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September 6, 2024

Commercial Energy Consumers Association of British Columbia
c/o Owen Bird Law Corporation
Vancouver Centre II
2900 – 733 Seymour Street
Vancouver, BC
V6B 0S6

Attention: Christopher P. Weafer

Dear Christopher P. Weafer:

Re: FortisBC Energy Inc. (FEI) and FortisBC Inc. (FBC) (collectively FortisBC)

Application for Approval of a Rate Setting Framework for 2025 through 2027 (Application)

Response to the Commercial Energy Consumers Association of British Columbia (CEC) Information Request (IR) No. 1

On April 8, 2024, FortisBC filed the Application referenced above. In accordance with the regulatory timetable established in BCUC Order G-165-24 for the review of the Application, FortisBC respectfully submits the attached response to CEC IR No. 1.

If further information is required, please contact the undersigned.

Sincerely,

on behalf of FORTISBC

Original signed:

Sarah Walsh

Attachments

cc (email only): Commission Secretary
Registered Interveners

1. Reference: Exhibit B-1, Chapter A, Page A-1, Lines 29-33; and Exhibit B-1, Chapter A, Page A-2, Lines 10-17

> Key influences in the operating environment that are becoming increasingly predominant are:
>
> - Policy direction and mandate from all levels of government towards decarbonization;
> - Challenges related to energy affordability; and
> - Addressing physical and cyber security, climate adaptation, and the ongoing need to invest in FortisBC's energy systems.
>
> With this context, FortisBC has proposed a Rate Framework that includes:
>
> 1. A term that provides incentive to perform and the capacity to focus on key issues, while acknowledging the current level of uncertainty in the operating environment;
> 2. Sufficient funding to address emerging requirements and challenges;
> 3. Flexibility to adapt to the energy transition to manage its costs and impacts; and
> 4. An efficient annual rate-setting process that allows the Companies to focus on responding to the energy transition operationally and through key regulatory filings focused on the energy transition.

1.1 Please discuss how each of the considerations 1 through 4 included in the proposed Rate Framework address the challenges related to energy affordability, if at all.

1.1.1 Of the four considerations included in the proposed Rate Framework, please explain which one will most measurably addresses the challenges related to energy affordability and provide the proposed measures by which the Commission can determine FortisBC's progress.

Response:

Affordability is a relative measure and is defined differently by different customer segments, so there is no specific level of increase that can be used to measure affordability or affordable rates. As discussed in the response to BCOAPO IR1 6.1, the energy transition is expected to continue to put upward pressure on rates for both FEI and FBC. FortisBC considers that affordability and affordable rates should be viewed through the lens of the Companies' ability to decarbonize the system and transition to low carbon fuels at the lowest reasonable cost, while also maintaining safe, reliable and resilient service, rather than on a specific level of rates or rate increase.

As such, within the context of the energy transition, FortisBC considers that all four of the considerations listed in Section B3.2 of the Application help to address the challenges related to affordability, as follows:

1. **A term that provides incentive to perform and the capacity to focus on key issues, while acknowledging the current level of uncertainty in the operating environment:** FortisBC proposes to reduce the length of the Rate Framework term to three years compared to the Current MRP to ensure there is a long enough time frame to find some efficiencies in the regulatory process with some degree of certainty on the rate mechanisms in place. This is beneficial for both the Companies and customers as efficiencies gained in the rate-setting processes reduce costs and will allow the Companies to focus on addressing the challenges of the energy transition (which include affordability). Further, the shorter (i.e., three-year) term provides an opportunity for FortisBC, the BCUC and interveners to reassess the effectiveness of the Rate Framework within a relatively short period of time, ensuring that if the energy transition is having unexpected impacts on costs or load, which could impact rates (and therefore affordability), adjustments can be made or a new rate-setting approach could be considered.

2. **Sufficient funding to address emerging requirements and challenges:** As explained in the response to BCUC Panel Supplemental IR 1, the energy transition is having, and will continue to have, an impact on rates. Both utilities are facing increased cost pressures, and FEI is experiencing decreasing growth in new customer connections. However, the Rate Framework has been designed with these issues in mind and with a focus on cost containment to the extent possible. The formulaic approach to O&M and Growth capital (for FEI) ensures that costs will escalate based on a net inflation factor, and that changes in average customers (for O&M) and gross customer additions (for Growth capital) will be reflected in the formula funding available each year. Further, as explained in Section C3.2.1.1 of the Application, FEI has carefully considered and scoped projects that are driven by capacity to ensure that they meet the needs of the shorter-term system demand forecast, thus considering the energy transition and customer affordability.

3. **Flexibility to adapt to the energy transition to manage its costs and impacts:** The proposed flow-through treatment of Clean Growth Initiatives provides the Companies, the BCUC and interveners an opportunity to review forecast expenditures on Clean Growth Initiatives annually. Annual forecasting and truing up for actual expenditures also provides the necessary flexibility to ramp up (or ramp down) spending each year, recognizing that the pace and timing of Clean Growth Initiatives can be unpredictable. This treatment is beneficial for the Companies (i.e., due to the flexibility provided by annual forecasting) and for customers (i.e., customers are only paying for actual costs, and the costs are being reviewed annually by the BCUC and interveners).

4. **An efficient annual rate-setting process that allows the Companies to focus on responding to the energy transition operationally and through key regulatory filings focused on the energy transition:** As discussed in the responses to BCUC Panel Supplemental IR 1 and 4, the Annual Review process will continue to provide a regular opportunity for the BCUC to consider rate impacts and affordability. Through the Annual Review process, the BCUC and interveners can review the Companies' forecast and

actual expenditures on Clean Growth Initiatives (and other flow-through expenses), year-over-year changes in customer growth and demand, and the level of the Companies' service quality, which would include FEI's proposed new informational indicators on the energy transition.

1.2 Please expand Table C1-1[1] of the Application to include a commentary column with respect to the directional contribution of each line item to energy affordability by indicating where applicable: a) indifferent (or n/a); b) helps affordability; c) contributes to declining affordability.

1.2.1 Where applicable, please include key discussion points on how the proposed Rate Framework changes would impact affordability when compared to the current Rate Framework.

1.2.2 Where applicable, please discuss any differences as it pertains to the impacts of the proposed Rate Framework changes for FEI versus FBC, regarding their contribution to affordability.

Response:

While FortisBC acknowledges the importance of affordability to its customers, as discussed in the response to CEC IR1 1.1, affordability is a relative measure and there is no specific level of increase that can be used to measure affordability or affordable rates. Please also refer to the response to BCOAPO IR1 7.1, where FortisBC describes how the Rate Framework has been designed to align with the guiding principles that were accepted in the MRP Decision (page 168), including that the framework should, to the greatest extent possible, align the interests of customers and the Companies, and maintain the Companies' focus on maintaining safe, reliable service and customer service quality while creating the efficiency incentives to continue with its productivity improvement culture. As stated by the BCUC in the MRP Decision, the Rate Framework should be viewed on a holistic basis taking all of the plan elements into account, in order to assess whether the Rate Framework strikes an appropriate balance of the principles so as to result in a fair, reasonable, and not unduly discriminatory rate-setting framework.

However, to be responsive, FortisBC provides the following table which is an expanded version of Table C1-1 of the Application, as requested by the CEC in this question.

[1] Exhibit B-1, Section C, Pages C-2 and C-3, Table C1-1.

1 **Table 1: Revised Table C1-1 of Application – Summary of 2025-2027 Rate Framework**

Item	2025-2027 Rate Framework	Section(s)	Affordability	Comments/Compared to Current MRP	FEI vs FBC
Term	A three-year term from 2025 to 2027, with the potential to extend the Rate Framework beyond 2027.	C1.2	Helps	Please refer to the responses to CEC IR1 1.1 and BCOAPO IR1 7.2.	Same
Inflation Index (I-Factor)	A weighted average of AWE:BC for labour costs and CPI:BC for other costs will be used to determine the I-Index. FortisBC proposes to return to a fixed labour/non-labour weighting for the term of the Rate Framework.	C1.3	Helps	The I-Factor ensures the funding envelopes for FortisBC's O&M (FEI and FBC) and Growth capital (FEI) are tied to CPI:BC and AWE:BC, less a productivity improvement factor (X-Factor). FortisBC notes that the proposed change to the calculation of the labour/non-labour weightings is neutral from an affordability perspective when compared to the Current MRP's approach to calculating the labour/non-labour weightings. Please also refer to the response to BCUC IR1 6.3.	Same
Productivity Factor (X-Factor)	***FEI***: An X-Factor of 0.38 percent, consisting of 0.28 percent industry O&M partial factor productivity (PFP) and 0.10 percent stretch factor for FEI's O&M and Growth capital indexing formulas. ***FBC:*** An X-Factor of 0.20 percent, consisting of 0.20 percent industry PFP and zero percent stretch factor for FBC's O&M indexing formula.	C1.4	Helps	The X-Factor built into FortisBC's formula O&M (FEI and FBC) and Growth capital (FEI) will inherently constrain the spending envelope of both Companies. Please also refer to the responses to CEC IR1 1.1 and BCOAPO IR1 7.2.	Same

