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British Columbia Utilities Commission
Suite 410, 900 Howe Street
Vancouver, BC V6Z 2N3

**Attention: Patrick Wruck, Commission Secretary**

Dear Sirs/Mesdames:

**Re: FortisBC Energy Inc. and FortisBC Inc. (collectively FortisBC) - Application for Approval of a Rate Setting Framework for 2025 through 2027**

We enclose for filing in the above proceeding the Final Submission of FortisBC, dated November 27, 2024.

Yours truly,

**FASKEN MARTINEAU DuMOULIN LLP**

Chris Bystrom*
*Law Corporation

Encl.

cc (email only): Registered Interveners

# BRITISH COLUMBIA UTILITIES COMMISSION

# FORTISBC ENERGY INC. AND FORTISBC INC.
# 2025 TO 2027 RATE SETTING FRAMEWORK

# FINAL SUBMISSION
# OF
# FORTISBC ENERGY INC. AND FORTISBC INC.

## NOVEMBER 27, 2024

**Fasken Martineau DuMoulin LLP**
**Chris Bystrom and Niall Rand**

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# PART ONE: INTRODUCTION AND OVERVIEW

## A. Introduction

1. FortisBC Energy Inc. (FEI) and FortisBC Inc. (FBC) (together, FortisBC, the Companies or the Utilities) submit that the record in this proceeding demonstrates that its proposed Rate Setting Framework for 2025 through 2027 (Rate Framework) is fair and reasonable and has been carefully designed to respond to the current operating environment of the Utilities. The Rate Framework is a flexible rate setting mechanism that recognizes the uncertainty inherent in the energy transition and manages its impacts on the provision of affordable, reliable, and resilient service to customers in the face of heightened concern around the impacts of climate change, as well as physical and cyber security risks on BC's energy systems.

2. Over the course of the year-long process to design the Rate Framework, FortisBC carefully considered the performance of the 2020 to 2024 Multi-Year Ratemaking Plan (Current MRP), the Decisions and Orders of the British Columbia Utilities Commission (BCUC),[1] the challenges in the Companies' operating environment, including the energy transition, a review of ratemaking plans in other jurisdictions, and feedback from the BCUC staff and interveners through its consultation process.[2] Based on its analysis and careful consideration of these factors, FortisBC proposed a Rate Framework that continues to evolve its rate setting approach in response to the changes in it operating environment by continuing successful elements of the Current MRP with updates and modifications needed for the Rate Framework term.

3. The Rate Framework builds on the success of the Current MRP, which itself had evolved in response to FortisBC's operating environment and has a proven track record of functioning well through significant changes and challenges, such as the COVID-19 pandemic and the subsequent inflationary impacts. Thus, the Rate Framework includes elements of the Current MRP that have proven successful, including an indexed approach to FEI's and FBC's Operations

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1 Decision and Orders G-165-20 and G-166-20 (MRP Decision). Online: https://docs.bcuc.com/documents/decisions/2020/doc_58466_2020-06-22-fortisbc-mrp-2020-2024-decision.pdf.

2 Exhibit B-1-2, Updated Application, Section B; Exhibit B-16, CEC IR2 21.1.

and Maintenance (O&M) expense and FEI's Growth capital, a forecast cost of service approach to the remainder of FEI's regular capital and all of FBC's regular capital, Service Quality Indicators (SQIs) for FEI and FBC, and an enhanced Clean Growth Innovation Fund (2025 CGIF) for FEI. These features remain appropriate and will be key to the success of the Rate Framework over the coming years.

4. The Rate Framework includes numerous updates and modifications. This includes a shorter three-year term that is long enough to provide incentive to perform and the capacity to focus on key issues, while acknowledging the current level of uncertainty in the operating environment. FortisBC considers that the Rate Framework is flexible enough that the term could be extended beyond three years, and therefore has included an option to extend the Rate Framework beyond 2027, subject to a review of the operating environment at that time.[3] FortisBC has also proposed necessary updates to the formula inflation, productivity and growth factors, updates to the base amounts for formula O&M (Base O&M) and FEI's Growth capital, new capital forecasts, updated depreciation rates, and other updates based on supporting studies. These and other proposed updates and modifications have been carefully designed and are reasonable and appropriate for the Rate Framework term.

5. FortisBC submits that the proposed Rate Framework is just and reasonable and should be approved. FortisBC's approvals sought are set out in detail in Section A2 of its Application for Approval of a Rate Setting Framework for 2025 through 2027 (Application), as amended,[4] and draft forms of the final Orders sought are included in updated Appendix E2 and E3.[5]

## B. Organization of this Final Submission

6. In this Final Submission, FortisBC addresses the key components of the Rate Framework and approvals sought with a focus on those elements that were the subject of information requests (IRs). FortisBC continues to rely on the totality of its evidence filed in this proceeding.

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[3] Exhibit B-1-2, Updated Application, pp. B-45 to B-46; Exhibit B-10, ICG IR1 3.1.

[4] Exhibit B-1, Application, as updated by Exhibit B-1-1; Exhibit B-1-2, Updated Application.

[5] Exhibit B-1-1, updated Appendix E2 and E3.

7. The remainder of this Final Submission is organized as follows:

- Part Two explains how the Rate Framework is appropriate for, and flexible enough to respond to, the challenges of the energy transition.
- Part Three addresses the key components of the Rate Framework, including the term, inflation, productivity and growth factors, and Annual Review process.
- Part Four addresses topics related to the calculation of FortisBC's revenue requirement under the Rate Framework, including the proposed treatment of the Core Market Administration Expense (CMAE).
- Part Five sets out how FEI's and FBC's 2024 Base O&M is a just and reasonable starting point for the O&M formula, as well as the categories of O&M which will be forecast each year in the Annual Review process.
- Part Six address FortisBC's three-year forecast capital expenditures, FEI's updated 2024 Growth capital unit cost, and the remaining categories of capital that FortisBC forecasts annually, all of which are reasonable and necessary for the safe, reliable and resilient operation of the Utilities.
- Part Seven sets out how the Clean Growth Innovation Fund (CGIF) continues to be in the public interest.
- Part Eight addresses FortisBC's proposed changes to SQIs for the Rate Framework.
- Part Nine addresses the proposed updates to policies and supporting studies, which are just and reasonable and should be approved.
- Part Ten addresses the letters of comment filed in the proceeding.

## PART TWO: RATE FRAMEWORK WILL WORK WELL IN THE CONTEXT OF THE ENERGY TRANSITION

### A. Overview

8. FortisBC has demonstrated through reasoning, analysis and evidence that the proposed Rate Framework will work well in the context of the energy transition. The subsections below expand on the following points:

- The Rate Framework is based on the Current MRP which itself is a product of evolution in response to the energy transition and has proven to be successful in the context of the energy transition and other significant challenges.
- The Rate Framework includes new design elements to respond to the energy transition, including a more limited, three-year term, with the potential for extension.
- FortisBC has analyzed the current state of the energy transition and its operational environment, and the Rate Framework has flexibility to respond to the anticipated challenges ahead, including the ability to incorporate impacts of decisions from other proceedings which will be considering FortisBC's response to the energy transition.
- A jurisdictional review shows that FortisBC's Rate Framework is in line with responses from other regulators.
- FortisBC considered affordability in the design of the Rate Framework and included mechanisms to manage annual rate impacts.

### B. Rate Framework Builds on the Current MRP Which Has Proven Successful in Responding to the Energy Transition

9. The Rate Framework's ability to respond to the challenges of the energy transition is built off the Current MRP which FortisBC intentionally designed to respond to decarbonization policies, including novel and important features such as forecasting clean growth expenditures each year, shifting to forecast regular capital (excluding FEI Growth capital), the CGIF, and targeted incentives related to the energy transition (although they were subsequently denied by the BCUC). Indeed, when applying for the Current MRP, FortisBC explained that the focus of the plan had shifted due to changes such as the policy direction and mandate from all levels of

government towards decarbonization[6] and listed as a benefit the ability to "address the increasing pace and growing scope of energy industry transformation."[7] FortisBC's evolution of its ratemaking framework to respond to the energy transition has thus been underway for many years, and is the product of significant effort on behalf of FortisBC.[8] The proposed Rate Framework is simply the next step in this evolution.

10. Moreover, the Current MRP has proven to perform well in response to the energy transition to date and other significant challenges. Indeed, the Current MRP has been successful in the face of unprecedented pressures on rates, including the global COVID-19 pandemic, significant economy-wide inflationary pressures, persistent supply chain shortages and uncertainty, a historic flooding event impacting a wide area of British Columbia, and the worst wildfire season on record.[9] Despite these challenges, the Current MRP worked as intended, with no need to terminate or vary the plan.

11. A key feature of the Current MRP is the ability to incorporate the growing impacts of the energy transition into rates each year through the Annual Review process.[10] For example, FEI and FBC have been able to incorporate the annual amortization of their growing Demand-Side Management (DSM) Plans and increased equity thickness and return on equity (ROE), FEI has incorporated the reduction in revenue and load from the termination of its contract with BC Hydro's Island Generation facility, and FBC has been able to incorporate increased power supply costs each year through updated power supply forecasts.

12. Moreover, the Current MRP was successful, as indicated by the following:

- FEI's delivery rates and FBC's electricity rates have trended below cumulative inflation, when excluding items approved outside of the Current MRP;[11]

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6 Exhibit B-14, BCOAPO IR2 13.1.

7 Exhibit B-1-2, Updated Application, p. B-26.

8 Exhibit B-1-2, Updated Application, p. B-44.

9 Exhibit B-2, BCUC Panel Supplemental IR 2.

10 Exhibit B-2, BCUC Panel Supplemental IR 1 and 2.

11 Exhibit B-1-2, Updated Application, Tables B2-3 (p. B-22) and B2-5 (p. B-26).

- FEI and FBC will have returned savings to customers of approximately $28.0 million and $11.8 million, respectively, over the term of the Current MRP;[12] and
- FEI and FBC have maintained efficiency, with FEI performing slightly better and FBC performing significantly better than industry peers on an O&M per customer basis.[13]

The success of FortisBC's rate-setting frameworks was recognized by the BCUC in early 2024, when it stated that performance-based ratemaking (PBR) has been "successfully implemented and endorsed by the FortisBC utilities for decades in British Columbia, to the mutual benefit of both their ratepayers and shareholders."[14] FortisBC agrees with this assessment which is also consistent with the BCUC's assessment of the Companies' 2014-2019 Performance Based Ratemaking Plan (PBR Plan) when it approved the Current MRP.[15] Therefore, FortisBC has appropriately retained in the Rate Framework the features of the Current MRP that have allowed it to be successful through the energy transition and other significant challenges to date.

## C. FortisBC Has Evolved the Current MRP to Respond to Changes in its Operating Environment

13. FortisBC has analyzed the energy transition, considered its potential impacts, and proposed changes from the Current MRP in the design of the Rate Framework.[16] As discussed in detail in Section B of the Application, 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 the need to address physical and cyber security, climate adaptation, and the ongoing need to invest in FortisBC's energy systems.[17]

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[12] Exhibit B-1-2, Updated Application, Tables B2-8 (p. B-29) and B2-9 (p. B-30).

[13] Exhibit B-1-2, Updated Application, Tables C1-4 (p. C-8) and C1-6 (p. C-10).

[14] Decision and Order G-73-24, BC Hydro Reconsideration of the Performance Based Regulation Report Order G-388-21, p. 7. Online: https://www.ordersdecisions.bcuc.com/bcuc/decisions/en/522179/1/document.do.

[15] MRP Decision, p. 14: "The Panel is persuaded that the Current PBR Plans were successful and both ratepayers and the Utilities benefited."

[16] Exhibit B-1-2, Updated Application, Section B.

[17] Exhibit B-1-2, Updated Application, p. A-1.

14. FortisBC has also considered prior BCUC decisions, the performance of the Current MRP, stakeholder feedback, and a review of other jurisdictions.[18] Based on its analysis and consideration of these various factors, FortisBC has proposed a framework that addresses the energy transition, other influences in its operating environment, and feedback received from stakeholders. This includes the following four key proposals for the Rate Framework:

- 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;
- Sufficient funding to address emerging requirements and challenges;
- Flexibility to adapt to the energy transition to manage associated costs and impacts; and
- 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.[19]

15. The details of these features are canvassed in Parts Three though Nine of this Final Submission. In FortisBC's submission, it has thoroughly considered its operating environment and made the appropriate adjustments in its proposed Rate Framework.

## D. FortisBC Has Shown How the Rate Framework Accommodates the Anticipated Impacts of the Energy Transition

16. FortisBC has also shown how the Rate Framework will be able to accommodate the expected areas of increased costs and rate pressures due to the energy transition. These areas, and how they are dealt with by the Rate Framework, are summarized below:

- **The energy transition will require increased costs related to investment in emissions reductions.** To address this impact, FEI and FBC will continue to forecast the cost of Clean Growth Initiatives each year in the Annual Reviews, including a new category for methane emissions mitigation. FEI will also continue to report on the Renewable Natural Gas (RNG) Account in each Annual Review, to forecast and recover the costs of renewable and low carbon gas, and to continue the CGIF, with enhancements.

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[18] Exhibit B-16, CEC IR2 21.1.

[19] Exhibit B-1-2, Updated Application, p. B-45.

- **The energy transition will require increased costs related to expanding FBC's electrical generation, transmission and distribution infrastructure to meet growing demand, while also maintaining a clean electricity portfolio.** To address this impact FBC is seeking approval of its three-year capital forecast in this Application and will apply for project approvals in Certificate of Public Convenience and Necessity (CPCN) or section 44.2 applications over the term of the Rate Framework as needed. FBC will also continue to forecast power supply costs each year in the Annual Reviews and has increased O&M funding to add resources to manage and optimize its power supply portfolio.

- **The energy transition will require increased costs related to investments in climate adaptation and resilience, especially for FBC, as electric infrastructure is above ground and therefore more exposed to climate events.** To address this impact, FortisBC will file CPCN or section 44.2 applications for approval of any needed projects to address climate change adaption or seek deferral account treatment for smaller projects. FBC has included a request for increased formula O&M funding related to System Operations and Adaptation, for increased Engineering resources to support FBC's capital plan and to ensure the reliability of energy supply, and increased tree and vegetation management funding. FBC also has flexibility to reprioritize spending within the total O&M funding level.

- **The energy transition will cause FEI rate pressures due to the potential for reduced throughput and a decline in customer additions on the gas system, resulting in increased costs per customer.** To address this impact, FortisBC has proposed a shorter, three-year term in recognition of the uncertainties of the energy transition, with an opportunity to extend the term. FEI is proposing to inflate Growth capital funding annually by a formula based on forecast gross customer additions multiplied by a net inflation factor, meaning a decline in gross customer additions will be reflected in FEI's Growth capital funding. FEI also proposes to continue to set O&M annually by a formula based on forecast average customer count multiplied by a net inflation factor, such that formula O&M will decrease if existing customers leave the system. As in the Current MRP, the forecast gross customer additions and the forecast average customer count will be subject to a true-up mechanism to reflect actual amounts. Further, the index-based formula approach incents FEI to control Growth capital and O&M costs. Finally, FEI has carefully considered and scoped capital projects that are driven by capacity, as is reflected in FEI's three-year regular capital forecast (which declines over the next three years).

17. Ultimately, the purpose of the Rate Framework is not to prescribe FEI's or FBC's response to the energy transition, but to establish a flexible and efficient rate-setting framework that supports FortisBC's ability to adapt to the energy transition and manage its impacts on the

provision of affordable, reliable and resilient service to customers.[20] Therefore, a key feature of the Rate Framework is its ability to incorporate the impact of those other proceedings where FortisBC's substantive response to the energy transition will be addressed in each year's forecasts. This includes important applications such as long-term resource plans, DSM expenditure plans, major project applications, cost of capital proceedings, rate design applications, and energy supply agreements and plans. As with the Current MRP, the Rate Framework is designed to be able to incorporate the impacts of the BCUC's decisions in these other proceedings into rates each year through the Annual Reviews.

18. Notably, over the course of this proceeding, there has been no cost or impact of the energy transition identified that could not be accommodated by the Rate Framework, nor has there been any alternative rate framework identified that would better position FortisBC to manage the impacts of the energy transition over the next three years. While the energy transition is inherently uncertain and unexpected impacts may arise, it is difficult to conceive of a plausible impact over the next three years that could not be accommodated in some way by the Rate Framework. To account for uncertainty, however, FortisBC's proposed shorter, three-year term, is the appropriate response.

## E. Jurisdictional Review Shows Regulators Are Maintaining Rate Plans During the Energy Transition

19. FortisBC's jurisdictional review of rate plans across Canada[21] confirms FortisBC's view that its Rate Framework is reasonable and appropriate in the context of the energy transition. The jurisdictional review shows that the requirements of rate plans have remained consistent and the impacts of the energy transition have generally been managed outside rate plan proceedings.[22] For example, Ontario public utilities can continue to choose from a menu of incentive rate-setting plans, including a Custom Incentive Regulation plan where a distribution utility can forecast "lumpy" capital needs.[23] In Quebec, the Régie de l'énergie (Régie) specifically

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20 Exhibit B-2, BCUC Panel Supplemental IR 4.

21 Exhibit B-1-2, Updated Application, pp. B-32 to B-36; Exhibit B-1, Application, Appendix B2-2.

22 Exhibit B-1-2, Updated Application, p. B-40.

23 Exhibit B-1-2, Updated Application, pp. B-33 and B-36.

notes that its approved rate plan for Énergir is designed to reduce the regulatory burden so that both the Régie and Énergir can focus on other strategic projects/proceedings that relate to the energy transition.[24] Finally, while performance incentive mechanisms (PIMs) have been designed in other jurisdictions to address specific aspects of performance regarding the energy transition, these PIMs work alongside existing ratemaking practices and do not fundamentally change the utility remuneration paradigm.[25] Thus, as discussed below, PIMs or targeted incentives are not inconsistent with the Rate Framework, but could simply be added to the Rate Framework.

## F. Rate Framework Considers Affordability and Is Designed to Manage Rate Impacts

20. FortisBC developed the Rate Framework with consideration to energy affordability and the impacts of the energy transition on customer energy costs. The affordability of its service to customers is important for FortisBC. FortisBC recognizes that responding to the impacts of decarbonization policies while continuing to provide safe, reliable and resilient service to customers, will result in higher costs and rates.[26] FortisBC also recognizes that affordability is a relative measure that is defined differently by different customer segments, that there are many drivers of increasing costs that are outside of the Companies' control, and that the concept of affordability extends well-beyond just gas and electric rates.[27]

21. With all of these considerations in mind, FortisBC has outlined actions to mitigate rate increases both through the design of the Rate Framework and by seeking to manage costs and invest in the most affordable ways, including:[28]

- Continuing with an indexed-based formula approach for the majority of O&M costs and for FEI Growth capital, limiting spending in these areas and maintaining a cost-control focus;
- Increasing investment in energy efficiency programs aimed at reducing customers' energy consumption;

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[24] Exhibit B-1-2, Updated Application, pp. B-35-36.

[25] Exhibit B-2, BCUC Panel Supplemental IR 5 and 6, pp. 29-30.

[26] Exhibit B-16, CEC IR2 18.1.

[27] Exhibit B-16, CEC IR2 17.1.

[28] Exhibit B-1-2, Updated Application, Section B1-5; Exhibit B-7, BCOAPO IR1 8.1.

- Optimizing energy supply portfolios to reduce customer costs;
- Pursuing a diversified approach to long-term planning to manage affordability and optimize the use of gas and electric infrastructure;
- Carefully considering the need for capital investments and available project alternatives, including considering whether there are smaller incremental investments to increase future optionality as the energy transition evolves;
- Balancing the need to be proactive in building capacity with the expected timing of demand on the system; and
- Adding new sources of revenue through serving non-traditional markets, like transportation end uses.

22. FortisBC will also continue to support customers with opportunities to reduce their energy use through energy efficiency incentives, providing customers with accurate and timely energy use information, identifying and supporting access to governmental and non-governmental assistance programs, and providing flexible bill payment support for those who may need it.[29] FortisBC also recognizes that the provincial government can play a key role in assisting with the affordability of the energy transition, whether through managing the pace of the energy transition or by assisting utilities or customers directly.[30] FortisBC will continue to explore and develop these and other avenues to mitigate rate increases[31] as part of its efforts to address affordability concerns during the Rate Framework term.

23. Finally, FortisBC is also proposing to continue the Annual Review process, which remains the most appropriate forum to address rate impacts. At the Annual Reviews, all aspects of FEI's and FBC's revenue requirement are identifiable, including the rate impacts of determinations in other BCUC proceedings and all available offsetting benefits, making it the ideal time to determine if a rate mitigation strategy is required. Given that the level and pace of rate impacts during the energy transition is uncertain at this time, the Annual Reviews provide the necessary flexibility to address rate impacts each year as they occur.[32]

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[29] Exhibit B-16, CEC IR2 17.1.

[30] Exhibit B-7, BCOAPO IR1 8.1.

[31] Exhibit B-7, BCOAPO IR1 8.1.

[32] Exhibit B-2, BCUC Panel Supplemental IR 1, p. 9.

## PART THREE: RATE FRAMEWORK DESIGN

### A. Overview

24. In this Part, FortisBC addresses its proposals with respect to nine components of the Rate Framework: the Term, inflation factor (I-Factor), productivity factor (X-Factor), growth factor (Growth Factor), exogenous factor (Z-Factor), earning sharing mechanism (ESM), efficiency carry-over mechanism (ECM), financial off-ramp, and Annual Review process. For the reasons discussed below, FortisBC submits that its proposals with respect to all nine of these components are reasonable, appropriate and should be approved.

### B. Three-Year Term with Opportunity for Extension Strikes a Reasonable Balance in the Current Operating Environment

25. FortisBC's proposed three-year term, with the potential to extend the term beyond 2027, subject to review and approval by the BCUC, is reasonable and appropriate in the current operating environment.

26. A three-year term is substantially shorter than the 6- and 5-year terms of the PBR Plan and the Current MRP, respectively, and the typical 5-year term of rate plans in other jurisdictions.[33] This shorter three-year term strikes a reasonable balance between managing the uncertainty inherent in the energy transition, while also providing a long enough timeframe to find some efficiencies in the regulatory process and provide certainty on the rate mechanisms in place.[34] Three points supporting why this is the right balance are set out below.

27. First, reducing the term to three years sufficiently addresses the uncertainty caused by the energy transition, as a three-year term provides an opportunity to evaluate whether a change to the Rate Framework is needed once policy has had time to develop. Three years is a reasonable timeframe over which to expect policy developments to occur that could clarify the roles that gas

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[33] Exhibit B-1-2, Updated Application, Section B2.3.1.

[34] Exhibit B-4, BCUC IR1 5.1.

and electric utilities play in the future, and on how gas and electric utilities can work together to accommodate the energy transition.[35]

28. Second, three years is not too long, as the Rate Framework provides a flexible and efficient approach to rate-setting that supports both Companies' abilities to adapt to the energy transition and manage its impacts on service to customers.[36] Please refer to Part Two of this Final Submission on the ability of the Rate Framework to work well over the next three years.

29. Third, a three-year term is the minimum time required to enable efficiencies in the regulatory process and provide certainty on the rate mechanisms in place. Creating regulatory efficiency and certainty is vital, as it allows the Companies to focus more time and resources on other regulatory applications and on responding to the energy transition and the complex operating environment.[37] A shorter term would create regulatory inefficiency and uncertainty. Notably, if the Rate Framework were only two years or less, the length of the Rate Framework would be shorter than the length of the process to develop, file and review the Application, and FortisBC would need to commence preparing the next application immediately after receiving the decision on the current Application. This would detract from FortisBC's ability to respond to the energy transition, and eliminate the regulatory efficiency benefits of a multi-year rate framework.[38]

30. FortisBC's proposal for the opportunity to extend the Rate Framework is also reasonable and appropriate. Towards the end of the three-year term, FortisBC would review the Rate Framework in light of any changes in the external policy or operating environment at that time, consult with BCUC staff and interveners, and determine whether an application for extension of the Rate Framework (for one or both utilities) is reasonable and, if so, whether any elements should be changed or adjusted. This would be an opportunity for modifications to the Rate Framework, such as the addition of a leading safety indicator, changes to the proposed energy

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35 Exhibit B-4, BCUC IR1 5.1.

36 Exhibit B-4, BCUC IR1 5.1.

37 Exhibit B-4, BCUC IR1 5.1.

38 Exhibit B-4, BCUC IR1 5.1.

transition informational indicators, and the development of new forecasts for capital expenditures.[39] FortisBC submits that this proposal is suitable for the current operating environment, providing the opportunity to evaluate any changes in policy or other factors, as well as the opportunity to assess whether to refresh the Rate Framework or apply for a new rate-setting mechanism if necessary.

### C. Inflation Factor (I-Factor)

31. The use of an I-Factor in the indexing formula is a standard component of rate frameworks[40] and is necessary to reflect the fact that utility costs are subject to the general inflationary pressures occurring in the economy.[41] FortisBC proposes to continue to use a weighted composite I-Factor, consisting of labour indexed to Statistics Canada's AWE:BC and non-labour indexed to the All-items Index for CPI:BC.[42] The only change that FortisBC is proposing from the Current MRP is to return to a fixed labour and non-labour weighting approach, rather than having the weightings determined each year based on actual results from the previous year. Specifically, FortisBC proposes an I-Factor consisting of a fixed 50 percent labour weighting for FEI and a fixed 60 percent labour weighting for FBC, based on the average of the 2019 to 2023 actual labour weightings.[43] FortisBC submits that this approach is just and reasonable for the following reasons.

32. First, fixing the labour and non-labour weightings for the term of the Rate Framework is reasonably and sufficiently accurate. FortisBC's fixed weightings are consistent with three years of historical data, ensuring that the weightings reflect a realistic and stable average. The relatively short term of the Rate Framework limits the potential for significant variations from the historical average,[44] and the impact of minor annual variations from actual weightings over the term should be minor.[45] Further, the approach used in the Current MRP is also inaccurate to a degree because

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39 Exhibit B-1-2, Updated Application, pp. C-3 to C-4; Exhibit B-12, RCIA IR1 7.1.

40 Exhibit B-1-2, Updated Application, p. B-33.

41 Exhibit B-1-2, Updated Application, p. C-4.

42 Exhibit B-1-2, Updated Application, p. C-4.

43 Exhibit B-1-2, Updated Application, pp. C-4 to C-6.

44 Exhibit B-1-2, Updated Application, pp. C-4 to C-6.

45 Exhibit B-1-2, Updated Application, p. C-5; Exhibit B-4, BCUC IR1 6.1.

the weightings are based on the most recent full year of actual O&M results, whereas the formula is being used to establish the upcoming year's O&M spending (or Growth capital) envelope.[46] The reasonableness of using fixed labour and non-labour weightings is confirmed by the BCUC's previous approval of the approach for the 2014-2019 PBR Plan. The Alberta Utilities Commission (AUC) has also adopted fixed labour to non-labour ratios in the most recent PBR plans for the utilities in Alberta, even though there are a number of utilities that each have a different weighting from year to year.[47]

33. Second, utilizing a fixed labour and non-labour weighting approach should increase acceptance. The method of updating the weightings annually during the Current MRP led to numerous IRs during the Annual Reviews, even though the calculation method was predetermined and not within scope. This suggests less acceptance of the approach used during the Current MRP and that a return to a fixed weighting approach is warranted.[48]

34. Third, fixing the labour and non-labour weightings will reduce the administrative time and effort involved in recalculating labour and non-labour ratios annually and responding to IRs on the calculations in each Annual Review. This reduction in regulatory workload allows the Companies to focus on more critical aspects of their operations, thus enhancing overall efficiency.

35. FortisBC accordingly proposes that the weightings for AWE:BC and CPI:BC rates be fixed at 50 percent labour and 50 percent non-labour for FEI, and at 60 percent labour and 40 percent non-labour for FBC for the Rate Framework term.[49]

## D. Proposed Productivity Factor (X-Factor) Is Just and Reasonable

36. FortisBC submits that its proposed X-Factors for FEI and FBC, based on the clear and compelling expert evidence of Dr. Lawrence Kaufmann, are reasonable and appropriate for the

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46 Exhibit B-4, BCUC IR1 6.2.

47 Exhibit B-1-2, Updated Application, p. C-6.

48 Exhibit B-1-2, Updated Application, p. C-5.

49 Exhibit B-1-2, Updated Application, pp. C-4 to C-6.

Rate Framework term, are unchallenged by any evidence in this proceeding and should be approved by the BCUC.

37. The X-Factor, also referred to as the productivity improvement factor (PIF), is typically calculated as the sum of the industry productivity growth trend and a company-specific stretch factor (if appropriate). The productivity factor is intended to capture the effects of economies of scale and productivity improvements that have been realized within the utility industry. The stretch factor is designed to reflect the incremental productivity improvements the utility can reasonably be expected to achieve over the term of its upcoming incentive regulation plan.[50]

38. FortisBC's proposed X-Factors are recommended by Dr. Kaufmann, who FortisBC retained to conduct productivity studies for FEI's and FBC's respective industries and recommend an appropriate, evidence-based X-Factor. Dr. Kaufmann is an expert in the field of productivity studies, having participated in over 200 projects addressing incentive regulation and other energy policy issues in 15 countries. Over the past 20 years, Dr. Kaufmann's clients have been almost evenly divided between utility companies and regulatory agencies, including the Ontario Energy Board and the Essential Services Commission of Victoria, Australia. The Curriculum Vitae of Dr. Kaufmann is in Appendix 4 of his report, which is Appendix C1-1 to the Application.[51]

39. Dr. Kaufmann's report contains a full explanation of his analysis and recommendations, including the economic foundation for formula-based ratemaking, an explanation of indexing and its application to FortisBC, and a detailed step-by-step explanation of his analysis leading to the recommended productivity and stretch factors. While Dr. Kaufmann's expert analysis covers a complex subject, his report is transparent and both clear and compelling. FortisBC submits that the IRs have indicated no flaw in his analysis, which is also unchallenged by any evidence in this proceeding.

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[50] Exhibit B-17, ICG IR2 2.1.

[51] Exhibit B-1, Application, Appendix C1-1, Dr. Kaufmann's Report, Appendix 4.

40. Based on productivity studies for FEI's and FBC's respective industries and other expert analysis set out in his report, Dr. Kaufmann recommends the following X-Factor values for FEI and FBC:

- An X-Factor of 0.38 percent, consisting of a 0.28 percent industry O&M partial factor productivity (PFP) and a 0.10 percent stretch factor for FEI's O&M and Growth capital indexing formulas.
- An X-Factor of 0.20 percent, consisting of a 0.20 percent industry O&M PFP and zero percent stretch factor for FBC's O&M indexing formula.

FortisBC submits that Dr. Kaufmann's recommendations are based on clear and persuasive reasoning and expert analysis, and should be approved.

41. In the subsections below, FortisBC addresses in more detail the basis of the proposed X-Factors, responding to the key topics explored in IRs.

**(a) Competitive Market Paradigm Requires Productivity Factor to Be Based on Industry Measures Not Performance of the Utility**

42. Dr. Kaufmann's recommended X-Factors are rooted in the application of the competitive market paradigm. The competitive market paradigm is supported by prominent economists, including Professor Alfred Kahn, who wrote that "the single most widely-accepted rule for the governance of the regulated industries is to regulate them in such a way as to produce the same results as would be produced by effective competition, if it were possible."[52]

43. As discussed by Dr. Kaufmann, the competitive market paradigm requires that industry input price and productivity measures be used for the productivity factor, rather than the utility's own performance:

> It is critical for rate and revenue adjustment formulas to link rate changes to "external" data rather than the utility's own costs. While incentive regulation is in effect, using external data to update rates severs the link between the utility's allowed costs (determined by the rate or revenue adjustment formula) and its actual costs. This separation will strengthen utilities' cost-control incentives, since

[52] Kahn, A, *The Economics of Regulation*: Principles and institutions, Volume 1, p. 17.

> actual cost reductions are not reflected in rate changes (as they would be in a cost of service rate case) but instead go to the bottom line.
>
> Incentive regulation uses economic reason to identify appropriate external metrics for rate adjustment formulas. This is achieved through an application of "the competitive market paradigm." The aim of incentive regulation is to replicate the behavior and outcome of competitive markets, so the formulas used to adjust utility rates in index-based regulation are designed to be consistent with how prices change in competitive markets.
>
> Competitive market prices depend on industry-wide conditions, not the costs or circumstances of any particular firm. Incentive rate-setting replicates this outcome by using industry-wide measures to calibrate rate adjustment formulas. Relying on industry-wide data, rather than the utility's own performance, is important for ensuring that formula-based rate adjustments depend on external metrics rather than the utility's own costs.

It is therefore essential that the productivity factor be based on industry productivity, not the productivity of FEI or FBC themselves. Accordingly, it would not be appropriate to set the productivity factor based on FortisBC's historical ability to generate savings during the Current MRP or any other time period.

44. Thus, when asked about the relationship between FortisBC's historical savings and the productivity factor, Dr. Kaufmann's response was justifiably as follows:[53]

> There is no conceptual or empirical relationship between FEI's and FBC's historical actual O&M savings and the proposed O&M partial factor productivity (PFP) component of the X factor. As explained in Part 2 of Dr. Kaufmann's report (LKC Report), the productivity factor is an industry-based measure that uses indexing logic and economic reason to identify appropriate external metrics for rate adjustment formulas. The aim of incentive regulation is to replicate the behavior and outcome of competitive markets, so the formulas used to adjust utility rates in index-based regulation are designed to be consistent with how prices change in competitive markets.

Historical savings are not relevant to setting the productivity factor, but are passed onto customer in other ways. Specifically, the formula O&M cost reductions that FortisBC achieved over the Current MRP have been fully passed on to customers as the base formula O&M has

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[53] Exhibit B-4, BCUC IR1 7.1.

incorporated these savings as reflected in FortisBC's 2023 Actual formula O&M. Customers will benefit immediately from these cost savings, since the savings are reflected in lower rates from the outset of the new plan and for each subsequent year of the Rate Framework. As stated by Dr. Kaufmann, this is a "tangible and significant source of benefit for both Companies' customers."[54]

45. When asked what operational circumstances justified the reduction to FEI's and FBC's productivity factors, Dr. Kaufmann's response was similar:[55]

> FEI's and FBC's "operational circumstances" are not relevant to the calculation of appropriate productivity factors for the Companies' Rate Framework. Instead, these productivity factors should be based on industry-wide trends in O&M PFP for the gas distribution and electricity distribution industries.

Changes in the operating environment are not relevant to setting the productivity factors, but can impact FEI's and FBC's O&M and are, in fact, reflected in the Companies' proposed 2024 Base O&M amounts.[56]

46. Similarly, the productivity factors should not be set based on the success of the previous X-Factors to generate savings, which is just another measure of the Utilities' performance. Further, it is important to understand that the incentive to achieve savings is not derived from the quantum of the productivity factor, but from the decoupling between revenues and costs, the length of the term of the plan, the share of costs that are subject to the incentive framework, and the inclusion of an ESM. The X-Factor does not incent savings, but ensures that the benefit of the industry's long-run productivity trend is passed to customers regardless of the actual performance of the utility.[57] Thus, Dr. Kaufmann responded to an IR as follows:[58]

> No, the 0.20 percent X factor will not reduce the incentive for managers to achieve savings. Incentive regulation is grounded in the principle that utility managers, like managers of other businesses, will respond rationally to financial incentives.

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54 Exhibit B-4, BCUC IR1 7.1.

55 Exhibit B-4, BCUC IR1 7.4.

56 Exhibit B-4, BCUC IR1 7.4.

57 Exhibit B-10, ICG IR1 4.9.

58 Exhibit B-10, ICG IR1 4.9.

> More descriptively, incentive regulation uses "carrots" to motivate better performance.
>
> The notion that higher X factors increase incentives seems to view the X factor as a "stick," which will "force" a utility to work harder and find efficient costs. This assumption is antithetical to more incentive-compatible regulatory frameworks that encourage efficiencies that benefit both customers and shareholders. In incentive-based plans, incentives are created by establishing price trends that are "external" to the company's own costs. This is analogous to competitive markets, where prices are determined by market-wide forces rather than any individual company's own costs. When prices are set by external forces, companies have stronger incentives to control costs since doing so does not impact their prices but does reduce costs which, in turn, improves the bottom line.
>
> This process is replicated in incentive regulation. Indeed, as discussed in the LKC Report, incentive regulation uses a competitive market paradigm to establish price trends that simulate competitive market outcomes where competition itself is impractical. While the utility is under an incentive-based plan, its price trends are determined by changes in industry-wide changes in input price inflation and productivity growth. The company's own costs are "external" to these industry-wide forces, so the utility has incentives to reduce costs. Moreover, these incentives are not impacted in any way by the external values of the inflation measure, productivity trend, or stretch factor.

FortisBC therefore submits that the productivity factor needs to be based on industry-wide productivity trends, not on the Utilities' performance. The latter approach would be at odds with the competitive market paradigm and could undermine FEI's and FBC's incentives to improve performance, thereby reducing benefits to both customers and shareholders over the term of the Rate Framework.

47. In this regard, Dr. Kaufmann emphasized how his evidence has improved the basis on which the BCUC can set the productivity factor for the Rate Framework:[59]

> However, it should be noted that the decision to approve a 0.5 percent X factor was based on the BCUC's experience and judgement. It was not based on rigorous evidence of O&M PFP trends, since there was no explicit, O&M PFP evidence on the record at the time for the BCUC to consider. Recommendations for FEI's and FBC's proposed Rate Framework include industry O&M PFP evidence and therefore improve on the information on the record in the 2020-2024 MRP Application proceeding. The BCUC articulated clear concerns regarding the

[59] Exhibit B-4, BCUC IR1 7.3.

establishment of the X factors for FEI's and FBC's Current MRPs. In particular, the BCUC found that:

> …if the X-Factor is to apply to a utility's entire operation, it would be reasonable for the TFP studies to be applicable to FortisBC. However, this is not the case with the Proposed MRPs where the X-Factor applies only to O&M expenses and a small part of the capital expenditures…the Panel finds that TFP studies are not sufficiently relevant to be applied to FEI and FBC's MRPs…[and] the Panel is not persuaded that productivity studies from other jurisdictions can be applied or are relevant in this instance.

Dr. Kaufmann's recommendations for the Companies' proposed Rate Framework respond directly to the BCUC's stated concerns. Instead of drawing on TFP evidence applied elsewhere, Dr. Kaufmann developed new evidence on O&M productivity growth that is more relevant to be applied to FEI's and FBC's Rate Framework. This evidence is a better fit for rate-setting frameworks where "the X factor applies only to O&M expenses and a small part of the capital expenditures." Further, by focusing his analysis more directly on the services provided by FEI and FBC, Dr. Kaufmann's recommendations provide more carefully tailored and accurate productivity evidence to the BCUC.

Notwithstanding the reasonableness of the X-factor findings in 2019, Dr. Kaufmann believes the Companies' current analysis responds to the BCUC's previously expressed concerns. He accordingly believes he has provided more refined, accurate, and appropriately tailored evidence for the BCUC's review.

48. FortisBC agrees and submits that Dr. Kaufmann has provided a strong and compelling analysis rooted in the competitive market paradigm that should be accepted by the BCUC.

### (b) Recommended O&M Partial Factor Productivity (PFP) Factors Are Based on Rigorous O&M PFP Analysis

49. Dr. Kaufmann's recommended productivity factors of 0.28 percent for FEI and 0.20 percent for FBC are based on a rigorous and careful analysis of O&M productivity trends specific to FEI's and FBC's industries using the best and most applicable data. FortisBC relies on Dr. Kaufmann's report in Appendix C1-1 to the Application for the full explanation of his analysis and recommendations, including his explanation of indexing and its application to FortisBC and his step-by-step explanation of his analysis leading to the recommended productivity factors. FortisBC highlights the following key points supporting Dr. Kaufmann's conclusions, with an emphasis on topics raised in the IRs.

***The Appropriate Industry Measure for Calculating FortisBC's Productivity Factors is O&M Productivity Growth***

50. Dr. Kaufmann has used industry O&M productivity growth as the measure for calibrating FEI's and FBC's O&M formulas to align with the fact that FortisBC's indexing formulas overwhelmingly apply to O&M costs. The use of O&M productivity growth also responds to the BCUC's determination in the MRP Decision that the results of total-factor productivity (TFP) studies, which consider both O&M and capital costs, cannot be directly applied to FortisBC's formulas. While FEI's formula also applies to its Growth capital, Dr. Kaufmann explains that, due to data constraints, it is not possible to calculate a Growth capital-specific productivity value.[60] Therefore, using O&M productivity growth trends is the best and most reasonable option for FEI's and FBC's formulas.

***Use of US Data is Necessary Due to Lack of Canadian Data***

51. Dr. Kaufmann's use of US datasets to estimate long-run O&M PFP growth rates is reasonable and appropriate due to the similarities between the jurisdictions and the fact that the cross-sectional and time series data necessary to estimate these trends are simply not available in Canada.[61] As stated by Dr. Kaufmann:[62]

> Due to the lack of uniform and standardized data sets for Canadian electric and gas utilities, it is not possible to estimate long-run O&M PFP trends for the Canadian gas distribution or electricity distribution industries, similar to Table C1-3 and Table C1-5.

52. The use and applicability of US data for calculating the industry productivity trends for Canadian utilities has also been reviewed and approved by various Canadian regulators. For instance, in its first generation PBR Decision, the AUC concluded that considering the lack of a centralized data set in Canada and given the overall similarities between the two jurisdictions, the use of a US data set is acceptable. Furthermore, the BCUC's approved X-Factors in the 2014-

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60 Exhibit B-1-2, Updated Application, p. C-6; Exhibit B-1, Application, Appendix C1-1, Dr. Kaufmann's Report, p. 8.

61 Exhibit B-4, BCUC IR1 7.7.

62 Exhibit B-12, RCIA IR1 12.3.

2019 PBR Decisions for FEI and FBC were based on average industry productivity growth in the US.[63]

***Dr. Kaufmann's Use of Wide Industry Samples Is a Sound and Accurate Approach***

53. To estimate industry O&M productivity trends, Dr. Kaufmann used a large cross-section of utilities for which high-quality data was available to accurately represent the industries in which FEI and FBC operate. Dr. Kaufmann explained:[64]

> Dr. Kaufmann's main task was to estimate the industry O&M PFP trends for FEI's and FBC's Rate Framework. To estimate O&M PFP trends, it is necessary to compile and utilize industry-wide datasets for both the gas distribution and electric distribution industries. Industry-wide datasets require the compilation of extensive cross-sectional data (i.e., data on utilities across the entire US) and extensive time series data (i.e., long series of data across time for each selected utility). His criteria for selecting the companies in each of these samples were:
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> 1. To select companies with sufficient, high-quality data, across multiple years, for estimating productivity trends;
>
> 2. To develop industry samples that reflect the economic and geographic diversity across the US; and
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> 3. Simultaneously, to develop industry samples that reflect the diversity in company size across each of the respective utility industries.

To obtain the high-quality data, Dr. Kaufmann utilized publicly-available data on US gas and electric utilities compiled and provided by Standard&Poor's.[65]

54. The end result was that Dr. Kaufmann used a sample of 54 US natural gas distributors for FEI and 82 electric utility industry companies for FBC. This represents a very large cross-section of utilities encompassing virtually the entire US gas and electric distribution industries, respectively, which enables an accurate calculation of *industry-wide* O&M PFP trends.[66] The use

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63 Exhibit B-12, RCIA IR1 12.3.

