continue using technology and web-based communication software such as Microsoft Teams for other situations. For example, the Energy Solutions team is now travelling and meeting with customers and stakeholders in-person again, helping to establish/re-establish connections, while all departments have become comfortable with continuing to use Microsoft Teams to minimize travel where possible.

23.2 Please describe the purposes of travel that FBC employees were expecting to take both within the province and outside the province.

Response:

Please refer to the response to CEC IR1 23.1.

23.3 Please confirm or otherwise explain that the travel restrictions did not result in significant detriments to FBC's operations.

Response:

Please refer to the response to CEC IR1 23.1.

23.4 In what ways did FEI adapt its operations to account for travel restrictions?

Response:

Please refer to the response to CEC IR1 23.1.

23.5 Please provide FBC's average travel budget in a non-COVID-19 year.

Response:

FEI has assumed this question was intended for FEI, not FBC.

Based on FEI's O&M employee travel expenditures in 2017, 2018 and 2019 (i.e., the three years prior to the COVID-19 pandemic), the average annual travel cost is approximately $3 million.

23.6 Considering that opportunities for Zoom, and other web-based meetings have now become commonplace, please explain how FBC expects to make use of these on a permanent basis, and the expected savings that FBC can achieve annually using such technologies.

Response:

FEI has assumed this question was intended for FEI, not FBC, although the response would be the similar.

Please refer to the discussion of the productivity initiative "Technology Investments to Support Enhanced Communications" (page 5 of the Application) on how FEI expedited the use of the Microsoft Teams platform, introduced enhancements, and plans to invest in further enhancements to enable employees to productively work remotely.

FEI views the Microsoft Teams platform as an important contributor to creating a productive work environment for its employees to complete their work, with the benefit of not requiring time away from the home office and lost productivity. It was, and continues to be, a platform to reduce travel requirements for staff, providing options to meet in person less often, which enables continued savings on fuel costs, hotels, meals, and wear and tear on vehicles.

At this time, FEI is not able to quantify any expected permanent lower employee costs as a result of using Microsoft Teams. While there have been reduced costs to date with the adoption of the technology, higher costs for employee travel related costs experienced recently due to high inflation may likely serve to offset some of the lower costs observed. Also, FEI may be required to reprioritize some of the funding to help with managing other cost pressures that the Company may experience in other parts of its business. In accordance with the approved treatment under FEI's 2020-2024 MRP, should there be any remaining cost reductions, these are shared equally with customers under the earnings sharing mechanism.

24. Reference: Exhibit B-2, page 150 and 151

> However, upon further review of FEI's original proposal, FEI has concluded that a better approach is to record these amounts in the Flow-through deferral account. This approach is preferable for three reasons:
>
> 1. It is consistent with the treatment of other exogenous items;
> 2. It will allow the O&M and Late Payment Charge Revenue reported in the Annual Reports to be more reflective of the actual amounts incurred, as using the Flow-through deferral account does not result in direct adjustments to O&M or Late Payment Charge Revenue, but rather one catch-all account for all flow-through adjustments. Alternatively, transferring the actual O&M savings or Late Payment Charge shortfall directly to the COVID-19 Customer Recovery Fund Deferral Account would result in those respective O&M and Other Revenue actual amounts being effectively booked back to the forecast amounts; and
> 3. The COVID-19 incremental savings will be returned to customers immediately in 2023, as opposed to over three years, which is the amortization period being proposed for the COVID-19 Customer Recovery Fund Deferral Account in Section 7.5.2.1.
>
> From a customer perspective, there is no negative impact from the proposed change in treatment as customers will still have the full net savings returned to them. The benefit of the proposed treatment, as described above, is that the net savings will be returned to customers over one year as opposed to three years.
>
> As such, FEI has included the O&M and Late Payment Charge amounts shown above in the 2022 Flow-through projection provided in Table 12-5 below, on Lines 15 and 27 respectively, so that the net amounts will be returned to customers in 2023 via the amortization of the Flow-through deferral account forecast in this Application.

