Diane Roy
Vice President, Regulatory Affairs

Gas Regulatory Affairs Correspondence
Email: gas.regulatory.affairs@fortisbc.com

Electric Regulatory Affairs Correspondence
Email: electricity.regulatory.affairs@fortisbc.com

FortisBC
16705 Fraser Highway
Surrey, B.C. V4N 0E8
Tel: (604) 576-7349
Cell: (604) 908-2790
Fax: (604) 576-7074
www.fortisbc.com

August 5, 2022

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

Attention: Ms. Sara Hardgrave, Acting Commission Secretary

Dear Ms. Hardgrave:

Re: FortisBC Inc. (FBC)

Multi-Year Rate Plan for 2020 through 2024 approved by British Columbia Utilities Commission (BCUC) Order G-166-20 (MRP Plan)

Annual Review for 2023 Rates

In accordance with the MRP Plan and BCUC Order G-193-22 setting out the Regulatory Timetable for FBC's Annual Review, FBC hereby attaches its Annual Review for 2023 Rates Application materials.

If further information is required, please contact the undersigned.

Sincerely,

FORTISBC INC.

Original signed:

Diane Roy

Attachments

cc (email only): Registered Interveners to the FBC Annual Review for 2022 Rates

FortisBC Inc.

Annual Review for 2023 Rates

August 5, 2022

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1. APPROVALS SOUGHT, OVERVIEW OF THE APPLICATION AND PROPOSED PROCESS

1.1 *INTRODUCTION*

FortisBC Inc. (FBC or the Company) files this Application in compliance with British Columbia Utilities Commission (BCUC) Order G-166-20, which approved a Multi-Year Rate Plan (MRP or the Plan) for FBC for the years 2020 to 2024. In accordance with the MRP, an annual review process is required to set rates for each year of the MRP.

The MRP provides stable levels of O&M funding and includes service quality indicators (SQIs) to monitor the maintenance of service quality. The approved Earnings Sharing Mechanism (ESM), set out in Section 10, aligns the incentive properties of the Plan between customers and the Company.

As explained in Section 10 of the Application, FBC proposes to distribute $0.911 million pre-tax ($0.665 million after-tax) in earnings sharing to customers in 2023.

The proposed rates for 2023 flowing from the approved formulas and forecasts set out in the Application, including returning the actual 2021 earnings sharing to customers, result in a 3.99 percent rate increase from 2022 rates. The increase is primarily due to an increase in power purchase expense (PPE) as well as rate base growth.

In the subsections below, FBC sets out the approvals it is seeking and provides an overview of the requirements for the annual review process. This is followed by a discussion of FBC's 2021 formula O&M savings and the productivity initiatives that FBC is developing. Finally, FBC provides a summary of its proposed revenue requirements and rate changes for 2023 and a summary of the SQI results. These matters are addressed in more detail in subsequent sections of the Application.

1.2 *APPROVALS SOUGHT*

With this Application, FBC requests BCUC approval for the following pursuant to sections 59 to 61 and 89 of the *Utilities Commission Act* (UCA):

1. Approval to recover the 2023 revenue requirement and resultant rate change on an interim basis, effective January 1, 2023, as filed in the Application and subject to any adjustments identified by FBC during the regulatory process and from any directives or determinations made by the BCUC in its decision on the Application. Rates will remain interim pending the outcomes of the BCUC's current generic cost of capital (GCOC) proceeding and FBC's 2023-2027 Demand Side Management (DSM) Plan proceeding.
2. The level of forecast growth, sustainment and other capital to be incorporated in rates for the years 2023 and 2024, as set out in Section 7.2.1.

3. The following deferral account approvals, as described in Section 7.6:
   - Creation of a rate base deferral account for the 2023 Joint Pole Use Audit, with the balance in the deferral account to be amortized over five years commencing January 1, 2023; and
   - Approval of a three-year amortization period for the existing COVID-19 Customer Recovery Fund Deferral Account, commencing January 1, 2023.
4. Approval to cease reporting on the COVID-19 Customer Recovery Fund Deferral Account, as described in Section 7.6.2.1.

FBC also seeks approval pursuant to section 99 of the UCA to vary the following Orders:

1. Directive 6 of Order G-42-21 in order to facilitate the return of the net incremental COVID-19 related cost reductions to customers through inclusion of the cost reductions in the Flow-through deferral account, as described in Section 12.2.1.
2. Directive 2 of Order G-83-14 to ensure that FBC continues to have approval from the BCUC to use US GAAP for regulatory accounting purposes, as described in Section 12.3.1.

A draft order is included in Appendix D.

1.3 *REQUIREMENTS FOR THE ANNUAL REVIEW*

On page 167 of the MRP Decision, the BCUC set out its expectations for the Annual Review component of the MRP. For reference, the table below sets out each requirement and FBC's response or where it is addressed in the Application.

Table 1-1: Annual Review Requirements

Item	Description	Response or Reference
1	Review of the current year projections and the upcoming year's forecast. For further clarity, these items are listed below:	See items 1(a) to 1(f) below
1(a)	Customer growth, volumes and revenues;	Section 3
1(b)	Year-end and average customers, and other cost driver information including inflation;	Section 2
1(c)	Expenses, determined by the indexing formula plus items forecast annually;	Section 6
1(d)	Capital expenditures (as provided for by the capital forecast), plus other items forecast annually;	Section 7
1(e)	Plant balances, deferral account balances and other rate base information and depreciation and amortization to be included in rates; and	Sections 7 and 12
1(f)	Projected earnings sharing for the current year and true-up to actual earnings sharing for the prior year.	Section 10

Item	Description	Response or Reference
2	Identification of any efficiency initiatives that the Utilities have undertaken, or intend to undertake, that require a payback period extending beyond the MRP period with recommendations to the BCUC with respect to the treatment of such initiatives.	FBC has not identified any efficiency initiatives with a payback beyond the end of the MRP period
3	Review of any exogenous events that the Company or stakeholders have identified that should be put forward to the BCUC for review.	Section 12.2
4	Review of the Utilities' performance with respect to SQIs. Bring forward recommendations to the BCUC where there have been a "sustained serious degradation" of service.	Section 13
5	Assess and make recommendations with respect to any SQIs that should be reviewed in future Annual Reviews.	FBC does not have any recommendations at this time
6	Reporting on the Innovation Fund status.	Not Applicable for FBC
7	Assess and make recommendations to the BCUC on potential issues or topics for future Annual Reviews.	FBC does not have any recommendations at this time

1.4 *FORMULA O&M SAVINGS AND PRODUCTIVITY INITIATIVES*

1.4.1 Overview of 2021 Formula O&M Savings

For 2021, FBC achieved formula O&M savings in addition to meeting the embedded productivity improvement factor in the O&M formula. Total formula O&M savings before earnings sharing were approximately $3.4 million.

Approximately $0.9 million in formula O&M savings were realized due to the net incremental impact of the COVID-19 pandemic, which will be returned to customers via the Flow-through deferral account. Please refer to Section 12.2.1 for further details. Lower spending in the Finance and Information Systems departments of approximately $0.6 million from vacancies, reduced consulting, and lower computer consulting services and expenses contributed to the savings. Additionally, approximately $2.2 million of O&M savings were due to the timing of expenditures, such as vacancies and consulting expenditures, and lower general and miscellaneous expenditures. These savings were partially offset by approximately $0.3 million of higher spending compared to the formula amount for incremental expenditures related to System Operations, Integrity and Security. Please refer to Section 6.2.1 for further details. While some of the savings are one-time in nature (e.g., delay in filling vacancies), some of the savings are expected to continue into the future, recognizing that cost pressures in the future may offset the savings.

FBC will continue to pursue productivity improvements to achieve savings beyond the productivity improvement factor as it seeks to manage its business needs and cost pressures resulting from its evolving and challenging operating environment.

1.4.2 Productivity Initiatives

As mentioned in FBC's Annual Review for 2022 Rates (2022 Annual Review), in 2021, FortisBC Energy Inc. (FEI) and FBC (together FortisBC) initiated a working group consisting of senior managers and directors from different parts of the organization that is responsible for reviewing and identifying areas for productivity initiatives. An area of focus for potential productivity opportunities is initiatives that offer financial and customer service benefits and leverage technology and innovation to achieve these benefits.

Following is a summary of productivity initiatives from different parts of the organization FortisBC reviewed this past year and/or is investigating.

1. **Field Operations Improvements:** This initiative was investigated through collecting feedback and analyzing efficiency gains within FBC's Outage Management System (OMS) and Mobile Workforce Management System (MWFM). Changes have been made to the software and processes that allow for improved information sharing and functionality when dispatching and performing jobs. This allows for less manual intervention and a more streamlined workflow. On a separate, but related initiative, enhancements are also underway to provide FBC's storm response restoration teams with an improved interface to access triage information. This will allow for a better prioritization of repairs, and a more efficient allocation of the available resources, resulting in faster restorations.
2. **Use of Unmanned Aerial Vehicles (UAVs - Drones):** FBC is investigating using UAVs to perform transmission line condition assessments. In 2021, FBC requested its contractor performing condition assessments to incorporate the use of drones for collecting data for certain suspected deficiencies. This use of drones was expected to reduce the need for follow-up bucket truck inspections to confirm deficiencies that cannot be fully assessed from the ground, and allow FBC to prepare work-packages for deficiencies identified during condition assessments in a more timely manner. Additionally, some of the drone-collected data has been used to help assess potential system upgrades and reconfigurations without requiring additional field verification of existing assets. For 2022, FBC is developing a request for pricing to assess the potential efficiencies associated with a condition assessment program relying exclusively on drone-collected data and the use of artificial intelligence and machine learning to help identify and categorize deficiencies related to FBC's transmission assets. Should a proponent be identified through this process, it is expected that this work will help validate the use of these techniques for performing condition assessment work and also help quantify the potential cost-savings associated with a drone-based approach for condition assessments.
3. **Technology Investments to Support Enhanced Communications:** FBC introduced enhancements during the COVID-19 pandemic to enable employees to productively work remotely. The implementation of the Microsoft Teams platform was expedited in 2021, allowing for use of video meetings for employee communications. In 2021, FBC also introduced the Microsoft Teams mobile app that provided seamless integration and access to Teams meetings, Teams sites, calendar, chat functionality and a seamless transition

from phone to computer or vice versa during meetings. It was and continues to be a platform to reduce travel requirements for staff, providing options to meet in person less often, which enables continued savings on fuel costs, hotels, meals, and wear and tear on vehicles. Hybrid meetings support large audience attendance using Teams meetings, with the added benefit of not requiring time away from the home office and the resulting lost productivity. Additional functionality will continue to be added to the Teams platform (i.e., whiteboard, enhancements to breakout rooms, Presenter modes and group control of presentation, etc.) as Microsoft continues to develop and release upgrades. The mobile application will also see improvements.

The Company's rapid implementation of communications software during the pandemic has contributed to creating a productive work environment for employees to complete their work with the benefit of not requiring time away from the home office and lost productivity. In total, FBC invested approximately $0.2 million over the two years 2020 and 2021. This investment has contributed to achieving employee-related expense savings (i.e., travel) during the pandemic and will also help to permanently sustain some of the related savings post pandemic.

4. **Data Analytics:** This is an initiative to centralize the Company's data sources coupled with a suite of analytic tools to analyze and use the data to inform decision-making. Data analytics is the process of extracting and analyzing data sets to identify or uncover patterns, correlations, trends, customer preferences and other information for the purpose of allowing an organization to make more informed business decisions. Better decisions will lead to improved business operations and customer service and increased productivity. The ability to easily access and analyze data can be inhibited by internal processes, decentralization of information and a lack of understanding of the data. With Data Analytics, departments will be provided a common cleansed data source and the tools to create advanced analytics quickly and easily. Resources will be provided to business areas to help identify reporting and analytic needs that will lead to efficiencies. Through a centralized approach, this will provide the skills along with the data and the tools to drive business capability to support analytic needs and also provide better visibility to costs or benefits of data analytics initiatives.

   The requirements and business case for the necessary information systems infrastructure were completed in 2021. FBC plans to implement systems that will allow centralized data access in 2022 and add new data sources in priority sequence over time. Data usage cases for this initiative are being prioritized first for those that enable cost savings.

5. **Streamlining and Automating Reporting Process:** This initiative is one of the earlier usage cases that FBC is considering for the Data Analytics initiative. The focus is on streamlining the reporting processes for financial and management reporting information (i.e., internal cost reporting, key performance indicators, etc.). Currently, the reporting processes work well with clearly defined requirements and processes but rely on manual effort. Source system (i.e., SAP) reports are not formatted for users and SAP reports are data extracts and are not set-up for data integration and manipulation. Instead, Excel is

used to integrate, transform and format reports. FBC is presently assessing the feasibility of implementing an automated solution that will reduce the effort required to generate reports, with expected productivity gains. This automation is expected to be achieved through the use of a data model to aggregate data sources and a reporting tool to allow for self-service.

FBC will be in a better position at next year's Annual Review to provide details of this initiative should it be undertaken, and to provide details of other specific data analytics initiatives undertaken and the benefits achieved.

6. **Robotics Process Automation (RPA):** This is an efficiency initiative using automation software to alleviate repetitive and simple manual tasks. With the rising volume of manual tasks performed for operational work, such as financial transactions or project closeout activities, departments within FBC are challenged. Both the Finance and Engineering departments have experienced an increase in manual activities over several years. Between steps performed multiple times daily, to weekly, monthly or annually, the common theme is a manual and repetitive task with limited decision points.

   In the first phase of RPA implementation, the Company is evaluating opportunities within the Finance and Engineering areas to apply RPA. There are a number of processes being evaluated for RPA with the focus on processes requiring supporting manual activities. The processes vary from creating journal entries, generating third party billing, populating reports, filing documents, and collecting information for budgeting purposes.

   FBC will be in a better position at next year's Annual Review to provide details of this initiative, including the results and benefits achieved.

7. **Paperless Billing Customer Campaigns:** This initiative focuses on working with customers to encourage the switch to paperless billing. In addition to the convenience for customers of receiving their bill electronically and the environmental considerations of less paper and physical transport of the bills, an increased percentage of customers making the switch to paperless billing results in ongoing printing and postage cost savings. At the start of 2021, FBC had approximately 69,000 customers choosing paperless billing as their preferred bill delivery method. Following the success of several internal programs that encouraged employees to highlight this option with customers and including an external social media campaign that resulted in donations to food banks in need, FBC achieved an increase of approximately 8,000 customers choosing this option in 2021. This increase equates to approximately $0.07 million in printing and postage cost savings in 2021 as compared to 2020.[1]

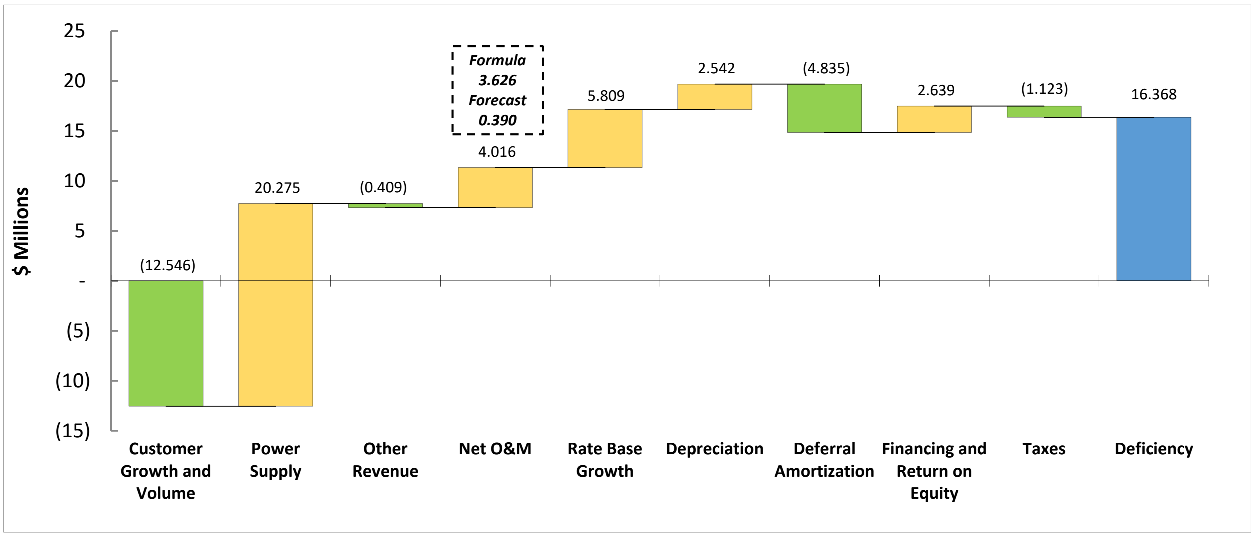
[1] Calculation is a high-level estimate based on the incremental monthly paperless billing growth at an average savings of approximately $1.24 per bill.

1.5 *REVENUE REQUIREMENT AND RATE CHANGES FOR 2023*

The revenue requirement components set out in the Application result in an effective rate increase of 3.99 percent for 2023 compared to 2022. The effective rate increase results from a revenue deficiency of $16.368 million.

The following chart summarizes the items that contribute to the 2023 revenue deficiency. The chart shows each item that increases the deficiency in yellow and each item that decreases the deficiency in green. The 2023 deficiency of $16.368 million is then the sum of all of the previous bars and is shown at the end of the chart in blue.

Figure 1-1: 2023 Revenue Deficiency ($ millions)



Each of the categories is discussed briefly below.

1.5.1 Customer Growth and Volume Forecast (Section 3)

For 2023, FBC forecasts a net load increase of 170 GWh compared to 2022 Approved, resulting in a decrease in FBC's 2023 revenue deficiency of $12.546 million. The increase in net load is primarily due to increased loads in the industrial classes, followed by smaller increases in the residential, commercial, wholesale, and irrigation classes. FBC's 2023 Forecast revenue at 2022 approved rates is $409.840 million.

1.5.2 Power Supply (Section 4)

FBC forecasts an increase in power supply of $20.275 million in 2023 compared to 2022 Approved. This increase is primarily due to the increase in load, and an increase in PPE under the BC Hydro Power Purchase Agreement (PPA) by approximately $27.240 million. This is offset by reduced market and contracted purchases by approximately $8.776 million.

1.5.3 Other Revenue (Section 5)

Other Revenue is forecast to increase by $0.409 million in 2023 compared to 2022 Approved. The main drivers of this increase are higher Late Payment Charges and the expected annual increases in rates for Apparatus and Facilities Rental, Contract Revenue and Transmission Access Revenue.

1.5.4 Operations and Maintenance (O&M) Expense (Section 6)

FBC establishes the majority of its O&M expense by formula during the MRP term. The O&M formula incorporates a net inflation factor of 4.017 percent, which is inclusive of a productivity improvement factor (X-Factor) of 0.5 percent, and uses a forecast of the change in average customers[2]. The 2023 Formula O&M net of capitalized overhead has increased by $3.626 million[3] when compared to the 2022 Formula O&M. Net O&M forecast outside of the formula is increasing by $0.390 million[4] over 2022 Approved, primarily due to an increase in pension and OPEB expense. Overall, the 2023 increase in total O&M expense net of capitalized overhead is $4.016 million (6.9 percent).

1.5.5 Rate Base Growth and Depreciation (Section 7)

The 2023 rate base is forecast to increase by approximately $92.524 million when compared to the 2022 Approved rate base, resulting in an increase to the 2023 revenue deficiency of $5.809 million. The increase in rate base is primarily the result of the mid-year impact of FBC's 2023 regular capital additions to plant, as well as the full-year impact of FBC's major capital project additions, including the Kelowna Bulk Transformer Additions (KBTA) project, the Corra Linn Dam Spillway Gates Replacement project, and the Playmor Substation Upgrade project, as described in Section 7.1.

The increase in rate base also results in an increase in 2023 depreciation expense by approximately $2.752 million compared to 2022 Approved, which is offset by approximately $0.210 million of CIAC from net additions, resulting in a net increase of $2.542 million in depreciation expense.

1.5.6 Amortization of Deferral Accounts (Section 7 and Section 12)

Amortization of deferral accounts in 2023 decreased by $4.835 million, primarily due to the credit amortization related to the 2020-2024 Flow-through non-rate base deferral account, partially offset by increases in the amortization expense of the DSM deferral account, the BCUC Initiated Inquiry Costs deferral account, and the COVID-19 Customer Recovery Fund deferral account. The credit amortization in the Flow-through deferral account in 2023 is $9.625 million, which is $5.698 million higher than the credit amortization in this account compared to 2022 Approved. As discussed in Section 12.4.2.1, the credit amortization in the Flow-through deferral account is

[2] Modified by 75 percent.
[3] Increase in gross formula O&M of $3.810 million (5.8 percent) compared to 2022 Approved.
[4] Increase in gross forecast O&M of $0.491 million (26.8 percent) compared to 2022 Approved.

primarily due to favourable revenue variances resulting from increased loads from industrial, commercial, wholesale, and residential classes.

1.5.7 Financing and Return on Equity (Section 8)

Financing and Return on Equity (ROE) increased the 2023 deficiency by $2.639 million through changes in financing rates, the ratio of long-term debt versus short-term debt, and changes in rate base.

For 2023, FBC is forecasting a short-term debt rate of 4.24 percent, which is an increase from the 1.51 percent short-term debt rate embedded in the 2022 Approved revenue requirement. Overall, FBC's deficiency is increased by $3.688 million from financing rate changes which is offset by $1.049 million from the ratio change between long-term and short-term debt.

In calculating its 2023 revenue deficiency, FBC has utilized its currently approved capital structure and ROE of 40 percent and 9.15 percent, respectively. As explained in Section 8.1, FBC's ROE is set at a premium of 40 basis points over the benchmark ROE, which is the ROE approved for FEI. FEI is currently participating in the BCUC-initiated GCOC proceeding and has filed evidence on its recommended capital structure and ROE as part of Stage 1 of the proceeding. In Order G-156-21 and accompanying Reasons for Decision, the BCUC found that the effective date to implement a new cost of capital will depend on the timing and progress of the GCOC proceeding. FBC is seeking approval of interim 2023 rates pending the outcome of Stage 1 of the GCOC proceeding as well as a decision on FBC's 2023-2027 DSM Expenditure Plan. When a decision is reached on these proceedings, FBC will update its rate calculations and apply for permanent 2023 rates.

1.5.8 Taxes (Section 9)

FBC's 2023 property taxes are forecast to increase by 2.1 percent or $0.371 million from 2022 Approved. The increase is primarily due to changes in tax rates and increases in assessed values, as well as an increase in grants in-lieu of taxes which are calculated based on a fixed percentage of FBC's revenue.

There has been no change in the income tax rate of 27 percent from 2022. Taxes are forecast to decrease in 2023 by $1.494 million due to higher deductible temporary differences associated with amortization of deferred charges and property, plant and equipment, and lower taxable temporary differences associated with pension and OPEB.

1.6 *SERVICE QUALITY INDICATORS (SECTION 13)*

FBC reports on its 2021 and June 2022 year-to-date SQI results in Section 13. In 2021, for the eight SQIs with benchmarks, six met or were better than the benchmark, with two better than the threshold. For the four SQIs that are informational only, performance in 2021 generally remains at a level consistent with prior years. In 2022 to date, performance for the metrics with benchmarks is trending towards meeting the benchmark or the threshold.

2. FORMULA DRIVERS

2.1 *INTRODUCTION AND OVERVIEW*

This section provides the calculation of the Inflation Factor (or I-Factor) and Growth Factor used for calculating the 2023 O&M amounts according to the MRP formula.

In the MRP Decision and Order G-166-20, the BCUC approved an I-Factor using the actual CPI-BC and BC-AWE indices from the previous year and a labour weighting based on the most recent completed year of actuals.[5]

The MRP Decision approved the use of a forecast of growth[6] to determine formula O&M and determined that a growth factor multiplier of 75 percent for formula O&M was appropriate.

The Inflation Factor and Growth Factor calculations utilize the above-described inputs and determinations. For 2023, FBC has used July 2020 through June 2022 inflation data for the 2023 revenue requirement calculations, using the Statistics Canada tables included in Appendix A1 of the Application.

2.2 *INFLATION FACTOR CALCULATION SUMMARY*

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

As shown in Table 2-1 below, the I-Factor has been calculated utilizing actual CPI-BC and AWE-BC data. Applying the actual 2021 labour weighting of 60 percent, the calculation of the 2023 I-Factor is (4.940 percent x 40 percent) + (4.235 percent x 60 percent) = 4.517 percent.

[5] FBC's most recent year of completed actuals is 2021 so that ratio has been used for the 2023 I-Factor calculation.
[6] Forecast of average customers for Formula O&M, including a true-up to actual customers in the following years.

Table 2-1: I-Factor Calculation

		Table: 18-10-0004-01	*Table: 14-10-0223-01*	12 Mth Average				Last Completed Year			
Line No.	Date	BC CPI index	BC AWE $	CPI index	AWE $	CPI %	AWE %	Non Labour %	Labour %	I-Factor %	MRP Year
1	Jul-2020	132.6	1,093.72								
2	Aug-2020	132.4	1,089.35								
3	Sep-2020	132.5	1,093.75								
4	Oct-2020	132.9	1,095.32								
5	Nov-2020	133.3	1,102.95								
6	Dec-2020	132.8	1,110.36								
7	Jan-2021	133.6	1,113.22								
8	Feb-2021	134.1	1,114.21								
9	Mar-2021	134.9	1,107.66								
10	Apr-2021	135.2	1,112.04								
11	May-2021	135.1	1,118.59								
12	Jun-2021	135.8	1,115.40	133.8	1,105.55						
13	Jul-2021	136.7	1,140.52								
14	Aug-2021	137.0	1,142.40								
15	Sep-2021	137.2	1,139.64								
16	Oct-2021	137.9	1,136.85								
17	Nov-2021	138.1	1,132.25								
18	Dec-2021	138.0	1,134.84								
19	Jan-2022	139.4	1,157.19								
20	Feb-2022	140.4	1,153.88								
21	Mar-2022	143.0	1,161.22								
22	Apr-2022	144.2	1,176.54								
23	May-2022	146.1	1,176.54								
24	Jun-2022	146.5	1,176.54	140.4	1,152.37	4.940%	4.235%	40%	60%	4.517%	2023

2.3 *GROWTH FACTOR CALCULATION SUMMARY*

As noted above, the BCUC approved the use of a forecast of average customers with a 75 percent modifier to determine formula O&M.

The calculation of average customers used to determine 2023 Formula O&M is summarized in the table below. The growth factor is applied to the unit cost O&M (UCOM), which was calculated based on 2019 average customers of 139,916 (shown on line 21 under year 2020 or line 28 in Table 2-2 below). Starting with this 2019 average customer count, the calculation adds 75 percent of the cumulative average of actual/forecast customer growth during the MRP term from 2020 to 2023 (shown on line 26 in Table 2-2 below) to determine the average customers for rate setting (shown on line 29 of Table 2-2 below).

Table 2-2: Calculation of 2023 Average Customer (AC) Growth Factor

Line No.	Date	Actual 2020	Actual 2021	Projected 2022	Forecast 2023	Total for 2023 Rate Setting	Reference
1	Prior Year Ending Customer Count	141,027	143,714	145,830	148,861		Appendix A2 - Section 3.1 Customers
2							
3	Additions:						
4	January	292	257	226	256		
5	February	174	89	194	266		
6	March	8	123	122	264		
7	April	110	113	178	264		
8	May	173	319	537	255		
9	June	172	116	250	261		
10	July	522	308	255	265		
11	August	129	187	252	262		
12	September	83	136	254	264		
13	October	545	132	255	265		
14	November	234	217	252	262		
15	December	245	119	256	266		
16	Total Additions	2,687	2,116	3,031	3,150		Appendix A2 - Section 3.2 Customer Additions
17	12-month Weighted Average Additions	1,294	1,163	1,587	1,701		
18							
19	Current Year Ending Customer Count	143,714	145,830	148,861	152,011		Line 1 + Line 16; Appendix A2 - Section 3.1 Customers
20							
21	Actual/Projected Prior Year Average Customers	139,916	142,321	144,877	147,417		2020: G-42-21; Sch 3, Line 13; 2021 and 2022: Prior Year Ending, Line 22
22	Average Customers for the Year	142,321	144,877	147,417	150,562		Line 1 + Line 17
23	Change in Average Customers	2,405	2,556	2,540	3,145	**10,646**	Sum of Annual Change in Average Customers on Line 23
24							
25	Growth Factor Multiplier					**75%**	G-166-20
26	Change in Average Customers for Rate Setting Purposes					**7,985**	Line 25 x Line 23
27							
28	Average Customers Used to Determine the Starting UCOM					**139,916**	Line 21, Yr 2020
29	**Average Customer Forecast for Rate Setting**					**147,901**	Line 28 + Line 26
30							
31	2021 Approved Average Customers for Rate Setting		142,473				2021: G-42-21; Sch 3, Line 22
32	2021 Actual Average Customers for Rate Setting		143,637				Line 21(2020) + Sum of Line 23 (2020 & 2021) x 0.75
33	**2021 True Up**		**1,164**				Line 32 - Line 31

2.4 *INFLATION AND GROWTH CALCULATION SUMMARY*

A summary of the factors used to determine formula O&M for 2023 is provided in Table 2-3, including the I-Factor calculated in Section 2.2, the approved X-Factor of 0.5 percent, and the forecast of average customers incorporating the growth factor multiplier determined in Section 2.3.

Table 2-3: Summary of Formula Drivers

Line No.		2023	Reference
1	CPI	4.940%	Table 2-1, Line 24
2	AWE	4.235%	Table 2-1, Line 24
3			
4	Non Labour	40%	Table 2-1, Line 24
5	Labour	60%	Table 2-1, Line 24
6			
7	CPI/AWE Inflation	4.517%	(Line 1 x Line 4) + (Line 2 x Line 5)
8			
9	Productivity Factor	-0.500%	Order G-166-20
10			
11	Net Inflation Factor	4.017%	Line 7 + Line 9
12			
13	Average Customers for Formula O&M purposes	147,901	Table 2-2, Line 29

In summary, the Net Inflation Factor for 2023 is 4.017 percent and formula O&M for 2023 is determined using average customers of 147,901.

3. LOAD FORECAST AND REVENUE AT EXISTING RATES

3.1 INTRODUCTION AND OVERVIEW

This section describes FBC's forecast of gross system load. The gross system load is a combination of residential, commercial, wholesale, industrial, lighting and irrigation loads, system losses and company use. The forecast of gross system load includes the impacts of forecast load savings which include Demand Side Management (DSM) savings. These savings are further explained in Section 3.3 – Demand Side Management Savings.

FBC is forecasting an increase in consumption in the 2023 Forecast (2023F) compared to the 2022 Approved. The 2023F gross load is forecast to be approximately 3,775 GWh, which is a 184 GWh increase compared to the 2022 Approved gross load. The increase in 2023F is due to increased loads in the industrial, commercial, wholesale, residential and irrigation classes. Based on the 2022 Approved rates for each customer class, FBC's 2023 revenue forecast is $409.840 million.

FBC has provided further information supporting its load forecast in Appendix A of the Application.

3.2 OVERVIEW OF FORECAST METHODS

Consistent with the forecasting method followed by FBC in previous years, the load forecast relies on the following components:

- the residential and commercial customer count forecast;
- the residential use per customer (UPC) forecast;
- the commercial, lighting and irrigation load forecast; and
- the industrial and wholesale survey forecast.

The load forecast for residential customers is based on forecasts for the number of customers and UPC rates. Specifically, the UPC forecast is multiplied by the corresponding forecast of the number of annual average customers to derive the residential load forecast. The commercial load forecast is based on a regression against the Conference Board of Canada (CBOC) Gross Domestic Product (GDP) forecast, the lighting forecast uses the prior year's actual load, and the irrigation forecast uses a five-year historical average. Wholesale and industrial forecasts are primarily based on customer-specific survey results.

More detail on FBC's forecasting methods can be found in Appendix A of this filing.

The following sections set out the results of the load forecast. In the figures provided in the load forecast sections, the following three time periods are shown:

- Actual Years: Actual years are those for which actual data exists for the full calendar year. For this Annual Review the latest calendar year for which full actual data exists is the 2021 calendar year.
- Seed Year: The Seed Year is the year prior to the first forecast year. The Seed Year is forecast based on the latest years of actual data available,[7] and will be different than the original forecast for that year in the previous filing. For example, for this Application the Seed Year is 2022 (2022S) and the Seed Year forecast is based on the latest actual years, including 2021. As such, the 2022 Seed Year forecast in this Application will differ from the 2022 Forecast presented in the Annual Review for 2022 Rates, for which 2021 actual data was not available.
- Forecast Year: This is the year or years for which the forecast is being developed. This can be one year (in the case of the Annual Review) or a range of two or more years depending on the filing. In this Application, the forecast year is 2023 (2023F).
- Also included in the figures in this section is the prior year's forecast (shown as the green Approved lines in the figures below), as presented in the Annual Review for 2022 Rates.

FBC acquired the utility assets and customers of the City of Kelowna's electric utility effective March 31, 2013, resulting in an increase in direct customers and changes in the composition of customers and sales load by class, which are reflected in the data and figures in this section.

3.3 *DEMAND SIDE MANAGEMENT SAVINGS*

FBC forecasts the DSM savings that are incremental to the DSM savings that are already embedded in historical loads up to and including 2021.

The DSM savings forecast is deducted from the before-savings forecast for all customer classes. All forecast values in the sections below are shown after being reduced by DSM savings unless explicitly stated otherwise.

The forecast incremental DSM savings for 2023 are summarized in Table 3-1 below, and are the forecast savings incremental to the savings embedded in the historical loads. Historical DSM savings can be found in Appendix A2.

[7] FBC's load forecast is developed using only complete years of historical data. FBC requires the complete year of load data in order to validate it, including the review of and potential adjustments to unbilled energy. For this reason, partial year data is not used in forecasting.

Table 3-1: Forecast Incremental 2023 DSM Savings (GWh)

Line No.	Description	DSM 2023
1	Residential	(8.9)
2	Commercial	(22.6)
3	Wholesale	(7.7)
4	Industrial	(16.2)
5	Lighting	(0.3)
6	Irrigation	(0.2)
7	Net	(55.9)
8	Losses	(4.6)
9	Gross Load	(60.5)

3.4 *LOAD FORECAST*

FBC's total load consists of the weather normalized residential, commercial and wholesale load and the actual industrial, lighting and irrigation load. In aggregate, the absolute load forecast variance in 2021 was 0.2 percent. As shown in Figure 3-1 below, the total load, net of losses, is forecast to be 3,476 GWh in 2023F, which is 3 GWh more than 2022S and an increase of 170 GWh from 2022 Approved.

Figure 3-1: Total Net Load (GWh)

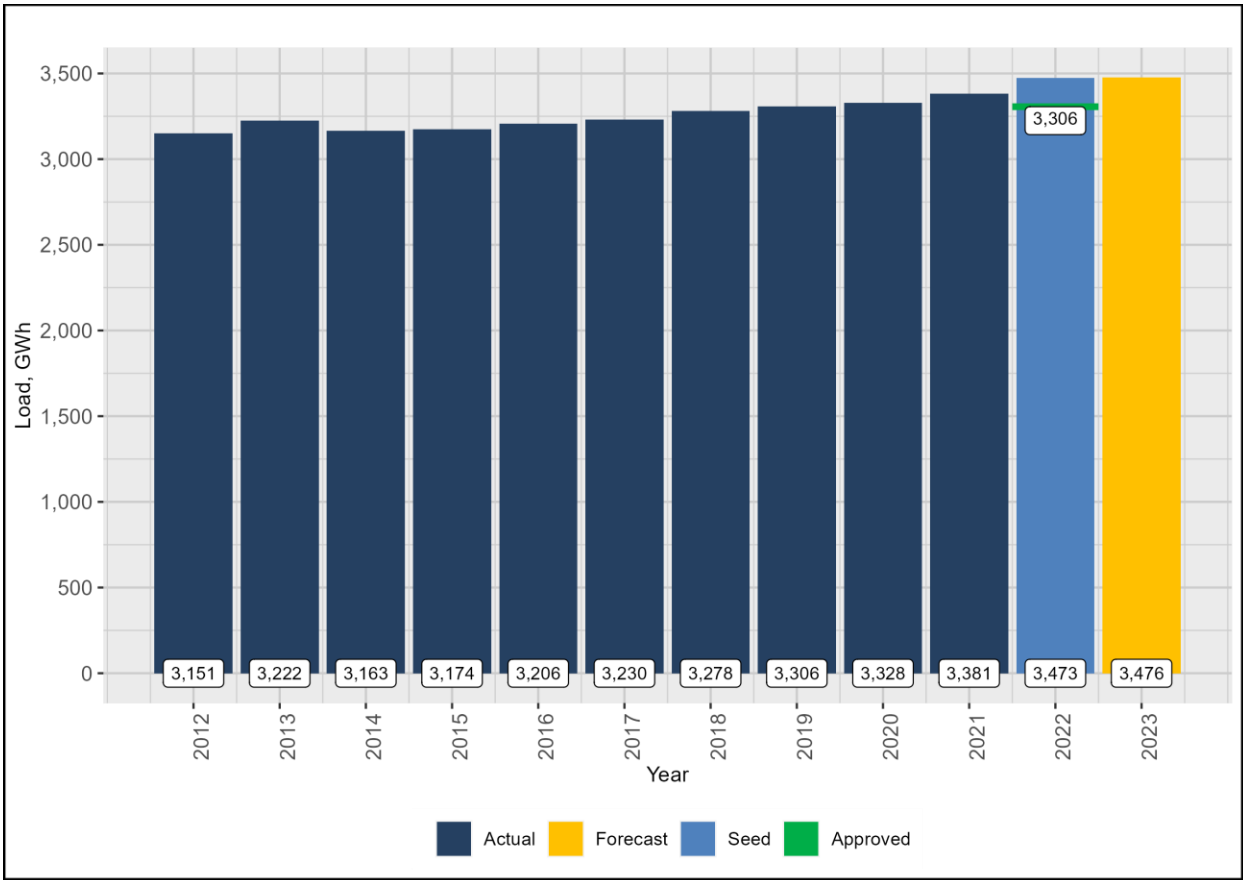


Table 3-2 below shows the normalized after-savings gross load by customer class as well as the system peak. For 2023F, the residential customer class is forecast to account for 34 percent of the normalized after-savings gross load.

Table 3-2: Normalized After-Savings Gross Load and System Peak

Line No.	Description	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022S	2023F
	Energy (GWh)												
1	Residential	1,229	1,353	1,296	1,298	1,296	1,320	1,313	1,266	1,347	1,330	1,304	1,301
2	Commercial	681	788	863	853	905	915	926	932	922	960	962	973
3	Wholesale	899	675	567	580	574	574	585	566	569	566	579	578
4	Industrial	291	352	381	380	373	363	403	495	441	472	579	575
5	Lighting	13.5	13.5	15.6	15.9	15.9	15.9	13.2	11.0	10.8	9.7	9.5	9.4
6	Irrigation	38.0	39.7	40.0	46.0	42.1	41.9	39.0	36.0	37.3	43.6	39.5	39.4
7	Net Load	3,151	3,222	3,163	3,174	3,206	3,230	3,278	3,306	3,328	3,381	3,473	3,476
8	Losses & Company Use	271	278	270	272	274	282	285	287	288	295	299	299
9	Gross Load	3,422	3,500	3,433	3,446	3,480	3,512	3,564	3,592	3,616	3,677	3,771	3,775
10													
11	System Peak (MW)												
12	Winter Peak	723	698	693	685	755	714	682	732	731	685	782	786
13	Summer Peak	589	600	620	611	593	605	631	639	666	653	678	684

The residential, commercial, wholesale, industrial, lighting, irrigation, loss load and the winter and summer peak demand forecasts are provided separately in the following subsections.

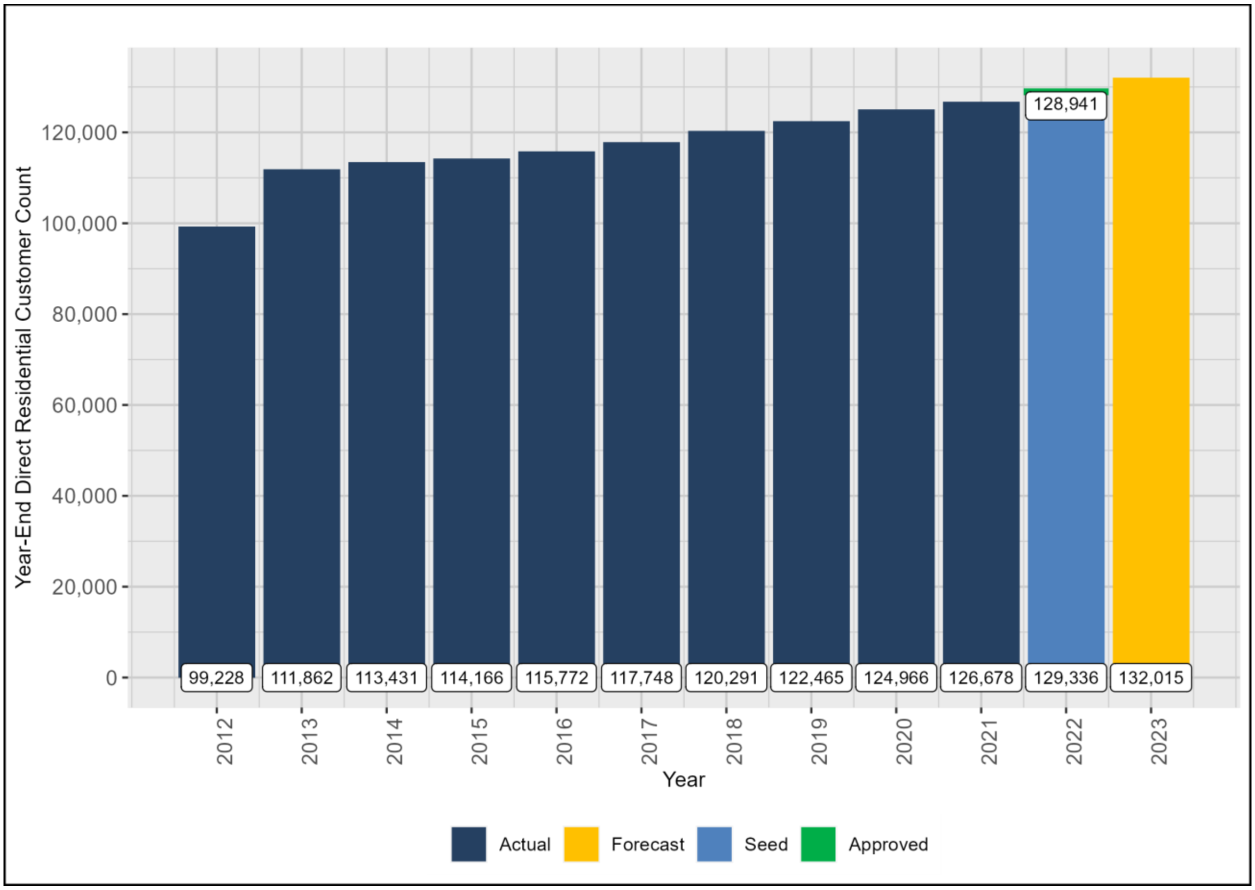
3.4.1 Residential

3.4.1.1 Residential Customers

Forecast residential customer counts are determined by a regression of the year-end customer accounts against population in the FBC direct service area. The population forecast for the FBC service area is provided by a BC Statistics report produced for FBC.

Figure 3-2 shows the year-end residential customer count for FBC.

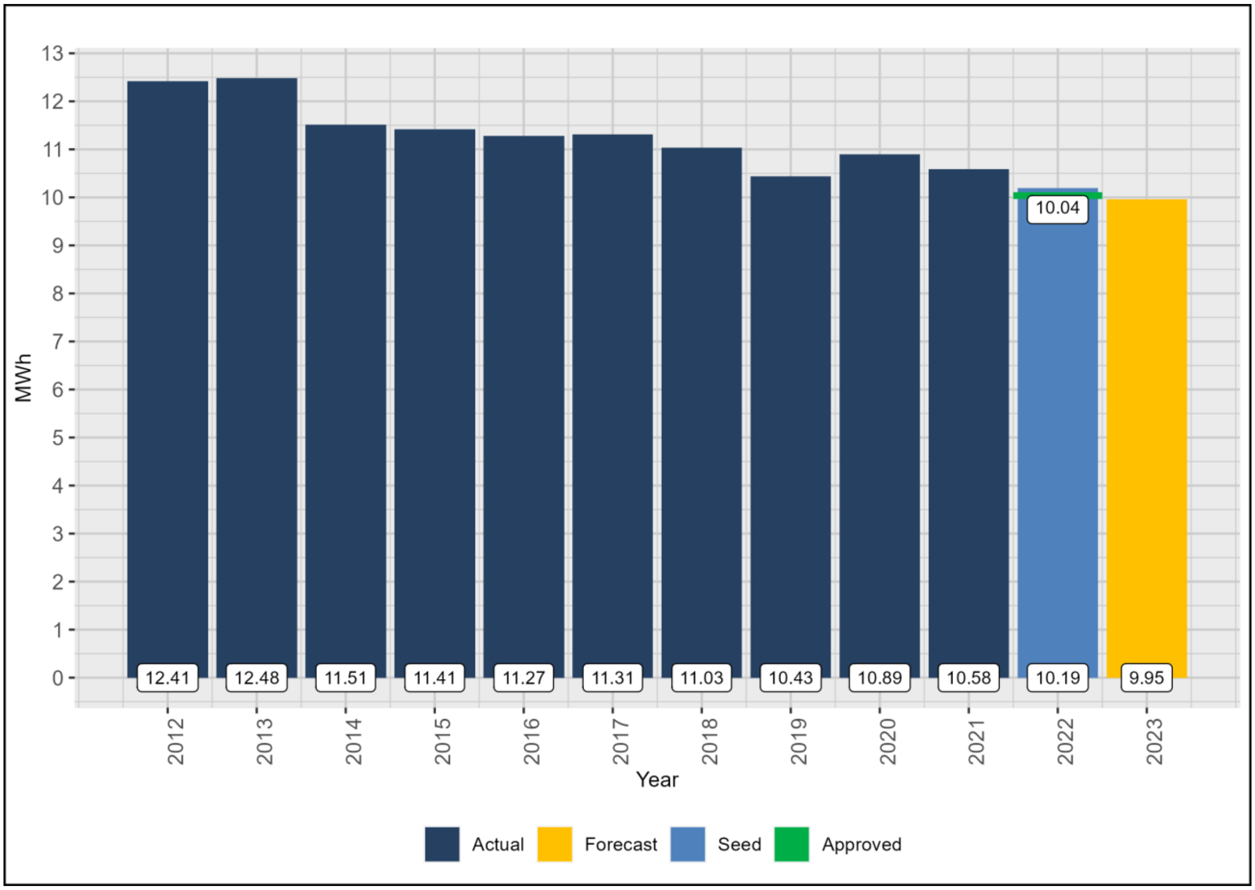
Figure 3-2: Year-End Direct Residential Customer Count



3.4.1.2 Residential UPC

Normalized historical UPCs are obtained by dividing the weather-normalized residential load by the average customer count in each year. The before-savings UPC is forecast by applying a 10-year trend to the normalized historical UPCs. The before-savings UPC forecast is then multiplied by the forecast average customer count to derive the before-savings load forecast. DSM savings, which are incremental to the savings embedded in the historical data to 2021, are then deducted from the before-savings load forecast to determine the after-savings load forecast. The after-savings UPC forecast is then calculated by dividing the after-savings load forecast by the average customer count. As shown in Figure 3-3 below, the residential after-savings UPC is forecast to decrease by 0.24 MWh in 2023F from 2022S and decrease by 0.09 MWh from 2022 Approved.

Figure 3-3: Normalized After-Savings Residential UPC (MWh)

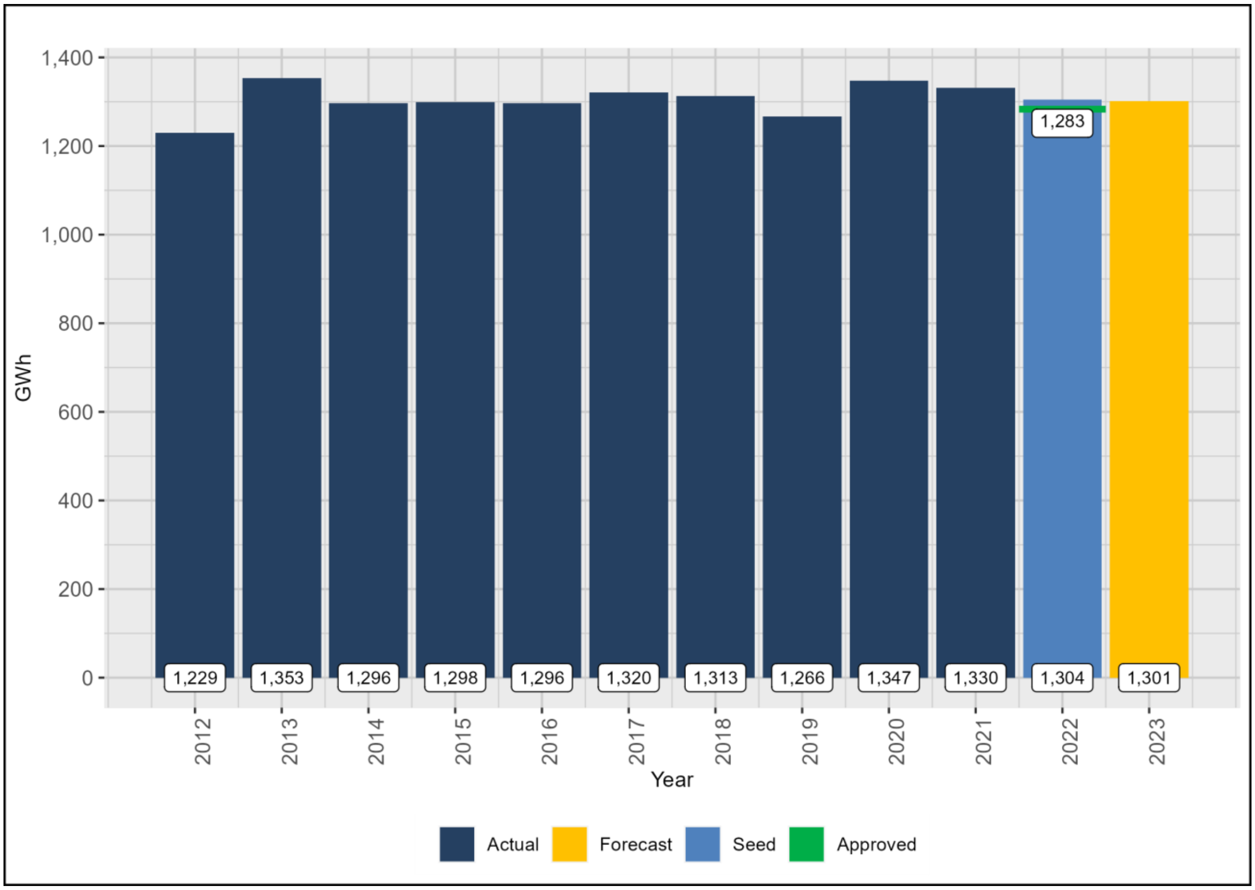


3.4.1.3 Residential Load

Consistent with past practice, the total before-savings load for the residential class is the product of the average annual residential customer count multiplied by the residential UPC. The after-savings load is produced by taking the before-savings load and then subtracting DSM savings.