64 Exhibit B-4, BCUC IR1 7.5.

65 Exhibit B-4, BCUC IR1 7.5.1.

66 Exhibit B-4, BCUC IR1 7.5.1.

of these broad samples is consistent with the competitive market paradigm, wherein industry-wide productivity trends are used to set productivity factors.[67]

55. The large cross-section also increases the accuracy of the analysis. Dr. Kaufmann explained:[68]

> In general, industry productivity studies become more accurate when they sample a large cross section of utilities across the industry. Adding companies to the sample naturally increases the coverage of the sample, and ideally the industry sample will comprise the entire industry. In practice, it is rarely possible to sample the entire industry because of data and reporting constraints. Nevertheless, a good rule of thumb for estimating industry productivity is to include as many companies as possible, provided that all sampled companies have high-quality data.

56. FortisBC therefore submits that Dr. Kaufmann's sample of gas and electric distribution companies was reasonable and appropriate for the productivity studies.

***Use of a 15-Year Period to Estimate Productivity Trends Balances the Need to Minimize the Impact of Volatility and Reflect Current Conditions, and is Consistent with Industry Standard Practice***

57. Dr. Kaufmann used a 15-year sample period for the productivity studies which is consistent with industry practice, and reasonably balances the needs to minimize the impact of volatility in O&M productivity from year to year while still reflecting current experience. Dr. Kaufmann states:[69]

> Using a 15-year period to estimate productivity trends has become widespread in incentive regulation. This period is long enough to average out the annual "ebbs and flows" in utility expenditures and thereby minimize the impact of year-to-year volatility, and the experience of a small number of years, on estimated productivity growth. At the same time, this period is recent enough to reflect the industry's current, long-run conditions rather than dated, obsolete experience. By balancing these objectives, a 15-year sample period is likely to provide a reliable

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[67] Exhibit B-1, Application, Appendix C1-1, Dr. Kaufmann's Report, p. 18; Exhibit B-1-2, Updated Application, p. C-9.

[68] Exhibit B-13, BCUC IR2 45.3.

[69] Exhibit B-4, BCUC IR1 7.6. See also Exhibit B-1, Application, Appendix C1-1, Dr. Kaufmann's Report, p. 10.

> measure of long-run productivity trends (partial or total-factor). LKC therefore uses a 2007-2022 period to estimate long-run O&M PFP trends for FEI and FBC.

58. Given that 15 years of high-quality data is available, using a shorter period of time would only reduce the reliability of the estimates due to the volatility in the data.[70] As Dr. Kaufmann explains, as industry productivity data can be quite volatile from year to year, longer-term data sets are generally more reliable measures for productivity factors:[71]

> The data also show that O&M PFP measures can be volatile. This is evident in the divergent estimates of O&M PFP growth for the 2014-2022 and 2007-2022 periods, for both companies. This is an important finding, because it supports the view that changes in O&M PFP can be affected by a wide range of factors, including the timing of relatively large O&M expenditures, changes in inflationary pressures, and other exogenous factors that impact output growth, O&M growth, or both. As discussed above, these ebbs, flows, and transitory developments in business operations tend to balance out over longer sample periods. Longer-term measures of O&M PFP growth therefore provide more reliable estimates of underlying O&M PFP trends for utility industries. This, in turn, implies that longer-term measures of O&M PFP are generally a more appropriate basis for productivity factors in index-based incentive regulation plans than O&M PFP measured over relatively short intervals.

In short, the best practical solution for mitigating volatility in O&M is to increase the number of years used to measure productivity. As Dr. Kaufmann's sample used to estimate productivity already includes all the available utilities with high quality data, volatility could not be mitigated further by expanding the cross section of sampled utilities.[72]

59. The balance to this is that a time-series that reaches too far back may no longer reflect current industry conditions. In Dr. Kaufmann's judgement, 15 years is a reasonable limit on the length of the data. Using a 15-year period to estimate productivity trends has become widespread in incentive regulation and has been used recently by many researchers to measure productivity trends.[73]

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[70] Exhibit B-13, BCUC IR2 45.3.

[71] Exhibit B-1, Application, Appendix C1-1, Dr. Kaufmann's Report, p. 12.

[72] Exhibit B-13, BCUC IR2 45.3.

[73] Exhibit B-1, Application, Appendix C1-1, Dr. Kaufmann's Report, p. 10; Exhibit B-4, BCUC IR1 7.6; Exhibit B-13, BCUC IR2 45.3.

60. Using only the last five years of data would clearly not strike the right balance. As stated by Dr. Kaufmann:[74]

> However, the 2017-2022 period is clearly not representative of conditions going forward. The 2017-2022 period included a worldwide pandemic, which in short order initiated a worldwide recession. When the pandemic abated in late 2021, it sparked the worst worldwide price inflation in more than 40 years. Therefore, it would not be reasonable to calculate the PFP for FEI and FBC based on the most recent five years of data.

61. Similarly, using a three-year period, as is typically used for benchmarking analysis, would also be clearly inappropriate. The purpose of benchmarking is to look at productivity at a specific point in time, which is a much different analysis than measuring productivity trends.[75] Therefore, the length of the data period used for benchmarking is necessarily much shorter than for measuring long-term industry productivity trends.[76]

***Industry O&M PFP Analysis for Natural Gas Distribution Utilities***

62. Based on the data and methods discussed above and more fully in Dr. Kaufmann's Report, Dr. Kaufmann's industry O&M PFP analysis for FEI is estimated based on a sample of 54 US natural gas distributors over the 2007-2022 period as shown in the table below.[77] As shown, the industry O&M PFP growth for the US natural gas distributors is computed at 0.28 percent which, along with the stretch factor value, is used to determine FEI's X-Factor value. FEI submits that this value is based on a principled and rigorous analysis and should be accepted.

**Table 4**

**Computation of O&M PFP Trend for U.S. Gas distribution**
**Average 2007-2022**

| Customer Growth | O&M Growth | Industry Input Price Inflation | O&M Quantity Growth | O&M PFP Growth |
|---|---|---|---|---|
| 0.67% | 2.98% | 2.59% | 0.39% | 0.28% |

[74] Exhibit B-13, BCUC IR2 45.6.

[75] Exhibit B-4, BCUC IR1 7.5 and 7.5.1.

[76] Exhibit B-13, BCUC IR2 45.3.

[77] Exhibit B-1, Application, Appendix C1-1, Dr. Kaufmann's Report, p. 15.

***Industry O&M PFP Analysis for Electric Utility Industry***

63. Similarly, Dr. Kaufmann's industry O&M PFP analysis for FBC is estimated based on a sample of 82 electric utilities over the 2007-2022 period as shown in the table below.[78] As shown, the industry O&M PFP growth for the US electric utilities is computed at 0.20 percent which, along with the stretch factor value, is used to determine FBC's X-Factor value. FBC submits that this value is based on a principled and rigorous analysis and should be accepted.

**Table 7**

**Computation of O&M PFP Trend for U.S. Electric Utility Industry 2007-2022**

| Customer Growth | O&M Growth | Industry Input Price Inflation | O&M Quantity Growth | O&M PFP Growth |
|---|---|---|---|---|
| 0.91% | 3.26% | 2.55% | 0.71% | 0.20% |

**(c) Recommended Stretch Factors Are Reasonable and Appropriate**

64. FortisBC submits that Dr. Kaufmann's recommended stretch factors are based on an analytically sound approach that considers the available evidence and are reasonable and appropriate for FEI and FBC. As defined in Dr. Kaufmann's Report, a stretch factor represents a commitment by the utility to achieve incremental cost performance above the industry's average productivity during the plan's term. Ordinarily, stretch factor values are set based on a regulator's best judgement informed by: (1) a utility's relative efficiency at the outset of the plan's term; and (2) the number of times the utility has been subject to cost efficiency improvement plans.[79] Dr. Kaufmann has considered these factors in the context of the stretch factors approved for FEI and FBC in the past two rate plans, and recommends a stretch factor of 0.10 percent for FEI and zero percent for FBC.

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[78] Exhibit B-1, Application, Appendix C1-1, Dr. Kaufmann's Report, p. 19.

[79] As acknowledged by the BCUC in the MRP Decision, utilities that have been continuously subject to an incentive ratemaking framework may have less potential for incremental productivity gains.

65. While FortisBC relies on Dr. Kaufmann's report for the full explanation and justification for his recommended stretch factor values, FortisBC highlights key points below with an emphasis on topics raised in IRs:

- Dr. Kaufmann has used a structured and rigorous analysis based on the relevant factors and evidence.
- Dr. Kaufmann's recommendations align with the BCUC's previous stretch factors and determination that expectations for a utility to achieve cost efficiencies decrease over successive incentive-based rate plans.
- Dr. Kaufmann's recommendations align with cost benchmarking analysis conducted for both utilities.
- The resulting difference between the stretch factors for FEI and FBC is reasonable and demonstrates the weight put on the different cost performance of the two utilities.

***Dr. Kaufmann Used a Structured Analysis of the Relevant Evidence to Arrive at Recommended Stretch Factors***

66. Dr. Kaufmann's recommended stretch factors are the result of an analytic approach that systematically takes into account the relevant evidence. While a degree of judgement is inherent in determining the stretch factor, as stated by Dr. Kaufmann, "judgement can and should be informed by a rigorous conceptual framework and relevant empirical evidence."[80] In terms of empirical evidence, there are two key pieces:

- First is the company's cost performance at the outset of the plan. As discussed further below, Dr. Kaufmann considered the cost savings achieved by FEI and FBC and conducted a benchmarking analysis to determine the current cost performance of the Companies.
- Second, it is increasingly difficult for utilities to achieve incremental cost performance gains for each subsequent iteration or "generation" of an incentive regulation plan. As stated by the BCUC in the MRP Decision, pp. 61-62: "we acknowledge that FortisBC has just ended the Current PBR Plans and it would not be reasonable to expect the same level of productivity improvement that was achieved over the last six years. We therefore accept there will be increased challenges associated with achieving savings as the Utilities undertake a further

[80] Exhibit B-1, Application, Appendix C1-1, Dr. Kaufmann's Report, p. 20.

> performance-based framework. Accordingly, the Panel accepts that a reduction of current X-Factors from the Current PBR Plans for both Utilities is appropriate."

67. Considering these factors, Dr. Kaufmann used the following framework to develop stretch factor recommendations for FEI and FBC:

> First, we carefully reviewed the BCUC's stretch factor findings for the 2014-2019 and 2020-2024 MRPs. We drew conclusions on how much stretch factors changed between those plans. These estimated changes were then taken to be an appropriate basis for adjusting stretch factors in the Companies' subsequent rate frameworks in light of the "increased challenges associated with achieving savings as the Utilities undertake a further performance-based framework."
>
> Next, we reviewed benchmarking evidence that compares FEI's and FBC's O&M unit costs to equivalent costs within the Companies' respective industries, as well as the Companies' O&M 2007-2022 O&M PFP trends relative to analogous trends for the respective industries.
>
> Drawing on the BCUC regulatory precedents and the empirical results, LKC recommended stretch factors that we believe are consistent with the regulatory and empirical evidence.

68. FortisBC submits that this approach is reasonable and appropriately accounts for the evidence relevant to the stretch factors.

### *Stretch Factor Analysis Begins with the BCUC's Approved Stretch Factors and Takes Into Account Increased Challenges Associated with a Third Incentive-Based Ratemaking Plan*

69. Dr. Kaufmann's assessment of the recommended stretch factors begins with a consideration of the BCUC's most recent stretch factor precedents. In the 2014-2019 PBR Plan, the BCUC approved a stretch factor of 0.2 percent for FEI and 0.1 percent for FBC. As the Current MRP does not identify explicit stretch or productivity factors, Dr. Kaufmann calculated an "implicit" stretch factor of about 0.1 for FEI and 0.05 for FBC, based on the fact that the X-Factors in the Current MRP were reduced by more than 50 percent compared to the X-Factors in the PBR Plan. The implicit reduction in the stretch factor from the PBR Plan to the Current MRP is also consistent with the BCUC's findings that there are "increased challenges associated with

achieving savings as the Utilities undertake a further performance-based framework."[81] FortisBC submits that grounding the stretch factor recommendation in the BCUC's previously approved stretch factors is reasonable and beneficial for maintaining consistency in the BCUC's approach.

70. Dr. Kaufmann then considered the BCUC's determination in the MRP Decision that there are increased challenges associated with achieving savings as the Utilities undertake a third consecutive performance-based framework. As Dr. Kaufmann explains, 'the potential for incremental cost performance gains, and hence the appropriate value for the stretch factor, will decline for later iterations, or "generations," of utility incentive regulation plans.'[82] For example, successive applications of incentive regulation for electricity distributors in Ontario have led to decreasing stretch factors across the industry.[83] The data on the stretch factors used in successive rounds of PBR in Alberta similarly supports the view that stretch factors are expected to decrease with successive incentive rate-making plans.[84] Thus, the fact that the Utilities have achieved significant savings over two successive incentive rate-making plans supports the need for a reduction to the current "implicit" stretch factors for the Rate Framework. More specifically, given that the BCUC reduced the X-Factors by approximately 50 percent in the MRP Decision, a further 50 percent reduction in the stretch factors would be warranted for the Rate Framework, subject to the impact of the cost performance of the Utilities discussed in the following section.[85]

***Stretch Factors Take Into Account Each Company's Cost Performance as Measured by Industry Benchmarking and Other Available Evidence***

71. Dr. Kaufmann's analysis takes into account the cost performance of each of the utilities, as measured by a cost benchmarking study for each utility and by comparing each utility's own internal O&M productivity to the industry. As set out below, FortisBC submits that Dr. Kaufmann considered a significant body of cost performance evidence.

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81 Exhibit B-1, Application, Appendix C1-1, Dr. Kaufmann's Report, pp. 21-22.

82 Exhibit B-1, Application, Appendix C1-1, Dr. Kaufmann's Report, p. 21.

83 Exhibit B-12, RCIA IR1 45.1.

84 Exhibit B-12, RCIA IR1 45.1.

85 Exhibit B-1, Application, Appendix C1-1, Dr. Kaufmann's Report, p. 22.

72. Dr. Kaufmann's benchmarking analyses evaluated the three-year, 2020-2022 period. This three-year period is shorter than the 2007-2022 period used to estimate industry O&M productivity trends because benchmarking evidence is designed to assess the Companies' current cost performance, on a company-by-company basis, just prior to the outset of the Rate Framework, whereas the productivity studies were designed to identify long-run industry O&M PFP trends. Further, the three-year period for cost benchmarking strikes a reasonable balance between mitigating the company's own cost volatility and developing timely and accurate measures of the utility's current unit costs.[86] Dr. Kaufmann's cost benchmarking analysis compares unit costs on a company-by-company basis, rather than against a single, industry-wide trend. Therefore, unlike the case for industry productivity studies, larger companies in the sample do not have an outsized impact on the volatility of calculated unit costs for each company, reducing the need for extending the time series of the sampled companies. In other words, while there is some amount of volatility in the three-year period, the key difference is that the volatility is due to the volatility in the company's own cost performance, rather than the volatility created by other firms in the industry, particularly larger firms. In this context, the averaging of unit costs over three years reasonably controls for the internal company volatility from year to year while still representing the company's current cost performance. In any case, expanding the sample period beyond three years may reduce volatility, but would not be reasonable as it would use data that is less relevant for assessing the company's current cost conditions. This concern is more pronounced for cost benchmarking than for estimating industry O&M PFP growth, because benchmarking is expressly designed to measure a company's current cost performance and its potential to achieve incremental cost performance.[87]

73. Dr. Kaufmann benchmarked FEI's O&M unit costs against the 54 US gas distributors used to estimate O&M PFP trends, which shows that FEI's average O&M cost per customer is similar to the US gas distribution average.

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[86] Exhibit B-13, BCUC IR2 45.3.

[87] Exhibit B-13, BCUC IR2 45.3.

**Table 8**

**U.S. Gas Distribution Benchmarking**
**2020-2022 US$ Average**

| FEI Avg. Cost/Customer | U.S. Gas Distribution Cost/Customer | Percent Difference FEI/US Gas Distribution Avg. |
|---|---|---|
| $257.20 | $262.18 | -0.2% |

74. In addition, Dr. Kaufmann estimates that FEI's own internal, O&M PFP growth averaged 1.26 percent over the 2014-2022 period, which greatly exceeds the industry's O&M PFP trends of 0.28 percent. Dr. Kaufmann concludes that "by out-performing industry norms, FEI has likely generated significant cost savings for customers that have since been rebased into customer rates."[88]

75. In response to IRs, Dr. Kaufmann also benchmarked FEI against a sample of six Canadian gas distributors [Apex Gas (Alberta), Atco Gas (Alberta), Centra Gas (Manitoba), Eastward Gas (Nova Scotia), Enbridge Gas (Ontario), and Liberty Utilities (New Brunswick)].[89] As shown below, FEI's unit costs were fifth lowest in this group. Dr. Kaufmann concludes: "Viewed in isolation, the Canadian benchmarking results support the view that FEI is an above average O&M cost performer in the Canadian gas distribution industry."[90]

| Company | Average O&M/Customer | Time Period |
|---|---|---|
| **Liberty Utilities** | $1,182.8 | 2020-2022 |
| **Eastward** | $1,158.0 | 2018-2020 |
| **Apex Gas** | $539.0 | 2020-2022 |
| **Atco Gas** | $386.9 | 2020-2022 |
| **FEI** | $306.2 | 2020-2022 |
| **Enbridge Gas** | $217.3 | 2020-2022 |
| **Centra** | $197.4 | 2018-2020 |
| **Sample Average** | $569.6 | |
| **FEI/Sample Average $** | -46.3% | |

88 Exhibit B-1, Application, Appendix C1-1, Dr. Kaufmann's Report, p. 23.

89 Exhibit B-4, BCUC IR1 7.7.

90 Exhibit B-4, BCUC IR1 7.7.

76. Finally, FEI ranked 31st among the 54 sampled gas distributors for average O&M costs per customer over the 2020-2022 period. Dr. Kaufmann concludes: "This ranking is consistent with Dr. Kaufmann's finding that FEI exhibits average cost performance relative to the US gas distribution industry."[91]

77. For FBC, Dr. Kaufmann conducted a unit cost benchmarking analysis where FBC's O&M expense (excluding generation O&M) per customer is compared with the equivalent O&M unit cost of a small company sample and the full industry sample group. As shown in the table below, this analysis indicates that FBC is an efficient cost performer relative to both proxy groups.

**Table 9**

**Small Company and Overall Electric Utility Benchmarking, Total O&M per Customer 2020-2022 US$ Average**

| FBC Average Cost/Customer | U.S. Small Company Average O&M Cost/Customer | U.S. Overall Company Average O&M Cost/Customer | Percent Difference FBC/US Average Small Company Cost per Customer. | Percent Difference FBC/US Average Cost per Customer |
|---|---|---|---|---|
| $340.15 | $947.88 | $523.23 | -64.1% | -35.0% |

78. In addition, FBC's own O&M productivity performance of 3.68 percent during the 2014-2022 period greatly exceeds the O&M PFP trend typical of small utilities and the larger electric utility industry. As Dr. Kaufmann concludes, "this exceptional performance has almost certainly generated cost savings that have since been rebased into rates and thereby benefited customers."[92]

79. Finally, FBC ranked 5th among the 83 sampled electricity distributors for average O&M costs per customer over the 2020-2022 period. Dr. Kaufmann concludes: "FBC's cost

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91 Exhibit B-4, BCUC IR1 7.9.

92 Exhibit B-1, Application, Appendix C1-1, Dr. Kaufmann's Report, p. 25.

performance therefore exceeds the top decile standards. This evidence bolsters the data provided in the LKC Report, which found that FBC's cost performance was well above average."[93]

***Recommended Stretch Factors Are Based on the Evidence***

80. Pulling the analysis above together, Dr. Kaufmann's recommended stretch factor for FEI is 0.10 percent, which is essentially equal to the current "implicit" stretch factor for FEI. In Dr. Kaufmann's opinion, a reasonable judgement is that the effects of the third consecutive incentive plan and FEI's cost performance entirely offset each other, primarily because FEI's cost performance is very close to the industry norm, which typically implies that the potential for incremental cost performance gains are relatively modest. Further, FEI's O&M PFP trend in its recent rate frameworks has outperformed industry norms. Given this, the impact of the "further performance-based framework," which reduces the recommended stretch factor, will offset the cost performance considerations that indicate the company has the potential to achieve a modest amount of incremental cost efficiencies. Since these effects are offsetting, Dr. Kaufmann's opinion is that FEI's current (implicit) stretch factor of 0.09 percent should not be adjusted. Rounding up to a single digit, Dr. Kaufmann recommends a stretch factor of 0.10 percent for FEI.[94]

81. For FBC, Dr. Kaufmann's recommended stretch factor is zero, as supported by FBC's superior cost performance. Dr. Kaufmann concludes:[95]

> This recommendation is supported by the empirical benchmarking evidence showing that FBC exhibits exceptional cost performance within the electric utility industry. FBC's O&M unit costs are 64% below the O&M unit costs of its small company peers and 35% below the average O&M unit costs of the US electric utility industry. FBC's exceptional cost performance also extends to all four cost categories that comprise approximately 95% of the costs recovered by FBC's rate framework. In addition, FBC's cost performance on its recent rate plan greatly exceeds industry norms, and this performance has almost certainly generated cost savings that have been rebased into FBC's rates and benefited customers. In light of all this evidence, LKC believes that no stretch factor is warranted for FBC. Given

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93 Exhibit B-4, BCUC IR1 7.9.

94 Exhibit B-1, Application, Appendix C1-1, Dr. Kaufmann's Report, p. 26.

95 Exhibit B-1, Application, Appendix C1-1, Dr. Kaufmann's Report, p. 27.

a recommended productivity factor of 0.20%, and the recommended stretch factor of zero, LKC recommends that an overall X factor of 0.20% be applied to FBC's rate framework.

***Resulting Differential Between FEI and FBC Is Reasonable***

82. The resulting differential between the stretch factors for FEI and FBC is 0.10 percent. This is reasonable based on the analysis set out above. In particular, Dr. Kaufmann recommended a higher stretch factor for FEI compared to FBC primarily based on the empirical evidence showing that FBC has displayed superior cost performance while FEI has displayed average cost performance.[96] Further, the 0.10 percent stretch factor differential between FEI and FBC is reasonable as it is:

- consistent with the 0.10 percent stretch factor differential approved by the BCUC for the 2014-2019 PBR Plans.
- approximately double the implicit stretch factor differential in the Current MRP.

83. Given that this is the third consecutive application of incentive regulation for the Companies, Dr. Kaufmann's proposal to *increase* the stretch factor differential from 0.05 percent to 0.10 percent for FEI demonstrates the weight that has been placed on the cost benchmarking evidence for FEI and FBC.[97] Furthermore, compared to the previous rate plans, the significance/weighting of the stretch factor value for FEI, as an average cost performer, has increased, while the significance/weighting of the stretch factor value for FBC, as a superior cost performer, has decreased.[98] FortisBC therefore submits that the results of Dr. Kaufmann's analysis are reasonable and should be accepted.

## E. Proposed Growth Factor is Fair and Reasonable

84. FortisBC submits that it continues to be reasonable and appropriate to use the average number of customers as the Growth Factor for FEI's and FBC's O&M indexing formulas, Gross Customer Additions (GCA) as the Growth Factor for FEI's Growth capital formula, and a forecast

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96 Exhibit B-13, BCUC IR2 45.1.

97 Exhibit B-13, BCUC IR2 45.1.

98 Exhibit B-13, BCUC IR2 45.1.

with subsequent true-up mechanism for both of the Growth Factors. Further, FortisBC submits that there is no basis for a discount factor to be applied to the Growth Factor for the O&M formulas. Each of these points is addressed further below.

**(a) Average Number of Customers Remains the Main Cost Driver for O&M Costs**

85. FortisBC submits that the average number of customers continues to be the most reasonable and appropriate Growth Factor for FEI's and FBC's O&M indexing formulas. It is widely accepted that the number of customers is one of the primary cost drivers for a utility's operations. Experts, including Dr. Kaufmann, commonly use the number of customers to measure the output trends and to calculate the productivity growth trends of utilities. Indeed, Appendix One of Dr. Kaufmann's report provides a mathematical derivation which shows customer numbers is the appropriate output quantity measure in productivity indices when the regulatory mechanism (like FortisBC's Rate Framework) recovers revenues on a revenue per customer basis. This rigorous, mathematical proof shows that customer numbers are entirely, and uniquely, compatible with the indexing mechanism applied to FEI's and FBC's rate-setting framework. Any other output measure would not be mathematically aligned with the Companies' rate frameworks. As Dr. Kaufmann used the number of customers for his O&M productivity calculations,[99] using the average number of customers as the Growth Factor aligns with Dr. Kaufmann's calculated productivity factors.[100] Therefore, FortisBC submits that the use of average number of customers as the Growth Factor for FEI's and FBC's O&M indexing formulas is consistent with industry practice and the proposed X-Factors, and should be approved.

**(b) Gross Customer Additions Continues to be the Appropriate Growth Factor for FEI's Growth Capital Formula**

86. FEI submits that Gross Customer Additions continues to be the most reasonable and appropriate Growth Factor for its Growth capital formula and should be approved. In the MRP Decision, the BCUC agreed with FEI's reasoning that Gross Customer Additions is the primary cost driver for FEI's Growth capital (p. 30):

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[99] Exhibit B-1, Application, Appendix C1-1, Dr. Kaufmann's Report, p. 9.

[100] Exhibit B-1-2, Updated Application, p. C-11.

> **The Panel approves Gross Customer Additions as the primary growth factor element to be used for the FEI Growth capital formula.** As noted above, the evidence establishes a clear connection between the number of new attachments and actual Growth capital expenditures.
>
> The Panel also finds it reasonable that the increasing trend towards multi-family developments makes the use of Gross Customer Additions more reflective of costs compared to the use of service line additions because of the need for multiple meters and larger headers. This is supported by the correlation between expenditures on meters and Gross Customer Additions (0.94) being higher than service line additions (0.88). This is also consistent with FortisBC's explanation that use of service line additions in the Growth capital formula in the Current PBR Plan was one of the causes of the variance between actual and formula Growth capital.
>
> Further, the Panel is persuaded by FortisBC's argument that it is the addition of customers, not the average number of customers, that drives cost. This is supported by the high correlation of FEI Growth capital with Gross Customer Additions and by the fact that the average number of customers includes customers that move in and out of premises, which typically does not require capital additions. [Footnote omitted.]

FEI submits that the BCUC's reasons for approving Gross Customer Additions as the Growth Factor for Growth capital continues to hold true and that Gross Customer Additions continues to be the appropriate Growth Factor for FEI's Growth capital formula.[101]

### (c) Forecast and True-up Mechanism Remains Appropriate

87. FortisBC submits that the forecast and true-up mechanism approved for the Current MRP has worked well and continues to be reasonable and appropriate for the Rate Framework for the following reasons:

- Costs and revenues are both driven by the actual growth experienced in the year for which rates are being set. Using a forecast ensures the Companies have the necessary funds to connect customers and operate the business in the year the funds are required to be spent.
- FortisBC recognizes that by using a forecast, a forecast variance will result in either an under recovery or over recovery of costs. FortisBC's proposed forecast and true-up mechanism will adjust the Companies' O&M expenditures and FEI's

[101] Exhibit B-1-2, Updated Application, pp. C-11 to C-12.

Growth capital for the forecast variance and removes any concerns of forecasting bias.

- The use of a forecast Growth Factor is consistent with: (1) the approach under traditional cost of service ratemaking; (2) the approved approach in other jurisdictions; and (3) how FortisBC internally forecasts its costs.

88. In the MRP Decision, the BCUC agreed with FEI's reasoning and approved the proposed forecast and true-up mechanism (pp. 37 and 41):

> **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.**

89. As the forecast and true-up mechanism has worked as anticipated and there is no compelling reason to change the approach,[102] FortisBC submits that it should be approved for the Rate Framework.

**(d) Discount Factor Would Double Count the Efficiencies Embedded in the X-Factor**

90. FortisBC submits that there is no evidence or rational foundation to justify the imposition of a discount on the Growth Factor and, as such, no discount factor should be included in the Rate Framework. FortisBC's formula O&M costs will already be reduced by the productivity factor, which considers the relationship between the growth in average number of customers and O&M costs for the industry as a whole, including economies of scale. Therefore, discounting the Growth Factor amounts to a clear double counting of the effect of the productivity factor on O&M costs.

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[102] Exhibit B-1-2, Updated Application, pp. C-12 to C-13. Also see Exhibit B-16, CEC IR2 19.1.

91. In support of its proposal to eliminate the discount factor, FortisBC relies on the expert evidence of Dr. Kaufmann who provides a deep analysis of the issue in his report. Dr. Kaufmann confirms in his report that economies of scale (or lack of a 1:1 relationship between the growth in O&M costs and average number of customers) are reflected in the productivity factor calculations, not in the Growth Factor. Accordingly, any discount of the customer Growth Factor would be unwarranted and tantamount to a "double counting" of scale economies, which are fully recovered in the productivity factors.[103] Dr. Kaufmann's explains as follows:[104]

> Cost theory shows that economies of scale is one of several sources of productivity growth. A rigorous mathematical derivation of this fact is presented (along with similar findings) in Appendix Two of this report. Since economies of scale is a component of productivity change, a properly constructed productivity index will by definition capture the impact of scale economies.
>
> There is also a more commonplace explanation: claiming that scale economies are reflected in the growth factor puts the cart before the horse. The logical sequence of events is that customer growth occurs, and scale economies follow. The phenomenon instigating the change will not measure the consequences.
>
> Another way to look at this is that, in a well-designed cost recovery mechanism, the productivity factor and customer growth factor have two distinct purposes. The productivity factor is designed to capture all the factors contributing to achieved cost efficiencies. The customer growth factor has a different purpose: to scale revenues upward or downward in response to changes in the scale of output, as measured by customer growth. There should accordingly be a one-to-one relationship between the number of customers served and the value of revenues received.

As Dr. Kaufmann indicates, while the productivity factor captures cost efficiencies, the Growth Factor scales revenues in proportion to the number of customers.

92. Dr. Kaufmann's evidence is supported by the academic article titled *Escalating Power Distributor O&M Revenue* by Dr. Mark Lowry and David Hovde in the May 2021 Electricity Journal. As Dr. Kaufmann's explains, this article identifies the components of an appropriate index-based mechanism for adjusting allowed O&M costs, including I-Factors, X-Factors and customer Growth

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[103] Exhibit B-1, Application, Appendix C1-1, Dr. Kaufmann's Report, p. 30.

[104] Exhibit B-1, Application, Appendix C1-1, Dr. Kaufmann's Report, pp. 29 to 30.

Factors, the design of which is identical to the formulas used for FortisBC since 2014.[105] In their article, Dr. Mark Lowry and David Hovde specifically indicate that economies of scale should not be reflected in the Growth Factor, as these are accounted for in the productivity factor:[106]

> However, the article does more than identify the components of an appropriate index-based mechanism for adjusting allowed O&M costs; it also explains what those components do, and do not, measure. For example, after emphasizing that "a consistent cost-based treatment of output growth should be used in the productivity research," Lowry and Hovde write (in footnote 5), that the "growth of OutputsC Utility *is not the effect of output growth on cost because economies of scale are part of this effect and these are captured in the productivity trend* (emphasis added)."
>
> In other words, an important element of a "consistent cost-based treatment of output growth" is recognizing that changes in output (i.e. customer numbers) do not measure or reflect "the effect of output growth on cost." Instead, "these are captured in the productivity trend."

FortisBC submits that the article by Lowry and Hovde is persuasive and compelling evidence that there is indeed no theoretical basis for applying a discount factor to the Growth Factor.

93. Dr. Kaufmann concludes:[107]

> For all components of the Companies' indexing formulas to be internally consistent, no discounts of the customer growth factor should be applied to the Companies' allowed O&M adjustment formulas. 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. Accordingly, LKC recommends that no discounts should be applied to the customer growth factors for FEI and FBC's proposed indexing formulas.

FortisBC therefore submits that the expert evidence is clear that economies of scale are already captured in the productivity factor and cannot be reasonably used to justify a discount in the Growth Factor.[108]

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105 Exhibit B-1, Application, Appendix C1-1, Dr. Kaufmann's Report, p. 28.

106 Exhibit B-1, Application, Appendix C1-1, Dr. Kaufmann's Report, p. 29.

107 Exhibit B-1, Application, Appendix C1-1, Dr. Kaufmann's Report, p. 30.

108 Exhibit B-4, BCUC IR1 8.1.

94. Eliminating the discount factor will also align FortisBC's formulas with those approved by regulators in other jurisdictions. FortisBC is aware of only one other utility that has a discount factor applied to its indexing formula, which is Énergir. However, Énergir's O&M formula does not include an X-Factor value and so the discount factor to the Growth Factor implicitly acts as an X-Factor. Therefore, unlike FEI's and FBC's O&M formulas in the Current MRP, Énergir's O&M formula does not lead to double counting of the effects of economies of scale.[109]

95. Finally, FEI notes that its formula O&M costs will also be reduced by the stretch factor, which represents productivity that FEI should be expected to achieve over and above the productivity factor. To be clear, the productivity and stretch factors (together, the X-Factors) reduce FEI's and FBC's unit cost per customer, so that FEI's and FBC's O&M per customer is reduced systematically for every customer it serves. Adding yet a third reduction to the formula O&M has no basis in indexing logic, cost theory, or regulatory practice, and is unsupported by any evidence in this proceeding.

96. During the course of the proceeding, FortisBC and Dr. Kaufmann responded to a number of IRs on this topic. FortisBC highlights the following three points arising from these IRs.

***There Is a Significant Correlation Between Average Customer Count and Formula O&M***

97. While the appropriate treatment of the discount factor depends on indexing logic and incentive regulation principles, not on statistical factors, there is in fact a significant correlation between the actual/projected average customer count to actual/projected formula O&M for both FEI (0.99) and FBC (0.98).[110]

***Inclining/Declining Customer Numbers Is Not Relevant***

98. Whether FEI and FBC experience inclining or declining customer counts has no bearing on the appropriateness of a discount of the Growth Factor. As stated by Dr. Kaufmann: "Any changes in costs associated with customer growth are also reflected directly, and fully, in the customer growth components of the mechanisms. Accordingly, there is no need to modify the customer

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[109] Exhibit B-4, BCUC IR1 8.2.

[110] Exhibit B-4, BCUC IR1 8.4.1.

growth elements of the mechanisms, and any such adjustments will lead to double-counting of the relevant costs."[111]

99. Dr. Kaufmann further explained why the lack of appropriateness of the discount of the Growth Factor has nothing to do with whether there is an inclining or declining customer base:[112]

> 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.

For clarity, FortisBC also notes that its is forecasting continued customer growth for both utilities over the next three years, although the rate of customer growth for FEI is expected to decline.[113]

***Positive or Negative Commodity Throughput Has No impact***

100. Positive or negative changes to commodity throughput will have no impact on FEI's and FBC's formula-driven costs because the formulas' growth factors are not based on changes in throughput but rather are based on average number of customers (for FEI's and FBC's O&M formulas) and gross customer additions (for FEI's Growth capital formula). Furthermore, the impact of positive or negative throughput trends is symmetrical for FEI and FBC in terms of commodity costs and delivery revenues, as all variances will be returned to or recovered from customers through the amortization of the Flow-through deferral account for FEI and FBC, and

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111 Exhibit B-11, MoveUP IR1 2.2.

112 Exhibit B-9, CEC IR1 2.1 and 2.2.

113 Exhibit B-16, CEC IR2 19.1: "Currently, neither FEI nor FBC are experiencing a decline in customer base and are not expecting a decline to occur during the proposed Rate Framework term. In the case of FEI, although the rate of customer growth is expected to be slower, FEI is still expecting to have positive gross customer additions (GCA) during the proposed Rate Framework term."

the Revenue Stabilization Adjustment Mechanism (RSAM), Commodity Cost Reconciliation Account (CCRA) and Midstream Cost Reconciliation Account (MCRA) for FEI.[114]

## F. Exogenous Factor (Z-Factor) Remains Just and Reasonable

101. FortisBC proposes to retain the existing Z-Factor treatment from the Current MRP for events that are non-controllable and unforeseeable in nature. FortisBC will continue to identify exogenous factor events in its Annual Reviews and follow the criteria established as part of the MRP Decision for evaluating whether the impact of an event qualifies for exogenous factor treatment. Subject to BCUC approval, rates will be adjusted either up or down for the cost-of-service impacts of exogenous factors that are beyond the control of the Companies. Exogenous factor treatment of such items will ensure that customers pay only for the actual costs in circumstances where FEI or FBC does not control the level of expenditures.[115] FortisBC submits that the current Z-Factor treatment should be approved.

102. In particular, FortisBC submits that the materiality thresholds of $0.500 million for FEI and $0.150 million for FBC continue to reflect an appropriate level of risk for the Companies and customers given their respective size. While costs have increased due to inflation and other factors, FortisBC submits that the current materiality thresholds remain reasonable as they ensure that the Companies and customers are able to recover/receive the costs/savings associated with unforeseen and uncontrollable events without resulting in the Companies seeking exogenous factor treatment for every event that may occur. For example, during the Current MRP term, FEI and FBC were approved for exogenous factor treatment of the COVID-19 pandemic cost reductions, which resulted in savings flowing 100 percent back to customers, and FBC was approved for exogenous factor treatment for two other events: (1) the MRS Assessment Report No. 13 incremental costs; and (2) the costs resulting from the 2021 Nk'Mip Creek wildfire.[116] As these exogenous factors relate to cost pressures and/or savings due to events that

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[114] Exhibit B-11, MoveUP IR1 2.3.

[115] Exhibit B-1-2, Updated Application, p. C-74; Exhibit B-9, CEC IR1 7.1.

[116] Exhibit B-7, BCOAPO IR1 7.8.

are non-controllable and unforeseeable in nature, FortisBC submits that they should be recovered from or returned to customers.

**(a) 2021 Flood-Related Costs Meet Z-Factor Criteria**

103. Pursuant to the approved Z-Factor treatment under the Current MRP, FEI's request for Z-Factor treatment of the incremental 2021 flooding related damage and remediation costs, that were not recovered through its insurance claim, should be approved.

104. As discussed in FEI's Annual Reviews for 2023 and 2024 Delivery Rates, the impacts of extreme flooding during the atmospheric river event in 2021 caused significant damage to FEI's assets and greatly impacted customers.[117] From 2021 to 2022, FEI incurred approximately $3.734 million of incremental O&M and capital costs both to remediate the damages due to the floods and provide bill credits to customers for those months where customers were under evacuation orders. While $3.013 million was recovered through insurance, and the unrecovered portion of bill credits is accounted for in the Flow-through deferral account, there is a remaining unrecovered balance of $0.068 million and FEI had a $1 million deductible on the insurance claim that was not recovered. Together, the total of $1.068 million represents FEI's out-of-pocket costs related to the flood remediation and the basis for the proposed exogenous factor amount.[118]

105. These costs meet the criteria for Z-Factor treatment:

- The costs are attributable entirely to the 2021 flood event, which was outside of FEI's control;
- The costs were directly related to the 2021 flood event and clearly outside the base upon which the rates were originally derived, as the costs were incremental O&M and capital costs and billing credits provided to customers to remediate the damages due to the floods;
- The 2021 flood event was unforeseen;
- The costs were prudently incurred; and
- The costs exceed the BCUC-defined materiality threshold of $0.500 million for FEI.

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[117] Exhibit B-1-2, Updated Application, p. B-30.

[118] Exhibit B-1-2, Updated Application, p. C-18.

106. FEI therefore submits that the proposed Z-Factor treatment should be approved.

## G. 50/50 ESM Continues to Align Customer and Company Interests

107. FortisBC submits that the symmetrical 50/50 ESM for variances both above and below the allowed ROE used in the PBR Plan and Current MRP should continue under the Rate Framework. The 50/50 ESM balances the interest of the Companies and customers and provides an appropriate incentive for FortisBC to seek savings throughout the term of the Rate Framework. The same mechanism was used during the PBR Plan and the Current MRP and resulted in savings that were shared equally between the customer and shareholder. Shifting to an asymmetrical ESM where customers receive a greater portion of the favourable variance would reduce the incentive properties of the Rate Framework and would be unfair and unbalanced, as it would restrict the potential upside of over earnings that result from savings created by the Companies and subject the Companies to a higher risk for any potential under earnings, increasing the business risk of the Companies. In contrast, the 50/50 ESM provides the appropriate level of alignment between customer and shareholder interests, both in terms of risks and benefits, and avoids unfair outcomes for the Companies and customers. FortisBC submits that there is no reason to deviate from a symmetrical 50/50 ESM.[119]

## H. FortisBC Will Evaluate the Design of a Potential ECM for a Future Application

108. FortisBC has not proposed an ECM for the Rate Framework and does not intend to apply for an ECM during the proposed three-year term. Instead, FortisBC intends to evaluate the design of a future ECM and may propose to re-instate an ECM after the three-year term of the Rate Framework. Given that no approved ECM mechanisms have been triggered over the PBR Plan or Current MRP, FortisBC requires time to consider the design of an ECM that is simple to understand and that would more effectively incent investments in efficiencies in the context of the energy transition.[120]

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[119] Exhibit B-1-2, Updated Application, p. C-19; Exhibit B-12, RCIA IR1 14.1.

[120] Exhibit B-1-2, Updated Application, p. C-20; Exhibit B-4, BCUC IR1 9.1; Exhibit B-12, RCIA IR1 8.1.

## I. Financial Off-Ramp Provisions Provide a Continued Safeguard

109. FortisBC submits that the financial off-ramp provisions in the Current MRP, if earnings in any one year vary from the approved ROE by more than +/- 150 basis points post-sharing, should continue with the Rate Framework. The inclusion of an off-ramp ensures that both the Companies and customers are safeguarded against the potential for excessive profits or losses. While the likelihood of triggering the off-ramp is low, an off-ramp is typical for multi-year rate plans and has particular value at this time due to the potential for a more rapid acceleration in climate change policy over the term of the Rate Framework than what is currently anticipated.[121] FortisBC submits that the proposed off ramp should be approved.

## J. Scoping of Annual Review Process Will Promote Regulatory Efficiency

110. FortisBC proposes to continue the Annual Review process, but with a clearer scoping of topics permitted to be explored in IRs or at the workshop. FortisBC submits that this proposal is reasonable and will promote regulatory efficiency without any detriment to the overall process, and should therefore be approved.

111. FortisBC proposes that the structure of the Annual Review process remain the same, i.e., that the process continues to include one round of written IRs, a workshop, and written final and reply submissions. This process has been in place for the PBR Plan and the Current MRP, and has been successful in providing a relatively streamlined rate-setting process, while still allowing for issues to be explored and evidence gathered so that the BCUC is able to make informed decisions on the approvals sought.[122]

112. However, considering the results of the BCUC's Regulatory Efficiency Initiative process, the general "scope creep" experienced in the Annual Reviews, and the BCUC's decisions on scope in the Annual Reviews,[123] FortisBC has proposed to increase regulatory efficiency by more clearly

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[121] Exhibit B-1-2, Updated Application, p. C-20; Exhibit B-9, CEC IR1 1.2; Exhibit B-12, RCIA IR1 19.2.