24.1 Please elaborate on the implications of the O&M and Other Revenue being 'effectively booked back to the forecast amounts'. Please consider both FEI's and the customers' perspectives.

<u>Response:</u>

While still accurate and a valid method to reflect actual costs in rates, the main implication of an accounting approach that effectively books back to forecast amounts in a scenario like this is that it is less direct and as such, it may result in less clarity or visibility of actual amounts. Please refer to BCUC IR1 29.1 for the journal entries related to both approaches and the financial statement implications of both approaches.

For clarity, there is no impact to FEI from a financial perspective under either approach (i.e., both approaches fully return the exogenous factor savings to customers). For customers, there is similarly no impact in terms of the amount of savings returned under either approach. As explained in the Application and provided in the preamble, from a customer perspective, the only notable difference is that the savings will either be returned immediately (i.e., through the Flow-through deferral account) or over three years (i.e., through the COVID-19 Customer Recovery Fund Deferral Account).

25. Reference: Exhibit B-2, page 155

> ***12.2.2.3 Summary Potential Exogenous Factor for Flooding***
>
> As outlined above, the total incremental capital and O&M costs related to the flooding event are currently expected to be $3.3 million, which includes actual costs for 2021 and 2022 as well as forecast costs for the remainder of 2022 (i.e., $1.761 million of capital and $1.540 million of O&M). FEI has submitted an insurance claim to recover the total O&M and capital costs. As part of the same insurance claim, FEI has also submitted a claim to recover the approximately $0.9 million in evacuation relief bill credits provided to customers related to the flooding incident. If FEI's insurance claim is successful, FEI's net incremental costs would be limited to the $1 million insurance deductible. However, until the insurance claim has been settled, FEI will not know the total cost related to the flooding, as FEI may receive all, partial or no reimbursement.
>
> At this time, FEI is unable to predict when the insurance claim is likely to be settled. However, once the insurance claim has been settled, FEI will determine if exogenous factor treatment is warranted and will file for approval of exogenous factor treatment, if applicable, in a future rate filing.

25.1 Please provide any update available on the insurance claim. Has there been any progress on settlement and is there any reason to expect that it will not be successful? Please explain.

<u>Response:</u>

The FEI insurance claim submission is still in progress. FEI does not have any reason to expect that it will not be successful at this time. However, until the insurance claim has been settled, FEI will not know if all or partial reimbursement will be received.

25.2 If the claim is successful, would the $1 million insurance deductible warrant exogenous treatment? Please explain why or why not.

<u>Response:</u>

FEI is unable at this time to definitively state if the insurance deductible would warrant exogenous factor treatment. While the flooding event itself is clearly an exogenous factor event due to its unforeseen nature, and the cost of the insurance deductible is entirely attributable to the flooding event and was prudently incurred (as evidenced by the fact that, if the insurance claim is successful, FEI's total cost outlay will be limited to the $1 million insurance deductible), FEI will need to determine if the amount exceeds the exogenous factor threshold.

Similar to the calculation that FBC performed when determining the total exogenous factor costs resulting from the Nk'Mip Creek wildfire (see Appendix A to the Evidentiary Update in the FBC Annual Review for 2022 Rates), FEI would need to determine the amount of flooding repair costs currently embedded in formula O&M and regular sustainment capital, and subtract that amount from the $1 million insurance deductible. If, after netting out the embedded costs the remaining cost exceeded the exogenous factor materiality threshold of $0.500 million, exogenous factor treatment would be warranted.

As stated in the Application, FEI will determine if exogenous factor treatment is warranted and will file for approval of exogenous factor treatment, if applicable, in a future rate filing.

25.2.1 Assuming exogenous treatment is warranted, when does FEI expect to recover the costs of the flooding from ratepayers?

Response:

The timing of when FEI expects to recover the costs of the flooding from customers will be dependent on the results of the insurance claim; however, it is reasonable to assume the costs would be collected in the year following the settlement of the insurance claim.