As shown in Figure 3-4 below, residential after-DSM savings load is forecast to decrease by 3 GWh in 2023F from 2022S and increase by 18 GWh from 2022 Approved levels.

Figure 3-4: Normalized After-Savings Residential Load (GWh)

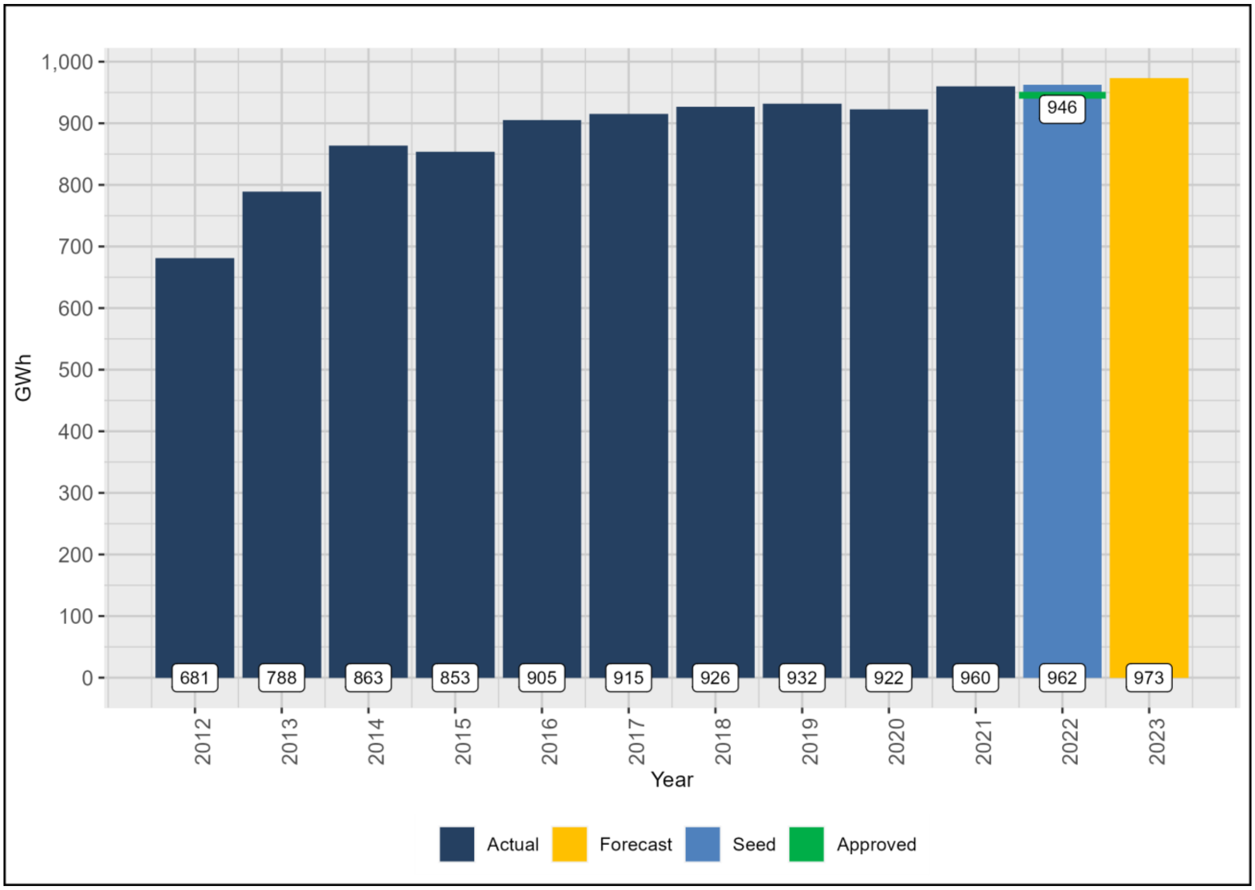


3.4.2 Commercial

3.4.2.1 Commercial Load

The commercial class is forecast based on a regression of load on the provincial GDP forecast obtained from the CBOC. The load for Electric Vehicle Direct Current Fast Chargers (EV DCFC) serviced by FBC are then added to 2022S and 2023F and account for less than a 1 GWh increase in both 2022S and 2023F. As shown in Figure 3-5 below, commercial after-savings load is forecast to increase by 11 GWh in 2023F from 2022S and increase by 27 GWh in 2023F from 2022 Approved.

Figure 3-5: After-Savings Commercial Load (GWh)



3.4.3 Wholesale

FBC sells wholesale power to municipalities for service to certain customers within its service territory that own and operate their own electrical distribution systems, and to BC Hydro. The wholesale customers' load composition is a combination of residential, commercial, industrial and lighting.

Consistent with past practice, the wholesale class is forecast using survey information from each of the individual wholesale customers, as the individual wholesale customers are best able to forecast their future load growth. For 2023, all but one of the wholesale customers responded with their load forecast projections.

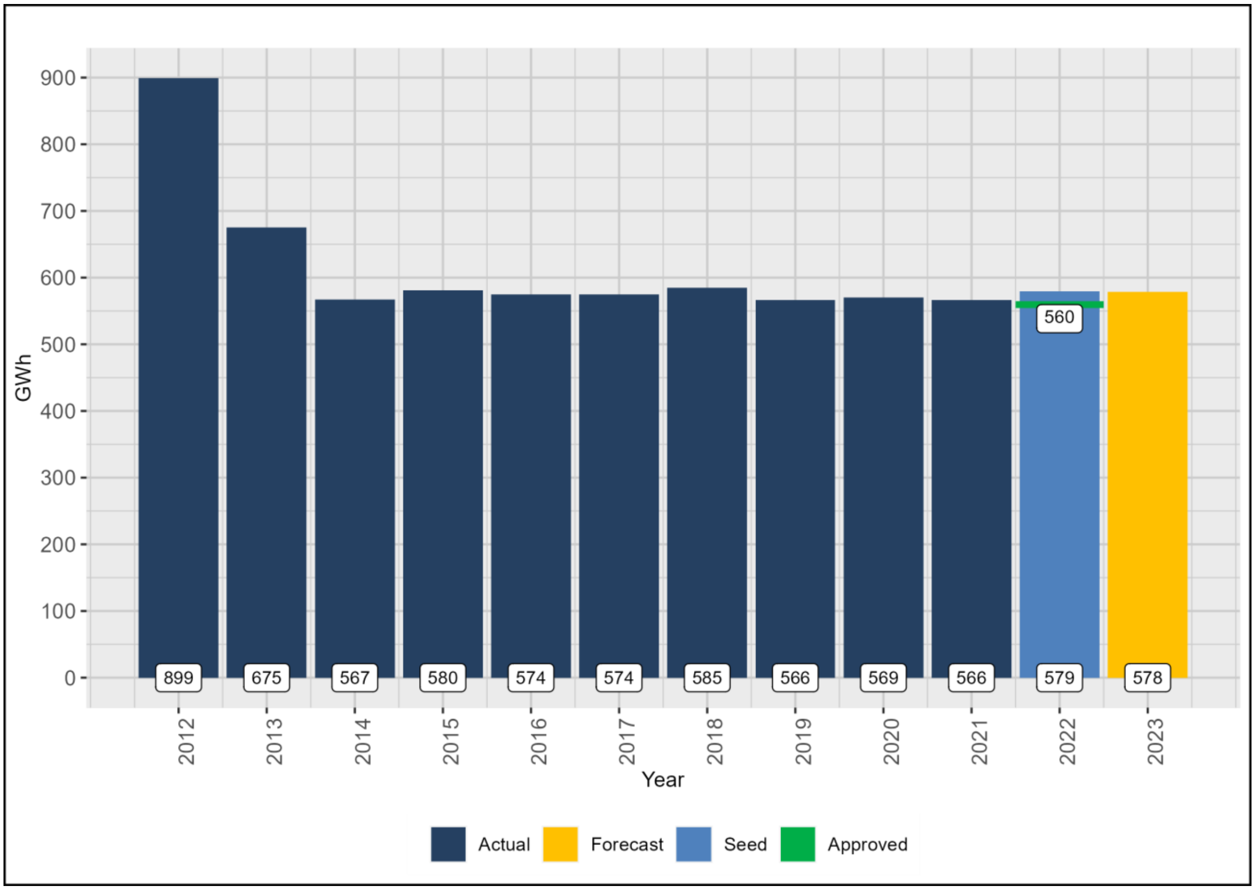
In the Annual Review for 2022 Rates Decision, the BCUC Panel directed FBC "to provide any efforts it has undertaken to improve the accuracy of its forecasts of wholesale customer load in the 2023 Annual Review, including the results of such efforts."[8] The BCUC Panel further requested that FBC work more closely with wholesale customers to develop more accurate forecasts. As such, in April of this year, FBC met with the City of Penticton, the District of

[8] FBC Annual Review for 2022 Rates Decision and Order G-374-21, p. 32.

Summerland and the City of Nelson to discuss load forecast methods, techniques and tools, as well as each City's/District's individual load forecasts. Both FBC and the Cities/District found the workshops to be informative and productive, and FBC intends to continue to conduct these workshops on an annual basis in the future.

As shown in Figure 3-6 below, after-savings wholesale load is forecast to decrease by 1 GWh in 2023F from 2022S and increase by 18 GWh in 2023F from 2022 Approved.

Figure 3-6: Normalized After-Savings Wholesale Load (GWh)



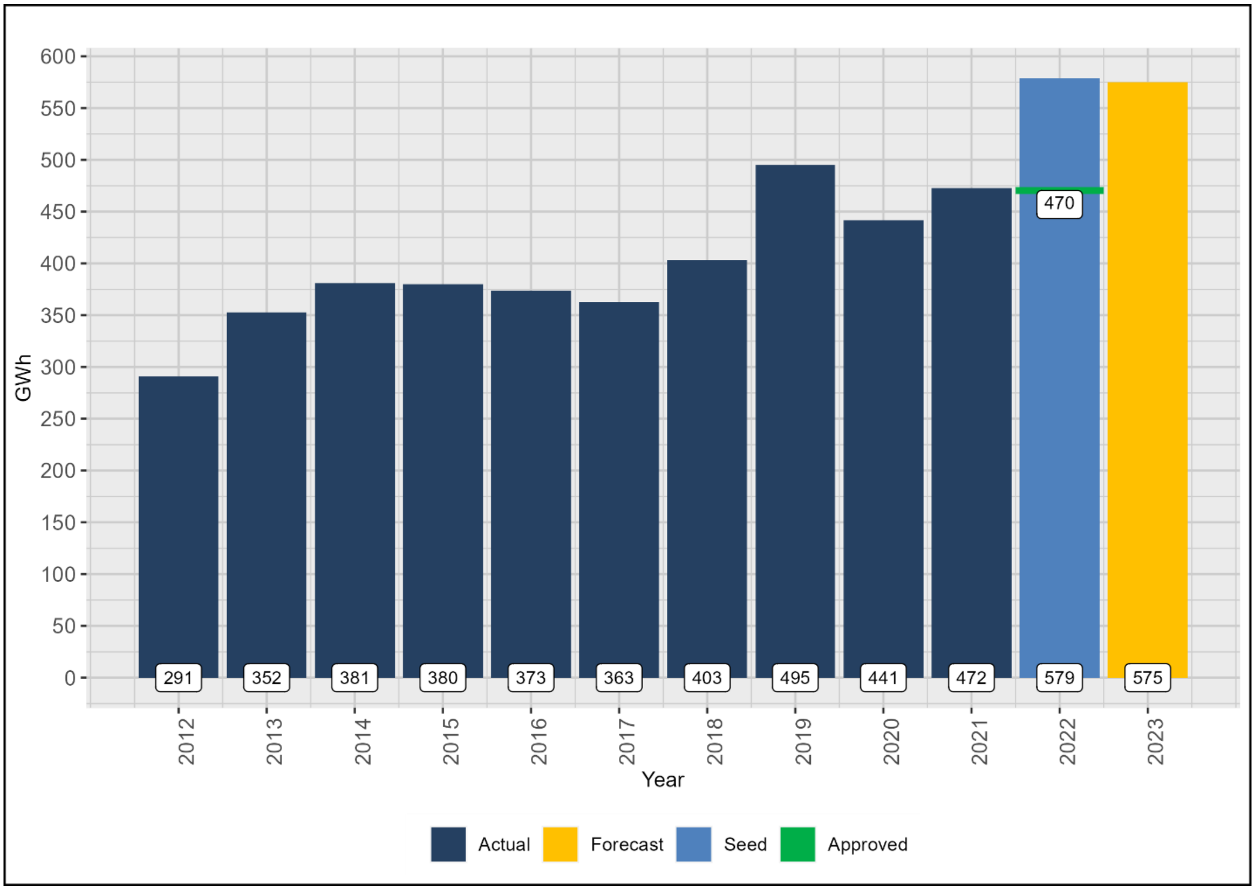
3.4.4 Industrial

Consistent with past practice, the industrial forecast is determined through a combination of customer load surveys and, when not available, escalation of the most recent annual loads by the corresponding provincial GDP growth rates for individual industries.

FBC sends all existing industrial customers a load survey that requests the customer's anticipated use for the next five years. A survey is used because individual industrial customers have the best understanding of what their future load will be. This year FBC received a response from 81 percent (34 of 42) of the surveys sent out. The responding customers represent approximately 90 percent of the total industrial load.

As shown in Figure 3-7 below, after-savings industrial load is forecast to decrease by 4 GWh in 2023F when compared to 2022S and increase by 105 GWh in 2023F compared to 2022 Approved. The increased forecast in 2022S and 2023F compared to 2022 Approved is primarily due to projected increases in data centre loads.

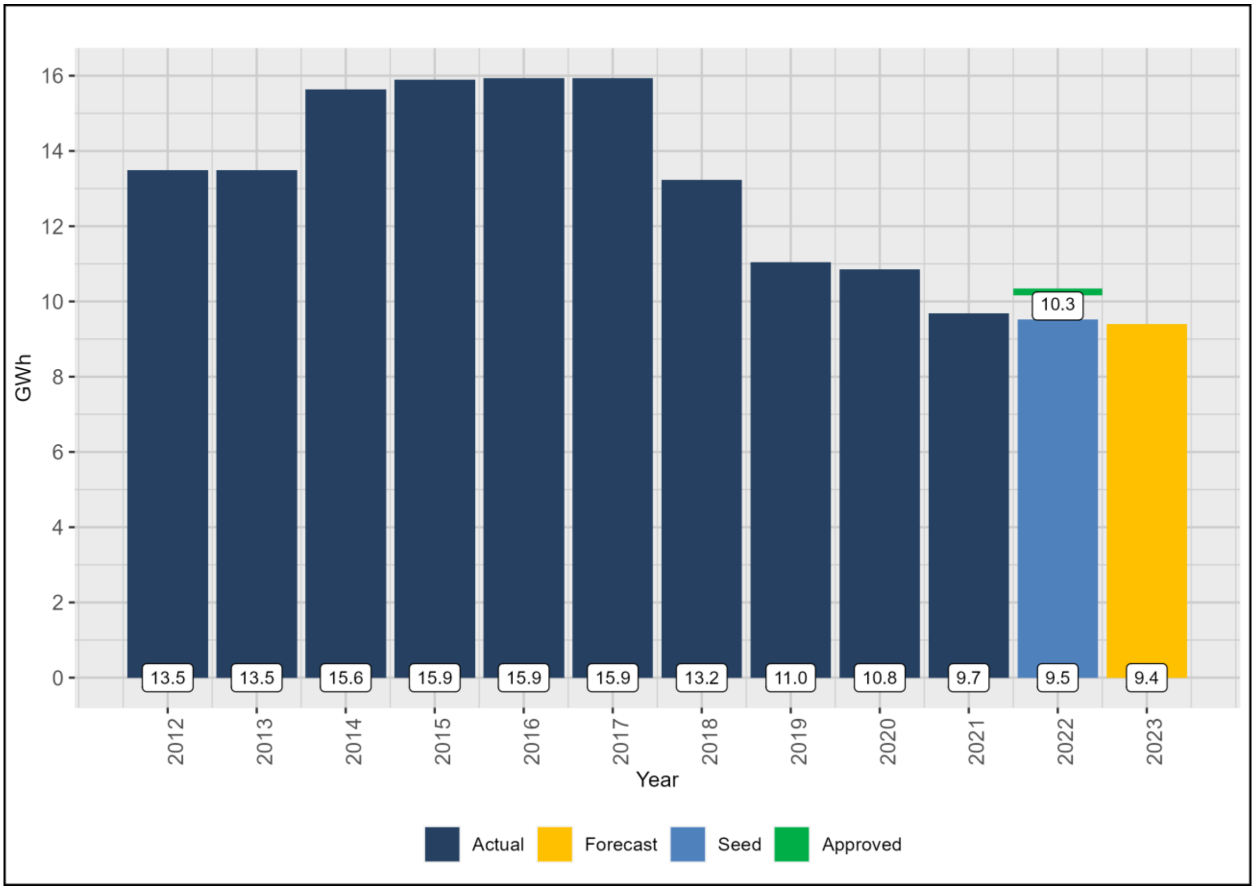
Figure 3-7: After-Savings Industrial Load (GWh)



3.4.5 Lighting

Due to the implementation of LED streetlights, the lighting load has seen declines for the past four years. FBC used the 2021 Actuals as the forecast for this load and then reduced it by DSM savings. As shown in Figure 3-8 below, after-savings lighting load is forecast to decrease by 0.1 GWh in 2023F from 2022S and decrease by 0.9 GWh when compared to 2022 Approved.

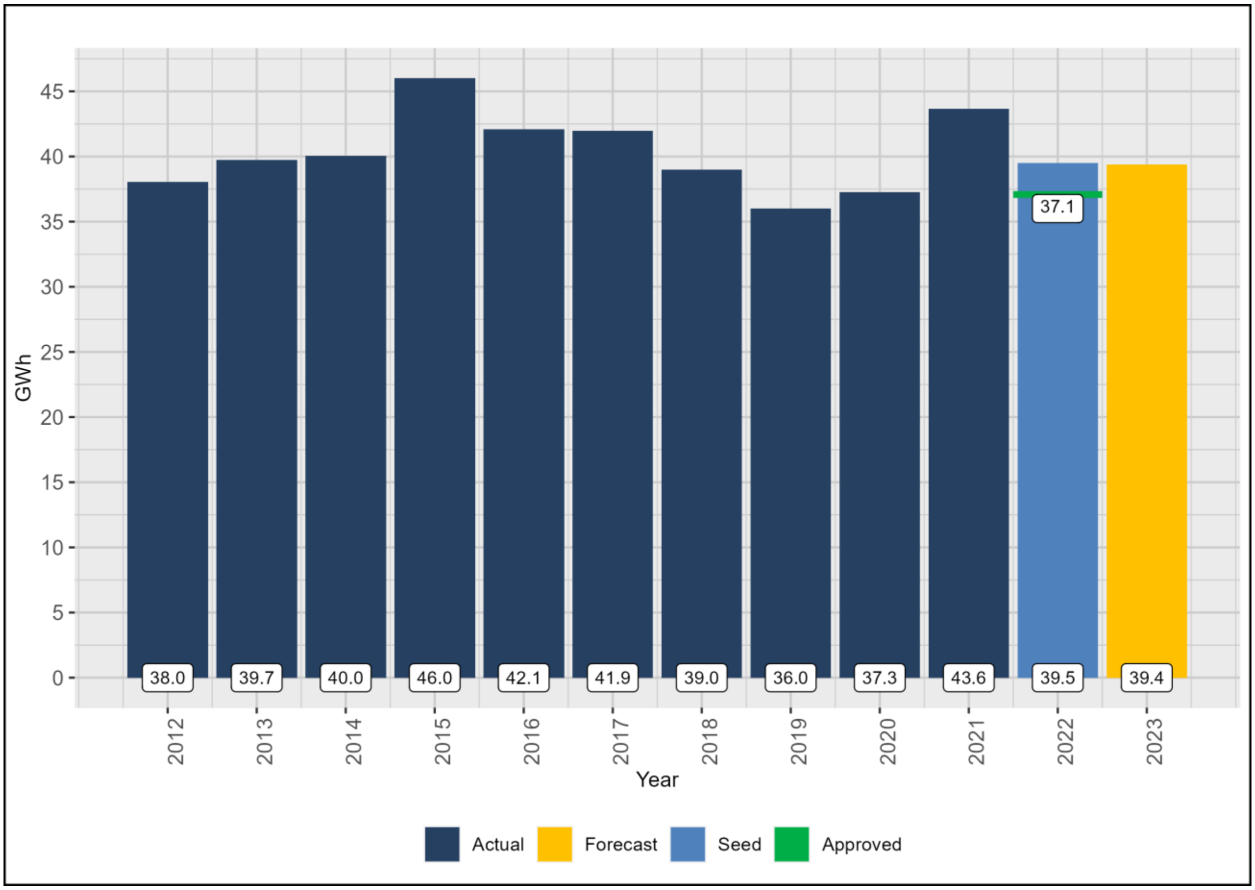
Figure 3-8: After-Savings Lighting Load (GWh)



3.4.6 Irrigation

Due to the variability in the load in the recent historical data, FBC used a five-year average as the forecast for the irrigation load. As shown in Figure 3-9 below, after-savings irrigation load is forecast to decrease 0.1 GWh from 2022S to 2023F and increase by 2.3 GWh in 2023F when compared to 2022 Approved.

Figure 3-9: After-Savings Irrigation Load (GWh)



3.4.7 Losses and Company Use

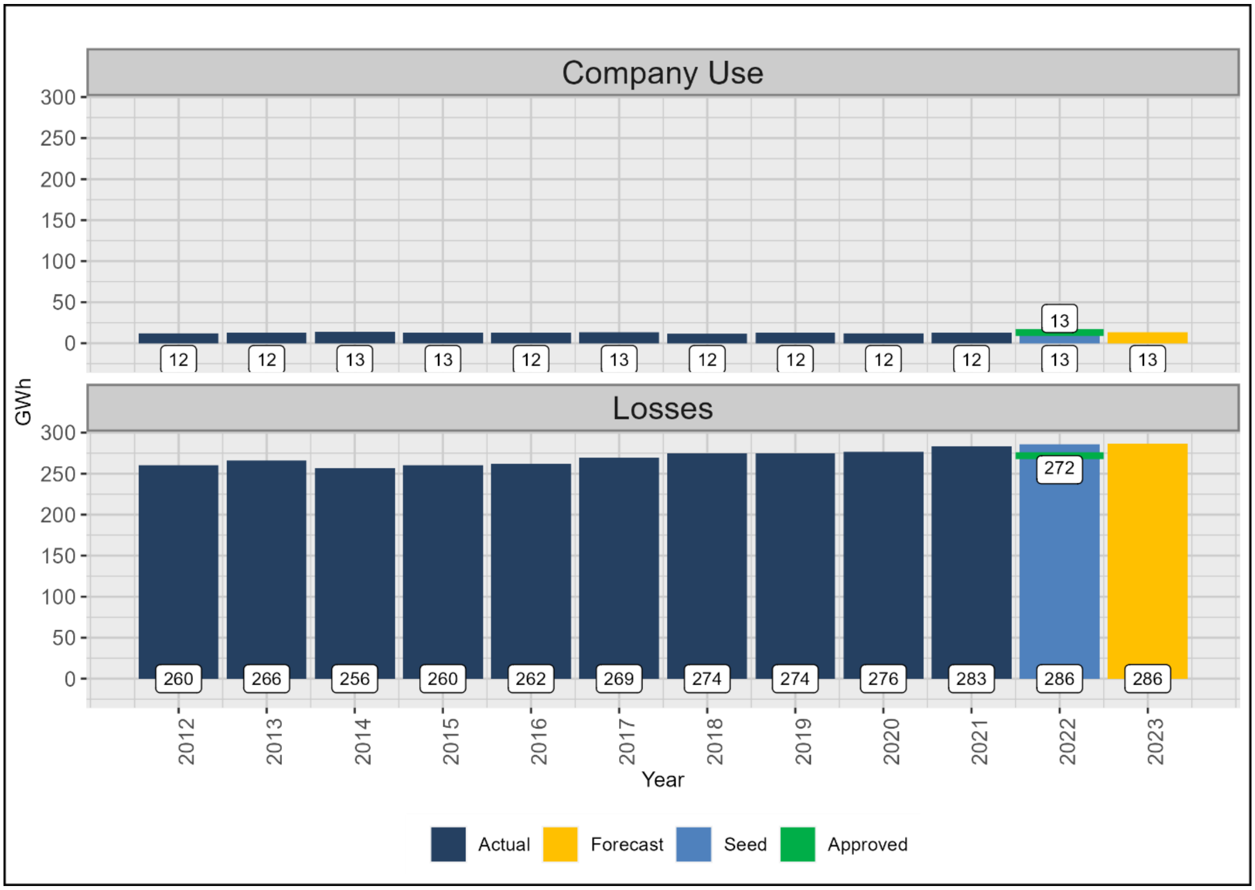
FBC conducted a Losses Study in 2019[9] and, consistent with that study, has assumed a loss rate of 7.6 percent of gross load (excluding company use). System losses consist of:

- Losses in the transmission and distribution system;
- Losses due to wheeling through the BC Hydro system; and
- Unaccounted-for load (meter inaccuracies and theft).

As shown in Figure 3-10 below, after-savings load losses are forecast to remain constant in 2023F because the gross load is forecast to be relatively stable when compared to 2022S. When compared to 2022 Approved, the 2023F after-savings load losses are forecast to increase by 14 GWh due to increased load. FBC has separated company use in the graph below, which is forecast at 13 GWh per year in 2023F, consistent with 2022S.

[9] MRP Application, Exhibit B-1-1, Appendix B3.

Figure 3-10: Normalized After-Savings Load Losses (GWh)



3.4.8 Peak Demand

The peak demand forecast is produced using the 10-year average of historical peaks, including peaks from the June 2021 "heat dome" event. The historical peak data is escalated by the gross load growth rate before it is averaged to account for the growth of demand on the FBC system.

Normalized after-savings historical winter and summer peaks are shown below along with 2022S and 2023F. The peaks shown below are seasonal, where the winter peak can fall in either November or December of the current year or January and February of the following year, while the summer peak falls in June, July or August of the current year.

Figure 3-11: After-Savings Winter Peaks (MW)

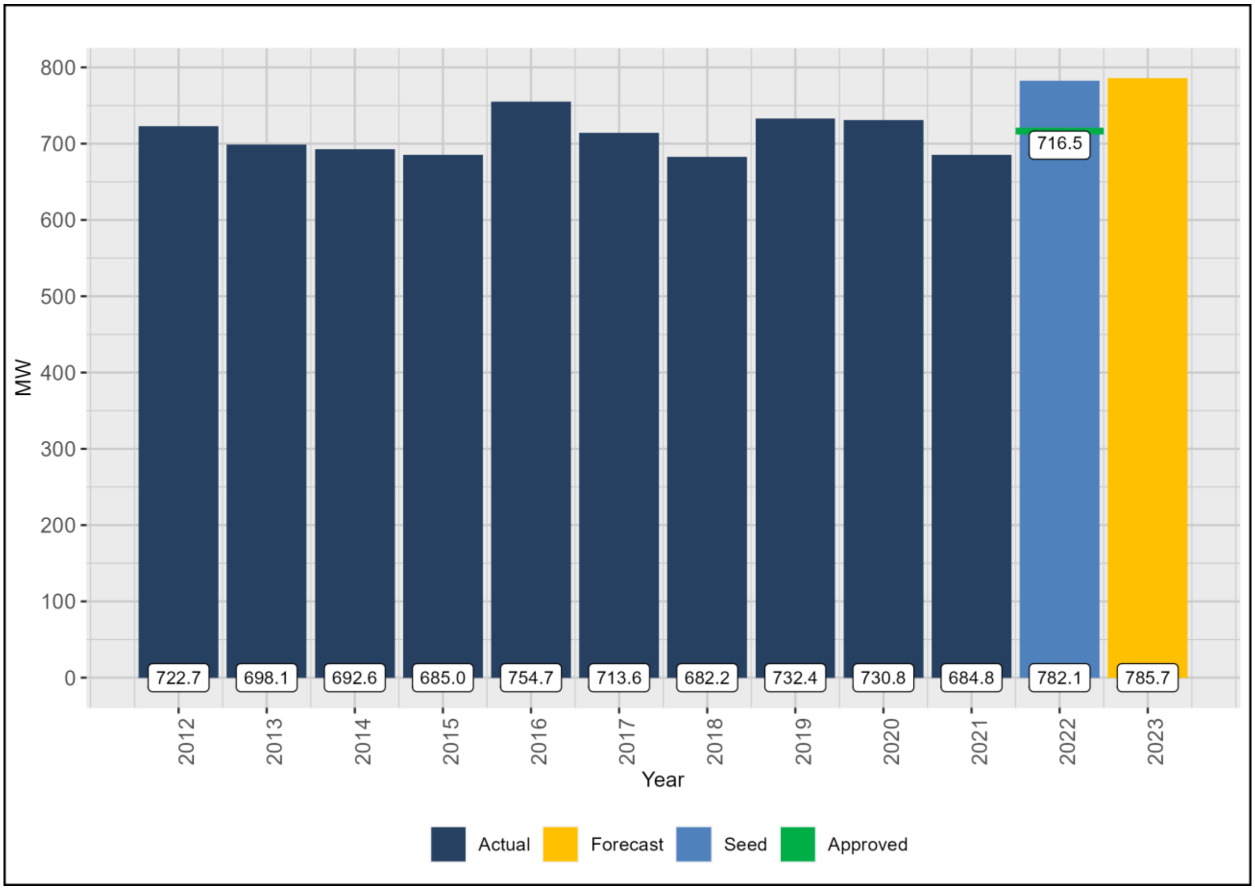
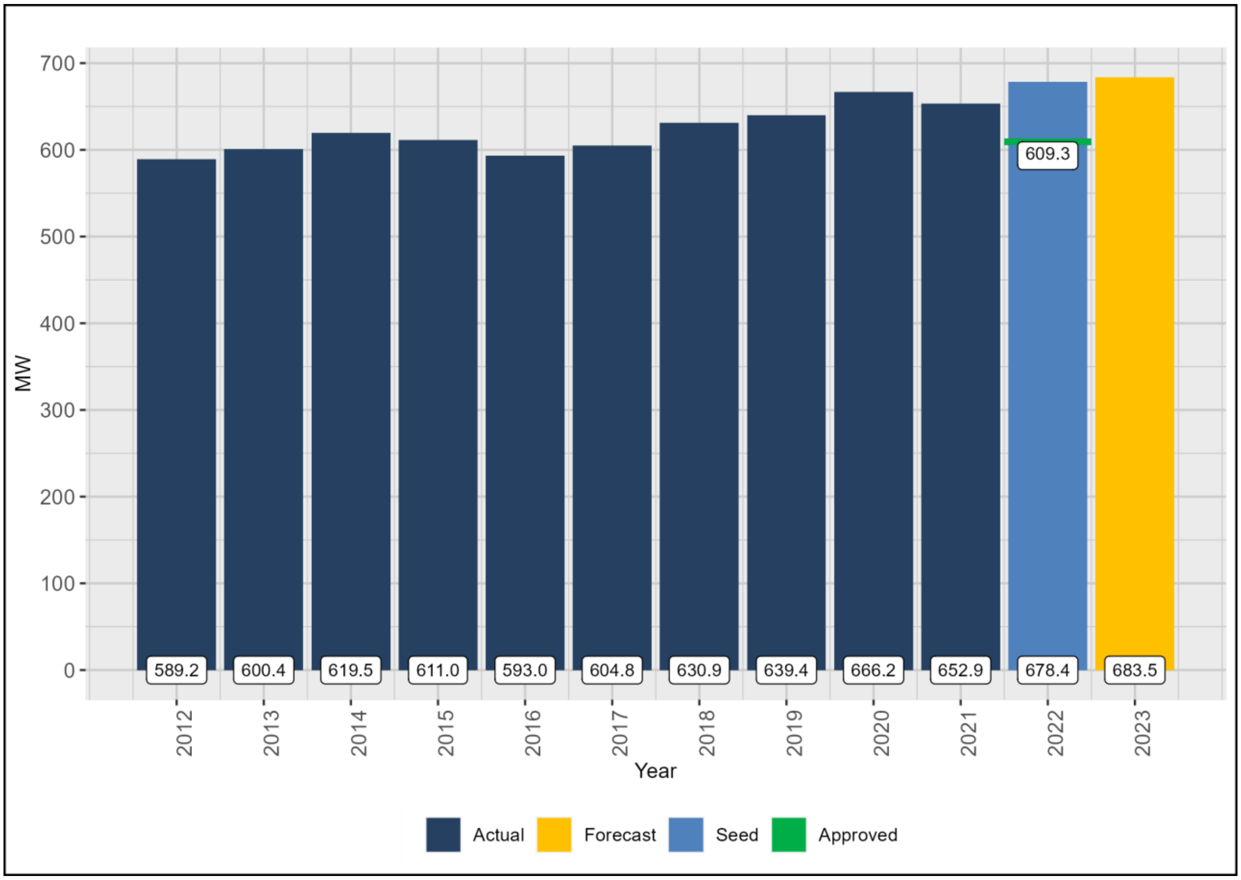


Figure 3-12: After-Savings Summer Peaks (MW)



3.5 *CUSTOMER FORECAST*

Table 3-3 shows the actual and forecast year-end customer count by rate class. The residential and commercial customer counts are forecast using the methods described in Sections 3.4.1 and 3.4.2, respectively. Industrial customers are forecast based on information on expected new loads provided by key account managers. The lighting customer forecast is prepared using a three-year regression of year-end customer counts. Wholesale and irrigation customer counts are assumed to remain at 2021 levels.

Overall, for 2023F, FBC is forecasting customer growth of 2.1 percent compared to 2022S and growth of 2.4 percent compared to 2022 Approved.

Table 3-3: Year-End Direct Customer Count

Line No.	Description	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022S	2023F
1	Residential	99,228	111,862	113,431	114,166	115,772	117,748	120,291	122,465	124,966	126,678	129,336	132,015
2	Commercial	11,811	13,662	14,363	14,976	15,073	15,398	15,678	15,956	16,165	16,594	16,995	17,496
3	Wholesale	7	6	6	6	6	6	6	6	6	6	6	6
4	Industrial	39	47	49	50	50	50	52	51	43	42	42	42
5	Lighting	1,739	1,644	1,620	1,590	1,559	1,511	1,482	1,467	1,443	1,407	1,379	1,349
6	Irrigation	1,091	1,097	1,103	1,095	1,090	1,080	1,078	1,082	1,091	1,103	1,103	1,103
7	**Total**	113,915	128,318	130,572	131,883	133,550	135,793	138,587	141,027	143,714	145,830	148,861	152,011

3.6 REVENUE FORECAST

The forecast of revenues has been developed by applying approved 2022 rates to the forecast billing determinants for each customer class.

Table 3-4 below summarizes the 2022 Approved, 2022 Projected and 2023 Forecast sales revenue.

Table 3-4: Forecast Sales Revenue at Approved Rates ($ millions)[10]

Line No.	Description	Approved 2022	Projected 2022	Forecast 2023
1	Residential	$ 195.058	$ 200.837	$ 197.962
2	Commercial	104.380	107.153	106.230
3	Wholesale	51.255	53.722	52.031
4	Industrial	40.804	46.764	47.856
5	Lighting	2.411	2.266	2.207
6	Irrigation	3.386	3.550	3.554
7	Total	$ 397.294	$ 414.292	$ 409.840

When comparing the 2022 Approved to 2022 Projected there is an increase in revenue of $16.998 million, the majority of which is due to increased residential and industrial loads.

The 2023 Forecast revenue is $12.546 million higher than 2022 Approved, primarily due to an increase in the industrial load, followed by small increases in the residential, commercial, and wholesale loads. These increases are slightly offset by a decrease in the lighting load resulting from the continued conversion to LED streetlights in the FBC service territory.

Variances between the revenue forecast in this section and the actual revenues realized are captured in the Flow-through deferral account.

3.7 SUMMARY

The normalized after-savings gross load forecast for 2023F is 3,775 GWh. Based on net load of 3,476 GWh at the approved 2022 rates, FBC's 2023 revenue forecast is $409.840 million. When comparing 2023F to 2022 Approved, there is an increase in net load of 170 GWh. The net load increase in 2023F is due to increased loads in the industrial, commercial, wholesale residential and irrigation classes.

[10] The commercial sales revenue includes the revenues under RS 96 EV DCFC Stations. Please refer to Section 5.8 for further detail on EV DCFC station costs and revenues.

4. POWER SUPPLY

4.1 INTRODUCTION AND OVERVIEW

This section includes a review of the 2022 Projected and 2023 Forecast power purchase expense (PPE), wheeling expense and water fees. Collectively, the PPE, wheeling expense and water fees are referred to as the power supply cost.

As shown in Table 4-1 below, the 2023 Forecast power supply cost of $182.105 million represents an increase of 12.5 percent or $20.275 million compared to the 2022 Approved cost of $161.830 million. The increase in 2023 Forecast power supply cost is mainly due to increases in PPE, however, wheeling expense has increased as well. The 2023 Forecast PPE has increased as a result of increased gross load and a reduction in wholesale market purchases, which has resulted in a correspondingly greater reliance on energy supplied under BC Hydro Rate Schedule (RS) 3808. 2023 Forecast wheeling expense has increased as a result of both rates and usage. The 2023 Forecast water fee expense has decreased compared to 2022 Approved as a result of decreased usage.

Any variances between forecast and actual power supply costs are recorded in the Flow-through deferral account and returned to or recovered from customers in the subsequent year.

Table 4-1: Power Supply Cost ($ millions)

Line No.	Description	Approved 2022	Projected 2022	Forecast 2023
1	Power Purchase Expense	$ 143.779	$ 153.164	$ 163.575
2	Wheeling Expense	6.093	6.330	6.987
3	Water Fees	11.958	11.916	11.543
4	Total Power Supply Cost	$ 161.830	$ 171.409	$ 182.105
5				
6	Gross Load (GWh)	3,591	3,786	3,775

4.2 SUMMARY OF POWER SUPPLY RESOURCES

FBC uses a combination of Company-owned generation entitlements, firm contracted supply, and market purchases to meet its load requirements. The Company's firm resources consist of:

1. Canal Plant Agreement (CPA) Entitlements associated with the generation facilities owned by FBC. The costs associated with FBC-owned generation are not included in the power purchase estimates, except for the Balancing Pool adjustments, which account for year-to-year timing differences in the entitlement energy storage under the CPA;
2. The Brilliant Power Purchase Agreement (BPPA), a 125 MW contract (Order E-7-96), and an amendment to the BPPA which reflects the purchase of 20 MW of Brilliant Upgrade

power (Letter L-57-00), and the 5 MW Brilliant Tailrace Capacity agreement (Order E-17-01);

3. A power purchase agreement (PPA) with BC Hydro (a 200 MW contract) under BC Hydro RS 3808 (Order G-60-14);
4. The Waneta Expansion Capacity Purchase Agreement (WAX CAPA), which is a 40-year purchase agreement with the Waneta Expansion Limited Partnership for capacity entitlements under the CPA (Orders E-29-10 and E-15-12);
5. A number of small Independent Power Producer (IPP) contracts; and
6. A number of market purchase arrangements.

4.3 *PORTFOLIO OPTIMIZATION*

The primary objectives of FBC's power supply portfolio planning are to ensure that the Company has sufficient firm resources to meet expected load requirements, to ensure the availability of cost-effective reliable power for FBC's customers, to prudently manage exposure to the cost and availability of market power supplies, and to optimize the value of any surplus resources that are not needed to meet load requirements.

The Company currently has long-term, firm resources from which it can supply all of its 2023 forecast annual energy requirements, and most of its forecast capacity requirements with the exception of a small number of hours during June and July. These forecast capacity gaps result from the Company's updated, increased load forecast. As mentioned in previous Annual Reviews, the nature of FBC's contracted resources, in particular the BC Hydro PPA, provides the Company some flexibility to participate in the market when conditions are favourable to mitigate the cost of holding those firm resources. However, in contrast to recent years, the regional electricity market has experienced a step change over the past year due to several factors that include resource adequacy concerns, increased natural gas prices, and increased severe weather events. This change in the market price environment has resulted in little opportunity to displace PPA purchases on a forward basis. Furthermore, although FBC's load requirements are forecast to grow over time, the amount of capacity provided under the WAX CAPA is currently greater than FBC's capacity requirements in most months, and FBC sells the surplus capacity to mitigate power purchase expense. FBC has contracted to release a 50 MW block of capacity purchased under the WAX CAPA to BC Hydro under the Residual Capacity Agreement (RCA), which was approved by Order G-161-14. The remaining surplus WAX CAPA will be sold to Powerex Corp. (Powerex) on a day-ahead basis, if and when it is not required to meet FBC load requirements. These sales are made under the Capacity and Energy Purchase and Sale Agreement (CEPSA) with Powerex dated February 17, 2015, and accepted by Order E-10-15.

4.4 *FBC 2022/23 ANNUAL ELECTRIC CONTRACTING PLAN*

On May 2, 2022, FBC filed its 2022/23 Annual Electric Contracting Plan (AECP) with the BCUC. The purpose of the AECP is to outline FBC's plan to meet its peak demand requirements and annual energy requirements for the operating year commencing October 1, 2022 and ending September 30, 2023, and to facilitate FBC's annual energy nomination under the PPA. FBC is required to take or pay for 75 percent of the PPA Nomination, regardless of whether it schedules the energy. The difference between the PPA Nomination and the 75 percent minimum take provides flexibility to manage annual loads that are below forecast or to displace PPA purchases with lower cost market purchases. Therefore, real-time opportunities to displace PPA purchases are restricted to a maximum of 25 percent of the PPA nominated energy, but could be more or less, depending on system conditions.[11] The AECP also outlines FBC's load and resource balance over the following four years, and FBC's plan for optimizing its portfolio over that period. FBC's forecasts of PPE for the remainder of 2022 and for 2023 are based on the plan detailed in the 2022/23 AECP, which was accepted by the BCUC on May 26, 2022, by Letter L-19-22.[12]

The AECP identified FBC's intention to make its annual energy nomination under the PPA for the 2022/23 contract year equal to 767 GWh, less any firm market contracts that FBC could enter into, as described in Section 5 of the 2022/23 AECP. Prior to the June 30, 2022 nomination deadline, FBC updated its forecast load and resource balance for the 2022/23 contract year and submitted a nomination of 774 GWh.

4.5 *2022 PROJECTED POWER PURCHASE EXPENSE*

As shown in Table 4-2 below, FBC's 2022 Projected gross load (after taking into account demand side management and other customer savings) is expected to be 195 GWh above the 2022 Approved value, and PPE is projected to be above the 2022 Approved value by $9.385 million. The increase in 2022 Projected PPE is primarily due to the increase in gross load above the 2022 Approved value. This increase in gross load drives increases in both the BC Hydro PPA and wholesale market expense to meet the additional load. In addition, increases in both the purchase price under the BC Hydro PPA and the average cost of purchases from the market further contributed to the increase in PPE.

[11] For example, if loads were 50 GWh lower in a year than forecast, that must be adjusted for as part of the 25 percent PPA flexibility such that the amount of PPA energy that can be displaced by market purchases is also reduced by 50 GWh.

[12] The AECP was filed confidentially. The non-confidential Executive Summary is attached to Letter L-19-22.

Table 4-2: 2022 Power Purchase Expense ($ millions)

Line No.	Description	Approved 2022	Projected 2022	Difference
1	Brilliant	$ 41.841	$ 42.367	$ 0.526
2	BC Hydro PPA	44.062	49.539	5.477
3	Waneta Expansion	42.701	41.434	(1.267)
4	Market and Contracted Purchases	15.102	21.672	6.570
5	Independent Power Producers	0.073	0.058	(0.015)
6	Self-Generators	-	-	-
7	CPA Balancing Pool	-	(1.252)	(1.252)
8	Transmission Service Loss Recoveries	-	-	-
9	Special and Accounting Adjustments	-	(0.654)	(0.654)
10	Total	$ 143.779	$ 153.164	$ 9.385
11				
12	Gross Load (GWh)	3,591	3,786	195

4.6 *2023 FORECAST POWER PURCHASE EXPENSE*

As shown in Table 4-3 below, the 2023 Forecast PPE is $10.412 million greater than the 2022 Projected. The forecast increase from $153.164 million in 2022 to $163.575 million in 2023 is mainly a result of a reduction in market and contracted purchases as they increase in price and correspondingly, a greater reliance on energy supplied by BC Hydro as it becomes more cost effective compared to market. Furthermore, as a result of load growth and uneconomic wholesale market prices, FBC expects to take Tranche 1 PPA energy over the nominated amount during 2023. Tranche 1 PPA energy taken over the nominated amount costs 150 percent of the Tranche 1 embedded cost rate,[13] and this exposure to more expensive PPA energy is also contributing to increased costs. Also contributing to the increase are escalations to the Waneta Expansion and Brilliant contract rates.

Table 4-3 below shows a comparison of the 2022 Projected and 2023 Forecast PPE. Reasons for significant variances from the 2022 Projected PPE are discussed below.

[13] $50.94 per MWh x 150 percent = $76.41 per MWh.

Table 4-3: 2023 Forecast Power Purchase Expense ($ millions)

Line No.	Description	Projected 2022	Forecast 2023	Difference
		-		
1	Brilliant	$ 42.367	$ 44.050	$ 1.683
2	BC Hydro PPA	49.539	71.302	21.763
3	Waneta Expansion	41.434	41.834	0.400
4	Market and Contracted Purchases	21.672	6.326	(15.346)
5	Independent Power Producers	0.058	0.062	0.004
6	Self-Generators	-	-	-
7	CPA Balancing Pool	(1.252)	-	1.252
8	Transmission Service Loss Recoveries	-	-	-
9	Special and Accounting Adjustments	(0.654)	-	0.654
10	Total	$ 153.164	$ 163.575	$ 10.412
11				
12	Gross Load (GWh)	3,786	3,775	(11)

4.6.1 Brilliant

Brilliant expense is forecast to increase in 2023 by $1.683 million compared to 2022 Projected due to increased rates, which are based on a forecast of the operating and maintenance cost of the plant, as well as a true-up to the prior year's actual costs compared to forecast.

4.6.2 BC Hydro PPA

BC Hydro PPA expense is forecast to increase in 2023 by $21.763 million compared to the 2022 Projected expense. The drivers of the increase are a higher purchased volume (371 GWh), which increases the expense by $21.775 million, and an increase in BC Hydro rates, which accounts for an increase of $3.987 million, for a total of $25.763 million. FBC has decreased its 2023 Forecast of PPA expense by $7.000 million in savings to account for potential real-time opportunities to displace PPA purchases with lower cost market purchases. The 2022 Projected BC Hydro expense was reduced by $3.000 million to account for potential real-time opportunities during the remainder of 2022. This results in a variance between 2022 Projected and 2023 Forecast of $21.763 million[14], as shown in Table 4-3. Actual market savings for the remainder of 2022 and 2023 may be higher or lower and will depend on system and market conditions at the time. Any variance, including these savings, is recorded in the Flow-through deferral account and returned to or recovered from customers in a subsequent year.

4.6.3 Waneta Expansion

The $0.400 million increase in Waneta Expansion expense is due to the 2.1 percent annual fixed escalation of WAX CAPA rates, offset by a $0.291 million increase in forecast surplus sales revenue under the RCA and CEPSA. Revenue under the CEPSA is linked to the amount of

[14] $21.763 million is calculated as follows: Total increase of $25.763 million less the $4.000 million variance between the 2022 Projected and 2023 Forecast real-time opportunities, or, $25.763 million – ($7.000 million - $3.000 million).

capacity FBC releases to Powerex and the day-ahead market prices at the Mid-Columbia River (Mid-C) trading hub. The Mid-C is the largest electricity trading hub in the Pacific Northwest and is located on the US portion of the Columbia River. FBC's forecast of Mid-C forward market prices is based on contracts that have been traded and/or bids and offers from forward contracts on the Intercontinental Exchange Inc. (ICE), which is a global exchange, clearing, financial data, and technology company. The method used to forecast market prices and surplus sales is the same as in the Annual Review for 2022 Rates. The forecast of surplus capacity sales revenue in 2023, which is included in line 3 of Table 4-3, is approximately $10.700 million.

4.6.4 Market and Contracted Purchases

The $15.346 million decrease in Market and Contracted Purchases forecast for 2023 is due to a lesser volume purchased at higher rates when compared to 2022 Projected. Market and Contracted Purchases for 2022 Projected include both fixed price contracted purchases and real-time market purchases made using the 25 percent flexibility of the PPA. All of the market purchases included in the 2023 Forecast are based on fixed price contracts executed by the Company, with the exception of forecast real-time market purchases for Rate Schedule 37[15] load. As discussed above in the BC Hydro PPA variance explanation, there may be opportunities for additional real-time market purchases using the flexibility of the PPA purchases.

4.6.5 CPA Balancing Pool

The CPA Balancing Pool represents timing differences in entitlement energy storage under the CPA and is used to manage fluctuations in load and resource availability, or to take advantage of market opportunities. In the 2022 Projected PPE, FBC has stored a net total of 25 GWh of entitlement energy, valued at $1.252 million. For the 2023 Forecast, and consistent with past practice, FBC does not forecast any net use or storage of entitlement energy.

4.7 TRANSMISSION SERVICE LOSS RECOVERIES

Transmission service customers taking service under FBC's Rate Schedules 100 and 101 currently physically deliver energy to FBC to compensate for the losses that are incurred on FBC's system as a result of wheeled energy. FBC includes transmission wheeling losses in its load forecast (included in Tables 4-2 and 4-3, line 8), and also includes loss recovery as a firm resource. Because the recoveries are delivered physically, there is no associated cost or revenue. Table 4-4 shows the 2022 and 2023 loss recoveries.

[15] RS 37 is large commercial stand-by service, which is on-demand back-up and maintenance service provided to self-generating customers. This service is provided to the customer at an hourly market-based rate, reflective of FBC's cost of supply. FBC procures this supply on a real-time basis because there is little certainty as to when customers will use this service. Forecast RS 37 load for 2023 is 15 GWh or 0.4 percent of total gross load.