[122] Exhibit B-1-2, Updated Application, pp. C-20 to C-21.

[123] Exhibit B-1-2, Updated Application, p. C-21.

scoping the issues that can be explored in IRs or the workshop. Specifically, FortisBC submits that the following components should be out of scope for the Annual Review process:[124]

1. **I-Factor and X-Factor:** The approved methodology for calculating each factor as well as any chosen economic indexes for labour and non-labour.

2. **Growth Factor:** The methodology for calculating the Growth Factor (average number of customers for O&M and gross customer additions for FEI Growth capital).

3. **Demand/Load Forecast Method:** The methods used to forecast demand and load each year for FEI and FBC, as described in Section C4.2 of the Application.

4. **Index-based O&M (FEI and FBC) and Growth Capital (FEI):** The methodology to calculate each year's index-based O&M and Growth capital, including the use of the Growth Factor, should remain out of scope as it will not change during the term of the Rate Framework. Additionally, requests for detailed comparisons of actual versus formula components of the index-based O&M should be out of scope in the Annual Reviews.

5. **Forecast Capital:** For regular capital (i.e., three-year Growth capital for FBC, and three-year Sustainment and Other capital for both FEI and FBC as discussed in Section C3 of the Application), once the total amount is approved as part of this Application, it should not be subject to further review. Requests for detailed comparisons of actual versus approved forecast components of the approved regular capital expenditures should be out of scope in the Annual Reviews.

6. **Major Projects or Other Approved Projects or Initiatives:** Projects or Initiatives that are approved by the BCUC through a CPCN or other separate application process, or by government Order in Council (OIC) should not be subject to review again during the Annual Review process.

7. **FEI Biomethane Program and FBC RS 96 EV DCFC Service:** The cost and revenues that are forecast each year are within the scope of the Annual Review process; however, the merits of the program, the program design, and the rate design as approved by the BCUC through other proceedings should be out of scope of the Annual Review process.

113. With the exception of the demand/load forecast methods, all of the above items were already implicitly scoped out of the Current MRP as they were approved and not subject to

[124] Exhibit B-1-2, Updated Application, p. C-22.

change in the Annual Reviews. As the BCUC stated in its Decision on FBC's Annual Review for 2020-2021 Rates:[125]

> The purpose of the Annual Review is not to unravel or revisit the MRP Decision, rather, as the BCUC stated in that decision, the Annual Review process is designed to provide the BCUC, interveners and interested parties the opportunity to review the performance of [FBC] over the prior year.

114. This was confirmed by the BCUC on a number of occasions, including in the decision on FBC's Annual Review for 2022 Rates[126] and 2023 Rates:[127]

> Once an MRP is approved, it should be given the opportunity to work as intended and should not be adjusted due to annual fluctuations in certain individual components of the plan. The Panel agrees with the BCUC's statement in FBC's Annual Review for 2020-2021 Rates that adjusting individual components of the formula O&M is outside the scope of any Annual Review. The purpose of the Annual Review is not to unravel or revisit the MRP Decision but to provide the BCUC, interveners and interested parties the opportunity to review the performance of FBC over the prior year and to assess the reasonableness of proposed rates for the following test period. [*Footnote omitted*]

115. Aligned with the above determinations, scoping out approved items increases efficiency by scoping out questions on topics that the BCUC has already confirmed are not subject to review or change in the Annual Reviews. In short, there is no benefit or purpose to questions on these topics, so they are reasonably and appropriately scoped out of the proceeding.

116. The only new item that FortisBC is requesting to scope out of the Annual Reviews is the methods used to forecast demand and load each year. For clarity, the demand/load forecast itself and the drivers of each year's demand increase or decrease would be within the scope of the Annual Review process, but the methods used to develop each forecast should remain out of scope as they will not change during the term of the Rate Framework. Unlike questions about the load forecast itself, questions about load forecasting methods ask about the appropriateness of

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[125] Decision and Order G-42-21, p. 14. Online: https://www.ordersdecisions.bcuc.com/bcuc/decisions/en/492971/1/document.do.

[126] Decision and Order G-374-21, pp. 20-21. Online: https://www.ordersdecisions.bcuc.com/bcuc/decisions/en/518244/1/document.do.

[127] Decision and Order G-382-22, p. 9. Online: https://www.ordersdecisions.bcuc.com/bcuc/decisions/en/521448/1/document.do.

the forecasting method or the availability of, or results of using, alternative forecasting methods. For example, FortisBC is routinely asked to justify the appropriateness of using different time periods of actual results, the appropriateness of the Exponential Smoothing (ETS) method, and the use of the Conference Board of Canada (CBOC) forecast by dwelling type (FEI) or the use of BC-Stats for population data (FBC). These are methodology-focused IRs and would be more appropriate when evaluating the forecasting method at the end of each multi-year rate framework period, instead of during the Annual Review process.[128]

117. It is reasonable to scope the demand/load forecasting methods out of the Annual Review process for a number of reasons:

- FortisBC has described in Section C4.2 of the Application the forecasting methods that it will use for the three-year term of the Rate Framework. Further detail is provided in Appendices C4-1 and C4-2 for FEI and FBC, respectively. These methods can be and have been reviewed in this proceeding, which FortisBC submits should be sufficient for the Rate Framework term. Similar to a three-year cost of service application, there should be no need to revisit the forecasting methods each year of the test period.

- FEI's forecasting methods have consistently produced a high level of accuracy when forecasting for the upcoming rate-setting year. From 2015 to 2023, FEI's forecasting method has remained the same, with the exception that in 2020, the BCUC approved the adoption of the ETS method for the use-rate forecasts of residential and commercial rate schedules (i.e., RS 1, 2, 3, and 23). Using these methods, variances in aggregate demand have been less than five percent from 2015 to 2023 with the exception of 2016, and the Mean Absolute Percentage Error (MAPE) over the period was approximately 2.7 percent. The small variances since 2015 show that the existing forecasting methods for FEI have been effective in providing reasonably accurate forecasts in each Annual Review.[129]

- Similarly, FBC's forecasting methods have consistently produced a high level of accuracy when forecasting for the upcoming rate-setting year. From 2015 to 2023, the variances in the aggregate load have been less than three percent with the exception of 2022, and the MAPE for the load forecast over this period is approximately 1.5 percent. For the aggregate customer count, upon which FBC's formula O&M is based, the variances have been consistently less than two percent since 2015 and the MAPE for customer counts over the period is small at

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[128] Exhibit B-4, BCUC IR1 10.1.

[129] Exhibit B-1-2, Updated Application, pp. C-141 to C-142.

approximately 0.7 percent. The small variances since 2015 show that the existing forecasting methods for FBC have been effective in providing a one-year forecast in each Annual Review.[130]

- As the load and demand will be re-forecast in each Annual Review, it will be a single test-year forecast, which lowers the potential for variances. Such short-term forecasting is the most accurate approach for year-over-year forecasting for rate setting as the demand trends in the most recent years intrinsically reflect the full impact of policy (such as building energy codes), technology, and all other changes in the service territory – including those driven by demand from electrification of loads. Since this short-term forecast will be updated annually during the Rate Framework term (i.e., in each Annual Review), any acceleration or deceleration of these trends will be reflected in the actual data used to prepare the upcoming year's demand forecast for rate-setting purposes.[131]

- The Companies are proposing to continue the treatment of variances approved during the Current MRP, which includes:[132]

  - FEI: Revenue variances related to the use rates of residential and commercial customers (Rate Schedules 1, 2 and 3/23) will continue to be subject to the RSAM mechanism which has been in existence since 1994. All other variances in revenues will be captured in the Flow-through deferral account.

  - FBC: All variances in revenues will be captured in the Flow-through deferral account.

- With the above deferral accounts in place, customers will ultimately not be impacted by forecast variances.

118. With respect to the impacts of the energy transition, FortisBC confirms that it does not anticipate any changes to the accuracy of the annual load and peak demand forecasts due to the impacts of the energy transition over the proposed Rate Framework term.[133] For example, FortisBC explained:

> All forecast components are updated every year with the latest data so any changes due to the energy transition will be captured. FBC does not expect changes due to the energy transition in any single year to materially affect the

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130 Exhibit B-1-2, Updated Application, pp. C-144 to C-145.

131 Exhibit B-4, BCUC IR1 27.4.

132 Exhibit B-1-2, Updated Application, p. C-40.

133 Exhibit B-4, BCUC IR1 27.4.

> performance of the forecast methods. Notable, sustained changes to the annual actual load and capacity are expected to happen gradually over time, rather than as a one-year step change, and are well within the capabilities of the annual load and peak forecast methods to model accurately. The longer-term implications of the energy transition are more appropriately examined as part of the Long-Term Electric and Gas Resource Plans.[134]

119. Given the performance of FortisBC's existing forecasting methods and the short-term nature of the single test-year forecast with updates completed each year, as well as the use of deferral accounts to capture all forecasting variances, FortisBC submits that the existing forecasting methods continue to be appropriate for the three-year term of the Rate Framework.

120. Overall, FortisBC submits that its proposal to explicitly identify out-of-scope items will provide greater clarity and improve the efficiency of the Annual Reviews, is similar to the BCUC's intent with scoping IRs which was implemented as part of the BCUC's Regulatory Efficiency Initiative's Final List of Efficiencies, and is supported by the BCUC's determinations cited above regarding the purpose of the Annual Reviews. FortisBC therefore submits that its proposal should be approved.

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[134] Exhibit B-4, BCUC IR1 27.7.

## PART FOUR: ANNUAL CALCULATION OF THE REVENUE REQUIREMENTS

### A. Overview

121. This part addresses topics explored in the proceeding related to the calculation of FortisBC's annual revenue requirements under the Rate Framework as described in Section C4 of the Application. Under the Rate Framework, the components that make up FortisBC's revenue requirements will largely remain the same as under the Current MRP. FortisBC will continue to present its forecast revenue and demand/load each year along with the components of its revenue requirements, such as the cost of energy, other revenue, O&M, rate base, depreciation and amortization, financing and return on equity, property taxes and income taxes.[135] FortisBC is not proposing any change in the treatment of variances,[136] and will continue the treatment approved during the Current MRP where variances between forecasts and actuals are captured in a single Flow-through deferral account except where an approved deferral account either already exists or new deferral accounts are approved by the BCUC.[137] FortisBC will also continue to present the calculation of earnings sharing and various delivery and other rate riders (for FEI) approved by the BCUC, request approval of any exogenous factors, report on its existing deferral accounts and request any new deferral accounts.[138]

122. In the following subsections, FortisBC addresses the topics in Section C4 of the Application that were the subject of IRs, namely:

- FEI's method for forecasting non-natural gas for transportation (NGT) LNG demand;
- FEI's proposed treatment of the Core Market Administration Expense (CMAE); and
- FEI's methodology for forecasting late payment charges.

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135 Exhibit B-1-2, Updated Application, pp. C-140 to C-156.

136 Exhibit B-4, BCUC IR1 30.1.

137 Exhibit B-1-2, Updated Application, p. C-155.

138 Exhibit B-1-2, Updated Application, pp. C-152 to C-153.

## B. Method for Forecasting Non-NGT LNG Demand Under Rate Schedule (RS) 46

123. FortisBC submits that its load/demand forecasting methods[139] for setting rates in the Annual Reviews should be approved for the proposed Rate Framework term and, as discussed in Part Three, Section J above, be out of scope of Annual Reviews. FortisBC's demand/load forecasting methods have been reviewed each year in the Annual Reviews under the PBR Plan and Current MRP and have consistently produced accurate results.[140]

124. FEI's method for forecasting non-NGT LNG demand under RS 46 was the only aspect of FortisBC's demand/load forecasting methods that was the subject of IRs of a material nature. FEI was directed by Order G-334-23 to discuss alternative methodologies for forecasting non-NGT LNG demand in this Application.[141] FEI submits that either its current method of forecasting non-NGT LNG demand or the method that excludes spot demand from the forecast should be approved for the Rate Framework. In the sections below, FEI discusses the nature and challenges of forecasting non-NGT LNG demand, the alternative forecasting methods, and why FEI's current method or no forecast for spot demand are the most reasonable options.

### *Nature of and Difficulty with Forecasting Non-NGT LNG Demand*

125. FEI's non-NGT LNG demand is challenging to forecast as most of the volume is from spot purchases. While firm contract demand can be easily forecast based on contractual commitments, spot demand is not backed by firm take-or-pay commitments. Further, FEI's spot non-NGT LNG customers served via ISOtainers[142] operate internationally in rapidly changing business environments and have alternative market options available at various price points. Consequently, spot customer demand can change suddenly due to fluctuations in economic

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139 FEI's and FBC's load/demand forecasting methods are described in detail in Section C4.2 and Appendices C4-1 and C4-2 of the Application (Exhibit B-1).

140 Exhibit B-1-2, Updated Application, pp. C-142 to C-145.

141 Decision and Order G-334-23, FEI 2024 Annual Review of Delivery Rates, p. 10. Online: https://www.ordersdecisions.bcuc.com/bcuc/decisions/en/522019/1/document.do.

142 All RS 46 sales to ISOtainer (spot) LNG customers occur in BC, with the transfer of title of the LNG occurring at the outlet flange of the Tilbury LNG Facility and the customer responsible for transportation and delivery of the LNG to the end user. Most of FEI's ISOtainer LNG customers are located in Asia, particularly in China, while some are located in the US. While the LNG is ultimately consumed in the Asian or US markets, FEI's sales occur in BC: Exhibit B-4, BCUC IR1 26.4.

factors, such as LNG price, foreign exchange rates, and logistics costs, as well as other unforeseen events, such as logistical difficulties, geopolitical instability, and regulatory changes. These dynamics make spot demand difficult to forecast.[143]

***Alternative Forecasting Methods***

126. FEI considered the following forecast method options:[144]

- **Current Method:** Similar to FEI's method for forecasting industrial demand, FEI forecasts its spot LNG demand based on direct discussions with customers. Given the nature of their business, FEI's customers are in the best position to forecast their demand. This is FEI's preferred method.

- **Exclude Spot Demand:** FEI would exclude any spot demand from its forecast and, instead, FEI's actual spot LNG demand revenue would be returned to customers in the following year through the Flow-through deferral account. This was FEI's method prior to 2016 before FEI was directed to include a spot demand forecast by Order G-86-15.[145]

- **Most Recent Year of Actuals:** This method would use the most recent year of actuals. As the most recent year of actuals would be two years prior to the test period, there would effectively be a two-year lag in the forecast. Further, this method would not take into account anticipated changes in demand based on information from customers.

***FEI's Current Forecast Method Continues to be the Most Appropriate***

127. FEI submits that its current method of forecasting non-NGT LNG demand is the best approach. FEI forecasts its non-NGT LNG demand by including a forecast of volume for which FEI has firm contract demand and a forecast of spot purchases derived from direct conversations from spot purchase customers. FEI staff reach out directly to existing and prospective spot LNG customers in June of each year to gather their estimated demand for the upcoming year and include the customers' estimated demand in the forecast.[146] FEI has developed and is improving

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143 Exhibit B-1-2, Updated Application, p. C-143.

144 Exhibit B-1-2, Updated Application, p. C-143.

145 Decision and Order G-86-16, FEI Application for 2015 Delivery Rates, p. 13. Online: https://www.ordersdecisions.bcuc.com/bcuc/decisions/en/111650/1/document.do.

146 Exhibit B-4, BCUC IR1 26.5.

its procedures for verifying and validating the demand forecasts from spot LNG customers, including:[147]

- Analyzing historical sale volumes to identify the customers' consumption patterns and trends;
- Engaging in detailed discussion with customers to understand the rationale behind their usage estimates;
- Collaborating on shipment planning, including conversations on estimated delivery schedules and container quantities; and
- Maintaining consistent communication with customers, to remain apprised of any shifts in their operations and market dynamics.

128. Additionally, FEI has conducted market research and studies to gain deeper insight into market trends, and works to develop close business relationships with customers, brokerage agents, port authorities, and shipping companies, to obtain first-hand and critical knowledge on LNG markets, which helps FEI to verify and validate the forecast demand from customers.[148]

129. Given the complexity and number of factors impacting FEI's spot LNG demand, such as LNG market price, foreign exchange, and logistics costs, the customers themselves are best able to forecast their own demand.[149] FEI's approach to forecasting spot LNG demand is similar to FEI's method for forecasting industrial customer demand,[150] although the process for industrial customers is mostly automated with the use of the online survey. Ultimately, the methodologies are substantively the same as both rely on the customer to provide their estimation of demand based on their own information.[151]

***Not Providing a Forecast for Spot Demand Would be a Reasonable Option***

130. FEI is amenable to reverting back to the pre-2016 forecasting method for RS 46 LNG demand, in which FEI did not include any spot purchases from non-NGT LNG customers. By

147 Exhibit B-4, BCUC IR1 26.6.

148 Exhibit B-4, BCUC IR1 26.6.

149 Exhibit B-1-2, Updated Application, p. C-143.

150 Exhibit B-1-2, Updated Application, p. C-144.

151 Exhibit B-1-2, Updated Application, p. C-143.

excluding spot purchases, the accuracy of the non-NGT LNG forecast demand may improve. The revenue from actual spot purchases would still be accounted for, as the variance between forecast and actual RS 46 revenue will be captured in the Flow-through deferral account and returned to customers in the subsequent year.[152]

## C. Proposed Treatment of CMAE is Reasonable and Appropriate

131. Further to the BCUC's direction in the Annual Review for 2021-2022 Delivery Rates Decision, FEI performed a comprehensive assessment of the CMAE budget, as described in Section C4.3.1 and Appendix C4-3 to the Application. Based on this assessment, FEI submits that CMAE costs should be: (1) forecast annually; and (2) reviewed in a separate application filed at or near the same time that FEI files its third quarter gas cost reports (Q3 Gas Cost Reports). While FEI continues to rely on its detailed report in Appendix C4-3 of the Application, FEI emphasizes the following points in support of this proposal.

132. First, CMAE costs do not fit well within a formula approach or the Annual Review process:[153]

- Since CMAE costs form part of commodity and midstream rates, and not delivery rates, forecast variances in CMAE costs are not captured in the Flow-through deferral account but in FEI's commodity and midstream rates. This distinction is important because, if the CMAE costs were to be moved to form part of FEI's Base O&M (and thus be subject to the annual indexed-based formula), variances between forecast and actual costs would impact the earnings sharing mechanism, yet these costs are in reality being recovered through commodity and midstream rates. This creates a disconnect between the impact the variances would have on delivery rates (i.e., through the ESM) and the method by which the actual costs are being recovered. Further, if CMAE were to be included in delivery charges, then Transportation Service customers would bear some of those costs without having caused them. This approach would not follow cost causation principles.[154]

- FEI's delivery rates do not include gas costs (including any midstream costs), and the Annual Review process makes no other requests related to FEI's gas costs or

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[152] Exhibit B-1-2, Updated Application, p. C-143.

[153] Exhibit B-1-2, Updated Application, pp. C-146 to C-147.

[154] Exhibit B-1, Application, Appendix C4-3, p. 5.

gas cost related charges. It would be most appropriate for the BCUC to review CMAE costs at the same time that the other gas cost items are reviewed.

- There is little opportunity to find efficiencies within CMAE. FEI's CMAE cost is small in comparison to FEI's overall O&M (approximately $6 million in 2024 compared to total approved net O&M of $305 million) and compared to the total gas costs it manages (approximately $940 million in 2023) and mitigation savings it achieves (approximately $311 million in 2023). The staffing requirements and other resource requirements have generally remained unchanged from year to year.[155]

133. Second, FEI's proposed simple forecast approach is reasonable for CMAE. FEI has always managed its CMAE budget in an efficient and cost-effective manner and will continue to do so. Increases to CMAE costs are primarily driven by labour and non-labour inflation. Variations in the actual CMAE costs each year are primarily related to external legal and consulting costs which can fluctuate depending on the degree of FEI's involvement in upstream regulatory matters and the complexity of those matters. FEI utilizes external legal and consultants to help respond to upstream proponents' applications before the Canadian Energy Regulator or the US Federal Energy Regulatory Commission. As variations in costs due to these proceedings are largely beyond FEI's control, they are more appropriately forecast than subjected to a formula.[156]

134. Third, FEI proposes to file the CMAE budget at or near the same time as the Q3 Gas Cost Report, which is typically filed in early September, which will allow adequate time for the annual CMAE budget to be reviewed and approved prior to the end of the year. This addresses the BCUC's previous concern that including the CMAE budget in the fourth quarter gas cost report (Q4 Gas Cost Report) did not provide enough time to review the budget.[157]

135. Accordingly, FEI seeks approval to continue to forecast the CMAE budget annually, but to file the budget for review as a separate application at or near the same time as the Q3 Gas Cost Reports.

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[155] Exhibit B-4, BCUC IR1 28.2.

[156] Exhibit B-4, BCUC IR1 28.2.

[157] Exhibit B-1-2, Updated Application, p. C-146.

***Updated Allocation Percentages to the Commodity Cost Reconciliation Account (CCRA) and Midstream Cost Reconciliation Account (MCRA) Are Appropriate***

136. Further to the BCUC's direction in Order G-319-20,[158] FEI submits that the allocation of CMAE costs between the CCRA and MCRA should be updated so that 25 percent of the costs (and variances) are allocated to the CCRA and 75 percent are allocated to the MCRA. The revised allocation is justified by a survey of FEI's gas supply staff which determined the proportion of their time spent on the commodity (CCRA) portfolio and the proportion on the midstream (MCRA) portfolio and RNG. The resulting time spent on MCRA, CCRA and RNG activities was averaged across all staff and showed that 25 percent of staff time is spent on CCRA activities, 70 percent is spent on MCRA activities, and 5 percent is spent on RNG activities. Rather than making an accounting entry to move 5 percent of Gas Supply costs to the RNG account, for which costs are recovered through a rate rider on FEI's Storage & Transport charges (Storage & Transport charges are used to recover MCRA costs), it is more efficient to amend the allocation between CCRA and MCRA so that the cost of RNG activities undertaken by FEI's Gas Supply staff forms part of the MCRA allocation of costs which is aligned with how FEI recovers much of its RNG costs through the rate rider.[159]

137. Directionally, the shift in cost allocation from the CCRA to the MCRA will decrease the Cost of Gas charges and increase the Storage and Transport charges. The impact would be immaterial. For example, using FEI's approved 2024 CMAE costs, the updated allocation would affect FEI's January 1, 2024 Cost of Gas (tested rate) and Storage and Transport (proposed and approved) charges as follows: RS 1 (Residential) and RS 2 (Small Commercial) customers, who purchase commodity from FEI, would have an equal offsetting change in the Cost of Gas and Storage and Transport charges of $0.002 per GJ, with RS 3 (Large Commercial) and RS 5 (General Service) customers experiencing a small net decrease of $0.001 per GJ.[160]

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[158] Decision and Order G-319-20, FEI Annual Review for 2020 and 2021 Delivery Rates, p. 16. Online: https://www.ordersdecisions.bcuc.com/bcuc/decisions/en/489787/1/document.do.

[159] Exhibit B-4, BCUC IR1 28.1.

[160] Exhibit B-4, BCUC IR1 28.1.

## D. Methodology for Forecasting Late Payment Charges Continues to be Reasonable

138. FortisBC submits that its current method of forecasting late payment charges remains appropriate and should be approved. FortisBC's forecast method is to use the average of the previous year's actual late payment charges and the current year's projected late payment charges. Further to the BCUC's direction from the FEI Annual Review for 2024 Delivery Rates Decision,[161] FortisBC has evaluated alternative methods for forecasting late payment charges, including forward-looking and backward-looking approaches.

139. FortisBC's current method remains appropriate for the following reasons:

- Since the COVID-19 pandemic, the current method has proven to be more accurate than the backwards-looking, three-year average approach, which resulted in historical results prior to the 2021/2022 timeframe being an inaccurate representation of future late payment charges.[162]
- While the impacts of the COVID-19 pandemic have dissipated, the current approach continues to be more appropriate than backward-looking approaches that use more historical years, as it excludes historical years which could still be influenced by pandemic and subsequent inflationary impacts. Given the risk of continued volatility in late payment charges, the benefit of the current approach is that it uses the most recent data, ensuring that the latest trend in late payment charge revenue is used.[163]
- The average of the two previous years of actuals is another backward-looking option that would be inferior to FortisBC's proposed approach. For example, for FEI, using the average of two previous years of actuals would have produced a 2023 Forecast of $3.137 million, which is significantly lower than 2023 Actuals of $3.863 million and worse than FEI's current approach which produced a forecast of $3.385 million.[164]
- As Tables C4-5 and C4-6 of the Application show, variances between actual and forecast late payment charges have been both positive and negative, indicating that there is no bias in results being created by the method.[165]

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161 Decision and Order G-334-23, p. 11.

162 Exhibit B-1-2, Updated Application, pp. C-148 to C-149.

163 Exhibit B-1-2, Updated Application, p. C-149.

164 Exhibit B-4, BCUC IR1 29.1; Exhibit B-1-2, Updated Application, p. C-149.

165 Exhibit B-4, BCUC IR1 29.1.

- FEI considered a forward-looking approach based on the projected revenue for the forecast year. FEI performed a linear regression between revenue/customer bills and late payment charges but there was no observable trend between late payment charges and revenue or late payment charges and customer bill sizes that would suggest these methods would be a reasonable approach to forecasting late payment charges.[166]

- FortisBC is not aware of any other forward-looking approaches that would be suitable for the purposes of forecasting annual late payment charges. As there are various reasons behind late payment charges, and it depends on the circumstances of the individual customers, using just one or two parameters, such as revenue or customer bill size, to forecast late payment charges would not produce a reasonable result.[167] FEI's approach is grounded in recent historical actual/projected results, which FortisBC considers to be more appropriate than attempting to assign a correlation between projected revenue or customer bills (or other trends in revenue or customer activity) where none has been identified.[168]

For these reasons, FEI submits that its current approach to forecasting late payment charges should be continued.

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[166] Exhibit B-1-2, Updated Application, p. C-150; Exhibit B-4, BCUC IR1 29.1.

[167] Exhibit B-4, BCUC IR1 29.1.

[168] Exhibit B-4, BCUC IR1 29.1.

## PART FIVE: PROPOSED FORMULA AND FORECAST O&M IS JUST AND REASONABLE

### A. Overview

140. This Part addresses the 2024 Base O&M for each of FEI and FBC that will be subject to the index-based formula for the Rate Framework term and the categories of O&M that FortisBC will continue to forecast each year in the Annual Review as they are appropriately not subject to the formula. FortisBC submits that its proposed mix of formula and forecast O&M is reasonable and appropriate for the Rate Framework term and should be approved. As the majority of FortisBC's O&M expenses are controllable in nature, they are appropriately set by formula by escalating the Unit Cost O&M (UCOM), which is the 2024 Base O&M divided by the average number of customers, by the I-Factor, X-Factor and Growth Factor discussed in Part Three of this Final Submission.[169] Section C2.4 of the Application provides a detailed explanation of how formula O&M will be set over the Framework term.[170] In addition to the index-based formula O&M, some categories of O&M are not suitable for a formula, e.g., they are not controllable, and will therefore be forecast on an annual basis, with the variances between forecast and actual amounts trued up through the Flow-through deferral account or other deferral accounts. Together, the proposed formula and forecast O&M reflect FortisBC's best estimate of what will be needed to meet the challenges and requirements that will arise over the Rate Framework term, including the O&M required to address the impacts of the energy transition and other new requirements, while continuing to meet service quality and reliability requirements, which is a key focus for FortisBC.

141. The remainder of this Part is organized around the following points:

- FortisBC's approach to setting the 2024 Base O&M incorporates the savings achieved during the Current MRP and includes cost-of-service adjustment to arise at the best estimate of the O&M required over the Rate Framework term.

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[169] See Exhibit B-1-2, Updated Application, Section C2.4 for a detailed explanation of how the 2024 Base O&M will be escalated over the term of the Rate Framework.

[170] See Exhibit B-1-2, Updated Application.

- FEI's 2024 Base O&M reflects the best estimate of what FEI will need to meet the challenges and requirements that will arise over the Rate Framework term.
- FBC's 2024 Base O&M reflects the best estimate of what FBC will need to meet the challenges and requirements that will arise over the Rate Framework term.
- The proposed categories of forecast O&M are reasonable and appropriate for the Rate Framework term.

## B. Approach to Setting Base O&M Incorporates the Savings Achieved During the Current MRP and is Not Materially Different than a Cost of Service Approach

142. FortisBC's approach to setting the 2024 Base O&M follows the same method that was used and approved by the BCUC for the Current MRP and that has been used in other jurisdictions to set the base amount for index-formulas. This approach is designed to capture savings achieved during the Current MRP and set a 2024 Base Amount that reflects the best estimate of what will be needed to meet the challenges and requirements that will arise over the Rate Framework term. Specifically, the process to calculate the 2024 Base O&M consists of the following five steps:[171]

1. Start with 2023 Actual Base O&M, which is the 2023 Approved Base O&M reduced by the 2023 savings achieved.
2. Adjust for any previously approved exogenous factors and items currently in formula O&M that will be re-classified as Forecast (flow-through) O&M during the term of the Rate Framework. This adjustment is required to align the 2023 Actual Base O&M with the scope of the formula O&M for the term of the Rate Framework.
3. Multiply by the 2024 formula inflator as approved in the Annual Reviews for 2024 Rates. This adjustment is required to state the 2023 Actual Base O&M in 2024 dollars.
4. Add amounts for required spending that will begin in 2024. As FortisBC started with 2023 Actual expenditures, this adjustment is required to derive a projection of FortisBC's 2024 Base O&M requirements.
5. Add net incremental funding required beginning in 2025 and over the term of the Rate Framework. This is the final adjustment, which increases the projected 2024 Base O&M to the amount that will be required over the term of the Rate Framework but stated in 2024 dollars.

[171] Exhibit B-1-2, Updated Application, pp. C-25 and C-48.

143. For the reasons set out below, FortisBC submits that this process continues to be reasonable and appropriate for setting the 2024 Base O&M.

***Savings from the Current MRP, Including due to Vacancies, Are Captured in the 2024 Base O&M***

144. First, the process captures the savings achieved during the Current MRP. The approach achieves this by starting with the 2023 Actual expenditures, which is the 2023 Approved Base O&M less savings. The 2023 Actual expenditures are the appropriate starting point as 2023 is the latest year for which actual expenditures are available and is the most recent historical representation of the level of O&M funding required to operate FortisBC's system safely and reliably and to maintain its overall service quality level. In addition, all of the O&M savings that FEI and FBC achieved in 2023 are reflected in the 2023 Actual expenditures, and are therefore accounted for in the calculation of the 2024 Base O&M.[172]

145. Specifically, the savings embedded in the 2023 Actual expenditures include any reductions in costs that may be realized due to vacancies, such as the time required to fill positions vacated due to retirements, resignations or other voluntary employee attritions.[173] Because the cost reductions due to vacancies are embedded in the 2023 Actual expenditures and the 2024 Base O&M, it is neither necessary nor reasonable to forecast an additional level of employee attrition or vacancies over and above the level already embedded in the 2024 Base O&M, as doing so would double count the impact of such attrition.[174]

146. Furthermore, FortisBC has confirmed that:

- None of the new incremental employees that it plans to hire as described in Sections C2.2.4 and C2.3.4 of the Application are to fill vacancies, but are net new positions;[175]
- FortisBC has substantially filled the incremental 2024 positions identified;[176]

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[172] Exhibit B-1-2, Updated Application, pp. C-25 and C-48; Exhibit B-14, BCOAPO IR2 20.1.

[173] Exhibit B-4, BCUC IR1 11.2.

[174] Exhibit B-4, BCUC IR1 11.2; Exhibit B-19, RCIA IR2 49.1.

[175] Exhibit B-4, BCUC IR1 11.3 and 11.4.

[176] Exhibit B-4, BCUC IR1 11.3.

- FortisBC does not anticipate difficulties filling the incremental 2025 positions:[177]and
- There are no further areas of O&M spending that can be removed from FEI's and FBC's 2023 Approved O&M that would be in addition to the 2023 savings achieved.[178]

147. Therefore, given that any cost reductions due to vacancies and attrition experienced in 2023 are embedded in the 2024 Base O&M, making additional assumptions regarding vacancy rates would double-count the impact of vacancies and incorrectly decrease the 2024 Base O&M below what is required to operate the utilities. As such, adding any further reductions to Base O&M would be unfair and punitive to the Utilities.

***Approach to Base O&M Not Materially Different than a Cost-of-Service Approach***

148. Second, the process to set the Base O&M uses cost-of-service adjustments to the 2023 Actual amounts to arrive at the proposed 2024 Base O&M. Consequently, FortisBC's proposed 2024 Base O&M and the resulting 2025 O&M funding envelope for FEI and FBC are generally the same as if FortisBC were to develop a new O&M forecast for 2025 on a cost-of-service basis. FortisBC also notes that its historical and forecast O&M have been available for examination in this proceeding at a similar level of detail that would be available in a cost-of-service rebasing application. FortisBC has provided the 2019 to 2023 Actual O&M in detail in Appendices C2-1, C2-2 and C2-3 to the Application, and detailed explanations for all of the adjustments to 2024 and the incremental O&M funding starting in 2025 in Sections C2-2 and C2-3 of the Application.[179]

149. The BCUC has previously confirmed that this approach, which FortisBC used to set the 2019 Base O&M for the Current MRP, is not materially different from having a cost-of-service forecast:[180]

> The Panel agrees with FortisBC and BCOAPO that it is reasonable to use the 2018 Actual O&M as the starting point for determining FEI and FBC Base O&M for the MRP. Regarding the concerns expressed by the CEC and ICG that a full review of

[177] Exhibit B-4, BCUC IR1 13.3.

[178] Exhibit B-4, BCUC IR1 11.6.

[179] Exhibit B-4, BCUC IR1 1.1.

[180] MRP Decision, p. 107.

> costs should be developed prior to implementing another different formula or that a BCUC-approved COS for 2020 is necessary, the Panel is persuaded by FortisBC's submission that there is no material difference between what FortisBC has proposed and having a 2020 forecast of O&M. As FortisBC points out, the 2018 Actual O&M and all adjustments were available for review and scrutiny in this proceeding. [Emphasis added]

Accordingly, there is no need to have a "full" cost of service review to set the 2024 Base O&M, whether due to the impacts of the energy transition or otherwise.[181]

***Approach Has been Approved by the BCUC and Has Been Used in Other Jurisdictions***

150. Third, FortisBC's approach to setting its Base O&M has been previously approved by the BCUC, as noted above, and is similar to approaches used by other regulators such as the Ontario Energy Board (OEB) and AUC. For example, utilities in Ontario have wide flexibility to choose from a number of options for setting going-in rates, including a hybrid methodology using a combination of actual costs and cost-of-service forecasts similar to the approach used by FortisBC.[182] FortisBC's approach is also similar to the approach taken by the AUC, which also adopted a hybrid methodology, concluding that "a hybrid methodology achieves an appropriate balance between regulatory efficiency and providing an adequate opportunity for interveners and the Commission to test a utility's case."[183]

151. FortisBC therefore submits that its approach to setting the 2024 Base O&M is consistent with past practice, has been previously approved by the BCUC, has been endorsed by other regulators as a reasonable approach, and captures both savings achieved under the Current MRP and the necessary funding required for the Utilities to meet the challenges over the Rate Framework term.

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181 Exhibit B-7, BCOAPO IR1 3.1 and 3.3; Exhibit B-14, BCOAPO IR2 15.1.

182 Exhibit B-4, BCUC IR1 1.1.

183 AUC Decision 26354-D01-2021, para. 13. Online: file:///C:/Users/nrand/Downloads/26354_X[]_26354-D01-2021%20Process%20to%20Establish%202023%20Rates%20for%20Alberta%20Electric%20and%20Gas%20Distribution%20Utilities_000087.pdf.

## C. Base O&M for FEI

152. This section addresses in detail the incremental adjustments required for the calculation of FEI's 2024 Base O&M. As discussed in Part Five, Section B above, FEI established the 2024 Base O&M using a five-step approach starting with 2023 Actual expenditures. Table C2-1 below shows how the 2024 Base O&M of $302.127 million is calculated.[184]

**Table C2-1: FEI 2024 Base O&M ($ millions)**

| | |
|---|---|
| 2023 Approved Base O&M | 299.302 |
| 2023 Savings - Base O&M | (4.322) |
| **2023 Actual Base O&M** | **294.980** |
| Adjustment for exogenous factor and flow through items (in 2023 dollars) | (18.007) |
| **2024 Base O&M (in 2023 dollars)** | **276.973** |
| 2024 Inflator | 1.0443 |
| **2024 Base O&M (in 2024 dollars)** | **289.243** |
| Adjustments for Required 2024 Spending (in 2024 dollars) | 3.232 |
| **2024 Projected Base O&M** | **292.475** |
| Net incremental funding for Rate Framework (in 2024 dollars) | 9.652 |
| **2024 Base O&M for Rate Framework** | **302.127** |

153. FEI submits that the adjustments to arrive at the Base O&M per customer amounts are each reasonable and appropriate and needed to provide the right starting point for the Rate Framework. The sections below address the following key points:

- The adjustments for one exogenous factor and two shifts between formula and forecast O&M are needed to align the scope of the 2024 Base O&M with the scope of formula O&M over the Rate Framework term, and these adjustments are consistent with past practice.
- The adjustments to account for expenditures beginning in 2024 are needed to accurately derive a projection of FEI's 2024 Base O&M requirements.
- The incremental funding needed to respond to requirements over the Rate Framework term is fair and reasonable.

[184] Exhibit B-1-2, Updated Application, p. C-49.

**(a) Adjustments for Exogenous Factor and Flow-through Items Are Reasonable and Necessary to set the Scope of Formula O&M**

154. Consistent with past practice, FEI adjusted the 2023 Actual O&M for one exogenous event related to the 2021 flooding and to re-class two other O&M areas either into or out of the proposed indexed-based formula.

***Adjustment for 2021 Flooding Exogenous Factor Event***

155. FEI has adjusted the 2023 Actual Base O&M for the 2021 flooding and remediation exogenous factor event, which is discussed in Part Three, Section F of this Final Submission. As discussed on page C-18 of the Application, FEI's 2023 Actual O&M included a one-time credit of $0.576 million as a result of receiving insurance proceeds for the flooding event. As such, it is necessary to make an adjustment of $0.576 million to account for this one-time credit that will not be reflected in 2024 or future years.[185]

***Adjustment for AMI Project Costs Re-Classified as Flow-through***

156. FEI has proposed to remove the O&M costs impacted by the Advanced Metering Infrastructure (AMI) project from formula O&M and include them in forecast (flow-through) O&M, which will allow the O&M savings caused by the AMI project to be passed on to customers. As the AMI project is deployed, FEI expects related O&M costs currently included in the formula to decline as manual metering reading activities decrease.[186] These costs include Meter Installation, Meter Reading, Operations, Customer Service and Meter Shop O&M, which in 2023 totalled $19.783 million (gross).[187] Reclassifying these O&M costs impacted by the AMI project as forecast (flow-through) O&M will ensure that only the actual costs incurred are recovered from customers. This approach is consistent with the approved treatment of CPCN expenditures and is appropriate. By forecasting these costs in Annual Reviews, FEI will be able to track and report on annual costs and savings, with variances between forecast and actual costs recorded

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185 Exhibit B-1-2, Updated Application, pp. C-18 and C-26.

186 Exhibit B-1-2, Updated Application, pp. C-26 to C-27 and C-64.

187 FEI describes each of these O&M items in the Application: Exhibit B-1-2, Updated Application, p. C-28 and Table C2-2.

in the Flow-through deferral account. This approach also aligns with the treatment FEI indicated it planned to implement as part of the FEI AMI project CPCN proceeding.[188]

***Adjustment to Re-Classify Incremental Integrity Activities Related to the IGU and CTS TIMC Projects as Formula***

157. FEI has adjusted the 2023 Actual O&M to include in formula O&M its controllable O&M costs for the Inland Gas Upgrade (IGU) and Coastal Transmission System (CTS) Transmission Integrity Management Capabilities (TIMC) CPCN projects. The IGU and CTS CPCN projects were implemented during the Current MRP term and therefore the incremental O&M costs related to these projects were not included in formula and instead were forecast and treated as flow-through O&M. However, as FEI is now establishing the 2024 Base O&M for the Rate Framework, FEI submits that it is appropriate to re-classify the incremental IGU and CTS TIMC project O&M expenses from flow-through to formula. Consistent with its 2023 forecast and actual costs, FEI has added $0.300 million for the IGU project for engineering analysis of In Line Inspection (ILI) data as well as planning and implementing operational responses, such as identifying future integrity digs or other monitoring activities. Consistent with its 2023 forecast and actual costs, and the resources required over the Rate Framework term, FEI has added $0.900 million for the CTS project for headcount which have been fully resourced, and associated labour related to the incremental ILI analysis and Quantitative Risk Assessment activities.[189]

158. Treating the above IGU and CTS costs as part of formula O&M is consistent with how FEI's other controllable O&M is treated. In contrast, Integrity Dig O&M is highly variable year-over-year due to the considerable uncertainty related to scope, cost, timing, and volume of expected digs. Accordingly, FEI has continued to treat Integrity Dig O&M as flow-through.[190]

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188 Exhibit B-1-2, Updated Application, pp. C-26 to C-27.

189 Exhibit B-1-2, Updated Application, p. C-29; Exhibit B-12, RCIA IR1 21.2.

190 Exhibit B-12, RCIA IR1 21.2.

**(b) Adjustments to Account for Required 2024 Spending Are Needed to Accurately Set 2024 Base O&M**

159. FEI's new O&M expenditures that began in 2024 are not reflected in 2023 Actual Base O&M and, therefore, need to be added to accurately set the 2024 Base O&M. There is a total of $3.232 million in expenditures that commenced in 2024 and are not reflected in 2023 Actual expenditures, in the following four categories.

***New Facility Lease Costs***

160. Further to the Kelowna Space Project which was included in FEI's and FBC's approved capital expenditures for 2023 and 2024, FEI's and FBC's Shared Service Departments moved to a new leased facility in early 2024. The incremental leasing (O&M) cost for the site to be added to Base O&M is $0.900 million, shared between FEI and FBC based on the number of employees for each Company. FEI's allocation is approximately $0.600 million.[191]

161. FEI has also relocated employees into a new leased contact centre facility in Prince George with an incremental leasing (O&M) cost of $0.850 million.[192] The move was necessary to mitigate risks to the safety of FEI's employees and the security of FEI's operations due to the increased crime and social disorganization in the area.[193] FEI has proposed treatment of the costs/savings resulting from the disposition of the old facility in a separate application currently before the BCUC.

***LNG Operations***

162. FEI has needed to add incremental operator positions to enhance the safe and reliable operations of FEI's Tilbury and Mt. Hayes LNG facilities in 2024. At Mt. Hayes, two operator positions have been added[194] to ensure working alone requirements are met for emergency situations and to provide adequate staffing due to increased liquefaction requirements. Two

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191 Exhibit B-1-2, Updated Application, p. C-30.