Item	2025-2027 Rate Framework	Section(s)	Affordability	Comments/Compared to Current MRP	FEI vs FBC
Growth Factor	Continue with annual forecast of customer growth for FEI's and FBC's index-based O&M and gross customer additions (GCA) for FEI's Growth capital, both with a true-up to actual when available. In addition, FortisBC is proposing to eliminate the 0.75 discount factor currently applied to the growth factor for the O&M formula.	C1.5	Neutral	Regarding the approach to forecasting customer growth for formula O&M and Growth capital (FEI), the impact on affordability is neutral. Please refer to the response to CEC IR1 1.1. Regarding the growth factor, as explained in Dr. Kaufmann's report (Appendix C1-1 to the Application), any discount of the customer growth factor would be unwarranted and tantamount to a "double counting" of scale economies, which are in fact fully recovered in the productivity factors. Therefore, by eliminating the 0.75 discount factor to the growth factor, the O&M formulas will reflect the full O&M costs associated with each additional customer which will improve the ability of the formula to estimate the O&M costs, which is a benefit to both the Companies and customers. FortisBC accordingly considers the elimination of the growth factor to be neutral with regard to affordability.	Same
Controllable Expenses – O&M	Continue with an indexed (I – X) unit cost approach for O&M. A 2024 Base O&M is established. O&M will not be rebased during the term of the Rate Framework but will be subject to true-up for actual customers.	C2	Helps	Please refer to the response to CEC IR1 1.1.	Same

Item	2025-2027 Rate Framework	Section(s)	Affordability	Comments/Compared to Current MRP	FEI vs FBC
Controllable Expenses – Capital	***FEI***: Continue with an indexed (I – X) unit cost approach for Growth capital. The Growth capital formula is tied to the forecast GCA with the base unit cost developed using a regression of three-year actuals and projected results. Growth capital will not be rebased during the term of the Rate Framework but will be subject to true-up for actual GCA. Three-year forecast of Regular Sustainment and Other capital. ***FBC:*** Continue with a forecast of Regular Growth, Sustainment and Other capital expenditures for the term.	C3	Helps	As discussed in the response to CEC IR1 1.1, the cost of inaction could pose an even greater risk on affordability to FortisBC's customers. As such, the capital forecasts ensure there is sufficient funding to provide safe and reliable service while still progressing decarbonization over the term of the proposed Rate Framework. ***FEI***: Given FEI has an obligation to serve, the continuation of the formulaic approach for Growth capital ensures the spending envelope is symmetrical. For instance, a decline in new customer connections will result in a smaller increase to the Growth capital funding envelope, thereby reducing the rate impact from Growth capital. For Sustainment capital, FEI has scoped capacity-driven projects to the extent possible so that the expenditures are focused on meeting near-term demand. ***FBC:*** The capital forecasts will proactively build capacity during the term of the proposed Rate Framework due to the expected growth in demand on the electric system.	Different; however, in both cases the Companies are focused on prioritizing projects to ensure that customers continue to receive reliable and resilient service in an affordable manner.
Forecast O&M and Capital	Continue with specific O&M and capital items being forecast each year in the Annual Review with variances captured in the Flow-through deferral account or other deferral accounts.	C2 and C3	Helps	Please refer to the response to CEC IR1 1.1.	Same

Item	2025-2027 Rate Framework	Section(s)	Affordability	Comments/Compared to Current MRP	FEI vs FBC
Incremental Capital	Continue with annual forecasting of incremental capital approved through CPCNs, OICs, or other Major Project proceedings.	C3	Neutral	The rate impacts of these projects are approved through other regulatory processes. Further, FortisBC is not proposing any changes to the treatment of variances from the Current MRP.	Same
Forecast Revenues and Margins	Continue with annual forecast of revenues. For FEI, variances in revenue will continue to flow to either the RSAM deferral account (for RS 1, 2, 3, and 23) or the Flow-through deferral account. For FBC, variances in both revenue and power supply costs will continue to flow to the Flow-through deferral account.	C4	Neutral	No change to the forecasting method and treatment of variances from the Current MRP, therefore, no change to the impact on affordability from the Current MRP.	Same
Deferral Accounts	Continue the use of rate base and non-rate base deferral accounts, with any required changes proposed at each year's Annual Review. Continue the use of a single Flow-through deferral account for each utility to capture all variances that are approved with flow-through treatment, except where a separate deferral account is approved.	C4	Helps	Deferral accounts are an important tool for rate smoothing.	Same

Item	2025-2027 Rate Framework	Section(s)	Affordability	Comments/Compared to Current MRP	FEI vs FBC
Innovation Fund	Continue the funding of innovation for FEI. Return unused funds from the Current MRP in 2025.	C5	Helps	As discussed in the response to CEC IR1 1.1, the cost of inaction could pose an even greater risk on affordability to FEI's customers. As such, the innovation funding for FEI ensures potential decarbonization solutions for the gas system are developed.	FBC does not have an Innovation Fund
Service Quality Indicators (SQIs)	***FEI***: 17 SQIs (8 SQIs with a target benchmark and 9 informational indicators) are proposed as measures of customer service, employee safety and reliability, as well as new informational indicators related to the energy transition. ***FBC***: 12 SQIs (7 SQIs with a target benchmark and 5 informational measures) are proposed as measures of customer service, employee safety, and reliability.	C6	Neutral	FEI and FBC are proposing some changes to existing SQIs, and FEI is proposing a suite of new informational indicators related to the energy transition. Changes to existing SQIs (and the introduction of new informational indicators) have a neutral impact on affordability. Please also refer to the response to BCOAPO IR1 10.3 regarding why it would not be reasonable to establish an affordability SQI.	Same

Item	2025-2027 Rate Framework	Section(s)	Affordability	Comments/Compared to Current MRP	FEI vs FBC
Exogenous Factors (Z-Factor)	Continue with existing criteria (including existing materiality thresholds). Cost increases or decreases for items such as legislative changes, catastrophic events, accounting changes and BCUC decisions will be flowed through in rates, subject to BCUC approval.	C1.6	Neutral	No change to the treatment of variances from the Current MRP, therefore, no change in the impact on affordability from the Current MRP. Please also refer to the response to BCOAPO IR1 7.8.	Same
Earnings Sharing Mechanism (ESM)	Continue with a 50:50 ESM between customers and the Companies for earnings above and below the allowed ROE.	C1.7	Helps	The ESM incents the Companies to seek savings and productivity improvements, for the benefit of both customers and the Companies.	Same
Efficiency Carryover Mechanism (ECM)	Remove the ECM from the Rate Framework.	C1.8	Neutral	FortisBC did not utilize the ECM during the Current MRP and the proposed removal of the ECM for the Rate Framework has no impact on affordability.	Same
Off-Ramps	Continue with existing off-ramps.	C1.9	Helps	The inclusion of an off-ramp ensures that both the Companies and customers are safeguarded against the potential for excessive profits or losses.	Same
Annual Review Process	Retain the Annual Review process but with a more defined scope.	C1.10	Helps	As explained in the responses to BCUC Supplemental IR 1 and 4, the Annual Review process will continue to provide a regular opportunity to consider rate impacts. Please also refer to the response to CEC IR1 1.1.	Same

2. Reference: Exhibit B-1, Appendix C1-1, Page 3

> In addition to the productivity and stretch factors, LKC was asked to advise on the appropriateness of the 0.75 discount factor currently applied to FEI's and FBC's customer growth factors used in the Companies' O&M indexing formulas. In previous proceedings, the customer growth issue was debated using statistical tools such as correlation coefficients. However, appropriate values for FEI and FBC's customer growth factors are not a matter of statistics. Instead, the appropriate value of the customer growth factor should be determined by a proper application of cost theory and indexing logic. This analysis shows that any discounts on the Companies' customer growth factors are not logically or mathematically consistent with the Companies' approved inflation factor and the O&M PFP indices appropriate for calibrating the Companies' formulas. Any discount on the Companies' customer growth factor would not be consistent with the structure and basic design of FortisBC's incentive regulation-based rate frameworks.

2.1 Please discuss whether an inclining or a declining customer base growth, or the prospect of same, would factor into determining the appropriateness of applying discount factors to customer growth factors for a utility's O&M indexing formulas, and why.

Response:

The following response was provided by Dr. Kaufmann:

As explained in detail in Section 8 of the LKC Report, there is no conceptual or mathematical basis for adjusting the customer growth factors in an appropriately designed O&M indexing formula. One important reason is that economies of scale are by definition already embedded in the productivity factor. This result is evident in cost theory and cost indexing principles. If there is a declining customer base, the average number of customers in the O&M indexing formula will decline accordingly and this lower average number of customers will result in a level of O&M for FEI or FBC that fully and appropriately reflects the decline in the customer base. Conversely, if the customer base is expanding, growth in the average number of customers should be reflected in a higher level of O&M for the Companies. An additional adjustment to discount the impact of the change in customer numbers from one year to the next will therefore over-recover, or under-recover, the appropriate O&M level.

2.2 Please provide expert opinion on whether a progressively declining customer base, or the prospect of one, would factor into determining the appropriateness of applying discount factors to customer growth factors for a utility's O&M indexing formulas, and why.

Response:

The following response was provided by Dr. Kaufmann:

Please refer to the response to CEC IR1 2.1. A declining customer base will be reflected directly in a lower level of O&M for the company. However, there is no conceptual or mathematical basis for applying discounts to customer growth factors when the customer growth is declining or increasing.

2.3 Based on responses to CEC IR 2.1 and 2.2 above, please discuss the possibility of considering varying discount factor treatments for FEI's versus FBC's customer growth factors, given the prospects for their respective near-term and long-term customer growth trajectories.

Response:

The following response was provided by Dr. Kaufmann:

The future customer growth trajectories for FEI and FBC may differ because of differences in business conditions or policy changes. If and when this occurs, differing customer growth trends for FEI and FBC will be reflected directly in each Company's calculated level of formula O&M. There is no basis for applying discounts to either Company's customer growth factors under this scenario. The industry specific differences are already reflected through the X-Factor in the form of separately calculated O&M PFP trends for gas and electric distribution industries, and company specific circumstances are reflected in the stretch factors.