Table 4-4: Transmission Service Loss Recoveries (GWh)

Line No.	Description	Approved 2022	Projected 2022	Forecast 2023
1	Loss Recoveries	12	12	12

4.8 WHEELING EXPENSE

Wheeling expense includes wheeling service provided by BC Hydro under the Amended and Restated Wheeling Agreement (ARWA) and Open Access Transmission Tariff (OATT) as needed to supply the Company's loads in the Okanagan, Creston and Princeton. Also included are charges paid to Teck Metals Ltd. (Teck) for the use of its 71 Line. Rates under the ARWA are specified in BC Hydro's RS 3817.

Wheeling expense is forecast using the same method as in the Annual Review for 2022 Rates. Table 4-5 below shows FBC's Wheeling Expense for 2022 and 2023.

Table 4-5: Wheeling Expense ($ millions)

Line No.	Description	Approved 2022	Projected 2022	Forecast 2023
1	Wheeling Nomination (MW Months)			
2	Okanagan Point of Interconnection	2,475	2,475	2,670
3	Creston	420	420	420
4				
5	Wheeling Expense			
6	Okanagan Point of Interconnection	$ 4.903	$ 4.976	$ 5.555
7	Creston	0.542	0.550	0.570
8	Other	0.648	0.804	0.863
9	Total Wheeling Expense	$ 6.093	$ 6.330	$ 6.987

Total 2022 Projected wheeling expense is $0.237 million greater than 2022 Approved. The 2022 Projected ARWA costs are $5.526 million (lines 6 and 7 in the table above), a $0.081 million increase when compared to 2022 Approved, which is a result of higher than expected BC-CPI and therefore ARWA rates. 2022 Projected Teck and OATT wheeling costs are $0.804 million (line 8 above), which is $0.156 greater than 2022 Approved. This is mainly due to increased use of OATT wheeling.

2023 Forecast wheeling expense is $0.657 million higher than 2022 Projected. This is a result of both increased use and rates. FBC increased the Okanagan wheeling nomination to 2,670 MW months in 2023 from 2,475 MW months in 2022. ARWA rates are forecast to increase on October 1 of both 2022 and 2023, based on forecast BC-CPI, as is the Teck wheeling rate as a result of a letter agreement made between Teck and FBC.

4.9 WATER FEES

Water fees are based on FBC's entitlement usage in the previous year and the rate increases are indexed to BC-CPI.

As shown in Table 4-6 below, the 2023 Forecast water fees are decreasing by $0.373 million from the 2022 Projected due to decreased entitlement use. 2023 water fees are forecast using the same method as in the Annual Review for 2022 Rates.

Table 4-6: Water Fees ($ millions)

Line No.	Description	Approved 2022	Projected 2022	Forecast 2023
1	Plant Entitlement in Previous Year (GWh)	1,679	1,663	1,571
2				
3	Water Fees	$ 11.958	$ 11.916	$ 11.543

4.10 SUMMARY

The primary objectives of FBC's power supply portfolio planning are to ensure that the Company has sufficient firm resources to meet expected load requirements, to ensure the availability of cost-effective reliable power for FBC's customers, to prudently manage exposure to the cost and availability of market power supplies, and to optimize the value of any surplus resources that are not needed to meet load requirements.

FBC's forecast of PPE is based on FBC's firm resources in place at the time of filing and is consistent with the 2022/23 AECP. Any variances in the power supply cost, including any decreases in PPE due to further portfolio optimization, are recorded in the Flow-through deferral account and returned to or recovered from customers in a subsequent year.

5. OTHER REVENUE

5.1 INTRODUCTION AND OVERVIEW

This section discusses FBC's forecasts of Other Revenue. In the MRP Decision (page 74), FBC was approved for variances between forecast and actual Other Revenue to be subject to earnings sharing.[16]

FBC is forecasting Other Revenue for 2023 to be $0.409 million higher than 2022 Approved, primarily due to higher Late Payment Charges and expected annual increases in rates for Apparatus and Facilities Rental, Contract Revenue and Transmission Access Revenue.

2022 Projected Other Revenue is $1.335 million higher than 2022 Approved. The main drivers of this increase are the sales of carbon credits related to Electric Vehicle (EV) Direct Current Fast Charging (DCFC) stations, as well as higher Contract Revenue and Late Payment Charges.

Table 5-1: Other Revenue ($ millions)

Line No.	Description	Approved 2022	Projected 2022	Forecast 2023
1	Apparatus and Facilities Rental	$ 6.018	$ 6.018	$ 6.108
2	Contract Revenue	2.277	2.750	2.367
3	Transmission Access Revenue	1.771	1.788	1.834
4	Interest Income	0.020	0.020	0.030
5	Late Payment Charges	0.875	1.095	0.994
6	Connection Charges	0.505	0.505	0.553
7	EV Stations Carbon Credits	-	0.625	-
8	Other Recoveries	0.366	0.366	0.355
9	Total Other Revenue	$ 11.832	$ 13.167	$ 12.241

In the following sections, FBC summarizes its projections and forecasts for each of the line items included in the table above.

5.2 APPARATUS AND FACILITIES RENTAL

Apparatus and Facilities Rental is comprised primarily of pole contact revenue from other utilities and businesses that attach their facilities to FBC infrastructure in order to deliver services to their customers, such as telephone and cable television providers. Rent is charged at a unit rate per pole contact multiplied by the number of poles that are contacted. There are no variances projected in 2022 compared to 2022 Approved, as final amounts have yet to be calculated since the majority of invoices are issued during the third quarter of the year. The 2023 Forecast is higher than 2022 Approved due to expected escalations in unit rental rates for continuing contracts.

[16] Variances in Other Revenue associated with Electric Vehicle (EV) stations carbon credits are treated as flow-through, as EV Direct Current Fast Charging (DCFC) stations are prescribed undertakings under section 5 of the GGRR and the cost of service associated with EV DCFC stations is subject to flow-through treatment.

5.3 CONTRACT REVENUE

FBC performs work under contract to third parties at the Waneta and Brilliant hydroelectric generating facilities. This third-party work, and the associated management fees earned, fluctuates from year to year based on customer requirements, which include routine and non-routine work planned at the start of the customer's fiscal year.

The Company also operates and maintains a number of other facilities for third-party entities through its non-regulated affiliate FortisBC Pacific Holdings Inc. (FPHI). Transactions between FBC and FPHI are conducted in accordance with FBC's Code of Conduct and Transfer Pricing Policy[17] and earn a transfer price profit revenue. Revenues may fluctuate from year to year depending on customer requirements.

The 2022 Projected revenue is higher than 2022 Approved due to an increase in costs related to the close-out of a multi-year asset refurbishment project for a third party that began in 2020, as well as certain costs that shifted from 2021 into 2022 for the same project. The 2023 Forecast is higher than 2022 Approved due to expected increases in the average cost of work and materials recovered from third-party customers.

5.4 TRANSMISSION ACCESS REVENUE

Transmission Access Revenue represents charges to customers for transmitting power over the FBC system. The 2022 Projected revenue is slightly higher than 2022 Approved due to a higher nomination than originally forecast for one customer. The 2023 Forecast is higher than 2022 Approved due to the phased increase in rates over three years beginning January 1, 2020, as approved by Order G-40-19.

5.5 INTEREST INCOME

Interest Income is primarily comprised of DSM loan interest income, as well as other banking interest income. The Company is not forecasting significant changes in the amount of DSM loans outstanding; as a result, no significant changes in interest income are expected in 2022 Projected or the 2023 Forecast.

5.6 LATE PAYMENT CHARGES

Late Payment Charges have historically been forecast based on the average of the most recent three years of actual Late Payment Charges earned. However, due to the impact of the COVID-19 pandemic and FBC's implementation of customer relief measures, which included the suspension of Late Payment Charges until March 2021, the actual amounts collected have fluctuated from year to year.

[17] As approved by Order G-5-10A.

FBC continues to see fluctuations in Late Payment Charges. The 2022 Projected Late Payment Charges are higher than 2022 Approved by $0.220 million based on amounts charged so far in 2022 as well as growth in customers since the 2017 to 2019 period used to develop the 2022 Approved.

In consideration of the continued fluctuations being experienced, the 2023 Forecast has been calculated based on the average of 2021 Actual and 2022 Projected Late Payment Charges of $0.892 million and $1.095 million, respectively. This results in an increase in Late Payment Charges of $0.119 million compared to 2022 Approved.

5.7 *CONNECTION CHARGES*

Connection Charges are calculated based on the fees specified in FBC's rate schedules applicable to new customer connections or current customer reconnections. The 2022 Projected is expected to be consistent with 2022 Approved based on amounts charged so far in 2022. The 2023 Forecast is expected to be higher than 2022 Approved based on customer growth and forecast customer reconnections.

5.8 *CLEAN GROWTH INITIATIVE – EV DCFC STATIONS CARBON CREDITS*

FBC's EV DCFC stations are prescribed undertakings under section 5 of the GGRR[18] and the cost of service associated with EV DCFC stations is subject to flow-through treatment. The EV charging rates, the depreciation rate for EV charging stations, and the inclusion of related revenues and expenses associated with FBC's EV DCFC stations in FBC's regulated accounts were approved by the BCUC on November 24, 2021[19]. The revenues to be included in FBC's regulated accounts include the Other Revenue from the sale of carbon credits related to EV stations[20] earned under the Renewable Low Carbon Fuel Requirements Regulation (RLCFRR), which is embedded in the rate design of the EV DCFC stations.

At the time of the 2022 Annual Review, FBC did not have any carbon credits validated by the British Columbia Low Carbon Fuel Standard (BC-LCFS); as such, and as reflected in Table 5-1 above, FBC did not forecast any revenue from the sales of the credits for 2022 Approved. However, as of the end of the first quarter of 2022, the BC-LCFS has validated approximately 1,337 carbon credits for FBC that have accumulated since 2019, with an approximate market value of $0.625 million[21]. FBC anticipates monetizing these credits prior to the end of 2022 and has therefore reflected them in the 2022 Projected column in Table 5-1 above, and also included the $0.625 million credit in the Flow-through deferral account, to be returned to customers in 2023.

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[18] Order G-215-21 dated July 14, 2021.

[19] FBC EV DCFC Service Application Decision and Order G-341-21.

[20] Includes both public charging stations owned by FBC as well as public stations owned by other entities (metered commercial accounts) as discussed in Exhibit B-6 of FBC's 2022 Annual Review, BCSEA IR1 4.3. Beginning in 2022, FBC will only be permitted to claim credits for charging stations owned by FBC. FBC does not currently claim credits for non-public EV charging services for either commercial or residential customers.

[21] 1,337 credits x $467.32 average Q1-2022 sales price (source: https://www2.gov.bc.ca/assets/gov/farming-natural-resources-and-industry/electricity-alternative-energy/transportation/renewable-low-carbon-fuels/rlcf-017.pdf).

Consistent with the practice from the 2022 Annual Review, FBC does not forecast revenue from the sale of credits that are pending validation; FBC is therefore not forecasting any of these revenues in 2023.

As part of the 2022 Annual Review Decision, FBC was directed to include the following in future Annual Review filings:[22]

> …an update on its EV DCFC charging stations' costs and revenues for the previous fiscal year along with a forecast of costs and revenues for the test period.

FBC currently has a total of 40 EV DCFC stations in service across 23 sites and is planning to install two additional DCFC stations at two of the existing sites in 2022, resulting in a total of 42 EV DCFC stations across 23 sites. Consistent with the format of the information provided during the 2022 Annual Review[23], Table 5-2 below provides the costs and revenues for 2021 Actual (previous fiscal year), 2022 Projected, and 2023 Forecast. As highlighted in Table 3-4 of Section 3.6, the RS 96 EV DCFC revenue (i.e., Line 10 of Table 5-2 below) is included as part of the Commercial Sales Revenue. Please also refer to Section 6.3.4 for a discussion of the forecast O&M expenses for the EV DCFC stations and Section 7.2.2 for a discussion of the forecast capital expenditures for the EV DCFC stations, as well as information on how the two new stations are prescribed undertakings. Once the capital expenditures are included in rate base, they impact the depreciation, amortization of CIAC, income tax and earned return related to the EV DCFC stations that are shown in Table 5-2 below.

Table 5-2: EV DCFC Stations Costs and Revenues for 2021 Actual, 2022 Projected, and 2023 Forecast ($ millions)[24]

Line	Particulars	2021 Actual	2022 Projected	2023 Forecast	Cumulative
1	Cost of Energy	0.013	0.282	0.300	
2	Less: Power Purchase Expense	(0.013)	-	-	
3	O&M	0.101	0.187	0.193	
4	Depreciation	0.307	0.456	0.612	
5	Amortization of CIAC	(0.150)	(0.191)	(0.249)	
6	Other Revenue - Carbon Credits	-	(0.625)	-	
7	Income Tax	(0.299)	(0.199)	0.158	
8	Earned Return	0.124	0.172	0.183	
9	Total Cost of Service	0.083	0.082	1.196	
10	RS 96 Revenue	(0.058)	(0.155)	(0.178)	
11	(Surplus) / Deficiency	0.025	(0.072)	1.018	0.971
12	Prior Year 2018-2020 (Surplus)/Deficiency				(0.142)
13	Cumulative (Surplus) / Deficiency				0.828

22 FBC 2022 Annual Review Decision and Order G-374-21, p. 32.

23 Exhibit B-3, BCUC IR1 16.1.

24 As explained in Exhibit B-3, BCUC IR1 16.1 of the FBC 2022 Annual Review, RS 96 was approved on an interim basis in 2021 by Order G-9-18 in which the cost of energy embedded was based on BC Hydro's RS 3808; therefore,

As directed by Order G-341-21, FBC is to file a detailed assessment of the EV DCFC service by no later than December 31, 2022 or within six months of Measurement Canada's approval of DCFC energy-based metering for FBC, whichever is earlier. FBC is not expecting to receive approval from Measurement Canada prior to December 31, 2022; thus, FBC will file the detailed assessment report by December 31, 2022. As directed by the BCUC, the detailed assessment will include:

- An update of the financial models with actual and forecast information and updated assumptions;
- A detailed assessment of RS 96 and alternative rate design options;
- An overview of the current EV fast charging service market and rates across Canada and the United States;
- A proposal for a depreciation rate for its EV DCFC stations and information to support its proposal; and
- An assessment as to whether idling fees are warranted.

5.9 *OTHER RECOVERIES*

Other Recoveries are primarily comprised of fees earned on the recovery of costs for miscellaneous services, such as street light maintenance charged to municipalities and AMI radio-off meter read fees. There are no variances expected in 2022 Projected compared to 2022 Approved based on amounts recognized to date. The 2023 Forecast is expected to be slightly lower than 2022 Approved due to an expected reduction in AMI radio-off meter read fees resulting from a lower volume of customers choosing the radio-off option.

5.10 *SUMMARY*

FBC has forecast the Other Revenue components for 2023 reflecting all applicable contracts and fixed revenues, and based on the Company's best knowledge of the factors that drive the variable components. Variances in Other Revenue, with the exception of EV DCFC stations carbon credits, are shared with customers through the earnings sharing mechanism.

the cost of energy for 2021 Actual shown in Table 5-2 is equal to the power purchase expense. As approved in Order G-341-21, the permanent rate for RS 96 is based on FBC's commercial service RS 21. As such, starting in 2022, the cost of energy shown in Table 5-2 above is based on FBC's commercial service RS 21.

6. O&M EXPENSE

6.1 INTRODUCTION AND OVERVIEW

Under the MRP, FBC's O&M expense is primarily determined by formula, with the addition of a number of items that are forecast outside the formula on an annual basis.

In 2023, the formula O&M is $69.957 million, representing a 5.8 percent increase from the 2022 formula O&M, primarily due to the formula drivers. O&M expenses forecast outside the formula for 2023 are $2.323 million, representing a 26.8 percent increase from the amount approved for 2022. Overall, the 2023 Forecast gross O&M expense is $72.789 million, which is an increase of approximately 7.0 percent from the 2022 Approved level.

The components of 2023 O&M expense are shown in Table 6-1 below.

Table 6-1: 2023 O&M Expense ($ millions)

Line No.	Description	Approved 2022	Projected 2022	Forecast 2023	Reference
1	Formula O&M	$ 66.147	$ 66.147	$ 69.957	Section 11, Schedule 20, Line 8
2	Forecast O&M	1.832	1.635	2.323	Section 11, Schedule 20, Line 20
3	Prior year O&M True-up	0.053	0.053	0.509	Table 6-2, line 16
4	Total Gross O&M	68.032	67.835	72.789	Line 1 through 3
5	Capitalized Overhead	(10.177)	(10.177)	(10.918)	Section 11, Schedule 20, Line 23
6	Net O&M	$ 57.855	$ 57.658	$ 61.871	Line 4 + Line 5

In the sections below, FBC provides further details on its formula and forecast O&M expenses for 2023. Additionally, in compliance with the BCUC's directive in the MRP Decision,[25] FBC provides information related to its System Operations, Integrity and Security expenditures in Subsection 6.2.1.

6.2 FORMULA O&M EXPENSE

The formula-driven portion of O&M starts from the prior year's Approved Base O&M per Customer (UCOM), escalated by the prior year's inflation less a productivity improvement factor of 0.5 percent, and then multiplied by 75 percent of the forecast growth in average customers, resulting in the current year inflation-indexed O&M before true-up. A true-up of formula O&M based on actual average customers from two years prior is then added to the current year inflation-indexed O&M.

As calculated in Section 2, the 2023 inflation based on prior year's BC-CPI and BC-AWE, less the productivity improvement factor, is 4.017 percent.

For 2023, the annual operating and maintenance expense under the formula is calculated as:

[25] MRP Decision, p. 118.

2022 Approved formula UCOM x [1 + (I Factor – X Factor)] x [Prior Year Average Customers + (0.75 x growth in average customers)] + 2021 Formula O&M True-up

Table 6-2 below shows the calculation of the 2023 Formula O&M, including the calculation of the 2021 Formula O&M true-up. FBC notes the true-up of formula O&M is a two-year lag based on actual average customer counts from 2021.

Table 6-2: Calculation of 2023 Formula O&M ($ millions)

Line No.	Description		Forecast 2023	Reference
1	Prior Year Base Unit Cost O&M ($/ customer)	$	455	G-374-21 FBC 2022 Annual Review
2	I-Factor		4.017%	Section 2, Table 2-3, Line 11
3	Current Year Unit Cost O&M ($/customer)	$	473	
4	Average Customer Forecast		147,901	Section 2, Table 2-3, Line 13
5	2023 Inflation-Indexed O&M before 2020 True-up	$	69.957	Line 3 x Line 4 / 1,000,000
6	2021 True-up O&M		0.509	Line 16
7	Inflation-Indexed O&M	$	70.466	Line 5 + Line 6
8				
9	<u>2021 O&M True-up</u>			
10	2021 Actual 12 month Average Customers		144,877	FBC 2021 Annual Report
11	2021 Forecast 12 month Average Customers		143,325	G-42-21 FBC 2020-2021 Annual Review
12	Difference		1,552	Line 10 + Line 11
13	Growth Factor		75%	G-166-20 FBC MRP Decision
14	Change in Customers - True-up		1,164	Line 12 x Line 13
15	2021 Unit Costs	$	437	G-42-21 FBC 2020-2021 Annual Review
16	O&M True-up for 2023	$	0.509	Line 14 x Line 15 / 1,000,000

6.2.1 New/Incremental System Operations, Integrity and Security Funding

In the MRP Decision (page 118), the BCUC directed FBC to provide in each Annual Review a breakdown and explanation of both annual and cumulative variances between forecast/actual and formula O&M related to the approved new/incremental System Operations, Integrity and Security funding, and quantify the variances attributable to the following areas: tree management; generation dam safety; network operations apprentice program; cyber security; data analytics; and any other significant factors or miscellaneous items.

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

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

Line No.	Description	2021 Formula O&M[1]	Actual 2021 O&M	2021 Forecast/Actual Variance	Cumulative Forecast/Actual Variance[2]
1	Tree Management	$ 0.080	$ 0.278	$ 0.199	$ 0.436
2	Generation Dam Safety	$ 0.246	$ 0.415	$ 0.169	$ 0.137
3	Network Operations Apprentice Program	$ 0.209	$ 0.243	$ 0.034	$ (0.167)
4	Cyber Security	$ 0.085	$ 0.085	$ -	$ 0.250
5	Data Analytics	$ 0.105	$ -	$ (0.105)	$ (0.206)
6	Other	$ -	$ -	$ -	$ -
7	Total	$ 0.724	$ 1.021	$ 0.297	$ 0.449

Notes to Table:

[1] 2021 Formula O&M is the approved 2020 formula for incremental funding with Net Inflation factor applied (3.668%).

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

Overall, total actual spending in 2021 was $1.021 million, which is $0.297 million higher than the 2021 Formula O&M amount. Areas with notable variances include tree management, generation dam safety and data analytics.

For tree management, FBC spent $0.199 million more than the formula amount to address an increased number of unhealthy trees as part of FBC's right-of-way management program.

For generation dam safety, FBC spent $0.169 million more than the formula amount due to the continuation of dam safety review activities from 2020, as FBC required more time to complete the analysis for the determination of the dam classifications for the Upper Bonnington, Lower Bonnington and South Slocan plants.

Offsetting the higher costs in these two categories was lower spending in data analytics. FBC spent $0.105 million less than the formula amount in 2021 primarily due to labour savings from a delay in hiring. In 2021, FBC focused on finalizing the requirements for the necessary information infrastructure, with the implementation of the systems that will allow centralized data access occurring in 2022 and the addition of new data sources in priority sequence over the remaining term of the MRP.

For the first two years of the MRP, FBC spent $0.449 million more than the formula amount. Over the term of the MRP, FBC anticipates the total new/incremental spending required in the combined categories of System Operations, Integrity and Security will continue to be higher than the amount embedded in the formula. FBC will continue to manage this spending within its overall O&M spending envelope.

6.3 *O&M EXPENSE FORECAST OUTSIDE THE FORMULA*

In addition to FBC's formula O&M, FBC forecasts a number of O&M items outside of the formula annually, including pension and OPEB expense, insurance premiums, BCUC levies, and the cost of service associated with Clean Growth initiatives, such as Electric Vehicle (EV) charging stations, as well as the O&M impacts of any exogenous factor items. For 2023, FBC has included incremental O&M for the Mandatory Reliability Standards (MRS) Assessment Report No. 13 (AR13), which was approved for exogenous treatment in the 2022 Annual Review.

The 2023 amounts are shown in Table 6-4 below along with a comparison to 2022.

Table 6-4: 2023 Forecast O&M ($ millions)

Line No.	Description	Approved 2022	Projected 2022	Forecast 2023
1	Pension/OPEB (O&M Portion)	$ (1.716)	$ (1.716)	$ (1.297)
2	Insurance Premiums	2.223	2.291	2.457
3	BCUC Levies	0.373	0.373	0.385
4	Clean Growth Initiative - EV DCFC Stations	0.187	0.187	0.193
5	Exogenous Factor - MRS	0.765	0.500	0.585
6	Total Forecast O&M	$ 1.832	$ 1.635	$ 2.323

Each of the items that is forecast outside of the formula is discussed below. Variances in pension and OPEB expense are captured in the Pension and OPEB Variance deferral account and variances in BCUC levies are captured in the BCUC Levies Variance deferral account. Variances in insurance premiums, the cost of service associated with EV charging stations, and exogenous factors are captured in the Flow-through deferral account.

6.3.1 Pension and OPEB Expense

Pension and OPEB expense for 2023 is based upon actuarial estimates using a range of assumptions as of December 31, 2021 with an update of discount rate estimates as of April 30, 2022 provided by the Company's external third party actuary, Willis Towers Watson. The discount rate determined reflects the market yields of high quality Canadian corporate bonds which have increased since 2021. In addition to O&M, pension and OPEB expense is embedded in Capital Expenditures, as shown in Table 6-5.

Table 6-5: Pension and OPEB Expense ($ millions)

Line No.	Description	Approved 2022	Projected 2022	Forecast 2023
1	O&M	$ (1.716)	$ (1.716)	$ (1.297)
2	Capital (Approved)	3.807	3.807	1.888
3	Capital (to Pension & OPEB Variance Deferral)[1]	(0.400)	(0.400)	-
4	Total	$ 1.691	$ 1.691	$ 0.591

Notes to Table:

[1] This line item represents the pension and OPEB expense difference between the estimates embedded in the Regular Capital Expenditure forecasts on Line 2 in this table, which were based on the pension and OPEB actuarial estimates provided in 2019 as part of the 2020 to 2024 MRP Application, and the actuarial estimates

updated for 2023 rate-setting purposes. There is no difference for 2023 since FBC was directed to file an updated forecast of the 2023 and 2024 Regular Capital Expenditures in the 2023 Annual Review, as directed in the MRP Decision and Order G-166-20.

The variance between the 2022 Approved and actual pension and OPEB expense, including the known capital variance on Line 3 of Table 6-5 above, and any variance between the 2023 Forecast and actual amounts, is flowed through to the Pension and OPEB Variance deferral account and amortized into rates over a three-year period, as approved by Order G-139-14.

The 2023 Forecast pension and OPEB expense has decreased by $1.100 million compared to the 2022 Approved expense primarily due to the following factors, which are all components of pension and OPEB expense:

- An approximate $3 million decrease in current service costs due to an increase in the discount rate. The discount rate, which is determined with reference to the market rate of interest on high quality debt instruments at a point in time, increased from 3.5 percent, which was used to determine the 2022 Approved expense, to 4.5 percent, which is used to determine the 2023 Forecast expense;

offset in part by:

- An approximate $2 million increase in interest costs due to an increase in the discount rate.

6.3.2 Insurance Premiums

The component of insurance expense tracked outside of formula O&M relates to the insurance premium expense allocated to FBC by Fortis Inc. as set out in Table 6-6 below.

Table 6-6: Insurance Premiums ($ millions)

Line No.	Description	Approved 2022	Projected 2022	Forecast 2023	Reference
1	Insurance Premiums	$ 2.223	$ 2.291	$ 2.457	Section 11, Schedule 20, Line 16
2	Total	$ 2.223	$ 2.291	$ 2.457	

The 2022 Projected insurance premium expense of $2.291 million is $0.068 million higher than 2022 Approved, as it incorporates FBC's actual July 2022 to June 2023 insurance renewals of $2.253 million. The higher premiums experienced in 2022 are expected to continue into 2023, though at a lower rate of increase. The 2023 Forecast is $2.457 million, which is an increase of $0.166 million from 2022 Projected. The 2023 Forecast is calculated as the amount of the first six months of actual annual insurance premiums for January to June 2023 of $1.126 million and applying a 5 percent increase for the remaining six months, plus the cost of fire fighting services FBC pays to the Province of $0.148 million.[26]

6.3.3 BCUC Levies

FBC's 2023 Forecast for BCUC levies is $0.385 million. The 2023 Forecast is based on Order G-188-22 for the BCUC's Fiscal 2022/23 year, which represents the best information available at this time, as the BCUC levy calculation for Fiscal 2023/24 will not be available until early or mid 2023.

BCUC levies receive flow-through treatment, with annual variances between actual and forecast amounts in O&M expense being recorded in the BCUC Levies Forecast Variance deferral account and amortized over one year.

6.3.4 Clean Growth Initiative – Electric Vehicle (EV) DCFC Stations

As discussed in Section 5.8, FBC's EV DCFC stations are prescribed undertakings under section 5 of the GGRR[27] and the cost of service associated with EV DCFC stations is subject to flow-through treatment. Please refer to Table 5-2 in Section 5.8 which provides a summary of the EV DCFC stations' costs and revenues from 2021 Actual to 2023 Forecast.

As shown in Table 6-7 below, the 2022 Projected EV DCFC station O&M expense is expected to be consistent with 2022 Approved[28], and consists of network management, repairs and maintenance, inspection fees and FBC labour costs. The 2023 Forecast EV DCFC station O&M expense is anticipated to be similar to the 2022 Projected level, with an approximate increase of $6 thousand primarily due to inflation.

Table 6-7: Clean Growth Initiative – EV DCFC Stations ($ millions)

Line No.	Description	Approved 2022	Projected 2022	Forecast 2023	Reference
1	Clean Growth Initiative - EV DCFC	$ 0.187	$ 0.187	$ 0.193	Section 11, Schedule 20, Line 19
2	Total	$ 0.187	$ 0.187	$ 0.193	

6.3.5 MRS Incremental Operating Expenses

In the 2022 Annual Review Decision,[29] FBC received approval of exogenous factor treatment for the incremental O&M and capital costs associated with MRS AR13. As explained in the 2022

[26] $2.253 million/2 = $1.126 million. $1.126 million x 1.05 = $1.183 million. $1.126 million + $1.183 million + $0.148 million annual firefighting service fee = $2.457 million.

[27] Order G-215-21 dated July 14, 2021.

[28] Consistent with the 2022 Annual Review Decision, FBC included the 2022 forecast revenues and expenses associated with the EV DCFC stations in the Compliance Filing to the Annual Review Decision and Order G-374-21 because approval of the EV DCFC Service Application was not received until November 24, 2021. Accordingly, the 2022 Approved amount reflected in Table 6-7 is the amount included in the Compliance Filing.

[29] Decision and Order G-374-21, p. 21.

Annual Review, FBC expected to incur one-time costs in 2021 and 2022 related to the adoption of the standards in AR13 as well as ongoing incremental O&M expenses commencing in 2023[30].

BC Hydro issued AR13 on May 1, 2020 recommending adoption of seven standards, retirement of one standard, and holding one standard in abeyance pending resolution of the Planning Coordinator (PC) function along with the NERC Glossary dated August 12, 2019. The BCUC issued Order R-19-20 on September 8, 2020 accepting BC Hydro's recommendation and determined the effective dates of those standards. Of the standards and respective NERC Glossary terms assessed by FBC, five standards have associated costs, of which one was held in abeyance. The effective date for the four adopted standards is April 1, 2023, including the existing CIP-005-6 (Electronic Security Perimeter(s)), CIP-008-6 (Incident Reporting and Response Planning) and CIP-010-3 (Configuration Change Management and Vulnerability Assessments) standards and the new CIP-013-1 (Supply Chain Risk Management) standard. In order to address these changes, FBC is required to monitor and disconnect vendor remote access, evaluate and report attempts to compromise, ensure software downloads and installations are unaltered and secure, and assess risk for any product or service procured for Bulk Electrical System assets under the Critical Infrastructure and Protection (CIP) standards. These requirements are reflected in the 2022 Approved, 2022 Projected, and 2023 Forecast expenses in Table 6-8 below.

The following table provides the 2022 Approved and Projected and the 2023 Forecast of incremental O&M related to MRS AR13.

Table 6-8: Incremental O&M for MRS AR13 ($ millions)

Line No.	Description	Approved 2022	Projected 2022	Forecast 2023	Reference
1	Labour	$ 0.335	$ 0.200	$ 0.490	
2	Non-Labour	0.280	0.250	0.095	
3	Contingency	0.150	0.050	-	
4	Total	$ 0.765	$ 0.500	$ 0.585	Section 11, Schedule 20, Line 18

The 2022 Projected O&M expense is lower than 2022 Approved by $0.265 million. The reduction of $0.265 million is a result of less overall effort required to modify existing programs and processes as mentioned above than originally expected.

The 2023 Forecast O&M expense of $0.585 million is related to the expected ongoing efforts to maintain procedures and processes, hardware and software that address supply chain risk assessments, ongoing licensing and maintenance of the hardware and software, and the documentation to maintain compliance of AR13. The 2023 Forecast is based on the expected costs in 2022 Projected and is therefore less than the 2022 Approved level. These costs are annual and will continue in future years.

[30] Exhibit B-2, Annual Review for 2022 Rates Application, Section 12.2.1, pp. 103-104; Exhibit B-3, BCUC IR1 24.2.

6.4 NET O&M EXPENSE

Net O&M expense is gross O&M less capitalized overhead. As approved by the BCUC in Order G-166-20, the capitalized overhead rate is set at 15 percent for FBC, unchanged from 2022. After capitalized overhead, the net O&M expense is $61.871 million in 2023.

6.5 SUMMARY

Overall, the increase in gross O&M expense from 2022 Approved to 2023 Forecast is 7.0 percent. Formula-driven O&M is increasing at a rate of 5.8 percent, and O&M forecast outside the formula is 26.8 percent higher than 2022 Approved.

The capitalized overhead rate for 2023 remains unchanged from 2022.

7. RATE BASE

7.1 *INTRODUCTION AND OVERVIEW*

FBC forecasts its Rate Base to be $1.675 billion for 2023. Rate Base is comprised of mid-year net plant in service, work in progress not attracting AFUDC, unamortized deferred charges, working capital, and the utility plant acquisition adjustment.[31]

FBC's 2023 Rate Base includes the full-year impacts of the 2022 closing projected plant balances as well as the impact of the following amounts:

- Mid-year impact of regular capital additions, net of CIAC additions, of $94.209 million;
- Mid-year impact of plant depreciation, net of CIAC amortization, of $64.407 million; and
- Capital additions of CPCNs and other Major Projects totalling $45.439 million[32], as discussed in Section 7.3 below, which include:
  - Full-year impact of $21.250 million for the capital expenditures and related AFUDC for the Kelowna Bulk Transformer Additions (KBTA) Project, which is expected to complete in late 2022 or early 2023;
  - Full-year impact of $16.151 million for the final capital expenditures and related AFUDC for the Corra Linn Dam Spillway Gates Replacement Project, which is expected to complete in 2022; and
  - Full-year impact of $8.036 million for the final capital expenditures and related AFUDC for the Playmor Substation Upgrade Project, which is expected to complete in 2022.

In addition, various changes in deferred charges, working capital and other items increase rate base by a net amount of $24.303 million in 2023.

Details of the 2023 Forecast plant balances can be found in Section 11, Schedules 5 through 9.

7.2 *REGULAR CAPITAL EXPENDITURES*

As part of the MRP Decision and Order G-166-20, FBC received the following approvals for capital expenditures:

- Approval of FBC's forecasts submitted for regular capital expenditures for the years 2020 through 2022; and

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[31] The utility plant acquisition adjustment relates to the 1982 purchase of Plants 2, 3, and 4 and is being amortized over a period of 64 years.

[32] The 2023 capital additions of $45.439 million also include $0.002 million for the close out costs and related AFUDC in 2022 for the UBO Old Units Refurbishment Project.

- Approval of a number of items to be forecast on an annual basis.

Further, in the MRP Decision the BCUC directed FBC to file an updated forecast of the 2023 and 2024 regular capital expenditures in the 2023 Annual Review.[33]

The components of FBC's 2023 regular capital expenditures are shown in Table 7-1 below.

Table 7-1: Regular Capital Expenditures ($ millions)

Line No.	Description	Approved 2022	Projected 2022	Forecast 2023	Reference
1	Forecast Capital	$ 81.925	$ 87.735	$ 94.428	Table 7-2 and Table 7-3, Line 4
2	Flow-Through Capital	0.935	2.430	0.248	Table 7-11, Line 3
3	Total Gross Regular Capital	$ 82.860	$ 90.165	$ 94.676	Sum of Lines 1 & 2
4	Less CIAC	(11.712)	(8.287)	(11.628)	Section 11, Schedule 9, Line 2
5	Net Regular Capital	$ 71.148	$ 81.878	$ 83.048	Sum of Lines 3 & 4

In Section 7.2.1, FBC provides its updated 2023 and 2024 regular capital forecasts. In Section 7.2.2, FBC provides details on its forecast flow-through expenditures for 2023, consistent with the format provided in previous annual reviews during this MRP term.

7.2.1 Updated 2023 and 2024 Forecast Regular Capital Expenditures

As stated above, in the MRP Decision and Order G-166-20[34], the BCUC directed FBC to file updated 2023 and 2024 regular capital forecasts as part of the 2023 Annual Review. The BCUC in its decision highlighted FBC's evolving operating environment and inherent uncertainties in the capital forecasts, and thus considered it appropriate for FBC to have the opportunity to true-up its capital spending and re-forecast its capital for the final two years of the MRP term. Specifically, the BCUC stated the following:

> …FEI and FBC face evolving operating environments and there are inherent uncertainties in the five-year forecast. Reviewing the capital forecast in 2022 allows for a review of any significant variances between forecast and actual to date and provides an opportunity to true-up the rate-base for actual spending and to re-forecast the remaining years in the MRP term.[35]

As further explained below, FBC has begun to experience pressures due to a variety of factors which are outside of the Company's control and could not have been anticipated at the time of the MRP proceeding, including supply chain issues and rising commodity prices and other inflationary pressures brought on by the COVID-19 pandemic and the war in Ukraine. These factors, as well as the increased cost and complexity in permitting and land acquisition as well as increased growth, are impacting FBC's ability to execute on all of its planned capital projects and programs. While FBC has pursued various mitigation measures to manage through the spending

[33] MRP Decision and Order G-166-20, p. 131.
[34] Directive 1.c. of Order G-166-20.
[35] MRP Decision and Order G-165-20, p. 131.

pressures, FBC requires an increase in its capital spending for 2023 and 2024 compared to its original forecasts to execute on its planned activities.

The following tables summarize the growth, sustainment and other capital expenditures[36]. The first table presents the 2020 through 2022 Approved forecasts (i.e., the forecasts approved in the MRP Decision) and the 2023 and 2024 forecasts which were reviewed during the MRP proceeding (Original Forecasts). The second table provides the Actual/Projected results for 2020 through 2022 and FBC's updated forecasts for 2023 and 2024 (Updated Forecasts).

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

Line No.	Description	Approved 2020	Approved 2021	Approved 2022	Original Forecast 2023	Original Forecast 2024
1	Growth Capital	27.029	23.042	24.339	26.283	23.170
2	Sustainment Capital	50.463	49.818	42.830	44.377	53.470
3	Other Capital	15.752	14.712	14.756	15.281	15.134
4	Total	93.244	87.573	81.925	85.941	91.774

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

Line No.	Description	Actual 2020	Actual 2021	Projected 2022	Updated Forecast 2023	Updated Forecast 2024
1	Growth Capital	28.799	21.865	29.868	30.973	24.568
2	Sustainment Capital	47.325	49.601	41.486	45.797	58.673
3	Other Capital	16.036	15.349	16.381	17.658	17.213
4	Total	92.160	86.815	87.735	94.428	100.454

In Section 7.2.1.1, FBC describes its updated forecasts for growth and sustainment capital. In Section 7.2.1.2, FBC describes its updated forecasts for other capital.

7.2.1.1 Growth and Sustainment Capital

7.2.1.1.1 GROWTH CAPITAL

Growth capital expenditures involve transmission and distribution system improvements required to meet incremental customer and load growth, in addition to the cost of connecting new customers to the system.

The three main growth capital portfolios are: (i) Transmission Growth; (ii) Distribution Growth; and (iii) New Connects. In the MRP Application, FBC provided forecasts of these three categories of

[36] Excluding sustainment CIAC.

growth capital expenditures based on a bottom-up approach which included a two percent inflationary increase per year.

The following tables provide the 2020 to 2022 Approved vs Actual/Projected expenditures and the Original and Updated 2023 and 2024 Forecasts.

Table 7-4: Growth Capital Expenditures 2020-2022 ($ millions)

Line No.	Description	2020 Approved	2020 Actual	2021 Approved	2021 Actual	2022 Approved	2022 Projected
1	Transmission Growth	5.172	7.109	2.063	0.744	2.740	5.524
2	Distribution Growth	3.716	1.926	1.876	1.965	1.807	3.450
3	New Connects	18.141	19.764	19.104	19.156	19.792	20.894
4	Total Growth Capital	27.029	28.799	23.042	21.865	24.339	29.868

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

Line No.	Description	2023 Original Forecast	2023 Updated Forecast	2024 Original Forecast	2024 Updated Forecast
1	Transmission Growth	5.195	6.223	1.086	1.088
2	Distribution Growth	1.899	2.800	1.921	1.716
3	New Connects	19.188	21.951	20.163	21.764
4	Total Growth Capital	26.283	30.973	23.170	24.568

As shown in Table 7-5 above, FBC's Updated Forecasts for growth capital have increased by $4.690 million in 2023 and $1.398 million in 2024 compared to the Original Forecasts. FBC is forecasting increases in all three growth capital portfolios in 2023. For 2024, the increase is primarily in the New Connects portfolio, with FBC reducing the expenditures for the Distribution Growth portfolio to offset some of the required increases. These increases are described in Section 7.2.1.1.3 below.

7.2.1.1.2 SUSTAINMENT CAPITAL

The expenditures within sustainment capital include system improvements to the transmission and distribution system in order to maintain existing equipment to meet forecast load and for the safety, reliability and quality of the system. FBC operates and maintains four generating facilities with a total of 15 units. FBC regularly monitors its infrastructure to ensure it meets industry standards and guidelines, complies with regulations, and operates safely to minimize risk to the public and employees. FBC also identifies and addresses hazards and risks that require immediate attention through specific projects. FBC's telecommunications system is an integral component in the protection relaying system, remedial action schemes, substation operations and control, and generation dispatch systems. The system requires ongoing investment to replace aging or failed systems for safe and reliable operation of the system and to ensure business needs continue to be met.

The five main sustainment capital portfolios are: (i) Generation; (ii) Transmission Sustainment; (iii) Stations Sustainment; (iv) Distribution Sustainment; and (v) Telecommunications. In the MRP

Application, FBC provided forecasts of these five categories of sustainment capital expenditures based on a bottom-up approach which included a two percent inflationary increase per year.

The following tables provide the 2020 to 2022 Approved vs Actual/Projected expenditures and the Original and Updated 2023 and 2024 Forecasts.

Table 7-6: Sustainment Capital Expenditures 2020-2022 ($ millions)

Line No.	Description	2020 Approved	2020 Actual	2021 Approved	2021 Actual	2022 Approved	2022 Projected
1	Generation	6.697	5.884	6.766	6.949	6.309	6.731
2	Transmission Sustainment	8.353	12.506	6.387	10.667	5.698	7.841
3	Stations Sustainment	13.538	4.821	13.624	12.083	5.279	6.889
4	Distribution Sustainment	20.057	21.530	20.058	17.479	19.262	17.439
5	Telecommunications	1.818	2.584	2.983	2.423	6.280	2.587
6	Total Sustainment Capital	50.463	47.325	49.818	49.601	42.830	41.486

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

Line No.	Description	2023 Original Forecast	2023 Updated Forecast	2024 Original Forecast	2024 Updated Forecast
1	Generation	7.008	7.623	6.514	7.225
2	Transmission Sustainment	7.951	9.159	7.591	12.800
3	Stations Sustainment	3.793	7.928	15.971	15.229
4	Distribution Sustainment	19.710	17.480	19.922	18.219
5	Telecommunications	5.915	3.606	3.472	5.199
6	Total Sustainment Capital	44.377	45.797	53.470	58.673

As shown in Table 7-7 above, FBC's Updated Forecasts for sustainment capital have increased by $1.420 million in 2023 and $5.203 million in 2024 compared to the Original Forecasts. For 2023, the increases are primarily in the Transmission Sustainment and the Stations Sustainment portfolios, with FBC proposing to reduce the expenditures for the Distribution Sustainment and the Telecommunications portfolios to offset some of the required increases. For 2024, the increases are primarily in the Transmission Sustainment and Telecommunications portfolios, with FBC proposing to reduce the expenditures for the Distribution Sustainment and the Stations Sustainment portfolios to offset some of the required increases. These increases are described in Section 7.2.1.1.3 below.

7.2.1.1.3 DRIVERS OF UPDATED GROWTH AND SUSTAINMENT CAPITAL FORECASTS

The drivers of the increases in growth and sustainment capital are summarized as follows:

- Significant inflationary increases brought on by unanticipated events such as the COVID-19 pandemic and the war in Ukraine, which have resulted in large cost escalations in materials, labour and fuel;
- Increases in growth capital as a result of more customer applications; and
- Additional reliability, refurbishment or end of life projects being required that were not anticipated at the time of the MRP proceeding.

These cost drivers, as well as the mitigation efforts FBC has undertaken during the first three years of the MRP term, are described in the following subsections.

FBC is Experiencing Significant Inflationary Pressures

FBC's Original Forecasts were developed using an assumption of two percent for annual inflation. While FBC has generally managed its overall capital spending within the approved levels over the first two years of the MRP term, FBC has begun to experience pressures throughout its growth and sustainment portfolios. These pressures coincide with the significant global market events experienced during this time period, including the COVID-19 pandemic, supply chain disruptions, and the war in Ukraine. These unforeseen events have had a significant impact on market conditions for many commodities and services that make up FBC's supply chain, and the impacts are still being felt and continue to contribute to volatility in the supply chain and the overall commodity and services market in 2022.

In order to better understand the extent of the inflationary impacts that have affected North American utilities since 2020 and to compare the impacts on the industry with FBC's experience, FBC engaged Wood Mackenzie Supply Chain Consulting (Wood Mackenzie) to provide a market report on electric and gas utility transmission and distribution (T&D) markets from 2020 to 2022 and the anticipated impact until the end of 2024 (Wood Mackenzie Report). Wood Mackenzie identified an average escalation of 17.5 percent in capital costs for electric utilities between the period of the first quarter of 2020 and the first quarter of 2022. The Wood Mackenzie Report is based on the aggregated spend from utilities across North America, and incorporated over 150 indices which roll up to form the model for each category. Indices specific to BC have also been incorporated where appropriate, particularly around trades and other labour in the Province. This report has been included as Appendix C1.

FBC has experienced significant inflationary pressures during the first three years of the MRP term and expects these pressures will continue into 2023 and 2024. In particular, FBC has experienced the most significant inflationary cost pressures for poles, transformers and wires/cables. The projects in Transmission, Distribution and Station growth and sustainment portfolios have been impacted by incremental increases in the cost of these materials since 2020. Cost escalation is also impacting FBC due to steel commodity prices in North America, which have increased approximately 117 percent from the first quarter of 2020.

As shown in the Wood Mackenzie Report, it is expected that the average capital costs for electric utilities will continue to rise until the fourth quarter of 2024, although at a slower pace than what was experienced between the first quarter of 2020 and the first quarter of 2022, and will not come back down to the 2020 level. This expectation also aligns with the Bank of Canada's July 2022 Monetary Policy Report[37] which projects that CPI is expected to hover around 8 percent in the third quarter of 2022 before decreasing to approximately 3 percent by the fourth quarter of 2023 and 2 percent in 2024.

[37] https://www.bankofcanada.ca/wp-content/uploads/2022/07/mpr-2022-07-13.pdf.

Updated Forecasts Reflect Increased Growth

The New Connects category includes the installation of new electric services consisting of additions to FBC overhead and underground distribution facilities. These capital expenditures allow FBC to meet its obligation to provide reliable service to customers in its service area. This category also funds any costs associated with upgrading FBC facilities to provide service for an extension or drop service. Consistent with past practice, the forecast expenditures for New Connects are based on a historical rolling average of expenditures adjusted by inflation. The overall increase is due to more customer applications for connections.

Updated Forecasts Reflect New Growth and Sustainment Projects

As noted by the BCUC in the MRP Decision, there are inherent uncertainties in capital forecasting, particularly when forecasting projects over a five-year period. In the MRP Application, FBC identified projects over $1 million that it anticipated undertaking over the five-year MRP term. Due to a variety of reasons, such as land and permitting issues, re-prioritization of capital spending, and changes in capacity requirements, some projects have been delayed or cancelled while other new projects have been identified and prioritized.

For example, in order to address aging infrastructure and to support load growth while maintaining current levels of reliability, substation rebuild projects or transformer addition projects are required. In some cases, these projects require increasing the station footprint and acquiring more adjacent land or larger parcels of land in new locations. The selection of an appropriate land parcel can be a lengthy process that can include activities such as open houses as part of stakeholder consultation. Given the uncertainties related to consultation and purchase negotiation, it introduces risk to project timelines if these activities are not completed in advance of the project execution window. The need to acquire land has arisen in a number of FBC's planned projects and has resulted in increased costs and, at times, delays to the project schedule. Projects that have been impacted by land acquisition requirements are described in Appendix C2 and include, as an example, the Fruitvale Station Upgrade project.

As detailed in the MRP Application[38], FBC actively manages its capital plan to ensure projects are planned and executed efficiently. Accordingly, the timing, scope, and cost of the individual projects and programs within the overall regular capital forecasts are subject to change, and FBC may identify new projects and programs that need to be added over the term of the MRP. The capital plan contains a mix of projects across the portfolio categories, some of which are time sensitive and others that have some schedule flexibility. The plan is developed with the understanding that conditions change and the plan must be capable of adapting. This provides FBC flexibility to manage and execute normal levels of unforeseen urgent work that are expected to occur throughout the year within the resource and budget constraints of the capital plan. While this flexibility means that individual projects may move around, at a portfolio level, FBC has consistently executed a similar portfolio of work to the Original Forecasts.

[38] Section 3.4.1.5, page C-106.

In Appendix C2, FBC provides a list of the projects over $1 million which are included in the Updated Forecasts for 2023 and 2024.

FBC Employed Mitigation Strategies to Limit Cost Pressures

FBC has implemented the following strategies to mitigate the impact of the aforementioned cost pressures:

- Re-scheduling projects that can be safely re-scheduled to 2023 to accommodate other project costs increase that could not be deferred. As detailed in Section 3.2 (Capital Planning Process – page C-52) of the MRP Application, FBC manages its capital investment plan to maintain a safe and reliable system, optimize resources and spending, and achieve efficiencies and cost savings. The capital plan contains a mix of projects, some of which are time-sensitive and others that have some schedule flexibility. The plan is developed with the understanding that conditions change, and the plan must be capable of adapting. This provides FBC flexibility to manage and execute normal levels of unforeseen urgent work that is expected to occur throughout the year within the resource and budget constraints of the capital plan. While FBC has delayed some work with flexible timing to accommodate the increased demands in 2022, this has only mitigated part of the capital pressures due to the magnitude of market pressures;
- Entering into long-term supply contracts for many commonly used materials and service providers (e.g., engineering consultants, construction contractors, etc.);
- Competitively tendering large contracts for materials and services to ensure competitive pricing;
- Communicating with critical suppliers and contractors to discuss issues and mitigation strategies;
- Negotiating collective agreement with unionized FBC employees that provide longer-term stability for internal labour rates (IBEW and MoveUP agreement expires in 2023); and
- Optimally allocating construction work to internal or external construction crews as appropriate.

Despite the mitigation strategies listed above, FBC has not been able to fully mitigate cost increases due to the cost drivers described above.

7.2.1.2 Other Capital

In this section, FBC provides its Updated Forecasts for other capital. Other capital includes Equipment, Facilities and Information System (IS) expenditures.

Table 7-8 below shows the Approved and Actual/Projected other capital from 2020 to 2022 while Table 7-9 below shows the Original and Updated Forecasts of other capital for 2023 and 2024. FBC notes that the majority of the increase shown in the Updated Forecasts is related to Facilities, primarily as a result of the Kelowna Space Project.