192 Exhibit B-1-2, Updated Application, p. C-30.

193 Exhibit B-4, BCUC IR1 12.1.

194 Exhibit B-4, BCUC IR1 11.5.

operator positions have also been added[195] at Tilbury to ensure full vacation and sick coverage and full 24/7 coverage for the operation of that facility. These needs were identified based on recommendations made after an emergency response exercise and following an assessment of the staffing levels required to manage incremental maintenance, increased unforeseen repairs, and other operational requirements that have increased beyond what was planned for in the Current MRP. The total cost of these four positions is $0.600 million.[196]

***Long-Term Resource Planning***

163. FortisBC's resource planning activities are required under section 44.2 of the *Utilities Commission Act* (UCA) and are critical for prudent long-term resource planning that requires more on-going resources due to long-term resource plans being developed and filed with the BCUC on a more frequent basis. This shift is driven by the energy transition and a rapidly changing external environment, including new supply sources and types of customer demand, which together have increased resource planning complexity. In particular, the BCUC has directed FEI to undertake a variety of detailed analyses and file its next plan by March 31, 2026, such that FEI has already commenced work. Therefore, FortisBC is adding three additional positions in 2024 (two of which were filled by September 6)[197] to conduct analysis and research, as well as managing internal and external stakeholder engagement.[198]

***Decarbonization and Sustainability***

164. To support reporting and compliance requirements related to decarbonization and sustainability, FEI requires $0.800 million for two new positions that it has filled in 2024,[199] as well as costs related to membership dues, external audit fees and consulting costs. FortisBC created a new Decarbonization and Sustainability department to comply with growing requirements related to greenhouse gas (GHG) emissions and sustainability reporting and

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195 Exhibit B-4, BCUC IR1 11.5.

196 Exhibit B-1-2, Updated Application, p. C-30; Exhibit B-4, BCUC IR1 12.5.

197 Exhibit B-4, BCUC IR1 11.5.

198 Exhibit B-1-2, Updated Application, pp. C-50 to C-51; Exhibit B-4, BCUC IR1 12.6; Exhibit B-5, Air Products IR1 1.1; Exhibit B-12, RCIA IR1 24.1.

199 Exhibit B-4, BCUC IR1 11.5. For a description of the positions, see Air Products IR1 1.3.

disclosures.[200] Examples of broadening requirements for reporting, compliance and disclosure include:

- BC Energy Regulator methane reporting requires increased measurement and reporting with documented leak detection and repair programs.
- GHG quantification for reporting has become more complex, with less reliance on asset-based emission factors and an increasing requirement for measurement.
- FEI has to report under three carbon trading systems, including the BC Low Carbon Fuels Standard, Environment and Climate Change Canada's Clean Fuel Regulation, and the BC Output Based Pricing System.
- Other Canadian regulators have enhanced the requirements for environmental disclosure related to GHG emissions and climate risk, and guidance for Environmental, Social, and Governance (ESG) reporting continues to evolve with a shift away from voluntary reporting to proposed required reporting from regulators and standard setters globally. [201]

The legal and reputational risks associated with compliance are growing with these broadening requirements and FortisBC is responding by developing frameworks to advance sustainable practices and report on progress towards sustainability commitments, which requires analytical resources, systems, and controls. FEI therefore requires these additional resources for data accumulation, analysis, validation, verification, and controls to support climate-related disclosures.[202]

### (c) Incremental Funding is Needed to Respond to Requirements Over the Rate Framework Term

165. FEI requires $9.652 million in incremental funding to meet new and incremental requirements during the Rate Framework term, particularly in the areas driven by the energy transition, increasing physical and cyber security risks, and Indigenous relations and reconciliation.[203]

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[200] Exhibit B-1-2, Updated Application, pp. C-31 to C-32.

[201] Exhibit B-1-2, Updated Application, pp. C-31 to C-32; Exhibit B-5, Air Products IR1 1.2.

[202] Exhibit B-1-2, Updated Application, pp. C-31 to C-32.

[203] Exhibit B-1-2, Updated Application, p. C-33.

166. FEI does not anticipate any difficulty filling the identified positions required for 2025.[204] As has been the case with the Current MRP and the 2014-2019 PBR Plan, the full labour costs of incremental positions required beginning in 2025 should be included in 2024 Base O&M. First, FEI anticipates that it will have no difficulty filling these positions in 2025 and, as such, the best available forecast is that FEI will incur the full labour costs. Second, to the extent that positions are not able to be filled immediately in 2025, and depending on the degree of urgency of the required work to be undertaken, FortisBC may need to pursue short-term solutions such as contractors or consultants to assist with necessary work, which would increase non-labour O&M costs above what FortisBC has proposed in the 2024 Base O&M. Third, regardless of the experience in 2025, the full year of labour costs is required to provide for sufficient funding for each subsequent year of the Rate Framework term. Further, there is always some variability in the timing of new hires despite FortisBC's best efforts and this variability has been incorporated into the Base O&M through the 2023 Actual expenditures. For all of these reasons, FortisBC submits that it is reasonable and appropriate for the full net incremental funding for 2025 to be added to the 2024 Base O&M.

167. Each incremental funding request is discussed below.

***Government, Indigenous and Community Engagement***

168. FEI requires total net incremental funding of $2.499 million for government, Indigenous and community engagement in response to substantial shifts in policy and increasing requirements for Indigenous engagement activities that are becoming more complex.[205] The table below shows FEI's incremental funding requests in this area. Given the significant challenges facing the Company in this complex area, FEI submits that its incremental funding requests are both necessary and reasonable.

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[204] Exhibit B-4, BCUC IR1 13.3.

[205] Exhibit B-1-2, Updated Application, p. C-33.

**Table C2-4: FEI Government, Indigenous and Community Engagement Net Incremental Funding ($ millions)**

| | Historical Actual Expenditures | | | | Projected Base | Proposed Incremental |
|---|---|---|---|---|---|---|
| | 2020 | 2021 | 2022 | 2023 | 2024 | |
| Government Relations and Public Policy | 2.041 | 2.202 | 2.246 | 2.510 | 2.621 | 0.234 |
| Community and Indigenous Relations | 4.624 | 4.279 | 4.810 | 5.455 | 5.697 | 1.990 |
| Customer Engagement | 6.878 | 5.730 | 6.424 | 6.942 | 7.250 | 0.275 |
| **Total** | **13.543** | **12.211** | **13.480** | **14.907** | **15.567** | **2.499** |

169. **Government Relations and Public Policy:** FortisBC requires additional funding to respond to the rapidly changing climate policy at the local, Indigenous, provincial and federal levels of government aimed at reducing GHG emissions and promoting cleaner energy solutions.[206] These changes have created a challenging and complex operating landscape and FortisBC must now navigate a combination of government climate plans, targets, legislation, and regulation to enable its Clean Growth Pathway. FortisBC is required to undertake increased analysis to identify positive policy outcomes, respond to consultation requests at various levels of government, and engage in detailed policy development with government staff. Therefore, FortisBC requires new funding of $0.300 million, to be allocated between FEI ($0.234 million) and FBC ($0.066 million), for two new positions who will be responsible for conducting analyses to identify policy outcomes and ensuring new or amended policies align with FortisBC's objectives to provide safe, affordable, reliable, and resilient service while also supporting provincial GHG reduction targets.[207]

170. **Community and Indigenous Relations:** FEI requires a total of $1.990 million for activities related to community and Indigenous relations, which is divided into four categories as shown in the table below.

[206] For examples of government policy changes, see Exhibit B-1-2, Updated Application, Section B1.

[207] Exhibit B-1-2, Updated Application, p. C-33; Exhibit B-4, BCUC IR1 15.2.

**Table C2-5: Breakdown of Community and Indigenous Relations Net Incremental Funding ($ millions)**

| Breakdown of Net Incremental Funding | Net Incremental Funding |
|---|---|
| Community Engagement | 0.480 |
| Community Investment | 0.250 |
| **Total Community** | **0.730** |
| | |
| Indigenous Relations Engagement | 0.560 |
| Advancing Reconciliation | 0.700 |
| **Total Indigenous** | **1.260** |

171. **Community Engagement:** FEI requires incremental resources within its Community Relations team to support the engagement required for capital projects, ongoing operations, and the implementation of climate policy at the local level. A total of $0.480 million is required for three Community Relations/Public Policy Manager positions focused on Municipal and Climate Policy, along with supporting costs (non-labour) to cover increased associated travel and administration.[208] There are a number of drivers of this need, including:[209]

- There are increasingly restrictive municipal climate policies, uncertainty around FEI's role in supporting provincial and municipal decarbonization goals, and a political environment that favours electrification. Responding to this environment requires systematic, structured, and frequent dialogue at multiple levels within a municipality, including elected officials, senior city staff, and departmental leads.
- The increasing number of organized voices opposing low carbon gaseous energy solutions requires continued engagement in the community with a broad range of stakeholders, including chambers, boards of trade, and business associations.
- While FEI negotiated one or two operating agreements per year over the Current MRP term, FEI will be required to renegotiate 14 operating agreements over the next three years that will be expiring with municipalities in the Interior which require significant increase in negotiation activity over the upcoming three years. At the same time, FEI must build capacity to field requests for new or updated operating agreements in the Lower Mainland.

[208] Exhibit B-1-2, Updated Application, pp. C-34 to C-35.

[209] Exhibit B-1-2, Updated Application, pp. C-34 to C-35.

- FEI's engagement with municipalities around FEI's operations and sustainment work has increased significantly over the past few years and there is increased need for the Community Relations team to be involved to help coordinate and provide resolution for high-risk operations and sustainment work.[210]

172. **Community Investment:** FEI requires increased funding of $0.250 million to expand its Community Investment program due to the increased cost of these activities and increased requests from communities for support.[211] The increase to FBC's funding amount is discussed in Section D(c) below. The cost of this program is allocated 50/50 between customers and the shareholder which fully accounts for any potential benefits that may accrue to the shareholder from these activities.[212]

173. FortisBC's Community Investment Program is a robust initiative designed to enrich and support the communities within BC. By partnering with local leaders, non-profits, and social giving groups, FortisBC targets four key areas that significantly contribute to the well-being of the communities it serves: Safety, Education, Indigenous Initiatives, and the Environment. For instance, FortisBC supports various local projects in these areas:

- **Safety:** Providing funding and resources to local fire departments, search and rescue teams, and community fire prevention programs.
- **Environment:** Sponsoring environmental clean-ups, wildlife rehabilitation projects, and ecosystem restoration initiatives.
- **Education:** Funding educational programs and literacy initiatives for both children and adults, including support for Indigenous students.
- **Indigenous Initiatives:** Supporting conferences and projects that promote Indigenous economic development and health services.

174. FortisBC also extends its support during crises, such as the COVID-19 pandemic and natural disasters, by funding food banks, emergency relief efforts, and community recovery programs.

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210 Exhibit B-1-2, Updated Application, pp. C-34 to C-35.

211 Exhibit B-1-2, Updated Application, pp. C-36 to C-37.

212 Exhibit B-4, BCUC IR1 16.2.

175. FortisBC's investments include sponsoring and participating in conferences and events for local governments, Indigenous economic development, climate change and Net Zero collaboration, and local chambers. These include, for instance, the BC First Nations Energy and Mining Council's Hydrogen Initiative Workshop, the Greater Vancouver Board of Trade's Indigenous Opportunities Forum, the Vancouver Island Economic Alliance Society's business event, and the City of Maple Ridge's Climate Action Summit.

176. The impacts and benefits of this program include:

- Community Partnerships: These partnerships enhance FortisBC's effectiveness and collaboration in communities.
- Support for Indigenous Reconciliation: Actively engaging and supporting Indigenous communities.
- Employee Pride and Productivity: Boosting employee morale and attracting top talent.
- Customer Trust and Engagement: Demonstrating FortisBC's dedication to community improvement increases customer loyalty.
- Operational Certainty: Building stronger relationships that facilitate smoother project implementation.

177. The Community Investment Program is a crucial and beneficial initiative that enhances community welfare and customer satisfaction and increases the effectiveness of FortisBC's operations.[213]

178. **Indigenous Relations and Reconciliation:** FEI submits that its proposal to add a total of $1.260 million for activities in the area of Indigenous Relations and Reconciliation is necessary and in the public interest. Indigenous Relations and Reconciliation is an increasingly predominant activity and continues to require enhanced engagement, relationship building, capacity support, economic inclusion and community investment. There have been significant policy changes, legal decisions, and discoveries in communities in recent years which have all increased the need for and expectations around engagement with Indigenous Nations. This includes the affirmation of

[213] Exhibit B-1-2, Updated Application, pp. C-36 to C-37; Exhibit B-4, BCUC IR1 16.1 and 16.2.

the application of the UN Declaration for the Rights of Indigenous Peoples in provincial and federal laws and the incorporation of the concept of free, prior and informed consent into the *Environmental Assessment Act* (EAA) which significantly broadens engagement requirements. Other important developments described in detail in the Application include recent legal decisions and increasing expectations for the actioning of Indigenous-led policy documents, including the Truth and Reconciliation Commission's (TRC's) Calls to Action and the National Inquiry into Missing and Murdered Indigenous Women and Girls. Indigenous communities are also increasingly interested in participating in discussions regarding energy planning and have greater expectations for economic opportunities. In response, FortisBC must continue to enhance its engagement practices with Indigenous communities which includes learning the Indigenous communities' protocols, governance structures, and community engagement systems so that FEI's operations and project development on traditional territories are undertaken in a way that respects Indigenous rights and title. Given the age of much FEI's infrastructure, FEI also faces challenges resolving historical grievances as part of moving new projects forward. For example, FEI is working with the Okanagan Indian Band to modernize a right of way agreement through reserve lands that have been in place since the 1950s. This requires enhanced engagement and will impact all future projects.[214] Particular initiatives and resources required are outlined below.

- **Indigenous Relations Engagement:** FEI requires net incremental funding of $0.560 million for four new Community & Indigenous Relations/Initiatives Manager positions to support key activities related to engagement, Indigenous initiatives, and advancing reconciliation efforts.[215]

- **Advancing Reconciliation:** FEI requires $0.700 million for initiatives and administration to support Truth and Reconciliation efforts, including advancing Indigenous agreement, developing and implementing Indigenous procurement supply chain initiatives, and supporting Indigenous Initiatives such as Indigenous Awareness training for employees that are an important part of TRC's Call to Action 92 for advancing reconciliation.[216]

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[214] Exhibit B-1-2, Updated Application, pp. C-36 to C-38.

[215] Exhibit B-1-2, Updated Application, p. C-38.

[216] Exhibit B-1-2, Updated Application, pp. C-38 to C-39.

179. **Customer Engagement:** FEI requires $0.275 million for an Events and Outreach position and a Digital Content Designer to support FEI's digital and in-person event communications to meet growing customer expectations. This reflects the growth of and customer interest in new and more prominent community channels that have emerged since the Current MRP was developed, and the increasing need for in-language and in-person communications due to the increasing linguistic diversity of the population in BC.[217]

***Environment and Sustainability***

180. FEI requires net incremental funding of $1.800 million due to increasing environmental and archaeological regulatory requirements. FEI faces numerous environmental and archaeological regulatory requirements and risks associated with its operations, and many federal, provincial, regional, and municipal permits and approvals are typically required for its works. FortisBC's work in urban, rural, and natural areas often triggers significant regulatory requirements under the *Fisheries Act*, *Species at Risk Act*, *Water Sustainability Act*, *Environmental Management Act*, *Declaration on the Rights of Indigenous Peoples Act* (DRIPA), and *Heritage Conservation Act* (HCA). These types of federal and provincial regulatory requirements are continuing to increase. For example:

- Changes to the Contaminated Sites Regulation (CSR) under the *Environmental Management Act* in 2021 and 2023 have triggered more Stage 1 & 2 Preliminary Site Investigations (PSIs) requiring significant environmental support.
- Ongoing process improvements at FortisBC's facilities are required to ensure proper storage and disposal of hazardous and non-hazardous waste (including soils), such as improved waste categorization and segregation practices and increased waste pick-ups to avoid accumulation and meet increasing regulatory requirements.
- New requirements are proposed to come into force in 2024 under the *Transportation of Dangerous Goods Act* (TDGA) and associated regulations related to the creation of a job specific TDGA training course and registration of all sites with dangerous goods.
- The implementation of DRIPA has resulted in increased regulatory requirements for Indigenous review and consultation related to the protection of environmental

[217] Exhibit B-1-2, Updated Application, p. C-39; Exhibit B-12, RCIA IR1 25.1.

and archaeological resources, which results in an increased workload to ensure Indigenous communities' concerns are addressed through project planning, assessment, permitting and execution.

- For example, the HCA is currently being revised to incorporate the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP)/DRIPA principles. While the Province works to amend the HCA, the Ministry of Forests' Archaeology Branch is being directed by the spirit of the feedback it has received through consultation and will continue to work towards government's commitments to implement the UNDRIP/DRIPA. FEI has already seen increased assessment and permitting requirements for heritage/archaeological resource management, particularly related to Indigenous community requirements and expectations.[218]

181. The above factors are driving the need for recurring funding for labour and non-labour resources to respond to the ongoing increases to the following: scope/scale of activities/projects requiring environmental review and environmental management during implementation; regulatory/compliance requirements; GHG management and reporting requirements; carbon accounting and management; archaeological permitting costs; environmental (non-regulatory) reporting; and consulting costs for environmental risk management.[219]

***Corporate Security***

182. FEI requires net incremental funding of $1.607 million to support increased investments in cybersecurity, physical security, business continuity and emergency management that are necessary to manage increasing and evolving risks. Net incremental funding required for FortisBC (FEI and FBC) is approximately $2.060 million, of which FEI is allocated 78 percent. This funding consists of $0.420 million for a cybersecurity analyst, a physical security advisor and an emergency program manager, as well as $1.640 million for external contracted services across cybersecurity, physical security, and emergency management. As explained below, these three additional resources will support the Corporate Security department in managing cybersecurity, physical security, business continuity programs, and emergency management programs for all of FortisBC's business areas.[220]

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[218] Exhibit B-12, RCIA IR1 26.1.

[219] Exhibit B-1-2, Updated Application, pp. C-40 to C-42; Exhibit B-4, BCUC IR1 13.5.

[220] Exhibit B-1-2, Updated Application, pp. C-42 to C-43.

183. Cyber threats have changed and become more sophisticated (e.g., phishing scams aimed at accessing customer funds or information by impersonating FortisBC). FortisBC needs to protect customers and employees and respond to these evolving threats by investing more to: [221]

- Deploy and sustain technologies that detect and mitigate the growing cyber and physical threats;
- Enable swift response to security incidents;
- Improve the security of FortisBC's assets; and
- Enhance emergency response and business continuity capabilities to respond to increasing climate related events.

184. These additional resources will, in particular, enhance FortisBC's ability to discover and monitor for security threats and perform threat hunting (i.e., the practice of searching for cyber threats that may have evaded detection tools). They will also enable the expansion of FortisBC's cybersecurity operations centre, enabling additional alert monitoring and threat responses, while improving visibility and coordination between information systems, operation technology and cybersecurity.[222]

185. Similarly, incremental funding for physical security will enable additional monitoring of alerts, allow for improved responses to security events, provide resources for additional physical security audits and assessments, while supporting the continued standardization of physical security practices and equipment across FortisBC.

186. Finally, demands on the emergency operations centre and the team that operates it have increased primarily in response to the increase in climate related events that have been experienced over the past five years. Incremental funding will enable additional training and resources to ensure FortisBC can continue to respond to emergency events of any kind.[223]

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[221] Exhibit B-1-2, Updated Application, p. C-42.

[222] Exhibit B-1-2, Updated Application, p. C-42.

[223] Exhibit B-1-2, Updated Application, p. C-43.

***Technology***

187. FEI requires net incremental funding of $2.946 million, consisting of $1.600 million to fund the year-over-year increases expected in its software licensing fees and $1.346 million to support an increased cadence for security patching of hardware and software.[224] FEI describes why incremental funding is needed below, which is also applicable to FBC.

- **Software Licensing Fees:** FEI requires additional funding of $1.6 million for software licensing fees associated with new systems software, the renewal of existing software licenses, and for new licenses to support the addition of new users or expanded use of existing software. For example, as older systems are replaced, the ongoing licensing costs of the new systems can be double or triple that of the older systems due to higher costs for the software.

  Software licensing fees are charged for the right to use, or maintain a copy of, software for operating and maintaining technology solutions in FortisBC's IS application portfolio. Software licencing has also increasingly shifted to a Software as a service – Cloud (SaaS) model which results in higher ongoing costs as opposed to a higher initial capital cost with a lower O&M cost under an "on-premises" model. Put simply, software licencing is shifting away from one-time purchases to a subscription model. This estimate for the Rate Framework term is based on the current project list and incorporates recent pricing information.

- **Patching:** The net incremental funding for this area is comprised of $0.596 million, which is the non-capitalized portion of 12 technical and 2 management employees, and $0.750 million for managed services. As described above, FortisBC has increased expenditures for cybersecurity in recent years in response to evolving cyber threats. The sophistication of these threats has also forced hardware and software companies to release updated code and operating system patches to counteract these threats at an increased cadence. This, in turn, has a knock-on effect to FortisBC, which must review and deploy these patches, including off-cycle and zero-day which cannot wait for the next scheduled patch implementation cycle.[225]

  For context, FEI has over 300 applications, 5,200 end-points (computers and mobile devices), 1,100 servers, and 550 appliances. While FortisBC pushes patches to end-points via automation, critical servers are patched manually – which involves extensive testing. FortisBC's patch process must also increase in scope to include all critical and non-critical applications, which expands the review,

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[224] Exhibit B-1-2, Updated Application, pp. C-43 to C-45.

[225] Exhibit B-1-2, Updated Application, p. C-45.

assessment, testing and deployment process beyond its current bounds.[226] In Part Six, Section C(b) of this Final Submission, FortisBC addresses the associated capital expenditures.

***System Operations and Adaptation***

188. FEI requires net incremental funding of $0.800 million for operations, which are focused on meeting customer expectations by improving processes that promote efficiency and effectiveness of the work completed. FEI describes the specific areas this incremental funding is needed to support below.

- **Operate and Maintain LNG Plants:** FEI requires net incremental funding of $0.400 million to support its LNG O&M, including to: (1) add a warehouse position to manage the flow of spare parts and consumables required for the ongoing operation of the Tilbury 1A facility; and (2) manage ongoing maintenance requirements over the Rate Framework term.[227] These maintenance requirements include the recertification of pressure safety valves, which is driven by a regulatory requirement, funding of material and facility costs related to increased Mt. Hayes production, and enabling FEI to complete major equipment maintenance. The portion of the total O&M costs allocated to formula O&M represents the fixed costs to operate the LNG plants, regardless of use, while the variable costs are addressed through forecast (flow-through) O&M.[228]

- **Workforce Development:** FEI requires net incremental funding of $0.400 million to support the development of its workforce. This funding will provide three additional positions. Two positions are required for recruitment and employee training and development to support projected retirements and the volume of recruitment and employee movements. One position is required to support multi-year employment contracts with Indigenous nations to strengthen partnerships with Indigenous communities.[229]

## D. Base O&M for FBC

189. This section addresses in detail the incremental adjustments required for the calculation of FBC's 2024 Base O&M. As discussed in Part Five, Section B above, FBC established the 2024

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[226] Exhibit B-1-2, Updated Application, p. C-45.

[227] See Exhibit B-4, BCUC IR1 13.9 for a breakdown of these funding requirements.

[228] Exhibit B-1-2, Updated Application, p. C-46.

[229] Exhibit B-1-2, Updated Application, p. C-47.

Base O&M using a five-step approach starting with 2023 Actual expenditures. Table C2-10 below shows how the 2024 Base O&M of $76.269 million is calculated.[230]

**Table C2-10: FBC 2024 Base O&M ($ millions)**

| | |
|---|---|
| 2023 Approved Base O&M | 70.318 |
| 2023 Savings - Base O&M | (4.235) |
| **2023 Actual Base O&M** | **66.083** |
| Adjustment for exogenous factor (in 2023 dollars) | 0.585 |
| **2024 Base O&M (in 2023 dollars)** | **66.668** |
| 2024 Inflator | 1.0356 |
| **2024 Base O&M (in 2024 dollars)** | **69.043** |
| Adjustments for Required 2024 Spending (in 2024 dollars) | 1.670 |
| **2024 Projected Base O&M** | **70.713** |
| Net incremental funding for Rate Framework (in 2024 dollars) | 5.556 |
| **2024 Base O&M for Rate Framework** | **76.269** |

190. FBC submits that the adjustments to arrive at the Base O&M per customer amounts are each reasonable and appropriate and needed to provide the right starting point for the Rate Framework. The sections below address the following key points:

- The adjustment for the exogenous factor is needed to align the scope of the 2024 Base O&M with the scope of formula O&M over the Rate Framework term and is consistent with past practice.
- The adjustments to account for expenditures beginning in 2024 are needed to accurately derive a projection of FBC's 2024 Base O&M requirements.
- The incremental funding needed to respond to requirements over the Rate Framework term is fair and reasonable.

### (a) Adjustments for Exogenous Factor Are Reasonable and Necessary to set the Scope of Formula O&M

191. Consistent with how FBC incorporated exogenous factor impacts into Base O&M when establishing the 2019 Base O&M in the Current MRP, FBC has adjusted the 2023 Actual Base O&M to incorporate FBC's incremental costs of Mandatory Reliability Standards (MRS) compliance associated with MRS Assessment Report (AR) 13. FBC projects $0.585 million of O&M spending in 2024 related to ongoing efforts to maintain procedures and processes, hardware and

[230] Exhibit B-1-2, Updated Application, p. C-49.

software that address supply chain risk assessments, ongoing licensing and maintenance of the hardware and software, and the documentation. As FBC expects to continue incurring these costs annually to maintain compliance with AR 13, FBC submits it is reasonable to include these costs as an adjustment to the Base O&M for the purpose of setting the 2024 Base O&M.[231]

**(b) Adjustments to Account for Required 2024 Spending Are Needed to Accurately Set 2024 Base O&M**

192. As addressed in Section C2.3.3 of the Application, new O&M expenditures that begin in 2024 are not reflected in 2023 Actual Base O&M (which FBC used as the starting point for determining its 2024 Base O&M) and, therefore, need to be added to accurately set the 2024 Base O&M. These expenditures total $1.670 million and are divided into the three items addressed below.

- **New Facility Lease Costs:** As discussed in Part Five, Section C(b) of this Final Submission with respect to FEI, further to the Kelowna Space Project included in FBC's approved 2023 and 2024 capital expenditures, FBC's Shared Services Department began occupying new facilities in 2024. FBC's allocation of the incremental leasing (O&M) cost for the site is approximately $0.300 million.[232]

- **Long-Term Resource Planning:** As discussed in Part Five, Section C(b) of this Final Submission with respect to FEI, to address increasing frequency and complexity of resource planning, FortisBC is staffing three additional positions in 2024 (two of which were filled by September 6)[233] to conduct analysis and research, as well as manage internal and external stakeholder engagement. FBC's one-third allocation of these three positions, including supporting costs, is $0.170 million.[234]

- **Power Supply and Development of Supply Resource Options:** FBC added $1.200 million of total cost to strategically and proactively: (1) support the management of its power supply portfolio, which is becoming increasingly complex to manage and optimize given the increasingly tight power market; and (2) support the development of new supply side resources, which was not an area of focus when FBC was considering its resourcing for the Current MRP. As the need for increased electric supply in the region grows in response to the move to electrification, the

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231 Exhibit B-1-2, Updated Application, p. C-49.

232 Exhibit B-1-2, Updated Application, p. C-50.

233 Exhibit B-4, BCUC IR1 11.5.

234 Exhibit B-1-2, Updated Application, pp. C-50 to C-51.

pressures placed on FBC's power supply and resource development group will continue to grow.[235]

This funding enables four additional positions, as well as funding for external consultants,[236] to support the management and optimization of FBC's supply portfolio, enhanced modelling and data analytics to determine new electric supply resources and associated contract design, and pre-project electric generation planning. For example, the Energy Supply Data Analysis Manager and the Energy Supply Resource Specialist are focused on the medium to long-term power supply portfolio and will help ensure that FBC has the information and analysis required to make strategic and cost-effective decisions regarding the resources needed to meet FBC's load.[237] FBC has filled these positions.[238]

This work is critical to identify and further explore the best resource options, develop the new framework under which FBC operations will be coordinated with BC Hydro and, ultimately, ensure that FBC is responding to the changing environment driven by electrification to continue reliably serving customers as cost-effectively as possible.[239]

**(c) Incremental Funding is Needed to Respond to Requirements Over the Rate Framework Term**

193. FBC requires $5.556 million in incremental funding to meet new and incremental requirements during the Rate Framework term, particularly in the areas driven by the energy transition, increasing physical and cyber security risks, and Indigenous relations and reconciliation. FBC does not anticipate any challenges in filling the identified positions,[240] and for all of the reason identified in Part Five, Section C(c) above, FortisBC submits that it is reasonable and appropriate for the full net incremental funding for 2025 to be added to the 2024 Base O&M.

194. Each incremental funding request is discussed below.

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[235] Exhibit B-1-2, Updated Application, pp. C-51 to C-52; Exhibit B-4, BCUC IR1 14.1 and 14.3.

[236] The increased need for external consultants is required because there are areas of specialization that would be very difficult to obtain internally: Exhibit B-4, BCUC IR1 14.3.

[237] Exhibit B-13, BCUC IR2 46.2. See also Exhibit B-13, BCUC IR2 46.1 which describes the specific duties and responsibilities of each role.

[238] Exhibit B-4, BCUC IR1 11.5.

[239] Exhibit B-1-2, Updated Application, pp. C-51 to C-52; Exhibit B-4, BCUC IR1 14.1 and 14.3.

[240] Exhibit B-4, BCUC IR1 15.3.

***Government, Indigenous and Community Engagement***

195. FBC requires net incremental funding of $1.231 million for government, Indigenous and community engagement in response to substantial shifts within the policy environment and increasingly complex Indigenous engagement activities. The specific areas this incremental funding is needed to support are:[241]

- **Government Relations and Public Policy:** FBC's allocation of $0.066 million in net incremental funding (of a total of $0.300 million) will support the two new positions shared between FEI and FBC, as discussed in Part Five, Section C(c) above in relation to FEI.[242]

  For FBC, these positions will also support policy development and advocate on behalf of FBC's customers. For example, amendments to the *Clean Energy Act* in 2024 (e.g., regarding 100 percent BC generation) will require engagement with government regarding how this objective is defined. Further, FBC expects to engage with government on behalf of its customers to promote public policies related to the decarbonization of buildings that minimize impacts on peak demand in its service territory.[243] Policies promoting the use of electricity, including in home heating, light duty transportation and industrial processes, necessitate these additional resources to work with government regarding policy developments that impact the electric system.[244]

- **Community and Indigenous Relations:** FBC requires $0.890 million for community and Indigenous relations, consisting of $0.125 million for new community investment funding, $0.580 to support enhanced Indigenous engagement activities, and $0.310 to support Truth and Reconciliation efforts, each of which is described in Part Five, Section C(c) of this Final Submission in relation to FEI.[245]

  The incremental funding for enhanced Indigenous engagement activities will support three new Community & Indigenous/Initiatives Relations Manager positions (as well as non-labour costs). The need for enhanced engagement with Indigenous groups is, in particular, driven by changes in the public policy landscape regarding Indigenous rights and reconciliation over the last few years and will enable FBC to focus on strengthening its relationships with Indigenous peoples, communities and First Nations. As described in the Application, FBC must be able

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241 Exhibit B-1-2, Updated Application, Section C2.3.4.1 (pp. C-52 to C-55) and Section C.2.2.4.1 (pp. C-33 to C-39).

242 Exhibit B-1-2, Updated Application, p. C-53.

243 Exhibit B-1-2, Updated Application, p. C-53.

244 Exhibit B-1-2, Updated Application, p. C-53.

245 Exhibit B-1-2, Updated Application, pp. C-52 to C-55.

to respond to unique consultation and engagement challenges associated with its system, as well as resolving historical grievances to move new projects forward.[246]

- **Customer Engagement:** FBC requires net incremental funding of $0.150 million for an additional Communications Manager in response to growing daily communications needs. This additional position will manage media relations, customer and public communications related to issues management (i.e., wildfires, public safety, vegetation management, etc.), as well as increased communications support for community and Indigenous relations initiatives.[247]

***Environment and Sustainability***

196. FBC requires net incremental funding of $0.500 million for environment and sustainability, consisting of $0.200 million to respond to increasing regulatory requirements and $0.300 million for implementing new codes and regulations that are required or anticipated.[248] The increases in resources are both labour (two incremental positions) and non-labour.[249]

197. FBC is subject to the increasing environmental and archaeological regulatory requirements discussed in Part Five, Section C(c) of this Final Submission in relation to FEI. FBC is also subject to other increasing requirements. For example, FBC must ensure its works and undertakings related to its generation facilities comply with the strengthened fish and fish habitat protection provisions of the *Fisheries Act*. In addition, updates to the *Migratory Birds Regulation* under the *Migratory Birds Convention Act* have increased the protection afforded to pileated woodpecker nesting cavities, including requiring FBC to obtain permits to allow removal of poles with identified pileated woodpecker nesting cavities once the breeding season is over and only if the pole had no occupants during the breeding season. While many of these requirements came into force before or during the Current MRP, it has taken time for the requirements to be clarified through engagement with government representatives.[250]

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246 Exhibit B-1-2, Updated Application, pp. C-52 to C-55.

247 Exhibit B-1-2, Updated Application, p. C-55.

248 Exhibit B-1-2, Updated Application, pp. C-55 to C-57.

249 These positions include an Environmental Technician and an Environmental Program Lead, as well as additional work related to fisheries assessments, invasive species, terrestrial resources management and archaeology permits/compliance: Exhibit B-1-2, Updated Application, pp. C-56 to C-57; Exhibit B-4, BCUC IR1 15.4 and 15.5.

250 Exhibit B-1-2, Updated Application, pp. C-55 to C-57.

***Corporate Security***

198. FBC requires net incremental funding of $0.453 million to support increased investments in cybersecurity, physical security, business continuity and emergency management that are necessary to manage increasing and evolving risks. Net incremental funding required for FortisBC (FEI and FBC) is approximately $2.060 million, of which 22 percent is allocated to FBC.[251] The need for this funding is addressed in Part Five, Section C(c) of this Final Submission in relation to FEI's 2024 Base O&M and is the same for FBC.

***Technology***

199. FBC requires net incremental funding of $1.099 million, consisting of $0.650 million to fund the year-over-year increases expected in its software licensing fees and $0.449 million to support an increased cadence for security patching of hardware and software.[252] The need for this funding is addressed in Part Five, Section C(c) of this Final Submission in relation to FEI's 2024 Base O&M, and is the same for FBC.

***System Operations and Adaptation***

200. FBC requires net incremental funding of $2.273 million for operations, which are focused on meeting customer expectations by improving processes that promote efficiency and effectiveness of the work completed. FBC describes the specific areas this incremental funding is needed to support below.[253]

- **Engineering:** FBC requires net incremental funding of $0.535 million in Engineering, consisting of $0.345 million for the O&M portion of seven additional positions and $0.190 million in other related support costs.[254]
  - These positions[255] will support FBC's capital plan and asset maintenance strategy to ensure FBC's system has sufficient capacity and reliable energy supply. The majority of the positions' salaries are to support the proposed

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[251] Exhibit B-1-2, Updated Application, p. C-57 and Section C2.2.4.3 (pp. C-42 to C-43)

[252] Exhibit B-1-2, Updated Application, pp. C-57 to C-58 and Section C2.2.4.4 (pp. C-43 to C-45).

[253] Exhibit B-1-2, Updated Application, Section C2.3.4.5 (pp. C-58 to C-61).

[254] Exhibit B-1-2, Updated Application, pp. C-58 to C-59.

[255] The new positions include two engineers, three technologists, one data integrity coordinator and one asset assistant: Exhibit B-1-2, Updated Application, p. C-58; Exhibit B-4, BCUC IR1 15.6.

growth in FBC's capital over the upcoming period, with most of the salaries charged to capital activities and the remaining 10 to 15 percent allocated to O&M to support training, meeting regulatory requirements, and support for operations and standards.[256]

- The other support activities primarily comprise telecommunication fees for existing communication devices (e.g., smart meters and recloser controllers) and new fees for additional communications devices, as well as increases for license fees for the software used to meet MRS.[257] The increase in telecommunications fees for the Rate Framework term is based on the expected increase in the cost of new telecommunications contracts, which FBC is in the process of re-negotiating with vendors.[258] In the response to BCUC IR1 15.8, FBC provides a breakdown of MRS-driven cost increases.[259]

- **Generation and System Control:** FBC requires net incremental funding of $1.000 million, consisting of $0.330 million to fund compliance with codes and regulations and $0.670 to fund increases in maintenance activities and major unit inspections.

  - This incremental funding will allow FBC to undertake new required activities to maintain compliance with BC Dam Safety Regulation, including dam safety capacity assessments (which are required by recently completed dam safety reviews), dam monitoring, dam drainage and spillway gate testing.[260] This funding will also enable FBC to comply with WorkSafe BC regulations related to equipment identification and labelling, as well as to undertake upgraded annual crane inspection and certification activities.[261]

  - Increased maintenance costs are driven by an increase in dam and plant maintenance activities, and major unit inspections are required for units that have reached 20 years since their original upgrades under the Unit Life Extension (ULE) program.[262] The need for these activities in the upcoming three years is supported by dam safety reviews completed during the Current MRP term, and by FBC's ongoing review of the condition of its generation assets. FBC describes the activities it intends to undertake

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256 Exhibit B-4, BCUC IR1 15.7; Exhibit B-1-2, Updated Application, pp. C-58 to C-59.

257 Exhibit B-1-2, Updated Application, pp. C-58 to C-59.

258 Exhibit B-4, BCUC IR1 15.8.

259 Exhibit B-4, BCUC IR1 15.8.

260 FBC describes these new activities further in the response to BCUC IR1 15.11 (Exhibit B-4); see also Exhibit B-1-2, Updated Application, pp. C-58 to C-59.

261 Exhibit B-1-2, Updated Application, pp. C-58 to C-59.

262 Exhibit B-1-2, Updated Application, pp. C-59 to C-60.

during the Rate Framework term in further detail in the response to BCUC IR1 15.12.[263]

- **Vegetation Management:** FBC requires net incremental funding of $0.478 million for vegetation management, consisting of $0.320 million for trimming and clearing activities and $0.158 million for the removal of hazard trees.[264]

  - With a changing climate, FBC has experienced unpredictable growth in trees and ground vegetation around its distribution and transmission power lines. Increased tree contacts with power lines cause customer outages and increase the risk of possible subsequent fires. In response, FBC has recently changed its trimming standards, resulting in FBC increasing the horizontal and vertical clearance requirements to the powerlines.[265]

  - Climate change is driving an increase in hazard trees, whether dead or in decline, which pose a risk of fires and outages when they fall. As a result, FBC is removing increasing numbers of hazard trees, resulting in higher costs.[266]

- **Workforce Development:** FBC requires net incremental funding of $0.260 million to support the development of its workforce. This funding will provide two additional positions for recruitment and employee training, support employment contracts with Indigenous Nations, and provide support for the continued increases in retirements and staffing for projects, as well as the volume of recruitment and employee movements.[267]

  As FBC explained in the response to BCUC IR1 15.10, the environment in which FBC operates has changed dramatically over the last five years, resulting in increased workloads, while recruitment volumes due to retirements and resignations have increased since 2018 – leaving a critical need to fill these positions. While the activities described above have been performed in previous years, FBC's metrics and industry trends show a sustained increase in the volume of retirements and turnover that require additional incremental resources.[268]

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263 Exhibit B-4.

264 Exhibit B-1-2, Updated Application, pp. C-60 to C-61.

265 Exhibit B-1-2, Updated Application, pp. C-60 to C-61.

266 Exhibit B-1-2, Updated Application, p. C-61.

267 Exhibit B-1-2, Updated Application, p. C-61.

268 Exhibit B-4, BCUC IR1 15.10.

## E. FortisBC's Proposed Forecast O&M Categories Are Appropriate

201. FortisBC's proposal to continue to forecast certain O&M expenses on an annual basis, with the variances between forecast and actual amounts recorded in the Flow-through deferral account or other deferral accounts and recovered from/returned to customers through amortization of the deferral accounts, remains appropriate. Forecast amounts would continue to be approved by the BCUC during Annual Reviews.

202. In the MRP Decision, the BCUC determined that certain categories of O&M "are not conducive to being included in an index-based O&M formula because they are either tied to parts of the business that are changing in response to government policy or are otherwise outside the control of management."[269] This rationale applies to the forecast O&M expenses that FortisBC has proposed for the Rate Framework which, as in prior years, can vary significantly from year to year and are uncontrollable.[270] Therefore, FortisBC submits that five types of expenses warrant continued forecast/flow-through treatment, consistent with the Current MRP, as well as three new expense types, as set out below.[271]

| Type of O&M Expense | Applicable Company |
|---|---|
| Pension and OPEB Expenses | FEI and FBC |
| Insurance Premiums | FEI and FBC |
| BCUC Levies | FEI and FBC |
| Integrity Digs | FEI only |
| Clean Growth Initiatives | FEI and FBC |
| AMI Project Expenses **(New)** | FEI only |
| MRS Audit Costs (**New**) | FBC only |
| MRS Assessment Report Costs **(New)** | FBC only |

203. Additional expenses may also arise over the Rate Framework term that are not included in Base O&M. For example, FortisBC (either FEI or FBC) may propose new Clean Growth Initiatives in alignment with government policy. There may also be incremental O&M arising from approved

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269 MRP Decision, p. 119.

270 Exhibit B-7, BCOAPO IR1 5.6

271 Exhibit B-1-2, Updated Application, p. C-63.

CPCN or Major projects. These expenses would be forecast and subject to approval through the Annual Review process.[272]

204. In the sections below, FortisBC addresses the three new expense types warranting forecast/flow-through O&M treatment during the Rate Framework term.

**(b) Flow-Through Treatment of O&M Expenses Impacted by the AMI Project Recognizes Deployment Uncertainties**

205. For the reasons discussed in Part Five, Section C(a) above, FEI submits that the O&M costs impacted by the AMI project should be treated as forecast (flow-through) O&M.[273]

**(c) Forecasting MRS Audit Costs Addresses BCUC Commentary and Should be Approved**

206. FBC's proposal to forecast costs associated with its triennial audit by the administrator of the BC MRS Program – the Western Electricity Coordinating Council (WECC) – should be approved. These costs have previously been trued up to actuals through the use of deferral accounts which was inefficient as it required FBC to apply for a new deferral account to record these costs every three years.[274] In response to the BCUC commentary in the FBC Annual Review for 2024 Rates Decision,[275] FBC considered including the MRS audit costs in index-based O&M. FBC submits that forecasting the MRS audit costs in the year they are expected to be incurred is the preferrable alternative and is in the best interest of customers. If these costs were included in index-based O&M, the MRS audit costs would be included in O&M prior to when they would occur and would be subsequently escalated by the formula each year, whether or not they are required in any particular year. In short, the timing of when these triennial costs are incurred and when they are recovered from customers would not be well matched.[276] Therefore, FBC submits that forecasting MRS audit costs in the years they occur addresses BCUC commentary, appropriately reflects the recurring nature of MRS audit costs while avoiding the creation of a

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272 Exhibit B-1-2, Updated Application, p. C-63.