3. Reference: Exhibit B-1, Section C-1, Page C-12

> In the MRP Decision, the BCUC agreed with FEI's reasoning and approved the proposed forecast and true-up mechanism:[48]
>
> **The Panel approves the use of forecast average number of customers and the related true-up mechanism for calculating the FEI and FBC growth factor.** The Panel notes that none of the interveners raised concerns with FortisBC's request to eliminate the use of lagged actual customer growth and agrees with its reasons for an adopting forecast/true-up approach as a preferable methodology …
>
> … **The Panel approves FortisBC's proposal to eliminate the lagged actual customer approach for FEI Growth capital used in FEI's Current PBR Plan. The Panel also approves FortisBC's proposal to use forecast Gross Customer Additions with true-up to actual amounts in each test year for the previous year's forecasts.**

3.1 Please explain whether, since the MRP Decision referenced above, any of the interveners have raised concerns with FortisBC's forecasting of average number of customers and the related true-up mechanism.

3.1.1 If yes, please provide particulars of the pertinent proceeding(s), along with summary of intervener submissions, and FortisBC's positions in its Reply Arguments to intervener submissions.

3.1.2 If applicable, please advise if the intervener concerns differ for FEI versus FBC and how.

Response:

FortisBC reviewed the Reply Arguments submitted in the FEI and FBC Annual Review proceedings since the MRP Decision (i.e., from 2020 to 2024) to determine whether concerns have been raised regarding the forecasting of average number of customers and the related true-up mechanism. No specific concerns were identified for the average number of customers and the true-up mechanism; however, FortisBC noted a few related items for FEI in the areas of Gross Customer Additions (GCA), growth factors and net customer additions, and for FBC on customer count. These discussions are summarized in the following paragraphs.

FEI Gross Customer Additions

In the FEI Reply Argument for the Annual Review for 2024 Delivery Rates, FEI affirmed that its forecast GCA is reasonable, responding to a recommendation that FEI begin forecasting GCA to reflect anticipated demand destruction due to rising delivery rate costs and government policy.[2] FEI noted it reasonably forecasts GCA based on the best available information and that the variance between forecast and actual GCA is trued up in future years, so customers will only pay

[2] FEI Annual Review for 2024 Delivery Rates, Reply Argument, para. 20-24.

for costs that reflect actual GCA. Please refer to the response to MoveUP IR1 3.1 for GCA trends from 2009 to 2027.

FEI Growth Factors

In the FEI Reply Argument for the Annual Review for 2023 Delivery Rates, FEI confirmed that the calculation of the growth factor is consistent with the MRP Decision, responding to an argument that in a declining trend of gross customer additions, the MRP formula at 75 percent results in an over-calculation of O&M costs given the two-year lag in customer growth and customer count true-ups.[3] FEI noted that the growth factor calculation for formula O&M and Growth capital are different. Formula O&M uses a growth factor based on forecast average customers with a 75 percent modifier whereas Growth capital uses a growth factor based on forecast GCA, thus a declining GCA has no impact on O&M. In this Application, this methodology remains the same, except for the proposed removal of the 0.75 percent discount factor currently applied to the growth factor for FEI's and FBC's O&M formulas.

FEI Forecast Net Customer Additions

In the FEI Reply Argument for the Annual Review for 2020 and 2021 Delivery Rates, FEI stated that there was no need for further work on the demand forecast method at the time, responding to a recommendation that FEI conduct a review of the residential and commercial customer additions forecast in the Long Term Gas Resource Plan Application (LTGRP).[4] FEI explained the existing forecast methodology and maintained that the forecasting method was performing well. Similar concerns were brought forward regarding the residential and commercial demand forecast in the FEI Annual Review for 2024 Delivery Rates, and FEI confirmed the consistency and reliability of its forecasts.[5] In this Application, FEI and FBC propose to continue the use of the existing forecasting methods from the Current MRP for rate-setting purposes.

FBC Customer Count

In the FBC Reply Arguments for the Annual Review for 2020 and 2021 Rates[6] and Annual Review for 2022 Rates,[7] FBC indicated that its forecast customer counts are reasonable, responding to suggestions to modify or re-examine its customer count forecasting method. However, FBC's forecast customer count has been methodologically sound and reasonably accurate while using the best data available. FBC regularly examines its customer count forecasting and uses a proven forecast methodology. In this Application, FEI and FBC propose to continue the use of the existing forecasting methods from the Current MRP for rate-setting purposes.

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3 FEI Annual Review for 2023 Delivery Rates, Reply Argument, para. 32-36.

4 FEI Annual Review for 2020 and 2021 Delivery Rates, Reply Argument, para. 15-21.

5 FEI Annual Review for 2024 Delivery Rates, Reply Argument, para. 25-26.

6 FBC Annual Review for 2020 and 2021 Rates, Reply Argument, para.12-17.

7 FBC Annual Review for 2022 Rates, Reply Argument, para. 20.

4. Reference: Exhibit B-1, Section C-1, Page C-13; and

> FortisBC submits that the forecast and true-up mechanism has worked as anticipated and that there is no compelling reason to change the current approach.

Reference: Exhibit B-1, Appendix C1-1, Page 3

> FBC's recommended productivity factor was also calculated using indexing methods and the best available data. However, in recognition of FBC's unique characteristics, LKC computed two different measures of O&M PFP growth for the electric utility industry. One PFP measure was developed using a sample of 20 U.S. utilities which, like FBC, serve a relatively small number of customers. The second O&M PFP estimate was developed using a broad sample of 82 U.S. electric utilities. In LKC's opinion, a careful consideration of these two studies indicates that the broad-based utility sample provides the most relevant and appropriate O&M productivity target for FBC's rate framework. FBC's recommended stretch factor was informed by the BCUC's previously approved stretch factors for FBC, as well as O&M unit cost and O&M PFP benchmarking evidence for FBC against the electric utility industry.
>
> In addition to the productivity and stretch factors, LKC was asked to advise on the appropriateness of the 0.75 discount factor currently applied to FEI's and FBC's customer growth factors used in the Companies' O&M indexing formulas. In previous proceedings, the customer growth issue was debated

4.1 Please advise whether all the 20 small U.S. electric utilities that were sampled for purposes of O&M indexing methods for FBC employ the same methodology for the forecast (average number of customers) and true-up mechanism as FBC and/or have comparable favourable regulatory contexts such as FBC has.

4.1.1 If not, please identify the observed differences in methodologies and comment on the reasons for the differences.

4.1.2 If yes, please confirm that all the peers' methodologies employ a two-year lag in customer growth and customer count true-ups for purposes of O&M indexing, as is the case for FBC.

Response:

The following response was provided by Dr. Kaufmann:

The calculation of an appropriate O&M PFP trend is not impacted in any way by FEI's and FBC's forecasting methodology. Both output and input measures are based on observed, actual values and not impacted by forecast methodology.

The 20 small US electric utilities sampled by Dr. Kaufmann, as well as all of the 82 US electric utilities that were sampled, operate under diverse regulatory arrangements but, to the best of Dr. Kaufmann's knowledge, none of them "employ the same methodology" for forecasting and later truing-up the average number of customers when re-setting rates, or "employ a two-year lag in customer growth and customer count true-ups for O&M indexing." However, there are US jurisdictions that have implemented "formula rate plans" that employ similar techniques.

FortisBC adds the following response:

FortisBC notes that the differences in approved rate setting and regulatory treatment between FEI and FBC and their respective proxy groups is often assessed as part of the regulatory risk in Cost of Capital proceedings and reflected in the revenue requirement through the approved allowed ROE and capital structure. However, this has no impact on the O&M formulas.

4.2 Please advise on whether all the 82 U.S. electric utilities that were sampled for purposes of O&M indexing methods, for comparison to FBC employing the same methodology for the forecast (average number of customers) and true-up mechanism as FBC.

4.2.1 If not, please identify the observed differences in methodologies and comment on the reasons for the differences.

4.2.2 If yes, please confirm or not that all the peers' methodologies employ a two-year lag in customer growth and customer count true-ups for purposes of O&M indexing, as is the case for FBC.

Response:

The following response was provided by Dr. Kaufmann:

Please refer to the response to CEC IR1 4.1.

5. Reference: Exhibit B-1, Section C-1, Page C-13; and

> FortisBC submits that the forecast and true-up mechanism has worked as anticipated and that there is no compelling reason to change the current approach.

Reference: Exhibit B-1, Appendix C1-1, Page 14

> LKC developed a productivity factor for FEI using data on the U.S. gas distribution industry. This work relied on a sample of 54 U.S. gas distributors. The sampled companies are listed in Table 3 below.
>
> **Table 3**
>
> **U.S. Gas Distributors used to estimate industry O&M PFP 2007-2022**

5.1 Please advise on whether all the 54 U.S. gas distributors that were sampled for purposes of O&M indexing methods for comparison to FEI employ the same methodology for the forecast (average number of customers) and true-up mechanism as FEI.

5.1.1 If not, please identify the observed differences in methodologies and comment on the reasons for the differences.

5.1.2 If yes, please confirm if all the peers' methodologies employ a two-year lag in customer growth and customer count true-ups for purposes of O&M indexing, as is the case for FEI.

Response:

The following response was provided by Dr. Kaufmann:

Please refer to the response to CEC IR1 4.1. This response extends to the gas distribution sample.