Table 7-8: Approved and Actual/Projected Other Capital Expenditures 2020-2022 ($ millions)

Line No.	Description	2020 Approved	2020 Actual	2021 Approved	2021 Actual	2022 Approved	2022 Projected
1	Equipment	3.407	3.444	3.338	2.711	3.274	3.560
2	Facilities	3.264	3.434	2.346	3.685	2.346	2.846
3	Information Systems	9.081	9.158	9.028	8.953	9.136	9.975
4	Total Other Capital	15.752	16.036	14.712	15.349	14.756	16.381

Table 7-9: Original and Updated Forecasts of Other Capital Expenditures 2023 and 2024 ($ millions)

Line No.	Description	2023 Original Forecast	2023 Updated Forecast	2024 Original Forecast	2024 Updated Forecast
1	Equipment	3.681	4.099	3.388	3.717
2	Facilities	2.346	4.305	2.346	4.096
3	Information Systems	9.254	9.254	9.400	9.400
4	Total Other Capital	15.281	17.658	15.134	17.213

The following sections provide further details on the Updated Forecasts for other capital.

7.2.1.2.1 EQUIPMENT CAPITAL

Equipment capital expenditures include the acquisition of vehicles, specialized tools and equipment. Expenditures for the equipment listed above are driven by obsolescence, excessive wear and regulatory compliance.

FBC's 2023 and 2024 capital forecasts for Equipment have increased by $0.418 million and $0.329 million, respectively, compared to the Original Forecasts. The average unit cost per vehicle has risen significantly as supply of vehicles has reduced in relation to demand in the marketplace. In particular, FBC is experiencing the following changes to the average cost of the vehicles:

- Substantial reduction in volume-based concessions from manufacturers to all commercial fleet (from $10.5 thousand to $2.5 thousand per unit);
- Increased costs on steel, aluminum, glass and paint; and
- Inflationary surcharges on transport of materials, services and labour by manufacturers;

7.2.1.2.2 FACILITIES CAPITAL

Facilities capital expenditures include the acquisition or leasing of land, buildings, and building equipment. Facilities capital expenditures focus primarily on capacity planning, upgrading and replacement of end of life assets. The Facilities department ensures approved facilities projects are built to meet internal standards, building codes and regulations, and provide a long-term solution toward meeting the business requirements.

As shown in Table 7-9 above, FBC's 2023 and 2024 Facilities capital forecasts have increased by $1.959 million and $1.750 million in 2023 and 2024, respectively, compared to the Original

Forecasts. As further explained below, the majority of the increase is for the Kelowna Space Project. The remainder of the increase is related to: (i) energy management and GHG emissions reductions activities that FBC is planning to undertake to improve the adaptability and resiliency of FBC's facilities; and (ii) the installation of EV infrastructure at FBC's facilities.

Kelowna Space Project

FBC continues to experience capacity challenges at numerous locations for office, material storage and parking spaces and has been working to address these complex challenges. These capacity issues are impacting FBC's facilities across the Province and require different solutions depending on the location, as the challenges vary depending on the unique circumstances of each region. At the time of filing the MRP Application, FBC was in the process of developing a strategy for a cost-effective solution to the capacity issues in the Kelowna area, and therefore did not include this project in its Original Forecasts.

Both FEI and FBC have been experiencing space capacity challenges in the Kelowna region. Identifying solutions to address the space constraints has been very challenging, particularly due to the significant escalation in real estate costs to acquire new industrial land in the Kelowna area. However, the companies have now finalized a solution which leverages the use of FEI's and FBC's existing sites and results in the leasing of a new site for FEI's and FBC's Shared Services Departments. As further explained below, the Kelowna Space Project is a combined project for FEI and FBC, and the cost of the project has therefore been allocated between the two utilities accordingly. The total cost of the Kelowna Space Project is $13.930 million. Of this total, approximately $2.934 million is allocated to FBC based on employee count, with $1.209 million and $1.000 million reflected in FBC's Updated Forecasts for 2023 and 2024, respectively[39].

As part of the Kelowna Space Project, both FEI and FBC Shared Services Departments (Support Services) located in Kelowna will relocate to a new office lease facility approximately 25,000 ft^2 in size. Tenant improvements will be completed in 2023 and the Shared Services Departments will be relocated to this new leased facility. The allocation of leasing costs for this site will be determined using a cost driver approach based on the number of employees for FEI and FBC. In addition, FBC's Electrical Operations will move to the existing FEI-owned Springfield facility, as that location has a larger footprint and thus better aligns with the required Electrical Operations Space Program. FEI's Gas Operations will move to the existing FBC-owned Benvoulin property, as Gas Operations has a smaller footprint requirement. Broadly speaking, the Electrical and Gas Operations will "swap" locations.

Each building will require modifications to accommodate the Space Program requirements. Work will commence in late 2023 to complete the swap in 2025. Changes in building occupancy will be captured through new lease agreements where FEI will lease the entire Benvoulin building from

39 There was also approximately $0.631 million and $0.094 million of actual costs related to the Kelowna Space Project allocated to FBC in 2020 and 2021, respectively, with the total allocation to FBC equaling approximately $2.934 million, including the forecast expenditures in 2023 and 2024.

FBC and FBC will lease the entire Springfield building from FEI. The buildings will remain operational while these changes are made.

The Kelowna Space Project results in a number of benefits for both FEI and FBC, including:

- Provision of sufficient space for both Operations and Support Services:
  - Support Services space requirement of 25,000 ft^2 of office at a new leased facility;
  - Gas Operations space requirement of 15,000 ft^2 of office and 12,000 ft^2 of industrial storage and shop space align with the sizing of the Benvoulin buildings and site; and
  - Electric Operations space requirement of 33,000 ft^2 of office and 13,000 ft^2 of industrial storage and shop space align with the sizing of the Springfield buildings and site;
- Retaining and updating the existing properties and adding a leased office facility results in a reasonable implementation timeline; changes are made at a measured pace to minimize business and employee disruption and do not require temporary relocation to another facility;
- The solution ensures Electric Operations remain located in an area that best supports their service territory; by not relocating this group farther from the city, potential inefficiencies are prevented;
- The solution is cost effective in contrast to other options such as purchasing new property or constructing a new Operation Hub, and utilizes FEI's and FBC's existing properties to the best extent possible; and
- Each Operations group is located in its own facility, increasing planning, operations, and management efficiencies.

Capital Expenditures to Support Energy Efficiency and GHG Reductions

The Updated 2023 and 2024 Forecasts include $0.750 million in each year for expenditures that are specifically in support of energy efficiency and GHG emissions reductions. These expenditures consist of projects that will result in reduced electrical and natural gas usage in FBC's facilities and/or will result in GHG emissions reductions. Where applicable, the planned projects are aligned with the ISO 50,001 Energy Management Standard, and enable FBC to prepare for the impacts of climate change and the transition to net-zero emissions. These planned projects will improve FBC's buildings' energy efficiency, support the adoption of electric vehicles, and contribute to efforts towards climate change and the Province's CleanBC Plan targets.

FBC is pursuing energy management and GHG emissions reduction opportunities for its buildings as part of the Company's climate action initiatives, including energy management activities related to climate adaptation, mitigation, and resiliency for buildings. FBC also plans to install EV charging infrastructure at FBC's facilities for fleet use.

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

7.2.1.2.3 INFORMATION SYSTEMS

FBC's Information Systems (IS) expenditures focus on enhancing, replacing, upgrading and sustaining existing applications and infrastructure or, as needed, introducing new technology capabilities in order to improve safety, customer service, reliability and efficiency.

As shown in Table 7-8 above, the actual/projected expenditures for 2020 through 2022 are generally consistent with what was forecast in the MRP Application. As such, FBC has not made any changes to the 2023 and 2024 IS capital forecasts (Table 7-9 above) compared to what was presented in the MRP Application as there have been no changes in circumstances or anticipated spending that would warrant revisions.

7.2.1.3 Summary of FBC's Updated Regular Capital for 2023 and 2024

FBC provided an updated forecast for regular growth, sustainment and other capital in 2023 and 2024. These Updated Forecasts are summarized in Table 7-10 below.

Table 7-10: Summary of 2023-2024 Updated Forecasts of Regular Capital

Line No.	Description	2023 Updated Forecast	2024 Updated Forecast
1	Growth Capital	30.973	24.568
2	Sustainment Capital	45.797	58.673
3	Other Capital	17.658	17.213
4	Total Regular Capital	94.428	100.454

For FBC's growth and sustainment capital, the Updated Forecasts reflect the significant and unanticipated cost pressures experienced over recent years. These pressures, generally experienced by North American utilities, are being driven by factors outside of FBC's control, and include, among others, the COVID-19 pandemic, supply chain pressures and the war in Ukraine, as well as growth-related expenditures and necessary reliability, refurbishment and end of life replacement projects. The Updated Forecasts will ensure FBC's ability to execute its planned growth and sustainment capital programs which are critical to ensuring the ongoing safe and reliable operation of FBC's system and ensuring that FBC is able to meet its customer's needs.

For FBC's other capital, the Updated Forecasts are primarily related to the Kelowna Space Project, as well as expenditures for activities at FBC's facilities related to energy efficiency and GHG emissions reductions.

7.2.2 Flow-Through Capital Expenditures

FBC is afforded flow-through treatment for certain capital items due to a variety of factors, including their uncontrollable nature, because they drive incremental revenues, because they are related to Clean Growth initiatives, or because of the uncertainty in scope, costs and timing. The amounts for 2023 are shown in Table 7-11 below along with a comparison to 2022.

Table 7-11: Flow-Through Regular Capital Expenditures ($ millions)

Line No.	Description	Approved 2022	Projected 2022	Forecast 2023	Reference
1	Clean Growth Initiative - EV DCFC	$ -	$ 1.560	$ 0.248	
2	Exogenous Factor - MRS	0.935	0.870	-	
3	Forecast Capital Expenditures	$ 0.935	$ 2.430	$ 0.248	Section 11, Schedule 4, Line 10

7.2.2.1 EV DCFC Stations

As discussed in Section 5.8, FBC's EV DCFC stations are prescribed undertakings under section 5 of the GGRR[40], and the cost of service associated with EV charging stations is subject to flow-through treatment. Please refer to Table 5-2 of Section 5.8 which provides a summary of the EV DCFC stations' costs and revenues from 2021 Actual to 2023 Forecast.

Table 7-11 above shows the EV DCFC stations capital expenditures for 2022 Approved[41], 2022 Projected, and 2023 Forecast. FBC originally did not forecast any EV DCFC station capital in 2022 during the 2022 Annual Review as FBC expected all construction activities to be completed in 2021. However, the originally planned construction activities in 2021 were delayed to 2022 mainly due to the flooding experienced in the latter part of 2021 which also led to FBC being required to undergo design changes to 16 of its DCFC sites to complete a required safety retrofit for the power supply kiosks. The flooding caused delays in construction and deployment for two planned DCFC stations in Keremeos and Princeton that were identified in FBC's Revised and Updated Application for EV DCFC Service and approved by Order G-215-21[42]. This resulted in an increase in capital expenditures for 2022 Projected when compared to 2022 Approved. FBC notes the reduction in expenditures for 2021 due to the delayed deployment of the Keremeos and Princeton stations was offset by the installation of two new DCFC stations in late 2021 at existing sites (i.e., Naramata and Grand Forks). Installations at Keremeos and Princeton are planned to be completed by the end of 2022, which by then will bring the total number of DCFC stations in service to 42 across the 23 sites. At this time, FBC is not expecting to construct any additional

[40] Order G-215-21 dated July 14, 2021.

[41] Consistent with the 2022 Annual Review Decision, FBC included the 2022 forecast revenues and expenses associated with the EV DCFC stations in the Compliance Filing to the Annual Review Decision and Order G-374-21 because approval of the EV DCFC Service Application was not received until November 24, 2021. Accordingly, the 2022 Approved amount reflected in Table 7-11 is the amount included in the Compliance Filing.

[42] FBC's Revised and Updated EV DCFC Service Application, Table 2-2, pp. 10-11.

stations or sites beyond the two additional DCFC stations noted above; however, station utilization will continue to be monitored to determine if any additional stations are warranted to meet customer demand. For 2023, FBC is forecasting to complete accessibility improvements for its existing EV DCFC sites. These improvements include new or additional lighting as the stations are available for use 24 hours a day, and paving for wheelchairs access to the charger.

The two new DCFC stations were installed at the existing Naramata and Grand Forks sites that only have a single DCFC station installed previously. Both Naramata and Grand Forks were identified in FBC's Revised Application for EV DCFC Service, and construction of these two additional stations was completed in late 2021. As directed by Order G-341-21[43], FBC is to include evaluation of any additional EV charging stations that were not originally identified in the Revised EV DCFC Service Application in FBC's Annual Review process, including review of whether the additional stations meet the criteria to be a prescribed undertaking under the GGRR and assessment of whether the levelized rate under RS 96 EV DCFC service will need to be recalculated as a result of the additional EV charging stations. Consistent with the information provided in FBC's Revised EV DCFC Application, Table 7-12 below shows that these two additional stations are prescribed undertakings and meet the requirements as set out in section 5 of the GGRR. Regarding the review of the levelized rate under RS 96 EV DCFC service, as discussed in Section 5.8, FBC is required to file a detailed assessment of the EV DCFC service by the end of December 31, 2022, which includes an update of the financial models with actual and forecast information as well as a detailed assessment of RS 96 and alternative rate design options. For the purposes of regulatory efficiency, FBC will address the review of the levelized rate under RS 96 EV DCFC service in the assessment report.

Table 7-12: Assessment of New EV DCFC Stations as Prescribed Undertakings Under the GGRR

	Greenhouse Gas Reduction Regulation Criteria						
GGRR Section	5(1)(a)	5(1)(b)	5(1)(c)	5(2)(a)	5(2)(b)(i)	5(2)(a)(ii)	5(2)(c)
	Station is available for use 24 hours a day by any member of the public	Station does not require users to be members of a charging network	Station is capable of charging electric vehicles of more than one make	Eligible charging station is constructed and operated or purchased and operated by the public utility	The public utility reasonably expects, on the date the public utility decides to construct or purchase an eligible charging station, that		For any eligible charging station coming into operation on or after January 1, 2022, the station uses or is configured to use the Open Charge Point Protocol.
					The station will come into operation by December 31, 2025. (Operation Date)	Is the station located in a limited municipality? (Population – 2021 Census)	
Sites							
Naramata	Yes	Yes	Yes	Yes	Q4 2021	No[1]	Yes
Grand Forks	Yes	Yes	Yes	Yes	Q4 2021	No (4,112)	Yes

43 Decision and Order G-341-21, p. 27.

Note to Table:

[1] Not located in a municipality as defined by the Community Charter.

7.2.2.2 Mandatory Reliability Standards Incremental Capital

As explained in Section 6.3.5, the incremental capital expenditures related to the adoption of MRS AR13 were approved for exogenous factor treatment in the 2022 Annual Review Decision. These costs are for the implementation of changes/additions, including the development and implementation of methods to monitor network traffic and software tools to support the changes/additions to the standards. The implementation of the required changes/additions requires the purchase and installation of hardware and software to assess and evaluate network traffic and the development of software tools to track risk assessments of any product or service procured for Bulk Electrical System assets.

Table 7-13 below shows the incremental capital expenditures related to MRS AR13 with a breakdown between labour, non-labour and contingency for 2022 Approved, 2022 Projected and 2023 Forecast.

Table 7-13: Incremental Capital Expenditures for MRS AR13 ($ millions)

Line No.	Description	Approved 2022	Projected 2022	Forecast 2023	Reference
1	Labour	$ 0.580	$ 0.680	$ -	
2	Non-Labour	0.205	0.140	-	
3	Contingency	0.150	0.050	-	
4	Total	$ 0.935	$ 0.870	-	Section 11, Schedule 4, Line 8

As shown in the table above, the 2022 Projected capital expenditures are approximately $0.065 million less than 2022 Approved. The reason for the variance is that FBC was able to purchase some software early (i.e., at the end of 2021 instead of 2022). Overall, there is no change to the original total estimate of $0.935 million (i.e., $0.065 million in 2021 Actual and $0.870 million in 2022 Projected).

As explained in the 2022 Annual Review[44], FBC is not expecting any incremental capital costs for 2023; therefore, the 2023 Forecast is zero. As the capital expenditures related to MRS AR13 are approved for flow-through treatment, any variances from Projected and Forecast amounts for the adoption of MRS AR13 will be trued up by way of the Flow-through deferral account and returned to, or recovered from, customers in future years.

7.3 *MAJOR PROJECTS CAPITAL EXPENDITURES*

Major Projects are capital expenditures that do not form part of regular capital spending as they are approved through a separate CPCN or other application. As part of the MRP Decision,[45] the

[44] Exhibit B-3, BCUC IR1 24.2.

[45] MRP Decision and Order G-166-20, pp. 132-133.

BCUC approved the continuation of the current process of reviewing Major Projects outside of the proposed MRP and approved the continuation of the existing financial threshold for CPCNs of $20 million for FBC for the MRP term.

For 2023, FBC is forecasting capital expenditures related to the KBTA project only. However, FBC's 2023 Forecast rate base also includes the full-year impact of capital additions related to the Corra Linn Dam Spillway Gate Replacement project, the UBO Old Units Refurbishment project, and the Playmor Substation Upgrade project, all of which are expected to complete in 2022. Each of these approved projects is described further below.

KBTA Project

The KBTA project was approved by Order C-4-20 and involves the installation of a third terminal transformer at the F.A. Lee Terminal Station, including the reconfiguration of the 138 kV bus into an industry standard ring bus configuration. The new transformer is scheduled to be in service by the end of 2022 or early 2023, with project close-out in 2023, at an estimated cost of $23.288 million, inclusive of AFUDC and cost of removal. FBC forecasts capital expenditures of $11.384 million and $1.710 million (excluding AFUDC) in 2022 and 2023, respectively, with $21.250 million to be added to rate base on January 1, 2023 and the remainder added to rate base on January 1, 2024.

Corra Linn Dam Spillway Gate Replacement Project

The Corra Linn Dam Spillway Gate Replacement project was approved by Order C-1-17 and involves the replacement of 14 spillway gates and upgrades to the associated infrastructure. The project is expected to be complete in 2022 at a cost of $79.727 million, inclusive of AFUDC and cost of removal. Thus, FBC is not forecasting any capital expenditures related to this project in 2023. Since 2020, a total of $51.768 million has been added to FBC's rate base with the remaining $16.151 million forecast to be added to rate base in 2023. Overall, $67.919 million is forecast to be added to rate base by January 1, 2023 ($51.768 million of actual from 2020 to 2022 plus $16.151 million of 2023 Forecast), plus $11.808 million of cost of removal, for a total estimated project cost of $79.727 million including AFUDC and cost of removal.

UBO Old Units Refurbishment Project

The UBO Old Units Refurbishment project was approved by Order G-8-17 and involves the refurbishment of four generating units that are more than 100 years old. The refurbishments were completed in 2021 at an estimated total project cost of $34.180 million, inclusive of AFUDC and cost of removal. FBC is projecting approximately $0.002 million of remaining close-out costs in 2022 which will be added to rate base January 1, 2023. Overall, $32.290 million is forecast to be added to rate base by January 1, 2023 ($32.288 million of actual from 2018 to 2022 and $0.002 million of 2023 Forecast), plus $1.890 million of cost of removal, for a total estimated project cost of $34.180 million including AFUDC and cost of removal. As directed by the BCUC in the Annual Review for 2017 Rates, the UBO Refurbishment Project Final Report is included as Appendix B2.

Playmor Substation Upgrade Project

The Playmor Substation Upgrade project was approved by Order G-42-21 and involves rebuilding the Playmor substation in South Slocan, BC on an expanded station footprint in order to increase station capacity. The project is expected to be complete in 2022 at an estimated cost of $8.036 million, inclusive of AFUDC, and approximately $0.300 million of cost of removal. As the project is expected to complete in 2022, FBC is not forecasting any capital expenditures related to this project in 2023, and all project costs, estimated to be $8.036 million (including AFUDC) are forecast to enter rate base on January 1, 2023, with $0.300 million to be recorded to cost of removal.

7.4 *2023 PLANT ADDITIONS*

The 2023 Plant Additions are comprised of: (i) FBC's 2023 regular capital expenditures from Section 7.2; (ii) the Major Projects from Section 7.3 to the extent that portions of those projects are placed into service; (iii) the change in work in progress which adjusts for capital expenditures for projects that are in progress at year-end; (iv) AFUDC; and (v) overhead capitalized for the year. A reconciliation of capital expenditures to plant additions is shown below and is also provided in Section 11, Schedule 5.

Table 7-14: Reconciliation of 2023 Capital Expenditures to Plant Additions ($ millions)

Line No.	Description	Forecast 2023	Reference
1	Forecast Capital Expenditures	$ 94.428	Section 11, Schedule 5, Line 2
2	Flow-Through Capital Expenditures	0.248	Section 11, Schedule 5, Line 3
3	Total Gross Regular Capital Expenditures	94.676	Sum of Lines 1 and 2
4			
5	Capitalized Overhead	10.918	Section 11, Schedule 5, Line 16
6	AFUDC	0.243	Section 11, Schedule 5, Line 17
7	Change in Work in Progress	-	Section 11, Schedule 5, Line 19
8	Total Regular Additions to Plant	**105.837**	Sum of Lines 3 through 7
9			
10	Special Projects and CPCN Capital Expenditures		
11	Kelowna Bulk Transformer Capacity Addition	1.710	Section 11, Schedule 5, Line 7
12	AFUDC	0.049	Section 11, Schedule 5, Line 23
13	Change in Work in Progress	43.680	Section 11, Schedule 5, Line 25
14	Total Special Projects and CPCN Additions to Plant	**45.439**	Sum of Lines 11 through 13
15			
16	Total Plant Additions	**$ 151.276**	Line 8 + Line 14

7.5 *ACCUMULATED DEPRECIATION*

Rate base includes both the accumulated depreciation on plant in service and accumulated amortization of CIAC. Both are increased through depreciation expense and decreased through retirements.

The depreciation rates used for 2023, which were approved by Order G-166-20 and are based on FBC's most recent depreciation study, include the recovery of the estimated future costs of removal over the average service life of the assets (net salvage) in accumulated depreciation. Depreciation is calculated beginning January 1 of the year after the assets are placed in service, which is the treatment approved by Order G-139-14.

Based on calculating depreciation expense at these approved depreciation rates on the opening plant-in-service balance, the 2023 depreciation expense is calculated as $64.407 million.[46]

7.6 *DEFERRED CHARGES*

On May 3, 2017, the BCUC issued its Regulatory Account Filing Checklist.[47] The stated purpose of the checklist is to assist regulated entities when filing regulatory account requests and to facilitate an efficient review by the BCUC.

The checklist classifies deferral accounts as one of: (a) forecast variance account; (b) rate smoothing account; (c) benefit matching (capital-like) account; (d) retroactive expense account; or (e) other. In Section 11, Schedule 11, FBC has classified its rate base deferral accounts in accordance with this classification.

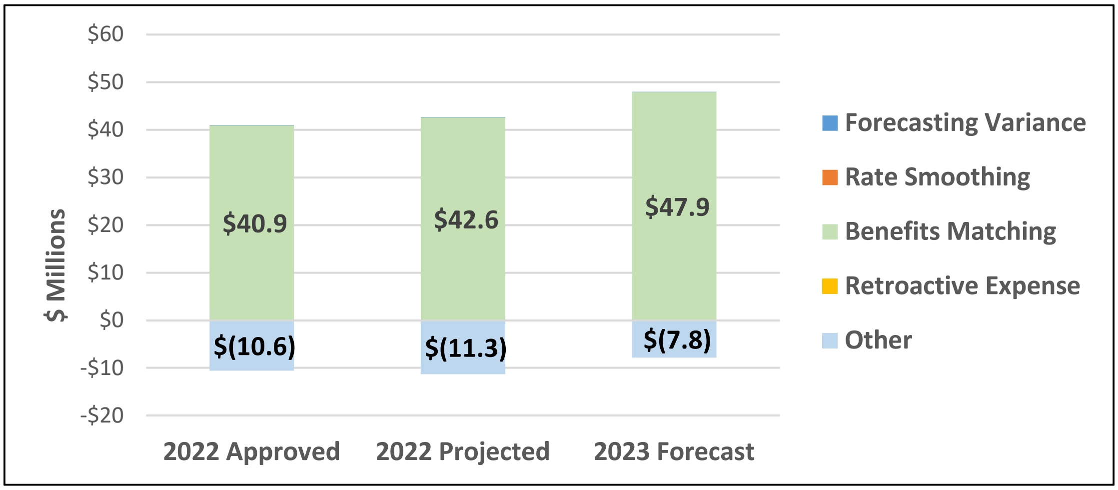
The 2023 Forecast mid-year balance of unamortized deferred charges in rate base for FBC is a debit of $40.045 million. The 2023 debit balance is driven largely by the balances in the Demand Side Management (DSM) and Deferred Debt Issue Costs deferral accounts, partially offset by the Pension and OPEB Liability deferral account.

Figure 7-1 provides the mid-year deferral account balances summarized by deferral account category.

[46] $69.474 million depreciation expense as shown in Section 11, Schedule 21, Line 2 less $5.067 million amortization of CIAC as shown in Section 11, Schedule 21, Line 8.

[47] BCUC Letter, Log No. 53608, Appendix B.

Figure 7-1: FBC Forecast Mid-Year Balances of Rate Base Deferral Accounts by Category



Based on amortizing the opening deferral account balances (rate base and non-rate base) using the approved and proposed amortization periods, the 2023 amortization expense is calculated as a credit of $3.277 million.[48] The subsections below include a discussion on new rate base deferral accounts and changes or updates to existing rate base deferral accounts. For a discussion on non-rate base deferral accounts, please refer to Section 12.

7.6.1 New Deferral Accounts

FBC is seeking approval to create one new rate base deferral account in this Application, as discussed below.

7.6.1.1 Joint Pole Use Audit 2023

Under the provisions of FBC's various joint use pole agreements, the parties are required to perform an audit of the joint use pole contacts once every five years, the last of which occurred in 2018.

Consistent with past treatment of costs for joint pole use audits, FBC is seeking approval to establish a rate base deferral account to capture costs incurred for the 2023 Joint Use Pole Audit, which are estimated at $0.435 million ($0.318 million after tax) to be incurred in 2023.

FBC is also requesting approval to amortize these costs over a five-year period beginning January 1, 2023, which represents the time period between the required audits.

Table 7-15 below addresses the considerations identified in the Regulatory Account Filing Checklist as they pertain to the above-described deferral account request.

[48] Section 11, Schedule 21, Column 3, Sum of Line 5 and 6.

1 **Table 7-15: Deferral Account Filing Considerations**

Item	Consideration	Joint Pole Use Audit 2023
I.	Indicate if the request is: (a) for a modification or a change in scope to an existing Commission approved regulatory account; or (b) to establish a new regulatory account.	The 2023 Joint Pole Use Audit deferral account is a new deferral account, consistent with the past treatment of joint pole use audits in previous years.
a)	If the request is for a modification or change in scope to an existing regulatory account, explain why the existing regulatory account is an appropriate account to use (specifically addressing the existing account's intended and approved purpose, mechanism for recovery, timeline for recovery and carrying costs).	N/A
b)	If the request is for approval of a new regulatory account, state the purpose of the regulatory account and explain its intended use.	The purpose of the requested account is to capture costs related to joint use pole audits that are required once every five years.
II.	Propose a term (i.e. length of time) that the regulatory account should be approved for and explain why that term is appropriate.	The term of the account encompasses the conduct of the audit and subsequent amortization period, equivalent to the term of the benefit.
III.	Identify any alternate treatments that were considered, including an overview of what the accounting treatment would be in the absence of approval of the request to establish a regulatory account, and explain why these alternate treatments may not be appropriate.	In the absence of a deferral account, the costs of the audit would have to be forecast as an O&M expense (outside of the MRP formula O&M since the 2018 audit costs were deferred and excluded from Base O&M Expense) and trued up annually by way of the Flow-Through deferral account. FBC considers a deferral account to be the more appropriate treatment since it permits the amortization of costs over the five-year period between audits.
IV a)	Address: whether, or to what extent, the item is outside of management's control;	An audit of joint use poles is required at five-year intervals as a condition of FBC's agreements with the counter parties and is therefore outside of FBC's direct control.
b)	the degree of forecast uncertainty associated with the item;	FBC forecasts audit costs based on past experience. Actual costs are recorded in the account so that the actual, not forecast, costs are recovered in rates.
c)	the materiality of the costs	Refer to Section 7.6.1.1.
d)	any impact on intergenerational equity	FBC proposes to recover the deferred costs over the five-year period between the required audits.
V.	Classify the regulatory account as either: (a) forecast variance account; (b) rate smoothing account; (c) benefit matching account; (d) retroactive expense account; or (e) other.	FBC classifies this account as a benefit matching account since the costs are recovered over the period between audits.
VI.	Identify if the regulatory account is a cash or non-cash account.	The joint use pole audit account is a cash account.

Item	Consideration	Joint Pole Use Audit 2023
VII.	Specify what additions to the regulatory account are being requested (i.e. type and amount of additions), including whether the account is intended to capture additions for a specific period of time or on an ongoing basis.	Costs include incremental labour, vehicle, and staff expense in addition to FBC's share of common costs such as data input costs. See Section 7.6.1.1.
VIII.	Propose a mechanism for recovery (e.g. how the balance in the regulatory account will be recovered or refunded to ratepayers) and explain why it is appropriate.	Costs are recovered in revenue requirements by way of amortization expense.
IX.	Propose a timeline for recovery (e.g. the period over which the regulatory account balance is either collected or refunded; also referred to as the amortization period) and explain why it is appropriate.	FBC proposes to recover the deferred costs over the five-year period between the required audits.
X.	Propose a carrying cost for the balance in the regulatory account and explain why it is appropriate.	Rate base deferral accounts are included in rate base and are therefore implicitly financed using the weighted average cost of capital (WACC).
XI.	Outline a recommended regulatory process for the Commission's review of the application.	The proposed deferral account can be reviewed as part of the present proceeding. Deferral account approvals and disposition are generally determined in revenue requirement proceedings. Where requested within CPCNs or other applications, the regulatory process will be included within the draft timetable for each specific application.

7.6.2 Existing Deferral Accounts

In the discussion below, FBC provides information on two existing deferral accounts and requests approval of an amortization period for one of them.

7.6.2.1 COVID-19 Customer Recovery Fund Deferral Account

7.6.2.1.1 DESCRIPTION AND FINANCIAL ESTIMATES

In June 2020, FBC received approval through Order G-133-20 to establish the COVID-19 Customer Recovery Fund Deferral Account in rate base to record three items:

1. any bill payment deferrals provided to customers due to the COVID-19 pandemic and subsequent payments of those deferred amounts;
2. any bill credits provided to customers due to the COVID-19 pandemic; and
3. any unrecovered revenue resulting from customers being unable to pay their bills due to the COVID-19 pandemic, which will be tracked separately by rate schedule.

The following section provides 2022 and 2023 financial estimates and descriptions for each of the three items approved for inclusion in the COVID-19 Customer Recovery Fund Deferral Account. FBC also proposes to commence amortization of the deferral account balance in 2023 and to discontinue quarterly reporting.

(a) Bill payment deferrals provided to residential and small commercial customers

The bill payment deferral program was offered to residential and small commercial customers affected by the COVID-19 pandemic. FBC experienced high collection rates in regard to this program, recovering approximately 85 percent of the outstanding balances through the regular monthly instalments. The remaining customer balances that were ultimately deemed unrecoverable have been designated as unrecoverable revenue and as such, a total of $0.119 million has been transferred to the COVID-19 Customer Recovery Fund Deferral Account. These additions to the deferral account are forecast in section (c), Table 7-18 *Unrecoverable Revenue Amounts*.

FBC ceased accepting new applications effective June 1, 2021 and is therefore not forecasting further additions related to this relief measure.

Table 7-16: Bill Payment Deferral Forecast Amounts ($ millions)

	2020 Actual	2021 Actual	2022 Projected	2023 Forecast
Opening Balance	-	0.563	0.005	-
Additions	0.803	-	-	-
Repayments	(0.240)	(0.444)	-	-
Transfers	-	(0.114)	(0.005)	-
Ending Balance	0.563	0.005	-	-

(b) Bill credits provided to small commercial customers

The bill credit program offered to small commercial customers has been calculated using the existing balance of $0.132 million as of April 2022. Given the duration and period these credits were available for, as well as the June 1, 2021 closure of the program for new applications, FBC does not expect additional credits to be offered to customers throughout the remainder of 2022 or in 2023. As such, FBC is proposing to amortize the $0.132 million over three years, with the 2023 amortization amount shown in Table 7-17 below.

Table 7-17: Bill Credit Amounts ($ millions)

	2020 Actual	2021 Actual	2022 Projected	2023 Forecast
Opening Balance	-	0.130	0.132	0.132
Additions	0.178	0.003	-	-
Tax	(0.048)	(0.001)	-	-
Amortization[49]	-	-	-	(0.044)
Ending Balance	0.130	0.132	0.132	0.088

[49] Based on a requested three-year amortization period, as discussed in Section 7.6.2.1.2.

(c) Unrecovered revenue resulting from customers being unable to pay their bills due to the COVID-19 pandemic

This portion of the deferral account forecast represents the amount of customer balances owing (i.e., account receivables) that are recognized as unrecoverable due to the COVID-19 pandemic. As such, these amounts are in excess of the normal course forecast bad debt expense that is recognized in indexed-based O&M.

Table 7-18: Unrecoverable Revenue Amounts ($ millions)

	2020 Actual	2021 Actual	2022 Projected	2023 Forecast
Opening Balance	-	0.011	0.134	0.375
Transfers[50]	-	0.114	0.005	-
Additions[51]	0.015	0.054	0.325	-
Tax	(0.004)	(0.045)	(0.089)	-
Amortization[49]	-	-	-	(0.125)
Ending Balance	0.011	0.134	0.375	0.250

The unrecovered revenue recorded in the deferral account includes:

- any remaining balances associated with the bill payment deferral program, described in section (a), that resulted from customers' inability to pay (shown as the Transfers line in Table 7-18 above); and
- any unrecovered revenue from all customer classes due to the COVID-19 pandemic, including industrial and large commercial customers and those residential and small commercial customers that did not participate in the bill payment deferral or bill credit relief offerings (shown as the Additions line in Table 7-18 above).

The 2022 Projected transfers of $0.005 million represent the actual 2022 transfers for the months available and any remaining bill payment deferral loan balances that were not yet repaid. The 2022 Projected additions of $0.325 million have been calculated using actual additions for the months available with the remainder of the year forecast using an approach consistent with the prior year. That is, a factor of 15 percent has been applied to the total outstanding balance of customer accounts that are past due as at March 1, 2022. This approach was based on a pilot outreach program in 2021 where 15 percent of customers with an average balance of $800 confirmed that they were financially impacted by the COVID-19 pandemic and required support to bring their account into good standing.

[50] The actual 2021 unrecoverable revenue transfers of $0.114 million consist of $0.004 million of small commercial customer balances and $0.110 million of residential customer balances.

[51] The actual 2020 unrecoverable revenue additions of $0.015 million consist of $0.014 million of small commercial customer balances and $0.001 million of residential customer balances. The actual 2021 unrecoverable revenue additions of $0.054 million consist of $0.004 million of small commercial customer balances and $0.050 million of residential customer balances.

While the forecasts of the unrecovered revenue additions above rely on estimates and broader macroeconomic factors, the actual amounts that will be recorded in the deferral account will reflect actual balances that are attributable to specific customers that cannot make payment due to the COVID-19 pandemic.

In this regard, to support the development of a consistent and appropriate approach for identifying amounts deemed unrecoverable due to COVID-19, FBC has created an internal set of guidelines to be used by members of the customer service team with an objective to identify and support customers that have been financially impacted by the COVID-19 pandemic. The underlying goal and intent of this approach is for customers to be able to maintain their gas services while maximizing recoveries associated with any balances due. These internal guidelines include questions that help identify the extent to which the customer has been impacted by COVID-19 as well as payment arrangement guidelines that include partial or full recognition of receivable balances as unrecoverable due to the COVID-19 pandemic.

7.6.2.1.2 DISPOSITION OF DEFERRAL ACCOUNT

As indicated in the 2022 Annual Review, additions to the COVID-19 Customer Recovery Fund Deferral Account for unrecovered revenues resulting from customers being unable to pay their bills due to the COVID-19 pandemic were expected to continue into 2022. As such, FBC has continued to capture unrecovered revenues in this deferral account during 2022.

Since the 2022 Annual Review, conditions have improved such that most COVID-19 pandemic restrictions in BC have been lifted.[52] The Federal government support programs such as the Canada Emergency Response Benefit (CERB) and the Canada Emergency Wage Subsidy (CEWS) for businesses have ended as the impact of the COVID-19 pandemic lessens. This, along with the improved economic conditions, although somewhat tempered recently with inflationary and recessionary considerations, suggests that ongoing pandemic support is not needed anymore.

Additionally, FBC has resumed most of its collection practices in 2022 with no significant uptick in unrecoverable revenues from customers experienced so far, and FBC anticipates full resumption of normal collection practices by mid-2022.

As a result, based on the positive current outlook for the COVID-19 pandemic and the lessened impact, FBC does not anticipate any further additions to the deferral account after 2022 and proposes to commence amortization of the balance in the deferral account on January 1, 2023 using a three-year amortization period. FBC considers a three-year amortization period to be appropriate because it matches the number of years during which the COVID-19 Customer Recovery Fund Deferral Account was active (i.e., 2020 through 2022).

Should public health and economic conditions deteriorate significantly due to the resurgence of the COVID-19 pandemic later this year or in the future (i.e., another wave of the pandemic which causes shutdowns and job losses impacting individuals and businesses), FBC may seek BCUC

52 See Section 12.2.1 for further discussion and details.

approval again for deferral account treatment for the same purpose and reasons set out in the 2020 application.

7.6.2.1.3 REQUEST TO DISCONTINUE REPORTING

FBC seeks approval to discontinue the existing quarterly reporting requirements for the COVID-19 Customer Recovery Fund Deferral Account filed with the BCUC. If approved, the final quarterly report would be for Q4 2022 and would be submitted in Q1 2023.

With more than two full years of reporting complete, the closure of the deferral and credit program to new applicants as of June 1, 2021, and the planned discontinuation of additions to the deferral account as of December 31, 2022, FBC does not see further value in providing separate detailed reporting for this account.

7.6.2.2 Indigenous Relations Agreement (Huth Substation)

As part of the Annual Review for 2020 and 2021 Rates Decision and Order G-42-21, FBC received approval to establish the Indigenous Relations Agreement (Huth Substation) deferral account to capture costs to address the Penticton Indian Band's (PIB) concerns regarding the Huth Substation in Penticton and the impacts the substation has had on Syilx[53] history and culture, such as the discovery of ancestral remains found at the Huth substation while performing construction works.

The Huth substation is a vital component of the South Okanagan area power system, providing direct service to both FBC customers and the municipal utility of the City of Penticton. This hub is connected to five major transmission lines (42L, 49L, 47L, 52L and 53L) and to two City of Penticton distribution substations. Given the importance of the substation to the supply of power in the South Okanagan and the historical value of the land to the PIB and the Syilx people, FBC has engaged in reconciliation efforts with the PIB, consistent with the recent legislation passed by the Provincial government.

FBC stated in the 2020-2021 Annual Review that it would update its progress with respect to this matter in future annual reviews and request approval for recovery of costs captured in this deferral account once an agreement with the PIB had been reached and the impacts could be communicated.

FBC has been unable to continue preliminary discussions with the PIB on reconciliation efforts on the Huth substation. Due to impacts on the community from the COVID-19 pandemic, followed by the unique circumstances that arose in 2021 with the Kamloops Residential School findings, and as the Penticton Indian Band and FortisBC Energy Inc. are currently in discussions regarding the proposed Okanagan Capacity Upgrade project, FBC chose not to pursue further efforts regarding the Huth Substation until both parties agreed to proceed. FBC will continue to provide updates on this matter and on the deferral account in future annual review filings.

[53] The PIB is a community of the Syilx people.

7.7 *WORKING CAPITAL*

The working capital component of rate base is comprised of cash working capital and other working capital.

Cash working capital is defined as the average amount of capital provided by investors in the Company to bridge the gap between the time expenditures are required to provide service (expense lag) and the time collections are received for that service (revenue lag). The cash working capital requirements that have been included reflect the most recent Lead Lag Study results, as approved through Order G-166-20.

Other working capital includes customer (DSM) loans, employee loans and withholdings, and inventory of materials and supplies. 2023 amounts are forecast based on 2021 Actual levels.

7.8 *SUMMARY*

FBC's rate base includes the impact of regular and Major Project capital expenditures, adjusted for work-in-progress, AFUDC and overheads capitalized. FBC has provided forecasts for all of its rate base deferral accounts in the financial schedules included in Section 11. In Section 7.2.1, FBC requested approval of its updated 2023 and 2024 regular capital (growth, sustainment and other) forecasts; in Section 7.6.1, FBC requested approval of one new deferral account; and in Section 7.6.2, FBC discussed two existing accounts, including requesting amortization of one of these existing accounts. Finally, the rate base includes cash and other working capital.

8. FINANCING AND RETURN OF EQUITY

8.1 INTRODUCTION AND OVERVIEW

FBC has prepared this Application using a capital structure of 60 percent debt and 40 percent equity and a Return on Equity (ROE) of 9.15 percent as approved by Orders G-129-16 and G-47-14. FBC's ROE is set at a premium of 40 basis points over the benchmark ROE, which is the ROE approved for FEI.

FBC is currently participating in the BCUC-initiated Generic Cost of Capital (GCOC) proceeding and has filed evidence on its recommended capital structure and ROE as part of Stage 1 of the proceeding. In Order G-156-21 and accompanying Reasons for Decision, the BCUC found that the effective date to implement a new cost of capital will depend on the timing and progress of the GCOC proceeding. As explained in Section 1.2, FBC is seeking approval of interim 2023 rates pending the outcome of Stage 1 of the GCOC proceeding as well as a decision on FBC's 2023-2027 DSM Expenditure Plan. When a decision is reached on these proceedings, FBC will update its rate calculations and apply for permanent 2023 rates.

The 2023 Forecast for financing costs, including the interest expense on issued long- and short-term debt and on new issuances that are forecast, has been updated as described in Section 8.3 below. Based on the updated financing costs, FBC's AFUDC rate for 2023 (which is equal to its after-tax weighted average cost of capital) is 5.73 percent. Any variances from interest rates used to set rates, and any variances in interest resulting from items subject to flow-through in the Flow-through deferral account, will be flowed through to customers. All other differences in interest expense will affect the achieved ROE and be subject to earnings sharing.

8.2 CAPITAL STRUCTURE AND RETURN ON EQUITY

The Company finances its investment in rate base assets with a mix of debt and equity, as approved by the BCUC from time to time. Order G-47-14 approved a capital structure for FBC of 60.0 percent debt and 40.0 percent equity with an equity risk premium of 40 basis points over the benchmark ROE, which was set at 8.75 percent by Order G-129-16; these approved capital structure and ROE values have been used to calculate rates in the Application.

8.3 FINANCING COSTS

Debt financing costs include the borrowing costs on issued debt as well as on new issuances that are forecast. Debt consists of both long- and short-term debt.

8.3.1 Long-Term Debt

FBC is both a private and public issuer of long-term debt. In March 2022, FBC issued long-term debt of $100 million at a rate of 4.16 percent for a term of 30 years. The net proceeds were used to repay existing indebtedness and finance the Company's capital expenditure program. FBC plans to issue additional long-term debt of approximately $75 million in 2023 and will use the funds for the same purposes. The 2023 debt issuance is reflected in the financial schedules in July 2023 at a rate of 4.90 percent.[54] The exact timing, amount and rate of the 2023 issuance will depend on future market conditions and capital expenditure requirements. Variances in interest expense related to the timing and amount of the issuances of the debt or the rates at which they are issued will be captured in the Flow-through deferral account.

8.3.2 Short-Term Debt

FBC obtains short-term funding primarily through the issuance of commercial paper to Canadian institutional investors. FBC backstops the commercial paper issuances by maintaining a $150 million committed credit facility that matures in April 2026.[55] This facility is also used to issue letters of credit. The credit facility, along with a $10 million overdraft facility, provides FBC with short-term liquidity to fund its capital program and working capital requirements.

8.3.3 Forecast of Interest Rates

FBC uses interest rate forecasts to estimate future interest expense. Forecasts of Treasury Bills and benchmark Government of Canada Bond interest rates are used in determining the overall interest rates for short-term debt and for rates on new issues of long-term debt, respectively. The forecasts are based on available projections made by Canadian Chartered banks.

Credit spreads on new long-term debt are based on current indicative rates, on the assumption that the current credit ratings of FBC are maintained.

FBC's short-term borrowing rate is based on the rate at which it issues commercial paper. Since commercial paper issuance rates are not forecast by economists, a forecast needs to be derived by FBC. The forecast is based on the historical differential between the Canadian Deposit Overnight Rate (CDOR) and the rate obtained by FBC under its commercial paper program. CDOR is used because FBC's short-term borrowings under its credit facility are priced based on CDOR and therefore CDOR is tracked relative to FBC's commercial paper borrowings. As CDOR is not forecast by economists, FBC must first obtain the 3-Month T-Bill rate forecast and then convert it to a CDOR forecast. FBC does this by taking the 3-year historical spread between CDOR and the 3-month T-Bill rate. Then, to derive the short-term borrowing rate forecast, FBC adjusts the CDOR forecast with the historical spread between CDOR and rates of issuances under its commercial paper program.

The 3-Month T-Bill forecast for 2023 is 3.14 percent, which is a significant increase from the 0.47 percent approved in 2022. FBC is in a rising interest rate environment due to high inflation, Russia's invasion in Ukraine, and the removal of monetary policy actions that were prevalent during the initial years of the COVID-19 pandemic (i.e., 2020 and 2021). In addition, on July 13, 2022 the Bank of Canada completed its fourth rate hike of the year, raising the benchmark interest

[54] Section 11, Schedule 27, Line 10.
[55] On July 14, 2021, the credit facility was extended to April 27, 2026.

rate to 2.5 percent from 0.25 percent at the beginning of 2022 and signalling that more rate hikes will be announced in 2022. The market volatility is expected to persist given many ongoing elevated risk variables.

For 2023, FBC forecasts a similar level of other financing fees to the 2022 Approved amount. Other financing fees include the fees that FBC incurs for its letters of credit under the $150 million credit facility, as well as interest paid on customer deposits. The short-term borrowing rate forecast is shown in Table 8-1 below.

Table 8-1: Short Term Interest Rate Forecast

FBC Short Term Interest Rate	Approved 2022	Projected 2022	Forecasted 2023
3-Month T-Bill Rate [1]	0.47%	3.08%	3.14%
Spread to CDOR	0.39%	0.36%	0.36%
CDOR Rate	0.86%	3.44%	3.50%
Spread to CP	-0.32%	-0.36%	-0.36%
CP Dealer Commission	0.10%	0.10%	0.10%
ST Interest Rate on Credit Facilities	**0.64%**	**3.18%**	**3.24%**
Fixed Financing Fees [2]			
Standby fee on Undrawn Credit [3]	0.44%	0.39%	0.44%
Renewal Fee on Undrawn Credit	0.17%	0.11%	0.12%
Other Financing Fees	0.26%	0.35%	0.44%
ST Interest Rate on Fixed Financing Fee	**0.87%**	**0.84%**	**1.00%**
FBC Short Term Rate	**1.51%**	**4.02%**	**4.24%**

Notes to Table:

1 3-Month T-Bill Rate for 2023 is a weighted average rate based on forecasts provided by Canadian Chartered banks in July 2022.

2 Fixed financing fees represent the costs of maintaining the $150 million credit facility and letter of credit facility, which are fixed fees incurred regardless of whether FBC draws from the credit facility. The fees have been converted into a short-term rate for forecast purposes.

3 A standby fee of 20 bps is charged on undrawn credit facility amounts, which would change if credit facility amounts are drawn through banker acceptances or prime loans. However, the forecast assumes FBC will borrow through commercial paper and will not change the undrawn credit facility fee percentage.

4. Other financing fees include commercial paper issuance fees, letter of credit fees, customer deposit interest expense and miscellaneous bank administration costs. The letter of credit fees, customer deposit interest and miscellaneous bank administration costs are incurred regardless of whether FBC draws from the credit facility.

As noted above, FBC's interest rate forecasts are based on CDOR. An indirect result of the cessation of the publication of the London Interbank Offered Rate (LIBOR) is that Canada is reassessing its use of CDOR as a risk-free rate benchmark for financial instruments in multiple asset classes. This will impact FBC's credit facility agreement as Refinitiv Benchmark Services (UK) Limited (RBSL), CDOR's regulated administrator, announced that CDOR will cease to be published after June 28, 2024.[56] The Canadian Alternative Reference Rate Working Group

56 https://www.bankofcanada.ca/markets/canadian-alternative-reference-rate-working-group/.

(CARR) was established to coordinate the transition to a new risk-free rate benchmark. It is anticipated that CDOR will transition to the Canadian Overnight Repo Rate Average (CORRA), a transaction-based overnight risk-free interest rate benchmark in existence since 1997.[57] FBC will work with its banking syndicate members to transition its credit facility agreement to CORRA and will revisit the methodology for short-term interest rate forecasting when such a transition is complete.

8.3.4 Interest Expense Forecast

The interest expense forecast reflects FBC's existing and forecast borrowing costs on long- and short-term debt.

Short-term interest expense is determined by applying the forecast short-term debt rate to the estimated short-term debt balance. Long-term debt interest expense is determined using the straight-line method by multiplying the average balance of the specific debenture by the debt coupon rate, or forecast coupon rate, if it is a new issue. The 2023 long-term debt schedule for FBC can be found in Section 11, Schedule 27.

8.3.5 Allowance for Funds Used During Construction (AFUDC)

FBC applies AFUDC to projects that are greater than three months in duration and greater than $100 thousand. Based on the above information, FBC's AFUDC rate for 2023 (which is equal to its after-tax weighted average cost of capital) is 5.73 percent. The calculation of the rate is shown in the following table.

Table 8-2: Calculation of AFUDC Rate for 2023

	Weight	Pre Tax Rate	After Tax Rate	Earned Return
Short Term Debt	5.44%	4.24%	3.10%	4.24%
Long Term Debt	54.56%	4.78%	3.49%	4.78%
Common Equity	40.00%	12.53%	9.15%	9.15%
Weighted Average	100.00%	7.85%	5.73%	6.50%

8.4 *SUMMARY*

FBC's equity financing and ROE have been forecast for 2023 at the same percentages as approved for 2022. FBC's debt financing costs on rate base are primarily determined by embedded rates on long-term debt, and to a lesser degree by short-term debt rates; the embedded rate on long-term debt is forecast to decrease in 2023 as compared to 2022 Approved.