273 Exhibit B-1-2, Updated Application, pp. C-26 to C-27 and C-64.

274 Exhibit B-1-2, Updated Application, p. C-65.

275 Decision and Order G-340-23, p. 19.

276 Exhibit B-1-2, Updated Application, pp. C-64 to C-65.

new deferral account triennially, allows for the costs to be reviewed by the BCUC and interveners, and enables the costs to be matched with the expected timing of the audit, benefits that cannot be achieved by including these costs in the index-based O&M.[277]

**(d) MRS Assessment O&M Costs Properly Form Part of Forecast O&M**

207. FBC's proposal to treat incremental MRS Assessment Report costs as forecast (flow-through) O&M during the Rate Framework term will increase efficiency, and properly reflects the mandatory nature of these costs which are outside of FBC's control and should be approved.

208. MRS Assessment Reports occur at varying intervals and, as such, one or multiple reports may be issued during the Rate Framework term.[278] Costs resulting from the MRS Assessment Reports were treated as exogenous factors during both the 2014-2019 PBR Plan and the Current MRP terms. This approach is somewhat inefficient as it requires FBC to apply for exogenous factor treatment for each report, but ultimately treats the MRS Assessment Report costs as if they were approved to be forecast in O&M when new assessment reports are issued. Further, while the existing approach of treating MRS Assessment Report costs as exogenous factors means these costs will be subject to a materiality threshold, the incremental costs typically exceed the materiality threshold.[279] Moreover, FBC MRS Assessment Report costs are mandatory and outside of FBC's control as FBC is required by law to implement MRS approved by the BCUC. For example, FBC will be required to incur incremental costs when the new Planning Coordinator MRS come into effect in BC, but the amount and timing of these costs remains uncertain and beyond FBC's control.[280] These characteristics support flow-through treatment.

209. As such, FBC submits that MRS Assessment Report costs should continue to be recovered in rates but not be subject to a materiality threshold. Therefore, FBC submits that MRS Assessment Report costs properly warrant forecast (flow-through) treatment.[281]

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277 Exhibit B-1-2, Updated Application, p. C-65.

278 Exhibit B-1-2, Updated Application, p. C-66.

279 Exhibit B-1-2, Updated Application, pp. C-65 to C-66.

280 Exhibit B-22, BCUC Panel IR1 1.1.

281 Exhibit B-1-2, Updated Application, p. C-67.

## PART SIX: FORMULA, FORECAST AND FLOW-THROUGH CAPITAL PROPOSALS ARE REASONABLE AND REFLECT FORTISBC'S CAPITAL REQUIREMENTS

### A. Overview

210. This part addresses FortisBC's formula, forecast and flow-through capital for the Rate Framework term as set out in Section C3 of the Application. FortisBC submits that its forecast level of regular Sustainment and Other capital expenditures for FEI and regular Sustainment, Growth and Other capital expenditures for FBC, net of CIAC,[282] should be approved. As discussed below, FortisBC's forecast capital expenditures are the result of a robust planning process and are required for the continued safe and reliable service to FortisBC's customers. FortisBC also submits that its re-based starting unit cost Growth capital (UCGC) provides a reasonable starting point for setting FEI's Growth capital for the Rate Framework term. Finally, the scope of capital to be forecast each year in the Annual Reviews remains appropriate for the Rate Framework. As is the case in the Current MRP, FEI and FBC will seek approval of Major Projects[283] outside of the proposed Rate Framework.

211. In this Part, FEI addresses the following key points:

- FortisBC's capital forecasts are the result of a robust planning process that has evolved to respond to the challenges posed by the energy transition, climate change and difficulties associated with land acquisition.
- FEI's three-year forecasts of Sustainment and Other capital are required for the safety, reliability and integrity of FEI's system and to address operational needs and evolving cybersecurity threats.
- FBC's three-year forecasts of Growth, Sustainment and Other capital are required for the safety, reliability and integrity of FBC's electrical system in response to electrification.
- FEI's re-based starting UCGC provides a reasonable starting point for setting FEI's Growth capital for the Rate Framework term.

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[282] Exhibit B-4, BCUC IR1 17.1 and 17.2.

[283] Major Projects are those projects the cost of which exceeds the BCUC-approved CPCN threshold and are therefore approved through a separate CPCN or other application. (Exhibit B-1-2, Amended Application, pp. C-68 to C-69.

- FortisBC's areas of flow-through capital are appropriate given the nature of the expenditures.

- Consistent with the process under the Current MRP, FortisBC will continue to seek approval of Major Projects outside of the Rate Framework.

## B. FortisBC's Forecast is Based on a Robust and Adaptable Capital Planning Process

212. FortisBC's three-year capital forecasts are the result of a robust capital planning process that is designed to maintain a safe and reliable system, optimize resources and spending, as well as providing value to its customers.[284] FortisBC continues to use its asset investment planning (AIP) tool to prioritize and optimize its capital portfolio.[285] The AIP tool uses seven values to quantify the value of potential investments: (1) financial; (2) reliability; (3) environmental; (4) health & safety; (5) regulatory; (6) corporate reputation; and (7) customer service.[286] This value framework is foundational to the AIP tool and optimizes FortisBC's capital planning portfolio to achieve the greatest benefit.[287]

213. FortisBC's capital planning process has also evolved to address the current challenges in the operating environment, including the impact of the energy transition on growth and capacity projects, the influence of climate change on climate adaptation planning, and increasing challenges in securing land for project siting.

214. First, FEI has adjusted its capital planning process in response to the uncertainty over future gas demand levels and in consideration of the BCUC's findings and determinations in the Okanagan Capacity Upgrade CPCN Project Decision and Order G-361-23.[288] Specifically, FEI has reviewed the scope of capacity-driven projects to assess if they could be re-scoped into smaller capacity upgrades that could meet the underlying need for the near term (pre-2030).[289] FEI has explained in detail where these opportunities exist for its capacity-driven projects. For example,

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284 Exhibit B-1-2, Updated Application, p. C-68.

285 Exhibit B-1-2, Updated Application, p. C-68.

286 Exhibit B-1-2, Updated Application, p. C-69.

287 Exhibit B-1-2, Updated Application, p. C-69.

288 Decision and Order G-361-23. Online: https://www.ordersdecisions.bcuc.com/bcuc/decisions/en/522057/1/document.do.

289 Exhibit B-1-2, Updated Application, pp. C-70 to C-71.

where a system improvement is added along parts of the system without specific bottlenecks, the length and diameter of the pipe can be sized to meet the immediate or near-term system needs, maintaining only the minimum delivery pressures in that shorter timeframe. Stations can similarly be re-scoped to meet varying degrees of flow requirements.[290] FEI has provided a detailed breakdown of all the capacity-driven projects included in the forecast and where they have been scoped to meet near-term needs.[291] As part of its capital planning process, FEI also regularly confirms that the scope of projects remain appropriate and seeks to optimize the timing of projects in order to use available capital funds in the most effective manner.[292] This approach to capital planning is therefore a flexible approach that enables FEI to adapt and respond to changes in the current policy environment.[293]

215. FEI is also appropriately planning for the integration of hydrogen on its system. FEI is currently completing the British Columbia Gas System Blending Study and Technical Assessment project to better understand how hydrogen integration will affect FEI's legacy system. Until this study is done, FEI does not have the required information to incorporate the impacts of hydrogen integration at the project level. However, FEI utilizes modern materials for all new gas infrastructure installations, so the compatibility of new gas infrastructure with hydrogen is improved.[294] In addition, FEI's approach of re-scoping projects to meet the short-term needs allows for more frequent re-evaluation of system needs and planning for hydrogen blends as applicable, thus ensuring efficient and timely spending.[295]

216. On the other hand, for FBC, the energy transition is expected to increase demand. FBC is therefore assessing the potential impacts of increased demand across the service territory and planning for investments to support continued growth.[296]

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[290] See Exhibit B-4, BCUC IR1 18.1 for further examples of the types of projects that could be re-scoped.

[291] Exhibit B-4, BCUC IR1 18.6.

[292] Exhibit B-4, BCUC IR1 18.4.

[293] Exhibit B-4, BCUC IR1 18.5.

[294] Exhibit B-4, BCUC IR1 18.2; Exhibit B-13, BCUC IR2 47.1.

[295] Exhibit B-4, BCUC IR1 18.2.

[296] Exhibit B-1-2, Updated Application, p. C-71.

217. Second, FEI and FBC are both developing Climate Change Operational Adaptation (CCOA) Plans to study and evaluate the necessary investments to mitigate the increasing risk posed by natural hazards.[297] FortisBC's CCOA work aims to improve asset and operational resilience to climate change risks and maintain safe and reliable energy supply to customers. In 2023 and 2024, FortisBC is evaluating the risk to its assets due to climate-related events, including wildfires, flooding, sea-level rise, windstorms, snowstorms, extreme temperature, landslides, lightning, and freeze-thaw events. The results of this risk assessment and any additional investigations regarding the impacts of certain climate-related events will inform FortisBC's next steps with respect to specific assets.[298] While FortisBC has incorporated known projects within its three-year capital forecasts, if unexpected projects to address the risk of climate-related events arise, the Rate Framework is flexible enough to accommodate such projects, as has been demonstrated over the term of the Current MRP with the Playmor Substation Rebuild project.[299]

218. Third, to respond to the increasing difficulty in procuring land for projects, FBC will evaluate alternative property locations earlier in the planning process for new substations to support the timely acquisition of land.[300]

219. In summary, FortisBC submits that it has engaged in a robust planning process and has prudently evolved its approach to meet current challenges, thereby providing strong support for the reasonableness of its forecast level of capital over the term of the Rate Framework.

## C. FEI's Forecast of Sustainment and Other Capital is Reasonable and Necessary for Service to Customers

220. FEI submits that its three-year forecast of Sustainment and Other capital is reasonable and required for the continued safe and reliable service to FEI's customer. FEI has presented its forecast in detail in Sections C3.3.2 and C3.3.3 of the Application and provided additional

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297 Exhibit B-1-2, Updated Application, p. C-71; Exhibit B-4, BCUC IR1 2.1.

298 Exhibit B-1-2, Updated Application, p. B-12; Exhibit B-4, BCUC IR1 25.1.

299 Exhibit B-2, BCUC Panel Supplemental IR 1.

300 Exhibit B-1-2, Updated Application, p. C-71.

information substantiating its forecast in responses to IRs. FEI addresses its forecast of Sustainment and Other capital below, with a focus on those areas on which FEI received IRs.

### (a) FEI's Forecast of Sustainment Capital Ensures the Safety, Integrity and Reliability of its Assets

221. FEI has demonstrated that its forecast Sustainment capital is reasonable. FEI's Sustainment capital consists of replacements and upgrades to the distribution and transmission systems to ensure safety, integrity and reliability, as well as expenditures for meter exchange programs and for mains and service renewals and alterations. FEI is forecasting average Sustainment capital expenditures across the Rate Framework term to be lower relative to the Approved 2023 and 2024 amounts.[301] Table C3-6 in the Application, reproduced below, summarizes FEI's forecast Sustainment capital expenditures, along with the 2023 and 2024 Approved amounts for comparison.[302]

**Table C3-6: FEI Approved and Forecast Sustainment Capital Expenditures 2023-2027 ($000s)**

| | 2023 Approved | 2024 Approved | 2025 Forecast | 2026 Forecast | 2027 Forecast |
|---|---|---|---|---|---|
| Customer Measurement | 30,015 | 30,494 | 14,295 | 13,459 | 13,422 |
| Transmission System Relilability & Integrity | 47,937 | 49,573 | 60,065 | 75,133 | 66,469 |
| Distribution System Reliability | 15,341 | 17,709 | 21,245 | 17,254 | 9,237 |
| Distribution System Integrity | 36,043 | 32,852 | 29,993 | 25,887 | 36,356 |
| **Total Sustainment Capital (Gross)** | **129,336** | **130,628** | **125,599** | **131,733** | **125,484** |
| Sustainment CIAC | (4,342) | (4,342) | (4,436) | (8,443) | (4,615) |
| **Total Sustainment Capital (Net)** | **124,994** | **126,286** | **121,163** | **123,290** | **120,869** |

222. FEI has provided detailed information about each of the following Sustainment capital expenditure categories, as summarized below:

- **Customer Measurement:** This category includes expenditures related to meter exchanges and meter set upgrades.[303] FEI has forecast decreased spending in this

[301] Exhibit B-1-2, Updated Application, p. C-80.

[302] Exhibit B-1-2, Updated Application, p. C-81.

[303] See Exhibit B-1-2, Updated Application, Section C3.3.2.1 (pp. C-81 to C-82).

category due to FEI's AMI project which is replacing residential diaphragm style meters with new ultrasonic style meters.[304]

- **Transmission System Reliability & Integrity:** This category includes activities related to the ongoing safe and reliable operation of the transmission system.[305] The primary categories of forecast increased capital spending during the Rate Framework term are in the Pipeline Alterations and Pipeline Inspection areas, with a smaller increase in the Transmission System Telemetry Alterations.[306] The Transmission System Reliability & Integrity category includes 12 projects with a spend profile greater than $2 million from 2025 to 2027.[307]

- **Distribution System Reliability**: This category primarily includes expenditures related to new pressure control stations or improvements to existing pressure control stations due to condition, load change, obsolescence and regulatory compliance, as well as alterations or improvements to distribution telemetry installations and distribution sectioning valves.[308] The Distribution System Reliability category includes five projects with a spend profile greater than $2 million from 2025 to 2027.[309] FEI is forecasting overall average Distribution System Reliability spending for 2025 to 2027 to be lower than the 2023 and 2024 Approved amounts.[310]

- **Distribution System Integrity:** This category primarily includes expenditures related to main and service alterations/renewals, as well as replacements due to condition or at the request of third parties.[311] The Distribution System Integrity category includes two projects with a spend profile greater than $2 million from 2025 to 2027.[312] FEI is forecasting overall average Distribution System Integrity spending for 2025 to 2027 to be lower than the 2023 and 2024 Approved amounts.[313]

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[304] The AMI project capital is not included in FEI's Sustainment capital expenditure forecasts, but will be added to FEI's rate base in multiple phases as the project progresses, consistent with the treatment of FEI's other approved Major Project capital: Exhibit B-1-2, Updated Application, pp. C-81 to C-82.

[305] See Exhibit B-1-2, Updated Application, Section C3.3.2.2 (pp. C-82 to C-86).

[306] Exhibit B-1-2, Updated Application, pp. C-83 to C-84.

[307] FEI has identified and provided a description of these projects in Table C3-9 and pp. C-84 to C-86 of the Updated Application (Exhibit B-1-2).

[308] See Exhibit B-1-2, Updated Application, Section C3.3.2.3 (pp. C-87 to C-89).

[309] FEI has identified and provided a description of these projects in Table C3-11 and pp. C-88 to C-89 of the Updated Application (Exhibit B-1-2).

[310] Exhibit B-1-2, Updated Application, p. C-87.

[311] See Exhibit B-1-2, Updated Application, Section C3.3.2.4 (pp. C-89 to C-90).

[312] FEI has identified and provided a description of these projects in Table C3-13 and p. C-90 of the Updated Application (Exhibit B-1-2).

[313] Exhibit B-1-2, Updated Application, p. C-89.

- **Sustainment Contributions in Aid of Construction (CIAC):** This category is forecast based on the anticipated customer contributions for work for third party alterations and the historical level of contributions for Transmission crossing replacements and identified recoverable projects.[314] FortisBC notes that it is not seeking approval of its CIAC forecast, but is proposing to reforecast CIAC at each Annual Review based on the latest information.[315]

**(b) FEI's Forecast of Other Capital Reflects Reasonable and Necessary Costs to Meet Operational Needs and Evolving Cybersecurity Threats**

223. FEI has demonstrated that its forecast Other capital, which includes expenditures related to equipment, facilities, information systems and corporate security, is reasonable. FEI's Other capital is forecast to increase as the Equipment and Facilities categories are entering a large capital replacement cycle due to their age. FEI is also responding to the evolving cybersecurity risk environment which necessitates increased investment in corporate security.[316]

224. Table C3-17 in the Application, reproduced below, summarizes FEI's forecast Other capital expenditures required over the Rate Framework term, along with the 2023 and 2024 Approved amounts for comparison.[317]

**Table C3-17: FEI Approved and Forecast Other Capital Expenditures 2023-2027 ($000s)**

| | 2023 Approved | 2024 Approved | 2025 Forecast | 2026 Forecast | 2027 Forecast |
|---|---|---|---|---|---|
| Equipment | 12,270 | 12,240 | 14,989 | 16,123 | 18,421 |
| Facilities | 14,686 | 11,349 | 18,727 | 13,053 | 8,551 |
| Information Systems | 24,458 | 24,563 | 25,300 | 25,800 | 26,500 |
| Corporate Security | 3,100 | 3,100 | 8,887 | 7,720 | 7,741 |
| **Total Other Capital** | **54,514** | **51,252** | **67,904** | **62,696** | **61,213** |

225. FEI has provided detailed information about each of the Other capital expenditures categories, as summarized below:

- **Equipment:** This category includes the acquisition of vehicles and equipment, telecommunication infrastructure, specialized tools and equipment, and radio

[314] See Exhibit B-1-2, Updated Application, Section C3.3.2.5 (pp. C-90 to C-91).

[315] Exhibit B-4, BCUC IR1 17.1 and 17.2.

[316] Exhibit B-1-2, Updated Application, p. C-100.

[317] Exhibit B-1-2, Updated Application, p. C-91.

system upgrades.[318] With the exception of the Fleet Services area, FEI is forecasting overall average Equipment spending for 2025 to 2027 to be consistent with the 2023 and 2024 Approved amounts.[319] The forecast increase in the Fleet Services area is driven by a substantial capital replacement cycle which is required to maintain safe and reliable vehicles and equipment that is able to respond to customer calls and provide emergency response.[320]

- **Facilities:** This category includes the acquisition or leasing of land, non-plant buildings such as offices, field musters and warehouses, and office furniture and equipment.[321] FEI is forecasting overall average Facilities spending for 2025 to 2027 to be consistent with the 2023 and 2024 Approved amounts.[322] FEI has provided further information about key projects in this area through the Application and in response to IRs.[323]

- **Information Systems (IS):** This category focuses on sustaining, enhancing, replacing, and upgrading existing applications and infrastructure or, as needed, introducing new technology capabilities in order to improve safety, customer service, reliability and efficiency.[324] FEI is forecasting overall average IS spending for 2025 to 2027 to be consistent with 2023 Actual and 2024 Projected expenditures.[325] This includes reduced expenditures in the Business Technology Applications area to better reflect actual/projected spending levels during the Current MRP term, which were lower than 2023 and 2024 Approved levels.[326] In response to IRs, FEI explained how it reasonably assesses ongoing and future business needs, while mitigating technology obsolescence, such as by carefully choosing technologies, leveraging as many potential benefits of new technologies as possible, and ensuring strong project governance and controls during implementation.[327]

- **Corporate Security:** This is a new category that includes costs associated with cybersecurity, mobile incident command units, physical security and patch management, which were previously split between Sustainment capital and Other capital.[328] FEI is forecasting a large increase in Corporate Security capital

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318 See Exhibit B-1-2, Updated Application, Section C3.3.3.1 (pp. C-91 to C-92).

319 Exhibit B-1-2, Updated Application, Table C3-19 (p. C-92).

320 Exhibit B-1-2, Updated Application, p. C-92.

321 See Exhibit B-1-2, Updated Application, Section C3.3.3.2 (pp. C-93 to C-94).

322 Exhibit B-1-2, Updated Application, Table C3-21 (p. C-93).

323 Exhibit B-1-2, Updated Application, p. C-93 to C-94; Exhibit B-4, BCUC IR1 19.1 and 19.2.

324 See Exhibit B-1-2, Updated Application, Section C3.3.3.3 (pp. C-95 to C-97).

325 Exhibit B-1-2, Updated Application, Table C3-23 (p. C-95).

326 Exhibit B-1-2, Updated Application, p. C-97.

327 Exhibit B-4, BCUC IR1 20 series.

328 See Exhibit B-1-2, Updated Application, Section C3.3.3.4 (pp. C-97 to C-98).

expenditures during the Rate Framework term which are needed to respond to the ever changing cyber and physical security threat landscape.[329] As explained further below, FEI has provided detailed information to support the forecast increase in spending in this area includingwith respect to patch management which makes up the majority of expenditures for 2025 to 2027.

226. FEI addresses particular areas of focus raised by the BCUC and interveners through IRs about its forecast of Other capital below.

***Increased Patch Management Spending is Necessary to Support the Reliability, Resilience and Security of Utility Assets***

227. FEI is forecasting capital costs for its patch management program to total $5.589 million annually during the Rate Framework term, comprising $2.799 million in Labour and $2.790 million in Managed Services.[330] This includes the installation and testing of upgrades to operating systems, firmware, and business applications to extend the life and enhance the value provided by FEI's hardware and software assets (e.g., servers, desktops, mobile devices, firewalls, switches, virtualization hardware, virtual machines, appliances and storage infrastructure).[331] For example, a firewall may have its life extended by two or more years by applying patches and upgrades.[332]

228. These increased expenditures also improve the reliability, resilience and security of these assets and are necessary to ensure FEI is able to keep apace with more frequent code updates and operating system patches, which hardware and software companies are releasing in response to the increased sophistication of attacker techniques in recent years.[333] In particular, before implementing an update or patch, FEI completes a patch implementation plan, completes and documents implementation trials, and performs an impact analysis.[334] FEI expects that, for many systems, patching workload will quadruple.[335] FEI will also be increasing the scope of the patching program to all critical and non-critical applications to prevent attackers from exploiting

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329 Exhibit B-1-2, Updated Application, p. C-97.

330 Exhibit B-4, BCUC IR1 21.1.

331 Exhibit B-4, BCUC IR1 21.2; Exhibit B-13, BCUC IR2 48.2.

332 Exhibit B-13, BCUC IR2 48.2.

333 Exhibit B-1-2, Updated Application, p. C-98; Exhibit B-13, BCUC IR2 48.2.

334 Exhibit B-13, BCUC IR2 48.1.

335 Exhibit B-1-2, Updated Application, p. C-98.

known flaws in software or devices which could potentially lead to compromised system reliability, including data integrity, confidentiality, or availability.[336]

### *Mobile Incident Command Centres Needed to Improve FEI's Response to More Frequent and Severe Events*

229. FEI's post-incident reviews of actual and simulated events identified a need to be able to respond more quickly and effectively to increasingly frequent and severe emergencies and disaster events in areas where facilities and infrastructure do not exist, or where space to respond is an issue.[337] To address this need, FEI plans to purchase two mobile incident command units in 2025 and strategically position them in areas where they can be easily deployed to support emergency and disaster events.[338] These mobile command units operate as a central office and safe shelter,[339] equipped with a range of communications technology (e.g., satellite, cellular and Wi-Fi connections) and provide a central hub for communication between teams of emergency responders to manage on-site emergencies.[340] These mobile units will significantly improve upon FEI's current approach of establishing incident command posts in its own facilities, borrowed facilities, or company vehicles nearest to the incident.[341] Given the increasing severity and frequency of forest fires and other emergencies, the mobile units are a reasonable and necessary investment to improve FEI's capabilities to respond to such events.

## D. FBC's Forecast of Growth, Sustainment and Other Capital is Reasonable and Necessary for Service to Customers

230. FBC's forecast of Growth, Sustainment and Other capital for the proposed three-year Rate Framework term is reasonable and necessary for the continued safe and reliable service based on the Company's current knowledge of its system requirements and industry drivers. The

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336 Exhibit B-1-2, Updated Application, p. C-98.

337 Exhibit B-1-2, Updated Application, p. C-98; Exhibit B-12, RCIA IR1 34.1.

338 Exhibit B-4, BCUC IR1 21.1; Exhibit B-1-2, Updated Application, p. C-98.

339 These shelters include restrooms, technology, communications, food and hydration, and enable local planning, as well as providing a muster point near incident sites to support effective response and recovery: Exhibit B-12, RCIA IR1 34.1.

340 Exhibit B-1-2, Updated Application, p. C-98.

341 Exhibit B-12, RCIA IR1 34.1. See Exhibit B-19, RCIA IR2 52.1 for a list of these incidents and how mobile incident command units would have improved FEI's response.

provincial focus on electrification necessitates investments across the entire FBC system to accommodate load growth and support current and increasing levels of demand on its existing infrastructure.[342] In addition, increased investments are required to respond to an evolving corporate security risk environment, to update aging assets to meet codes and standards, to address the condition and age of infrastructure, and to improve reliability. These factors are driving an increase in specific areas of FBC's Growth, Sustainment and Other capital expenditures,[343] which are detailed in Section C3.4 of the Application and have been further addressed in response to IRs, substantiating its forecast. FBC addresses its forecast of Growth, Sustainment and Other capital for 2025 to 2027 below.

### (a) FBC's Forecast of Growth Capital is Required to Respond to Load Growth and Ensure System Reliability

231. The forecast increase in Growth capital, which is primarily driven by the forecast number of Transmission Growth capital projects, is reasonable and required to accommodate load growth driven by electrification, as well as to ensure reliable service for areas served by FBC.

232. Table C3-29 in the Application, reproduced below, summarizes FBC's forecast Growth capital expenditures required over the 2025-2027 Rate Framework term, along with the 2023 and 2024 Approved amounts for comparison.[344]

**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** |

[342] Exhibit B-1-2, Updated Application, p. C-136.

[343] Including, in particular: (1) Transmission Growth capital; (2) Generation and Stations Sustainment; and (3) Vehicles and Equipment (Other capital).

[344] Exhibit B-1-2, Updated Application, p. C-105.

233. FBC has provided detailed information about each of the Growth capital expenditures categories, as summarized below:

- **Transmission Growth Capital:** This category includes nine discrete projects that are planned to be undertaken from 2025 to 2027.[345] Each proposed project aligns with FBC's system peak demand forecast during the Rate Framework and FBC's 2021 LTERP.[346] FBC has provided detailed information to support the forecast increase in spending in this area which, as discussed further below, is largely driven by increased demand in the City of Kelowna and to address the remaining portions of FBC's transmission interconnected system that do not achieve N-1 planning criteria.

- **Distribution Growth Capital:** This category includes expenditures for service upgrades, voltage regulation, ties to accommodate load splitting, single to three phase upgrades, and conductor upgrades that are necessary due to load growth as divided between two ongoing programs: (1) Small Growth (i.e., planned projects less than $0.5 million); and (2) Unplanned Growth (i.e. unforeseen projects typically less than $0.2 million).[347] Forecast expenditures across the proposed Rate Framework term are consistent with 2023 and 2024 Approved amounts, and none of the planned projects under these programs are forecast to exceed $1 million.[348]

- **New Connects Growth Capital:** This category includes the installation of new electric services on FBC's distribution system (both overhead and underground distribution facilities), and any costs associated with upgrading FBC facilities to provide service for an extension or drop service that are not recovered from customers under the terms of FBC's tariff. Forecast expenditures for New Connects are based on historical expenditures adjusted for anomalous years and inflation, which is consistent with the approach used to forecast these expenditures for the Current MRP. Like Distribution Growth capital, none of the planned projects are forecast to exceed $1 million.[349]

234. FBC addresses below areas of focus in the BCUC and intervener IRs.

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345 Exhibit B-1-2, Updated Application, Table C3-30 (p. C-106).

346 Exhibit B-4, BCUC IR1 23.2.

347 Exhibit B-1-2, Updated Application, Table C3-31 (p. C-109).

348 Exhibit B-1-2, Updated Application, p. C-109.

349 Exhibit B-1-2, Updated Application, p. C-109.

***Load Growth in the City of Kelowna and Other Parts of the Okanagan Are the Primary Driver of FBC's Transmission Growth Capital***

235. FBC plans to undertake five Growth capital projects in the Kelowna area[350] and two other projects in the Okanagan area[351] over the proposed Rate Framework term.[352] FBC submits that all of these projects are needed to meet its transmission system capacity requirements, as informed by FBC's obligation to serve and FBC's planning criteria.[353] In particular, FBC is forecasting that the most growth will take place in the North and South Okanagan areas of its service territory driven by large increases in residential load and densification of residential customers in the City of Kelowna, which is one of the fastest growing cities in Canada.[354] Load growth in the City of Kelowna, and specifically the downtown, is driven by several factors, including: (1) significant population growth, contributing to an increased demand for housing, services, and infrastructure; (2) new provincial legislation enabling residential densification that is affecting the City of Kelowna's zoning and land use planning and will increase electrical demand beyond the City's current unit forecasts; (3) electrification of heating loads as contemplated by policies such as the BC Energy Step Code and in the future, the Zero Carbon Step Code; (4) the rapid adoption of electric vehicles (EVs) and EV ready charging requirements in new buildings that place additional pressure on the electrical grid; and (5) the redevelopment of existing structures and densification in downtown Kelowna that is increasing economic activity and demand for electricity.[355] FBC expects summer and winter peaks for the City of Kelowna and surrounding area alone to increase by approximately 8 percent by 2027, as compared to the projected summer and winter 2024 peaks.[356] The forecast increase in FBC's Growth capital

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350 These are the Glenmore Low Voltage Bus Capacity and Equipment Upgrades, Saucier Second Distribution Transformer Addition, DG Bell Second Distribution Transformer Addition, Reconductor 51L & 60L, and Glenmore Station Capacity Upgrade projects.

351 These are the Duck Lake Second Distribution Transformer Addition and Christina Lake Station Upgrade projects.

352 See Exhibit B-1-2, Updated Application, pp. C-106 to C-109.

353 FBC's planning criteria is informed by CSA standards and good utility practice: Exhibit B-13, BCUC IR2 49.1.

354 Exhibit B-1-2, Updated Application, p. C-106; Exhibit B-9, CEC IR1 12.3. See also Exhibit B-9, CEC IR1 12.4 which provides the forecast summer and winter peaks for the North and South Okanagan areas over the proposed Rate Framework term.

355 Exhibit B-4, BCUC IR1 23.5.

356 See Exhibit B-4, BCUC IR1 23.4.

expenditures is therefore needed to ensure adequate supply during periods of peak demand and adverse weather conditions.

***Growth Capital Expenditures Address N-1 Contingencies and Ensure Reliable Service for Customers in the Penticton, Oliver and Princeton Areas***

236. There remain parts of FBC's transmission interconnected system serving the Penticton, Oliver and Princeton areas that do not achieve N-1 planning criteria.[357] The Reconductor 52L & 53L and Princeton 138 kV Capacitor Bank Addition projects address these N-1 contingencies and are required to ensure reliable supply is delivered to these areas. FBC undertook a comprehensive analyses to determine the forecast capital expenditures for these two projects, including evaluating multiple options with high level cost estimates before progressing to an AACE Class 3 level of definition.[358] Currently, an outage on either the 52L or 53L transmission lines serving Penticton and Oliver would result in the flow on the remaining line violating its thermal rating.[359] Similarly, an outage on either the 40L transmission line or the Bentley Transformer T1 (BEN T1) would cause voltages well below acceptable limits in the Princeton area.[360] While FBC has considered using pre-contingency operational procedures to defer or avoid these projects altogether, in both cases these procedures are insufficient to achieve N-1 planning criteria year round. For example, despite FBC historically being able to transfer Princeton load along the 43L transmission line to BC Hydro's system, this transfer is no longer available during peak winter and summer times due to increased load from customers on BC Hydro's system.[361] FBC therefore submits that these forecast Growth capital expenditures are reasonable and should be approved.

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357 Exhibit B-4, BCUC IR1 23.7; Exhibit B-13, BCUC IR2 49.3.1.

358 FBC is still in the process of developing an AACE Class 3 level estimate for the Princeton 138 kV Capacitor Bank Addition Project: Exhibit B-4, BCUC IR1 23.9.

359 Exhibit B-1-2, Updated Application, p. C-106; Exhibit B-4, BCUC IR1 23.7.

360 Exhibit B-1-2, Updated Application, p. C-108; Exhibit B-4, BCUC IR1 23.7.

361 Exhibit B-4, BCUC IR1 23.8.

***Reconductoring of 51L and 60L Is Required for Reliable Supply***

237. The Reconductor 51L & 60L project is required to provide a reliable transmission supply to Kelowna and its surrounding area. This project is primarily driven by the need to serve load growth in Kelowna and the surrounding area, but also to provide adequate capacity in the event of an outage to one of the F.A. Lee (LEE) terminal substation transformers (LEE T2, LEE T3 or LEE T4), followed by an outage to another LEE transformer. In this N-1-1 event, the flow on the remaining LEE transformer exceeds the emergency rating. Re-configuring the Kelowna loop to reduce the post contingency transformer flow results in exceeding the emergency rating of the 138 kV transmission lines 51L and 60L based on forecast load levels during the Rate Framework term. This project will therefore reconductor 51L and 60L to a higher ampacity conductor to allow for future load growth in the Kelowna area and provide adequate capacity during this N-1-1 event.[362]

238. As clarified in this proceeding, due to the Local Network exclusion, the Kelowna area (which is a local network) is not currently subject to MRS. Instead, the Kelowna area is governed by FBC's Transmission System Planning Criteria,[363] which FBC uses to identify whether capital investments for local networks are needed.[364] Consistent with industry practice, FBC only provides N-1-1 redundancy to local networks on a case-by-case basis based on an area's unique reliability risks, size (impact of an outage) and/or growth rate.[365] Planning to N-1-1 redundancy was deemed to be appropriate for Kelowna by the BCUC in Decision and Order G-52-05 (p. 59):[366]

> With respect to the appropriate reliability levels for the City of Kelowna, the Commission Panel notes that the criteria of N-1 is a minimum standard set by the WECC for bulk transmission systems and adopted by most utilities. The Commission Panel acknowledges that there are situations (particularly in large urban centers) where the consequence of a lower probability occurrence of an N-

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362 Exhibit B-1-2, Updated Application, C-108; Exhibit B-4, BCUC IR1 23.10.

363 FBC confirmed that it has not made updates to its planning criteria for the proposed term of the Rate Framework: Exhibit B-13, BCUC IR2 49.4.

364 Exhibit B-13, BCUC IR2 49.3.

365 Exhibit B-13, BCUC IR2 49.3.1.

366 Exhibit B-13, BCUC IR2 49.3.1. See Decision and Order G-52-05, 2005 Revenue Requirements, 2005-2024 System Development Plan and 2005 Resource Plan. Online: https://www.ordersdecisions.bcuc.com/bcuc/decisions/en/111663/1/document.do.

> 1-1 or N-2 event requires the N-1 standards to be exceeded. Each case is a judgment call and must be evaluated on its own merits. However it is common practice to have N-2 contingency levels for certain load centers in large urban centers (e.g. Vancouver and Victoria). **The Commission Panel accepts that an N-1-1 contingency level for Kelowna is appropriate at this time.** [Emphasis in original.]

Therefore, although the Reconductor 51L & 60L project is primarily required to serve load growth, FBC submits that the objective to enable the system to withstand multiple contingencies in Kelowna is also reasonable and appropriate.[367]

### (b) FBC's Forecast of Sustainment Capital is Required to Accommodate Load Growth and Address Aging Assets

239. The forecast increase in FBC's Sustainment capital, which is primarily driven by improvements to generation and station equipment, is reasonable and required to meet forecast load and for the safety, reliability, and integrity of the system. In particular, these expenditures are needed to accommodate load growth driven by electrification, while upgrading aging assets to meet current codes and standards, address the condition and age of infrastructure and improve reliability.[368]

240. Table C3-33 in the Application, reproduced below, summarizes FBC's forecast Sustainment capital expenditures required over the 2025-2027 Rate Framework term, along with the 2023 and 2024 Approved amounts for comparison.[369]

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[367] Exhibit B-13, BCUC IR2 49.3.1.

[368] Exhibit B-1-2, Updated Application, p. C-136; Exhibit B-12, RCIA IR1 15.1.

[369] Exhibit B-1-2, Updated Application, p. C-110.

**Table C3-33: FBC Approved and Forecast Sustainment Capital Expenditures 2023-2027 ($000s)**

| | 2023 Approved | 2024 Approved | 2025 Forecast | 2026 Forecast | 2027 Forecast |
|---|---|---|---|---|---|
| Generation | 7,623 | 7,225 | 12,823 | 13,298 | 15,274 |
| Transmission Sustainment | 9,159 | 12,800 | 13,604 | 9,149 | 8,991 |
| Stations Sustainment | 6,841 | 8,209 | 20,486 | 23,627 | 24,783 |
| Distribution Sustainment | 17,480 | 18,219 | 22,446 | 19,014 | 18,291 |
| Telecommunications | 3,606 | 5,199 | 6,304 | 7,028 | 3,971 |
| **Total Sustainment (Gross)** | **44,710** | **51,652** | **75,664** | **72,116** | **71,310** |
| Sustainment CIAC | (1,410) | (614) | (765) | (791) | (816) |
| **Total Sustainment (Net)** | **43,300** | **51,038** | **74,899** | **71,326** | **70,494** |

241. FBC has provided detailed information about each of the following Sustainment capital expenditures categories in the Application and in response to several IRs, as summarized below:

- **Generation Sustainment Capital:** This category includes expenditures that ensure FBC's generation facilities (consisting of 15 hydroelectric generating units) continue to meet industry standards and guidelines, comply with regulations such as the *Dam Safety Regulation* and WorkSafe BC, and operate safely.[370] FBC has identified critical path items that need to be addressed related to condition, structural capacity, operational requirements and safety that primarily fall within the Hydraulic Dam Structures[371] and Generating Equipment[372] areas. In particular, FBC must undertake necessary upgrades to equipment to remediate the condition of aging infrastructure, address obsolescence, and ensure dam safety compliance identified in Dam Safety Reviews.[373] In the Application, FBC has provided a description of the 10 projects with expenditures that exceed $1 million and explains why each project is needed during the Rate Framework term.[374]

- **Transmission Sustainment Capital:** Expenditures in this category were developed based on condition assessments and are required to proactively manage the condition and integrity of FBC's existing transmission line facilities, manage the safety risk to employees and the public, and maintain an acceptable level of service for customers.[375] This includes the assessment of the condition of transmission lines (which take place on an eight-year cycle), associated

[370] Exhibit B-1-2, Updated Application, Table C3-34 (p. C-111).

[371] This category includes capital projects that are related to water flow control equipment, including concrete structures, gates and stop logs, superstructures, lifting equipment (hoists and gantries), and dam safety.

[372] This category includes projects that are related to turbines, generators, governor systems, excitation systems, unit control systems, lubrication systems, cooling water systems and generator switchgear.

[373] Exhibit B-1-2, Updated Application, p. C-111.

[374] Exhibit B-1-2, Updated Application, pp. C-112 to C-115.

[375] Exhibit B-1-2, Updated Application, Table C3-35 (p. C-116).

rehabilitation and urgent repairs, as well as expenditures related to the acquisition of rights of way and easements in trespass on private property.[376] FBC has forecast expenditures for two projects with a spend profile greater than $1 million from 2025 to 2027.[377]

- **Distribution Sustainment Capital:** This category includes expenditures to proactively manage the condition and integrity of FBC's distribution line facilities, manage the risk to employees and public safety, and ensure an acceptable level of service is maintained for customers.[378] Forecast expenditures across the proposed Rate Framework term are generally comparable to 2023 and 2024 Approved amounts, with the largest increases occurring in the Distribution Line Rebuilds and Other Distribution Sustainment areas.[379] FBC has explained the underlying reason for these increases, namely, the expanded scope of the Distribution Line Rebuilds area and the replacement of the main 350MCM feeder and 1/0 aluminium cables manufactured pre-1990.[380] Finally, FBC expects to complete the PCB Environmental Compliance and Porcelain Cutouts Replacement programs in 2025, which were primarily completed during the Current MRP term.[381]

- **Telecommunications:** This category includes ongoing investments in integral components of FBC's protection relaying system, remedial action schemes, substation operations and control, as well as field dispatch systems. These investments address aging systems and ensure continued compliance with standards and regulations, including MRS.[382] FBC is forecasting increases in Telecommunications capital in 2025 and 2026, with spending forecast to decrease in 2027. The increases are driven by Systems Upgrades and Replacements, which includes three projects with forecast spending in excess of $1 million during the Rate Framework term, as well as in the Station Smart Device and Recloser Upgrades area. FBC has demonstrated the need for these capital expenditures, including detailed information about those projects with higher forecast expenditures. [383]

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376 Exhibit B-1-2, Updated Application, pp. C-116 to C-117.

377 The 27 Line Rehabilitation and 32 Line Rehabilitation projects: see Exhibit B-1-2, Updated Application, p. C-116.

378 Exhibit B-1-2, Updated Application, Table C3-38 (p. C-122).

379 Exhibit B-1-2, Updated Application, p. C-122.

380 As explained in the response to CEC IR1 13.1 (Exhibit B-9), the overall number of planned activities in the Distribution Line Rebuilds area is lower in 2027, reflecting FBC's prioritization of other capital expenditures within Sustainment capital and despite the area's expanded scope; see also Exhibit B-1-2, Updated Application, pp. C-123 and C-125.

381 Exhibit B-1-2, Updated Application, pp. C-122 to C-123; Exhibit B-9, CEC IR1 13.1.

382 Exhibit B-1-2, Updated Application, Table C3-39 (p. C-126).

383 Exhibit B-1-2, Updated Application, pp. C-126 to C-128.

- **Sustainment CIAC:** This category is forecast based on the anticipated forced upgrades and historical levels of receivables for new connects and identified recoverable projects.[384] FBC is forecasting stable levels of contributions across the proposed Rate Framework term.[385] FortisBC notes that it is not seeking approval of its forecast CIAC, but is proposing to reforecast CIAC at each Annual Review based on the latest information.[386]

- **Stations Sustainment Capital:** This category includes expenditures related to FBC's substation assets that are driven by a combination of time-based and condition-based scheduling. FBC schedules maintenance tasks using its Computerized Maintenance Management System (CMMS), which tracks basic equipment data and condition information. FBC is forecasting increased spending in the Stations Sustainment category over the proposed Rate Framework term compared to 2023 and 2024 Approved amounts.[387] This increased spending is needed to address the condition of transformers and other equipment, and is primarily driven by larger discrete projects.[388] In particular:

  - The forecast increase in expenditures in Station Sustainment Programs is primarily the result of FBC implementing certain new programs.[389] These programs will support FBC's new Station Condition Assessment program which was developed in response to changing market conditions that are resulting in longer delivery and project development timelines.[390] The resulting approach to station condition assessments will be "all-inclusive", assessing each FBC-owned station on a six-year cycle, while providing valuable information to refine FBC's capital spending. In particular, the program deliverables will be used to allocate resources, develop rehabilitation strategies, mitigate risk, and, importantly, to prioritize investments according to cost, criticality, reliability, safety and risk.[391]

  - The forecast increase in Station/Upgrade Replacement Projects involves the replacement of key substation equipment through a number of discrete projects with forecast expenditures over $1 million (e.g., the Grand Forks T1 Replacement and Equipment Upgrades project). These projects are driven by the results of an asset health assessment which calculated the effective age of assessed assets to determine their

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384 See Exhibit B-1-2, Updated Application, Section C3.3.2.5 (pp. C-90 to C-91).