6. Reference: Exhibit B-1, Section C1, Page C-4

Table C1-2: History of Labour and Non-labour Split for FEI and FBC

	FEI		FBC	
	Labour	Non-Labour	Labour	Non-Labour
2019	52%	48%	62%	38%
2020	52%	48%	62%	38%
2021	51%	49%	63%	37%
2022	51%	49%	60%	40%
2023	49%	51%	57%	43%
Average	51%	49%	61%	39%

FortisBC is proposing a fixed 51 percent labour weighting for FEI and a fixed 61 percent labour weighting for FBC, based on the average of the 2019 to 2023 actual labour weightings. This is a departure from past filings where the same percentages were applied to both FEI and FBC. Using the proposed weightings, the I-Factor determination for the Rate Framework is expressed as follows:

6.1 Please explain the reasoning for FortisBC's proposal to base the fixed labour weighing for FEI on the average of the 2019 to 2023 actual labour weightings, given that FEI's labour weighing has been on a steady decline since 2019, declining 3% (or by 5.8 percent in percentage terms) between 2019 and 2023.

Table C1-2: History of Labour and Non-labour Split for FEI and FBC

	FEI		FBC	
	Labour	Non-Labour	Labour	Non-Labour
2019	52%	48%	62%	38%
2020	52%	48%	62%	38%
2021	51%	49%	63%	37%
2022	51%	49%	60%	40%
2023	49%	51%	57%	43%
Average	51%	49%	61%	39%

FortisBC is proposing a fixed 51 percent labour weighting for FEI and a fixed 61 percent labour weighting for FBC, based on the average of the 2019 to 2023 actual labour weightings. This is a departure from past filings where the same percentages were applied to both FEI and FBC. Using the proposed weightings, the I-Factor determination for the Rate Framework is expressed as follows:

6.1.1 Please advise as to whether FEI expects its labour weighing for 2024 to be higher than 49% based on actual year-to-date performance.

6.1.2 Please advise as to whether FEI expects its labour weighing for the proposed 3-year term of the Rate Framework to recover to an average of 51% and what operating environment factors would be involved.

6.1.3 Please advise as to the cost-effectiveness and productivity benefits of each of the Labour and Non-Labour categories.

Response:

Please refer to the response to BCUC IR1 6.2 for the revised version of Table C1-2 to the Application for the actual labour and non-labour weightings for FEI and FBC from 2019 to 2023. The revised five-year average split from 2019 to 2023 is 50 percent labour and 50 percent non-labour for FEI, and 60 percent labour and 40 percent non-labour for FBC.

FortisBC currently does not have estimates of FEI's and FBC's labour/non-labour weightings at the end of 2024 or forecasts for the proposed term of the Rate Framework from 2025 to 2027; however, please see Table 1 below for the historical actuals for both utilities from 2014 to 2023 (over a 10-year period covering the previous PBR Plan and the Current MRP). The historical actuals for FEI show that the labour/non-labour splits have been both above and below 50 percent over the past 10 years but generally have remained close to 50 percent. Similarly, the labour/non-labour splits for FBC have been above and below the 60/40 split but overall have remained relatively close to these weightings.

Table 1: Actual FEI and FBC Labour and Non-Labour Weightings from 2014-2023

	FEI		FBC	
	Labour	Non-Labour	Labour	Non-Labour
2014	54%	46%	64%	36%
2015	51%	49%	62%	38%
2016	50%	50%	59%	41%
2017	48%	52%	57%	43%
2018	52%	48%	60%	40%
2019	52%	48%	62%	38%
2020	51%	49%	63%	37%
2021	51%	49%	60%	40%
2022	49%	51%	57%	43%
2023	48%	52%	59%	41%

FortisBC notes that the proposed approach of fixed labour and non-labour weightings for the calculation of the I-Factor was previously approved for the Companies' respective 2014-2019 PBR Plans. FortisBC considers both the proposed/PBR Plan approach and the approach used during the Current MRP to produce reasonably accurate results, as illustrated in the response to BCUC IR1 6.1.1, and notes that even under the approach used during the Current MRP, there is some degree of misalignment. This is because during the Current MRP FortisBC was calculating the upcoming year's I-Factor labour/non-labour weightings using the most recent full year of actuals, resulting in an inherent two-year lag (e.g., the 2024 I-Factor was based on the most recent year of O&M actuals which was 2022).

As explained in the responses to BCUC IR1 6.2 and 6.3, the main reason for reverting back to the approach used during the 2014-2019 PBR Plan is to increase acceptance of the I-Factor calculation. Since both approaches are reasonably representative of actual labour/non-labour weightings, and there is no notable difference between the two approaches from a customer or shareholder perspective, FortisBC considers returning to fixed labour/non-labour weightings for

the I-Factor calculation during the Rate Framework term may improve acceptance and therefore potentially increase regulatory efficiency.

Regarding the "cost-effectiveness and productivity benefits" of each of the Labour and Non-Labour categories, as requested by the CEC in IR1 6.1.3 and 6.2.3, FortisBC has not proposed the fixed weighting approach for labour and non-labour based on cost-effectiveness or productivity benefits, as the weightings and the indices used to calculate the I-Factor should appropriately be focused on providing a reasonably accurate representation of the annual escalation to be applied to the O&M (and Growth capital for FEI) formulas. Considerations of productivity are addressed by the X-Factor and are described in Dr. Kaufmann's report provided as Appendix C1-1 to the Application. For additional details on the AWE:BC and CPI:BC indices, please refer to the response to BCOAPO IR1 7.6.

6.2 Please explain the reasoning for FortisBC's proposal to base the fixed labour weighing for FBC on the average of the 2019 to 2023 actual labour weightings, given that FBC's labour weighing has been on a steady decline since 2019, declining 5% (or by 8 percent in percentage terms) between 2019 and 2023.

6.2.1 Please advise as to whether FBC expects its labour weighing for 2024 to be higher than 57% based on actual year-to-date performance.

6.2.2 Please advise as to whether FBC expects its labour weighing for the proposed 3-year term of the Rate Framework to recover to an average of 61% and what operating environment factors would be involved.

6.2.3 Please advise as to the cost-effectiveness and productivity benefits of each of the Labour and Non-Labour categories.

Response:

Please refer to the response to CEC IR1 6.1.

7. Reference: Exhibit B-1, Section C, Page C-73

Table C3-3: FEI Growth Capital Expenditures and UCGC 2020-2024 ($000s)

	2020 Actual	2021 Actual	2022 Actual	2023 Actual	2024 Projected
New Customer Mains	29,699	25,637	39,301	38,398	35,611
New Customer Services	49,794	58,291	58,819	60,376	54,127
New Customer Meters	4,690	4,125	4,011	4,287	2,840
System Improvements (DP)	1,153	3,452	4,718	14,477	22,248
Total Growth Capital (Gross)	**85,336**	**91,505**	**106,848**	**117,538**	**114,826**
CIAC	(1,791)	(1,719)	(1,850)	(1,688)	(1,252)
Total Growth Capital (Net)	**83,545**	**89,786**	**104,998**	**115,850**	**113,574**
Gross Customer Additions	18,890	20,344	16,589	15,608	11,765
Acrtual Unit Costs, Net (UCGC)	**4,423**	**4,413**	**6,329**	**7,422**	**9,654**

Reference: Exhibit B-1, Section C, Page C-79

> During the Current MRP term, FEI experienced significant cost pressures in Growth capital, primarily due to unanticipated inflationary pressures since 2021 which also included contractor price increases in 2022, increasing complexity in mains and services installation, evolving local government restrictions and permitting requirements, and a higher number of system improvements. However, FEI expects the Growth capital cost increases will track more closely to general inflation over the three-year term of the Rate Framework.

7.1 Please confirm that FEI's net UCGC is on course and projected to increase by approx. 30% between 2023 (actual) and 2024 (projected), based on figures provided in Table C3-3 (line 14) referenced above.

7.1.1 If confirmed, please provide the estimated approximate % contribution of the respective factors (captured in the second reference above) to the projected 30% year-over-year increase: a) unanticipated inflationary pressures; b) contractor price increases; c) increasing complexity in mains and services installation; d) evolving local government restrictions and permitting requirements; and e) a higher number of system improvements.

7.1.2 Please explain whether the factors (listed in the second reference above) are new to FEI's operating environment, or whether they also contributed to the 43.4% year-over-year increase in the net UCGC in 2022 and the 17.3% year-over-year increase in the net UCGC in 2023, and if so how.

Response:

FEI confirms the net unit cost growth capital (UCGC) is projected to increase by approximately 30 percent from 2023 to 2024 based on the figures provided in Table C3-3 of the Application. However, besides the higher number of system improvements (item (e) listed in CEC IR1 7.1.1),

FEI is unable to provide a further quantitative breakdown of the percentage contributions of the other factors to the 30 percent increase (i.e., (a) inflation, (b) contractor price increases, (c) increasing complexity, and (d) evolving local government restrictions and permitting requirements). This is because cost reporting or invoices received from contractors or material suppliers are typically not broken down or identified by these individual factors. Further, many of these factors are interrelated (e.g., subcontractor fuel surcharges are typically embedded within the prime contractor rate increases which could be classified as both an inflationary pressure and contractor cost increases).

However, in order to be responsive, FEI provides further discussion on each impact qualitatively.

(a) ***Impact due to inflationary pressures***

The inflationary pressures experienced by FEI (and FBC) during the Current MRP were significant and unprecedented, as explained in Section C3.3.1.1.1 of the Application:

> FEI faced significant inflationary increase in 2022 and 2023 triggered by significant global market events occurred at that time, including the recovery from the COVID-19 pandemic, supply chain disruptions, and the war in Ukraine. These unforeseen events significantly increased market prices of many commodities and services that make up FEI's supply chain and did so in a sustained way, such that these inflated prices for commodities and services remained at this high level into 2024.