[57] https://www.bankofcanada.ca/wp-content/uploads/2021/12/CARR-Review-CDOR-Analysis-Recommendations.pdf.

9. TAXES

9.1 INTRODUCTION AND OVERVIEW

This section discusses FBC's forecasts of property taxes and income tax which have been forecast on a basis consistent with prior years. In 2023, property taxes are forecast to increase by 2.1 percent from 2022 Approved, while income tax is forecast to decrease by 19.9 percent compared to 2022 Approved.

9.2 PROPERTY TAXES

Property taxes for 2023 of $18.260 million incorporate Company forecasts of assessed values of taxable assets, mill rates and taxes from revenues earned from electricity consumed within municipalities. A breakdown of property taxes by asset type is provided in Table 9-1 below.

Table 9-1: Property Taxes ($ millions)

Line No.	Description	Approved 2022	Projected 2022	Forecast 2023
1	Generating Plant	$ 3.210	$ 3.199	$ 3.253
2	Transmission and Distribution	7.428	6.950	7.189
3	Substation Equipment	3.948	4.156	4.208
4	Land and Buildings	1.165	1.201	1.322
5	In-Lieu	2.138	2.115	2.288
6	Total Property Taxes	$ 17.889	$ 17.621	$ 18.260
7				
8	Forecast Change from 2022 Approved			2.1%
9	Forecast Change from 2022 Projected			3.6%

As shown in the above table, in 2023 property taxes are forecast to increase by 2.1 percent from 2022 Approved and increase by 3.6 percent compared to 2022 Projected. In general, the 2023 increase from 2022 Projected is due to construction activities, market value changes, and changes in tax policies of local taxing authorities. The most significant drivers of the forecast changes are as follows:

1. **Changes in Tax Rates.** Tax Rates are expected to change for 2023 as follows:
    a) Municipal rates are expected to increase by 1.0 percent;
    b) School rates are expected to decrease by 1.0 percent;
    c) Rural rates are expected to decrease by 0.4 percent;

d) Tax rates on First Nations are expected to increase by 0.8 percent; and

e) Other rates are expected to decrease by 1.4 percent.

2. **Changes in Revenues to Calculate Grants In Lieu of Taxes.** Revenues reported to municipalities are expected to increase by 8.2 percent based on actual revenues applicable to the taxation year. Grants in-lieu of taxes are based on a fixed percentage of revenues; the overall actual increase in revenues reported to municipalities increases the grants in-lieu of taxes due.

3. **Changes in Assessed Values.** Forecast changes in the assessed values of FBC's property are based on expected inflationary increases. These include:

a) A 5.2 percent increase in assessed values of distribution lines and a 2.5 percent increase in transmission lines;

b) A 2.5 percent increase in assessed values for generating facilities calculated using legislated cost manuals for valuing generating facilities;

c) A 0.5 percent decrease in assessed values for substations calculated using legislated cost manuals for valuing substations; and

d) Land values are expected to increase between 4.3 percent to 11.4 percent for right of ways and properties owned in fee simple.

Any variances from the forecast of property taxes included in rates are recorded in the Flow-through deferral account and will be returned to or recovered from customers in the following year.

9.3 *INCOME TAX*

FBC is subject to corporate income taxes imposed by the Federal and BC governments. Current income taxes have been calculated using the flow-through (taxes payable) method, consistent with BCUC-approved past practice, at the corporate tax rate of 27 percent for 2023, which is unchanged from 2022. The corporate tax rates used in this Application are based on the Canada Income Tax Act and the BC Income Tax Act enacted legislation and are updated each year as part of the annual rate setting process.

Income tax for 2023 is forecast to decrease by $1.494 million or 19.9 percent compared to 2022 Approved. The 2023 Forecast decrease is primarily due to higher deductible temporary differences associated with amortization of deferred charges and property, plant and equipment, and lower taxable temporary differences associated with pension and OPEB, partially offset by higher rate base.

Any tax rate variances and variances in income taxes on items that are flowed through in rates are subject to flow-through treatment.

All other differences in income tax expense are subject to earnings sharing.

9.4 SUMMARY

FBC has forecast its property and income taxes on a basis consistent with prior years, utilizing enacted legislation for income taxes and forecast changes for property tax rates and assessments.

10. EARNINGS SHARING

In the MRP Decision (at page 82), the BCUC approved an earnings sharing mechanism from 2020 to 2024 whereby 50 percent of the achieved ROE above or below the allowed ROE will be shared with customers. Since FBC is unable to determine final earnings sharing until all items required for the ROE calculation are known, including the final rate base, there is a lag in when FBC distributes earnings sharing amounts. This is consistent with the calculations of formula O&M, where the true-up of the formula inputs happens only once actuals are known. Thus, for 2023 rates, it is the 2021 formula O&M and 2021 earnings sharing amounts that are calculated and impact rates in 2023.

For 2023, FBC proposes to distribute a $0.911 million pre-tax credit ($0.665 million after-tax) to customers, comprised of:

- The $0.665 million credit difference between the projected 2021 deferral account after-tax credit addition of zero embedded in 2022 rates, and the actual 2021 deferral account after-tax credit addition of $0.665 million as provided in FBC's 2021 Annual Report to the BCUC. This amount is also shown in the opening 2023 balance[58] in the financial schedules in the Application.

FBC proposes to distribute $0.911 million to customers in 2023 as a reduction in 2023 revenue requirements through amortization of the projected 2023 opening after-tax balance of $0.665 million in the MRP Earnings Sharing deferral account.

As part of future rate filings, the actual earnings sharing for 2022 will be distributed to or collected from customers in a similar manner as described above, which will account for the actual 2022 ROE variance from approved.

[58] Section 11, Schedule 12.2, Line 14, Column 2.

11. FINANCIAL SCHEDULES

SUMMARY OF RATE CHANGE
FOR THE YEAR ENDING DECEMBER 31, 2023
($millions)

Schedule 1

Line No.	Particulars	2023 Forecast		Cross Reference
	(1)	(2)	(3)	(4)
1	**VOLUME/REVENUE RELATED**			
2	Customer Growth and Volume	$ (12.546)		
3	Change in Other Revenue	(0.409)	(12.955)	
4				
5	**POWER SUPPLY**			
6	Power Purchases	19.796		
7	Wheeling	0.894		
8	Water Fees	(0.415)	20.275	
9				
10	**O&M CHANGES**			
11	Gross O&M Change	4.757		
12	Capitalized Overhead Change	(0.741)	4.016	
13				
14	**DEPRECIATION EXPENSE**			
15	Depreciation from Net Additions		2.752	
16				
17	**AMORTIZATION EXPENSE**			
18	CIAC from Net Additions	(0.210)		
19	Deferrals	(4.835)	(5.045)	
20				
21	**FINANCING AND RETURN ON EQUITY**			
22	Financing Rate Changes	3.688		
23	Financing Ratio Changes	(1.049)		
24	Rate Base Growth	5.809	8.448	
25				
26	**TAX EXPENSE**			
27	Property and Other Taxes	0.371		
28	Other Income Taxes Changes	(1.494)	(1.123)	
29				
30	**REVENUE DEFICIENCY (SURPLUS)**		**$ 16.368**	Schedule 16, Line 6, Column 4
31				
32	Revenue at Existing Rates		409.840	Schedule 18, Line 7, Column 3
33	Rate Change		3.99%	

UTILITY RATE BASE
FOR THE YEAR ENDING DECEMBER 31, 2023
($000s)

Schedule 2

Line No.	Particulars	2022 Approved	2023 at Revised Rates	Change	Cross Reference
	(1)	(2)	(3)	(4)	(5)
1	Plant in Service, Beginning	$ 2,279,658	$ 2,375,297	$ 95,639	Schedule 6.1, Line 32, Column 3
2	Opening Balance Adjustment	4,512	-	(4,512)	Schedule 6.1, Line 32, Column 4
3	Net Additions	105,010	134,666	29,656	Schedule 6.1, Line 32, Column 5+6+7
4	Plant in Service, Ending	2,389,180	2,509,963	120,783	
5					
6	Accumulated Depreciation Beginning	$ (659,517)	$ (693,759)	$ (34,242)	Schedule 7.1, Line 32, Column 5
7	Opening Balance Adjustment	(569)	-	569	Schedule 7.1, Line 32, Column 6
8	Net Additions	(33,657)	(47,865)	(14,208)	Schedule 7.1, Line 32, Column 7+8+9
9	Accumulated Depreciation Ending	(693,743)	(741,624)	(47,881)	
10					
11	CIAC, Beginning	$ (232,291)	$ (243,101)	$ (10,810)	Schedule 9, Line 3, Column 2
12	Opening Balance Adjustment	(2,523)	-	2,523	
13	Net Additions	(11,712)	(11,628)	84	Schedule 9, Line 3, Column 5+6
14	CIAC, Ending	(246,526)	(254,729)	(8,203)	
15					
16	Accumulated Amortization Beginning - CIAC	$ 84,284	$ 89,140	$ 4,856	Schedule 9, Line 7, Column 2
17	Opening Balance Adjustment	212	-	(212)	
18	Net Additions	4,857	5,067	210	Schedule 9, Line 7, Column 5+6
19	Accumulated Amortization Ending - CIAC	89,353	94,207	4,854	
20					
21	Net Plant in Service, Mid-Year	$ 1,506,015	$ 1,567,697	$ 61,682	
22					
23	Adjustment for timing of Capital additions	$ 16,181	$ 22,720	$ 6,539	
24	Capital Work in Progress, No AFUDC	19,332	34,306	14,974	
25	Unamortized Deferred Charges	30,372	40,045	9,673	Schedule 11, Line 26, Column 8
26	Working Capital	6,258	6,100	(158)	Schedule 13, Line 9, Column 3
27	Utility Plant Acquisition Adjustment	4,749	4,563	(186)	
28					
29	Mid-Year Utility Rate Base	$ 1,582,907	$ 1,675,431	$ 92,524	

FORMULA INFLATION FACTORS
FOR THE YEARS ENDING DECEMBER 31, 2020 to 2023
($000s)

Line No.	Particulars	Reference	2020	2021	2022	2023	Total for 2023 Rate Setting	Cross Ref
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1	**Formula Cost Drivers**							
2	CPI		2.692%	1.596%	1.281%	4.940%		
3	AWE		2.881%	5.745%	6.455%	4.235%		
4	Labour Split							
5	Non Labour		38.000%	38.000%	37.000%	40.000%		
6	Labour		62.000%	62.000%	63.000%	60.000%		
7	CPI/AWE	(Line 2 x Line 5) + (Line 3 x Line 6)	2.809%	4.168%	4.541%	4.517%		
8	Productivity Factor	G-166-20	-0.500%	-0.500%	-0.500%	-0.500%		
9	Net Inflation Factor	Line 7 + Line 8	2.309%	3.668%	4.041%	4.017%		
10								
11								
12	**Growth in Average Customer Calculation**							
13	Actual/Projected Prior Year Average Customers		139,916	142,321	144,877	147,417		
14	Average Customers for the Year	Schedule 18, Line 7, Column 6	142,321	144,877	147,417	150,563		
15	Change in Average Customers	Line 14 - Line 13	2,405	2,556	2,541	3,145	10,647	
16								
17	Customer Growth Factor Multiplier	G-166-20					75%	
18	Change in Average Customers for Rate Setting Purposes	Line 15 x Line 17					7,985	
19								
20	Average Customers Used to Determine Starting UCOM	Line 13 Year 2020					139,916	
21								
22	Average Customer Forecast - 2023 Rate Setting Purposes	Line 18 + Line 20					147,901	

CAPITAL EXPENDITURES
FOR THE YEAR ENDING DECEMBER 31, 2023
($000s)

Schedule 4

Line No.	Particulars	Total CapEx	Cross Reference
	(1)	(2)	(3)
1	**Forecast Capital Expenditures**		
2	Growth Capital	$ 30,973	
3	Sustainment Capital	45,797	
4	Other Capital	17,658	
5	Total Forecast Capital	$ 94,428	
6			
7	**Flow-Through Capital Expenditures**		
8	MRS Capital	$ -	
9	EV Charging Stations	248	
10	Total Flow-Through Capital	$ 248	
11			
12	**Total Regular Capital Expenditures**	$ 94,676	

CAPITAL EXPENDITURES TO PLANT RECONCILIATION
FOR THE YEAR ENDING DECEMBER 31, 2023
($000s)

Schedule 5

Line No.	Particulars		2023 Formula	Cross Reference
	(1)		(2)	(3)
1	**CAPEX**			
2	Forecast Capital Expenditures	$	94,428	
3	Flow-Through Capital		248	
4	Total Regular Capital Expenditures	$	94,676	Schedule 4, Column 2, Line 12
5				
6	**Special Projects and CPCN's**			
7	Kelowna Bulk Transformer Capacity Addition	$	1,710	
8	Total Special Projects and CPCN's	$	1,710	
9				
10	**Total Capital Expenditures**	$	96,386	
11				
12				
13	**RECONCILIATION OF CAPITAL EXPENDITURES TO PLANT**			
14				
15	Regular Capital Expenditures	$	94,676	Line 4
16	Add - Capitalized Overheads		10,918	Schedule 20, Column 4, Line 23
17	Add - AFUDC		243	
18	Gross Capital Expenditures		105,837	
19	Change in Work in Progress		-	
20	**Total Regular Additions to Plant**	$	105,837	
21				
22	Special Projects and CPCN's Capital Expenditures	$	1,710	Line 8
23	Add - AFUDC		49	
24	Gross Capital Expenditures		1,759	
25	Change in Work in Progress		43,680	
26	**Total Special Projects and CPCN Additions to Plant**	$	45,439	
27				
28	**Grand Total Additions to Plant**	$	151,276	Schedule 6.1, Columns 5 + 6, Line 32

PLANT IN SERVICE CONTINUITY SCHEDULE
FOR THE YEAR ENDING DECEMBER 31, 2023
($000s)

Schedule 6

Line No.	Account	Particulars	12/31/2022	Opening Bal Adjustment	CPCN's	Additions	Retirements	12/31/2023	Cross Reference
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1		**Hydraulic Production Plant**							
2	330	Land Rights	$ 962	$ -	$ -	$ -	$ -	$ 962	
3	331	Structures and Improvements	22,045	-	-	167	(12)	22,200	
4	332	Reservoirs, Dams & Waterways	119,076	-	16,151	7,747	(782)	142,192	
5	333	Water Wheels, Turbines and Gen.	105,453	-	2	699	(142)	106,012	
6	334	Accessory Equipment	51,357	-	-	128	(38)	51,447	
7	335	Other Power Plant Equipment	48,572	-	-	5	(1)	48,576	
8	336	Roads, Railroads and Bridges	1,287	-	-	-	-	1,287	
9			$ 348,752	$ -	$ 16,153	$ 8,746	$ (975)	$ 372,676	
10									
11		**Transmission Plant**							
12	350	Land Rights-R/W	$ 10,767	$ -	$ -	$ 118	$ -	$ 10,885	
13	350.1	Land Rights-Clearing	9,992	-	-	118	-	10,110	
14	353	Station Equipment	243,150	-	21,250	3,446	(305)	267,541	
15	355	Poles Towers & Fixtures	127,975	-	-	6,450	(291)	134,134	
16	356	Conductors and Devices	123,228	-	-	6,449	(313)	129,364	
17	359	Roads and Trails	959	-	-	-	-	959	
18			$ 516,071	$ -	$ 21,250	$ 16,581	$ (909)	$ 552,993	

PLANT IN SERVICE CONTINUITY SCHEDULE
FOR THE YEAR ENDING DECEMBER 31, 2023
($000s)

Schedule 6.1

Line No.	Account	Particulars	12/31/2022	Opening Bal Adjustment	CPCN's	Additions	Retirements	12/31/2023	Cross Reference
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1		**Distribution Plant**							
2	360	Land Rights-R/W	$ 7,185	$ -	$ -	$ 817	$ -	$ 8,002	
3	360.1	Land Rights-Clearing	11,630	-	-	374	-	12,004	
4	362	Station Equipment	304,310	-	8,036	13,065	(885)	324,526	
5	364	Poles Towers & Fixtures	258,898	-	-	13,410	(570)	271,738	
6	365	Conductors and Devices	436,812	-	-	20,531	(728)	456,615	
7	368	Line Transformers	193,494	-	-	14,165	(1,815)	205,844	
8	369	Services	9,521	-	-	-	-	9,521	
9	370.1	AMI Meters	41,459	-	-	532	-	41,991	
10	371	Installation on Customers' Premises	938	-	-	-	-	938	
11	373	Street Lighting and Signal System	14,178	-	-	170	(42)	14,306	
12	372	EV Stations Kiosks & Charger Connectors	5,993	-	-	-	-	5,993	
13			$ 1,284,418	$ -	$ 8,036	$ 63,064	$ (4,040)	$ 1,351,478	
14									
15		**General Plant**							
16	389	Land	$ 11,184	$ -	$ -	$ -	$ -	$ 11,184	
17	390.1	Structures - Masonry	48,652	-	-	2,785	(319)	51,118	
18	390.2	Operation Building	19,432	-	-	609	(23)	20,018	
19	390.1	Leasehold Improvements	2,872	-	-	-	-	2,872	
20	391	Office Furniture & Equipment	5,399	-	-	215	(237)	5,377	
21	391.1	Computer Hardware	13,614	-	-	3,330	(3,016)	13,928	
22	391.2	Computer Software	41,906	-	-	7,033	(4,015)	44,924	
23	391.2	AMI Software	13,439	-	-	(3)	-	13,436	
24	392.1	Light Duty Vehicles	5,967	-	-	549	(484)	6,032	
25	392.1	Heavy Duty Vehciles	28,678	-	-	1,523	(351)	29,850	
26	394	Tools and Work Equipment	8,507	-	-	724	(587)	8,644	
27	397	Communication Structures & Equipment	15,707	-	-	681	(1,456)	14,932	
28	397.1	Fibre	5,729	-	-	-	(198)	5,531	
29	397.2	AMI Communications Structure & Equipment	4,970	-	-	-	-	4,970	
30			$ 226,056	$ -	$ -	$ 17,446	$ (10,686)	$ 232,816	
31									
32		**Total Plant in Service**	$ 2,375,297	$ -	$ 45,439	$ 105,837	$ (16,610)	$ 2,509,963	
33									
34		Cross Reference			Schedule 5, Line 26, Column 2	Schedule 5, Line 20, Column 2			

ACCUMULATED DEPRECIATION CONTINUITY SCHEDULE Schedule 7
FOR THE YEAR ENDING DECEMBER 31, 2023
($000s)

Line No.	Account	Particulars	Gross Plant for Depreciation	Depreciation Rate	12/31/2022	Opening Bal Adjustment	Depreciation Expense	Retirements	Cost of Removal	Adjustments	12/31/2023	Cross Ref
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
1		**Hydraulic Production Plant**										
2	330	Land Rights	$ 962	1.07%	$ (382)	$ -	$ 10	$ -	$ -	$ -	$ (372)	
3	331	Structures and Improvements	22,045	1.68%	5,718	-	370	(12)	-	-	6,076	
4	332	Reservoirs, Dams & Waterways	135,227	1.90%	7,278	-	2,569	(782)	(1,857)	-	7,208	
5	333	Water Wheels, Turbines and Gen.	105,455	1.79%	20,564	-	1,888	(142)	(3)	-	22,307	
6	334	Accessory Equipment	51,357	3.13%	15,121	-	1,607	(38)	(130)	-	16,560	
7	335	Other Power Plant Equipment	48,572	2.12%	20,171	-	1,030	(1)	-	-	21,200	
8	336	Roads, Railroads and Bridges	1,287	1.44%	476	-	19	-	-	-	495	
9			$ 364,905		$ 68,946	$ -	$ 7,493	$ (975)	$ (1,990)	$ -	$ 73,474	
10												
11		**Transmission Plant**										
12	350	Land Rights-R/W	$ 10,767	0.00%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	
13	350.1	Land Rights-Clearing	9,992	1.27%	2,485	-	127	-	-	-	2,612	
14	353	Station Equipment	264,400	2.33%	101,920	-	6,161	(305)	(159)	-	107,617	
15	355	Poles Towers & Fixtures	127,975	2.52%	39,342	-	3,225	(291)	(469)	-	41,807	
16	356	Conductors and Devices	123,228	2.52%	24,036	-	3,105	(313)	(469)	-	26,359	
17	359	Roads and Trails	959	1.96%	432	-	19	-	-	-	451	
18			$ 537,321		$ 168,215	$ -	$ 12,637	$ (909)	$ (1,097)	$ -	$ 178,846	

ACCUMULATED DEPRECIATION CONTINUITY SCHEDULE
FOR THE YEAR ENDING DECEMBER 31, 2023
($000s)

Schedule 7.1

Line No.	Account	Particulars	Gross Plant for Depreciation	Depreciation Rate	12/31/2022	Opening Bal Adjustment	Depreciation Expense	Retirements	Cost of Removal	Adjustments	12/31/2023	Cross Ref
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
1		**Distribution Plant**										
2	360	Land Rights-R/W	$ 7,185	0.00%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	
3	360.1	Land Rights-Clearing	11,630	1.25%	2,935	-	145	-	-	-	3,080	
4	362	Station Equipment	312,346	2.61%	93,321	-	8,152	(885)	(156)	-	100,432	
5	364	Poles Towers & Fixtures	258,898	2.73%	80,092	-	7,068	(570)	(567)	-	86,023	
6	365	Conductors and Devices	436,812	2.38%	129,625	-	10,396	(728)	(914)	-	138,379	
7	368	Line Transformers	193,494	3.13%	45,961	-	6,056	(1,815)	(347)	-	49,855	
8	369	Services	9,521	0.51%	6,807	-	49	-	-	-	6,856	
9	370.1	AMI Meters	41,459	6.25%	12,897	-	2,591	-	-	-	15,488	
10	371	Installation on Customers' Premises	938	0.00%	937	-	-	-	-	-	937	
11	373	Street Lighting and Signal System	14,178	4.95%	6,259	-	702	(42)	-	-	6,919	
12	372	EV Stations Kiosks & Charger Connectors	5,993	10.00%	914	-	599	-	-	-	1,513	
13			$ 1,292,454		$ 379,748	$ -	$ 35,758	$ (4,040)	$ (1,984)	$ -	$ 409,482	
14												
15		**General Plant**										
16	389	Land	$ 11,184	0.00%	$ 34	$ -	$ -	$ -	$ -	$ -	$ 34	
17	390.1	Structures - Masonry	48,652	2.53%	13,006	-	1,231	(319)	-	-	13,918	
18	390.2	Operation Building	19,432	1.63%	7,081	-	317	(23)	-	-	7,375	
19	390.1	Leasehold Improvements	2,872	1.63%	2,700	-	47	-	-	-	2,747	
20	391	Office Furniture & Equipment	5,399	4.42%	1,501	-	239	(237)	-	-	1,503	
21	391.1	Computer Hardware	13,614	21.60%	4,496	-	2,941	(3,016)	-	-	4,421	
22	391.2	Computer Software	41,906	8.96%	16,368	-	3,755	(4,015)	-	-	16,108	
23	391.2	AMI Software	13,439	10.00%	7,627	-	1,344	-	-	-	8,971	
24	392.1	Light Duty Vehicles	5,967	3.81%	2,528	-	227	(484)	77	-	2,348	
25	392.1	Heavy Duty Vehciles	28,678	6.50%	8,066	-	1,864	(351)	-	-	9,579	
26	394	Tools and Work Equipment	8,507	4.11%	3,500	-	350	(587)	-	-	3,263	
27	397	Communication Structures & Equipment	15,707	3.44%	5,067	-	540	(1,456)	(5)	-	4,146	
28	397.1	Fibre	5,729	6.97%	2,486	-	399	(198)	-	-	2,687	
29	397.2	AMI Communications Structure & Equipment	4,970	6.67%	2,390	-	332	-	-	-	2,722	
30			$ 226,056		$ 76,850	$ -	$ 13,586	$ (10,686)	$ 72	$ -	$ 79,822	
31												
32		**Total**	$ 2,420,736		$ 693,759	$ -	$ 69,474	$ (16,610)	$ (4,999)	$ -	$ 741,624	
33												
34		Cross Reference	Schedule 6.1, Line 32, Column 3+4+5									

SCHEDULE NOT APPLICABLE

CONTRIBUTIONS IN AID OF CONSTRUCTION CONTINUITY SCHEDULE
FOR THE YEAR ENDING DECEMBER 31, 2023
($000s)

Schedule 9

Line No.	Particulars	12/31/2022	CPCN / Open Bal Adjt	Adjustment	Additions	Retirements	12/31/2023	Cross Reference
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1	**CIAC**							
2	CIAC	$ 243,101	$ -	$ -	$ 11,628	$ -	$ 254,729	
3	**Total**	$ 243,101	$ -	$ -	$ 11,628	$ -	$ 254,729	
4								
5	**Amortization**							
6	Amortization	$ (89,140)	$ -	$ -	$ (5,067)	$ -	$ (94,207)	
7	**Total**	$ (89,140)	$ -	$ -	$ (5,067)	$ -	$ (94,207)	
8								
9	**Net CIAC**	$ 153,961	$ -	$ -	$ 6,561	$ -	$ 160,522	

SCHEDULE NOT APPLICABLE

UNAMORTIZED DEFERRED CHARGES AND AMORTIZATION - RATE BASE Schedule 11
FOR THE YEAR ENDING DECEMBER 31, 2023
($000s)

Line No.	Particulars	12/31/2022	Opening Bal./ Transfer/Adj.	Gross Additions	Less Taxes	Amortization Expense	12/31/2023	Mid-Year Average	Cross Reference
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1	**1. Forecasting Variance Accounts**								
2	BCUC Levies Variance Account	$ 32	$ -	$ -	$ -	$ (32)	$ -	$ 16	
3									
4	**2. Rate Smoothing Accounts**								
5									
6	**3. Benefits Matching Accounts**								
7	Preliminary and Investigative Charges	$ 2,646	$ -	$ (439)	$ -	$ -	$ 2,207	$ 2,427	Note 1
8	Demand Side Management	37,219	-	14,455	(3,903)	(5,829)	41,942	39,581	
9	Deferred Debt Issue Costs	4,074	-	600	(111)	(167)	4,396	4,235	
10	Joint Pole Use Audit 2023	-	-	435	(117)	(64)	254	127	
11	2021 Generic Cost of Capital Proceeding	675	-	450	(122)	-	1,003	839	
12	Annual Reviews for 2020-2024 Rates	154	-	200	(54)	(154)	146	150	
13	2021 Long Term Electric Resource Plan	264	-	250	(68)	(113)	333	298	
14	BCUC Initiated Inquiry Costs	109	-	100	(27)	(109)	73	91	
15	Mandatory Reliability Standards 2021 Audit	157	-	-	-	(79)	78	118	
16		$ 45,298	$ -	$ 16,051	$ (4,402)	$ (6,515)	$ 50,432	$ 47,866	
17									
18	**4. Retroactive Expense Accounts**								
19									
20	**5.Other Accounts**								
21	Pension and OPEB Liability	$ (10,592)	$ -	$ 4,664	$ -	$ -	$ (5,928)	$ (8,260)	
22	COVID-19 Customer Recovery Fund	507	-	-	-	(169)	338	423	
23	Indigenous Relations Agreement (Huth Substation)	-	-	-	-	-	-	-	
24		$ (10,085)	$ -	$ 4,664	$ -	$ (169)	$ (5,590)	$ (7,837)	
25									
26	**Total Rate Base Deferral Accounts**	$ 35,245	$ -	$ 20,715	$ (4,402)	$ (6,716)	$ 44,842	$ 40,045	
27									

28 Note 1: Gross Additions for Preliminary and Investigative Charges are after transfers to Construction Work in Progress. Additions of $0.851 million - transfer of $1.290 million = $(0.439) million.

UNAMORTIZED DEFERRED CHARGES AND AMORTIZATION - NON-RATE BASE
FOR THE YEAR ENDING DECEMBER 31, 2023
($000s)

Line No.	Particulars	12/31/2022	Opening Bal./ Transfer/Adj.	Gross Additions	Less Taxes	Amortization Expense	12/31/2023	Mid-Year Average	Cross Reference
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1	**Deferral Accounts Financed at Short Term Interest Rate**								
2									
3	**1. Forecasting Variance Accounts**								
4	Pension & Other Post Retirement Benefits (OPEB) Variance	$ 1,493	$ -	$ -	$ -	$ (604)	$ 889	$ 1,191	
5									
6	**2. Rate Smoothing Accounts**								
7									
8	**3. Benefits Matching Accounts**								
9	Tariff Applications	31	-	-	-	(31)	-	15	
10		$ 31	$ -	$ -	$ -	$ (31)	$ -	$ 15	
11									
12	**4. Retroactive Expense Accounts**								
13									
14	**5.Other Accounts**								
15									
16	**Total NRB Deferral Accounts at Short Term Interest**	$ 1,524	$ -	$ -	$ -	$ (635)	$ 889	$ 1,206	
17									
18	Financing Costs at STI	$ 8	$ -	$ 37	$ -	$ (8)	$ 37	$ 23	

UNAMORTIZED DEFERRED CHARGES AND AMORTIZATION - NON-RATE BASE cont'd
FOR THE YEAR ENDING DECEMBER 31, 2023
($000s)

Line No.	Particulars	12/31/2022	Opening Bal./ Transfer/Adj.	Gross Additions	Less Taxes	Amortization Expense	12/31/2023	Mid-Year Average	Cross Ref
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1	**Deferral Accounts Financed at Weighted Average Cost of Debt**								
2									
3	**1. Forecasting Variance Accounts**								
4									
5	**2. Rate Smoothing Accounts**								
6									
7	**3. Benefits Matching Accounts**								
8	CPCN Projects Preliminary Engineering [1]	$ 980	$ -	$ 450	$ -	$ -	$ 1,430	$ 1,205	
9	2017 Rate Design Application	236	-	-	-	(118)	118	177	
10	2020 - 2024 Multi-Year Rate Plan Application	290	-	-	-	(145)	145	217	
11	Rate Design and Rates for Electric Vehicle Direct Current Fast Charging Service Application	127	-	-	-	(59)	68	98	
12		$ 1,633	$ -	$ 450	$ -	$ (322)	$ 1,761	$ 1,697	
13									
14	**4. Retroactive Expense Accounts**								
15									
16	**5.Other Accounts**								
17	US GAAP Pension and OPEB Transition Obligation	$ 348	$ -	$ (348)	$ -	$ -	$ -	$ 174	
18	Advanced Metering Infrastructure Radio-Off Shortfall	25	-	-	-	(25)	-	12	
19		$ 373	$ -	$ (348)	$ -	$ (25)	$ -	$ 186	
20									
21	**Total NRB Deferral Accounts at Weighted Average Cost of Debt**	$ 2,006	$ -	$ 102	$ -	$ (347)	$ 1,761	$ 1,883	
22									
23	Financing Costs at WACD	$ 64	$ -	$ 66	$ -	$ (64)	$ 66	$ 65	

24 Note 1: Gross additions for CPCN Projects Preliminary Engineering after transfers to Construction Work in Progress.

UNAMORTIZED DEFERRED CHARGES AND AMORTIZATION - NON-RATE BASE cont'd
FOR THE YEAR ENDING DECEMBER 31, 2023
($000s)

Line No.	Particulars	12/31/2022	Opening Bal./ Transfer/Adj.	Gross Additions	Less Taxes	Amortization Expense	12/31/2023	Mid-Year Average	Cross Reference
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1	**Deferral Accounts Financed at Weighted Average Cost of Capital**								
2									
3	**1. Forecasting Variance Accounts**								
4	2020 - 2024 Flow-Through Deferral Account	$ (9,625)	$ -	$ -	$ -	$ 9,625	$ -	$ (4,813)	
5									
6	**2. Rate Smoothing Accounts**								
7									
8	**3. Benefits Matching Accounts**								
9	On Bill Financing (OBF) Participant Loans	$ 1	$ -	$ (1)	$ -	$ -	$ -	$ 1	
10									
11	**4. Retroactive Expense Accounts**								
12									
13	**5.Other Accounts**								
14	MRP Earnings Sharing Account	$ (665)	$ -	$ -	$ -	$ 665	$ -	$ (333)	
15									
16	**Total NRB Deferral Accounts at Weighted Average Cost of Capital**	$ (10,289)	$ -	$ (1)	$ -	$ 10,290	$ -	$ (5,145)	
17									
18	Financing Costs at AFUDC	$ (757)	$ -	$ (317)	$ -	$ 757	(317)	(537)	
19									
20	**Non Rate Base Deferral Accounts Non-Interest Bearing**	$ 50	$ -	$ -	$ -	$ -	$ 50	$ 50	
21									
22									
23	**Total Non Rate Base Deferral Accounts (including financing)**	**$ (7,394)**	**$ -**	**$ (113)**	**$ -**	**$ 9,993**	**$ 2,487**	**$ (2,455)**	

WORKING CAPITAL ALLOWANCE
FOR THE YEAR ENDING DECEMBER 31, 2023
($000s)

Line No.	Particulars	2022 Approved	2023 Forecast	Change	Cross Reference
	(1)	(2)	(3)	(4)	(5)
1	**Cash Working Capital**				
2	Cash Working Capital	$ 7,065	$ 6,850	$ (215)	Schedule 14, Line 32, Column 5
3					
4	Add/Less: Funds Unavailable/(Funds Available)				
5	Customers Loans	329	353	24	
6	Employee Loans	443	570	127	
7	Inventories - Materials and Supplies	612	649	37	
8	Employee Withholdings	(2,191)	(2,322)	(131)	
9	Total	$ 6,258	$ 6,100	$ (158)	

CASH WORKING CAPITAL
FOR THE YEAR ENDING DECEMBER 31, 2023
($000s)

Schedule 14

Line No.	Particulars	2023 at Revised Rates	Lag (Lead) Days	Extended	Weighted Average Lag (Lead) Days	Cross Reference
	(1)	(2)	(3)	(4)	(5)	(6)
1	**REVENUE**					
2	**Sales Revenue**					
3	Residential Tariff Revenue	$ 205,868	56.0	$ 11,528,608		
4	Commercial Tariff Revenue	110,473	45.1	4,982,332		
5	Wholesale Tariff Revenue	54,109	37.5	2,029,088		
6	Industrial Tariff Revenue	49,767	38.0	1,891,146		
7	Lighting Tariff Revenue	2,295	34.6	79,407		
8	Irrigation Tariff Revenue	3,696	47.0	173,712		
9						
10	**Other Revenue**					
11	Apparatus and Facilities Rental	$ 6,108	90.0	$ 549,720		
12	Contract Revenue	2,367	62.2	147,227		
13	Transmission Access Revenue	1,834	65.2	119,577		
14	Late Payment Charges	994	54.0	53,658		
15	Connection Charges	553	30.5	16,867		
16	Other Utility Income	385	63.4	24,409		
17	Total	$ 438,449		$ 21,595,751	49.3	
18						
19	**EXPENSES**					
20	Power Purchases	$ 163,575	(51.5)	$ (8,424,126)		
21	Wheeling	6,987	(46.9)	(327,699)		
22	Water Fees	11,543	(1.4)	(16,160)		
23	Operating and Maintenance	61,871	(28.6)	(1,769,501)		
24	Property Taxes	18,260	(4.9)	(89,474)		
25	GST	593	(45.4)	(26,900)		
26	Income Tax	6,005	(15.2)	(91,276)		
27	Total	$ 268,833		$ (10,745,136)	(40.0)	
28						
29	Net Lag (Lead) Days				9.3	
30	Total Expenses				$ 268,833	
31						
32	Cash Working Capital				$ 6,850	

SCHEDULE NOT APPLICABLE

UTILITY INCOME AND EARNED RETURN
FOR THE YEAR ENDING DECEMBER 31, 2023
($000s)

Schedule 16

Line No.	Particulars	2022 Approved	2023 Forecast at 2022 Approved Rates	2023 Forecast Revised Revenue	2023 Forecast at Revised Rates	Change	Cross Reference
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
1	**ENERGY VOLUMES**						
2	Sales Volume (GWh)	3,306	3,476	-	3,476	170	Schedule 17, Line 8, Column 3
3							
4	**REVENUE**						
5	Sales	$ 397,294	$ 409,840	$ -	$ 409,840	$ 12,546	Schedule 17, Line 17, Column 3
6	Deficiency (Surplus)	-	-	16,368	16,368	16,368	
7	Total	397,294	409,840	16,368	426,208	28,914	Schedule 18, Line 7, Column 5
8							
9	**EXPENSES**						
10	Cost of Energy	$ 161,830	$ 182,105	$ -	$ 182,105	$ 20,275	Schedule 19, Line 30, Column 3
11	O&M Expense (net)	57,855	61,871	-	61,871	4,016	Schedule 20, Line 24, Column 4
12	Depreciation & Amortization	63,609	61,316	-	61,316	(2,293)	Schedule 21, Line 11, Column 3
13	Property Taxes	17,889	18,260	-	18,260	371	Schedule 22, Line 6, Column 3
14	Other Revenue	(11,832)	(12,241)	-	(12,241)	(409)	Schedule 23, Line 9, Column 3
15	Utility Income Before Income Taxes	107,943	98,529	16,368	114,897	6,954	
16							
17	Income Taxes	7,499	1,589	4,416	6,005	(1,494)	Schedule 24, Line 13, Column 3
18							
19	**EARNED RETURN**	$ 100,444	$ 96,940	$ 11,952	$ 108,892	$ 8,448	Schedule 26, Line 5, Column 7
20							
21	**UTILITY RATE BASE**	$ 1,582,907	$ 1,675,028		$ 1,675,431	$ 92,524	Schedule 2, Line 29, Column 3
22	**RATE OF RETURN ON UTILITY RATE BASE**	6.35%	5.79%		6.50%	0.15%	Schedule 26, Line 5, Column 6

VOLUME AND REVENUE
FOR THE YEAR ENDING DECEMBER 31, 2023
($000s)

Schedule 17

Line No.	Particulars	2022 Approved	2023 Forecast	Change	Cross Reference
	(1)	(2)	(3)	(4)	(5)
1	**ENERGY VOLUME SOLD (GWh)**				
2	Residential	1,283	1,301	18	
3	Commercial	946	973	27	
4	Wholesale	560	578	18	
5	Industrial	470	575	105	
6	Lighting	10	9	(1)	
7	Irrigation	37	39	2	
8	Total	3,306	3,476	170	
9					
10	**REVENUE AT EXISTING RATES**				
11	Residential	$ 195,058	$ 197,962	$ 2,904	
12	Commercial	104,380	106,230	1,850	
13	Wholesale	51,255	52,031	776	
14	Industrial	40,804	47,856	7,052	
15	Lighting	2,411	2,207	(204)	
16	Irrigation	3,386	3,554	168	
17	Total	$ 397,294	$ 409,840	$ 12,546	

REVENUE AT EXISTING AND REVISED RATES
FOR THE YEAR ENDING DECEMBER 31, 2023
($000s)

Schedule 18

Line No.	Particulars	2022 Approved Revenue	2023 Forecast Revenue at 2022 Approved Rates	2023 Forecast Effective Increase	2023 Forecast Revenue at Revised Rates	Average Number of Customers	GWh	Cross Reference
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1	Residential	$ 195,058	$ 197,962	$ 7,906	$ 205,868	130,787	1,301	
2	Commercial	104,380	106,230	4,243	110,473	17,267	973	
3	Wholesale	51,255	52,031	2,078	54,109	6	578	
4	Industrial	40,804	47,856	1,911	49,767	42	575	
5	Lighting	2,411	2,207	88	2,295	1,358	9	
6	Irrigation	3,386	3,554	142	3,696	1,103	39	
7	Total	$ 397,294	$ 409,840	$ 16,368	$ 426,208	150,563	3,476	
8								
9	**Effective Increase**			3.99%				

COST OF ENERGY Schedule 19
FOR THE YEAR ENDING DECEMBER 31, 2023
($000s)

Line No.	Particulars	2022 Approved	2023 Forecast	Change	Cross Reference
	(1)	(2)	(3)	(4)	(5)
1	**POWER PURCHASES**				
2	Gross Load (GWh)	3,591	3,775	184	
3					
4	**Power Purchase Expense**				
5	Brilliant	$ 41,841	$ 44,050	$ 2,209	
6	BC Hydro PPA	44,062	71,302	27,240	
7	Waneta Expansion	42,701	41,834	(867)	
8	Market and Contracted Producers	15,102	6,326	(8,776)	
9	Independent Power Producers	73	62	(11)	
10	Self-Generators	-	-	-	
11	CPA Balancing Pool	-	-	-	
12	Total	$ 143,779	$ 163,575	$ 19,796	
13					
14	**WHEELING**				
15	**Wheeling Nomination (MW months)**				
16	Okanagan Point of Interconnection	2,475	2,670	195	
17	Creston	420	420	-	
18					
19	**Wheeling Expense**				
20	Okanagan Point of Interconnect	$ 4,903	$ 5,555	$ 652	
21	Creston	542	570	28	
22	Other	648	863	215	
23	Total	$ 6,093	$ 6,987	$ 894	
24					
25	**WATER FEES**				
26	Plant Entitlement Use in previous year (GWh)	1,679	1,571	(108)	
27					
28	Water Fees	$ 11,958	$ 11,543	$ (415)	
29					
30	Total	$ 161,830	$ 182,105	$ 20,275	

Schedule 20

OPERATING AND MAINTENANCE EXPENSE
FOR THE YEAR ENDING DECEMBER 31, 2023
($000s)

Line No.	Particulars	Inflation Indexed O&M	Forecast O&M	Total O&M	Cross Reference
	(1)	(2)	(3)	(4)	(5)
1	**Inflation Indexed O&M**				
2	2022 Base Unit Cost O&M	$ 455			
3	2023 Net Inflation Factor	4.017%			Schedule 3, Line 9, Column 6
4	2023 Base Unit Cost O&M	$ 473			Line 2 x (1 + Line 3)
5					
6	2023 Average Customer Forecast - Rate Setting Purpose	147,901			Schedule 3, Line 22, Column 7
7					
8	2023 Inflation Indexed O&M before prior year True-up	$ 69,957			Line 4 x Line 6 / 1,000
9					
10	2021 Average Customer True-up	509			
11					
12	2023 Inflation Indexed O&M	$ 70,466		$ 70,466	Sum of Lines 8 and 10
13					
14	**O&M Tracked Outside of Formula**				
15	Pension & OPEB (O&M Portion)		$ (1,297)		
16	Insurance Premiums		2,457		
17	BCUC Levies		385		
18	MRS		585		
19	EV Charging Stations		193		
20	Sub-total		$ 2,323	2,323	Sum of Lines 15 through 19
21					
22	**Total Gross O&M**			$ 72,789	Line 12 + Line 20
23	Capitalized Overhead			(10,918)	-15 % x Line 22
24	**Net O&M Expense**			$ 61,871	Sum of Lines 22 and 23

DEPRECIATION AND AMORTIZATION EXPENSE
FOR THE YEAR ENDING DECEMBER 31, 2023
($000s)

Line No.	Particulars	2022 Approved	2023 Forecast	Change	Cross Reference
	(1)	(2)	(3)	(4)	(5)
1	**Depreciation**				
2	Depreciation Expense	$ 66,722	$ 69,474	$ 2,752	Schedule 7.1, Line 32, Column 7
3					
4	**Amortization**				
5	Rate Base Deferrals	$ 5,913	$ 6,716	$ 803	Schedule 11, Line 26, Column 6
6	Non-Rate Base Deferrals	(4,355)	(9,993)	(5,638)	Schedule 12.2, Line 23, Column 6
7	Utility Plant Acquisition Adjustment	186	186	-	
8	CIAC	(4,857)	(5,067)	(210)	Schedule 9, Line 7, Column 5
9		(3,113)	(8,158)	(5,045)	
10					
11	Total	$ 63,609	$ 61,316	$ (2,293)	

Schedule 22

PROPERTY AND SUNDRY TAXES
FOR THE YEAR ENDING DECEMBER 31, 2023
($000s)

Line No.	Particulars	2022 Approved	2023 Forecast	Change	Cross Reference
	(1)	(2)	(3)	(4)	(5)
1	Generating Plant	$ 3,210	$ 3,253	$ 43	
2	Transmission and Distribution	7,428	7,189	(239)	
3	Substation Equipment	3,948	4,208	260	
4	Land and Buildings	1,165	1,322	157	
5	1% In-Lieu of Municipal Taxes	2,138	2,288	150	
6	Total	$ 17,889	$ 18,260	$ 371	

OTHER REVENUE Schedule 23
FOR THE YEAR ENDING DECEMBER 31, 2023
($000s)

Line No.	Particulars	2022 Approved	2023 Forecast	Change	Cross Reference
	(1)	(2)	(3)	(4)	(5)
1	Apparatus and Facilities Rental	$ 6,018	$ 6,108	$ 90	
2	Contract Revenue	2,277	2,367	90	
3	Transmission Access Revenue	1,771	1,834	63	
4	Interest Income	20	30	10	
5	Late Payment Charges	875	994	119	
6	Connection Charges	505	553	48	
7	Other Recoveries	366	355	(11)	
8	EV Carbon Credits	-	-	-	
9	Total	$ 11,832	$ 12,241	$ 409	

INCOME TAXES
FOR THE YEAR ENDING DECEMBER 31, 2023
($000s)

Schedule 24

Line No.	Particulars	2022 Approved	2023 Forecast	Change	Cross Reference
	(1)	(2)	(3)	(4)	(5)
1	**EARNED RETURN**	$ 100,444	$ 108,892	$ 8,448	Schedule 16, Line 19, Column 5
2	Deduct: Interest on Debt	(42,510)	(47,571)	(5,061)	Schedule 26, Line 1+2, Column 7
3	Adjustments to Taxable Income	(37,660)	(45,084)	(7,424)	Line 32
4	Accounting Income After Tax	$ 20,274	$ 16,237	$ (4,037)	
5					
6	1 - Current Income Tax Rate	73.00%	73.00%	0.00%	
7	Taxable Income	$ 27,773	$ 22,242	$ (5,531)	
8					
9	Current Income Tax Rate	27.00%	27.00%	0.00%	
10	Income Tax - Current	$ 7,499	$ 6,005	$ (1,494)	
11					
12	Previous Year Adjustment	-	-	-	
13	**Total Income Tax**	$ 7,499	$ 6,005	$ (1,494)	
14					
15					
16	**ADJUSTMENTS TO TAXABLE INCOME**				
17	Addbacks:				
18	Depreciation	$ 66,722	$ 69,474	$ 2,752	Schedule 21, Line 2, Column 3
19	Amortization of Deferred Charges	1,558	(3,277)	(4,835)	Schedule 21, Line 5+6, Column 3
20	Amortization of Utility Plant Acquisition Adjustment	186	186	-	Schedule 21, Line 7, Column 3
21	Pension Expense	84	(528)	(612)	
22	OPEB Expense	1,607	1,119	(488)	
23					
24	Deductions:				
25	Capital Cost Allowance	(86,398)	(89,854)	(3,456)	Schedule 25, Line 19, Column 6
26	CIAC Amortization	(4,857)	(5,067)	(210)	Schedule 21, Line 8, Column 3
27	Pension Contributions	(4,419)	(4,203)	216	
28	OPEB Contributions	(655)	(705)	(50)	
29	Overheads Capitalized Expensed for Tax Purposes	(10,177)	(10,918)	(741)	Schedule 20, Line 23, Column 4
30	Removal Costs	(1,200)	(1,200)	-	
31	All Other	(111)	(111)	-	
32	Total	$ (37,660)	$ (45,084)	$ (7,424)	

CAPITAL COST ALLOWANCE
FOR THE YEAR ENDING DECEMBER 31, 2023
($000s)

Schedule 25

Line No.	Class	CCA Rate	12/31/2022 UCC Balance	2023 Additions & Opening Adjt	UCC Adjustment for AIIP *	2023 CCA	Forecast 12/31/2023 UCC Balance
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
1	1(a)	4%	$ 154,085	$ -	$ -	$ (6,163)	$ 147,922
2	1(b)	6%	33,091	3,043	1,521	(2,259)	33,875
3	2	6%	11,403	-	-	(684)	10,719
4	3	5%	648	-	-	(32)	616
5	6	10%	2	-	-	-	2
6	8	20%	3,694	842	421	(991)	3,545
7	10	30%	4,709	1,857	929	(2,250)	4,316
8	13	0%	11	-	-	-	11
9	14.1 (pre 2017)	7%	6,926	-	-	(485)	6,441
10	14.1 (post 2016)	5%	3,951	1,280	640	(294)	4,937
11	17	8%	156,652	22,036	11,018	(15,177)	163,511
12	42	12%	9,649	610	305	(1,268)	8,991
13	43.1	30%	566	(155)	-	(123)	288
14	45	45%	1	-	-	-	1
15	46	30%	2,708	-	-	(812)	1,896
16	47	8%	494,831	87,737	43,868	(50,115)	532,453
17	50	55%	2,800	9,286	4,643	(9,201)	2,885
18							
19	Total		$ 885,727	$ 126,536	$ 63,345	$ (89,854)	$ 922,409
20							
21	* Note - Accelerated Investment Incentive Property						

Schedule 26

RETURN ON CAPITAL
FOR THE YEAR ENDING DECEMBER 31, 2023
($000s)

Line No.	Particulars	2022 Approved Earned Return	Amount	Ratio	2023 Average Embedded Cost	Cost Component	Earned Return	Earned Return Change	Cross Reference
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1	Long Term Debt	$ 41,155	$ 914,178	54.56%	4.78%	2.61%	$ 43,709	$ 2,554	Schedule 27, Line 12, Column 6
2	Short Term Debt	1,355	91,081	5.44%	4.24%	0.23%	3,862	2,507	
3	Common Equity	57,934	670,172	40.00%	9.15%	3.66%	61,321	3,387	
4									
5	Total	$ 100,444	$ 1,675,431	100.00%		6.50%	$ 108,892	$ 8,448	
6									
7	Cross Reference		Schedule 2, Line 29, Column 3						

EMBEDDED COST OF LONG TERM DEBT
FOR THE YEAR ENDING DECEMBER 31, 2023
($000s)

Schedule 27

Line No.	Particulars	Issue Date	Maturity Date	Average Principal Outstanding	Interest Rate	Interest Expense	Cross Reference
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
1	1993 Debt Issue - Series G	August 28, 1993	August 28, 2023	$ 16,370	8.800%	$ 1,441	
2	2005 Debt Issue - Series 1 - 05	November 9, 2005	November 9, 2035	100,000	5.600%	5,600	
3	2007 Debt Issue - Series 1 - 07	July 4, 2007	July 4, 2047	105,000	5.900%	6,195	
4	2009 Debt Issue - MTN - 09	June 2, 2009	June 2, 2039	105,000	6.100%	6,405	
5	2010 Debt Issue - MTN - 10	November 24, 2010	November 24, 2050	100,000	5.000%	5,000	
6	2014 Debt Issue - MTN - 14	October 28, 2014	October 28, 2044	200,000	4.000%	8,000	
7	2017 Debt Issue - MTN - 17	December 4, 2017	December 6, 2049	75,000	3.620%	2,715	
8	2020 Debt Issue - MTN - 20	May 11, 2020	May 11, 2050	75,000	3.120%	2,340	
9	2022 Debt Issue - MTN - 22	March 14, 2022	March 14, 2052	100,000	4.160%	4,160	
10	2023 Debt Issue - MTN - 23	July 1, 2023	July 1, 2053	37,808	4.900%	1,853	
11							
12	Total			$ 914,178		$ 43,709	
13							
14	Average Embedded Cost				4.78%		

12. ACCOUNTING MATTERS

12.1 INTRODUCTION AND OVERVIEW

In this section, FBC discusses “Exogenous Factors” under its MRP, providing an update on the exogenous factor treatment for the impacts of the COVID-19 pandemic. FBC also discusses emerging accounting guidance, and the status of its non-rate base deferral accounts. With respect to its non-rate base deferral accounts, FBC provides information on the Flow-through deferral account.