385 Exhibit B-1-2, Updated Application, Table C3-41 (p. C-129).

386 Exhibit B-4, BCUC IR1 17.1 and 17.2.

387 Exhibit B-1-2, Updated Application, Table C3-36 (p. C-117).

388 Exhibit B-1-2, Updated Application, pp. C-117 to C-118.

389 Exhibit B-4, BCUC IR1 24.7 and 24.8.

390 Exhibit B-1-2, Updated Application, p. C-119; Exhibit B-4, BCUC IR1 24.6.

391 This includes all electrical equipment/apparatus in addition to foundations, above-ground structures, and buildings in the substation: Exhibit B-4, BCUC IR1 24.6.

> respective asset failure probability and associated risk cost.[392] FBC used these condition assessments to inform its investment decisions during the capital planning process.[393]

242. The Stations Sustainment Capital category also includes a new Spare Parts expenditure area.[394] FBC's purchase of spare equipment in the new Spare Parts expenditure area is necessary for FBC to comply with MRS Transmission System Planning Performance Requirements (TPL-001-4), and is also a reasonable response to the long lead times to procure high voltage equipment needed to deliver safe and reliable service to customers.[395]

243. TPL-001-4, requirement 2.1.5, requires FBC to undertake a study of where its spare equipment strategy could result in the unavailability of major transmission equipment that has a lead time of one year or more.[396] If unacceptable system responses occur due to the possible unavailability of the long lead time equipment, TPL-001-4 requirement 2.7 states that corrective actions must be undertaken to prevent or mitigate the unacceptable impact to the electrical system.[397]

244. To satisfy TPL-001-4 requirements, FBC completes a Power Flow and Transient Stability Analysis Report annually.[398] While previous studies did not indicate the needs for spares, supply chain issues have increased manufacturers' delivery times.[399] For example, the current delivery time estimates from power transformer manufacturers are approximately three years.[400] Accordingly, FBC's latest review of the impact of the unavailability of high voltage equipment[401]

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392 Exhibit B-4, BCUC IR1 24.10 and 24.12.

393 Exhibit B-4, BCUC IR1 24.12.

394 Exhibit B-1-2, Updated Application, pp. C-118 to C-119.

395 Exhibit B-1-2, Updated Application, p. C-118.

396 TPL-001-4 became effective in BC on July 1, 2020: Exhibit B-1-2, Updated Application, p. C-118; Exhibit B-4, BCUC IR1 23.10.

397 Exhibit B-10, ICG IR1 11.1.

398 Exhibit B-4, BCUC IR1 24.2.

399 Exhibit B-1-2, Updated Application, pp. C-118 to C-119.

400 Exhibit B-4, BCUC IR1 24.4.

401 As part of this review, FBC considers delivery times, availability of manufacturer support, technology obsolescence, and alternative equipment compatibility: Exhibit B-4, BCUC IR1 24.5.

indicates that the following five units of spare equipment are required to maintain TPL-001-4 compliance:[402]

- 500/230 kV, 250 MVA transformer;
- 230/161/138/63 kV, 200 MVA transformer;
- 245 kV, 2000 A circuit breaker;
- 145 kV, 30 MVAR capacitor bank; and
- 145 kV, 2000 A Point-On-Wave (POW) circuit breaker.

245. FBC has described the potential impacts on system performance if it did not have the above equipment on hand, including rotating power outages in the Okanagan (e.g., Kelowna and Oliver).[403] FBC analyzed possible corrective actions and mitigating measures, and purchasing of spare equipment is the most reasonable solution to be compliant with TPL-001-4. FBC does not have internal spares available,[404] and has researched suppliers of used and rebuilt electrical transmission equipment for acceptable spare equipment but has not located equipment that meets FBC's specifications.[405] FBC has also been unable to source emergency spare equipment from other utilities and cannot rely on a shared spare inventory being available when needed.[406] In short, the most reasonable corrective action to comply with TPL-001-4 is to purchase spare equipment during the Rate Framework term as planned.[407]

### (c) FBC's Forecast of Other Capital Reflects Reasonable and Necessary Costs to Meet Operational Needs and Evolving Cybersecurity Threats

246. FBC has demonstrated that its forecast Other capital, which includes expenditures related to equipment, facilities, information systems and corporate security, is reasonable. FBC's Other capital is forecast to increase as the Equipment and Facilities categories are entering a large

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402 Exhibit B-1-2, Updated Application, p. C-119; Exhibit B-12, RCIA IR1 17.1.

403 Exhibit B-4, BCUC IR1 24.3.

404 Exhibit B-1-2, Updated Application, p. C-119.

405 Exhibit B-10, ICG IR1 11.2.

406 Exhibit B-10, ICG IR1 11.3 describes FBC's efforts to coordinate with other utilities.

407 Per TPL-001-4 2.7: Exhibit B-10, ICG IR1 11.1.

capital replacement cycle due to their age. FBC is also responding to the evolving cybersecurity risk environment which necessitates increased investment in corporate security.[408]

247. Table C3-43 in the Application, reproduced below, summarizes FBC's forecast Other capital expenditures required over the Rate Framework term, along with the 2023 and 2024 Approved amounts for comparison.[409]

**Table C3-43: FBC Actual and Projected Other Capital Actual Expenditures 2023-2027 ($000s)**

| | 2023 Approved | 2024 Approved | 2025 Forecast | 2026 Forecast | 2027 Forecast |
|---|---|---|---|---|---|
| Equipment | 4,099 | 3,717 | 6,307 | 6,194 | 5,842 |
| Facilities | 4,305 | 4,096 | 6,945 | 6,792 | 4,763 |
| Information Systems | 8,246 | 8,372 | 9,150 | 9,400 | 9,550 |
| Corporate Security | 1,008 | 1,028 | 2,668 | 2,536 | 2,544 |
| **Total Other Capital** | **17,658** | **17,213** | **25,070** | **24,922** | **22,699** |

248. FBC has provided detailed information about each of the following Other capital expenditures categories, as summarized below:

- **Equipment:** This category includes the acquisition of vehicles and equipment, telecommunication infrastructure, specialized tools and equipment, and radio system upgrades.[410] FBC is forecasting spending in the Tools and Equipment area for 2025 to 2027 that is consistent with the 2023 and 2024 Approved amounts, but increased spending in the Vehicles and Equipment area.[411] Increased spending in the Vehicles and Equipment area is driven by a substantial capital replacement cycle which is required to maintain safe and reliable vehicles and equipment that are able to respond to customer calls and provide emergency response.[412] These replacements encompass light-duty, medium-duty and heavy-duty trucks and vans, trailers, and other equipment.[413]

- **Facilities:** This category includes the acquisition or leasing of land, non-plant buildings such as offices, field musters and warehouses, and office furniture and

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408 Exhibit B-1-2, Updated Application, p. C-137.

409 Exhibit B-1-2, Updated Application, p. C-91.

410 See Exhibit B-1-2, Updated Application, Section C3.4.3.1 (pp. C-130 to C-131).

411 Exhibit B-1-2, Updated Application, Table C3-45 (p. C-130).

412 Exhibit B-1-2, Updated Application, p. C-131.

413 Exhibit B-12, RCIA IR1 15.1.

equipment.[414] FBC is forecasting an increase in spending in 2025 and 2026, with spending forecast to decrease closer to historical levels in 2027.[415] FBC has provided further information about key projects in this area in the Application, including the Grand Forks Field Office Storage Addition and Yard Reconfiguration, Trail Esplanade Interior Office Space and Princeton Field Office projects, as well capital renewal of existing facilities due their age.[416]

- **Information Systems:** This category focuses on sustaining, enhancing, replacing, and upgrading existing applications and infrastructure or, as needed, introducing new technology capabilities in order to improve safety, customer service, reliability and efficiency.[417] FBC is forecasting overall average IS spending for 2025 to 2027 to be consistent with 2023 Actual and 2024 Projected expenditures.[418] Like FEI, this includes reduced expenditures in the Business Technology Applications area to better reflect actual/projected spending levels during the Current MRP term which were lower than 2023 and 2024 Approved levels.[419]

- **Corporate Security:** This is a new category that includes costs associated with cybersecurity, physical security and patch management, which were previously split between Sustainment capital and Other capital.[420] Like FEI, FBC is forecasting an increase in Corporate Security capital expenditures during the Rate Framework term which is needed to respond to the ever changing cyber and physical security threat landscape.[421] The majority of forecast expenditures are for the patch management program, totalling $1.849 million, made up of $1.099 million in Labour and $0.750 million in Managed Services, each year of the Rate Framework term.[422] Please refer to Part Six, Section C(b) of this Final Submission which discusses the drivers behind the increase in capital costs for patch management, which are equally applicable to FBC.

## E. Updated Unit Cost Growth Capital (UCGC) Is Reasonable

249. Further to FortisBC's submission on the Growth Factor in Part Three of this Final Submission, FEI submits that the most appropriate method to establish FEI's Growth capital spending envelope is by continuing to use a formula approach based on unit costs and a forecast

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414 See Exhibit B-1-2, Updated Application, Section C3.4.3.2 (pp. C-131 to C-132).

415 Exhibit B-1-2, Updated Application, Table C3-47 (p. C-131).

416 Exhibit B-1-2, Updated Application, p. C-132.

417 See Exhibit B-1-2, Updated Application, Section C3.4.3.3 (pp. C-132 to C-134).

418 Exhibit B-1-2, Updated Application, Table C3-23 (p. C-95).

419 Exhibit B-1-2, Updated Application, p. C-133.

420 See Exhibit B-1-2, Updated Application, Section C3.4.3.4 (pp. C-135 to C-136).

421 Exhibit B-1-2, Updated Application, Table C3-51 (p. C-135).

422 Exhibit B-4, BCUC IR1 22.1.

of gross customer additions with a true-up for variances. In this section, FEI addresses its proposal to rebase the starting UCGC amount, to which the formula will be applied to set the level of FEI's Growth capital for each year of the Rate Framework term. FEI's Growth capital consists of expenditures on mains, services, and meters and, for the Rate Framework, also includes distribution pressure system improvements.[423] These costs are all primarily driven by customer additions. As discussed below, FEI's proposed starting UCGC is based on a linear regression of FEI's actual UCGC between 2021 and 2023. In FEI's submission, this starting UCGC is reasonable and appropriate for the Rate Framework and should be approved.

250. This section is organized around the following key points:

- FEI's net UCGC has increased over the Current MRP term due to several contributing factors that FEI expects to continue to be reflected in construction costs during the Rate Framework term.
- A linear regression of actual UCGC between 2021 and 2023 (inflation-adjusted to 2024 dollars) is the best method to establish the starting UCGC for the Rate Framework.

**(a) FEI's Unit Costs Have Increased Over the Current MRP Term**

251. FEI experienced significant cost pressures in Growth capital during the Current MRP term. Net UCGC increased from $4,423 to $7,422 from 2020 to 2023, and FEI is projecting a further increase of approximately 30 percent from 2023 to 2024.[424] The cost pressures FEI experienced during this period were also experienced by other gas utilities in North America and, therefore, were not unique to FEI. For example, based on a market report completed by Wood Mackenzie Supply Chain Consulting and filed as part of FEI's Annual Review for 2023 Delivery Rates application, 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 inflationary increase experienced by FEI for its UCGC in 2022.[425]

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[423] Exhibit B-1-2, Updated Application, p. C-72.

[424] Exhibit B-1-2, Updated Application, Table C3-3 (p. C-73); Exhibit B-9, CEC IR1 7.1.

[425] Exhibit B-9, CEC IR1 7.1.3; Exhibit B-16, CEC IR2 22.1 and 22.2.

252. FEI addresses each of the contributing factors to the increase in net UCGC in turn below.[426]

- **Significant Inflationary Pressures:** 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, coinciding with significant global market events (e.g., COVID-19 pandemic and supply chain disruptions, etc.). These unforeseen events significantly increased market prices of many commodities and services in FEI's supply chain. These inflated prices have remained at this high level into 2024. The BCUC recognized the impact of inflationary pressures on costs in the Annual Review for 2023 Delivery Rates Decision and Order G-352-22 in relation to FEI's Sustainment capital forecasts for 2023 and 2024. However, FEI was not able to make any adjustments to the Growth capital formula to account for inflationary pressures until this Application.[427]

- **Increased Contractor Pricing:** FEI considers engaging contractors to support short-term projects and in response to fluctuating workloads (e.g., when work volumes increase during the busiest months).[428] One contributor to inflationary increases for Growth capital was that FEI's Mains and Services (M&S) construction contracts expired at the end of 2021. Despite a competitive bidding process and awarding contracts to multiple contractors to manage prices,[429] all new contracts put in place in 2022 had higher rates than the previous contracts, reflecting the significant inflationary pressures being experienced in the industry. The higher rates in the new M&S construction contracts contributed to the significant increase in the unit costs for FEI's capital. In 2024, FEI renewed the 2022 agreements, thus providing a more stable contractor environment for FEI's Growth capital until 2027, which coincides with the end of the proposed Rate Framework term.[430] Further, as customer additions have been lower than previous years in 2024, FEI has eliminated contractor construction crews and is increasing its reliance on internal resources.[431]

- **Increased Complexity of Mains Installations:** There are many factors that led to increased complexity in main installations, including: (1) evolving government policy; and (2) the continuing market shift towards high density dwellings such as

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426 FEI notes that 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 UCGC has been small: Exhibit B-9, CEC IR1 71.4.

427 Exhibit B-1-2, Updated Application, p. C-74; Exhibit B-9, CEC IR1 7.1.

428 Exhibit B-18, MoveUP IR2 4.1.

429 For example, a contractor would be selected for a project based on their geographic headquarters relative to the work location to reduce trucking costs: Exhibit B-9, CEC IR1 7.1.

430 Exhibit B-1-2, Updated Application, p. C-74; Exhibit B-9, CEC IR1 7.1.

431 Exhibit B-18, MoveUP IR2 4.1.

townhomes and high-rises in place of single-family dwellings. These factors, in turn, led to more challenging permit requirements and more complex installations.[432] For example, main installations for high density dwellings require a larger main pipe size diameter to service a much more diverse load profile. 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.[433]

FEI has also been experiencing an increasing trend of mains requiring narrower and more challenging running lines during installation. These installation challenges – in particular those involving large diameter pipe – have been exacerbated by increasing underground utility congestion, which requires additional coordination between utilities vying for limited space in smaller areas.[434]

- **Increased Municipal Restrictions and Permitting Requirements:** As noted above, evolving government restrictions and permitting requirements are interrelated with increasing installation complexity. 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.[435]

  In particular, as noted above, there is an ongoing push by local government policy and market trends towards high density dwellings in place of single-family dwellings. This shift to high density dwellings has, for example, required FEI to obtain more road use permits due to local traffic impacts in densely populated areas. These permits increasingly include restrictions on working hours (i.e., night work and shorter daytime working hours) which has cost implications that are not easily mitigated. For one project during the Current MRP term, FEI incurred over $250,000 due to permit requirements for night shifts and reduced allowable day shift hours. There are also additional costs due to requirements by the local municipality for full lane paving (as opposed to re-paving trench widths), greater asphalt thicknesses, and additional soil contamination testing and disposal.[436] Capital costs resulting from amendments to the Contaminated Site Regulation (CSR) have also significantly increased costs. FEI expects these challenges and the

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[432] Exhibit B-1-2, Updated Application, pp. C-74 to C-75.

[433] Exhibit B-1-2, Updated Application, pp. C-74 to C-75; Exhibit B-9, CEC IR1 7.1; Exhibit B-12, RCIA IR1 29.7.

[434] Exhibit B-1-2, Updated Application, pp. C-74 to C-75; Exhibit B-9, CEC IR1 7.1; Exhibit B-12, RCIA IR1 29.7.

[435] Exhibit B-1-2, Updated Application, p. C-75.

[436] Exhibit B-1-2, Updated Application, p. C-75; Exhibit B-9, CEC IR1 7.1.

increases in costs due to these factors will continue to be applicable during the proposed Rate Framework term.[437]

- **Higher Number of Distribution Pressure System Improvements:** As more customers connect to FEI's system over time, especially large volume customers such as multi-family and high-density dwellings, improvements to the distribution pressure (DP) system in the localized area are required to ensure sufficient capacity is available for customers.[438] System improvements were the largest contributor to the increase in UCGC between 2023 and 2024. For example, when excluding costs related to system improvements, the net UCGC declines from $7,422 to $5,884 in 2023 (a difference of $1,538) and $9,654 to $6,963 in 2024 (a difference of $2,691). There is often a lag between when the new customers are connected (i.e., GCA) and when the increased capacity is needed. Therefore, even though the number of GCA decreased in 2023 and 2024, there were significant increases in system improvements in these two years which were partly due to the higher number of GCA that occurred in the preceding years, 2020 and 2021.[439]

253. As discussed further below, FEI expects a number of these pressures to continue during the proposed Rate Framework term.

### (b) Use of a Three-Year Linear Regression Is Representative of FEI's Cost to Serve New Customers

254. FEI's proposal to calculate the starting base 2024 UCGC using a linear regression of actual UCGC between 2021 and 2023 (inflation-adjusted to 2024 dollars) provides an appropriate starting point for calculating FEI's Growth capital.

255. For the Current MRP, FEI calculated the starting UCGC based on the average of actual unit costs from 2016 to 2018. However, this approach proved inadequate, as FEI experienced a shortfall in Growth capital in the first year of the Current MRP which carried on throughout the term. In fact, setting the starting UCGC for 2019 based on the average of actual unit costs from

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437 Exhibit B-1-2, Updated Application, p. C-75; Exhibit B-9, CEC IR1 7.1.

438 System improvements are 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: Exhibit B-9, CEC IR1 7.1.

439 Exhibit B-1-2, Updated Application, p. C-75; Exhibit B-9, CEC IR1 7.1.

2016 to 2018 (inflation-adjusted to 2019 dollars) plus adjustments for 2019 was significantly lower than the first year's actual UCGC (i.e., $3,789 versus $4,423).[440]

256. While FEI expects the Growth capital cost increases will track more closely to general inflation over the three-year term of the Rate Framework (i.e., lower and more stable compared to what the market has experienced in recent years), which will help avoid some of the issues encountered with the UCGC during the Current MRP term, FEI expects the other factors discussed above (e.g., increased installation complexity and increasing system improvement requirements) to continue over the Rate Framework term.[441]

257. Therefore, to avoid understating the starting base UCGC, the starting base 2024 UCGC should be established by extrapolating from a linear regression of actual UCGC between 2021 and 2023 (inflation-adjusted to 2024 dollars).[442] Including the data from 2021 and 2022 ensures that the recent trends and increases in construction costs are captured as part of the linear regression when determining the 2024 Projected base UCGC. This approach is reasonable and responsive to the continued upward pressure in FEI's Growth capital since 2021, and will provide funding for FEI to make the capital investments necessary to add customers that request service, while allowing a fair and balanced recovery of the costs.[443]

258. As shown in Figure C3-4 from the Application, reproduced below, a three-year regression approach recognizes the growth trend in the UCGC over recent years with a starting base UCGC of $9,300 per GCA. This compares favourably to the current 2024 Projected UCGC of $9,654 per GCA and would better account for the increase in construction costs in recent years.[444]

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440 Exhibit B-1-2, Updated Application, p. C-76.

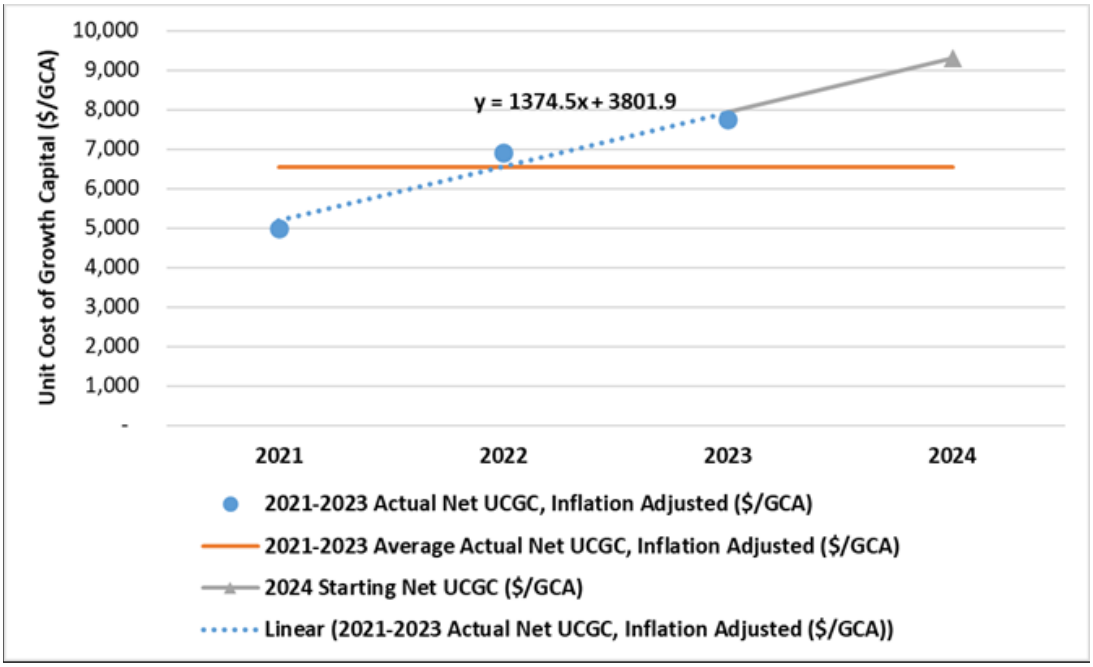
441 Exhibit B-9, CEC IR1 7.2; Exhibit B-16, CEC IR2 23.1.

442 Exhibit B-1-2, Updated Application, p. C-77.

443 Exhibit B-12, RCIA IR1 29.2.

444 Exhibit B-1-2, Updated Application, pp. C-77 to C-78.

**Figure C3-4: Comparison between Three-year Linear Regression Approach and Three-year Average Approach for Setting FEI's Starting Base UCGC**




As this figure shows, if FEI were to continue using the previous three-year average approach, the starting UCGC for 2024 would be $6,551 per GCA, which is less than the actual UCGC in 2023 by approximately 15 percent – a significant difference.[445]

259. For the reasons above, and in particular given the recent embedded increases in construction costs due to inflation and other factors, FEI submits that the proposed three-year regression approach is reasonable and the BCUC should approve FEI's Base UCGC net of CIAC.

## F. Scope of Flow-Through Capital is Appropriate

### (a) Scope of FEI's Flow-Through Capital is Appropriate

260. FEI submits that continued flow-through treatment of capital expenditures related to Pension/OPEB (Growth capital portion) and Clean Growth Initiatives, including Biomethane

[445] 2023 Actual UCGC = $7,422 x (1 + 4.41%) = $7,750 in 2024 dollars, whereas the average of the Actual UCGC from 2021 to 2023 = $6,551 in 2024 dollars ($6,551 / $7,750 – 1 = -15%): Exhibit B-1-2, Updated Application, p. C-77, fn 98.

capital and NGT capital, remains appropriate and should be approved as these expenditures are uncontrollable in nature or uncertain in scope, costs, and timing.[446]

261. Within the category of Clean Growth Initiatives, FEI submits that the BCUC should approve flow-through treatment for expenditures related to Methane Emission Mitigation, which are essential for FEI to align with provincial and federal regulations aimed at reducing GHG emissions. Given the uncertainty in the timing and scope of new federal and provincial regulations, forecasting these expenditures is currently challenging. Treating Methane Emission Mitigation expenditures as flow-through will allow FEI to adapt and comply with any regulatory requirements. While FEI has not yet identified any specific expenditures, FEI expects to start further review and project development related to measurement of emissions at its station assets in 2025, after which it expects to identify specific expenditures and bring them forward for review in Annual Reviews.[447]

**(b) Scope of FBC's Flow-Through Capital is Appropriate**

262. For the Rate Framework, FBC will continue to forecast Regular Flow-through capital related to its EV DCFC Service, as approved by Decision and Order G-215-21.[448]

263. In addition, FBC is proposing that MRS Assessment Report costs, which can be O&M, Capital or both, should also be afforded flow-through treatment.[449] As discussed above in Part Five, Section E(c) of this Final Submission, these expenditures are mandatory and uncontrollable in nature, as well as uncertain in scope and timing, and therefore appropriately treated as flow-through expenditures.

## G. FortisBC Will Continue to Seek Approval of Major Projects Outside of the Rate Framework

264. FortisBC will continue to seek approval of Major Projects by way of CPCN or an application under section 44.2 of the UCA. FortisBC is proposing that the approved CPCN thresholds for FEI

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446 Exhibit B-1-2, Updated Application, pp. C-98 to C-99.

447 Exhibit B-1-2, Updated Application, p. C-99.

448 Exhibit B-1-2, Updated Application, p. C-136.

449 Exhibit B-1-2, Updated Application, p. C-136.

and FBC of $15 million and $20 million, respectively, continue for the Rate Framework term.[450] While FortisBC is not seeking any approval of Major Project expenditures in this Application, FortisBC provided examples and details with respect to Major Project applications that may arise over the course of the proposed Rate Framework term. This includes information with respect to project need, scope, forecast construction timelines and, where available, preliminary cost estimates.[451]

[450] Exhibit B-1-2, Updated Application, pp. C-100 and C-137.

[451] See Exhibit B-1-2, Updated Application, pp. C-101 to C-103 (FEI) and C-137 to C-139 (FBC).

## PART SEVEN: FEI'S 2025 CLEAN GROWTH INNOVATION FUND IS REASONABLE AND IN THE PUBLIC INTEREST

### A. Overview

265. FEI's approved Clean Growth Innovation Fund (2020 CGIF) has performed well and should continue with the enhancements FEI has proposed (2025 CGIF). The purpose of the CGIF is to accelerate the pace of clean energy innovation, to achieve performance breakthroughs and cost reductions, and to provide cost effective, safe, reliable and resilient solutions for FEI's customers. These goals and the resulting innovation driven by the CGIF directly benefit FEI's customers and British Columbians in general.[452] FEI's proposed 2025 CGIF will allow FEI to continue supporting and advancing British Columbia's energy transition over the Rate Framework term and are reasonable and in the public interest. The policy direction from all levels of government has amplified the urgency for innovation and need to adopt new technologies in the energy sector to advance the CleanBC goal of decarbonization.[453] Continuing the CGIF aligns with these priorities and will build on the advancements enabled by the original fund. Further, FEI's proposed enhancements to the CGIF will: (1) aid British Columbia's clean energy transition by funding solutions that lower GHG emissions; (2) reduce costs for customers through performance breakthroughs and cost reductions on emerging technologies; and (3) strengthen the resilience of the energy system.[454]

266. Therefore, FEI submits that establishing the 2025 CGIF should be approved as proposed (a non-rate base deferral account attracting a WACC return), including the continuation of the $0.40 per customer per month Innovation Fund basic charge rate rider and using the existing BCUC-approved governance structure and accountability framework to approve projects. Consistent with the BCUC direction in the MRP Decision,[455] the unused balance of the funds

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[452] Exhibit B-4, BCUC IR1 32.2.

[453] Exhibit B-1-2, Updated Application, p. C-157.

[454] Exhibit B-1-2, Updated Application, p. C-157; Exhibit B-2, BCUC Panel Supplemental IR 7.

[455] MRP Decision, p. 156.

collected in the existing approved CGIF deferral account during the Current MRP term (currently projected at $7.699 million)[456] will be returned to customers in 2025.[457]

267. In this Part, FEI addresses the following key points:

- The 2020 CGIF has proven to be an important and effective mechanism to advance the clean energy transition for the benefit of customers.
- The 2025 CGIF would continue the benefits of the 2020 CGIF with scope enhancements to enable FEI to better address other impacts of climate adaption and the energy transition.
- The continuation of the Innovation Fund basic charge rate rider continues to be just and reasonable.
- The continuation of the BCUC-approved governance structure remains reasonable and appropriate.
- Returning the unused funding from the 2020 CGIF is the best and most reasonable approach.

## B. 2020 CGIF Has Helped Advance the Clean Energy Transition for the Benefit of Customers

268. The 2020 CGIF is an important and effective mechanism that supports provincial decarbonization goals by advancing the adoption of innovative technologies. The 2020 CGIF performed well during the Current MRP term, providing significant funding for a variety of innovative methods of producing, distributing and utilizing low-carbon fuels.[458] The innovative products and services funded by the 2020 CGIF will help decarbonize gas infrastructure and are key to preserving the significant investment in the existing gas delivery system that has been made on behalf of FEI customers.[459]

269. FEI provided grant funding through the 2020 CGIF for innovations in five application areas: (1) upstream production; (2) distribution; (3) end-use; (4) carbon capture, utilization and storage

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[456] Exhibit B-21, FEI 2025 Interim Delivery Rates Application, pp. 14 to 15.

[457] Exhibit B-1-2, Updated Application, p. C-153; Exhibit B-1-1, Appendix E2.

[458] Exhibit B-2, BCUC Panel Supplemental IR 7.

[459] Exhibit B-1-2, Updated Application, pp. C-168 to C-169; Exhibit B-4, BCUC IR1 32.2.

(CCUS); and (5) general low-carbon investments. Table C5-2 in the Application, reproduced below, summarizes the total approved grants from the 2020 CGIF up to the end of 2023 for each application and sub-application area.

**Table C5-2: 2020 CGIF Approved Investment by Application 2020-2023 ($ millions)**

| Application | Sub-Application | Portfolio Approvals |
|---|---|---|
| **Production** | Renewable Hydrogen | 2.483 |
| | Renewable Natural Gas | 1.514 |
| | Renewable Syngas | 0.344 |
| | **Subtotal** | **4.341** |
| **Distribution** | Renewable Hydrogen | **0.500** |
| | **Subtotal** | **0.500** |
| **End-Use** | Renewable Hydrogen | 0.407 |
| | Hybrid Systems | 0.280 |
| | Renewable Natural Gas | 0.125 |
| | **Subtotal** | **0.813** |
| **Carbon Capture** | End-Use | 0.469 |
| | Storage | 0.600 |
| | **Subtotal** | **1.069** |
| **General Low-Carbon** | General Initiatives | **2.672** |
| | **Subtotal** | **2.672** |
| **TOTAL** | | **9.395** |

270. As shown in the table above, and further explained in Section C5.2.3 of the Application, annual CGIF approvals and spending increased throughout the term of the Current MRP due to several factors, including the time needed to establish a new program like the 2020 CGIF, increased funding requests for projects that support GHG emission reductions, increased funding requirements as projects progressed to commercialization, and increased collaboration with other funding organizations to identify additional projects to fund.[460] This funding was amplified by contributions from government, other utilities and the private sector, which created a larger

[460] Exhibit B-1-2, Updated Application, pp. C-161 to C-162.

impact for each dollar invested by FEI (e.g., a leverage ratio of more than 20 times for 2020 CGIF projects).[461]

271. Section C5.2.3 of the Application also provides detailed information regarding the approved grant funding in each of the five application areas during the Current MRP term. Each application area contributed to the performance of the 2020 CGIF and support its continuation during the Rate Framework term:

- **Upstream Production:** Funding investments related to the production of renewable and low-carbon gases for use in FEI's gas distribution network or for direct consumption by larger customers, such as by improving the efficiency of production facilities and expanding the range of feedstocks from which RNG can be created.[462]

- **Distribution:** Includes funding for the accommodation of low-carbon hydrogen in the gas distribution system to support provincial CleanBC decarbonization objectives.[463]

- **End-Use:** Includes funding end-use applications of hydrogen end-use product development, hybrid system development and GHG reductions in the transportation sector.[464]

- **CCUS:** Includes funding end-use[465] and storage-based[466] carbon capture technologies.[467]

- **Generalized Low-Carbon:** Includes funding for low-carbon initiatives that broadly advance decarbonization of the gaseous fuel distribution system.[468]

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461 Exhibit B-2, BCUC Panel Supplemental IR 7, fn. 29.

462 Exhibit B-1-2, Updated Application, pp. C-163 to C-164; Exhibit B-5, Air Products IR1 2.1 and 2.2.

463 Exhibit B-1-2, Updated Application, pp. C-164 to C-165; see also Exhibit B-2, BCUC Panel Supplemental IR 7.

464 Exhibit B-1-2, Updated Application, pp. C-165 to C-167.

465 End-use carbon capture expenditures focus on capturing and purifying carbon dioxide post-combustion. In some cases, the carbon dioxide is converted into other marketable products and in others the carbon dioxide is being selectively captured for permanent storage: Exhibit B-1-2, Updated Application, p. C-167.

466 Carbon capture storage grants focus on taking captured carbon dioxide and permanently transforming it into a non-GHG form, such as a mineral, or permanently storing it: Exhibit B-1-2, Updated Application, p. C-167.

467 These initiatives include a pilot project assessing the ability of certain rocks to be used for CCUS and a geological study of the Georgia basin to assess the potential for permanent carbon storage: Exhibit B-1-2, Updated Application, p. C-168.

468 The LCRI is an initiative sponsored by utilities in North America that is focused on addressing the need to accelerate development and demonstration of low- and zero-carbon energy technologies to 2030 and beyond: Exhibit B-1-2, Updated Application, pp. C-168.

272. The 2020 CGIF has also: (1) allowed FEI to support and progress development of funded projects (e.g., facilitating access to utility and customer assets for testing and pilots); (2) helped FEI understand and prioritize key pre-commercial technologies that will be required to meet the CleanBC decarbonization goals (i.e., better understanding the advantages and disadvantages of new technologies); and (3) consistent with the benefits to customers recognized by the BCUC in the MRP Decision (p. 155), enabled investments in a number of technologies that could reduce the cost of current and future gaseous fuels – thus potentially mitigating the risk of future rate increases.[469]

## C. Enhancements to the 2025 CGIF Are Designed to Accelerate Clean Energy Innovation

273. The proposed 2025 CGIF builds on the momentum of the 2020 CGIF through the following enhancements to the fund's scope:[470] (1) the addition of two new application areas (Cost Mitigation and Resilience); and (2) the addition of a new evaluation criteria to support these new areas.[471] As discussed below, these enhancements will enable FEI to continue providing grant funding to support pre-commercial technologies that can reduce GHG emissions, mitigate cost pressures and further strengthen the resilience of the energy system in a manner that reflects the policy priorities in British Columbia.[472]

274. First, the Cost Mitigation application area would fund innovations that address the costs associated with the energy transition for gas customers. To date, the CGIF has focused on certain cost reductions like reducing the cost of RNG; however, there remain other non-commercially available innovations that could reduce costs in other business areas.[473] For example, innovations in satellite-enhanced vegetation management and the remote sensing and control of gas assets that are not yet commercially available could reduce costs that are ultimately borne by customers. This area would also fund innovations that directly reduce customer costs, including

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469 Exhibit B-1-2, Updated Application, p. C-169; Exhibit B-2, BCUC Panel Supplemental IR 7.

470 Exhibit B-1-2, Updated Application, p. C-169; see also Exhibit B-4, BCUC IR1 32.3 and Attachment 32.3 for a summary of the similarities and differences between FEI's proposed 2025 CGIF and innovation funds in other jurisdictions.

471 Exhibit B-1-2, Updated Application, pp. C-170 to C-171.

472 Exhibit B-2, BCUC Panel Supplemental IR 7; Exhibit B-4, BCUC IR1 32.3.

473 Exhibit B-1-2, Updated Application, p. C-172; Exhibit B-12, RCIA IR1 38.1.

Combined Heat and Power (CHP) systems, which may not only meet industrial and agricultural heating requirements but could also produce useful byproducts.[474]

275. Second, the addition of the Resilience application area responds to the increasing need to adapt the gas system to the impacts from higher temperatures, increased rainfall and other extreme weather events, thus helping customers manage and secure their energy sources in the future while improving energy system resilience.[475] This could mean investment in, for example:[476]

- New technologies that provide remote detection of adverse weather conditions or of weather-related asset failures;
- Innovations that enable FEI to better use the data it already collects at critical asset sites;
- Artificial intelligence algorithms that identify anomalies at substation sites in near real-time (e.g., from intrusion and wildfires) and obviate the need for 24/7 monitoring;
- Tools to manage an increasingly complex energy system with the advent of production facilities (e.g., biomethane and low-carbon hydrogen supply) connected directly to the distribution systems or customers;
- Distribution-scale storage systems that enable continued supply to customers that are reliant on hydrogen if a production disruption or large fluctuation in demand were to occur; and
- Innovations that allow customers' gas equipment to continue functioning in the absence of electric supply.

276. To support the increased funding scope of the Resilience application area and, in particular, given the growing need to consider innovative technologies that address the need to adapt to a changing climate, FEI proposes to add energy system resilience benefits to the 2025

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474 Exhibit B-1-2, Updated Application, p. C-172.

475 Exhibit B-1-2, Updated Application, pp. C-172 to C-173; Exhibit B-8, BCSEA IR1 2.3.

476 Exhibit B-1-2, Updated Application, pp. C-172 to C-173.

CGIF evaluation criteria.[477] The proposed 2025 CGIF evaluation criteria are therefore as follows:[478]

| # | 2025 CGIF Evaluation Criteria |
|---|---|
| 1. | Carbon dioxide-equivalent (CO2e) reduction potential in British Columbia |
| 2. | Non-CO2e emission reduction (NOx, SOx) potential in British Columbia |
| 3. | Potential energy system resilience benefits for FEI customers |
| 4. | Energy cost mitigation potential for FEI customers |
| 5. | Amount of co-funding secured (from applicant and third parties) |
| 6. | Relevant experience of the applicant project team |

## D. Innovation Fund Rate Rider Continues to Strike a Reasonable Balance and Remains Appropriate

277. The use of a fixed Innovation Fund basic charge rate rider of $0.40 for the 2025 CGIF, and recording the amounts in the 2025 CGIF deferral account, continues to strike a reasonable balance between rate impacts to FEI's customers and FEI's ability to advance the adoption of innovative technologies. As discussed further below, the proposed fixed rider is preferrable to other approaches because it is more equitable, more stable, easier to administer, and consistent with the existing amount which customers are already accustomed to.[479]

278. First, as the BCUC concluded in the MRP Decision (p. 156), "a fixed rate rider is more reasonable than a volumetric approach". This is demonstrated by the calculations provided in the response to RCIA IR2 54.4 which confirm that a fixed basic charge results in a small impact to all customers regardless of their volumes and rate class.[480] The same cannot be said for a volumetric funding approach, which is less equitable. For example, assuming a $0.03/GJ volumetric rider,[481] a Rate Schedule 22 (large volume industrial) customer would see a significant bill increase of $15,460 annually, while a Rate Schedule 1 (residential) customer would only

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[477] Exhibit B-1-2, Updated Application, pp. C-170 to C-171.

[478] Exhibit B-1-2, Updated Application, p. C-170; Exhibit B-12, RCIA IR1 38.2.

[479] Exhibit B-12, RCIA IR1 39.1.

[480] Exhibit B-19.

[481] See Exhibit B-19, RCIA IR2 54.1 for the calculation used to determine the equivalent volumetric rate to the fixed $0.40 basic charge rider.

benefit from a small annual savings of $2.10.[482] Any savings would be even lower for residential customers with consumption levels higher than the average of 90 GJ.[483] A volumetric approach is therefore not a reasonable alternative or in the best interest of FEI's customers.

279. Second, a fixed monthly rider is more stable, thus ensuring a consistent and predictable level of funding is being collected. This is an important consideration given the variability in the timing and amount of funding requested by applicants to the CGIF. Because the distribution of CGIF funding typically occurs over multiple years, it can be lumpy.[484] As such, a rider remains the most suitable method of funding, including compared to embedding a funding amount in the Base O&M or through forecasting the amounts annually in O&M and flowing through the variances between forecast and actual amounts. As FEI explained:[485]

> For example, if FEI funded the CGIF through formulaic O&M, the variances between formula and actuals each year would impact the earnings sharing calculation, which would likely result in some years where large amounts of "savings" would be experienced in O&M and other years where large amounts of "over-spending" would occur. Similarly, if FEI funded the CGIF through forecast O&M, the annual variances between forecast and actual amounts would be flowed through to customers in the following year. Either of these approaches creates unnecessary swings in the annual revenue requirement (and therefore rates).

Continuing the current approach to funding the CGIF through a monthly fixed rider and deferral account ultimately benefits both customers and the parties seeking innovation funding.

280. Third, a fixed rider is easier to administer than a volumetric rider because it avoids the need for annual re-calculation, provides greater regulatory efficiency as it does not require annual review and approval from the BCUC, and FEI's billing systems are already set up to administer the rider, thus avoiding the time and resources to change approaches.[486]

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[482] Table 1 of the response to RCIA IR2 54.4 (Exhibit B-19) provides a breakdown of the changes in the average annual customer bill under a volumetric approach for each rate class.

[483] Exhibit B-19, RCIA IR2 54.4.

[484] Exhibit B-4, BCUC IR1 32.1.

[485] Exhibit B-4, BCUC IR1 32.1.

[486] Exhibit B-19, RCIA IR2 54.2.

281. Fourth, a fixed rider avoids a general decrease in customer satisfaction and acceptance, which would result from adopting a volumetric funding approach.[487] All but Rate Schedule 1 (residential) customers would experience a bill increase under a volumetric funding approach. As most customers are aware of cost increases in general, regardless of where they show up on their bill, FEI anticipates that significant increases to the CGIF rider would result in numerous customer concerns and additional bill inquiries.

282. Ultimately, based on FEI's experience administering the 2020 CGIF and the funding requests it received over the Current MRP term, FEI considers that the estimated $5.2 million per year collected through the proposed $0.40 fixed rider will provide adequate funding for the Rate Framework term and remains appropriate.[488] As explained and shown in Table C5-2 reproduced above, CGIF approvals and spending increased throughout the term of the Current MRP, a trend which FEI expects to continue now that the CGIF is an established source of funding.[489] At the end of the Rate Framework term, the unused balance in the deferral account (if any) will be returned to customers.[490]

## E. 2025 CGIF Maintains the BCUC Approved Governance Structure and Accountability Framework

283. FEI proposes to maintain the 2020 CGIF governance structure and accountability framework for the 2025 CGIF. Section C5.2.1 of the Application provides a detailed description of the existing governance structure, which provides multiple levels of oversight on all approved projects, as summarized in Figure C5-1 reproduced below:[491]

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487 Exhibit B-19, RCIA IR2 54.4.

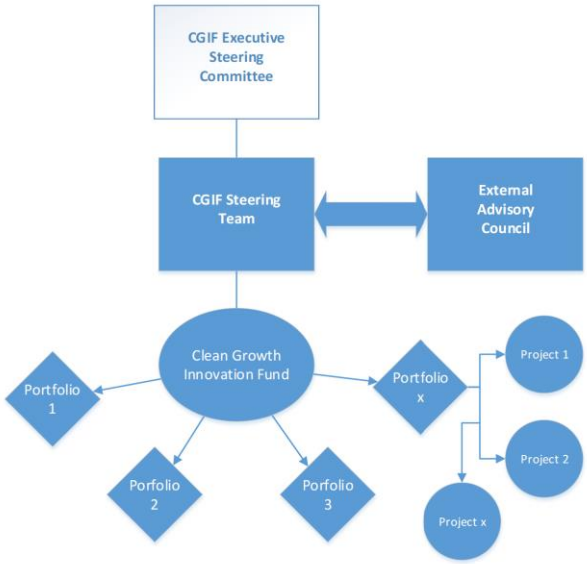
488 Exhibit B-4, BCUC IR1 31.4.