In the scenario where FEI receives full recovery of the costs and the insurance claim is successful, and assuming exogenous treatment is warranted, FEI will file for approval of exogenous factor treatment in a future rate filing, as discussed in the response to CEC IR1 25.2. Under the assumption that the future rate filing is the Annual Review for 2024 Delivery Rates, and assuming the claim is settled prior to that filing and assuming the mechanism proposed to recover the costs is the Flow-through deferral account, FEI would include the amounts in the 2023 Flow-through projection in the 2024 Annual Review and would amortize the costs into customer delivery rates in 2024.

The same timing (as described above) would apply if the insurance claim is unsuccessful and FEI proposes to record the exogenous factor costs in the Flow-through deferral account.

26. Reference: Exhibit B-2, page 165 and 172-173

Meter Reading Accuracy	Number of scheduled meters that were read	>= 95%	92%	88%	86%

The June 2022 year-to-date performance is 86.3 percent which is below the threshold. Staffing challenges attributable to the impacts of the Omicron variant experienced in the early part of the year, as well as overall labour shortages, have contributed to this below threshold result. FEI has continued to apply the mitigation measures described above throughout 2022. While year-to-date performance remains below threshold, significant improvement and consistent monthly

performance of this metric has been experienced starting in April of 2022 (91 percent for the month of April, 89 percent for the month of May, and 91 percent for the month of June), with the year-to-date performance trending upwards over the three months. FEI continues to work closely with Olameter on their improved performance and as such, barring the impact of any extreme weather or other unforeseen events, FEI expects Olameter to continue to meet the threshold and achieve the benchmark on a monthly basis for the remainder of the year.

[86] The BCUC anticipated this impact in Letter L-20-20, which granted public utilities relief from meter reading, when necessary, for the duration of the State of Emergency in the Province of BC and while social distancing practices remain in place. In BCUC Letter L-20-20, dated March 31, 2020, the BCUC stated:

26.1 Does FEI have performance metrics associated with its contract with Olameter? Please explain and, if so, please elaborate on the metrics, and if no, please explain why not.

Response:

Yes, FEI has performance metrics associated with its contract with Olameter as shown below:

Performance Standard	Definition	Performance Level
Meter Reading Accuracy	The number of correct monthly meter reads divided by the total number of regular reads on a monthly basis.	98%
Meter Reading Completion	The number of actual monthly meter reads obtained within the meter reading window as a percentage of the monthly meter reads requested.	95%
Monthly Reading Window Distribution	The number of monthly meter reads obtained in each workday within the meter reading window. The performance level is to be obtained on the first two workdays in the meter reading window.	80%
Accuracy – Off-Cycle Reads	The number of correct off-cycle reads divided by the total number of off-cycle reads, captured on a monthly basis.	99%
Completion – Off-Cycle Reads	The number of actual off-cycle reads assigned to and completed on or before the required date as a percentage of off-cycle reads requested on a monthly basis.	90%

Performance Standard	Definition	Performance Level
Resolution – Customer Escalations	All issues raised by customers and brought to the attention of the Contractor to be responded to within two business days and resolved within three business days or in a timeframe agreed to with the customer.	98%

1

27. Reference: Exhibit B-2, page 174

> Customer Service is experiencing higher than expected levels of attrition, having lost 65 Customer Service employees in 2021.[89] More than half of the employee exits were in the last half of 2021, resulting in fewer and less experienced employees prepared to support call volumes in the first quarter of 2022. To mitigate the impact of this, FEI accelerated the timing of planned new hire classes as well as the size of new hire classes in both 2021 and 2022. While some success has been achieved, FEI has continued to face challenges recruiting and retaining newly hired contact centre employees in 2022. In addition, it takes on average approximately 12 months for new employees to be proficient and fully trained in order to support all customer inquiries and calls, and as such, average call handle times remain higher than normal while a greater portion of employees gain this experience.
>
> [88] FEI experienced approximately 20,000 high bill inquiries in Q1 2022 which compares to an average of approximately 7,800 in the first quarter for the four-year period 2018-2021.
>
> [89] This is approximately 50 percent more employees than typical. In a typical year, customer service experiences employee attrition in the range of 40-50 employees.