The significant inflationary pressures were a primary contributor to the higher increase in net UCGC in 2022 (i.e., 43.4 percent) and 2023 (17.3 percent) when compared to prior years.

FEI notes that the impact of inflationary pressures on costs was recognized by the BCUC in the Annual Review for 2023 Delivery Rates Decision and Order G-352-22, where FEI received approval to increase its Sustainment capital forecasts for 2023 and 2024 in part to reflect the significant inflationary cost pressures. As discussed in the Annual Review for 2023 Delivery Rates, gas utilities across North America saw an average escalation of 31.2 percent in capital costs between the first quarter of 2020 and the first quarter of 2022. Because FEI's Growth capital was under a formulaic approach during the Current MRP and was therefore not included in the updated Regular capital forecasts in the Annual Review for 2023 Delivery Rates, FEI was not able to make any adjustments to the Growth capital formula to account for inflationary pressures until this Application.

(b) Impact due to contractor price increases

The previous agreements with contractors for FEI's mains and services installations were signed in January 2019 for a three-year term with two options to renew for two years each. However, in 2022, the contractors were unwilling to renew, citing rapidly rising costs in their operating environment due to the global inflationary pressures. When the previous agreements were signed in January 2019, the significant inflationary pressures that began in 2021 were unanticipated (which, as discussed above, FEI also experienced) and happened to coincide with the end of the

three-year agreement term. With the end of these agreements, FEI engaged in a competitive bidding process for new contractors, with new contracts ultimately being signed in 2022 with a two and a half-year term. Despite this competitive bidding process, these new agreements have higher rates than the previous agreements that also included annual adjustments for inflation and fuel costs.

FEI notes that to mitigate higher costs and to encourage a competitive environment, the 2022 contracts were awarded to multiple contractors, enabling FEI to implement strategies with multiple contractors to manage the higher prices. For example, a contractor would be selected for a project based on their geographic headquarters relative to the work location to reduce trucking costs.

In 2024, FEI renewed the 2022 agreements, thus providing a more stable contractor environment for FEI's Growth capital until 2027 (a further three years), which coincides with the end of the proposed three-year Rate Framework term.

(c) Impacts due to increasing installation complexity, and (d) Government restrictions and permitting requirements

Increasing installation complexity is interrelated with evolving government restrictions and permitting requirements and is primarily driven by an ongoing push by local government policy and market trends towards high density dwellings such as townhomes and high-rises in place of single-family dwellings. In many cases, main installations for high-density dwellings will require a larger main pipe size diameter to serve. As explained in the response to RCIA IR1 29.7, the increase in work required for installing larger pipe sized diameter mains is significant, and the associated increase in costs often outweigh the savings from the economies of scale achieved by serving more customers with a single larger pipe sized diameter. Further, the large pipe sized diameter mains are often installed in highly densified urban areas which require narrower and more challenging lines during installation, and it is common to have underground utility congestion which requires additional coordination between utilities vying for space in the same small and narrow areas.

The installation in densely populated urban areas also has significant impacts on local traffic. As a result, it is increasingly common for road use permits to include restrictions on working hours (i.e., night work and shorter daytime working hours) which will have cost implications that are not easily mitigated. For instance, FEI incurred an increase of $65 thousand for a project in 2023 associated with restricted working hours that were not anticipated previously and incurred over $250 thousand for another project due to permit requirements for night shifts and reduced allowable day shift hours.

Another example of Growth capital cost increases due to government restrictions is the Contaminated Site Regulation (CSR) Stage 13 (Feb 2021) and Stage 14 (March 2023) Amendments. As a result of these amendments, soil testing, trucking, and disposal costs have increased during the term of the Current MRP. For example, additional soil testing and disposal costs increased from approximately $850 thousand in 2022 to approximately $2.7 million in 2023 and are expected to increase further in 2024.

While the challenges due to increasing installation complexity, government restrictions and permitting requirements are not new, the scale of the changes during the Current MRP term were unprecedented when compared to the previous 2014-2019 PBR Plan term. FEI expects these challenges and the increases in costs due to these factors will continue to be applicable to the distribution mains installations during the proposed Rate Framework term.

(e) Impact due to high number of system improvements

System improvements are the largest contributor to the increase in UCGC between 2023 and 2024. As shown in Table 1 below, if the costs related to system improvements (customer-driven[8] and distribution plant) are excluded, the increase in the net UCGC for 2022, 2023, and 2024 would reduce to 31.6 percent, 7.3 percent, and 18.2 percent, respectively.

Table 1: FEI Growth Capital Expenditures and UCGC without System Improvements, 2020-2024 ($000s)

	2020 Actuals	2021 Actuals	2022 Actuals	2023 Actuals	2024 Projected
New Customer Mains, **excl. CDSI**	24,863	24,056	29,991	28,864	26,084
New Customer Services	49,794	58,291	58,819	60,376	54,127
New Customer Meters	4,690	4,125	4,011	4,287	2,840
TOTAL Growth Capital (Gross)	**79,347**	**86,472**	**92,821**	**93,527**	**83,051**
CIAC	-1,791	-1,719	-1,850	-1,688	-1,252
TOTAL Growth Capital (Net)	**77,556**	**84,753**	**90,971**	**91,839**	**81,799**
Gross Customer Additions	18,890	20,344	16,589	15,608	11,765
Actual Unit Costs, Net (UCGC), excl. System Improvement	**4,106**	**4,166**	**5,484**	**5,884**	**6,953**
Year-over-Year Increase, excl. System Improvement (%)		1.5%	31.6%	7.3%	18.2%

System improvements are projects required to increase the existing distribution system capacity with additional mains to meet the increasing customer peak demand. These costs are driven primarily by customer additions that necessitate improvement to the system capacity to maintain reliable service to existing and new customers. However, there is often a lag between when the new customers are connected (i.e., GCA) and when the increased capacity is needed (e.g., the load changes are not expected until future years even though the new customers were connected in the current year). This was evidenced in Table C3-3 of the Application, which showed that even though the number of GCA decreased in 2023 and 2024, there were significant increases in system improvements in these two years, partly due to the higher number of GCA that occurred in 2020 and 2021.

[8] System improvements initiated by customers.

7.1.3 If applicable, please explain whether the year-over-year increases in UCGC from 2022 to 2024 (projected) are comparable with those experienced by FEI's peers, if such a survey has been done, and provide the factual comparative data if any.

Response:

The inflationary pressures faced by FEI are not unique. Similar pressures have been experienced by other North American gas utilities. As noted in Section C3.3.1.1.1 of the Application, as well as in FEI's Annual Review for 2023 Delivery Rates,[9] gas utilities across North America saw an average escalation of 31.2 percent in capital costs between 2020 and 2022, which is comparable to the 31.6 percent increase in net UCGC for 2022 shown in Table 1 in the response to CEC IR1 7.1.

7.1.4 Please provide an estimated % contribution of the decline in gross customer additions to the FEI costs.

Response:

While there may have been some loss of efficiency and reduced economies of scale due to the decline in GCA, FEI considers that the impact of declining GCA on the unit cost (i.e., UCGC) has been small. Instead, the decline in GCA would impact the total Growth capital expenditures (i.e., the total Growth capital expenditures would have been higher than the amount shown in Table C3-3 of the Application).

7.2 Please discuss the perceived value of unit pricing for FEI's growth capital in the context of the proposed Rate Framework given: (a) the significant year-over-year UCGC increases experienced respectively in 2022 (43.4%), 2023 (17.3%), and 2024 (30%); (b) the increasing complexity in mains and services installation; and (c) the significant variability of the System improvements category.

7.2.1 Please explain whether the definition of 'unit' in the context of setting FEI's net UCGC holds true, or whether the increasing complexity in mains and services installations and other future considerations could potentially render it less relevant for FEI's rate setting purposes.

[9] FEI Annual Review for 2023 Delivery Rates, page 59.

7.2.1.1 Please provide a discussion of such potential future considerations.

Response:

FEI continues to consider the approach of using the UCGC and GCA to be the best method to estimate and set FEI's Growth capital spending envelope over the proposed Rate Framework term.

FEI expects a more stable inflationary environment during the proposed Rate Framework term, which will help avoid some of the issues encountered with the UCGC during the Current MRP term. While FEI continues to expect a high level of complexity in each installation due to evolving government policy and the continued market shift towards high density dwellings in place of single-family dwellings, as well as the increasing requirement for system improvements, FEI's Growth capital is still heavily dependent on the number of customers seeking to connect to FEI's system. Therefore, the formulaic unit cost approach to Growth capital is still the most reasonable approach for determining Growth capital annually as the annual spending envelope is directly tied to gross customer additions, and the method is transparent and easy to track and understand. The formulaic approach also incents FEI to continue to look for areas of efficiency and cost savings.

Additionally, the formulaic approach aligns well with the uncertainty resulting from the energy transition. FEI expects the number of GCA will continue to decline annually; however, there is no certainty on the pace of the decline and FEI is still adding new customers each year. The formulaic approach flexibly adjusts each year based on the number of new customer connections, providing necessary Growth capital funding.

An alternative approach would be to forecast total Growth capital expenditures annually. However, given the lag in updated unit cost information (i.e., 2023 actuals are available only when setting 2025 rates), forecasting Growth capital annually would not offer any improvement over the current formulaic approach.