489 Exhibit B-1-2, Updated Application, p. C-174.

490 Exhibit B-1-2, Updated Application, p. C-174; Exhibit B-12, RCIA IR1 39.2.

491 Exhibit B-1-2, Updated Application, p. C-159.

**Figure C5-1: CGIF Governance Structure**




284. The established governance structure and accountability framework have been effective and contributed to the overall success of the fund in accelerating the pace of clean energy innovation.[492] In finding "no issue" with the proposed governance structure and accountability framework for the 2020 CGIF, the BCUC concluded the following in the MRP Decision (p. 156):

> The governance structure appears to be consistent with that used for similar funds in other jurisdictions and to reflect accepted best practices. Similarly, the Panel does not consider it necessary for FEI to seek annual approval of specific projects before they are initiated. The Panel agrees that such an approval process would cause uncertainty, delay in project implementation and missed opportunities that would defeat the fund's purpose. We are satisfied that the Annual Review process provides sufficient opportunity for the BCUC and interveners to receive and review progress reports on individual projects and monitor the operation of the fund.

285. FEI submits that these conclusions remain equally applicable to the 2025 CGIF. FEI will continue to report on the funding being provided through the 2025 CGIF as part of the Annual Reviews.[493]

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[492] Exhibit B-1-2, Updated Application, p. C-158.

[493] Exhibit B-14, BCOAPO IR2 15.2.

## F. Unused 2020 CGIF Balance Should be Returned to Customers

286. FEI expects to have an unused balance of approximately $7.699 million[494] in the 2020 CGIF deferral account, which it submits should be returned to customers through amortization of the deferral account over one year (i.e., in 2025).[495] This approach is consistent with the BCUC's direction in the MRP Decision (p. 156) that "any unused balance in the deferral account [is] to be returned to customers at the end of the Proposed MRP term through a disposal mechanism subject to approval by the BCUC" and has several advantages.

287. First, returning the unused balance will reduce the overall rate increase to customers in 2025.[496] In particular, the delivery rate impact of returning the projected $7.699 million in the CGIF deferral account to FEI's customers in 2025 is a credit of approximately 0.92 percent when compared to the 2024 Approved delivery rates, and will not result in any additional administrative costs.[497] Second, returning the unused funds immediately in 2025 reduces intergenerational inequity issues.[498] Finally, FEI will still have adequate funding during the proposed Rate Framework term (approximately $5.2 million per year) through the continuation of the CGIF rider to fund innovation.[499] While not returning the funds would increase the funding available to fund innovative projects, this would require an increase in funding requests. A further balance would accrue in the CGIF deferral account for three more years if such requests do not materialize.[500] Similarly, there is little advantage to retaining the unused balance and using it to reduce the 2025 Innovation Fund rider, as the same outcome could be achieved by returning the unused balance in the CGIF deferral account to customers immediately in 2025.[501]

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494 Exhibit B-21, FEI 2025 Interim Delivery Rates Application, pp. 14 to 15.

495 Exhibit B-1-2, Updated Application, pp. C-160 to C-161.

496 Exhibit B-4, BCUC IR1 31.2.

497 Exhibit B-4, BCUC IR1 31.1. Updated to 0.92 percent based on the current projected unused balance of $7.699 million as shown in FEI's 2025 Interim Delivery Rates Application (Exhibit B-21, pp. 14 to 15).

498 Exhibit B-4, BCUC IR1 31.2.

499 Exhibit B-4, BCUC IR1 31.2.

500 Exhibit B-4, BCUC IR1 31.3.

501 Exhibit B-4, BCUC IR1 31.3.

288. Ultimately, while retaining the unused balance in the CGIF deferral account to be used during the proposed Rate Framework term would have the advantage of increasing the funding available for potential projects or reducing the 2025 Innovation Fund rate rider, FEI submits that returning the funds to customers in 2025 is the best and most reasonable approach, while also being consistent with the MRP Decision.

## PART EIGHT: SERVICE QUALITY INDICATORS ARE REASONABLE AND APPROPRIATE

### A. Overview

289. FortisBC's proposed SQIs for FEI and FBC were designed based on the experience gained under past multi-year rate plans, including the Current MRP, and accord with the BCUC's commentary from the MRP Decision that proposed performance measures should "maintain a high level of service yet not overly burden the Utilities with unnecessary costs".[502] The proposed SQIs are comprehensive, addressing the Companies' responsiveness to customer needs, safety and reliability, and include a new set of indicators focused on the energy transition. Together, the suite of SQIs will enable the monitoring of FEI and FBC's service quality throughout the Rate Framework term to ensure that any efficiencies and cost reductions do not result in a degradation of the quality of service to customers.

290. In preparing its proposals, FortisBC undertook a comprehensive review of its existing metrics, considering their continued appropriateness and benchmark and threshold levels, as well as carefully considering the comments and suggestions shared by BCUC staff and interveners through a workshop in 2023.[503] As the current SQIs for FEI and FBC have proven to be appropriate and useful in monitoring the Companies' performance during the Current MRP term, FortisBC is proposing limited updates and modifications, which build on the experience gained during the Current MRP, as well as the new energy transition informational indicators noted above. Like the Current MRP, FEI and FBC will report each year's results to the BCUC and stakeholders as part of Annual Reviews.[504]

291. FortisBC submits that its proposed suite of SQIs should be approved as proposed. The proposed changes from the Current MRP are discussed below.

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[502] MRP Decision, p. 96.

[503] Exhibit B-1-2, Updated Application, pp. C-178 to C-179.

[504] Exhibit B-1-2, Updated Application, p. C-178.

## B. FEI's Proposed Service Quality Indicators Build Off Of and Enhance Those of the Current MRP

292. FEI proposes eight SQIs with benchmarks and thresholds, and nine informational SQIs. Together, this suite of SQIs is broad and balanced, as well as being useful and appropriate for monitoring FEI's performance. FEI's proposed set of SQIs are supported by detailed information in Section C6.3 and Appendix C6-1 to the Application, including a description of the methodology used to determine the proposed benchmark and threshold (as applicable).[505] As discussed below, FEI is proposing to:

- Change the benchmarks and thresholds of two SQIs to reflect their recent historical performance;
- Change the name of the "Meter Reading Accuracy" metric to the "Meter Reading Completion" metric and to change it to an informational indicator; and
- Introduce a new suite of informational indicators to report on the results of FEI's activities related to the energy transition.

293. Table C6-2 of the Application, reproduced below, compares FEI's current and proposed SQIs, with highlighted cells indicating proposed changes.[506]

[505] Exhibit B-1 and B-1-2.

[506] Exhibit B-1-2, Updated Application, p. C-182.

**Table C6-2: Comparison of FEI Current and Proposed SQIs**

| | | Current | | *Proposed* | |
|---|---|---|---|---|---|
| **Safety Indicators** | | Benchmark | Threshold | Benchmark | Threshold |
| Annual results | Emergency Response Time | >= 97.7% | 96.2% | >=97.7% | 96.2% |
| Annual results | Telephone Service Factor (Emergency) | >= 95% | 92.8% | >=95% | 92.8% |
| 3 Year rolling average | All Injury Frequency Rate | <= 2.08 | 2.95 | <= 1.64 | 2.21 |
| Annual results | Public Contacts with Gas Lines | <=8 | 12 | <=6 | 10 |
| **Responsiveness to Customer Needs Indicators** | | | | | |
| Annual results | First Contact Resolution | >= 78% | 74% | >=78% | 74% |
| Annual results | Billing Index | <= 3 | 5 | <=3 | 5 |
| Annual results | Meter Reading Completion | >= 95% | 92% | Informational | Informational |
| Annual results | Telephone Service Factor (Non Emergency) | >= 70% | 68% | >=70% | 68% |
| Annual results | Meter Exchange Appointment Activity | >=95% | 93.8% | >=95% | 93.8% |
| Annual results | Customer Satisfaction Index | Informational | Informational | Informational | Informational |
| Annual results | Average Speed of Answer | Informational | Informational | Informational | Informational |
| **Reliability Indicators** | | | | | |
| Annual results | Transmission Reportable Incidents | Informational | Informational | Informational | Informational |
| Annual results and 5 Year rolling average | Leaks per KM of Distribution System Mains | Informational | Informational | Informational | Informational |
| **Energy Transition Indicators** | | | | | |
| Annual results | Scope 1 Emissions | N/A | N/A | Informational | Informational |
| Annual results | Renewable and Low Carbon Energy Supply Volume | N/A | N/A | Informational | Informational |
| Annual results | Natural Gas for Transportation Volume | N/A | N/A | Informational | Informational |
| Annual results | Demand Side Management Energy Savings | N/A | N/A | Informational | Informational |

## (a) Adjustments to FEI's All Injury Frequency Rate SQI Reflect Improved Performance

294. FEI's proposal to update the benchmark and threshold for the All Injury Frequency Rate (AIFR) reflects FEI's improved performance during the Current MRP and should be approved. FEI proposes a lower benchmark of 1.64 (down from the previous 2.08) based on the most recent three-year rolling average of the annual results from 2021 to 2023, and a lower threshold of 2.21 (down from the previous 2.95), which is set at 2 standard deviations from the recent 10-year

history of the three-year rolling averages of the metric's annual results.[507] FEI is using the same methodologies used to establish the benchmark and threshold under the 2014-2019 PBR Plan.[508] Based on the performance over the Current MRP term, FEI considers it appropriate to adjust the current benchmark and threshold for the term of the Rate Framework.[509]

***FortisBC Is Exploring a Potential Leading Indicator for Additional Safety Reporting***

295. FortisBC is exploring potential leading safety indicators to complement the AIFR, which is a lagging indicator. Leading indicators are proactive and preventative measures that can shed light on the effectiveness of safety and health activities and reveal potential gaps *prior* to an event occurring.[510] FortisBC expects to propose a suitable leading indicator either in an Annual Review during the Rate Framework term or after the proposed three-year term of the Rate Framework. Any such indicator would likely initially be informational only due to the lack of adequate historical information to establish a benchmark or threshold.[511]

**(b) Lowering the Public Contacts with Gas Lines Benchmark and Threshold is Sustainable**

296. FEI's proposal to lower the benchmark and threshold for Public Contacts with Gas Lines to reflect the trend of FEI's improved performance over the Current MRP is reasonable and should be approved. FEI's Public Contacts with Gas Lines SQI results from 2020 to 2023 have been better than the currently approved benchmark of 8, which was based on the annual results from 2016 to 2018.[512] While the metric is primarily affected by external factors,[513] the recent three-year rolling average results have improved due to: (1) increased awareness through targeted workshops with municipalities and excavating contractors; (2) increased collaboration with external agencies, including WorkSafeBC and BC 1 Call; and (3) a higher number of calls generated

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507 Exhibit B-1-2, Updated Application, p. C-183.

508 Exhibit B-1, Application, Appendix C6-1, p. 7, fns. 5 and 6.

509 Exhibit B-1, Application, Appendix C6-1, p. 7.

510 Exhibit B-1-2, Updated Application, p. C-183; Exhibit B-4, BCUC IR1 34.1 and 34.2.

511 Exhibit B-1-2, Updated Application, p. C-183.

512 Exhibit B-1-2, Updated Application, p. C-184.

513 These factors include construction activity levels, damage prevention awareness programs, and heightened public awareness created by the BC 1 Call program.

by the BC 1 Call program.[514] For example, FEI has increased the amount of actual direct expenditures for public awareness over the Current MRP term, which in turn contributes to an increase in BC 1 Call activities and a reduction in gas line damage for FEI over time.[515] As both of these adjustments are sustainable and reflect improved performance, the benchmark should be reduced from 8 to 6, based on the average of the most recent three years of results from 2021 to 2023. FEI also proposed to reduce the threshold by the same amount, from 12 to 10, to reflect its improved performance while maintaining a reasonable performance range. While performance has been better in recent years, a lower threshold would not be warranted given the potential for fluctuations in the metric, as has been seen in its historical performance since 2010.[516]

***FEI's Has Demonstrated a Commitment to Mitigating the Risk of Gas Line Hits to Public Safety***

297. FEI takes the safety of the public, customers and its employees very seriously and has taken all reasonable measures to mitigate the risk of gas line hits. While the excavator is ultimately responsible for locating gas and utility services, damage prevention is a joint effort and a shared responsibility with other stakeholders.[517] In BC, the first step of safe excavation practice is for an excavator to obtain underground gas line information, which can be obtained by calling BC 1 Call.[518] There is no cost associated with obtaining this information and all major utilities and numerous municipalities are active and registered members of BC 1 Call.[519] In 2023, BC 1 Call was not contacted prior to digging in nearly two-thirds of line contacts resulting in damage.[520] FEI continually evaluates its public safety awareness activities.[521] To increase calls to BC 1 Call and reduce the likelihood of gas line hits, FEI places significant attention on educating the public of the risk associated with gas line hits, as well as providing education about safe digging practices

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514 Exhibit B-12, RCIA IR1 40.1.

515 Exhibit B-12, RCIA IR1 40.9 and 40.10.

516 Exhibit B-1, Application, Appendix C6-1, p. 8.

517 Exhibit B-19, RCIA IR2 55.1; Exhibit B-1, Application, Appendix C6-1, p. 9.

518 Exhibit B-19, RCIA IR2 55.1.

519 Exhibit B-19, RCIA IR2 55.1.

520 Exhibit B-12, RCIA IR1 40.7.

521 Exhibit B-12, RCIA IR1 40.10.

and training opportunities to various municipalities, contractors and other industry organizations.[522] This includes partnering with organizations such as BC 1 Call and the International Union of Operating Engineers and Common Ground Alliance to deliver contractor excavation training sessions across the province.[523] FEI's efforts have been successful, as the number of line locate requests related to FEI's system have incrementally increased each year, and is forecast to increase to approximately 164,000 in 2024.[524] FEI's safe excavation policy and the process for locating gas lines in British Columbia are supported by WorkSafeBC and Technical Safety BC and align with other major utilities, including BC Hydro, Telus and Rogers, as well as municipal sewer and water operators in British Columbia.[525]

298. Drawing specific conclusions about the reasons for variability in gas line hits in jurisdictions across Canada is difficult due to the number of potential factors that could affect the number of gas line hits. The factors influencing the number of gas line hits include:[526]

- **Economic Activity:** Increased construction activity can lead to more potential contacts with gas lines.
- **Public Awareness/Damage Prevention Awareness Programs:** The extent of initiatives to educate the public and programs like BC 1 Call can affect public awareness of the risks posed by gas lines and the number of line locate requests before excavating.
- **Population Density:** Higher population densities and concentrated underground utilities in urban areas can increase the likelihood of gas line contacts.
- **Service Territory Characteristics:** The nature of the service area, whether rural or urban, can impact the frequency of gas line hits.
- **Regulatory Requirements:** The number of line locate requests is likely shaped by variability in regional regulations. For example, in Ontario locate requests are mandatory prior to excavation and non-compliance by an excavator could result in an administrative penalty of up to $10,000. This is not the case in BC where requests to locate buried gas lines are not mandatory. There are also differences

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522 Exhibit B-12, RCIA IR1 40.10.

523 Exhibit B-19, RCIA IR2 55.1.

524 Exhibit B-19, RCIA IR2 55.4.

525 Exhibit B-19, RCIA IR2 55.1.

526 Exhibit B-1, Application, Appendix C6-1, pp. 8-10.

> between Ontario One Call, which is a public safety administrative authority with a mandatory membership, and BC 1 Call which is a non-profit organization with mandatory membership limited to industry partners regulated by the BCER.[527]

299. While the above factors make drawing comparison between jurisdictions difficult, FEI does note that the number of gas line damages in British Columbia are generally proportionate to the province's proportion of the Canadian population.[528]

300. FEI submits that it is taking all reasonable steps within the BC context to mitigate the impact of gas line hits. FEI has demonstrated a strong commitment to reducing gas line hits, has continually improved its safety messaging and increased the number of line locate requests each year, works with WorkSafeBC and Technical Safety BC, and aligns its practices with other major utilities and municipal sewer and water operators.

**(c) Modifications to FEI's Meter Reading Accuracy SQI Strike an Appropriate Balance**

301. FEI submits that the BCUC should accept its proposals: (1) to change "Meter Reading Accuracy" to "Meter Reading Completion" to more accurately describe what the SQI is measuring; and (2) to change the metric to an informational indicator only, given the impact of AMI.[529] The deployment of AMI over the Rate Framework term will diminish the effectiveness of the benchmark and threshold in evaluating FEI's service quality,[530] as it will result in a mix of manual and advanced meters on the gas system with the proportion of manual meters declining as the AMI project progresses.[531] As a result of this decline, the metric may become more susceptible to fluctuations and volatility that may not accurately reflect the overall service quality experienced by FEI's customers.[532] Retaining the metric as an informational indicator (with no benchmark and threshold), the BCUC and interveners will continue to have information regarding meter reading completion rates and can be assured that FEI is providing customers with timely

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527 Exhibit B-1, Application, Appendix C6-1, p. 9.

528 Exhibit B-1, Application, Appendix C6-1, p. 10.

529 Exhibit B-1-2, Updated Application, pp. C-184 to C-185.

530 Exhibit B-1-2, Updated Application, p. C-185.

531 Exhibit B-1-2, Updated Application, p. C-185; Exhibit B-1, Application, Appendix C6-1, p. 14; Exhibit B-12, RCIA IR1 42.2.

532 Exhibit B-12, RCIA IR1 42.2.

and accurate bills.[533] Once the AMI project is fully deployed, FEI proposes to re-assess the metric and determine if it should be re-instated as a measured SQI with adjusted benchmarks and thresholds.[534] FEI therefore recommends that the BCUC approve the proposed modifications to the Meter Reading Accuracy metric.

### (d) Energy Transition Informational Indicators Are an Effective Means of Incorporating FEI's Response to the Energy Transition into the Rate Framework

302. FEI submits that the BCUC should accept FEI's proposed suite of new informational indicators as a reasonable and effective means of reporting on FEI's progress through the energy transition. These informational indicators, as set out in Table C6-6 of the Application reproduced below, respond to feedback from the BCUC and other stakeholders and meaningfully recognize the importance of incorporating FEI's response to the energy transition within the Rate Framework.[535]

**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 |

303. The proposed indicators will be useful for providing context on how FEI is addressing the energy transition.[536] The metric on Scope 1 Emissions aligns with the actions that FEI is taking to reduce the emissions from its own operations, such as reducing third-party line hits and increasing the integrity of its pipelines.[537] The other three metrics align with the actions FEI is

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533 Exhibit B-12, RCIA IR1 42.2.

534 Exhibit B-1-2, Updated Application, p. C-185.

535 Exhibit B-1-2, Updated Application, p. C-186.

536 Exhibit B-1-2, Updated Application, p. C-185.

537 Exhibit B-1, Appendix C6-1, p. 21.

taking to reduce emissions as reflected in the pillars of the Company's Clean Growth Pathway to 2050, which seek to lower emissions by increasing the supply of renewable and low-carbon gases, investing in energy efficiency, advancing low- and no-carbon transportation, and investing in LNG for marine shipping in place of higher-carbon fuels.[538]

304. FEI provides a summary of each indicator below.[539]

- **Scope 1 Emissions:**[540] This indicator will measure the total direct GHG emissions from FEI owned or controlled sources, including from natural gas consumption for compression on FEI's systems and in distribution line heaters, third-party distribution gas line damage incidents, owned vehicle emissions, facility comfort heating, fugitive emissions and major incidents.[541] Consistent with FEI's emphasis on maintaining and improving the integrity of the gas system, this indicator will show FEI's progress towards reducing GHG emissions across the operations of its system.[542]

- **Renewable and Low Carbon Supply Volume:** This indicator will measure the amount of renewable and low-carbon energy that FEI acquires annually. Renewable energy and low-carbon supplies displace conventional natural gas, thus lowering customers' GHG emissions. FEI continues to increase its supply of renewable natural gas and explore the potential of low-carbon gases (such as hydrogen).[543] Reporting renewable and low-carbon energy supplies in aggregate provides a simple, efficient and meaningful way to track FEI's efforts to lower customer emissions.[544]

- **Natural Gas for Transportation Volume:** This indicator measures the total gas consumed by CNG and LNG customers through one overall supply metric.[545] CNG and LNG, whether delivered to stations or used in marine bunkering, are a

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538 Exhibit B-1-2, Updated Application, p. C-185.

539 FEI provides further information regarding each proposed informational indicator in Appendix C6-1 to the Application.

540 See Exhibit B-8, BCSEA IR1 3.2, Attachment 3.2 for a detailed definition of Scope 1 emissions.

541 This includes externally verified Scope 1 GHG emissions as reported to the BC Ministry of Environment for FEI and its LNG operations, and are derived using the IPCC 5th Assessment protocol: Exhibit B-1, Application, Appendix C6-1, p. 21; see also Exhibit B-8, BCSEA IR1 3.3 and 3.5.

542 Exhibit B-1, Application, Appendix C6-1, p. 21.

543 Exhibit B-1, Application, Appendix C6-1, p. 21; see also Exhibit B-4, BCUC IR1 33.6 and Exhibit B-8, BCSEA IR1 3.10.

544 Exhibit B-8, BCSEA IR1 3.9.

545 The informational indicator includes the total gas consumed at CNG and LNG stations by on-road vehicle customers and LNG domestic marine vessel customers: Exhibit B-8, BCSEA IR1 3.10.

replacement for heavy-carbon transport fuels (e.g., diesel) that can be used to advance low- and zero-carbon transportation and reduce GHG emissions.[546]

- **Demand Side Management Energy Savings:** Finally, this indicator measures the lifetime net gas savings from FEI's conservation and energy management programs, where 1 TJ of gas savings is equivalent to approximately 68 tons of carbon dioxide emissions saved.[547] This indicator includes the entire stream of savings from measures supported in a given year, annualized to the present time to show the total value of the stream of savings. This approach most accurately reflects the overall eventual impact of the savings incurred as a result of the measures incented by FEI's DSM programming.[548] FortisBC will continue to separately capture and report on energy savings by type of DSM activity through its DSM Annual Reports.[549]

305. Filing these energy transition informational indicators in each Annual Review offers a number of advantages and benefits, including:[550]

- They will show FEI's progress in a number of areas central to lowering emissions and assist the BCUC and interveners in better understanding how FEI is addressing the energy transition;
- They will provide transparency, a level of accountability, and an incentive for FEI to progress these indicators;
- They are consistent with how other utilities disclose and report their sustainability performance and energy transition impacts; and
- They are easy to understand and implement, and do not require the development of an incentive framework for these metrics.

306. Similar to targeted incentives or Performance Incentive Mechanisms (PIMs), the informational indicators will make these goals more explicit and put a focus on whether the desired outcome is achieved rather than on the specific means to obtain that outcome.[551]

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546 Exhibit B-1, Application, Appendix C6-1, p. 22.

547 As per Environment and Climate Change Canada OpenLCA Clean Fuel Regulation Model: Exhibit B-1, Application, Appendix C6-1, p. 23.

548 Exhibit B-1, Application, Appendix C6-1, pp. 22-23.

549 Exhibit B-9, CEC IR1 16.4.

550 Exhibit B-4, BCUC IR1 33.1.

551 Exhibit B-4, BCUC IR1 44.1.

307. FEI has responded to several IRs from the BCUC and interveners, which further support the proposed suite of indicators. FEI addresses specific areas of focus of the IRs below.

***It is Premature to Track Hydrogen Deployment***

308. Providing a separate metric to track hydrogen deployment would be premature at this stage. FEI is currently in the process of undertaking the British Columbia Gas System Hydrogen Blending Study and Technical Assessment to better understand the readiness and physical limitations of the existing gas system with regard to hydrogen blending delivery. However, the project is not expected to be completed until 2027[552] and hydrogen does not yet form part of FEI's renewable energy supply.[553] FEI will assess whether an SQI tracking hydrogen deployment is reasonable and appropriate after the project is completed.[554]

***Reporting Overall Emissions from All Customers Would Not be Useful***

309. FEI does not consider it appropriate or useful to include an informational indicator on overall emissions from all customers (i.e., Category 11, Scope 3 emissions). Reporting Scope 3 emissions as an informational indicator would provide little value as Scope 3 emission levels tend to change materially from year to year for reasons that are difficult to isolate and beyond FEI's control, such as the weather.[555] Therefore, reporting on Scope 3 emissions would generally not be indicative of FEI's actions to reduce GHG emissions and explanations of changes from year to year would not inform any issue in scope of the Annual Reviews. As such, reporting on this metric and responding to questions in the Annual Reviews will take focus away from more important areas of discussion. In FEI's submission, it is more appropriate and useful to add informational indicators in areas where FEI's activities positively impact GHG emission reductions.[556] For this reason, FEI has proposed a suite of informational indicators that align with its activities related to the energy transition.[557]

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552 Exhibit B-4, BCUC IR1 33.7.

553 Exhibit B-4, BCUC IR1 33.6.

554 Exhibit B-4, BCUC IR1 33.7.

555 Exhibit B-4, BCUC IR1 33.5.1.

556 Exhibit B-4, BCUC IR1 33.5.1.

557 Exhibit B-8, BCSEA IR1 3.7.

***Attaching Benchmarks, Thresholds and Threat of Penalty to the Energy Transition Indicators Would Not be Fair or Reasonable***

310. The proposed energy transition indicators are best presented as informational only, and it would not be fair or reasonable to impose benchmarks, thresholds and penalties to these indicators.

311. First, classifying the indicators as informational only aligns with their underlying purpose, namely, to assist the BCUC and interveners in better understanding how FEI is addressing the energy transition.[558] As discussed above, this has a number of benefits, including transparency, a level of accountability, and an incentive for FEI to progress these indicators.[559]

312. Second, penalties simply do not make sense for these metrics. In the context of SQIs, the rationale for imposing benchmarks, thresholds and a penalty-only regime is that SQIs provide the base line service level that FEI is expected to maintain to ensure that FEI does not compromise service quality to achieve cost efficiencies. This rationale does not hold for the energy transition indicators.[560] The proposed energy transition indicators do not necessarily measure actual service quality and do not conform to the criteria for the design and selection of SQIs.[561] Rather than representing a base line level of service, the proposed suite of indicators will show FEI's progress in achieving a number of beneficial outcomes central to lowering GHG emissions. The energy transition indicators therefore represent metrics which government has supported (e.g., via the *Greenhouse Gas Reduction (Clean Energy) Regulation* or *DSM Regulation*) and that FEI should be incented to improve. It would therefore be inappropriate to impose penalties for failure to achieve a certain value, as any progress towards the targets can only be beneficial and the targets may not ultimately be achievable.[562]

313. Third, it would not be fair or reasonable to impose a penalty regime on the energy transition informational indicators due to the many factors that are outside of the Company's

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[558] Exhibit B-1, Application, Appendix C6-1, p. 20; Exhibit B-4, BCUC IR1 33.1.

[559] Exhibit B-4, BCUC IR1 33.1.

[560] Exhibit B-4, BCUC IR1 33.1.

[561] Exhibit B-1-2, Updated Application, Table C6-1.

[562] Exhibit B-4, BCUC IR1 33.1.

control that influence FEI's performance and the significant increased investment required to achieve performance.[563] For example, FEI does not have control over the policy and regulatory environment governing its activities, the regulatory approvals required to support expenditures in these areas, the pace of development and adoption of low-carbon technologies, or changing market dynamics and consumer preferences that influence customer choices. FEI's ability to achieve progress fundamentally depends on a supportive policy and regulatory environment, as well as favourable market conditions, and it would not be fair to impose penalties given these factors.[564]

314. Fourth, FEI submits that penalties for these metrics would be duplicative of government regulations that seek similar emissions reduction outcomes (e.g., Carbon Tax, Zero Carbon Step Code, BC Low Carbon Fuel Standard, etc.).[565] In short, there is already a regime in place to encourage or mandate GHG emissions reductions. An additional BCUC penalty regime is therefore not needed and risks conflicting with the complex policy framework set by government.

315. Fifth, continued policy uncertainty associated with the energy transition and, in particular, changes to GHG emission reduction policies would make setting targets a difficult exercise and there would be considerable risk that benchmarks and thresholds could become misaligned as policy changes occur. It would be difficult to assess FEI's performance and unfair to impose penalties in these circumstances.

316. Given the factors above, FEI submits that there is no rational foundation or valid ratemaking principle on which the BCUC could impose a penalty regime on the energy transition informational indicators. In FEI's submission, imposing penalties for failure to achieve benefits up to a benchmark that is not within FEI's control to achieve would violate the fair return standard.

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563 Exhibit B-1, Application, Appendix C6-1, p. 20; see also Exhibit B-14, BCOAPO IR2 18.2.

564 Exhibit B-4, BCUC IR1 33.1.

565 Exhibit B-4, BCUC IR1 33.1.

***Proposed Metrics are Preferable to Targeted Incentives or PIMs***

317. FEI also submits that its proposed energy transition informational indicators are preferable to targeted incentives. The major difference between informational indicators and targeted incentives relates to the financial incentives associated with the targeted incentives. Assuming they are properly designed, the financial incentives under targeted incentives are intended to encourage the utility to expedite its efforts to reach the targeted outcomes. While incentives to achieve the beneficial outcomes make sense and have advantages, targeted incentives may come with a number of challenges, including:

- **Disproportionate Incentives:** If not designed properly, targeted incentives can provide rewards that are too high relative to customer benefits or utility costs to achieve the targeted outcome. Financial incentives can also be inappropriate if they are based on volatile or uncertain factors, especially factors that are primarily beyond a utility's control.

- **Unintended Consequences:** Providing financial incentives for selected utility performance areas may encourage utility management to shift attention away from other performance areas that do not have incentives. This creates a risk that performance in the areas without incentives will deteriorate.

- **Uncertainty:** Significant and frequent changes to the design of the targeted incentives (metrics, targets, incentives) create uncertainty for utilities, thereby inhibiting efficient utility planning and encouraging utilities to focus on short-term solutions.

318. Additionally, the BCUC's denial of FEI's proposed targeted incentives in the MRP Decision illustrates the significant challenges in developing such incentives. In the MRP Decision (pages 162-163), the BCUC stated that it would assess the merits of the proposed targeted incentives based on the following principles:

- The incentives should relate to activities that would otherwise not be undertaken by the utility as part of its normal business;

- The incentives should entail stretch targets that are not readily achievable without significant additional or innovative efforts on the part of the utility itself, as opposed to the utility simply benefiting from third party contributions or legislative changes facilitating the achievement of targets;

- The achievement of targets should provide a demonstrable benefit for ratepayers; and
- The amount of the reward should be reasonable and proportional to the amount of effort required to achieve the award.

319. The BCUC determined that six of the seven proposed targeted incentives did not require FortisBC to go "above and beyond" its normal business. The BCUC was not persuaded that FEI's and FBC's other proposed incentive mechanisms would represent performance above or beyond the ordinary course of business. With respect to the seventh, "Growth in Renewable Gas Incentive", the BCUC doubted the effort required, stating that it was "concerned about changes in the renewable gas market and legislative changes to the GGRR which may make it easier for FEI to achieve its renewable targets over the next five years." While FEI disagrees with the analysis above, it illustrates the challenge in designing targeted incentives, especially given the continued market and policy uncertainty and disagreement about what activities, programs or initiatives can be considered to be "above and beyond" the normal course of utility business.[566]

320. Given these challenges, FortisBC submits that its proposed suite of energy transition informational indicators for FEI is preferrable to targeted incentives at this time.

321. Nonetheless, the Rate Framework is designed so that PIMs or targeted incentives could be added onto the Rate Framework, beginning in any year of the term or as part of the next iteration of the plan. If the BCUC is interested in exploring targeted incentives, FortisBC could file a proposed set of incentives in a standalone application or as part of a second phase to this proceeding. Specifically, FortisBC would explore and develop potential incentives and, based on the results of this assessment process, determine which incentives – and whether for FEI or FBC or both – to bring forward to the BCUC.[567] The Companies would require a minimum of four months to develop a proposal.[568]

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[566] Exhibit B-2, BCUC Panel Supplemental IR 5.

[567] Exhibit B-4, BCUC IR1 44.5.

[568] Exhibit B-2, BCUC Panel Supplemental IR 5.

## C. FBC's Proposed Service Quality Indicators Build Off Of and Enhance Those of the Current MRP

322. FBC proposes seven SQIs with benchmarks and thresholds, and five informational SQIs. Similar to FEI, FBC's proposed suite of SQIs is broad and balanced, as well as being useful and appropriate for monitoring FBC's performance during the proposed Rate Framework term. For each SQI, FBC has provided detailed information in Section C6.4 and Appendix C6-2 to the Application, including a description of the methodology used to determine the proposed benchmark and threshold levels, the metric's historical performance, and the benchmark and threshold levels during the Current MRP term. For the Rate Framework, FBC is proposing the following changes:

- Adjust the benchmarks and thresholds of three SQIs to reflect their recent historical performance; and
- Change the name of the "Meter Reading Accuracy" metric to the "Meter Reading Completion" metric and change it to an informational indicator.[569]

323. Table C6-7 of the Application provides a comparison of FBC's current and historical SQIs, reflecting the proposed changes from the Current MRP.[570] Highlighted cells indicate the changes proposed for the Rate Framework term.

[569] Exhibit B-1-2, Updated Application, p. C-186.

[570] Exhibit B-1-2, Updated Application, p. C-187.

**Table C6-7: Comparison of FBC Current and Proposed SQIs**

| Safety Indicators | | Current Benchmark | Current Threshold | *Proposed* Benchmark | *Proposed* Threshold |
|---|---|---|---|---|---|
| Annual results | Emergency Response Time | >= 93% | 90.6% | >=93% | 90.6% |
| 3 Year rolling average | All Injury Frequency Rate | <= 1.64 | 2.39 | <=1.31 | 2.56 |
| **Responsiveness to Customer Needs Indicators** | | | | | |
| Annual results | First Contact Resolution | >= 78% | 74% | >=78% | 74% |
| Annual results | Billing Index | <= 3 | 5 | <=3 | 5 |
| Annual results | Meter Reading Completion | >= 98% | 96% | Informational | Informational |
| Annual results | Telephone Service Factor | >= 70% | 68% | >=70% | 68% |
| Annual results | Customer Satisfaction Index | Informational | Informational | Informational | Informational |
| Annual results | Average Speed of Answer | Informational | Informational | Informational | Informational |
| **Reliability Indicators** | | | | | |
| Annual results | System Average Interruption Duration Index - Normalized | 3.22 | 4.52 | 3.24 | 4.71 |
| Annual results | System Average Interruption Frequency Index - Normalized | 1.57 | 2.19 | 1.64 | 2.25 |
| Annual results | Generator Forced Outage Rate | Informational | Informational | Informational | Informational |
| Annual results | Interconnection Utilization | Informational | Informational | Informational | Informational |

### (a) Adjustments to FBC's All Injury Frequency Rate Are Reasonable and Appropriate

324. FBC's proposal to update the benchmark for the AIFR SQI should be approved to reflect the Company's performance during the Current MRP, which was better than the currently approved benchmark of 1.64.[571] FBC proposes a lower benchmark of 1.31 (down from the previous 1.64) based on the most recent three-year rolling average of the annual results from 2021 to 2023.[572]

325. FBC also proposes to increase the threshold to 2.56 (up from the previous 2.39) to recognize the inherent volatility in AIFR results.[573] The proposed threshold is calculated using the

[571] Exhibit B-1-2, Updated Application, p. C-188.

[572] Exhibit B-1-2, Updated Application, p. C-188.

[573] Exhibit B-1-2, Updated Application, p. C-188; Exhibit B-4, BCUC IR1 34.6.

same methodology used to establish the threshold under the 2014-2019 PBR Plan; namely, setting the threshold 2 standard deviations from the recent 10-year history of the three-year rolling averages of the metric's annual results.[574] This method accounts for sudden increases in the metric – which can be influenced by a relatively low number of injuries in any year – that then take an extended period to correct as FBC works to address the driver behind the increase.[575] As FBC's corporate safety performance targets are set to meet the benchmark, and not the threshold, the proposed increase in the AIFR SQI threshold will not contribute to a degradation in safety performance.[576]

326. FBC's AIFR metric was not adjusted as part of the 2020-2024 MRP Application, as performance was volatile during the 2014-2019 PBR Plan term and a longer period of time was needed to confirm that performance had stabilized before changing the benchmark and threshold.[577] As FBC's performance has been maintained over the Current MRP and the existing AIFR benchmark and threshold were last set in 2015 based on data from as far back as 2004, FBC submits that updating the benchmark and threshold levels is now reasonable and appropriate.

327. As discussed in Part Eight, Section B(a), FBC is also exploring the addition of a leading safety indicator to complement the AIFR, which is a lagging indicator for the same reasons as FEI.

### (b) Modifications to FBC's Meter Reading Accuracy SQI Balance Stable Performance and Customer Value

328. FBC submits that the BCUC should accept the following proposed modifications to the Meter Reading Accuracy SQI: (1) changing the metric's name to the "Meter Reading Completion" SQI to more accurately describe what the metric is measuring; and (2) changing the metric to an informational indicator (with no benchmark and threshold).[578] These proposed modifications are

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574 Exhibit B-4, BCUC IR1 34.4; Exhibit B-1-2, Updated Application, p. C-188, fn. 132.

575 Exhibit B-4, BCUC IR1 34.6.

576 Exhibit B-4, BCUC IR1 34.6.

577 As explained in the response to BCUC IR1 34.3 (Exhibit B-4), FortisBC considers adjustments to SQI benchmarks and threshold levels when it prepares its rate framework applications based on, in particular, five factors listed in the 2014-2019 PBR Decision. See Decision and Order G-139-14, p. 150. Online: https://www.ordersdecisions.bcuc.com/bcuc/decisions/en/111635/1/document.do.

578 Exhibit B-1-2, Updated Application, p. C-188.

the same as those discussed above in Part Eight, Section B(c) with respect to FEI. In the case of FBC, however, the reason for changing the metric to an informational indicator is responsive to stakeholder feedback that comparing the number of meters that are read to those scheduled to be read may have become less valuable given the consistency that AMI has brought to meter reading completion. This is reflected in the fact that FBC has maintained 99 percent performance accuracy over the Current MRP term.[579]

329. Nonetheless, FBC's proposal to continue to report on the Meter Reading Completion metric as an informational indicator is reasonable because FBC did not achieve 100 percent performance accuracy during the Current MRP term and FBC recognizes the value customers place on receiving a timely and accurate bill. Continued visibility regarding meter reading completion will help ensure FBC remains focused on obtaining meter readings in both automated and the remaining manual[580] reading situations.[581]

330. FBC therefore recommends that the BCUC approve the proposed modifications to the Meter Reading Accuracy metric.

**(c) Adjustments to FBC's System Average Interruption Duration Index (SAIDI) and System Average Interruption Frequency Index (SAIFI) SQIs Are Appropriate and Maintain Acceptable Levels of Service Quality**

331. To update for the most recent actual results, FBC submits that the BCUC should accept the following adjustments to the SAIDI and SAIFI benchmarks and thresholds:

- For SAIDI, adjusting the benchmark to 3.24 (an increase from the previous 3.22) and the threshold to 4.71 (an increase from the previous 4.52); and
- For SAIFI, adjusting the benchmark to 1.64 (an increase from the previous 1.57) and the threshold to 2.25 (an increase from the previous 2.19).

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579 Exhibit B-1, Application, Appendix C6-2, p. 10.

580 Some AMI meters are not automatically read, either because a customer has requested the radio be turned off or due to the location of the meter not allowing for a proper signal to be received. Further, failures related to weather and system issues can still occur: Exhibit B-1-2, Updated Application, p. C-188.

581 Exhibit B-1, Application, Appendix C6-2, p. 10.

332. The proposed adjustments to both the SAIDI and SAIFI metrics incorporate the recent 2021 to 2023 results and have been calculated using the same methodologies approved by the BCUC in the 2014-2019 PBR Plan Decision and Order G-139-14. The proposed benchmarks are based on the average of the most recent three years of SAIDI/SAIFI results and the proposed thresholds are based on statistical analyses (i.e., standard deviation) of the SAIDI/SAIFI historical results from 2010 to 2023.[582] FBC submits that these methodologies remain appropriate as SAIDI and SAIFI outcomes are significantly affected by external factors (e.g., severe weather events) which cause performance variability and ultimately impact the proposed benchmarks and thresholds. By retaining a consistent methodology, FBC is able to analyse trends in it operations, the environment and external factors which, in turn, enables it to: (1) detect changes in service quality; and (2) make decisions that inform future system planning that mitigates associated reliability risks in response to its current operating environment.[583] For example, FBC has implemented policies to turn off reclosing, as well as wildfire specific trip settings for periods of high wildfire risk, in response to increasing wildfire risk. These policies exemplify operational changes undertaken by FBC to mitigate reliability risks and maintain service quality in response to its current operating environment, as informed by SAIDI and SAIFI performance.[584]

333. FBC also recommends continuing to normalize the results of the SAIDI and SAIFI metrics as it does not consider there to be value in providing SAIDI and SAIFI results for all events (i.e., Major Events in addition to normalized SAIDI and SAIFI results). FBC already provides Major Event Day descriptions, causes, and impacts in Annual Reviews, including customer outage hours lost, which FBC submits is more informative than including Major Events in the SAIDI and SAIFI SQI results.[585] Moreover, Major Events vary significantly from year to year and abnormal events that occur in random locations and are outside of FBC's control do not necessarily reflect the reliability of the service provided by FBC.[586]

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582 Exhibit B-1-2, Updated Application, p. C-189.

583 Exhibit B-4, BCUC IR1 35.2.

584 Exhibit B-4, BCUC IR1 35.2; Exhibit B-1, Application, Appendix C6-2, p. 14.

585 Exhibit B-4, BCUC IR1 35.1.

586 Exhibit B-4, BCUC IR1 35.1.

334. The proposed adjustments to the SAIDI and SAIFI thresholds and benchmarks reflect FBC's current operating environment, are appropriate, and maintain an acceptable level of service quality at an acceptable level of cost to customers. FBC therefore recommends that they be accepted by the BCUC as proposed.

## PART NINE: POLICIES AND SUPPORTING STUDIES

### A. Overview

335. FortisBC requests that the BCUC approve the following based on supporting studies that will contribute to the calculation of the revenue requirements for the Rate Framework term:

- Updated depreciation and net salvage rates based on the Depreciation Studies filed as Appendices D2-1 and D2-2 to the Application (2022 Depreciation Studies);
- Modifications to the approved Lead-Lag days based on the Lead-Lag Studies filed as Appendices D3-1 and D3-2 to the Application (2023 Lead-Lag Studies);
- The methodologies for allocating common corporate service costs from Fortis Inc. and FortisBC Holdings Inc. to each of FEI and FBC, as supported by the Corporate Services Allocation Report filed as Appendix D4-1 to the Application (2023 Corporate Services Study); and
- Updated capitalized overhead rates based on the Capitalized Overhead Studies filed as Appendices D5-1 and D5-2 to the Application (2023 Capitalized Overhead Studies).

336. As detailed in the subsections below, FortisBC submits that the record in this proceeding supports the approval of the above.

### B. FortisBC's Updated Depreciation and Net Salvage Rates Should be Approved

337. FortisBC's updated depreciation rates should be approved as they properly reflect the useful lives of its assets and a fair allocation and recovery of depreciation expense between current and future ratepayers. The proposed depreciation rates are calculated by an independent expert, Larry Kennedy of Concentric, and are supported by Concentric's 2022 Depreciation Studies.