27.1 Please provide FEI's views on why it experienced such significant attrition in its Customer Service employees.

Response:

FEI has limited information on the specific reasons why more attrition occurred in 2021 than recent years.

All employees exiting the Company are invited to participate in exit interviews. Exit interviews are offered so that FEI may better understand if there are any trends behind the reasons given for the exits. Of the 65 Customer Service employees that left in 2021, 22 completed an exit interview. The primary reason cited for leaving FEI was family and/or a personal change in circumstances.

27.2 Does FEI conduct exit interviews? Please explain why or why not, and if so, please provide the primary causes identified by customer service employees for leaving.

Response:

Please refer to the response to CEC IR1 27.1.

27.3 Please explain whether or not FEI will benefit from the reduction in staff, and if so in what ways.

Response:

Under the 2020-2024 MRP and the earnings sharing mechanism, any reduction in staff resulting in O&M savings are shared equally with customers and FEI. While there is some benefit to staff reductions from a financial perspective, the reduction in staff described in the preamble was not a purposeful attempt by the Company to create O&M savings through reduced staff. The higher levels of attrition are an issue being faced by many industries and organizations and FEI is working to overcome this issue.

FEI makes every effort to hire and retain staff to meet its business needs. As part of its forecasting process for anticipated workload for the customer service department, several factors are taken into account, such as expected future customer growth, historical volumes, impact of upcoming major projects, forecast attrition, etc., and then a plan is devised to hire staff at regular intervals throughout the year.

When FEI experiences more than forecast attrition, such as was experienced in 2021, it creates challenges and may negatively impact the Company's ability to effectively meet customer needs, which can be reflected in the annual SQI results.

Accordingly, FEI endeavors to maintain staffing levels that enable high service quality for customers while also considering efficiencies or improvements that will result in O&M savings and/or service quality enhancements for customers.

27.4 Please quantify any cost savings that will result in savings/benefits to FEI as a result of the reduction in customer service employees.

Response:

FEI does not track costs specific to attrition; however, based on total labour costs experienced for the year, the approximate net savings associated with the attrition of the 65 MoveUP employees in 2021 was limited to approximately $100 thousand, of which half was shared with customers. This is because the savings from this group of employees were partially offset with additional costs such as increased overtime and additional new hire classes. For 2022, minimal net O&M savings are expected because of the volume of overtime, training and additional new hires required to offset the impacts of attrition from both late 2021 and 2022 year to date.

27.5 Please describe and quantify the loss of service caused by the loss of the customer service employees.

Response:

Due to the presence of multiple factors that may impact service at any given time, FEI is unable to isolate the impacts of one factor on a standalone basis. However, and generally speaking, due to the timing of the attrition experienced in 2021, impacts on service associated with attrition appear to be largely focused in the first quarter of 2022. That is, despite the attrition in 2021, the 2021 annual non-emergency Telephone Service Factor (TSF) performance of 70 percent met the benchmark and is considered acceptable, the 2021 First Contact Resolution (FCR) metric was greater than the benchmark at 79 percent, the Billing Index was better than the benchmark at 0.9 and with respect to informational indicators, both the Customer Service Index (CSI) and the Average Speed of Answer (ASA) were within normal range.

Further, while FEI is unable to isolate the impacts of each factor, as described in the Application on page 174 (TSF non-emergency), the higher than normal attrition levels being experienced in the contact centre coupled with rate increases, colder weather and higher than normal meter reading estimates contributed to the 2022 year-to-date (June 2022) performance for TSF (non-emergency) at below the threshold. While the TSF was impacted in the first part of the year, FEI has been improving the TSF starting in May with performance close to or higher than the 70 percent benchmark in the three subsequent months since then (please refer to the table below). As stated in the Application, FEI is expecting to recover on a year-to-date basis to the threshold level of 68 percent within the fourth quarter, which is considered acceptable under the MRP, with no loss in service to customers.