8. Reference: Exhibit B-1, Section C, Page C-73; and

> Under the Current MRP, FEI's Growth capital expenditures are set based on an indexing formula using a unit cost approach escalated each year by the inflation factor less the approved productivity improvement factor (X-Factor), as discussed in Sections C1.3 and C1.4 respectively, and multiplied by a forecast of gross customer additions plus a true-up for the variances between prior years' forecast and actual gross customer additions. The following equation illustrates the formula used to determine Growth capital (GC):

Reference: Exhibit B-1, Section C, Page C-13; and

> FortisBC submits that the forecast and true-up mechanism has worked as anticipated and that there is no compelling reason to change the current approach.

Reference: Exhibit B-1, Appendix C1-1, Page 14

> LKC developed a productivity factor for FEI using data on the U.S. gas distribution industry. This work relied on a sample of 54 U.S. gas distributors. The sampled companies are listed in Table 3 below.
>
> **Table 3**
>
> **U.S. Gas Distributors used to estimate industry O&M PFP 2007-2022**

8.1 Please advise on whether LKC canvassed, for purposes of FortisBC's Rate Framework Application, the 54 U.S. gas distributors regarding their growth capital indexing methods, more specifically as it concerns the use of forecast (of gross customer additions) and true-up mechanism.

8.1.1 If not, please explain why.

8.1.2 If available, please share any current understanding by LKC on any differences as among FEI and its peers with respect to growth capital indexing methodologies currently in use.

8.1.3 If applicable, please explain what the differences are, the reasons for the differences, and the % degree to which adopting these differences might improve FEI's performance.

8.1.4 If applicable, please explain whether peers' methodologies employ a two-year lag in customer growth and customer count true-ups for purposes of growth capital indexing, as is the case for FEI.

Response:

The following response was provided by Dr. Kaufmann:

No. Dr. Kaufmann was not retained to canvas US gas distributors regarding their use of growth capital indexing methods. In addition, this criterion is not relevant for estimating O&M PFP or selecting sample utilities. It accordingly has no impact on the results of the gas distribution study.

9. Reference: Exhibit B-1, Section C, Page C-83, Table C3-8

Table C3-8: FEI Approved and Forecast Transmission System Reliability & Integrity Capital Expenditures 2023-2027 ($000s)

	2023 Approved	2024 Approved	2025 Forecast	2026 Forecast	2027 Forecast
Pipeline Alterations	16,667	14,479	23,186	28,563	31,165
Pipeline Capacity Improvements	-	-	-	-	335
Pipeline Station Alterations	2,014	3,835	3,127	6,151	1,965
Transmission System Telemetry Alterations	353	303	1,487	667	594
Compressor Station Alterations	9,140	13,096	7,899	11,710	8,850
Compressor Unit Overhauls	2,128	2,343	-	216	2,447
LNG Plant Alterations	6,579	7,322	7,200	7,200	7,200
Transmission System Cathodic Protection	356	395	425	409	417
Pipeline Inspection	10,635	7,767	16,100	20,197	13,497
Pipeline SRW Acquisition	65	33	641	21	-
Total Transmission System Reliability & Integrity	**47,937**	**49,573**	**60,065**	**75,133**	**66,469**

9.1 Please explain quantitatively the factors driving increases in 2025 and 2026 and the drop off in 2027 forecasts (vis-à-vis 2025 and 2026 forecasts) for the specific changes in the following categories of transmission system expenditures: (a) Pipeline Station Alterations; (b) Compression Station Alterations; and (c) Pipeline Inspection.

Response:

FEI provides the following quantitative analysis of the factors driving the changes year-over-year in each of the three categories of Transmission System Reliability & Integrity referenced in the question.

Pipeline Station Alterations

There are two large projects scheduled for construction in 2026 that are contributing to the increase in 2026. These projects are the Roebuck TP – New Control Station and the Island Cogen (Elk Falls) Heater Bypass which are estimated to be $2.5 million and $1.0 million, respectively. The lower forecast expenditures in 2027 compared to 2025 and 2026 are due to fewer scheduled projects and, of the projects planned, most are small upgrades, resulting in lower overall costs.

Compressor Station Alterations

The increase in 2026 is driven by a number of Compressor Unit Control Upgrades. These projects include upgrades to the Programmable Logic Controller (PLC), Human Machine Interface (HMI) and Control Systems, as the current systems are end of life and need to be replaced. These upgrades are required at the Kitchener and Langley Compressor Stations, with approximately $3.5 million and $5.4 million estimated for these stations in 2025 and 2026, respectively. These projects are listed in Table C3-9 of the Application. FEI has two additional sites requiring PLC and

HMI upgrades in 2026 (Warfield Compressor – Unit 1 & 2 and Hedley Compressor). These two projects contribute approximately $2.4 million to the forecast for 2026 in Table C3-8.

The decreased forecast for 2027 compared to 2026 is due to fewer anticipated projects.

Pipeline Inspections

The increased forecasts in 2025 and 2026 are due to baseline inline inspections on the Coastal Transmission System (CTS) related to the Transmission Integrity Management Capabilities (TIMC) and Inland Gas Upgrades (IGU) CPCN projects (which increase inline inspection capabilities). In 2027, the forecast does not include baseline inline inspections related to the CPCN projects, resulting in a lower forecast of expenditures compared to 2025 and 2026. The forecast for all three years during the proposed Rate Framework term includes regularly scheduled inline inspections which can fluctuate year to year depending on prior integrity findings (from inline inspection or integrity digs).

10. Reference: Exhibit B-1, Section C, Page C-87, Table C3-10

Table C3-10: FEI Approved and Forecast Distribution System Reliability Capital Expenditures 2023-2027 ($000s)

	2023 Approved	2024 Approved	2025 Forecast	2026 Forecast	2027 Forecast
Distribution Stations Alterations	11,485	13,633	12,520	11,372	7,150
Distribution System Telemetry Alterations	1,656	329	582	377	125
Distribution System Capacity Alterations	64	476	3,539	180	956
Distribution Stations New	1,326	3,159	3,539	5,238	41
Revelstoke Propane Plant Alterations	252	92	437	32	964
Distribution Sectioning Valves	558	20	629	55	-
Total Distribution System Reliability	**15,341**	**17,709**	**21,245**	**17,254**	**9,237**

10.1 Please explain quantitatively the factors driving increases in 2025 and the drop offs in the 2026 and 2027 forecasts (vis-à-vis 2025) specifically for the following categories of distribution system expenditures: (a) Distribution Stations Alternations; and (b) Distribution Stations New.

Response:

Overall, the Distribution System Reliability category forecast is approximately $3.6 million higher in 2025 than in 2024, with the forecasts for 2026 and 2027 decreasing year-over-year. The annual changes in the forecasts during the Rate Framework term are primarily driven by the number (and size) of the planned projects. As shown in Table C3-11 of the Application, there are a number of projects forecast in 2025 and 2026 over $2 million in the categories of Distribution Stations Alterations, Distribution System Capacity Alterations, and Distribution Stations New. Additionally, FEI is forecasting two Distribution Sectioning Valve projects for 2025: (1) a new isolation valve planned for the Richmond – Annacis Island IP pipeline; and (2) the relocation of valve V10161 at Burrard Street Bridge. These two projects are contributing $0.300 million and $0.329 million, respectively, to the 2025 forecast.

FEI provides the following quantitative analysis of the factors driving the changes year-over-year in each of the three requested categories of Distribution System Reliability expenditures.

Distribution Stations Alterations

The 2025 and 2026 forecasts are generally consistent with 2023 and 2024 amounts, with a forecast drop-off in expenditures in 2027. There are two projects greater than $2 million forecast in this category, with the majority of expenditures occurring in 2025 and 2026. Please refer to Table C3-11 and page C-88 of the Application for further quantification and details. The forecast decrease in expenditures for 2027 is due to fewer projects forecast in this category.

Distribution System Capacity Alterations

The forecast increase in 2025 is due to the SI -1050m x 323 IP/ST Riverside St, Abb project, with forecast expenditures totaling $3.140 million in 2025. This project is identified in Table C3-11 and described on page C-88 of the Application. The reason for the steep decline in 2026 is there are no Distribution System Capacity Alterations projects planned for construction in 2026. The forecast amounts are for project close-out related to 2025 work. The expenditures for 2027 are related to planning for future work beyond the Rate Framework term.

Distribution Stations New

The higher forecasts for 2025 and 2026 are due to specific projects and are described in Table C3-11 and page C-88 of the Application. These projects are the Colwood New IPDP Station and the 1900/420 Downes/Bradner IPDP station in Abbotsford. Additionally, in 2026, FEI is planning to undertake the Capilano & Marine station replacement which has an estimated cost of $0.682 million. As FEI is not forecasting any new distribution station projects in 2027, the only forecast costs are related to project close-out activities for the two stations being constructed in 2026.

10.2 Please explain the reasons for the steep forecasted increase in 'Distribution System Capacity Alterations' in 2025 vis-à-vis the prior years' (Approved) and the steep forecasted decline thereafter.

Response:

Please refer to the response to CEC IR1 10.1.

11. Reference: Exhibit B-1, Section C, Page C-103

> FEI is considering acquiring the Sun Peaks propane distribution system and the propane storage and vaporization plant which supplies the distribution system. FEI is currently undertaking due diligence activities to inform the acquisition decision.

11.1 Please provide the anticipated timeline for the Sun Peaks acquisition.

Response:

A decision to proceed with an acquisition of the Sun Peaks propane system has not been made at this time. If a decision is made to acquire these assets, FEI would expect to file an application with the BCUC in Q2 of 2025 at the earliest.