12.2 EXOGENOUS (Z) FACTORS

FBC is permitted to adjust the cost of service for “Exogenous Factors” under the MRP. The BCUC established the following criteria for evaluating whether the impact of an event qualifies for exogenous factor treatment:

1. The costs/savings must be attributable entirely to events outside the control of a prudently operated utility;
2. The costs/savings must be directly related to the exogenous event and clearly outside the base upon which the rates were originally derived;
3. The impact of the event was unforeseen;
4. The costs must be prudently incurred; and
5. The costs/savings related to each exogenous event must exceed the BCUC-defined materiality threshold.

The materiality threshold (item 5) for FBC has been established at $0.150 million, as approved in the MRP Decision.

In the Annual Review for 2020 and 2021 Rates, FBC identified the COVID-19 pandemic as a potential exogenous factor affecting 2020 and future years, and the BCUC approved FBC’s request to record COVID-19 pandemic incremental costs and cost reductions from 2020 and 2021 into the previously approved COVID-19 Customer Recovery Fund Deferral Account.[59] FBC also stated in the Annual Review for 2020 and 2021 Rates application that it would review the amounts in 2021 when actual 2020 amounts and forecasts for future years could be ascertained, and an appropriate recovery method could be determined. In the Annual Review for 2022 Rates application, FBC provided a status update on the COVID-19 pandemic net incremental costs (costs less cost reductions). In the following section, FBC reports on the net incremental cost reductions and proposes to return these cost reductions to customers.

[59] FBC Annual Review for 2020 and 2021 Rates Decision and Order G-42-21.

12.2.1 COVID-19 Pandemic

During the COVID-19 pandemic, FBC has taken the necessary steps as a critical infrastructure service provider to ensure the health, safety and well-being of its customers, employees and their communities, and to continue to operate its system safely and reliably. This has resulted in net incremental O&M impacts.

12.2.1.1 FBC Has Reasonably Tracked the Impact of the COVID-19 Pandemic on Net Operating Costs

Consistent with the MRP, FBC's general approach to managing its formula O&M funding is at an overall Company level. O&M funding is prioritized and allocated as required to meet the business environment, conditions and requirements the Company faces. Funding utilized for a specific purpose in one year may be used differently in the following year. As a result, this makes the determination of COVID-19 pandemic net incremental O&M costs from year to year challenging and fluid, particularly for cost reductions, as the Company reprioritizes its funding regularly to meet its needs to provide safe and reliable operations.

Further, the COVID-19 pandemic has a broad impact throughout the organization, making the determination of the incremental costs more challenging. The impact of the COVID-19 pandemic varies in different parts of the business. For example, there may be additional overtime costs in departments that are indirectly influenced by the pandemic (e.g., less internal resources available due to reassignment to assist with other priorities), which are difficult to specifically identify. Also, there may be delays in work scheduled as a result of the pandemic that may increase the total cost of the work required, which are not specifically identified as COVID-19 pandemic related.

Recognizing the above circumstances, FBC has undertaken its best efforts to track and report on the net incremental O&M costs that are directly related to the COVID-19 pandemic. FBC has included below all costs that are specifically identifiable as attributable to activities required to respond to the COVID-19 pandemic as part of the overall net incremental costs (costs less cost reductions). While acknowledging there are uncertainties, the following summary of net incremental cost reductions provides a reasonable representation of the overall COVID-19 pandemic impact on the Company.

12.2.1.2 Summary of Net Incremental Costs

The combined impact in 2020 and 2021 as a result of the COVID-19 pandemic is a decrease by approximately $1.03 million in FBC's net incremental O&M expense (costs less cost reductions).

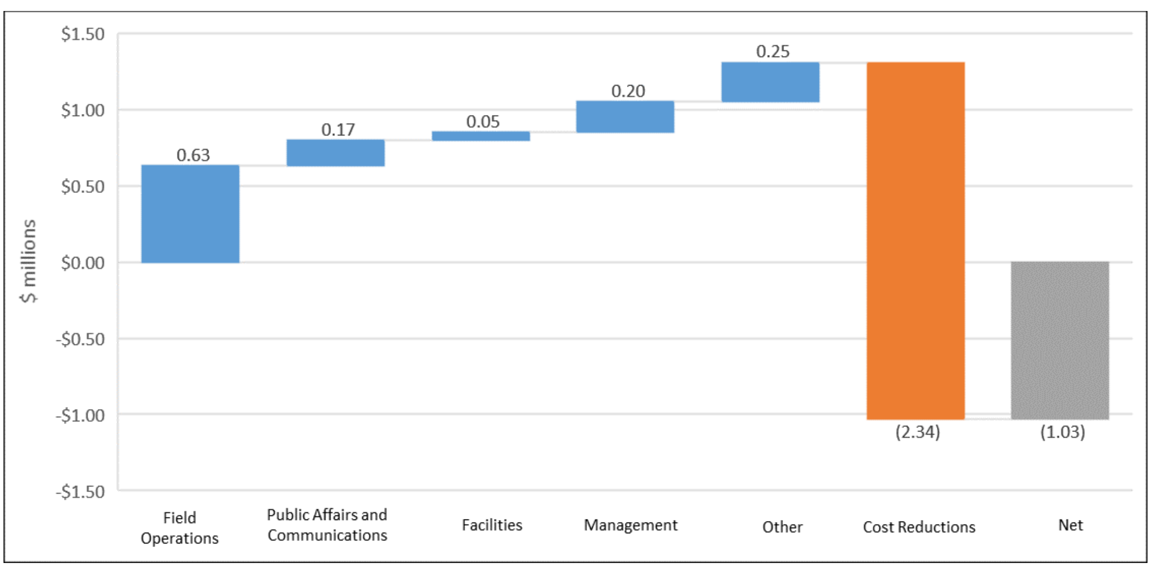
Table 12-1: Net Incremental Cost Reductions ($ millions)

	2020	2021	2020/2021
Direct Costs			
Field Operations	$ 0.46	$ 0.18	$ 0.63
Public Affairs and Communications	$ 0.16	$ 0.01	$ 0.17
Facilities	$ 0.04	$ 0.01	$ 0.05
Management	$ 0.10	$ 0.10	$ 0.20
Other	$ 0.18	$ 0.07	$ 0.25
Total Direct Costs	$ 0.94	$ 0.36	$ 1.31
Cost Reductions	$ (1.05)	$ (1.29)	$ (2.34)
Net difference	$ (0.10)	$ (0.93)	$ (1.03)

12.2.1.3 2020 and 2021 COVID-19 Pandemic Impact

While the COVID-19 pandemic increased many areas of O&M costs in 2020 and 2021, these costs were more than offset by lower employee related expenses. In 2020 and 2021, FBC incurred approximately $1.31 million in O&M costs related to the COVID-19 pandemic. These costs were primarily to ensure the health, safety and well-being of FBC's customers, employees, and their communities, and to continue to operate the system safely and reliably. The incremental costs were offset by approximately $2.34 million in employee expense related reductions. The figure below shows the categories of costs incurred and the offsetting savings. Each of the categories is described further below.

Figure 12-1: FBC COVID-19 Pandemic 2020 and 2021 Net O&M Cost Reductions



12.2.1.3.1 INCREASED O&M EXPENDITURES DUE TO THE COVID-19 PANDEMIC

In the Field Operations area, FBC incurred approximately $0.63 million related to the COVID-19 pandemic, with the majority of the costs related to the sequestering of system control centre employees from having to return to their homes and separation of the operators between the system control centre and Kootenay operating centre sites to ensure a safe and healthy work environment for this critical function. FBC also incurred costs for personal protective equipment (i.e., masks, gloves and sanitizers).

In the Public Affairs and Communications area, FBC incurred approximately $0.17 million for activities to keep customers and key stakeholders informed of the Company's assistance available during the COVID-19 pandemic, including the support required to develop the materials and to monitor and maintain messaging as needed. The costs were for advertising, various communication materials such as bill inserts, and labour and consultant services required to develop the materials and to monitor and maintain messaging as needed.

FBC incurred approximately $0.05 million for Facilities-related resources and activities including safety supplies, additional cleaning, first aid coverage, and signage.

Under the category of Management, approximately $0.20 million in management resource costs were added to support the following areas: the operation of the Emergency Operating Centre (EOC); the Human Resources and Environmental, Health and Safety groups' response to COVID-19 pandemic incidents and issues for employees and contractors; and the increased needs of supporting departments such as Information Systems, Supply Chain, Communications, and Business Continuity. The resources were necessary to respond to the COVID-19 pandemic and to address the various needs of the health authorities, regulators, and organizations like Emergency Management BC.

The Other category of approximately $0.25 million includes miscellaneous items such as different support group costs (e.g., Information Systems and TELUS Babylon health service).

12.2.1.3.2 O&M COST REDUCTIONS OFFSET INCREASED COSTS

The cost reductions that FBC achieved consist primarily of lower employee expenses, in part as a response to the travel restrictions, including in and out of Province travel, and the effect that the COVID-19 pandemic has had on social interactions. Employee expenses that were not incurred include course fees, travel, meals and accommodation, Company function expenses, and employee hiring and relocation expenses.

For the years 2020 and 2021, the reduced employee expenses were estimated at approximately $2.34 million.

12.2.1.3.3 CUMULATIVE NET IMPACT

The variances for the 2020 and 2021 net incremental O&M (costs less cost reductions) total to a net decrease of approximately $1.03 million.

Accordingly, FBC requests approval to return the exogenous factor savings of $1.03 million to customers in 2023, as further described below.

12.2.1.4 2022 COVID-19 Pandemic Impact

With the Company's transition to normal operations, FBC does not anticipate further impacts on its costs in 2022 requiring exogenous factor treatment. As mentioned in FBC's 2022 Annual Review, FBC started the transition to normal operations in September 2021 with the Province achieving Step 4 of the Province of BC Four Step Restart Plan. Step 4 included the lifting of restrictions with normal social contact allowed and workplaces fully reopened. For FBC, this meant having its employees return to offices and worksites starting September 7, 2021 with 100 percent of employees on site at least 50 percent of the time while maintaining building capacity at 50 percent.

The transition to normal operations continued into early 2022 with the provincial government lifting the workplace safety order on April 8, 2022, enabling businesses to transition back to communicable disease plans to reduce risk of all communicable disease, instead of maintaining a COVID-19 safety plan. At the same time, the provincial government also removed restrictions on gatherings and events, including at restaurants, bars, pubs and nightclubs. With the lifting of the workplace safety order, FBC accordingly adjusted its existing COVID-19 safety protocols at its worksites to balance safety with the return to normal operations. The adjustments included suspension of COVID-19 daily health check confirmation and the removal of mandatory mask wearing, although the practice of wearing a mask is still recommended. As of July 4, 2022, employees have returned to a primarily office-based work model. Employee-related activities and expenses for business purposes (i.e., travel, accommodation, etc.) have also returned to normal.

12.2.1.5 Mechanism to Return Cost Reductions to Customers

As part of the Annual Review for 2020 and 2021 Rates, FBC proposed (and was approved by Order G-42-21) to include the amounts related to incremental COVID-19 costs and cost reductions in the previously approved COVID-19 Customer Recovery Fund Deferral Account.

However, upon further review of FBC's original proposal, FBC has concluded that a better approach is to record these amounts in the Flow-through deferral account. This approach is preferable for three reasons:

1. It is consistent with the treatment of other exogenous items;
2. It will allow the O&M reported in the Annual Reports to be more reflective of the actual amounts incurred, as using the Flow-through deferral account does not result in direct adjustments to O&M, but rather one catch-all account for all flow-through adjustments. Alternatively, transferring the actual O&M savings directly to the COVID-19 Customer Recovery Fund Deferral Account would result in those O&M actual amounts being effectively booked back to the forecast amounts; and

3. The COVID-19 incremental savings will be returned to customers immediately in 2023, as opposed to over three years, which is the amortization period being proposed for the COVID-19 Customer Recovery Fund Deferral Account in Section 7.6.2.1.

From a customer perspective, there is no negative impact from the proposed change in treatment as customers will still have the full net savings returned to them. The benefit of the proposed treatment, as described above, is that the net savings will be returned to customers over one year as opposed to three years.

As such, FBC has included the O&M savings shown above in the 2022 Flow-through projection provided in Table 12-3 below, on Line 15, so that the net amount will be returned to customers in 2023 via the amortization of the Flow-through deferral account forecast in this Application.

Accordingly, FBC seeks a variance to Directive 6 of Order G-42-21. FBC requests that Directive 6 be varied as followed: "FBC is approved to record COVID-19 incremental costs and related savings from 2020 and 2021 into the Flow-through deferral account."

12.2.1.6 Conclusion

FBC proposes to refund to customers for years 2020 and 2021, via the Flow-through deferral Account, the cumulative net variance of the net incremental O&M (costs less reductions) of $1.03 million in 2023.

12.3 *ACCOUNTING MATTERS*

In the following section, FBC provides information on emerging accounting guidance.

12.3.1 Emerging Accounting Guidance

In the PBR Plan decision, the BCUC directed FBC to "communicate any accounting policy changes and updates to the Commission and other stakeholders as part of the Annual Review process during the PBR period." While this directive was not included as part of the MRP Decision, FBC will continue to provide accounting policy changes and updates as part of the Annual Review materials.

There are no new accounting policy changes that FBC is proposing, or that are required to be implemented under US GAAP, that result in a change in accounting for 2023; however, FBC provides an update on its exemptive relief to report under US GAAP.

12.3.1.1 Ontario Securities Commission Exemption to use US GAAP

FBC follows US GAAP for both financial and regulatory accounting purposes. Since 2011, FBC has made use of an exemption from the Ontario Securities Commission (OSC) permitting FBC to prepare and file its financial statements in accordance with US GAAP. Like other reporting issuers, FBC also has the option to obtain an exemption permitting the use of US GAAP by qualifying as a US Securities and Exchange Commission Issuer (SEC Issuer) pursuant to Canadian securities law. During 2022, FBC sought and received approval from its primary securities regulator, the BC Securities Commission (BCSC), for the same exemptive relief as the 2011 OSC exemption. FBC's original exemption from 2011 was filed jointly with FBC's parent company Fortis Inc., whose primary securities regulator is the OSC; however, Fortis Inc. is now an SEC Issuer and no longer makes use of the OSC exemption. As a result, FBC obtained an exemption on a stand-alone basis from the BCSC.

The BCUC has approved FBC's use of US GAAP for regulatory accounting purposes since 2011.[60] As part of the most recent BCUC approval to use US GAAP, the BCUC directed the following:[61]

> Approval is granted until such time as the FortisBC Utilities no longer has an Ontario Securities Commission exemption to use US GAAP or is no longer reporting under US GAAP for financial reporting purposes.

FBC considers that the intention of the above direction was to ensure that FBC has an exemption from its securities regulator to use US GAAP, and not that an exemption specifically from the OSC was required, as opposed to a different securities regulator that had jurisdiction. It was not contemplated at the time of the above direction that FBC would make use of a BCSC exemption rather than an OSC exemption.

To ensure that FBC has approval from the BCUC to use US GAAP for regulatory accounting purposes, FBC is seeking a variance of Directive 2 to Order G-83-14 to remove the reference to the OSC, so that it removes the reference to the Ontario Securities Commission, and states:

> Approval is granted until such time as FBC no longer has an exemption to prepare and file its financial statements in accordance with US GAAP or is no longer reporting under US GAAP for financial reporting purposes.

FBC notes that there have been no other changes in circumstances beyond the change in the regulatory body granting exemptive relief. However, similar to the original 2011 OSC exemptive relief, the 2022 BCSC exemptive relief is not permanent and would expire January 1, 2027 unless extended further. Should FBC plan to no longer report under US GAAP (e.g., convert from US GAAP to IFRS), it would file an application for approval from the BCUC at that time

12.4 *NON-RATE BASE DEFERRAL ACCOUNTS*

FBC maintains both rate base and non-rate base deferral accounts. Rate base deferral accounts are included in rate base and earn a rate base return. In contrast, non-rate base deferral accounts are outside of rate base and may have varying rates of return, depending on the nature of the account and the return approved by the BCUC.

[60] Order G-117-11 dated July 7, 2011 and Order G-83-14 dated July 3, 2014.
[61] Order G-83-14, Directive 2.

In the following section, FBC provides information on its Flow-through deferral account. Information on FBC's non-rate base earnings sharing deferral account is included in Section 10.

12.4.1 New Deferral Accounts

FBC is not seeking approval of any new non-rate base deferral accounts in this Application.

12.4.2 Existing Deferral Accounts

In the section below, FBC discusses the Flow-through deferral account.

12.4.2.1 Flow-Through Deferral Account (2020-2024)

As approved by Order G-166-20, the Flow-through deferral account is used to capture the annual variances between the approved and actual amounts for all costs and revenues which are forecast annually, are not subject to earnings sharing, and which do not have a previously approved deferral account. The specific items included in the Flow-through deferral account were set out in Table C4-1 of the MRP Application, reproduced below.

Table 12-2: Variances Captured in the Flow-through Deferral Account

	FEI	FBC
Delivery Revenues (FEI):		
Residential and commercial use rate variances	RSAM	N/A
Customer variances	Flow-through deferral	N/A
Industrial and all other revenue variances	Flow-through deferral	N/A
Revenues and Power Supply (FBC):		
Revenue variances	N/A	Flow-through deferral
Power Supply variances net of PSI	N/A	Flow-through deferral
Gross O&M:		
Index-based O&M variances	Subject to earnings sharing	Subject to earnings sharing
BCUC fees variances	BCUC variances deferral	BCUC variances deferral
Pension & OPEB variances	Pension/OPEB variances deferral	Pension/OPEB variances deferral
All other O&M variances [1,3]	Flow-through deferral	Flow-through deferral
Capitalized Overhead:		
Capitalized overhead variances	No variance	No variance
Depreciation and Amortization:		
Depreciation rate variances	No variance	No variance
Depreciation on Clean Growth Projects [2,3]	Flow-through deferral	Flow-through deferral
Other depreciation variances	Subject to earnings sharing	Subject to earnings sharing
Amortization of deferrals	No variance	No variance
Property Tax:		
Property tax variances	Flow-through deferral	Flow-through deferral
Other Revenues :		
SCP Mitigation revenues variances	SCP Revenues deferral	N/A
CNG/LNG Recoveries variances	CNG/LNG Recoveries deferral	N/A
Revenues from Clean Growth Projects [2,3]	Flow-through deferral	Flow-through deferral
All other other revenue/income variances	Subject to earnings sharing	Subject to earnings sharing
Interest Expense/Cost of Debt:		
Interest on RSAM/CCRA/MCRA/Gas storage	Interest on RSAM/CCRA/MCRA/Gas Storage	N/A
Interest rate variances	Flow-through deferral	Flow-through deferral
Interest on Clean Growth Projects [2,3]	Flow-through deferral	Flow-through deferral
Other interest variances	Subject to earnings sharing	Subject to earnings sharing
Income Tax:		
Income tax rate variances	Flow-through deferral	Flow-through deferral
Income tax on Clean Growth Projects [2,3]	Flow-through deferral	Flow-through deferral
Other income tax variances	Subject to earnings sharing	Subject to earnings sharing

1: Including items forecast outside of the formula such as insurance premiums, NGT stations, biomethane, variable LNG production, integrity digs and EV charging stations.

2: Cost of service for NGT fueling stations and tankers, variable LNG production, and EV stations will be captured in the Flow-through deferral account.

3: Biomethane other revenues will continue to capture the actual cost of service of the biomethane capital assets and transfer it to the BVA

In accordance with the method set out in the table above, the calculation of the 2022 Projected Flow-through amount of $5.007 million credit is shown in Table 12-3 below. To calculate the amount to be distributed to customers, FBC has also included the following adjustment:

- The $4.618 million credit difference between the projected ending 2021 deferral account credit balance of $3.927 million[62] embedded in 2022 rates, and the actual ending 2021 deferral credit balance of $8.545 million. A more detailed breakout of the 2021 variance is provided in Table 12-4 below. FBC notes that the financing return on this account is included in the aggregate financing of deferral accounts at Section 11, Schedule 12.2, Line 18.

Table 12-3: 2022 Projected Flow-through Deferral Account Additions ($ millions)

Line No.	Particulars	2022 Approved	2022 Projected	After-Tax Flow-Through Variance
	(1)	(2)	(3)	(4)
1	**Total Revenue**	$ (397.294)	$ (414.292)	$ (16.998)
2				
3	**Total Power Purchase Expense**	143.779	153.164	9.385
4				
5	**Total Wheeling**	6.093	6.330	0.237
6				
7	**Total Water Fees**	11.958	11.916	(0.042)
8				
9	**Net O&M Expense**			
10	Pension & OPEB	(1.716)	(1.716)	-
11	Insurance	2.223	2.291	0.068
12	BCUC Fees	0.373	0.373	-
13	MRS	0.765	0.500	(0.265)
14	EV DCFC	0.187	0.187	-
15	COVID-19 Pandemic	-	(1.030)	(1.030)
16	Capitalized Overhead	(10.177)	(10.177)	-
17				
18	**Depreciation and Amortization**			
19	Amortization of Deferrals	1.558	1.558	-
20	Depreciation variance on Clean Growth Projects/CPCNs/Exogenous Capital	-	-	-
21	CIAC Amortization variance on Clean Growth Projects/CPCNs/Exogenous Capital	-	-	-
22				
23	**Total Property Taxes**	17.889	17.621	(0.268)
24				
25	**Other Revenues**			
26	EV Carbon Credits	-	(0.625)	(0.625)
27				
28	**Interest Expense**			
29	Long-term debt interest expense variance	41.155	41.794	0.639
30	Interest variance on Clean Growth Projects/CPCNs/Exogenous Capital	-	-	-
31	Short-term debt rate variance	-	2.253	2.253
32	Short-term debt volume variance from long-term debt issue variance	-	(1.005)	(1.005)
33	Short-term debt timing variance from long-term debt issue timing	-	0.793	0.793
34				
35	**Income Tax Expense**			
36	Income tax variance on Clean Growth Projects/CPCNs/Exogenous Capital	-	-	-
37	Income tax/CCA rate changes	-	-	-
38	Income tax on taxable flowthrough variances above (excl. Clean Growth Projects/CPCNs/Exogenous Capital)	-	1.852	1.852
39				
40	**2022 After-Tax Flow-Through Addition to Deferral Account (excluding Financing)**			**(5.007)**
41				
42	2021 Ending Deferral Account Balance True-up			(4.618)
43				
44	**2023 After-Tax Amortization**			**(9.625)**

62 FBC Annual Review for 2022 Rates, Compliance Filing financial schedules, Schedule 12.2, Line 4, Column 2.

12.4.2.1.1 2022 PROJECTED FLOW-THROUGH VARIANCES

FBC provides the following explanations for the 2022 Projected flow-through variances shown in Table 12-3 above:

- The variance in revenue is due to increased industrial, commercial, wholesale and residential loads;
- The variance in power purchase expense is primarily due to an increase in gross load. Increasing gross load drove additional market purchases as well as BC Hydro PPA energy and capacity purchases at a higher than anticipated total cost. Rising rates further contributed to the increase in power purchase expense;
- Variances in wheeling and water fees are discussed in Section 4;
- Flow-through O&M amounts are discussed in Section 6;
- Amortization expense is equal to the approved value;
- Variances in property taxes are described in Section 9;
- Variances in other revenues are described in Section 5;
- The projected interest expense variances are derived from FBC issuing long-term debt later in 2022 than forecast, but at a higher amount and higher rate than forecast, and FBC projecting a higher short-term interest rate than the approved short-term interest rate, both as described in Section 8; and
- The income tax variance is derived as 27 percent of the aforementioned variances.

An adjustment to include the difference between the projected and final actual amounts for 2022 subject to flow-through will be recorded in the deferral account in 2022 and amortized in 2024 rates.

12.4.2.1.2 2021 FLOW-THROUGH DEFERRAL ACCOUNT TRUE-UP

As mentioned above, FBC is also providing a breakdown of the 2021 true-up amount of $4.618 million credit in Table 12-4 below, along with an explanation of the variances.

Table 12-4: 2021 Actual vs. Projected Flow-through Deferral Account Additions ($ millions)

Line No.	Particulars	2021 Projected	2021 Actual	After-Tax Flow-Through Variance
	(1)	(2)	(3)	(4)
1	**Total Revenue**	$ (389.100)	$ (404.247)	$ (15.147)
2				
3	**Total Power Purchase Expense**	141.747	152.473	10.726
4				
5	**Total Wheeling**	5.836	6.000	0.164
6				
7	**Total Water Fees**	10.878	10.741	(0.137)
8				
9	**Net O&M Expense**			
10	Pension & OPEB	0.775	0.775	-
11	Insurance	2.022	1.924	(0.098)
12	BCUC Fees	0.350	0.350	-
13	MRS	0.100	0.052	(0.048)
14	2021 Wildfires	0.155	0.155	-
15	Capitalized Overhead	(9.795)	(9.795)	-
16				
17	**Depreciation and Amortization**			
18	Amortization of Deferrals	5.110	5.110	-
19	Depreciation variance on Clean Growth Projects/CPCNs/Exogenous Capital	-	(0.301)	(0.301)
20	CIAC Amortization variance on Clean Growth Projects/CPCNs/Exogenous Capital	-	-	-
21				
22	**Total Property Taxes**	17.225	17.262	0.037
23				
24	**Interest Expense**			
25	Long-term debt interest expense variance	40.698	40.251	(0.447)
26	Interest variance on Clean Growth Projects/CPCNs/Exogenous Capital	-	(0.059)	(0.059)
27	Short-term debt rate variance	(0.500)	(0.593)	(0.092)
28	Short-term debt volume variance from long-term debt issue variance	-	0.303	0.303
29	Short-term debt timing variance from long-term debt issue timing	0.910	-	(0.910)
30				
31	**Income Tax Expense**			
32	Income tax variance on Clean Growth Projects/CPCNs/Exogenous Capital	-	0.048	0.048
33	Income tax/CCA rate changes	-	-	-
34	Income tax on taxable flowthrough variances above (excl. Clean Growth Projects/CPCNs/Exogenous Capital)	1.571	3.097	1.526
35				
36	EV DCFC Service Application 2018-2021 adjustment	0.107	(0.074)	(0.181)
37				
38	**2021 Ending Deferral Account Balance True-up**			**(4.618)**

The 2021 Actual variances shown in Table 12-4 above are described as follows:

- The favourable variance in revenue of $15.147 million was due to higher than projected residential, commercial, wholesale and irrigation loads, mainly due to weather variations. Favourable variances in residential ($12.209 million), commercial ($2.614 million), wholesale ($1.552 million), and irrigation ($0.815 million) revenue were partially offset by unfavourable variances in industrial ($1.939 million) and lighting ($0.104 million) revenue;
- The increase in power purchase expense of $10.726 million was due several factors including increased market expenses, increased load, and reduced generation availability. Increased load and market expenses were primarily due to several extreme weather events, such as the June 2021 heat dome event. This increase was partially offset by increased surplus capacity sales under the CEPSA Agreement;
- The increase in wheeling costs of $0.164 million was primarily due to increased use of wheeling under BC Hydro's Open Access Transmission Tariff;
- The decrease in water fees of $0.137 million was primarily due to reduced water rental rates compared to forecast;

- The flow-through components of O&M expense were $0.146 million lower than projected, with all items comparable to the projected amounts;
- Actual property tax expense was relatively consistent with the projected amount;
- The variance between the actual (0.81 percent) and projected (1.03 percent) short-term debt interest rates results in an amount to be returned to customers of $0.092 million,[63] shown on Line 27 of the table above. The long-term debt interest expense variance of $0.447 million to be returned to customers is due to the projected 2021 long-term debt issuance not actually occurring. The net variance of $0.607 million to be returned to customers on Lines 28 and 29 of Table 12-4 above is due to the impact of a lower actual short-term interest rate than projected, partially offset by the delay in the 2021 long-term debt issuance;
- The unfavourable income tax variance of $1.526 million is calculated as 27 percent of the aforementioned variances;
- The favourable variance of $0.181 million for the EV DCFC Service Application 2018-2021 adjustment relates to the true-up of the 2021 cost of service amounts. As discussed in the Compliance Filing to the 2022 Annual Review Decision, FBC estimated the 2018-2021 EV cost of service amounts to be a $0.107 million debit recoverable from customers, using the 2018-2020 actual cost of service amounts and a 2021 projected amount. The actual 2021 EV cost of service was lower than projected, mainly related to favourable taxes, resulting in the $0.181 million overall credit true-up amount to be returned to customers; and
- The combined favourable variance of $0.312 million related to depreciation, CIAC amortization, interest and tax variances on Clean Growth/CPCN/exogenous capital amounts, shown on Lines 19, 20, 26 and 32, respectively, were derived for 2021 by comparing the actual 2021 cost of service impacts of the UBO, Grand Forks Terminal Station and Corra Linn projects to the amounts forecast for those same projects.

12.5 *SUMMARY*

FBC has requested approval to return the incremental net cost reductions related to the COVID-19 pandemic exogenous factor to customers in 2023 through inclusion in the Flow-through deferral account. FBC has also provided an update on certain accounting related matters, and included information on the Flow-through deferral account.

[63] (0.81% - 1.03%) x $42.042 million forecast 2021 short-term debt in Schedule 26 of October 28, 2020 Evidentiary Update financial schedules.

13. SERVICE QUALITY INDICATORS

13.1 *INTRODUCTION AND OVERVIEW*

Under the MRP, SQIs are used to monitor the Utility's performance to ensure that any efficiencies and cost reductions do not result in a degradation of the quality of service to customers.

In the MRP Decision and Order G-166-20, the BCUC approved a balanced set of SQIs for FBC, covering safety, responsiveness to customer needs, and reliability. Eight of the SQIs have benchmarks and performance ranges set by a threshold level. Four of the SQIs are for information only and as such do not have benchmarks or performance ranges.

In the subsections below, FBC reports on its 2021 and June 2022 year-to-date performance as measured against the SQI benchmarks and thresholds. In 2021, for the eight SQIs with benchmarks, six met or were better than the benchmark, with two better than the threshold. For the four SQIs that are informational only, performance in 2021 generally remains at a level consistent with prior years. In 2022 to date, performance for the metrics with benchmarks are trending towards meeting the benchmark or the threshold.

Consistent with how SQIs were reviewed during the 2014-2019 PBR Plan term,[64] FBC has provided 2021 and year-to-date 2022 SQI results in this annual review. In accordance with Order G-44-16, the BCUC will evaluate FBC's actual 2022 SQI performance in the Annual Review for 2024 Rates when actual SQI results are known. FBC also notes that it will provide information on the 2023 year-to-date SQI results in the Annual Review for 2024 Rates.

13.2 *REVIEW OF THE PERFORMANCE OF SERVICE QUALITY INDICATORS*

For each SQI, Table 13-1 provides a comparison of FBC's 2021 and June year-to-date performance for 2022 to the proposed benchmarks and thresholds approved as part of the MRP. Actual 2021 and June year-to-date results for 2022 are also provided for the four informational SQIs.

[64] MRP Decision page 99: "the Panel determines that the existing approved process for interpreting metric performance is to remain in effect over the term of the MRPs."

Table 13-1: Approved SQIs, Benchmarks and Actual Performance

Performance Measure	Description	Benchmark	Threshold	2021 Results	June 2022 YTD Results
Safety SQIs					
Emergency Response Time	Percent of calls responded to within two hours	>=93%	90.6%	93%	95%
All Injury Frequency Rate (AIFR)	3 year average of lost time injuries plus medical treatment injuries per 200,000 hours worked	<=1.64	2.39	0.67	0.80
Responsiveness to Customer Needs SQIs					
First Contact Resolution	Percent of customers who achieved call resolution in one call	>=78%	74%	82%	78%
Billing Index	Measure of customer bills produced meeting performance criteria	<=3.0	5.0	0.12	0.14
Meter Reading Accuracy	Number of scheduled meters that were read	>=98%	96%	99%	99%
Telephone Service Factor (Non-Emergency)	Percent of non-emergency calls answered within 30 seconds or less	>=70%	68%	70%	63%
Customer Satisfaction Index	Informational indicator - measures overall customer satisfaction	-	-	8.4	8.4
Average Speed of Answer	Informational indicator – the amount of time it takes to answer a call (seconds)	-	-	65	98
Reliability SQIs					
System Average Interruption Duration Index (SAIDI) – Normalized	Annual SAIDI (average of cumulative customer outage time)	3.22[65]	4.52	4.27	2.94
System Average Interruption Frequency Index (SAIFI) - Normalized	Annual SAIFI (average customer outage)	1.57	2.19	2.08	1.58
Generator Forced Outage Rate	Informational indicator – Percent of time a generating unit is removed from service due to component failure or other events.	-	-	0.23%	0.85%
Interconnection Utilization	Informational indicator – percent of time that an interconnection point was available and providing electrical service to wholesale customers.	-	-	99.90%	99.91%

65 Benchmarks and thresholds for SAIDI and SAIFI were approved in the FBC Annual Review for 2020 and 2021 Rates Decision and Order G-42-21.

In the following sections, FBC reviews each SQI's year-to-date individual performance in 2021 and 2022. Discussion is also provided for the informational SQIs.

13.2.1 Safety Service Quality Indicators

13.2.1.1 Emergency Response Time

Emergency Response Time is the time elapsed from the initial identification of a loss of electrical power (via a customer call or internal notification) to the arrival of FBC personnel on site at the trouble location. This metric provides ongoing information to assess FBC crew sizes and crew locations in response to system trouble. The target measures the percentage of emergency calls responded to within two hours. The measure is calculated as follows:

$$\frac{\text{Number of emergency calls responded to within two hours}}{\text{Total number of emergency calls in the year}}$$

There are many variables affecting the response time, including time of day (i.e., during business hours or after business hours), number and type of events (i.e., widespread outages), available resources, location (i.e., travel times and traffic congestion) and weather conditions.

The 2021 result was 93 percent which met the benchmark. The June 2022 year-to-date performance is 95 percent, which is better than the benchmark.

For comparison, the Company's annual results under the 2014-2019 PBR Plan, the 2020 and 2021 results and the June 2022 year-to-date emergency response time results are provided below. While the results have been relatively consistent, variables such as the location and severity of outage and the number of trouble calls contribute to the observed volatility in the annual performance for this metric.

Table 13-2: Historical Emergency Response Time

Description	2014	2015	2016	2017	2018	2019	2020	2021	June 2022 YTD
Results	91%	92%	97%	93%	94%	92%	92%	93%	95%
Benchmark	93%								
Threshold	90.6%								

13.2.1.2 All Injury Frequency Rate

The All Injury Frequency Rate (AIFR) is an employee safety performance indicator based on injuries per 200,000 hours worked, with injuries defined as lost time injuries (i.e., one or more days missed from work) and medical treatments (i.e., medical treatment was given or prescribed). The annual performance for this metric is calculated as:

$$\frac{\text{Number of Employee Injuries x 200,000 hours}}{\text{Total Exposure Hours Worked}}$$

For the purpose of this SQI, the measurement of performance is based on the three-year rolling average of the annual results.

The 2021 (three-year rolling average) result was 0.67 which was better than the benchmark of 1.64. The 2021 annual AIFR was 0.89 which reflected 3 Medical Treatments and 1 Lost Time Injury.

The June 2022 year-to-date performance (three-year rolling average) result is 0.80 which is better than the benchmark. The June 2022 year-to-date performance (annual) is 1.25 and reflects 2 Medical Treatments and 1 Lost Time Injury.

Strengthening the safety culture continues to be a key driver for FBC, building on the commitment to learn from safety events, identify safety hazards, assess risk and continually improve through the implementation and sustainment of robust safety barriers and controls.

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

Table 13-3: Historical All Injury Frequency Rate Results

Description	2014	2015	2016	2017	2018	2019	2020	2021	June 2022 YTD
Annual Results	3.21	1.54	1.15	1.13	1.56	0.46	0.66	0.89	1.25
Three year rolling average	2.58	2.52	1.97	1.27	1.28	1.06	0.87	0.67	0.80
Benchmark	1.64								
Threshold	2.39								

13.2.2 Responsiveness to Customer Needs Service Quality Indicators

13.2.2.1 First Contact Resolution

First Contact Resolution (FCR) measures the percentage of customers who receive resolution to their issue in one contact with FBC. The Company determines the FCR results using a customer survey, tracking the number of customers who responded that their issue was resolved in the first contact with the Company. The FCR rate is impacted by factors such as the quality and effectiveness of the Company's coaching and training programs and the composition of the different call drivers.

The 2021 result was 82 percent which was better than the benchmark of 78 percent. The June 2022 year-to-date performance is 78 percent which meets the benchmark.

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

Table 13-4: Historical First Contact Resolution Levels

<table>
<tr><th>Description</th><th>2014</th><th>2015</th><th>2016</th><th>2017</th><th>2018</th><th>2019</th><th>2020</th><th>2021</th><th>June 2022 YTD</th></tr>
<tr><td>Annual Results</td><td>73%</td><td>76%</td><td>79%</td><td>80%</td><td>82%</td><td>82%</td><td>82%</td><td>82%</td><td>78%</td></tr>
<tr><td>Benchmark</td><td colspan="9">78%</td></tr>
<tr><td>Threshold</td><td colspan="6">72%</td><td colspan="3">74%</td></tr>
</table>

13.2.2.2 Billing Index

The Billing Index indicator tracks the effectiveness of the Company's billing system by measuring the percentage of customer bills produced meeting performance criteria. The Billing Index is a composite index with three components:

- Billing completion (percent of accounts billed within two days of the billing due date);
- Billing timeliness (percent of invoices delivered to Canada Post within two days of file creation); and
- Billing accuracy (percent of bills without a production issue based on input data).

The objective is to achieve a score of five or less.

The Billing Index is impacted by factors such as the performance of the Company's billing system, weather variability, which can cause a high volume of billing checks and estimation issues, and mail delivery by Canada Post.

The 2021 result was 0.12 which was better than the benchmark of 3.0. No significant billing issues occurred in 2021. The June 2022 year-to-date result is 0.14, which is also better than the benchmark.

The 2021 Billing Index sub-measures calculation is as follows.

Table 13-5: Calculation of 2021 Billing Index

<table>
<tr><th>Billing sub-measure</th><th>Percent Achieved (PA)</th><th colspan="2">Formula</th><th>Result</th></tr>
<tr><td>Billing Accuracy
(Percent of bills without a Production Issue, based on input data);
Target: 99.9%</td><td>100.00%</td><td>If (PA≥99.9%,5000*(1 - PA),100*(1.05-PA))</td><td>=5000*(1-99.99885%)</td><td>0.06</td></tr>
</table>

Billing sub-measure	Percent Achieved (PA)	Formula		Result
Billing Timeliness (Percent of invoices delivered to Canada Post within 2 days of file creation); Target: 95%	100.00%	(100%-PA)*100	=(100%-100%)*100	0.00
Billing Completion (Percent of accounts billed within 2 days of the billing due date); Target: 95%	99.60%	(100%-PA)*100	=(100%-99.69%)*100	0.31
Billing Service Quality Indicator; Target < 3.0		(Accuracy PA+Timeliness PA+Completion PA)/3	=(0.06+0+0.31) /3	0.12

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

Table 13-6: Historical Billing Index Results

Description	2014	2015	2016	2017	2018	2019	2020	2021	June 2022 YTD
Annual Results	2.34	0.39	0.57	0.15	0.29	1.96	0.13	0.12	0.14
Benchmark	5.0						3.0		
Threshold	5.0								

13.2.2.3 Meter Reading Accuracy

This SQI compares the number of meters that are read to those scheduled to be read. Providing accurate and timely meter reads for customers is a key driver for the Company and its customers. The results are calculated as:

$$\frac{\text{Number of scheduled meters read}}{\text{Number of scheduled meters for reading}}$$

The 2021 result was 99 percent, which was better than the benchmark of 98 percent. The June 2022 year-to-date result is 99 percent, which is better than the benchmark.

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

Table 13-7: Historical Meter Reading Accuracy Results

Description	2014	2015	2016	2017	2018	2019	2020	2021	June 2022 YTD
Annual Results	98%	96%	99%	99%	99%	99%	99%	99%	99%
Benchmark	97%						98%		
Threshold	94%						96%		

13.2.2.4 Telephone Service Factor (Non-Emergency)

The Telephone Service Factor (Non-Emergency) measures the percentage of non-emergency calls that are answered in 30 seconds. It is calculated as:

$$\frac{\text{Number of non-emergency calls answered within 30 seconds}}{\text{Number of non-emergency calls received}}$$

The TSF is a measure of how well the Company can balance costs and service levels with the overall objective to maintain a consistent TSF level. This ensures the Company is staying within appropriate cost levels and maintaining adequate service for its customers. The principal factors influencing the TSF results include volume and type of inbound calls received and the resources available to answer those calls. Staffing is matched to the expected call volume based on historical data in order to reach the service level benchmark desired. Other factors that can influence the TSF are billing system related issues and weather patterns that may generate high numbers of billing related queries and the complexity of the calls.

The 2021 result was 70 percent which met the benchmark. The June 2022 year-to-date performance is 63 percent, which is below the threshold.

Several challenging circumstances were faced in the first quarter of 2022 that have contributed to a year-to-date performance in the non-emergency TSF below threshold. These challenges include higher than normal attrition levels being experienced in the contact centre coupled with colder weather that resulted in approximately 27 percent more high bill inquiries in the first quarter than the average of the preceding two years[66]. Each of these is described further below.

Customer Service is experiencing higher than expected levels of attrition, having lost approximately 20 percent of its Customer Service Representatives in 2021.[67] All exits were in the last half of 2021, resulting in fewer and less experienced employees prepared to support call volumes in the first quarter of 2022. To mitigate the impact of this, FBC accelerated the timing of planned new hire classes as well as the size of new hire classes in both 2021 and 2022. While

[66] FBC experienced approximately 1,000 high bill inquiries in Q1 2022 which compares to an average of approximately 790 in the first quarter for the two-year period 2020-2021.

[67] On average, FBC has approximately 20 customer service representatives, and 4 left the organization in the latter part of 2021. This compares to typical annual attrition in the range of 1-2 customer service representatives from the organization.

some success has been achieved, FBC has continued to face challenges recruiting and retaining newly hired contact centre employees in 2022. In addition, it takes on average approximately 12 months for new employees to be proficient and fully trained in order to support all customer inquiries and calls, and as such, average call handle times remain higher than normal while a greater portion of employees gain this experience.

High bill inquiries are expected in the first quarter of the year and planned for with staffing levels and schedules adjusted, new hire classes timed accordingly, and refresher training offered to those employees who may need it. However, the colder temperatures resulted in a volume of high bill inquiries that was greater than anticipated and lasted longer than typical, carrying into April instead of early March. This particular call type is often longer in duration and may also result in follow-up work and investigation. As noted above, there were fewer and less experienced employees prepared to support these types of calls. Thus, the contact centre experienced the compounding impact of fewer employees along with a higher volume of this call type, resulting in overall longer average wait times and a lower percentage of calls answered within thirty seconds or less.

Although the start of 2022 has been challenging, strong performance in first contact resolution, in addition to the promotion of self-service and the call back feature, continues to mitigate the impacts of lower TSF on customer experience and service quality. Further, the recovery of the non-emergency TSF remains a focus, with FBC expecting to recover to threshold levels on a year-to-date basis within the fourth quarter. Finally, the customer service index has remained high throughout 2021 and 2022 to date, indicating that the mitigation measures and focus on first contact resolution continue to result in an overall high quality of service being experienced by customers.

For comparison, the Company's results under the 2014 to 2019 PBR Plan, the 2020 and 2021 results and the June 2022 year-to-date results are provided below. As discussed in the Annual Review for 2015 Rates, the 2014 result was negatively impacted by events such as the first verified meter readings occurring after the IBEW labour disruption ended in December 2013, introduction of the Residential Conservation Rate, and the integration of the City of Kelowna customers.

Table 13-8: Historical TSF Results

Description	2014	2015	2016	2017	2018	2019	2020	2021	June 2022 YTD
Annual Results	48%	71%	70%	70%	72%	70%	70%	70%	63%
Benchmark	70%								
Threshold	68%								

13.2.2.5 Customer Satisfaction Index

The Customer Satisfaction Index (CSI) is an informational indicator that measures overall customer satisfaction with the Company. The index reflects customer feedback about important service touch points including the contact centre, perceived accuracy of meter reading, energy conservation information and field services. The index includes feedback from both residential and commercial customers. The survey is conducted quarterly, and results are presented as a score out of ten.

The CSI survey investigates service quality as well as customer attitudes that are often influenced by factors outside the Company's control. Important examples include storm-related unplanned outages and media coverage.

The annual CSI score for 2021 was 8.4, slightly lower than that obtained in 2020. There were no statistically significant shifts from 2020 to 2021 in the five measures that make up the overall customer satisfaction score. The score for overall satisfaction, which has the highest weighting, decreased from 8.5 in 2020 to 8.4 in 2021. The scores for satisfaction with the energy conservation information and contact centre metrics decreased from 7.6 in 2020 to 7.5 in 2021, and 8.5 in 2020 to 8.4 in 2021, respectively. In addition, the scores for the satisfaction with the accuracy of meter reading and field services metrics remained static at 8.2 and 9.0 in 2021, respectively.

The score for 2022 year-to-date is 8.4, consistent with the annual score recorded for 2021. Of the five measures that make up the overall customer satisfaction score, the results for June 2022 year-to-date were higher in one area, lower in one, and static in three when compared to the annual 2021 scores. The score for the satisfaction with the accuracy of meter reading metric increased from 8.2 to 8.3. The score for the satisfaction with field services metric decreased from 9.0 to 8.8. The scores for the overall satisfaction, energy conservation information, and contact centre metrics were static at 8.4, 7.5 and 8.4, respectively, from results achieved in 2021. None of these changes are statistically significant.

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

Table 13-9: Historical Customer Satisfaction Results

Description	2014	2015	2016	2017	2018	2019	2020	2021	June 2022 YTD
Annual Results	8.1	8.1	8.2	8.2	8.3	8.5	8.5	8.4	8.4
Benchmark	n/a								
Threshold	n/a								

13.2.2.6 Average Speed of Answer

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

The 2021 result was 65 seconds, and the June 2022 year-to-date performance is 98 seconds.

As with previous years, 2021 remained within a reasonable range from a customer experience perspective in that, on average, calls to the contact centre were answered in and around the one-minute mark. With respect to 2022, the year-to-date performance reflects the challenging circumstances in the first quarter of the year described above for the Telephone Service Factor (Non-Emergency). Recovery of the ASA back towards normal performance is expected to continue through the remainder of the year.

For comparison, the Company's results under the 2014 to 2019 PBR Plan, the 2020 and 2021 results and the June 2022 year-to-date results are provided below.[68]

Table 13-10: Average Speed of Answer

Description	2014	2015	2016	2017	2018	2019	2020	2021	June 2022 YTD
Annual Results	226	49	48	49	49	49	71	65	98
Benchmark	n/a								
Threshold	n/a								

13.2.3 Reliability Service Quality Indicators

FBC measures transmission and distribution system reliability according to the Institute of Electrical and Electronics Engineers (IEEE) method of normalizing reliability statistics by excluding "major events". Major events are identified as those that cause outages exceeding a threshold number of customer-hours. Threshold values are calculated by applying a statistical method called the "2.5 Beta" adjustment to historical reliability data. Any single outage event that exceeds the threshold value is excluded from the reliability data. Excluding major events allows them to be studied separately and reveals trends in daily operations that would be hidden or skewed if they were included in the data set. Major event days in the FBC service territory have been caused by mudslides, wind or snow storms, and wildfires.

Reported outages included in these measures are of one minute or longer in duration, which is consistent with the Canadian Electricity Association (CEA) standard for reporting.

[68] ASA in 2014 is higher than other years due to the impact of the six months of job action that took place in Q3 and Q4 of 2013. This job action resulted in a higher number of bill estimates, which led to a higher volume of customer inquiries in 2014 as bill adjustments were made reflecting actual meter reads.

13.2.3.1 System Average Interruption Duration Index (SAIDI) – Normalized

SAIDI is the amount of time the average customer's power is off during the year (i.e., the total amount of time the average customer's clock would lose during a year), after adjusting for the impact of major events as described above, and is calculated as follows:

$$\frac{\text{Total Customer Hours of Interruption}}{\text{Total Number of Customers Served}}$$

Customer Hours of Interruption related to a power outage are calculated by multiplying the number of customers affected by the outage by the duration of the outage.

For the purpose of this SQI, the measurement of performance is based on the annual results.

The 2021 result was 4.27 which was better than the threshold of 4.52 but below the benchmark of 3.22. The June 2022 year-to-date performance is 2.94 which is better than the benchmark. The 2021 results were negatively impacted by multiple external factors which did not meet the threshold for normalization.

The July 2021 results were nearly five times the three-year average and were heavily influenced by several factors that did not meet the threshold for normalization. The largest single event that influenced the July results was the collapse of a construction crane on July 12 in downtown Kelowna. The immediate response to this event was to de-energize a large portion of the surrounding area so that first responders could safely attend to the scene. This incident interrupted power to over 2,600 customers and accounted for over 36,000 customer hours interrupted.

British Columbia also experienced an unprecedented run of extreme heat at the end of June and early July which dried forest fuels earlier than usual and led to one of the worst fire seasons on record. FBC transmission and distribution infrastructure were both impacted by the wildfires with dozens of structures burned to the ground. The largest single outage due to these fires was in the Oliver area and contributed over 21,000 customer hours to July.