For the informational indicator ASA, higher than normal attrition levels have also contributed to 2022 performance levels as described in the Application on page 176. This is expected to improve in the remaining part of the year to more typical levels. This is evidenced by the improvement to less than one minute in May 2022 and which has continued in the following three months (please refer to the table below). FEI expects to continue this performance in the rest of the year, resulting in the annual ASA being closer to 60 seconds and consistent with recent years.

At this time, FEI expects the ASA to perform at historical levels in the 60 seconds range for subsequent years; however, various factors, such as higher than expected attrition and variances in call volumes and call types from forecast, may impact the results achieved.

In all cases, to mitigate the impact of attrition on service to customers, FEI adjusts hiring and training plans and makes use of overtime where possible. In addition, FEI continues to focus on FCR to ensure that overall service quality remains high. Thus, despite the challenges faced in the early part of 2022, customers continued to identify a high level of quality service received as supported by the 2022 year-to-date FCR and CSI results that are at the benchmark and within the normal range, respectively.

The following table provides the monthly non-emergency TSF and ASA results for January through August 2022:

SQI	January	February	March	April	May	June	July	August
TSF (%)	37%	48%	58%	63%	83%	79%	66%	76%
ASA (seconds)	228	189	75	67	25	29	59	33

28. Reference: Exhibit B-2, page 174 and 175

> Although the start of 2022 has been challenging, strong performance in first contact resolution, in addition to the promotion of self-service and the call back feature, continues to mitigate the impacts of lower TSF on customer experience and service quality. Further, recovery of the non-emergency TSF to above benchmark began in May and positive progress continues (83 percent for the month of May and 79 percent for the month of June), with FEI expecting to recover to threshold levels on a year-to-date basis within the fourth quarter. Finally, the customer service index has remained high throughout 2021 and 2022 to date, indicating that the mitigation measures and focus on first contact resolution continue to result in an overall high quality of service being experienced by customers.
>
> For comparison, the Company's results under the 2014 to 2019 PBR Plan, the 2020 and 2021 results and the June 2022 year-to-date results are provided below.

Table 13-10: Historical TSF (Non-Emergency) Results

Description	2014	2015	2016	2017	2018	2019	2020	2021	June 2022 YTD
Annual Results	75%	71%	71%	71%	71%	71%	70%	70%	61%
Benchmark[90]	75%	70%							
Threshold	68%								

28.1 Please provide the monthly Telephone Service Factor results for 2022.

Response:

Please refer to the response to CEC IR1 27.5.

29. Reference: Exhibit B-2, page 176 and 177

13.2.2.7 Average Speed of Answer

The Average Speed of Answer (ASA) is an informational indicator that measures the amount of time it takes for a customer service representative to answer a customer's call (seconds).

The 2021 result was 65 seconds. The June 2022 year-to-date performance is 104 seconds. As described above, challenges experienced in the contact centre resulted in monthly non-emergency TSF performance levels below the threshold. Comparatively, the ASA also experienced challenges, and so far in 2022, calls are being answered on average under two minutes. Aligned with the recovery to threshold levels of the TSF, the monthly ASA also returned to typical levels of less than one minute in May and FEI expects this metric to continue to decrease on a year-to-date basis throughout the remainder of the year.

For comparison, the Company's results under the 2014 to 2019 PBR Plan, the 2020 and 2021 results and the June 2022 year-to-date results are provided below.

Table 13-13: Average Speed of Answer

Description	2014	2015	2016	2017	2018	2019	2020	2021	June 2022 YTD
Annual Results	34	37	40	34	35	39	72	65	104
Benchmark	n/a								
Threshold	n/a								

29.1 Please provide the monthly results for 2022.

<u>Response:</u>

Please refer to the response to CEC IR1 27.5.

29.2 Please confirm or otherwise explain that the Average Speed of Answer results are directly related to the customer service staffing issues.

<u>Response:</u>

Please refer to the response to CEC IR1 27.5.

29.3 Does FEI expect to reach the half minute to 45 second level within the next year? Please explain why or why not.

Response:

Please refer to the response to CEC IR1 27.5.