11.2 Please provide the customer count presently served by the Sun Peaks propane distribution system.

Response:

Resort Gas Ltd. (Resort Gas) owns and operates the propane distribution system at Sun Peaks. Based on Resort Gas' most recently approved revenue requirements application,[10] there were 1,123 actual customers in 2022, 1,182 customers projected for 2023, and 1,244 customers projected for 2024.

Resort Gas has three types of customer classes, which include Group 1 Residential, Group 2 Small Commercial, and Group 3 Large Commercial. Most of the load consumption is attributed to the Group 1 Residential class followed by the Group 3 Large Commercial class.

Please refer to Table 1 below for a breakdown of customer count, classes, and consumption.

[10] Decision and Order G-316-23 in the matter of Resort Gas 2023 Revenue Requirements Application.

Table 1: Resort Gas Customer Count, Customer Classes, and Consumption[11]

Customer Class	Customer Description	2022 Actual		2023 Projection		2024 Projection	
		Customers	Consumption (GJ)	Customers	Consumption (GJ)	Customers	Consumption (GJ)
Group 1 Residential	Premise serviced is a single family home, duplex or multifamily residential unit such as a townhouse or condominium.	1,074	47,345	1,133	53,114	1,195	55,770
Group 2 Small Commercial	Premise serviced is used for commercial purposes and consumption is typically under 2,000 GJ per year.	38	10,379	38	10,919	38	11,145
Group 3 Large Commercial	Premise serviced is used for commercial purposes and consumption is typically greater than 2,000 GJ per year.	11	46,205	11	46,216	11	43,714
Total		**1,123**	**103,929**	**1,182**	**110,249**	**1,244**	**110,629**

11.3 Please specify the types of customer classes that are presently served by the Sun Peaks propane distribution system, and please identify the dominant type of load.

Response:

Please refer to the response to CEC IR1 11.2.

[11] Data from Resort Gas 2023 Revenue Requirements proceeding, Exhibit B-5, Schedule 3 A.

12. Reference: Exhibit B-1, Section B-1, Page B-15

> FBC will see increasing load over the term covered by the Rate Framework. This growth results from both customer additions and from the movement away from fossil fuels to renewable and low carbon energy, including electricity. FBC expects the addition of approximately 2,400 new customer attachments per year and to grow at an average annual growth rate of 0.8 percent per year over the next 20 years. Along with the increase in the number of customers, FBC expects load to increase as a result of the growth in EV sales in the FBC service area, which is expected to play a significant role in the demand for electricity, and an increase in large load additions and decarbonization through hydrogen and RNG production. The electrification of existing heating load, and an increasing percentage of new heating installations being electricity-based, will also increase demand and place stress on the electric infrastructure.

Reference: Exhibit B-1, Section C, Page C-105

Table C3-29: FBC Approved and Forecast Growth Capital Expenditures 2023-2027 ($000s)

	2023 Approved	2024 Approved	2025 Forecast	2026 Forecast	2027 Forecast
Transmission	6,223	1,088	16,418	19,323	20,149
Distribution	1,899	1,716	1,775	1,747	1,814
New Connects	21,951	21,764	23,156	23,965	24,395
Total Growth (Gross)	**30,072**	**24,568**	**41,349**	**45,035**	**46,357**
CIAC (New Connect)	(10,218)	(6,925)	(8,085)	(8,364)	(8,485)
Total Growth (Net)	**19,854**	**17,643**	**33,264**	**36,671**	**37,871**

12.1 Please explain whether FBC anticipates any notable trends concerning the class, type and/or size of new attachments (i.e. customers) that it expects will materialize over the 3-year term of the proposed Rate Framework.

Response:

FBC is anticipating large growth in the north Okanagan region which is being driven by the factors explained in the response to BCUC IR1 23.5. FBC expects most new attachments to be residential.

12.2 Please explain whether FBC expects any large loads involved in hydrogen and/or RNG production to attach to its system during the 3-year term of the proposed Rate Framework, and if so of what magnitude.

Response:

FBC has not yet received any official load requests from RNG or hydrogen production customers and is therefore not expecting any large electric attachments from these types of customers during the Rate Framework term based on the information available at this time.

12.3 Please clarify as to what FortisBC expects will be the most impactful load development over the 3-year term of the proposed Rate Framework related to new attachments in FBC's service territory.

Response:

FBC expects the most impactful load development over the proposed three-year Rate Framework term will be from residential load and densification of residential customers, as described in the response to BCUC IR1 23.5.

12.4 Please identify the areas of FBC's service territory which FBC expects will experience the most growth over the 3-year term of the proposed Rate Framework, and please provide the magnitude of the forecasted load growth for each area.

Response:

FBC expects most growth within its service territory to occur in the North Okanagan and South Okanagan Areas over the three-year term of the proposed Rate Framework (and continuing beyond). Please refer to the response to BCUC IR1 23.2 for details of the total planned system capacity increases during the proposed three-year Rate Framework term and the response to BCUC IR1 23.5 for details on the drivers of the load growth in the City of Kelowna. The forecast summer and winter peaks for the North Okanagan and South Okanagan areas over the proposed Rate Framework term are shown in the following table.

Season	Region	Year		
		2025	2026	2027
Summer	North Okanagan (MW)	376	379	382
	South Okanagan (MW)	230	231	233
Winter	North Okanagan (MW)	378	381	387
	South Okanagan (MW)	244	245	248

13. Reference: Exhibit B-1, Section C, Page C-122

Table C3-38: FBC Approved and Forecast Distribution Sustainment Capital Expenditures 2023-2027 ($000s)

	2023 Approved	2024 Approved	2025 Forecast	2026 Forecast	2027 Forecast
Distribution Line Condition Assessment	1,730	1,841	1,684	1,543	1,850
Distribution Line Rehabilitation	3,498	3,268	4,728	4,448	5,154
Distribution Line Rebuilds	2,563	1,781	5,299	5,707	3,423
Secondary Network and Transformer Connectivity	-	-	264	264	265
Distribution Urgent Repairs	2,839	2,859	3,376	3,122	3,388
Small Planned Capital	952	842	929	937	1,120
Forced Upgrades and Line Moves	1,158	1,281	1,426	1,474	1,538
PCB Environmental Compliance	1,702	2,430	758	-	-
Porcelain Cutouts Replacement	2,438	3,507	2,491	-	-
Meter Exchanges	139	140	144	152	162
Other Distribution Sustainment Programs	461	270	1,347	1,367	1,392
Total Distribution Sustainment	**17,480**	**18,219**	**22,446**	**19,014**	**18,291**

13.1 Please explain in estimated % terms what factors contributes to the forecast increases from 2023 to 2025 and for the factors in the notable drop-off in the 2026 and 2027, and specifically for the 2027 forecast for 'Distribution Line Rebuilds' vis-à-vis 2025 and 2026 forecasts.

Response:

The overall increase in Distribution Sustainment capital expenditures from 2023 to 2025 is due primarily to increases in the Distribution Line Rebuilds and Other Distribution Sustainment Programs categories.

As discussed in Section C3.4.2.4.3 of the Application, the scope of the Distribution Line Rebuilds category has been expanded to include rebuilding residential subdivisions that are supplied by primary and secondary direct-buried underground cable approaching end-of-life. Failure of these assets has resulted in customer outages. While the scope continues to include the expanded activities in 2027, the overall number of planned activities is lower, reflecting FBC's prioritization of other capital expenditures within Sustainment capital, consistent with FBC's asset investment planning (AIP) process.

The increase in capital expenditures for the Other Distribution Sustainment Programs category during the Rate Framework term is to replace the main 350MCM feeder cables manufactured pre-1990 and 1/0 aluminium cables of similar vintage.

As shown in Table C3-38 of the Application (and referenced in the preamble to this IR), the drop-off in forecast 2026 and 2027 expenditures is due to the completion of the PCB Environmental Compliance and Porcelain Cutouts Replacement programs. These programs were carried over from the Current MRP term.

14. Reference: Exhibit B-1, Section C-4, Page C-143

> In response to the BCUC's directive in the 2024 Annual Review Decision, FEI considered the following alternative forecasting methods:
>
> 1. Exclude any spot demand from the forecast, which is the method FEI used prior to 2016. In the Annual Review for 2015 Delivery Rates Decision and Order G-86-15, the BCUC directed FEI "to address the issue of spot purchases more fully and provide a proposal for including some or all of these purchases in the demand forecast based on an analysis of the probability of various outcomes". In response, starting in 2016, FEI included an annual forecast of spot volumes based on discussions with customers.
> 2. Utilize the most recent full year of actuals as the subsequent period's forecast, without adjustment. This approach would not account for any changes in demand that FEI would be anticipating for the upcoming year based on conversations with customers (existing or potential) or developments in the market. Further, due to the timing of the Annual Reviews, there would be a two-year lag between the actuals used as the forecast for the test period (e.g., when setting rates for 2025, FEI would be using the most recent full year of actual demand, which would be 2023).
>
> Of the two alternatives identified above, FEI considers the first alternative to be more reasonable, because it would account for expected changes in customer demand since the previous Annual Review forecast but would exclude speculation in spot related demand which is the area of the forecast that can create the largest variances.

14.1 Please confirm that FEI derives its annual forecast of spot volumes through aggregating (i.e. summing up) each individual customer's indication for its own spot-volume purchases for the year.

14.1.1 If not confirmed, please explain in detail how FEI develops its annual spot-volumes' forecast based on discussions with customers.

Response:

Confirmed. Please also refer to the responses to BCUC IR1 26.1 and 26.5.