In addition to the damaged infrastructure, FBC Operations proactively de-energized portions of the system at the request of BC Wildfire Services to assist in fire suppression efforts. System operations were also impacted by proactively disabling automatic line reclosing in parts of the system to reduce the risk of igniting a fire from trees contacting FBC lines. This led to larger and longer outages in areas of the system where automatic line reclosing was disabled to allow field crews time to assess the cause and confirm that it was safe to re-energize the system. FBC estimates that the combination of fire damage, proactive de-energization, and disabling of automatic line reclosing contributed to over 52,000 customer hours of interruption in July.

There were three Major Event Days that met the threshold for normalization in 2021:

- On January 13, a major windstorm across the Okanagan and Kootenays caused approximately 11,000 customer-interruptions and totalled over 155,000 customer-hours of interruption.
- On April 18, a major windstorm across the West Kootenays qualified for a Major Event Day causing approximately 19,800 customer-interruptions and totalled over 200,800 customer-hours of interruption.
- On November 15, a major storm affected multiple areas in the Okanagan causing approximately 27,474 customer-interruptions and totalled over 218,720 customer-hours of interruption. This event is the highest total customer-hours of interruption FBC has on record (back to 2003).

There have been no Major Event Days in 2022 to-date.

For comparison, the Company's results under the 2014 to 2019 PBR Plan, the 2020 and 2021 results and the June 2022 year-to-date results are provided below. From 2014 to 2019, the benchmark and the threshold reflect the values established under the PBR Plan using three-year rolling average results. Starting in 2020, the benchmark and threshold reflect the values approved by the BCUC for the MRP term.[69]

Table 13-11: Historical SAIDI Results

Description	2014	2015	2016	2017	2018	2019	2020	2021	June 2022 YTD
Annual normalized results	2.32	2.13	2.10	4.05	3.15	2.45	3.17	4.27	2.94
Benchmark	2.22						3.22		
Threshold	2.62						4.52		

13.2.3.2 System Average Interruption Frequency Index (SAIFI) – Normalized

SAIFI is the average number of interruptions per customer served per year (i.e., the number of times the average customer would have to reset their clock during the year), after adjusting for the impact of major events as described above, and is calculated as follows:

$$\frac{\text{Total Number of Customer Interruptions}}{\text{Total Number of Customers Served}}$$

The Number of Customer Interruptions related to a power outage is the number of customers affected by the outage.

[69] The benchmark and threshold for SAIDI were approved in the FBC Annual Review for 2020 and 2021 Rates Decision and Order G-42-21.

For the purpose of this SQI, the measurement of performance is based on the annual results.

The 2021 result was 2.08 and the June 2022 year-to-date performance is 1.58, with both better than the threshold of 2.19. The 2021 results for SAIFI were similarly impacted by the crane collapse, wildfires and storms that were discussed in the SAIDI section. FBC also completed system upgrades on several radial transmission lines where no alternate supply was available which impacted a large number of customers. These outages were scheduled in advance during "off peak" hours to minimize the impact to homes and businesses.

For comparison, the Company's results under the 2014 to 2019 PBR Plan, the 2020 and 2021 results and the June 2022 year-to-date results are provided below. From 2014 to 2019, the benchmark and the threshold reflect the values established under the PBR Plan using three-year rolling average results. Starting in 2020, the benchmark and threshold reflect the values approved by the BCUC for the MRP term.[70]

Table 13-12: Historical SAIFI Results

Description	2014	2015	2016	2017	2018	2019	2020	2021	June 2022 YTD
Annual normalized results	1.64	1.56	1.34	1.78	1.73	1.21	1.64	2.08	1.58
Benchmark	1.64						1.57		
Threshold	2.50						2.19		

13.2.3.3 Generator Forced Outage Rate

Generator Forced Outage Rate (GFOR), an informational indicator, is a measure of the percentage of time in one year that the generating units experienced forced outages compared to the amount of time they could have operated without a forced outage. A forced outage means the removal of a generating unit from service due to the occurrence of a component failure or other event, making it unavailable to produce power due to the unexpected breakdown. The GFOR is defined by the CEA as follows:

$$\frac{\text{Total Forced Outage Time}}{\text{Total Forced Outage Time + Total Operating Time}} \text{ X 100}$$

The 2021 result for GFOR was 0.23 percent. The June 2022 year-to-date performance is 0.85 percent.

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

[70] The benchmark and threshold for SAIFI were approved in the FBC Annual Review for 2020 and 2021 Rates Decision and Order G-42-21.

Table 13-13: Historical Generator Forced Outages

	2014	2015	2016	2017	2018	2019	2020	2021	June 2022 YTD
FBC	1.7%	0.1%	0.8%	0.6%	0.4%	0.1%	1.3%	0.23%	0.85%
CEA	6.3%	6.2%	6.2%	6.2%	6.7%	4.9%	4.60	TBD	

13.2.3.4 Interconnection Utilization

Interconnection Utilization, an informational indicator, is a measurement of the time that an interconnection point was available and providing electrical service to the municipal wholesale customers (City of Penticton, City of Summerland, City of Grand Forks and City of Nelson). There are twelve points of interconnection combined between the four customers.

The Interconnection Utilization metric for the interconnection points listed is calculated as follows:

$$\frac{\text{Total Operating Hours}}{\text{Total Operating Hours + Total Outage Time}}$$

The 2021 result of 99.90 percent and June 2022 year-to-date result of 99.91 percent are generally consistent with prior years' results. The City of Nelson interconnection at Coffee Creek was negatively impacted by two of the three Major Events on the FBC system described previously in the SAIDI section. For comparison, the Company's results under the 2014 to 2019 PBR Plan, the 2020 and 2021 results and the June 2022 year-to-date results are provided below.

Table 13-14: Interconnection Utilization

Description	2014	2015	2016	2017	2018	2019	2020	2021	June 2022 YTD
Interconnection Utilization	99.99%	99.94%	99.99%	99.95%	99.96%	99.98%	99.89%	99.90%	99.91%
Benchmark	n/a								
Threshold	n/a								

13.3 SUMMARY

In summary, FBC's 2021 and June 2022 year-to-date SQI results indicate that the Company's overall performance meets service quality requirements. In 2021, for the eight SQIs with benchmarks, six met or were better than the benchmark with two better than the threshold. For the four SQIs that are informational only, performance in 2021 generally remains at a level consistent with prior years.

Appendix A

LOAD FORECAST SUPPLEMENTARY INFORMATION

Table A1-1: Consumer Price Index (CPI)

Products and product groups[3, 4]	All-items
Reference period	
	2002=100
July 2020	132.6
August 2020	132.4
September 2020	132.5
October 2020	132.9
November 2020	133.3
December 2020	132.8
January 2021	133.6
February 2021	134.1
March 2021	134.9
April 2021	135.2
May 2021	135.1
June 2021	135.8
July 2021	136.7
August 2021	137.0
September 2021	137.2
October 2021	137.9
November 2021	138.1
December 2021	138.0
January 2022	139.4
February 2022	140.4
March 2022	143.0
April 2022	144.2
May 2022	146.1
June 2022	146.5

Table A1-2: Average Weekly Earnings (AWE)

North American Industry Classification System (NAICS)[5]		Industrial aggregate excluding unclassified businesses[6, 7]
Geography	Reference period	
		Dollars
British Columbia (map)	July 2020	1,093.72[B]
	August 2020	1,089.35[B]
	September 2020	1,093.75[B]
	October 2020	1,095.32[B]
	November 2020	1,102.95[B]
	December 2020	1,110.36[B]
	January 2021	1,113.22[B]
	February 2021	1,114.21[B]
	March 2021	1,107.66[B]
	April 2021	1,112.04[B]
	May 2021	1,118.59[B]
	June 2021	1,115.40[B]
	July 2021	1,140.52[B]
	August 2021	1,142.40[B]
	September 2021	1,139.64[B]
	October 2021	1,136.85[B]
	November 2021	1,132.25[B]
	December 2021	1,134.84[B]
	January 2022	1,157.19[B]
	February 2022	1,153.88[B]
	March 2022	1,161.22[B]
	April 2022	1,176.54[B]

Table A1-3: British Columbia Two-Year Outlook 2022

Key Economic Indicators: British Columbia, 2021-23
(forecast completed February 18, 2022)

	2021Q1	2021Q2	2021Q3	2021Q4	2022Q1	2022Q2	2022Q3	2022Q4	2023Q1	2023Q2	2023Q3	2023Q4	2021	2022	2023
GDP at market prices ($ millions)	328,577	329,385	334,551	339,673	343,417	348,045	350,673	353,935	356,447	359,588	361,919	364,178	333,047	349,017	360,533
	1.5	*0.2*	*1.6*	*1.5*	*1.1*	*1.3*	*0.8*	*0.9*	*0.7*	*0.9*	*0.6*	*0.6*	*7.7*	*4.8*	*3.3*
GDP at market prices (2012 $ millions)	278,978	277,225	279,564	281,275	283,897	288,030	290,551	293,351	295,260	297,122	298,139	299,057	279,261	288,957	297,395
	0.7	*-0.6*	*0.8*	*0.6*	*0.9*	*1.5*	*0.9*	*1.0*	*0.7*	*0.6*	*0.3*	*0.3*	*4.7*	*3.5*	*2.9*
GDP at basic prices (2012 $ millions)	258,225	257,607	258,824	259,977	262,651	266,678	269,275	272,107	273,828	275,566	276,523	277,352	258,659	267,678	275,817
	0.5	*-0.2*	*0.5*	*0.4*	*1.0*	*1.5*	*1.0*	*1.1*	*0.6*	*0.6*	*0.3*	*0.3*	*4.8*	*3.5*	*3.0*
Consumer price index (2002 = 1.000)	1.342	1.354	1.370	1.380	1.401	1.412	1.424	1.433	1.441	1.449	1.456	1.463	1.361	1.418	1.452
	0.9	*0.9*	*1.2*	*0.7*	*1.6*	*0.7*	*0.9*	*0.6*	*0.6*	*0.6*	*0.5*	*0.5*	*2.8*	*4.1*	*2.5*
Implicit price deflator—GDP at market prices	1.178	1.188	1.197	1.208	1.210	1.208	1.207	1.207	1.207	1.210	1.214	1.218	1.193	1.208	1.212
(2012 = 1.000)	*0.8*	*0.9*	*0.7*	*0.9*	*0.2*	*-0.1*	*-0.1*	*0.0*	*0.1*	*0.2*	*0.3*	*0.3*	*2.9*	*1.3*	*0.4*
Wages and salary per employee ($ 000s)	54.6	55.5	56.8	57.2	57.3	57.2	57.3	57.6	57.9	58.1	58.5	58.8	56.0	57.3	58.3
	1.2	*1.7*	*2.2*	*0.8*	*0.1*	*-0.1*	*0.2*	*0.5*	*0.5*	*0.5*	*0.5*	*0.6*	*4.1*	*2.3*	*1.7*
Primary household income ($ millions)	232,341	235,256	242,425	248,720	249,890	251,061	252,734	254,925	256,921	259,217	261,239	263,382	239,685	252,153	260,190
	1.9	*1.3*	*3.0*	*2.6*	*0.5*	*0.5*	*0.7*	*0.9*	*0.8*	*0.9*	*0.8*	*0.8*	*9.1*	*5.2*	*3.2*
Household disposable income ($ millions)	210,080	211,206	215,909	216,925	215,827	216,553	218,063	219,981	220,758	222,983	224,889	226,886	213,530	217,606	223,879
	1.2	*0.5*	*2.2*	*0.5*	*-0.5*	*0.3*	*0.7*	*0.9*	*0.4*	*1.0*	*0.9*	*0.9*	*2.4*	*1.9*	*2.9*
Household net savings rate (per cent)	7.3	7.8	4.5	4.2	3.3	2.9	3.1	3.3	2.8	2.8	2.6	2.5	6.0	3.1	2.7
Population (000s)	5,164	5,186	5,215	5,250	5,259	5,268	5,276	5,284	5,296	5,307	5,320	5,332	5,204	5,272	5,314
	0.1	*0.4*	*0.6*	*0.7*	*0.2*	*0.2*	*0.2*	*0.2*	*0.2*	*0.2*	*0.2*	*0.2*	*1.0*	*1.3*	*0.8*
Employment (000s)	2,629	2,631	2,669	2,696	2,694	2,685	2,690	2,698	2,704	2,714	2,718	2,723	2,656	2,692	2,715
	1.6	*0.1*	*1.4*	*1.0*	*-0.1*	*-0.3*	*0.2*	*0.3*	*0.2*	*0.4*	*0.2*	*0.2*	*6.6*	*1.3*	*0.9*
Labour force (000s)	2,836	2,825	2,846	2,852	2,850	2,858	2,866	2,872	2,877	2,882	2,887	2,892	2,840	2,862	2,884
	1.4	*-0.4*	*0.8*	*0.2*	*-0.1*	*0.3*	*0.3*	*0.2*	*0.2*	*0.2*	*0.2*	*0.2*	*3.7*	*0.8*	*0.8*
Labour force participation rate (per cent)	65.6	65.2	65.3	65.0	64.8	64.8	64.9	64.8	64.8	64.7	64.7	64.7	65.3	64.8	64.7
Unemployment rate (per cent)	7.3	6.9	6.2	5.5	5.5	6.1	6.1	6.0	6.0	5.8	5.8	5.8	6.5	5.9	5.9
Retail sales ($ millions)	98,731	99,233	98,267	96,315	95,494	95,987	96,084	97,049	97,750	98,331	99,140	99,888	98,136	96,153	98,777
	3.7	*0.5*	*-1.0*	*-2.0*	*-0.9*	*0.5*	*0.1*	*1.0*	*0.7*	*0.6*	*0.8*	*0.8*	*12.1*	*-2.0*	*2.7*
Housing starts (units, 000s)	52,902	49,795	45,224	42,507	40,000	39,536	36,171	35,850	35,530	35,209	34,889	34,568	47,607	37,889	35,049
	30.7	*-5.9*	*-9.2*	*-6.0*	*-5.9*	*-1.2*	*-8.5*	*-0.9*	*-0.9*	*-0.9*	*-0.9*	*-0.9*	*26.2*	*-20.4*	*-7.5*
Net interprovincial migration (000s)	16.7	17.4	17.7	31.4	15.2	10.4	7.1	5.2	7.9	7.5	7.1	6.8	20.8	9.5	7.3
Net international migration (000s)	52.6	52.2	19.8	18.8	20.9	22.2	24.4	27.3	35.2	38.2	40.3	41.6	35.8	23.7	38.8

Shaded area represents forecast data, *italics indicate percentage change*.
All data are in millions of dollars, seasonally adjusted at annual rates, unless otherwise specified.
For each indicator, the first line is the level and the second line is the percentage change from the previous period.
Sources: The Conference Board of Canada; Statistics Canada; CMHC Housing Time Series Database.

Note: Table above is from the Conference Board of Canada, British Columbia Two-Year Outlook, March 30, 2022.

Appendix A2

Load Forecast Tables

Table of Contents

1. INTRODUCTION

This appendix provides the historical and forecast load data used in Section 3 of the Application. The tables in Section 2 show 10 years of historical data and the before-savings and after-savings forecast for 2022S and 2023F. Section 3 shows the customer forecast data while Section 4 presents the residential UPC data. The tables in Section 5 show the load forecast. Table 5.3 shows the DSM that was deducted from the before-savings forecast to provide the after-savings forecast for 2023F. Tables 6.1 and 6.2 show the variance of the customer accounts and forecasts from 2016 to 2021 when compared to the actuals. Table 6.3 shows the annual growth of customer and load that FBC has experienced since 2016. Tables 6.4 and 6.5 show the Residential UPC and Winter peak variances from forecast from 2019 to 2021. Finally, Table 6.6 shows the system load factor from the years 2016 to 2021 and the forecast load factor for 2022S and 2023F.

The tables in this appendix reflect the acquisition by FBC of the assets and customers of the City of Kelowna electric utility effective March 31, 2013. The acquisition resulted in an increase in direct customers to FBC and a re-distribution of load from wholesale to other rate classes in 2013 and 2014.

2. MONTHLY LOAD FORECAST

Forecast loads are shown:

- before-savings – the load before DSM and includes Normalized loads to December 2021.
- after-savings – the load after DSM and includes Normalized loads to December 2021.

2.1 GROSS LOAD (MWH)

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Historical Normalized Actuals													
2012	354,376	315,497	304,411	253,594	237,899	233,308	272,143	275,122	236,457	262,538	313,757	362,555	3,421,657
2013	372,939	327,919	300,296	255,888	249,987	235,093	291,183	274,786	241,239	266,317	303,923	380,406	3,499,975
2014	363,947	304,540	303,886	253,159	241,999	242,933	284,643	269,971	229,496	256,060	300,844	381,603	3,433,082
2015	365,681	319,636	299,774	250,449	249,965	245,501	286,189	276,449	233,713	256,762	300,047	361,987	3,446,152
2016	363,248	311,848	292,351	268,698	248,319	242,786	289,259	280,588	234,770	266,284	332,085	350,062	3,480,297
2017	361,265	295,737	307,586	263,795	249,642	251,284	299,544	288,941	246,701	265,695	326,103	355,527	3,511,820
2018	375,664	309,496	306,028	264,140	273,621	256,591	308,227	297,251	231,377	262,531	302,555	376,342	3,563,824
2019	372,224	288,274	315,330	261,324	268,354	257,653	298,081	293,227	260,757	291,917	313,593	371,724	3,592,459
2020	382,181	332,609	303,499	246,152	239,601	248,354	309,611	303,017	260,523	282,780	333,207	374,349	3,615,884
2021	378,637	338,019	319,817	276,739	257,155	259,320	306,943	294,834	257,175	285,567	334,065	368,654	3,676,926
Before-Savings													
2022S	393,190	335,138	331,640	280,553	267,153	271,396	321,383	310,626	274,609	295,951	337,171	383,507	3,802,317
2023F	396,339	337,950	334,411	282,950	269,568	273,870	324,232	313,473	277,139	298,596	340,037	386,627	3,835,192
After-Savings													
2022S	390,444	332,413	328,981	277,979	264,668	268,968	318,980	308,194	272,123	293,371	334,512	380,802	3,771,436
2023F	390,866	332,540	329,150	277,874	264,687	269,119	319,544	308,746	272,326	293,617	334,927	381,448	3,774,844

2.2 NET LOAD (MWH)

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Historical Normalized Actuals													
2012	321,730	286,779	279,732	235,517	222,312	217,842	252,099	254,667	220,598	243,793	286,926	328,517	3,150,511
2013	337,728	297,641	276,667	237,842	233,199	219,696	268,867	254,751	225,078	247,419	279,078	343,897	3,221,865
2014	330,080	277,952	279,588	235,366	226,108	226,460	263,122	250,470	214,691	238,394	276,319	344,675	3,163,224
2015	331,359	290,442	275,968	232,925	232,996	228,619	264,346	255,968	218,317	238,919	275,526	328,297	3,173,683
2016	329,697	284,239	269,871	248,933	231,743	226,433	267,219	259,761	219,415	247,393	302,834	318,710	3,206,245
2017	327,600	270,353	282,545	244,429	232,661	233,596	275,700	266,639	229,612	246,617	297,428	322,834	3,230,015
2018	340,082	282,343	281,627	245,049	253,803	238,507	283,500	274,131	216,479	244,187	277,988	340,643	3,278,339
2019	337,457	264,607	289,706	242,736	249,368	239,550	274,993	270,833	242,244	269,708	287,514	337,042	3,305,758
2020	346,177	302,227	279,953	229,763	224,464	231,690	285,178	279,540	242,297	262,136	304,435	339,684	3,327,545
2021	345,746	308,157	294,337	255,440	238,210	239,708	282,793	272,125	237,826	263,832	306,218	337,045	3,381,436
Before-Savings													
2022S	356,872	305,644	305,096	260,549	249,414	252,595	296,341	287,118	255,390	274,469	309,030	348,812	3,501,329
2023F	359,759	308,223	307,659	262,783	251,668	254,896	298,970	289,745	257,738	276,922	311,668	351,673	3,531,705
After-Savings													
2022S	354,335	303,127	302,639	258,171	247,118	250,352	294,120	284,871	253,093	272,084	306,573	346,312	3,472,795
2023F	354,702	303,224	302,798	258,093	247,157	250,505	294,638	285,378	253,291	272,322	306,947	346,888	3,475,944

2.3 RESIDENTIAL (MWH)

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Historical Normalized Actuals													
2012	134,187	105,958	112,447	88,508	81,808	82,946	97,309	91,118	73,417	89,175	117,807	154,029	1,228,709
2013	145,263	115,730	114,637	112,100	90,869	85,319	120,666	100,397	73,591	97,867	124,661	171,845	1,352,945
2014	147,191	120,724	129,852	84,813	80,792	77,673	105,443	102,753	73,260	95,314	119,531	159,107	1,296,452
2015	150,230	122,084	120,304	91,957	76,652	84,441	110,145	97,235	73,384	99,324	125,839	146,556	1,298,150
2016	147,429	121,286	113,080	99,963	91,648	85,702	101,212	96,335	77,431	96,417	129,741	135,335	1,295,580
2017	145,663	112,986	118,857	102,166	94,155	86,021	106,392	95,082	82,012	96,745	129,829	150,584	1,320,492
2018	154,740	121,081	119,975	97,261	100,276	86,146	109,349	100,153	70,342	89,942	112,695	150,638	1,312,598
2019	147,714	98,552	116,377	90,039	91,727	81,739	100,157	94,674	87,612	98,618	112,609	146,320	1,266,137
2020	150,634	126,164	117,219	93,211	89,289	91,128	111,958	103,644	86,533	100,913	126,958	149,181	1,346,832
2021	151,923	132,351	117,698	95,324	88,510	89,335	114,977	114,763	58,293	98,449	123,064	145,645	1,330,331
Before-Savings													
2022S	149,350	118,436	116,520	92,400	89,399	86,970	106,340	99,003	84,580	98,837	120,281	146,323	1,308,438
2023F	149,488	118,545	116,628	92,485	89,481	87,050	106,438	99,094	84,658	98,928	120,392	146,458	1,309,643
After-Savings													
2022S	148,891	117,988	116,106	92,031	89,075	86,679	106,062	98,712	84,257	98,468	119,867	145,876	1,304,011
2023F	148,568	117,647	115,796	91,743	88,830	86,464	105,876	98,507	84,003	98,180	119,551	145,549	1,300,714

2.4 COMMERCIAL (MWH)

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Normliazed Actuals													
2012	64,101	63,452	59,292	53,673	54,431	49,553	55,968	62,008	56,661	52,596	57,398	51,423	680,553
2013	65,750	60,623	56,214	57,036	69,494	61,665	67,834	73,941	72,704	67,185	66,229	69,533	788,208
2014	80,917	72,012	69,241	70,566	73,379	72,714	75,404	74,677	66,669	60,028	65,444	82,026	863,078
2015	81,041	74,201	68,933	64,674	71,533	72,581	71,204	71,712	68,657	62,650	66,828	79,463	853,478
2016	82,612	75,915	71,711	71,671	69,996	66,744	76,904	77,981	68,748	70,333	81,859	90,367	904,841
2017	85,017	74,211	77,360	69,012	70,513	72,529	81,817	81,344	72,335	73,835	78,070	78,916	914,960
2018	87,447	74,470	78,245	70,839	73,624	72,175	81,335	82,374	71,079	73,218	76,070	85,202	926,078
2019	86,215	75,958	80,152	69,784	72,863	72,688	80,601	81,248	73,015	75,305	77,661	86,230	931,722
2020	88,558	80,807	76,026	63,736	65,028	67,948	79,777	81,941	74,160	76,659	80,994	86,252	921,886
2021	88,860	79,418	80,125	72,153	73,680	74,618	79,949	69,139	96,038	76,264	81,554	87,844	959,641
Before-Savings													
2022S	91,281	81,781	81,825	71,225	73,270	74,552	85,487	85,537	76,428	79,040	83,178	90,148	973,752
2023F	93,329	83,616	83,662	72,825	74,916	76,228	87,409	87,461	78,147	80,815	85,045	92,172	995,624
After-Savings													
2022S	90,298	80,801	80,856	70,272	72,331	73,624	84,563	84,609	75,489	78,086	82,209	89,168	962,307
2023F	91,368	81,668	81,740	70,935	73,057	74,392	85,584	85,632	76,304	78,952	83,163	90,278	973,073

Note: The commercial class is normalized from 2014 to 2020 since weather correlation appeared in the data at that time, all numbers before 2014 are actuals.

2.5 WHOLESALE (MWH)

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Historical Normalized Actuals													
2012	96,036	85,333	81,119	66,560	58,307	59,084	69,719	70,177	60,311	72,646	82,146	97,532	898,971
2013	103,661	88,423	80,309	42,225	37,653	34,630	44,414	42,889	38,531	44,175	51,637	66,656	675,204
2014	64,115	50,647	51,900	41,917	35,985	34,959	43,081	42,482	38,972	41,116	53,678	68,270	567,123
2015	65,841	58,564	51,584	41,088	41,147	36,029	45,222	43,897	37,441	42,668	51,945	65,059	580,485
2016	64,687	55,006	49,218	43,812	36,262	35,106	48,506	43,480	37,096	43,408	59,685	58,167	574,434
2017	61,637	51,026	51,573	40,753	35,692	35,965	47,044	49,971	39,411	42,639	56,771	61,621	574,101
2018	65,721	51,837	50,293	43,769	41,467	33,766	45,024	47,275	36,478	47,576	54,103	67,407	584,715
2019	61,944	48,097	50,091	42,390	39,513	36,881	47,393	44,924	37,351	44,052	49,804	63,534	565,972
2020	64,233	56,219	48,768	39,333	33,066	35,088	44,642	44,913	39,548	45,075	55,660	62,943	569,488
2021	63,822	56,888	51,016	42,771	35,118	32,874	43,009	44,315	36,150	44,201	57,331	58,330	565,827
Before-Savings													
2022S	64,807	54,940	51,149	42,542	37,128	36,250	46,538	46,193	38,848	45,583	55,516	63,082	582,577
2023F	65,192	55,265	51,454	42,796	37,362	36,483	46,834	46,485	39,088	45,858	55,846	63,460	586,125
After-Savings													
2022S	64,456	54,593	50,813	42,220	36,821	35,954	46,246	45,897	38,540	45,261	55,180	62,735	578,717
2023F	64,492	54,573	50,785	42,156	36,752	35,895	46,253	45,897	38,481	45,223	55,184	62,779	578,470

2.6 *INDUSTRIAL (MWH)*

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Historical Actuals													
2012	24,973	30,356	25,036	25,285	23,707	21,432	22,094	22,115	22,666	22,863	26,328	23,917	290,771
2013	19,966	30,774	23,744	24,489	31,517	33,006	29,815	29,726	31,598	32,105	32,500	33,084	352,325
2014	35,943	32,746	26,411	34,532	30,112	32,770	29,719	22,362	30,032	38,104	35,138	33,043	380,912
2015	32,138	33,574	32,797	31,186	36,574	26,261	27,971	34,078	32,395	29,853	27,852	34,997	379,676
2016	32,901	29,835	33,180	28,953	27,588	31,785	31,632	32,805	30,120	33,350	28,559	32,687	373,396
2017	33,109	30,227	32,593	30,117	27,928	31,621	29,477	29,518	28,665	28,831	30,770	29,734	362,590
2018	30,089	33,113	31,062	30,455	32,718	39,030	38,264	35,307	33,245	30,034	33,591	35,836	402,744
2019	40,014	40,563	41,563	37,886	39,198	40,876	38,967	41,784	39,929	49,045	45,695	39,390	494,911
2020	41,115	37,485	36,324	30,596	32,632	32,899	39,933	39,350	35,590	36,265	39,250	39,794	441,233
2021	39,629	38,120	44,021	42,125	34,088	34,473	33,956	35,536	42,333	41,558	42,792	43,684	472,315
Before-Savings													
2022S	49,922	49,087	54,123	51,558	43,838	48,000	48,703	47,580	50,264	47,957	48,513	47,775	587,321
2023F	50,238	49,396	54,438	51,852	44,129	48,312	49,017	47,901	50,575	48,269	48,844	48,099	591,072
After-Savings													
2022S	49,195	48,360	53,402	50,840	43,130	47,296	48,007	46,881	49,566	47,241	47,795	47,067	578,779
2023F	48,797	47,968	53,031	50,464	42,773	46,975	47,708	46,597	49,287	46,956	47,539	46,827	574,920

2.7 *LIGHTING (MWH)*

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Historical Actuals													
2012	1,618	1,031	1,232	601	1,666	601	1,661	1,137	611	1,127	1,137	1,064	13,487
2013	1,532	863	1,003	1,112	1,186	1,101	1,151	1,069	1,135	1,132	1,080	1,114	13,479
2014	1,282	1,273	1,251	1,310	1,327	1,331	1,329	1,374	1,257	1,255	1,260	1,382	15,633
2015	1,319	1,339	1,261	1,321	1,372	1,382	1,299	1,347	1,248	1,349	1,295	1,359	15,891
2016	1,245	1,363	1,341	1,362	1,361	1,347	1,404	1,381	1,294	1,191	1,251	1,388	15,930
2017	1,394	1,233	1,390	1,286	1,339	1,301	1,383	1,382	1,289	1,335	1,270	1,330	15,932
2018	1,385	1,178	1,291	1,307	1,198	1,118	1,068	998	988	952	848	894	13,225
2019	907	808	873	943	965	937	917	949	955	947	909	928	11,039
2020	929	892	955	900	914	874	932	949	878	907	863	852	10,846
2021	838	774	836	795	858	787	802	805	770	851	776	791	9,682
Before-Savings													
2022S	820	759	817	809	839	797	813	829	798	830	782	789	9,682
2023F	820	759	817	809	839	797	813	829	798	830	782	789	9,682
After-Savings													
2022S	804	743	802	795	826	784	801	816	785	816	766	773	9,511
2023F	788	728	788	783	816	775	792	808	777	807	758	765	9,385

2.8 *IRRIGATION (MWH)*

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Historical Normalized Actuals													
2012	816	650	606	890	2,393	4,226	5,348	8,113	6,933	5,385	2,109	552	38,019
2013	1,557	1,228	759	880	2,480	3,974	4,986	6,729	7,519	4,955	2,970	1,666	39,704
2014	633	549	932	2,227	4,512	7,013	8,146	6,822	4,501	2,578	1,267	847	40,025
2015	790	680	1,089	2,698	5,718	7,925	8,506	7,700	5,192	3,074	1,768	863	46,003
2016	822	834	1,341	3,172	4,888	5,748	7,561	7,778	4,724	2,694	1,739	765	42,065
2017	780	670	772	1,096	3,035	6,160	9,587	9,343	5,898	3,231	719	649	41,939
2018	700	662	761	1,419	4,521	6,271	8,461	8,024	4,348	2,465	681	666	38,979
2019	663	630	650	1,694	5,103	6,429	6,958	7,254	3,381	1,741	835	640	35,978
2020	708	660	662	1,987	3,535	3,752	7,936	8,743	5,588	2,317	709	662	37,260
2021	674	606	641	2,272	5,957	7,621	10,099	7,568	4,242	2,508	701	751	43,640
Before-Savings													
2022S	692	642	661	2,015	4,940	6,025	8,459	7,976	4,472	2,222	760	695	39,559
2023F	692	642	661	2,015	4,940	6,025	8,459	7,976	4,472	2,222	760	695	39,559
After-Savings													
2022S	691	641	660	2,013	4,935	6,015	8,442	7,956	4,456	2,213	756	693	39,471
2023F	690	640	659	2,011	4,930	6,004	8,425	7,936	4,440	2,204	752	691	39,382

2.9 *SYSTEM PEAK (MW)*

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Winter	Summer
Historical Normalized Actuals														
2012	702	675	560	523	493	418	589	540	453	501	624	723	723	589
2013	720	631	549	493	515	442	600	565	523	502	598	698	698	600
2014	651	580	562	469	403	482	620	605	412	467	572	645	693	620
2015	693	679	568	488	501	523	611	587	437	514	669	631	685	611
2016	685	683	569	540	490	582	587	593	443	480	613	724	755	593
2017	755	673	595	510	597	505	600	605	561	515	594	648	714	605
2018	714	648	583	516	602	533	630	631	429	459	609	659	682	631
2019	678	682	651	514	568	502	626	639	538	562	622	701	732	639
2020	732	680	609	500	482	515	666	665	551	549	631	667	731	666
2021	711	731	555	495	488	653	597	635	486	509	628	675	685	653
Before-Savings														
2022S	725	687	608	516	488	588	658	661	502	537	645	722	783	679
2023F	732	693	614	521	493	593	664	667	506	542	650	728	788	685
After-Savings														
2022S	725	686	608	515	488	587	657	660	501	536	644	721	782	678
2023F	730	692	612	519	491	592	662	665	505	540	649	727	786	684

Note: The peaks shown in the table above are seasonal peaks. The seasonal winter peak is based on November and December of the current year and January and February of the following year. The seasonal summer peak is based on June, July and August of the current year and includes the June 2021 Heat Dome.

3. CUSTOMER FORECAST

3.1 CUSTOMERS

Customer Count	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022S	2023F
Residential	99,228	111,862	113,431	114,166	115,772	117,748	120,291	122,465	124,966	126,678	129,336	132,015
Commercial	11,811	13,662	14,363	14,976	15,073	15,398	15,678	15,956	16,165	16,594	16,995	17,496
Wholesale	7	6	6	6	6	6	6	6	6	6	6	6
Industrial	39	47	49	50	50	50	52	51	43	42	42	42
Lighting	1,739	1,644	1,620	1,590	1,559	1,511	1,482	1,467	1,443	1,407	1,379	1,349
Irrigation	1,091	1,097	1,103	1,095	1,090	1,080	1,078	1,082	1,091	1,103	1,103	1,103
Total Direct	113,915	128,318	130,572	131,883	133,550	135,793	138,587	141,027	143,714	145,830	148,861	152,011

3.2 CUSTOMER ADDITIONS

Customer Additions	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022S	2023F
Residential	912	12,634	1,569	735	1,606	1,976	2,543	2,174	2,501	1,712	2,658	2,679
Commercial	106	1,851	701	613	97	325	280	278	209	429	401	501
Wholesale	-	(1)	-	-	-	-	-	-	-	-	-	-
Industrial	1	8	2	1	-	-	2	(1)	(8)	(1)	-	-
Lighting	(27)	(95)	(24)	(30)	(31)	(48)	(29)	(15)	(24)	(36)	(28)	(30)
Irrigation	17	6	6	(8)	(5)	(10)	(2)	4	9	12	-	-
Total Direct	1,009	14,403	2,254	1,311	1,667	2,243	2,794	2,440	2,687	2,116	3,031	3,150

4. NORMALIZED AFTER-SAVINGS USE PER CUSTOMER (UPC)

MWh/Customer	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022S	2023F
Residential	12.41	12.48	11.51	11.41	11.27	11.31	11.03	10.43	10.89	10.58	10.19	9.95

5. LOAD

5.1 NORMALIZED AFTER-SAVINGS LOAD

Energy (GWh)	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022S	2023F
Residential	1,229	1,353	1,296	1,298	1,296	1,320	1,313	1,266	1,347	1,330	1,304	1,301
Commercial	681	788	863	853	905	915	926	932	922	960	962	973
Wholesale	899	675	567	580	574	574	585	566	569	566	579	578
Industrial	291	352	381	380	373	363	403	495	441	472	579	575
Lighting	13	13	16	16	16	16	13	11	11	10	10	9
Irrigation	38	40	40	46	42	42	39	36	37	44	39	39
Net	3,151	3,222	3,163	3,174	3,206	3,230	3,278	3,306	3,328	3,381	3,473	3,476
Losses & Company Use	271	278	270	272	274	282	285	287	288	295	299	299
Gross	3,422	3,500	3,433	3,446	3,480	3,512	3,564	3,592	3,616	3,677	3,771	3,775
System Peak (MW)												
Winter Peak	723	698	693	685	755	714	682	732	731	685	782	786
Summer Peak	589	600	620	611	593	605	631	639	666	653	678	684

5.2 NORMALIZED AFTER-SAVINGS WHOLESALE LOAD

Wholesale (GWh)	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2021S	2022F
BCH Lardeau	6	6	6	6	6	8	8	7	6	6	7	7
BCH Kingsgate	5	5	5	5	5	5	5	5	5	4	5	5
City of Grand Forks	41	41	39	41	41	39	46	37	38	36	36	36
City of Nelson	80	83	81	83	80	86	88	84	82	86	79	78
City of Penticton	341	348	342	348	345	338	340	338	340	337	351	351
District of Summerland	95	98	94	97	98	98	99	95	99	97	101	101
City of Kelowna	332	94	-	-	-	-	-	-	-	-	-	-
Total	899	675	567	580	574	574	585	566	569	566	579	578

5.3 DSM (GWH) WITHOUT LOSSES

Energy (GWh)	2017	2018	2019	2020	2021	2022S	2023F
Demand Side Management	(28)	(31)	(26)	(26)	(30)	(28)	(56)

6. VARIANCES TO FORECAST

6.1 CUSTOMER COUNT VARIANCE

Customer Count	2016	2017	2018	2019	2020	2021
Actual						
Residential	115,772	117,748	120,291	122,465	124,966	126,678
Commercial	15,073	15,398	15,678	15,956	16,165	16,594
Wholesale	6	6	6	6	6	6
Industrial	50	50	52	51	43	42
Lighting	1,559	1,511	1,482	1,467	1,443	1,407
Irrigation	1,090	1,080	1,078	1,082	1,091	1,103
Total	133,550	135,793	138,587	141,027	143,714	145,830
Forecast						
Residential	115,758	116,031	117,774	120,405	124,076	124,603
Commercial	15,042	15,813	16,122	16,405	16,220	16,579
Wholesale	6	6	6	6	6	6
Industrial	49	50	50	51	57	59
Lighting	1,620	1,590	1,559	1,511	1,425	1,393
Irrigation	1,103	1,095	1,090	1,080	1,082	1,082
Total	133,578	134,585	136,602	139,459	142,865	143,721
Variance (customers)						
Residential	14	1,717	2,517	2,060	890	2,075
Commercial	31	(415)	(444)	(449)	(55)	15
Wholesale	0	0	0	0	0	0
Industrial	1	0	2	0	(14)	(17)
Lighting	(61)	(79)	(77)	(44)	18	14
Irrigation	(13)	(15)	(12)	2	9	21
Total	(28)	1,208	1,986	1,569	849	2,109
Variance (%)						
Residential	0.0%	1.5%	2.1%	1.7%	0.7%	1.6%
Commercial	0.2%	-2.7%	-2.8%	-2.8%	-0.3%	0.1%
Wholesale	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Industrial	2.0%	0.0%	3.8%	0.0%	-32.6%	-40.5%
Lighting	-3.9%	-5.2%	-5.2%	-3.0%	1.3%	1.0%
Irrigation	-1.2%	-1.4%	-1.1%	0.2%	0.8%	1.9%
Total	0.0%	0.9%	1.4%	1.1%	0.6%	1.4%

1 ## 6.2 LOAD VARIANCE, NORMALIZED ACTUAL TO FORECAST

Energy (GWh)	2016	2017	2018	2019	2020	2021
Normalized						
Residential	1,296	1,320	1,313	1,266	1,347	1,330
Commercial	905	915	926	932	922	960
Wholesale	574	574	585	566	569	566
Industrial	373	363	403	495	441	472
Lighting	16	16	13	11	11	10
Irrigation	42	42	39	36	37	44
Net	3,206	3,230	3,278	3,306	3,328	3,381
Gross	3,480	3,512	3,564	3,592	3,616	3,677
Forecast						
Residential	1,367	1,353	1,280	1,349	1,326	1,255
Commercial	871	879	912	935	902	952
Wholesale	579	587	586	594	567	584
Industrial	393	407	379	385	453	537
Lighting	13	14	15	13	11	10
Irrigation	39	40	41	42	35	36
Net	3,262	3,282	3,213	3,319	3,294	3,374
Gross	3,540	3,559	3,485	3,602	3,602	3,664
Variance (GWh)						
Residential	(71)	(33)	33	(83)	21	75
Commercial	34	36	14	(3)	20	7
Wholesale	(5)	(13)	(1)	(28)	2	(18)
Industrial	(20)	(44)	24	110	(12)	(64)
Lighting	3	1	(2)	(2)	0	(0)
Irrigation	3	2	(2)	(6)	2	8
Net	(56)	(52)	65	(13)	34	8
Gross	(59)	(47)	79	(10)	14	13
Variance (%)						
Residential	-5.5%	-2.5%	2.5%	-6.6%	1.6%	5.6%
Commercial	3.8%	3.9%	1.5%	-0.4%	2.2%	0.8%
Wholesale	-0.8%	-2.3%	-0.2%	-5.0%	0.4%	-3.1%
Industrial	-5.3%	-12.3%	5.9%	22.2%	-2.7%	-13.6%
Lighting	16.3%	9.4%	-13.4%	-17.8%	2.1%	-2.8%
Irrigation	7.7%	3.9%	-5.2%	-16.7%	5.3%	17.9%
Net	-1.7%	-1.6%	2.0%	-0.4%	1.0%	0.2%
Gross	-1.7%	-1.3%	2.2%	-0.3%	0.4%	0.4%

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6.3 NORMALIZED AFTER-SAVINGS ANNUAL PERCENT GROWTH

Energy (GWh)	2016	2017	2018	2019	2020	2021	2022S	2023F
Residential	1,296	1,320	1,313	1,266	1,347	1,330	1,304	1,301
Commercial	905	915	926	932	922	960	962	973
Wholesale	574	574	585	566	569	566	579	578
Industrial	373	363	403	495	441	472	579	575
Lighting	16	16	13	11	11	10	10	9
Irrigation	42	42	39	36	37	44	39	39
Net	3,206	3,230	3,278	3,306	3,328	3,381	3,473	3,476
Losses & Company Use	274	282	285	287	288	295	299	299
Gross	3,480	3,512	3,564	3,592	3,616	3,677	3,771	3,775
System Peak								
Winter Peak (MW)	755	714	682	732	731	685	782	786
Summer Peak (MW)	593	605	631	639	666	653	678	684

Growth Year over Year	2016	2017	2018	2019	2020	2021	2022S	2023F
Residential	0%	2%	-1%	-4%	6%	-1%	-2%	0%
Commercial	6%	1%	1%	1%	-1%	4%	0%	1%
Wholesale	-1%	0%	2%	-3%	1%	-1%	2%	0%
Industrial	-2%	-3%	11%	23%	-11%	7%	23%	-1%
Lighting	0%	0%	-17%	-17%	-2%	-11%	-2%	-1%
Irrigation	-9%	0%	-7%	-8%	4%	17%	-10%	0%
Net	1%	1%	1%	1%	1%	2%	3%	0%
Losses & Company Use	1%	3%	1%	0%	1%	2%	1%	0%
Gross	1%	1%	1%	1%	1%	2%	3%	0%
System Peak								
Winter Peak (MW)	10%	-5%	-4%	7%	0%	-6%	14%	0%
Summer Peak (MW)	-3%	2%	4%	1%	4%	-2%	4%	1%

Customer Count	2016	2017	2018	2019	2020	2021	2022S	2023F
Residential	115,772	117,748	120,291	122,465	124,966	126,678	129,336	132,015
Commercial	15,073	15,398	15,678	15,956	16,165	16,594	16,995	17,496
Wholesale	6	6	6	6	6	6	6	6
Industrial	50	50	52	51	43	42	42	42
Lighting	1,559	1,511	1,482	1,467	1,443	1,407	1,103	1,103
Irrigation	1,090	1,080	1,078	1,082	1,091	1,103	1,379	1,349
Total Direct	133,550	135,793	138,587	141,027	143,714	145,830	148,861	152,011

Growth Year over Year	2016	2017	2018	2019	2020	2021	2022S	2023F
Residential	1%	2%	2%	2%	2%	1%	2%	2%
Commercial	1%	2%	2%	2%	1%	3%	2%	3%
Wholesale	0%	0%	0%	0%	0%	0%	0%	0%
Industrial	0%	0%	4%	-2%	-16%	-2%	0%	0%
Lighting	-2%	-3%	-2%	-1%	-2%	-2%	-22%	0%
Irrigation	0%	-1%	0%	0%	1%	1%	25%	-2%
Total Direct	1%	2%	2%	2%	2%	1%	2%	2%

6.4 RESIDENTIAL UPC, NORMALIZED ACTUAL TO FORECAST

Residential UPC (MWh)	2019	2020	2021
After- Savings Normalized Actual UPC	10.43	10.89	10.58
Forecast	11.27	10.75	10.10
Variance	(0.84)	0.13	0.49
Variance (%)	-8.0%	1.2%	4.6%

6.5 WINTER PEAK , ACTUAL TO FORECAST

Winter Peak (MW)	2019	2020	2021
After- Savings Actual Peak	732	725	777
Forecast	764	737	748
Variance	(32)	(12)	29
Variance (%)	-4%	-2%	4%

Note: The peaks reflected in this table are the actual seasonal peaks are not normalized.

6.6 SYSTEM LOAD FACTOR

The following table shows annual after-savings gross load, peak load and load factor. The annual load factor is calculated as annual load ÷ peak hourly load x number of hours in a year (8,760).

Year	Energy (MWh)	Peak (MW)	Load Factor
2016	3,480,297	755	0.53
2017	3,511,820	714	0.56
2018	3,563,824	682	0.60
2019	3,592,459	732	0.56
2020	3,615,884	731	0.56
2021	3,676,926	685	0.61
2022S	3,771,436	782	0.55
2023F	3,774,844	786	0.55

Note: The peaks in this table represent annual peaks meaning they happened in the calendar year and are not the seasonal peaks.

Appendix A3

Load Forecast Methods

Table of Contents

1. LOAD FORECAST METHODS

This appendix describes FBC's load forecast methods on which the forecast in Section 3 of the Application is based.

In the figures provided in this appendix, the following three time frames are shown:

- Actual Years: Actual years are those for which actual data exists for the full calendar year[1]. For the 2023 Annual Review the latest calendar year for which full actual data exists is the 2021 calendar year.
- Seed Year: The Seed Year is the year prior to the first forecast year. The Seed Year is forecast based on the latest years of actual data available, and will be different than the original forecast for that year in the previous filing. For example, for this Application the Seed Year is 2022 (2022S) and the Seed Year forecast is based on the latest actual years, including 2021. As such, the 2022 Seed Year forecast in this Application will differ from the 2022 Forecast presented in the Annual Review for 2022 Rates, for which 2021 actual data was not available.
- Forecast Year(s): This is the year or years for which the forecast is being developed. This can be one year (in the case of the Annual Review) or a range of two or more years depending on the filing. In this Application, 2023 is the Forecast Year (2023F).

1.1 *WEATHER NORMALIZATION*

Electricity consumption is impacted by weather, particularly by temperature. For example, load requirements in an extremely cold winter month can be significantly higher than requirements in normal weather conditions in the same month, due to additional heating loads. As the load forecast is made under an assumption of normal weather, it is necessary to remove those extreme weather effects from the historical data. This is the first step in forecasting.

Statistical tests were made to check whether the residential, wholesale, commercial and irrigation loads were sensitive to temperature due to heating and cooling demands and whether the irrigation load was sensitive to the amount of precipitation[2]. The results from the regression for these four rate classes are shown below. The regressions result in high R^2 values for all seasons for the residential, wholesale and commercial[3] load classes; therefore these classes are normalized. The irrigation class shows a low R^2 value for the winter, summer and fall seasons; therefore, this class was not normalized.

[1] FBC's load forecast is developed using only full years of historical data. FBC requires the full year of load data in order to validate it, including the review of and potential adjustments to unbilled energy. For this reason partial year data is not used in forecasting.
[2] Industrial and lighting loads are typically insensitive to the weather.
[3] The commercial class data is normalized from 2014 to 2021 since a strong correlation was present in those years. All commercial data prior to 2014 is actual because it did not show a correlation to weather at that time.

Table A3-1: Residential Regression Table

Residential	Winter	Spring	Summer	Fall
Intercept	39,370	66,140	70,359	64,926
Slope HDD	172	109	-	92
Slope CDD	-	-	245	-
Adjusted R^2	0.72	0.76	0.84	0.77

Table A3-2: Wholesale Regression Table

Wholesale	Winter	Spring	Summer	Fall
Intercept	61,401	57,123	58,803	60,135
Slope HDD	58	47	-	36
Slope CDD	-	-	90	-
Adjusted R^2	0.91	0.92	0.85	0.91

Table A3-3: Commercial Regression Table

Commercial	Winter	Spring	Summer	Fall
Intercept	48,156	51,092	49,674	54,643
Slope HDD	24	16	-	(0)
Slope CDD	-	-	78	-
Adjusted R^2	0.58	0.54	0.68	0.53

Table A3-4: Irrigation Regression Table

Irrigation	Winter	Spring	Summer	Fall
Intercept	1,634	5,218	5,079	6,034
Slope HDD	(1)	(11)	-	(10)
Slope CDD	-	-	23	-
Adjusted R^2	0.04	0.76	0.45	0.43

Steps for weather (temperature) normalization are as follows:

1. Calculate monthly Heating Degree Days (HDD)[4] and Cooling Degree Days (CDD)[5] for the Penticton weather station.
2. Calculate 10-year HDD and CDD averages for each month of the year. These are used as the parameters of normal weather.
3. For each of the residential, wholesale and commercial classes, regress load on HDD or CDD on a seasonal basis. Four seasons were defined: winter (November to February), spring (March to May), summer (June to August) and fall (September to October). Thus all monthly load and degree day data for each season is used and four separate

4 Heating degree-days for a given day are the number of Celsius degrees that the mean temperature is below 18 Celsius degrees.

5 Cooling degree-days for a given day are the number of Celsius degrees that the mean temperature is above 18 Celsius degrees.

regressions are calculated for each class. The City of Kelowna (CoK) Event variables were included in the regressions to recognize the integration of the CoK in 2013 into the FBC direct customer base.

4. To normalize a month, e.g. February 2021:
   (a) obtain the month's HDD (or CDD) information from Environment Canada;
   (b) calculate the deviation from the 10-year average (2012-2021) HDD (CDD) as found in Step 2;
   (c) apply the regression slope obtained in Step 3 to this deviation to come up with a normalization adder; and
   (d) add the normalization adder to the month's load (residential, commerical or wholesale).

The general equation to normalize load requirements in month t is shown below.

$$Normalized\ Load_t = Load_t - HDD\ Slope_t \times (HDD_t - Normal\ HDD_t)$$

$$where\ HDD\ is\ Heating\ Degree\ Days\ and\ t = Spring, Fall\ and\ Winter$$

And

$$Normalized\ Load_t = Load_t - CDD\ Slope_t \times (CDD_t - Normal\ CDD_t)$$

$$where\ CDD\ is\ Cooling\ Degree\ Days\ and\ t = Summer$$

1.2 LOAD FORECAST

FBC forecasts energy requirements by customer class based on weather normalized historical loads. These are referred to as the "before-savings[6]" loads. DSM savings that are incremental to those embedded in historical loads (up to and including 2021) are also forecast for each customer class and subtracted from the before-savings loads to arrive at the "after-savings" loads. This section discusses the before-savings forecast load requirements for each of FBC's load classes.