338. Concentric's method of calculating FortisBC's depreciation rates is consistent with FortisBC's 2017 Depreciation Studies and industry practice. In summary, Concentric estimated

the depreciation rates using the straight-line method and the Average Life Group procedure applied on a remaining life basis for each depreciable group of assets. Concentric developed the life and net salvage rates using various statistical methods such as Iowa-type survivor curves and "goodness of fit" criterion, a review of actual retirement activity, operational interviews with FEI and FBC staff, and informed judgement based on their experience in the gas and electricity industries. The process followed by Concentric involves the determination of an estimated average service life for each asset class and whether certain assets have depreciation surpluses or deficits, both of which drive the recommended depreciation rates. Straight-line depreciation is developed for the assets in a particular class beginning with the original cost, the estimated average and remaining service life characteristics, and accounting for the accumulated depreciation already booked in that class.[587]

339. Implementation of the rates from the 2022 Depreciation Studies results in a net increase of aggregate depreciation and net salvage expense of approximately $2.0 million per year for FEI and $4.3 million per year for FBC, which represents a 0.02 percent and 0.20 percent overall increase to the composite depreciation rate, respectively, compared to the current approved rates.[588] The adoption of the depreciation rates as outlined in the 2022 Depreciation Studies for FEI and FBC is necessary in order to properly reflect the assets' useful lives and a fair allocation and recovery of depreciation expense between current and future ratepayers.

340. In the Application, FortisBC discusses the categories that account for the majority of the forecast change in depreciation expense for FEI and FBC.[589] In the subsections below, FortisBC addresses the main topics arising in IRs.

**(a) There is No Evidence to Justify Accelerated Depreciation Due to the Energy Transition**

341. FEI submits that there is no basis on which to incorporate an impact of the energy transition in setting depreciation rates as there is no evidence at this time of a tangible and

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[587] See Exhibit B-1-2, Updated Application, Tables D2-1, D2-2, D2-5 and D2-6.

[588] Exhibit B-1-2, Updated Application, pp. D-3 and D-18.

[589] Exhibit B-1-2, Updated Application, pp. D-7 to D-12 and D-20 to D-22.

foreseeable change in the useful life of FEI's assets due to the energy transition.[590] FEI highlights three points below as to why FEI's depreciation rates should not be accelerated due to the energy transition.

342. First, the extent to which the impact of the energy transition will change the useful life of FEI's assets is unknown at this time. While climate change legislation may have impacts on natural gas usage, there is simply no evidence at this time of any date by which FEI's assets will no longer be used and useful due to climate change legislation or otherwise. This conclusion is supported by Concentric which explicitly considered the possible impacts of the energy transition, including obsolescence due to government-enacted legislation, change and other forms of obsolescence on FEI's assets. Concentric concluded that there remains insufficient information to support adjusting FEI's depreciation rates:[591]

> At this time, the future impacts of the relevant climate change legislation have not been sufficiently studied, nor have specific programs been put into place that would provide the indications of the changes in utilization levels. As the energy transition continues to evolve, a change in depreciation methodology may or may not be required in the future, depending on the impact that the energy transition has on the existing gas asset system.

In reaching this conclusion, Concentric reviewed other North American jurisdictions to determine the extent to which the energy transition developments impacted depreciation rates. Concentric did not identify any jurisdictions that have adopted economic planning horizons to shorten the average service life of assets when setting depreciation rates for natural gas distribution utilities.[592]

343. Second, FEI continues to expect its assets to be used for the long-term and expects asset retirements to follow historical trends based primarily on physical life characteristics, not any economic planning horizon due to the energy transition.[593] As supported by its 2022 Long-Term Gas Resource Plan, FEI continues to invest in decarbonization measures which support the long-

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590 Exhibit B-1-2, Updated Application, Section B3.2.2.4 (pp. B-49 to B-50) and p. D-2; Exhibit B-4, BCUC IR1 39.3.

591 Exhibit B-1, Application, Appendix D2-1, p. 3-4.

592 Exhibit B-4, BCUC IR1 39.2, 39.5, 39.6 and 39.7.

593 Exhibit B-4, BCUC IR1 39.3.

term use of the gas system. For example, renewable and low carbon gases can lower emissions by replacing natural gas while investments in demand side measures can reduce gas use overall.[594] Consistent with the 2022 Long-Term Gas Resource Plan, it is in the public interest to maintain a role for the existing gas delivery system in BC's energy future as FEI's assets can play a critical role in the transition towards a lower carbon economy, such as through the development of alternative products and services that use FEI's existing assets. In this regard, the continued use of FEI's assets is supported by BC's Clean Energy Strategy, Powering Our Future, where the BC Government concludes that the gas system will play an important role for many years to come, including to support the resiliency of BC's energy system:[595]

> Not all energy needs can be met through electricity and utility-scale batteries. Liquid and gas fuels will remain essential for the foreseeable future, especially in areas like long-haul transportation, certain industrial processes, and in remote communities not connected to the electricity grid. BC's gas system will also continue to play an important role for many years to come in order to maintain system resiliency, meet peak energy demand and provide home heating in colder climates.
>
> ….
>
> Maintaining BC's existing gas infrastructure is necessary to ensure BC can deliver clean fuels as production ramps up in the years ahead, in addition to supporting the resiliency of BC's energy system. [Emphasis added.]

The above statement underscores that there is no basis to set any economic planning horizon for FEI's assets. FEI's assets will be used for many years to come and can play a critical role in the delivery of renewable and low carbon energy in BC.

344. Third, shortening the average useful lives of FEI's assets without adequate support would adversely impact customers and create intergenerational inequity. Shortening the average useful lives would increase depreciation rates and increase FEI's delivery rates (all else equal).[596]

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[594] Exhibit B-4, BCUC IR1 39.3.

[595] Exhibit B-4, BCUC IR1 39.3; https://www2.gov.bc.ca/assets/gov/farming-natural-resources-and-industry/electricity-alternative-energy/community-energy-solutions/powering_our_future_-_bcs_clean_energy_strategy_2024.pdf.

[596] Exhibit B-4, BCUC IR1 39.7.

Further, an unwarranted and unsupported shortening of the lives of FEI's assets for depreciation purposes would lead to future customers not paying their fair share of the cost of assets that will be used and useful in the future.[597] FEI explained the impacts:[598]

> Shortening amortization periods of assets prematurely would create intergenerational inequity, whereby customers today pay more than their fair share of the depreciation of assets. Shortening the amortization periods for FEI's assets will also increase customers' rates, reducing natural gas price competitiveness and energy affordability. The higher rates could then jeopardize FEI's ability to develop low-carbon energy products and services that leverage existing assets, while also reducing emissions.

Given the adverse impacts of prematurely shortening asset lives, any determination that amortization periods should be shortened needs to be supported by strong evidence of a tangible and foreseeable change in the expected average useful lives of the assets. There is, however, no such evidence.

345. Finally, notwithstanding the above points, due to the uncertainty created by the energy transition, Concentric intentionally limited life extension estimates on long-lived asset groups until more information becomes known about the future of FEI's system.[599] In addition, as part of the next depreciation study, FEI will again ask Concentric to review applicable legislation and the impact on the future growth and retirement programs on FEI's energy system, and specifically the impact on the useful life of FEI's natural gas distribution assets. More may be known at that time about the impact of climate change legislation on the future of conventional natural gas.[600] FEI submits that this represents a reasonable and measured approach to the uncertainty posed by the energy transition. FEI submits that any more drastic step, such as accelerating depreciation due to the energy transition, is not supported by evidence and would be unreasonable at this time.

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[597] Exhibit B-4, BCUC IR1 39.3.

[598] Exhibit B-8, BCSEA IR1 7.4.

[599] Exhibit B-4, BCUC IR1 39.2.

[600] Exhibit B-4, BCUC IR1 39.3.

**(b) Increased Service Lives for LNG Gas Structures and Equipment at Tilbury Are Reasonable**

346. FEI's proposed depreciation rates with respect to LNG Gas Structures and Equipment at Tilbury are reasonable.[601] The following proposals are based on the recommendations of Concentric and reflect changes since the 2017 Depreciation Study:

- With respect to LNG Gas Structures at Tilbury, Concentric recommends a 28-year life, which represents an increase from the 25-year service life recommended in the 2017 Depreciation Study. However, the associated true-up for the depreciation rate over the remaining life of the assets results in an **increase** of approximately 1.5 percent in the depreciation rate.[602]

- With respect to LNG Gas Equipment at Tilbury, Concentric recommends a 57-year life, which represents an increase from the 40-year service life recommended in the 2017 Depreciation Study. However, the associated true-up for the depreciation rate over the remaining life of the assets results in an **increase** of 0.48 percent in the depreciation rate.[603]

FEI submits that the increase in service life for both LNG Gas Structures and Equipment at Tilbury is appropriate for the two reasons below.

347. First, the reason for the updated service lives recommended by Concentric is the large new additions that these asset classes have experienced in the past five years (e.g., the Tilbury 1A facility) that replace the existing assets and result in a longer life. FEI expects LNG facilities to remain used and useful through the energy transition as they remain highly valuable and versatile assets. For example, additions associated with the Tilbury 1A facility, which was constructed pursuant to Direction No. 5 to the BCUC to serve the transportation market with LNG, will continue to help lower GHG emissions for the long term. Further, with the recent approval of the Tilbury Marine Jetty, which will allow greater access to LNG for the marine shipping market, and the approval of a grant to attract an LNG-fueled bunkering vessel, FEI expects this market to grow.[604]

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601 Exhibit B-1, Application, Appendix D2-1, p. 3-7.

602 Exhibit B-1-2, Updated Application, p. D-8.

603 Exhibit B-1-2, Updated Application, p. D-8.

604 Exhibit B-4, BCUC IR1 40.3.

348. Second, the service life expectations are consistent with other LNG facilities in Canada, and FEI's operational staff and subject matter experts agree with Concentric that the recommended lives for LNG Gas Structures and Equipment at Tilbury is appropriate.[605] As Concentric explained:[606]

> Based on Concentric's discussions of the service life expectations for these accounts with FEI management and engineering staff, and also described in the Depreciation Study Report, it was noted that the majority of the investment in these accounts were new and should have similar life characteristics to FEI's Mt. Hayes LNG facility. There was no expectation by FEI at that time that the operating environment for LNG facilities would be negatively affected by the energy transition; therefore, a life extension was considered appropriate.
>
> Concentric also notes that this is consistent with other LNG facilities in Canada (e.g., a regulated LNG facility in Quebec) where significant expansion has resulted in similar life estimates and no consideration of economic planning horizon constraints.

349. FEI therefore submits that Concentric's average service life estimates are reasonable.

350. Concentric has also explained why the depreciation rate for these assets increased despite an increase in the average service life.[607] In the case of LNG Gas Structures and Equipment at Tilbury, the life rates decreased as a result of increasing the service lives, but this was more than offset by the true up related to the Amortization of Reserve Differences (ARD), which is the main driver of the increase in the overall life rate.[608] The ARD true up between the actual accumulated depreciation and the calculated theoretical accumulated depreciation enables the amount of accumulated depreciation expected for an asset account to be corrected over its remaining life, thereby decreasing the risk that the original cost of the asset will be under- or over-recovered during its service life.[609] The components of the depreciation rates for the Tilbury assets are shown in the table below.[610]

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605 Exhibit B-1, Application, Appendix D2-1, p. 3-7.

606 Exhibit B-4, BCUC IR1 40.3.

607 Exhibit B-4, BCUC IR1 40.1.

608 Exhibit B-4, BCUC IR1 40.1.

609 Exhibit B-13, BCUC IR2 51.1 and Attachment 51.1.

610 Exhibit B-4, BCUC IR1 40.2. For further explanation, see Exhibit B-13, BCUC IR2 51.2.

| Asset Account | Previous Life Rate | Proposed Life Rate | Previous ARD Rate (Life) | Proposed ARD Rate (Life) | Previous Total Life Rate | Proposed Total Life Rate |
|---|---|---|---|---|---|---|
| (1) | (2) | (3) | (4) | (5) | (6) | (7) |
| 442.00 LNG Gas Structures - Tilbury | 4.00% | 3.57% | -1.80% | 0.13% | 2.20% | 3.70% |
| 443.00 LNG Gas Equipment - Tilbury | 2.50% | 1.75% | -1.27% | -0.04% | 1.23% | 1.71% |

351. These types of shifts in total depreciation expense between studies are normal for utilities using remaining life depreciation or the whole life with a remaining life true up method. As true ups are an expected and required component of the depreciation study process, it is normal for life and net salvage estimates to be revised over time as more information becomes available. This is why depreciation studies need to be carried out regularly.[611] Ultimately, FEI has demonstrated the appropriateness of updating the service lives for LNG Gas Structures and Equipment at Tilbury and the resulting change in the depreciation rate.

### (c) Increased Depreciation Rate for FBC's Light Duty Vehicles is Reasonable

352. The increase in the depreciation rate for Light Duty Vehicles (392.10) of 6.38 percent is reasonable. As explained by Concentric, the recommended 12-year service life from the 2017 Depreciation Study remains appropriate because it: (1) continues to be consistent with the historical retirement activity; (2) falls within the typical range of lives used for this account by peer utilities, which is between 6 and 14 years; and (3) is supported by operational staff and management who consider it to be a good representation of historical life and future expectations for this account.[612] However, as shown in the table below, the true-up of the change in the ARD rate over the remaining life of the assets results in an increased depreciation rate.

| Asset Account | Previous Life Rate | Proposed Life Rate | Previous ARD Rate (Life) | Proposed ARD Rate (Life) | Previous Total Life Rate | Proposed Total Life Rate |
|---|---|---|---|---|---|---|
| (1) | (2) | (3) | (4) | (5) | (6) | (7) |
| 392.10 Light Duty Vehicles | 8.33% | 8.33% | -3.54% | 2.84% | 4.79% | 11.17% |

611 Exhibit B-13, BCUC IR2 51.3.

612 Exhibit B-1-2, Updated Application, p. D-21.

353. Similar to the LNG Gas Structures and Equipment at Tilbury, FBC's Light Duty Vehicles have seen significant investment since the previous depreciation study. Specifically, since 2017, there have been additions of over $3 million, representing 64 percent of the total plant in service as of December 31, 2022. According to Concentric, these additions have been depreciated at a rate of 4.79 percent, which includes a reduction of 3.54 percent due to the ARD rate true up embedded in the total life depreciation rate. The accruals at this reduced rate have eliminated the need for a true up, and this account is now under-accrued. As such, there is an increase in the depreciation expense related to the true up to 2.84 percent in the current depreciation rate.[613]

**(d) Increases in Net Salvage Rates for FEI and FBC Are Reasonable**

354. In the 2022 Depreciation Studies, Concentric also recommends the following updates to the net salvage rates for FEI and FBC, which FortisBC submits are just and reasonable:

- For FEI, an average composite net salvage rate of 0.78 percent which represents an increase from 0.71 percent using the current approved rates. The increase of 0.07 percent recommended by Concentric is primarily driven by the increases in FEI's actual cost of removal activities, as well as the upward and downward changes in the net salvage percentage for various asset classes. This change results in an increase to net salvage expense of approximately $5.9 million.[614]

- For FBC, an average composite net salvage rate of 0.77 percent, which represents an increase from 0.71 percent using the current approved rates. The increase of 0.06 percent is primarily driven by the increases in FBC's actual cost of removal activities, as well the upward and downward changes in the net salvage percentage for various asset classes. This change results in an increase to net salvage expense of approximately $1.2 million.[615]

355. FortisBC addresses the following areas canvassed in IRs below.

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[613] Exhibit B-13, BCUC IR2 51.2.

[614] Exhibit B-1-2, Updated Application, p. D-12.

[615] Exhibit B-1-2, Updated Application, p. D-22.

***Increase in Net Salvage Rates for FEI's Services and Distribution Mains***

356. FEI's proposed increases in the net salvage rates for Services and Distribution Mains is reasonable and supported by Concentric. Concentric has recommended increasing the net salvage rate for Services (473-00) to negative 85 percent, representing an increase from the negative 70 percent recommended in the 2017 Depreciation Study, and to negative 30 percent for Distribution Mains (475-00), representing an increase from the negative 25 percent.[616] This update is driven by a significant amount of net salvage activity caused by higher inflation and increased third-party requests to relocate and remove existing assets to accommodate their proposed infrastructure in the past five years.[617] In particular, there have been abandonment costs for Distribution Mains and Distribution Services that were retired from active service across the entire FEI service territory.[618] FEI has provided the net salvage activity that occurred with respect to these asset categories from 2018 to 2022, which demonstrate the basis for the proposed increase in the associated net salvage rates.[619]

***Moderate Increases to FBC's Net Salvage Collections Are Reasonable***

357. FBC's proposal to incrementally increase net salvage collections is reasonable. FBC was first approved to collect net salvage costs over the lives of its assets starting in 2016 and has increased its net salvage collection where required in each subsequent depreciation study. While FBC's net salvage requirements are still above what it is currently seeking in this depreciation study, FBC submits that moderate increases over time are preferrable to increasing net salvage collections to the historical indications because this approach avoids significant rate impacts in the near term.

358. In the table below, FBC summarizes the proposed increases in net salvage collections:[620]

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616 Exhibit B-1-2, Updated Application, p. D-17.

617 Exhibit B-4, BCUC IR1 41.1.

618 Exhibit B-13, BCUC IR2 52.1.

619 Exhibit B-4, BCUC IR1 41.1.

620 Exhibit B-4, BCUC IR1 41.3.

| Asset Category | Historical Net Salvage | Approved Net Salvage | Recommended Net Salvage |
|---|---|---|---|
| Line Transformers (Class 368.00) | -37% | -25% | -30% |
| Poles, towers and fixtures (Class 364.00) | -126% | -35% | -40% |
| Poles, towers and fixtures (Class 355.00) | -106% | -35% | -40% |
| Conductors and devices (Class 356.00) | -117% | -30% | -35% |
| Substation Equipment (Class 353.00) | -69% | -25% | -30% |

359. Concentric attributed the increase in the negative net salvage percent rate in the asset categories to large cost of removal amounts in recent years, which led to large net salvage percentages.[621] As FBC only started to collect net salvage costs over the lives of its assets in 2016, this increase has resulted in FBC's current net salvage collection being behind the salvage requirement based on historical indications.[622]

360. As noted above, the recommended net salvage percentage increases are moderate – all at 5 percent – and should be accepted. Concentric affirmed that it is appropriate to increase the net salvage estimate in a manner that "minimize[s] intergenerational [in]equities and also give[s] consideration to moderation and gradualism." As Concentric explained, "Moderation and gradualism are considered when changing net salvage estimates to ensure that indications of historical net salvage are sufficiently established before making large changes."[623] Among other factors, increasing net salvage collection immediately to what is indicated by the historical data would not account for the possibility that increases in some accounts could be offset by future decreases in other accounts when future studies are completed.[624]

361. Further, the historical time period that FBC has been collecting net salvage over the lives of its assets is limited and is only one factor in setting net salvage rates.[625] As noted above,

621 Exhibit B-4, BCUC IR1 41.3.

622 Exhibit B-17, ICG IR2 3.1.

623 Exhibit B-13, BCUC IR2 52.2.

624 Exhibit B-17, ICG IR2 3.2.

625 Exhibit B-17, ICG IR2 3.1.

increasing the net salvage collection immediately to match historical indications would result in significant rate impacts to customers, which FBC submits is unacceptable at this time. In contrast, a gradual and moderate increase in net salvage collection over time is more reasonable and consistent with Concentric's recommended approach.

362. FortisBC therefore submits that the gradual increase of net salvage collection through periodic review within depreciation studies is more reasonable and appropriate for customers instead of an immediate increase in customer rates, either through larger increases to net salvage rates or through a separate deferral account with amortization over several years.[626]

363. FBC will continue to monitor its current and long-term net salvage requirements, which are analyzed by Concentric when a new study is performed. Increases to net salvage rates may be required in future studies if the current trend continues;[627] however, when considering affordability for customers as part of the Rate Framework, FBC's proposed increases are more reasonable.

**(e) The Timing of Next Depreciation Study for FEI Should Be No Earlier Than 2027**

364. FortisBC's intention to file the next depreciation study for FEI in 2028 or 2029, or possibly earlier in 2027 to coincide with the end of the proposed Rate Framework term, is reasonable. FortisBC does not see any advantages to filing a new depreciation study earlier than 2027 for the following reasons.

365. First, the proposed timing reflects the typical timing of filing a new depreciation study every five years. Five years is sufficient in length to detect long-term trends and changes to assets' service lives. Second, it is unlikely that noticeable changes to asset lives will be observed in a shorter timeframe than proposed. Third, while FortisBC would consider performing a new depreciation study earlier than 2027 if there are large, anticipated changes in retirement

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[626] Exhibit B-17, ICG IR2 3.2.

[627] Exhibit B-4, BCUC IR1 41.3.

patterns, net salvage requirements, or technical obsolescence, this is unlikely to occur in the upcoming three to five years.[628]

366. Assuming the Rate Framework term ends in 2027, there may nonetheless be advantages to filing a new depreciation study at that time, as the study would reflect the most current information available at the time to inform preparation of the next rate framework application. This approach would, however, result in additional costs to customers. For context, the cost for Concentric (or another depreciation expert) to complete a study is approximately $125,000, as well as the increased regulatory requirements and costs to review the study's results and recommendations.[629] In FortisBC's view, the benefit of one or two years of new information would be far outweighed by the cost and time to undertake another study.

## C. Lead-Lag Studies Support Updated Lead-Lag Days

367. FortisBC submits that its proposed updated lead-lag days as determined in the 2023 Lead-Lag Studies should be approved. The 2023 Lead-Lag Studies provide a representative calculation of FEI's and FBC's cash working capital requirements that will be used starting in 2025 and in future rate applications until another lead-lag study is performed.[630] The 2023 Lead-Lag Studies analyze the timing differences between when FEI and FBC provide a service and when they receive payment for that service (revenue lag), and the time between when they receive a service and subsequently make payment for that service (expense lead). The difference between the total revenue lag and total expense lead is the net lag. The net lag, or updated lead-lag days, is then used to calculate the Companies' cash working capital requirements.[631]

368. The lead-lag days approved by the BCUC in the MRP Decision for FEI and FBC are based on lead-lag studies using actual data from 2017 and are due to be updated. In the MRP Decision, the BCUC stated that it would be appropriate to update FEI's and FBC's lead-lag days in 2025,

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628 Exhibit B-4, BCUC IR1 39.1.

629 Exhibit B-4, BCUC IR1 39.1.

630 Exhibit B-1-2, Updated Application, p. D-25.

631 Consistent with the traditional approach in Canada and the 2018 Lead-Lag Studies, the 2023 studies include only cash operating expenditures, whereas depreciation, interest and equity return are excluded from the studies and the calculation of cash working capital: Exhibit B-1-2, Updated Application, p. D-25.

which FortisBC is proposing in this Application.[632] FortisBC has followed the method previously reviewed and approved by the BCUC in the MRP Decision, which also generally reflects the approach used by utilities in other jurisdictions.[633]

**(a) 2023 Lead-Lag Study for FEI**

369. The 2023 Lead-Lag Study for FEI used the most recent full year of available actual data (2022) to perform the analysis. The 2023 Lead-Lag Study results in the same net lag of 5.1 days, and therefore, has no impact on FEI's cash working capital requirements compared to the last study in 2018.[634] The unchanged net lag result is due to the following offsetting inputs:[635]

- A 1.2 day decrease in expenditure lead days that is primarily attributable to a shorter payment lead for carbon tax and PST remittances, as well as a shorter service lead for O&M expenditures.
- A 1.2 day decrease in revenue lag days that is primarily attributable to a decrease in collection lag for residential customers.

370. FEI received no IRs on its lead-lag study.

**(b) 2023 Lead-Lag Study for FBC**

371. The 2023 Lead-Lag Study for FBC also used 2022 actual data to perform the analysis, which was the most recent full year of actual available data. The study is similar in scope and methodology to the FEI Lead-Lag Study.[636] The 2023 Lead-Lag Study results in an increase in the net lag, and therefore cash working capital requirements, for FBC. A summary of the results for FBC is as follows:[637]

- When applied to 2024 approved data, the 2023 Lead-Lag Study results in a net lag of 12.7 days, which is a 3.1 day increase compared to the net lag of 9.6 days using the previous lead-lag day study results.

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632 MRP Decision, p. 137.

633 Exhibit B-1, Application, Appendix D-3-1, p. 3 and Appendix D3-2, p. 3.

634 Exhibit B-1-2, Updated Application, Table D3-1 (p. D-27).

635 Exhibit B-1-2, Updated Application, p. D-26.

636 Exhibit B-1-2, Updated Application, p. D-27.

637 Exhibit B-1-2, Updated Application, p. D-28.

- The difference of 3.1 days is the result of a 4.7 day decrease in expenditure lead days offset by a 1.6 day decrease in revenue lag days. The decrease in expenditure lead days is primarily due to automation of the power purchase payment process, resulting in a shorter payment lead. This was offset by a decrease in revenue lag days primarily due to a decrease in service lag days for residential customers due to an increase in customers billed monthly vs bi-monthly.

372. To illustrate the impacts on cash working capital, when applied to the forecast revenues and operating expenses for 2024, this change in net days would have resulted in an increase of approximately $2.4 million in cash working capital ($3.7 million increase from expenses offset by a $1.3 million decrease from revenues).[638]

373. FBC received no IRs on its lead-lag study.

## D. Corporate Services Study

374. FortisBC submits that its proposed methodologies for allocating common corporate service costs from Fortis Inc. (FI) and FortisBC Holdings Inc. (FHI) to FEI and FBC should be approved. The recommended methodologies, which would be implemented beginning 2025, are endorsed by KPMG who was engaged to review the nature and allocation of FI and FHI corporate services to FEI and FBC. KPMG's 2023 Corporate Service Cost Study is included in Appendix D4-1.[639] In Section D4 of the Application, FortisBC provides a description of the corporate services provided by FI and FHI and how the costs of the corporate services are aggregated and allocated to FEI and FBC.[640]

375. In summary, the corporate services function consists of certain specialized functions that reside in FI and FHI. FI provides corporate service functions for FHI and then FHI passes along a majority of these activities to FEI and FBC, along with FHI corporate services. As a result, both FI and FHI provide expertise and corporate services to FEI and FBC, resulting in economies of scale to those two companies. The allocation methodologies include a formula that is based on total assets, excluding goodwill, and controllable operating expenses for FI corporate services, and the

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638 Exhibit B-1-2, Updated Application, p. D-28.

639 Exhibit B-1.

640 Exhibit B-1-2, Updated Application, Section D4 (pp. D-30 to D-39).

use of a Massachusetts Formula for FHI corporate service allocations.[641] For example, of the total 2023 FHI operating expenses of $30.8 million, approximately 43 percent and 13 percent were allocated to FEI and FBC, respectively.[642] As noted above, both allocation methodologies were endorsed as "reasonable mechanism[s] to allocate corporate services costs" and "an appropriate basis for setting utility rates" by KPMG in the 2023 Corporate Services Study.[643]

376. The general process, nature of eligible corporate service costs and allocation methodology of corporate services costs from FI and FHI remain generally consistent with the 2018 Corporate Service Cost Study, which was approved by the BCUC in the MRP Decision.[644] The allocation methodology will, in particular, reflect changes in: (1) the type or amount of corporate service costs incurred; (2) the size and structure of the FI group of companies; and (3) the number of subsidiaries receiving services within the FHI group.[645] As discussed below, the disposition of the Aitken Creek Gas Storage Facility (ACGS)[646] impacts the sharing methodology of FI and FHI corporate service costs. At a high level, customers will no longer benefit from less corporate service costs being allocated to FEI and FBC as corporate service costs will no longer be allocated to ACGS.[647] FEI addresses the specific impacts to the allocation below.[648]

377. First, the disposition of ACGS decreases the costs allocated from FI to FHI from 21.8 percent to 20.9 percent (or 0.9 percent).[649] Assuming ACGS was removed for all of 2023, this would amount to an approximate $0.3 million proportional decrease to the amount of corporate service costs allocated to FHI by FI.[650] Put simply, while the types of costs allocated from FI to FHI

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641 Exhibit B-1-2, Updated Application, pp. D-32 to D-36; see also Exhibit B-10, ICG IR1 15.4.

642 Exhibit B-10, ICG IR1 17.1.

643 Exhibit B-1, Application, Appendix D4-1, pp. 3 and 26.

644 MRP Decision, p. 140.

645 Exhibit B-4, BCUC IR1 42.2.

646 ACGS was no longer part of the Fortis group effective November 1, 2023 when FMI, the parent company and owner of ACGS, was sold to a subsidiary of Enbridge Inc.: Exhibit B-1-2, Updated Application, p. D-31.

647 Exhibit B-17, ICG IR2 4.1.

648 In addition to the disposition of ACGS, at the end of 2019, FI removed the position of EVP – Western Utility Operations which had costs which were previously allocated only to FHI and FortisAlberta Inc.: Exhibit B-1-2, Updated Application, p. D-31.

649 Exhibit B-1, Application, Appendix D4-1, p. 23.

650 Exhibit B-1-2, Updated Application, p. D-31; Exhibit B-17, ICG IR2 4.1.

did not change with the disposition of ACGS,[651] the size of the FHI group became smaller in comparison to the overall FI entity, thereby decreasing FHI's corporate service allocation from FI.[652]

378. Second, the disposition of ACGS increases the costs allocated from FHI to both FEI and FBC under the Massachusetts Formula by 3.4 percent and 1.0 percent, respectively.[653] Assuming ACGS was removed for all of 2023, this would amount to an approximate $0.8 million proportional increase to the total allocation of corporate service costs to FEI and FBC. While the benefits received by FEI and FBC through the support of corporate services from FI and FHI did not change with the disposition of ACGS, the total allocation of corporate service costs to FEI and FBC increased because there are fewer entities in the FHI group to allocate its eligible costs to.[654]

379. KPMG described the impact of the disposition of ACGS as follows:[655]

> … Based on the 2023 budget, the ACGS divestiture is expected to result in the reallocation of approximately $466,000 in costs to FBC and FEI. Across these departments, none of the FHI costs that are reallocated by department would be greater than or equal to the average cost of an FTE within FHI (approximately $190,000). Further, based on interviews with FHI cost centre owners, the support provided to FMI (ACGS) did not take the form of dedicated staff; support was instead provided through part time effort spread across several FTEs. Therefore, the divestiture of FMI (ACGS) is not expected to result in any changes in staffing levels that would result in a reduction of cost.

380. The net increase[656] in corporate service costs allocated to FEI and FBC as a result of the ACGS disposition reflects the reduction in FI costs allocated to FHI as result of the change in allocation percentages with ACGS no longer included.[657] When compared to the period prior to

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[651] The types of costs FI provides to its subsidiaries are described in Section 4.2 - Table 4 of the 2023 Corporate Services Study: see Exhibit B-1, Application, Appendix D4-1, Table 4 (pp. 12-13).

[652] Exhibit B-1-2, Updated Application, p. D-31; Exhibit B-4, BCUC IR1 42.1.

[653] Exhibit B-1, Application, Appendix D4-1, p. 23.

[654] Exhibit B-1-2, Updated Application, p. D-31; Exhibit B-4, BCUC IR1 42.2.

[655] Exhibit B-1, Application, Appendix D4-1, p. 24.

[656] As explained in the response to ICG IR2 4.1 (Exhibit B-17), this reflects the increase in the allocation formula used to charge down to FEI and FBC and the decrease in the total costs charged down from FI to FHI.

[657] Exhibit B-4, BCUC IR1 42.2.

ACGS ownership, the change to FEI and FBC corporate services costs is representative of annualized increases of less than 4 percent.[658]

381. FortisBC submits that its proposed methodologies of allocating common corporate service costs should be approved as proposed.

## E. Capitalized Overhead Studies

382. FortisBC's proposal to apply capitalized overhead rates of 14.5 percent and 15.5 percent of gross O&M to regular capital expenditures for FEI and FBC, respectively, over the proposed Rate Framework term should be approved.[659] As it did for the Current MRP, FortisBC engaged KPMG to perform a review of its capitalized overhead methodology for the term of the Rate Framework and prepare a capitalized overhead study for each of FEI and FBC.[660]

383. KPMG's 2023 capitalized overhead studies for FEI and FBC are found in Appendices D5-1 and D5-2 (2023 Capitalized Overhead Studies).[661] The methodology reviewed in the 2023 Capitalized Overhead Studies is consistent with prior years' studies and filings, including those approved by the BCUC in the MRP Decision,[662] and aligns with established rate-regulated utility practice, the BCUC's Uniform System of Accounts (USofA) and US Generally Accepted Accounting Principles (US GAAP).[663] KPMG concluded that FEI's and FBC's capitalized overhead cost allocation methodology was reasonable.[664]

384. In Section D5 of the Application, FortisBC discusses the basis for allocating overhead costs to capital projects, FortisBC's methodology for capitalized overhead studies, and the results of the most recent capitalized overhead studies for FEI and FBC.[665]

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658 Exhibit B-4, BCUC IR1 42.2.

659 The capitalized overhead rate for FEI is net of biomethane O&M transferred to the RNG Account: Exhibit B-1-2, Updated Application, p. D-40.

660 Exhibit B-1-2, Updated Application, p. D-40.

661 Exhibit B-1.

662 MRP Decision, pp. 144-145.

663 Exhibit B-1-2, Updated Application, p. D-40.

664 Exhibit B-1, Application, Appendix D5-1, p. 3 and Appendix D5-2, p. 3.

665 Exhibit B-1-2, Updated Application, pp. D-40 to D-45.

**(a) Methodology Used for the 2023 Capitalized Overhead Study for FEI is Sufficiently Flexible**

385. As FEI explained in its response to IRs, the methodology used in the 2023 Capitalized Overhead Study is flexible and adaptable to future changes in government policies and regulations related to the energy transition. FEI's process of determining whether to assign costs to capital or estimate the capitalized overhead, which uses surveys, interviews and other estimation methods, is able to identify changes of this kind. The 2023 Capitalized Overhead Study does not identify any overhead costs indirectly related to capital as having changed significantly due to government policies and regulations related to the energy transition.[666]

386. While the 2023 Capitalized Overhead Study did not identify any changes to FEI's capitalized overhead rates resulting from the energy transition, there may be changes to the composition of departments and department costs over time.[667] Further, if an asset has a shorter expected useful life (as determined in a depreciation study), so too does the overhead cost capitalized to it.[668] As such, FEI will continue to assess changes to these costs in future capitalized overhead studies using this methodology.[669]

**(b) FEI's Capitalized Overhead Rate of 14.5 Percent is Reasonable**

387. FEI's proposed capitalized overhead rate of 14.5 percent of gross O&M, net of biomethane O&M transferred to the Renewable Natural Gas Account (previously the Biomethane Variance Account), is a 1.5 percent decrease from the current rate approved by the BCUC in the MRP Decision. As stated by KPMG, the decrease in the rate is explained by:[670]

- Certain process improvements, where direct charging mechanisms to individual projects by the engineering and operations functional areas end up requiring less need to account for their costs through an indirect overhead rate;
- Stability in the rate of capital spending over time, as compared to the assessment performed in the prior capitalized overhead study for FEI; and

666 Exhibit B-4, BCUC IR1 43.1.

667 Exhibit B-4, BCUC IR1 43.2.

668 Exhibit B-4, BCUC IR1 43.3.

669 Exhibit B-4, BCUC IR1 43.1.

670 Exhibit B-1-2, Updated Application, pp. D-42 to D-43.

- A general increase in operating costs of functional areas which are not generally involved in capital activity (e.g., renewable gas development, LNG operations, Indigenous and external relations, customer service, and certain areas of engineering and operations).[671]

388. A 14.5 percent capitalized overhead rate for FEI is reasonable for the following reasons. First, if applied to 2024, it results in a level of net O&M (gross O&M less capitalized overhead) that is higher but comparable to 2024 Approved, taking into account inflationary pressures.[672] Second, it results in a relatively consistent capitalization rate[673] when applied to 2024 as compared to the rate over the term of the Current MRP.[674]

389. FEI estimates that decreasing the capitalized overhead rate from 16 percent to 14.5 percent will increase customer delivery rates by approximately 0.52 percent in 2025.[675]

390. In summary, a 14.5 percent capitalized overhead rate for FEI is comparable to the 16 percent capitalized overhead rate approved in the MRP Decision and should be approved.

**(c) FBC's Capitalized Overhead Rate of 15.5 Percent is Reasonable**

391. FBC's proposed capitalized overhead rate of 15.5 percent of gross O&M is a marginal (0.5 percent) increase from the current rate approved by the BCUC in the MRP Decision. The increase is generally a result of a recalculated general allocator for several support groups, partially offset by processes implemented to increase direct charging to capital in the operations and engineering functional areas, which resulted in a corresponding lower amount allocated to capital indirectly through the capitalized overhead rate.[676]

392. Applying a 15.5 percent capitalized overhead rate to 2024 results in a level of net O&M (gross O&M less capitalized overhead) that is higher compared to prior years. This increase is due

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671 The overall increase in O&M for engineering and operations has increased to manage operations as opposed to facilitate capital. As a result, the relative proportion of engineering and operations involved in capital activity has decreased compared to the prior study: Exhibit B-1-2, Updated Application, p. D-43.

672 Exhibit B-1-2, Updated Application, Table D5-1 (p. D-43).

673 The capitalization rate is the proportion of capitalized overhead to the annual capital expenditures.

674 Exhibit B-1-2, Updated Application, Table D5-1 (p. D-43).

675 Exhibit B-1-2, Updated Application, p. D-44.

676 Exhibit B-1-2, Updated Application, p. D-44.

to the increases in gross O&M and the slight increase in the rate. The proposed capitalized overhead rate of 15.5 percent and the resulting capitalization rate of 12 percent remain within a reasonable range compared to prior years.[677]

393. FBC expects that increasing the capitalized overhead rate from 15 percent to 15.5 percent will decrease customer rates by approximately 0.09 percent in 2025.[678]

394. KPMG also assessed FBC's Direct Overhead, which is a loading pool of supervisory and other administrative costs that are directly involved in capital projects. The estimated Direct Overhead loading pool is approximately $5.5 million, as compared to approximately $5.0 million in the capitalized overhead study prepared in 2018 for FBC. Consistent with prior years, costs included in FBC's Direct Overhead are excluded from the O&M used for determining the indirect capitalized overhead rate. Instead, these costs are included directly as part of forecast regular capital expenditures.[679] KPMG also concluded that this methodology was reasonable.[680]

395. In summary, a 15.5 percent capitalized overhead rate for FBC is comparable to the 15 percent capitalized overhead rate approved in the MRP Decision and should be approved.

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677 Exhibit B-1-2, Updated Application, Table D5-2 (p. D-45).

678 Exhibit B-1-2, Updated Application, p. D-45.

679 Exhibit B-1-2, Updated Application, p. D-44.

680 Exhibit B-1, Application, Appendix D5-2, p. 3.

## PART TEN: RESPONSES TO LETTERS OF COMMENT

396. On November 21, 2024, the BCUC requested that FortisBC address all letters of comment, as applicable, as part of this Final Submission.[681] There have been two letters of comment filed in the proceeding.

397. The first letter of comment was filed by Mr. Quail on behalf of MoveUP on May 22, 2024 requesting an opportunity to comment on the mechanisms for utility rate setting that enable regulated energy utilities to navigate the energy transition.[682] FortisBC has addressed the substance of Mr. Quail's comments in Part Two of this Final Submission, where the Companies have set out why the proposed Rate Framework, in fact, enables FEI and FBC to navigate the energy transition over the next three years.

398. The second letter of comment was filed by Mr. Brian Messer on November 13, 2024, requesting a model to disincentivize excessive contractor reliance, the establishment of an independent internal oversight committee to monitor contractor activities and costs, and re-establish the role of unionized employees in crucial areas.[683] FortisBC submits that Mr. Messer's comments should be afforded minimal weight by the BCUC and his requests should be dismissed.

399. Mr. Messer's request that the "model needs to disincentivize excessive contractor reliance" is not reasonable. First, the proposed Rate Framework is neutral as to FortisBC's use of contractors, although it does provide an incentive for FortisBC to control its costs through various mechanisms, such as limiting the vast majority of O&M and capital expenditures to a formula or forecast amount each year, with 50/50 sharing of variances between formula/forecast and actual amounts. Finding the right mix of contractors and employees is a management function and FortisBC relies on a mix of unionized employees and contractors to reliably and cost effectively

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681 Exhibit A-9.

682 Exhibit D-1.

683 Exhibit D-2.

carry out needed work each year. For example, FEI explained how it utilizes contractors for mains and services installations to manage variations in normal workloads:[684]

> With respect to utilizing contractors for mains and services installations as referenced in the preamble to this question, FEI considers engaging contractors to manage potential variations in normal workloads. For example, FEI uses contractors to support short-term projects and in response to fluctuating workloads. Internal staffing levels for this type of work are maintained at a relatively consistent baseline level to support workloads throughout the year as customer demand fluctuates. When work volumes increase substantially (as seen with the gross customer additions from 2018 to 2022) and in the busiest construction months, FEI uses contractors to respond to increased work volumes. These resources are eliminated in periods or years of decreased work volumes. For example, in regions where colder winter weather slows homebuilding and construction activities (resulting in associated reduced new customer connections), internal staff would perform this work without needing to rely on contractors. Similarly, as customer additions have been lower than previous years in 2024, FEI has eliminated contractor construction crews and is increasing its reliance on internal resources.

FortisBC's use of contractors, therefore, helps the Utilities to control costs by not having to have increase the base-line level of internal staff to respond to short-term or fluctuating work loads. The reasons for cost increases for connecting customers is discussed extensively in Part Six, Section E, of this Final Submission.

400. Mr. Messer's request for an "independent internal oversight committee" and to "re-establish the role of unionized employees" is not reasonable or within the scope of this proceeding. First, FortisBC submits that Mr. Messer's accusations of insufficient oversight, conflicts of interest and compromised fiscal integrity with respect to contractors are not substantiated by any evidence and are unfounded. Second, FortisBC submits that the management of its workforce is an operational matter that is properly in the hands of utility management. Third, to the extent that these topics have relevance to this proceeding, the proposed Rate Framework properly incentivizes FortisBC to control costs while maintaining service quality. This includes an incentive for FortisBC to maintain a cost-effective balance of employees and contractors to carry out the work required for its operations each year. Further,

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[684] Exhibit B-18, MoveUP IR2 4.1.

FortisBC has proposed SQIs that enable the BCUC to monitor service quality and the BCUC will be reviewing FortisBC's forecast costs each year through the Annual Review process, which provide sufficient regulatory touchpoints to canvass any serious issues with FortisBC's costs or service quality over the Rate Framework term.

## PART ELEVEN: CONCLUSION

401. FortisBC submits that the evidence in this proceeding demonstrates that the Rate Framework represents a fair and reasonable balance for both customers and the Companies and that the approvals sought are just and reasonable and in the public interest. FortisBC respectfully requests that the BCUC grant the approvals sought as set out in Section A2 of the Application and the draft forms of the final Orders sought in Appendix E2 and E3.

ALL OF WHICH IS RESPECTFULLY SUBMITTED

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| Dated: | November 27, 2024 | ***[original signed by Chris Bystrom]*** |
| | | Chris Bystrom<br>Counsel for FortisBC Energy Inc. and FortisBC Inc. |
| Dated: | November 27, 2024 | ***[original signed by Niall Rand]*** |
| | | Niall Rand<br>Counsel for FortisBC Energy Inc. and FortisBC Inc. |