15. Reference: Exhibit B-1, Section C-6, Page C-178

> Another consideration when determining whether an SQI should be an informational indicator is the amount of historical performance data available, as without an adequate amount of historical data available to identify trends, it is challenging to establish an appropriate benchmark or threshold.
>
> As a result, informational indicators are generally more directional in nature, providing a high-level view into key business functions.

15.1 Please comment on whether FortisBC monitors for its own needs 'average number of customers served per employee' each year.

Response:

FortisBC does not routinely monitor its overall "average number of customers served per employee" for internal purposes. While the overall number of customers per employee is relatively easy to calculate, the average number of customers served per employee provides limited insight into FortisBC's efforts to manage workforce efficiency. This is because the number of customers is only one driver of the number of employees. Other drivers, such as increasing regulatory and policy compliance requirements, affect the need for additional employees. The number of employees is impacted by the Companies' capital programs, which can vary significantly over time, as well as its mix of employees and external contractors. As a result, the average number of customers served per employee may only provide insight for departments whose workload is closely tied to the number of customers. For instance, customer service centres may use this type of metric to monitor their workforce efficiency in call centres.

Further, this metric also provides limited insight when viewed in isolation. Rather, it is more appropriate for periodic use as a secondary metric in benchmarking studies, along with other key metrics such as O&M per customer, to compare utilities against each other where they are experiencing similar regulatory and compliance requirements. For example, in the Benchmarking Studies filed as part of the 2020-2024 MRP Application (Appendices C2-1 and C2-2) to inform the Companies' proposed X-factor values,[12] Concentric used this metric, as well as the energy delivered per employee, to better understand FEI's and FBC's O&M unit cost performance against their peers.

These studies showed that while the employee per customer metrics for both Companies were slightly above the peer groups, the "distribution O&M + total A&G" per customer and per employee for both utilities outperformed the peer group median in all years studied:

> The figures above showing gas volume per employee and employees per thousand customers also provide information regarding the efficiency of the Company's workforce. The Company provided less volume per employee than the Canadian peer group median (both including and excluding FEI) over the period

[12] In the 2020-2024 MRP Application, FortisBC did not file a productivity study but rather relied on Concentric's benchmarking study to inform its X-factor recommendations.

studied but is only slightly above or at the Canadian peer group median (both including and excluding FEI) in terms of employees per thousand customers served. In addition, the lower volume per employee does not appear to have come at an overall higher cost, based on the OM&A results discussed above. [13]

[…]

While most companies in the Canadian peer group, including FBC, provided less than 12,000 MWh per employee over the Study period, two companies provided in excess of 20,000 MWh per employee, resulting in the relatively wide quartile range depicted in the figure. In addition, while most Canadian peer group companies had 2.5 employees or less per 1,000 customers, three of the companies (including FBC) had in excess of three employees per thousand customers. The Company provided less volume per employee than the Canadian peer group median over the period studied and is above the Canadian peer group medians in terms of employees per thousand customers. Those results, however, did not appear to come at an overall higher cost, based on the OM&A results discussed above.[14]

As a result, FortisBC considers that the average number of customers served per employee is best used in the context of periodic benchmarking studies where, along with other metrics, insights into FortisBC's efforts to manage workforce efficiency can be considered against other utilities and over multiple years.

15.2 Please discuss whether FortisBC agrees that 'average number of customers served per employee' each year would be a good informational indicator to track, and please explain why or why not.

Response:

Please refer to the response to CEC IR1 15.1.

15.3 Please confirm that FEI and FBC would be able to assemble with relative ease, if required, their respective records of 'average number of customers served per employee' for each year of the recent past.

[13] 2020-2024 MRP Application, Appendix C2-1, p. 24.
[14] 2020-2024 MRP Application, Appendix C2-2, p. 22.

Response:

Please refer to the response to CEC IR1 15.1.

15.4 Please comment on whether an indicator measuring 'average number of customers served per employee' on a yearly basis could conceptually help inform or modify FEI's and FBC's formula-based O&M forecasts or components thereof, and please explain why or why not.

Response:

Please refer to the response to CEC IR1 15.1.

15.5 Please explain whether FEI and FBC peer companies track 'average number of customers served per employee' on a yearly basis and, if so, how such indicators are used.

Response:

FortisBC is not aware of any Canadian utility that tracks and publicly publishes its average number of customers served per employee on an annual basis.

16. Reference: Exhibit B-1, Section C-6, Page C-181

> • FEI proposes to introduce a new suite of informational indicators to report on the results of FEI's activities related to the energy transition. While not a traditional category of SQIs, FEI considers it important to report on these metrics within the Annual Review process given the overall focus on the energy transition within the Rate Framework, and to be responsive to the comments received from both the BCUC and interveners.

Reference: Exhibit B-1, Section C-6, Page C-186, Table C6-6

Table C6-6: FEI Energy Transition Informational Indicators

Performance Measure	Description	2020 Results	2021 Results	2022 Results	2023 Results
Scope 1 Emissions	Total direct GHG emissions from FEI owned or controlled sources ($MtCO_2e$)	0.14	0.15	0.24	0.14[130]
Renewable and Low Carbon Energy Supply Volume	Acquired annual Renewable Gas and Low Carbon Energy supply (TJ)	306	790	2,295	2,778
Natural Gas for Transportation Volume	Total gas consumed by CNG and LNG customers (TJ)	2,413	2,652	3,077	3,117
Demand Side Management Energy Savings	Measure of lifetime gas savings from conservation and energy management programs (TJ)[131]	7,937	12,304	10,811	10,104

16.1 Please advise on whether, as part of 'Scope 1 Emissions' reporting, FortisBC plans to separately capture and report on GHG emissions from venting vis-a-vis combustion-related GHG emissions.

16.1.1 Please discuss the pros and cons of providing the requested breakdown of 'Scope 1 Emissions' for each of FEI and FBC.

Response:

This informational indicator is for FEI only.

Please refer to the response to BCSEA IR1 3.5 for a breakdown of FortisBC's Scope 1 emissions data. FEI does not plan to separately capture and report on GHG emissions from venting.

Reporting GHG emissions from venting separately may provide additional information; however, these emissions represent a relatively small portion of FEI's Scope 1 emissions (please refer to the response to BCSEA IR1 3.6) and disaggregating Scope 1 emissions departs from the focus on managing Scope 1 emissions on an overall basis. Further, disaggregation also adds complexity to reporting requirements without meaningful benefits as venting emissions are a small part of overall Scope 1 GHG emissions.

16.2 Please comment on whether, as part of 'Renewable and Low Carbon Energy Supply Volume' reporting, FortisBC plans to separately capture and report on supply volumes associated with each type of low carbon energy source.

16.2.1 Please discuss the pros and cons of providing the requested breakdown of 'Renewable and Low Carbon Energy Supply Volume' for each of FEI and FBC.

Response:

Please refer to the response to BCSEA IR1 3.9.

16.3 Please advise on whether, as part of 'Natural Gas for Transportation Volume' reporting, FortisBC plans on breaking down the gas volumes consumed by CNG customers vis-à-vis those of LNG customers.

16.3.1 Please discuss the pros and cons of providing the requested breakdown of 'Natural Gas for Transportation Volume' for each of FEI and FBC.

Response:

This informational indicator is for FEI only.

FEI is able to report CNG and LNG sales volume separately; however, the intention of the indicator is to show how much CNG and LNG are being used to replace other forms of transportation fuels, such as diesel. Since CNG and LNG carbon intensities are similar, there is no tangible benefit to reporting them separately.

16.4 Please advise on whether, as part of 'Demand Side Management Energy Savings', FortisBC plans to separately capture and report on energy savings by type of DSM activity.

16.4.1 Please discuss the pros and cons of providing the requested breakdown of 'Demand Side Management Energy Savings' for each of FEI and FBC.

Response:

This informational indicator is for FEI only.

FortisBC has historically, and will continue to, separately capture and report on energy savings by type of DSM activity through its DSM Annual Reports. These annual reports identify energy savings incurred as a result of DSM programming by overall portfolio, individual program area, and individual program.

As part of the Annual Reviews under the proposed Rate Framework, FEI plans to report metrics to the most recent completed year, as shown in Table C6-6. FEI considers that this approach most accurately reflects the overall impact of the savings incurred as a result of the measures incented by FEI's DSM programming.

As the requested breakdown of "Demand Side Management Energy Savings" for each of FEI and FBC are already filed and will continue to be filed on an annual basis, FortisBC has not addressed the associated pros and cons requested in the question.

16.5 Please advise as to whether FEI would consider an informational indicator that monitors the intensity of upstream GHG emissions of natural gas which FEI acquires on behalf of its customers and moves through its system.

16.5.1 Please explain why or why not.

Response:

FEI would not consider an informational indicator that monitors the intensity of upstream GHG emissions of natural gas because FEI cannot control the intensity of upstream natural gas production. Therefore, such an informational indicator would not provide context on how FEI is addressing the energy transition.

16.6 Please advise whether or not FEI can provide an estimate of its customers' GHG emission as an indicator and include the carbon tax costs to its customers as important indicators regarding the Energy Transition priority for FEI.

Response:

Please refer to the response to BCUC IR1 33.5 for the total customer GHG emissions from 2020 to 2023. For the reasons discussed in the response to BCUC IR1 33.5.1, FEI does not recommend adding an informational indicator for these emissions.

Further, FEI does not consider that adding carbon taxes paid by its customers would be useful for providing context on how FEI is addressing the energy transition. Carbon taxes are outside of

1 FEI's control, as they are set by government and are subject to change based on government
2 policy.

3