1.2.1 Residential

The formula to forecast the expected before-savings residential load in year *t* is:

$$Before\ Savings\ Load_t = UPC_t \times Average\ Customer\ Count_t$$

where UPC (use per customer in MWh per customer per year) is before-savings.

[6] The term "before-savings" is used in the remainder of this section and refers to "before incremental savings after 2021".

The before-savings UPC was based on a 10-year historic trend of annual UPC values from 2012 to 2021. FBC reviews the forecast methods on an annual basis. As FBC found that there was a strong correlation, it therefore applied a 10-year trend.

Table A3-5: Results of UPC Trend Analysis

Regression	UPC
Start Year	2012
End Year	2021
R^2	0.84
Adjusted R^2	0.82
df	9
Intercept	414
Slope UPC	-0.20

Next, average customer count in year *t* is calculated as:

$$Average\ Customer\ Count_t = \frac{(Year\ End\ Count_t + Year\ End\ Count_{t-1})}{2}$$

The year-end customer count was based on the least squares regression model below.

$$Year\ End\ Customer\ Count_t = b_0 + b_1 \times Population_t$$

$Population_t$ is the population data supplied by BC Stats for the Company's direct service area.

Table A3-6: Results of Residential Regression

Regression	Residential
Start Year	2019
End Year	2021
R^2	1.00
Adjusted R^2	0.99
df	2
Intercept	(118,476)
Slope Population	0.88

The residential class represented 39.3 percent of the net load in 2021.

1.2.2 Commercial

The expected before-savings commercial load in year *t* is forecast based on the provincial GDP supplied by the CBOC. The relationship was estimated from the following equation.

$$Before\ Savings\ Load_t = (b_0 + b_1 \times GDP_t + b_2 \times CoK\ Event_t) + FBC\ EV\ DC\ Fast\ Chargers$$

The CoK_t is a binary variable for the City of Kelowna integration event in 2013. Coefficients b0, b1 and b2 are obtained from an ordinary least squares (OLS) regression analysis on the 2007 to

2021 data. The FBC EV DCFCs are Electric Vehicle Direct Current Fast Chargers serviced by FBC which are added to the forecast. The commercial class represented 28.4 percent of the net load in 2021.

Table A3-7: Results of Commercial Regression

Regression	Commercial
Start Year	2007
End Year	2021
R^2	0.99
Adjusted R^2	0.99
df	14
Intercept	123,607
Slope GDP	3
Slope CoK Event	132,847

1.2.3 Wholesale

The Company forecasts the wholesale load based on load surveys from the wholesale customers. For this forecast, FBC received surveys from all the wholesale customers except one. This customer was contacted multiple times but did not respond. Since there was no response, FBC kept their load at 2021 levels. FBC then summed the wholesale customers' forecasts to calculate the before-savings wholesale load forecast. This approach recognizes that in the near to medium term, the wholesale customers themselves are best able to forecast their load growth based on their knowledge of their customer mix, load behaviors, development projects with associated load requirements, etc. The wholesale class represented 16.7 percent of the net load in 2021.

1.2.4 Industrial

The before-savings industrial load is the sum of forecasts supplied by those individual customers who responded to the load survey and, for customers who did not respond, escalation of the customer's load in the preceding year by the CBOC forecast GDP growth rates for the industrial sector the customer is in. 81 percent of FBC's industrial customers responded to the surveys, accounting for 90 percent of 2021 load.

FBC assumes no new industrial customers in the current forecast unless there is a confirmed commitment from an industrial customer. FBC works with key account managers to identify new customers and existing customers with expansion plans that have commited contracts that are being added to the system. The key account managers work with the new customers directly and relay the load requirements to the forecasting group. The industrial class represented 14.0 percent of the net load in 2021.

1.2.5 Irrigation

The before-savings irrigation load forecast uses a five-year average so that the extreme weather events such as those that occurred in 2021 are included in the forecast but do not overly influence it. The irrigation class represented 1.3 percent of the net load in 2021.

1.2.6 Lighting

The before-savings lighting load uses the 2021 actuals due to the variability in the load primarily due to streetlight LED replacement programs which reduced the loads from 2018 to 2021. The lighting class represented 0.3 percent of the net load in 2021.

1.2.7 Demand Side Mangment (DSM) Savings

FBC forecasts load reductions resulting from its DSM programs.

The forecast of DSM savings is consistent with the Company's approved 2019-2022 DSM Plan. DSM measures are grouped into applicable programs that are then added to produce the three primary sector (residential, commercial & industrial) annual plan savings targets. Finally, the annual sector targets beginning with the Seed Year are converted into a cumulative time series, and disaggregated into the customer rate classes and commensurate system loss reductions.

1.3 *PEAK DEMAND FORECAST*

The peak demand forecast is produced by taking the 10-year average (2012-2021) of historical peak data. The historical peak data is escalated by the gross load growth rate before it is averaged to account for the growth of demand on the FBC system. Self-generating customers are removed from the historical load data since the underlying trends that impact other loads do not apply. Seasonal peaks were used for both the winter and the summer. The 12 monthly peaks, as well as the seasonal peaks, were then escalated by the annual load growth rates in the forecast period to produce forecast monthly peaks. The winter peak and the summer peak are assumed to replace monthly peaks in December and July, respectively.

The after DSM peak forecast was calculated by subtracting DSM capacity savings forecast from the before DSM peak forecast for each month in each year.

Appendix B

PRIOR YEAR DIRECTIVES

No.	Decision Page No.	Directive No.	Reference	Description / Details	Status	Section in this Application
G-8-17 – FBC ANNUAL REVIEW FOR 2017 RATES						
1.	21	6	Upper Bonnington Old Units Refurbishment Project	The Panel directs FBC to report in each of its annual review applications during the remainder of the PBR term the following information on the UBO Refurbishment project: • The status of both the UBO Refurbishment project as a whole and of the individual units, including a comparison of the project timeline provided in the current Applicaton to any updated project timeline as at the time of filing each annual review application. • Updated cost estimates and cost descriptions compared to the cost estimates and scope descriptions provided in the current Application, including explanations for any variances/changes to the cost estimates or project scope. • Actual costs incurred to date on the UBO Refurbishment project as a whole and on each individual unit as at the time of filing each annual review application. • Final actual refurbishment costs at the completion of each unit, including a description of the scope of work completed relative to the conditions found and against the cost estimate.	Complete (Final Report filed in this Annual Review)	Appendix B2
G-165-20 AND G-166-20 – FEI AND FBC MULTI-YEAR RATE PLAN FOR 2020 THROUGH 2024						
2.	75	24	General Flow-through Deferral Account	The Panel directs [FBC] to provide a detailed analysis of the individual forecast variances recorded in the Flow-through deferral account in each Annual Review.	Ongoing during the MRP term	Section 12.4.2.1

No.	Decision Page No.	Directive No.	Reference	Description / Details	Status	Section in this Application
3.	87	32	Efficiency Carry-Over Mechanism	Therefore, the Panel determines the following process for the handling of an ECM application: 1. An ECM can be applied for at any time in the last three years of the MRPs, either in advance or following the action or initiative being undertaken. 2. For proposed activities where identifiable savings are expected to extend beyond the term of the MRP, FortisBC is to file an ECM proposal describing the initiative, its timing, costs and benefits and savings. 3. Parties will have the opportunity to review and comment on the proposal and the BCUC will determine whether to approve the ECM proposal (an Approved ECM Initiative). FortisBC must submit details of continued savings annually under an Approved ECM Initiative as part of the Annual Review process. The net savings will be shared equally between ratepayers and the Utilities will carry forward past the end of the MRP for a maximum period of three years.	No approved ECM initiatives to report on	n/a
4.	99	35	SAIDI and SAIFI major events	The Panel also directs FBC to include a discussion of major events relevant to the SAIDI and SAIFI results in future Annual Review materials.	Ongoing during the MRP term	Section 13
5.	99-100		SQI Informational Indicators	In addition to the SQIs, the Panel approves the following informational indicators for the Utilities: • Customer Satisfaction Index (measures overall customer satisfaction) – FEI and FBC. • Average Speed of Answer (average number of seconds to answer emergency and non-emergency calls) – FEI and FBC. • Generator Forced Outage Rate (percent of time a generating unit is removed from service due to component failure or other events) – FBC only. • Interconnection Utilization (percent of time that an interconnection point was available and providing electrical service to wholesale customers) – FBC only. The Utilities are directed to report on these informational indicators along with the SQIs as part of the Annual Review process.	Ongoing during the MRP term	Section 13

No.	Decision Page No.	Directive No.	Reference	Description / Details	Status	Section in this Application
6.	118	42	System Operations, Integrity and Security Expenditures	The Panel directs FBC to provide the following information related to System Operations, Integrity and Security expenditures in its future revenue requirements applications over the term of the Proposed MRPs: 1. A breakdown and explanation of both annual and cumulative variances between forecast/actual and formula O&M related to System Operations, Integrity and Security expenditures, which quantify the variances attributable to the following areas: • Tree management; • Generation dam safety; • Network operations apprentice program; • Cyber security; • Data analytics; and • Any other significant factors or miscellaneous items. 2. A description of how FBC is prioritizing its System Operations, Integrity and Security expenditures.	Ongoing during the MRP term	Section 6.2.1
7.	131	49	Forecast Capital Expenditures	The Panel directs FortisBC to file an updated forecast of the 2023 to 2024 capital expenditures in the 2023 Annual Review.	Complete	Section 7.2.1
G-42-21 – FBC ANNUAL REVIEW FOR 2020 AND 2021 RATES						
8.	21		COVID-19 Customer Recovery Fund Deferral Account	The Panel approves the following deferral account requests: f. Recording of the COVID-19 incremental costs and related savings from 2020 and 2021 into the previously approved COVID-19 Customer Recovery Fund deferral account, as discussed in Section 12.2.1 of the Application.	Status of COVID-19 exogenous factor treatment provided in this Application	Section 12.2.1
G-374-21 – FBC ANNUAL REVIEW FOR 2022 RATES						
9.	32	7	Wholesale Customer Load Forecast	The Panel directs FBC to provide details of any efforts it has undertaken to improve the accuracy of its forecasts of wholesale customer load in the 2023 Annual Review, including the results of such efforts.	Complete	Section 3.4.3
10.	32	8	EV Charging Updates	The Panel directs FBC to include in future Annual Review filings an update on its EV DCFC charging stations’ costs and revenues for the previous fiscal year along with a forecast of costs and revenues for the test period.	Ongoing	Section 6.3.4

Appendix B2

FortisBC Inc.

Upper Bonnington Old Units Refurbishment Project

Final Report

August 2022

Table of Contents

1. PROJECT STATUS

1.1 *PROJECT BACKGROUND*

On January 20, 2017, the British Columbia Utilities Commission (BCUC) approved capital expenditures related to the Upper Bonnington (UBO) Old Units Refurbishment (UBO Refurbishment Project, or the Project) in Order G-8-17. Directive 6 of Order G-8-17 required FBC to file specific information on the Project's updated scope, progress and costs as part of FBC's future annual review applications. Specifically, the BCUC directed FBC to provide the following information about the progress of the Project:

- The status of both the UBO Refurbishment Project as a whole and of the individual units, including a comparison of the Project timeline provided in the [Annual Review for 2017 Rates] Application to any updated Project timeline as at the time of filing each annual review application.
- Updated cost estimates and cost descriptions compared to the cost estimates and scope descriptions provided in the [Annual Review for 2017 Rates] Application, including explanations for any variances/changes to the cost estimates or Project scope.
- Actual costs incurred to date on the UBO Refurbishment Project as a whole and on each individual unit as at the time of filing each annual review application.
- Final actual refurbishment costs at the completion of each unit, including a description of the scope of work completed relative to the conditions found and against the cost estimate.[1]

The UBO Refurbishment Project involved the refurbishment of generating Units 1-4 (the Old Units), which are over 100 years old, in order to extend their lives for an additional 20 years or more. The Project also reduced the safety and environmental risks associated with failures of the aged equipment.

FBC submits the following final report regarding the UBO Refurbishment Project in compliance with Directive 6 of Order G-8-17, including final Project costs (Final Report).

The Project scope of work was completed and closed out in Q4 2021. The four generating units and associated equipment have been put into commercial operation and are performing well.

The Project successfully eliminated or reduced the safety and environmental risks previously associated with operating the plant.

[1] Order G-8-17, Appendix A, page 21.

With regard to the major environmental and safety accomplishments achieved during Project execution, FBC reports that it followed the Environmental Management Plan (EMP) developed in 2017 and the Project had no reportable environmental incidents. Further, the Project accumulated approximately 160 thousand hours without a lost time incident. The majority of the effort on the Project was internal FBC labour, with approximately 19 thousand hours supplied externally. While the COVID-19 pandemic presented challenges during the second half of the Project, the policies and procedures implemented by FBC minimized the risk of infection and Project interruption.

1.2 WORK COMPLETED SINCE AUGUST 2021 STATUS REPORT

The following is a brief summary of the work completed since the August 2021 status report filed as Appendix B2 to FBC's Annual Review for 2022 Rates application.

Balance of Plant

The scope of the balance of plant work evolved as the Project progressed and included the following:

Floor modifications – As equipment was removed, the concrete bases were demolished and floor repairs were completed. The plant floor loadings, drawings, demarcation, procedures and site signage updates were completed.

Ventilation access walkway – With the removal of the old switchgear concrete structure, both wall and floor repairs were required. The switchgear concrete structure provided access to plant ventilation systems; with the removal of this concrete, new access walkways and ladders were designed and installed.

Water wheel excitation decommissioning – The water wheel exciters and associated equipment were removed and the intakes were plugged with concrete. The holes through the generator and turbine floors were capped with steel plates. The exciter rheostats and buss were removed and the rheostat room was repurposed for plant equipment storage.

Units 2 and 3

Minor work was completed on Units 2 and 3 which was intentionally delayed until site conditions were preferable in 2021. The work included painting, hazardous materials removal, and the rotor oil leak repair on Unit 3.

Project Close

The Project was closed in Q4 2021 with all equipment and plant transferred back to generation operations.

2. PROJECT SCHEDULE

The following table is updated to show the final completion dates for each unit as well as the balance of plant work.

Table B2-1: Milestone Summary

Milestone	Planned Completion Date	Actual Completion Date	Status
Engineering			
Mechanical Components – Machining and Fabrication Specifications	Q4, 2017	Q4, 2017	Complete
All Units Detailed Engineering	Q1, 2018	Q1, 2018	Complete
Balance of Plant Engineering	Q3, 2020	Q4, 2020	Complete
Procurement of All Major Mechanical/Electrical	Q2, 2020	Q2, 2020	Complete
Construction			
Refurbishment of Unit 3	Q4, 2017	Q4, 2017	Complete
Refurbishment of Unit 4	Q4, 2018	Q4, 2018	Complete
Refurbishment of Unit 1[1]	Q4, 2020	Q4, 2019	Complete
Refurbishment of Unit 2[1]	Q4, 2019	Q4, 2020	Complete
U3 Oil Leak Deficiency Repair	Q1, 2021	Q2, 2021	Complete
Balance of Plant Work	Q2, 2021	Q3, 2021	Complete
Closeout	Q3, 2021	Q4, 2021	Complete

Note:

[1] *Units 1 and 2 construction years were changed from the original schedule to gain efficiencies by removing equipment while operating a live plant.*

2.1 SCHEDULE SUMMARY

The rotor oil leak repair work on Unit 3 delayed portions of the Balance of Plant scope of work from Q2 2021 to Q3 2021. The work completed on Units 2 and 3 as outlined above in Section 1.2 was completed in parallel with the Balance of Plant work, and the Project was closed in Q4 2021.

While some of the work was re-scheduled around sequencing concerns and operational constraints, the overall Project duration was as originally planned.

3. PROJECT COSTS

The following table outlines the final Project expenditures.

Table B2-2: Cost Summary

Description	Application/ Control Budget	Final Costs	Variance	Variance
	($000s)			(%)
Unit 4	6,634	8,058	1,424	21%
Unit 3	4,079	6,529	2,450	60%
Unit 2	5,641	6,606	965	17%
Unit 1	8,050	8,287	237	3%
Balance of Plant	860	1,657	797	93%
Subtotal - Construction	25,264	31,137	5,873	23%
Cost of Removal	1,880	1,840	-40	-2%
Project Contingency	3,771	-	-3,771	-
Subtotal - Construction & Removal	30,916	32,997	2,062	7%
AFUDC	867	1,174	307	35%
Total Project Cost	31,783	34,151	2,369	7%

3.1 *PROJECT COST SUMMARY*

The UBO Refurbishment Project was approved with a Class 4 capital cost estimate of $31.783 million in as-spent dollars (including $0.867 million of AFUDC and $1.880 million of removal costs). The Project's cost estimate was at an AACE Class 4 estimate class because of the difficulty in defining the full scope without dismantling the units. Final Project costs (including $1.174 million of AFUDC and $1.840 million of removal costs) are $34.151 million, which is 7 percent or approximately $2.4 million over the control budget. This is well within the typical accuracy range of an AACE Class 4 cost estimate as stated in AACE Recommended Practice 69R-12, Cost Estimate Classification System – As Applied in Engineering, Procurement, and Construction for the Hydropower Industry. As reported in the August 2020 status report, this approximately $2.4 million variance resulted primarily from higher than planned costs to rewind the generators and to refurbish the concealed turbine components.

The cost variances in each Project category are further described below.

Units 1-4 – These variances are explained in the August 2020 status report. In 2021, both Units 2 and 3 painting scope of work that had been delayed was completed. Unit 3 rotor oil leak repair work was completed for a final cost of approximately $0.252 million. These completed scopes are included in the final costs presented in Table B2-2.

Balance of Plant Work – The balance of plant work scope of work was completed with an unfavourable variance of $0.797 million. The Balance of Plant scope of work evolved as the

Project progressed. The installation of new equipment and removal of old equipment within an operating facility presented unanticipated challenges that were not able to be defined during the planning stage. This variance is primarily due to the extra effort required to remove equipment and cabling which was not expected to contain asbestos and the additional civil structural scopes, as well as the floor modifications required to facilitate the new plant equipment.

Cost of Removal – The forecast total for cost of removal is $1.840 million, which represents a favourable variance of $0.040 million.

Contingency – Project contingency has been utilized to offset the variances that were encountered among the different Units.

AFUDC – The total cost for AFUDC is $1.174 million, which represents an unfavourable variance of $0.307 million due to the higher overall Project costs.

3.2 *PROJECT SCOPE CHANGE SUMMARY*

Throughout the Project, FBC made adjustments to address unforeseen challenges and issues which were either not considered or not accessible during the planning stage. These adjustments totalled approximately $2.015 million and were explained in the August 2020 status report.

4. CONCLUSION

The UBO Refurbishment Project is complete and has successfully eliminated or reduced the safety and environmental risks previously associated with operating the plant. The Project maintained schedule and returned the Units to commercial service within the year planned. The final Project costs were well within the typical accuracy range of an AACE Class 4 cost estimate and totalled $34.151 million. This approximately $2.4 million increase was required to complete scope and ensure the units could operate safely for 20 years or more, as originally planned.

Appendix C

PROJECTS AND MARKET REPORT

Market Report: Gas and Electric Transmission and Distribution Cost Impacts 2020-2024

May 2022

The Engagement

FortisBC has engaged Wood Mackenzie Supply Chain Consulting to provide a market report detailing how market factors have impacted and are anticipated to impact North American utility spend between 2020 and 2024. Wood Mackenzie is a global research and consulting firm that provides energy clients with data, analytics, and insights that they rely on for their decision making. Wood Mackenzie Supply Chain Consulting (SCC), formerly PowerAdvocate, utilizes proprietary cloud-based software solutions and bespoke consulting services to enable our clients to leverage data analysis and assist them in navigating an ever-changing marketplace.

Market dynamics over the last two years have created significant inflationary pressures across both materials and services. This market report is specific to two portfolios: electric transmission and distribution (T&D) and gas T&D capital expenditures at Canadian utilities, with labour specific to British Columbia, Canada. In both portfolios, market escalation has been observed since FortisBC's initial Multi-Year Rate Plan (MRP) filing (Quarter 1, 2020 through Quarter 1, 2022). This report also includes a forecast of potential impacts from Quarter 2, 2022 through Quarter 4, 2024.

Qualifications

Wood Mackenzie Supply Chain Intelligence is a suite of cloud-based software solutions that includes a product, Cost Intelligence, which enables our clients to identify market-based risks and opportunities. Cost Intelligence includes thousands of cost models and indices that enable users to understand what a project or item should cost in a dynamic market. Wood Mackenzie Cost Intelligence models were developed to support the energy market. The Wood Mackenzie team starts with industry specifications, technical drawings, supplier 10ks, and other industry information to develop detailed items that tie cost inputs to dynamic market indices. Those indices are then weighted and loaded on the cloud-based platform. The items are combined into categories and sub-categories that reflect clients spend profiles, or specific capital project expenditures.

Methodology

North American Gas and Electric Utility Cost Models

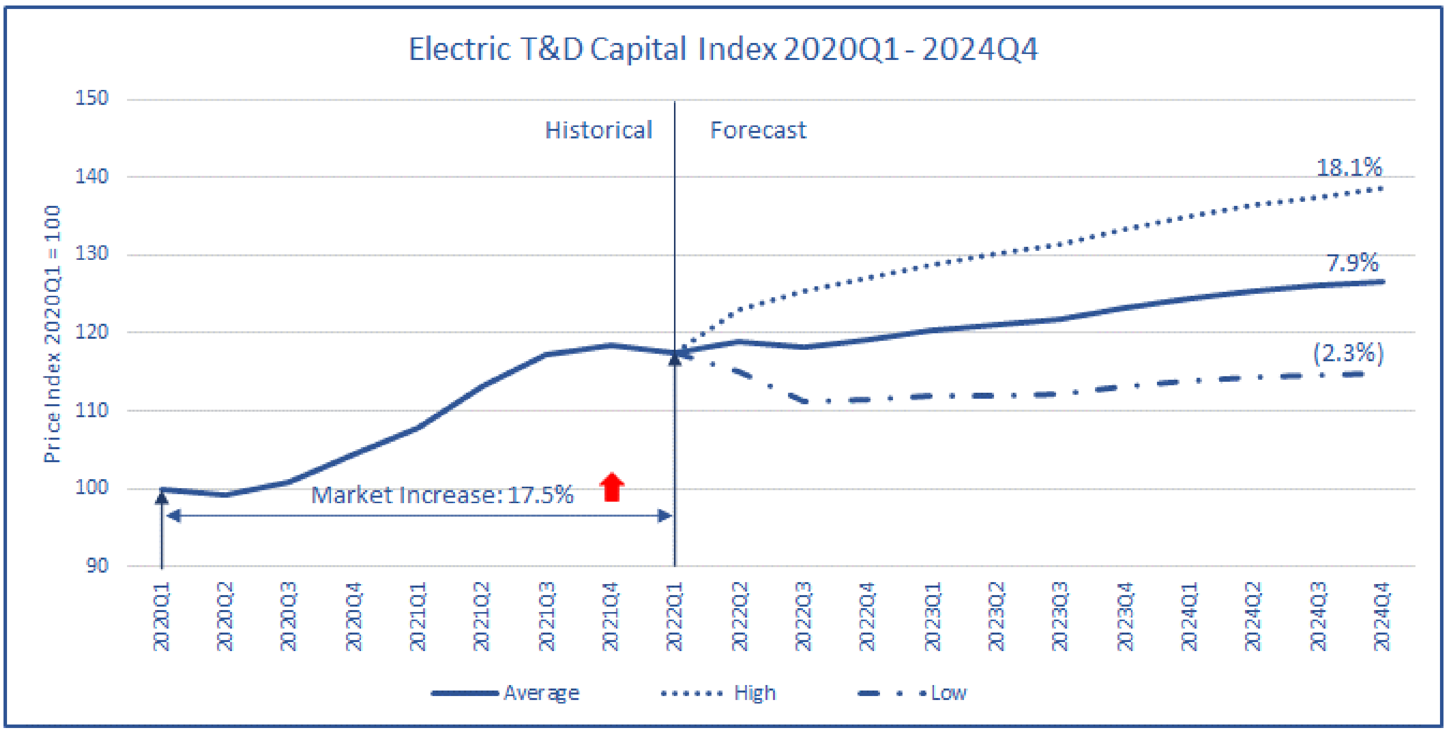
Wood Mackenzie built two customized cost models – Electric Transmission and Distribution and Gas Transmission and Distribution. Each cost model is built from aggregated spend from utilities across North America and over $550M (CAD) in total spend. The models apply indices to spend at an item level and roll up to sub-category, category, and facility level. Each model incorporates over 150 indices tracked monthly by Wood Mackenzie.

Customization for British Columbia Specific Labour Pool

British Columbia (BC) has a unique labour pool and, where appropriate, the models incorporate indices specific to BC, particularly around trade labour and any other labour activities specific to the BC province.

Market Insights

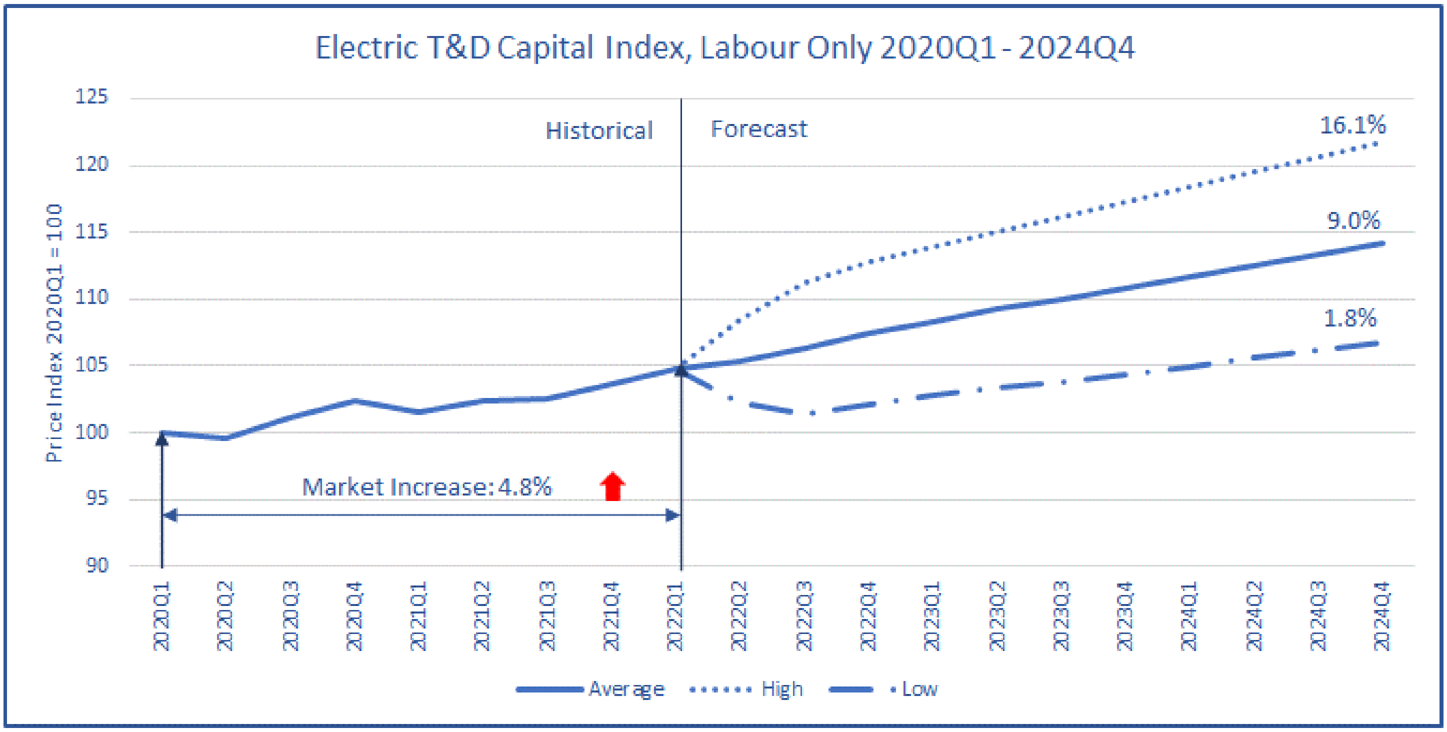
Electric Transmission and Distribution 2020Q1-2024Q4



*This graph includes an aggregate of multiple indices, including both labour and material cost components.
**Forecasted percentage increases or decreases are based on index 2022Q1 = 100

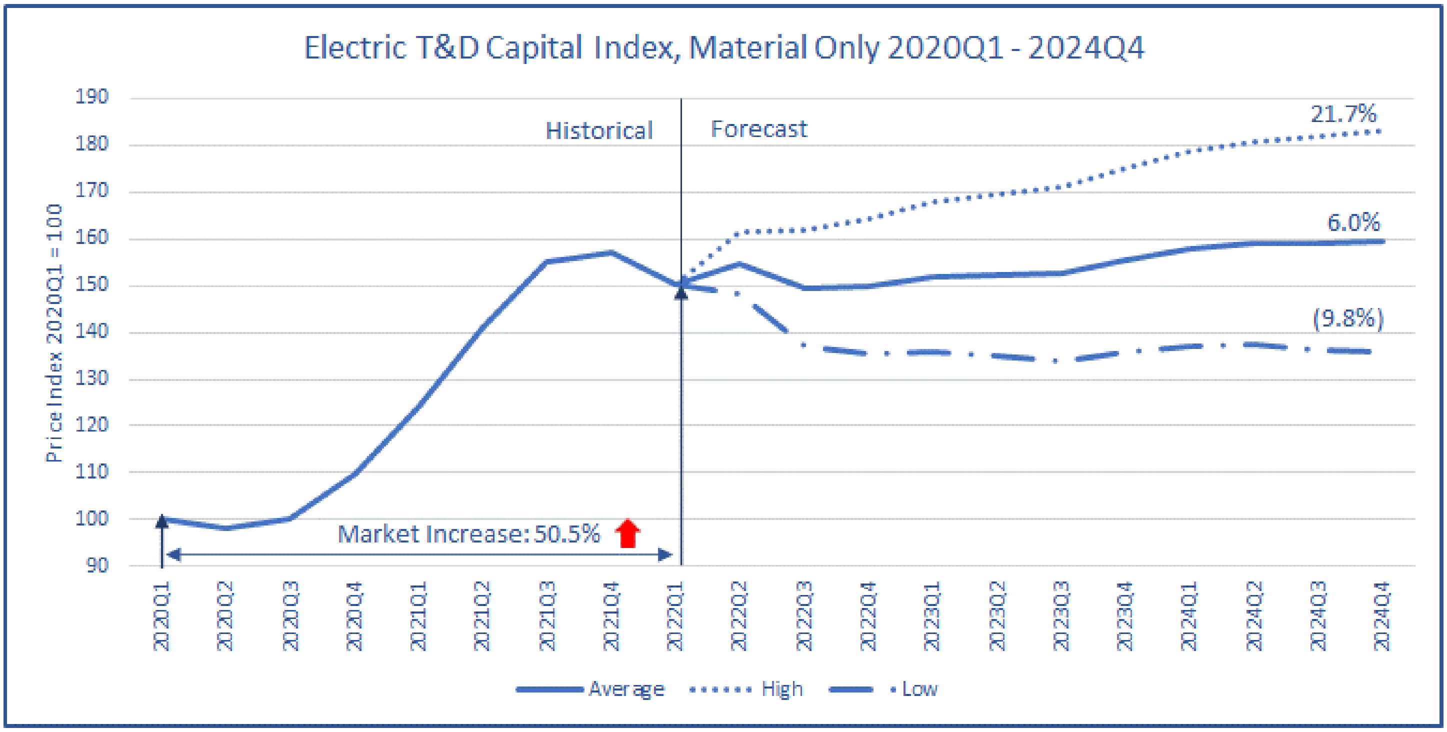
Since execution of FortisBC's MRP (Q1 2020 – Q1 2022), market factors have caused an escalation in capital costs for electric T&D of 17.5%. Forward-looking forecasts for Q1 2022 – Q4 2024 average 7.9%. Table 1 shows the ten most impactful commodities and services in the electric T&D model, and their individual escalations since the beginning of the MRP. Sharp increases in steel and aluminum prices starting in Q3 2020 drove escalations through Q3 2021. Prices of steel and aluminum have leveled off since Q4 2022 which is reflected in the forecast through 2024. The total market split for Electric T&D between labour and materials is 65% and 35% respectively. Labour costs are expected to continue to rise, while material costs level out.

Electric Transmission and Distribution - Labour 2020Q1-2024Q4



**Forecasted percentage increases or decreases are based on index 2022Q1 = 100

Electric Transmission and Distribution - Material 2020Q1-2024Q4



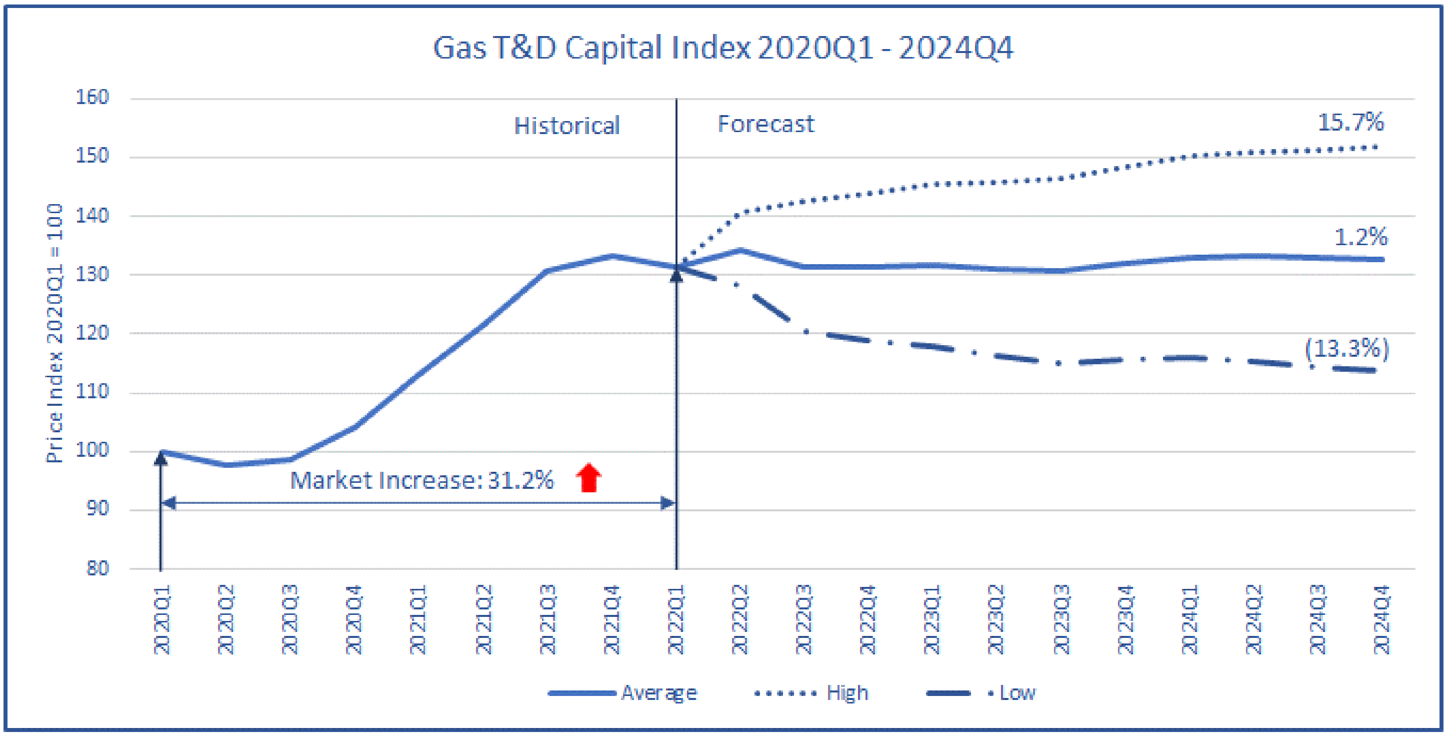
**Forecasted percentage increases or decreases are based on index 2022Q1 = 100

Table 1. Electric T&D High-impact Commodities and Services

Electric T&D High Impact Commodities and Services	Q1 2020 – Q2 2022 (%)
AHE: Mechanical and Electrical Trades, Basic Construction Union Wages, BC	1.5
AHE: Construction, Private Compensation, BC	10.8
ECEC: Benefits, Private Construction	3.3
SPM: Steel, Hot-Rolled Coil	117.3
PPI: Cement, Canada	(3.4)
AHE: Heavy Equipment Operator, Basic Construction Union Wages, BC	2.6
AWE: Repair and Maintenance, BC	4.3
SPM: Aluminum, High Grade	83.2
PPI: Springs and Wire Products, Canada	42.2
IM: Transmission Conductor	160.4

AHE: Average Hourly Earnings, Employer Costs for Employee Compensation, SPM: Spot Price Metal, IPPI: Producer Price Index, AWE: Average Weekly Earnings, IM: Industry Margin

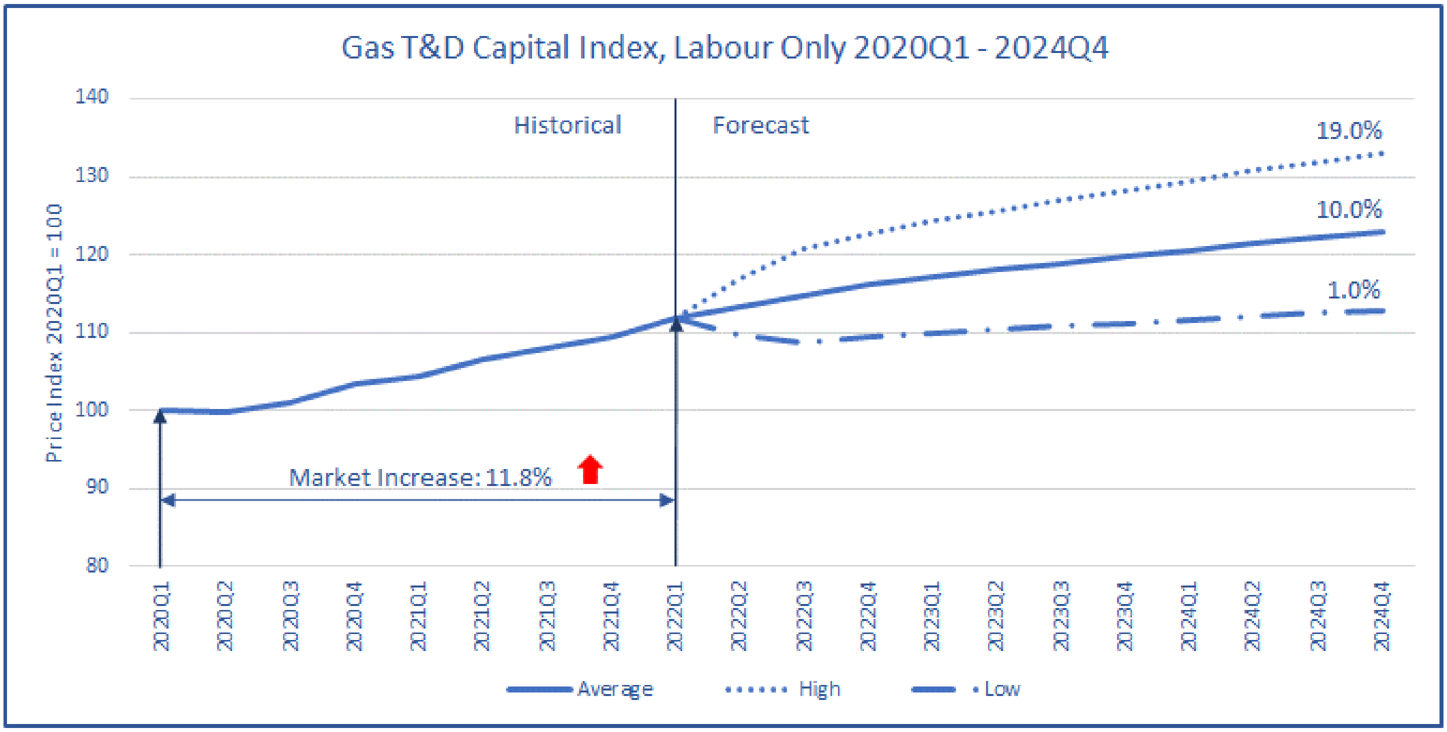
Gas Transmission and Distribution 2020Q1 – 2024Q4



*This graph includes an aggregate of multiple indices, including both labour and material cost components.
**Forecasted percentage increases or decreases are based on index 2022Q1 = 100

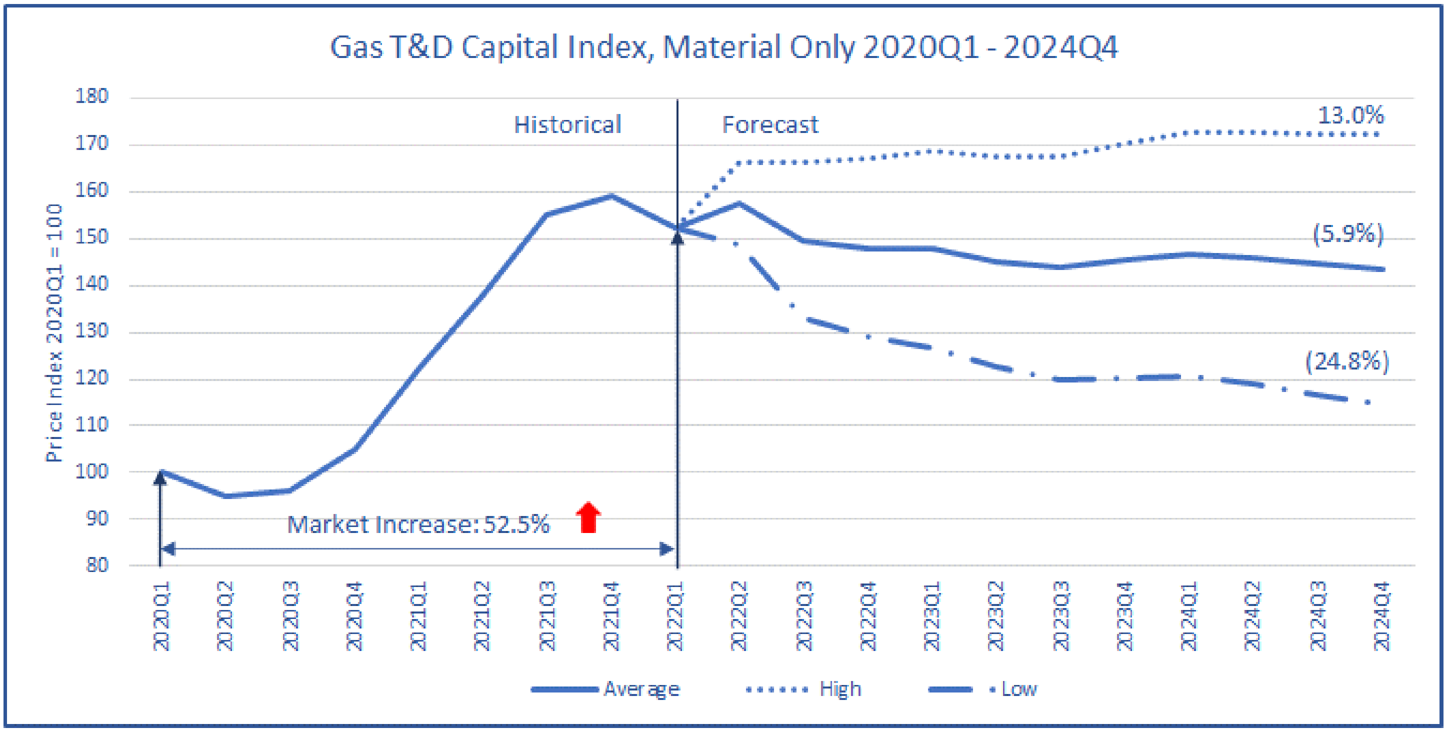
Since execution of FortisBC's MRP (Q1 2020 – Q1 2022), market factors have caused an escalation in capital costs for gas T&D of 31.2%. Forward-looking forecasts for Q1 2022 – Q4 2024 average 1.2%. Table 2 shows the ten most impactful commodities and services in the gas T&D model, and their individual escalations since the beginning of the MRP. Sharp increases in steel and aluminum prices starting in Q3 2020 drove escalations through Q3 2021. Prices of steel and aluminum have leveled off since Q4 2022 which is reflected in the forecast through 2024. The total market split for Gas T&D Construction between labour and materials is 44% and 56% respectively. Labour costs are expected to continue to rise, while material costs are expected to drop slightly, driven by declining steel prices.

Gas Transmission and Distribution - Labour 2020Q1 – 2024Q4



**Forecasted percentage increases or decreases are based on index 2022Q1 = 100

Gas Transmission and Distribution - Material 2020Q1 – 2024Q4



**Forecasted percentage increases or decreases are based on index 2022Q1 = 100

Table 2. Gas T&D High-impact Commodities and Services

Gas T&D High Impact Commodities and Services	Q1 2020 – Q2 2022 Escalation (%)
AHE: Construction, Private, Compensation, BC	10.8
SPM: Steel Plate, Cut-to-Length	173.7
SPM: Steel, Hot-Rolled Coil	117.3
PPI: Hand and Edge Tools	2.7
PPI: Commercial and Industrial Machinery and Equipment Rental	(2.2)
AHE: Professional, Scientific and Technical Services, BC	11.6
SPM: Steel Plate, Coiled	117.3
AHE: Architectural and Finishing Trades, Basic Construction, BC	1.4
AHE Manufacturing, BC	9.8
PPI: Metal Building and Construction Materials, Canada	51.1

AHE: Average Hourly Earnings, SPM: Spot Price Metal, PPI: Producer Price Index

Pre-MRP Market Escalations

The market conditions for both electric and gas T&D vary significantly from the five years prior to the execution of the MRP. Table 3 uses the same models as above to observe the market between Q1 2015 through Q4 2019. Two years (2015 and 2019) experienced a decrease in market price, and the total escalations over this period were 7.6% and 7.5% for electric T&D and gas T&D, respectively.

Table 3. Annual Market Adjustments for Electric and Gas T&D

Year Q1 – Q4	Electric T&D Market Change (%)	Gas T&D Market Change (%)
2019	(0.2)	(3.6)
2018	1.0	4.5
2017	1.8	1.2
2016	4.1	3.6
2015	(1.7)	(3.5)

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Europe +44 131 243 4400
Americas +1 713 470 1600
Asia Pacific +65 6518 0800
Email contactus@woodmac.com
Website www.woodmac.com

Appendix C2

Project Descriptions for Forecast Growth and Sustainment Capital

August 2022

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List of Tables and Figures

1. INTRODUCTION

In this appendix, FBC provides descriptions of growth and sustainment capital projects over $1 million.

As described in Section 7 of the Application, FBC's growth capital is divided into the following portfolios:

1. Transmision Growth;
2. Distribution Growth; and
3. New Connects.

FBC's sustainment capital is divided into the following portfolios:

1. Generation;
2. Transmission Sustainment;
3. Stations Sustainment;
4. Distribution Sustainment; and
5. Telecommunications.

The projects over $1 million in each of these categories are described below.

2. GROWTH CAPITAL

2.1 TRANSMISSION GROWTH

Regular Transmission Growth capital consists of discrete projects as dictated by transmission system capacity requirements based on forecast load for adequate supply during periods of peak demand and adverse weather conditions.

The table below shows the original spend profile of the projects greater than $1 million in this category during the MRP term, as provided in the MRP Application.[1]

[1] MRP Application, Section 3.4.1.1.1, Table C3-23, pp. C-82 and C-83.

Table C2-1: FBC Transmission Growth Capital Expenditures on Projects Greater than $1 million in MRP Application ($000s)

	2020	2021	2022	2023	2024
Sexsmith 2nd Transformer Addition	4,633	-	-	-	-
Summerland Transformer Replacement	539	2,063	-	-	-
Beaver Park Substation Upgrade	-	-	2,740	5,195	-
DG Bell 2nd Transformer Addition	-	-	-	-	1,086

The table below shows the updated forecast spend profile of the projects greater than $1 million in this category during the MRP term.

Table C2-2: Updated FBC Transmission Growth Capital Expenditures on Projects Greater than $1 million ($000s)

	2020	2021	2022	2023	2024
Sexsmith 2nd Transformer Addition	5,311	66	-	-	-
Beaver Park Substation Upgrade	-	636	4,936	6,223	-
Duck Lake 2nd Transformer Addition	-	-	-	-	1,088

Each of these projects is described further below.

- **Sexsmith Second Transformer Addition:** Peak load on the existing 32 MVA Sexsmith T1 transformer was forecast to exceed nameplate capacity in 2020. In order to continue to maintain the current levels of reliability and meet the planning criteria for this area of Kelowna, a second transformer was installed and put into service at the Sexsmith substation in 2020. The actual costs of this project were approximately $5.3 million with the bulk of capital expenditures occurring in 2020.
- **Summerland Transformer Replacement:** The existing 20 MVA Summerland substation transformer supplies one of two wholesale delivery points to the District of Summerland municipal utility. Due to anticipated new commercial development in Summerland, peak load at this wholesale delivery point was previously forecast to exceed 95 percent of the contract demand limit during the MRP term. Since the most recent load forecast projects that peak load will not exceed this threshold until 2026, no project expenditures are planned during the MRP term. FBC will continue to engage with the District of Summerland municipal utility to discuss options to increase wholesale capacity. This project is thus not included in Table C2-2.
- **Beaver Park Substation Upgrade:** This project is driven by load growth in the Trail area and equipment condition issues as the BEP T1 transformer tap changer cannot be adequately maintained. The project seeks to rebuild the Beaver Park substation on an expanded station footprint. To meet planning criteria and continue to provide a reliable supply, the existing transformer will be replaced, and a second transformer will be installed. The estimated total project cost including direct overhead is approximately $11.8

million. The total project costs have increased since the MRP Application filing in 2019 due to several factors, including archaeological requirements and increases in engineering, materials and construction costs. Commodity cost increases have placed significant pressure on materials.

- **Duck Lake Second Transformer Addition:** This project is driven by significant development occurring in the area served by the Duck Lake substation. FBC planning studies indicate that a second distribution transformer is required at Duck Lake to maintain the current level of reliability and support distribution contingency planning criteria. As the pace and scale of development has exceeded what was anticipated when the MRP Application was filed, this project has now been advanced ahead of the DG Bell project described below. The estimated cost of this project is $5.3 million; however, the cost could increase further as a result of potential commodity cost increases impacting the cost of materials.

- **DG Bell Second Transformer Addition:** FBC planning studies indicate that a second distribution transformer is required at DG Bell to maintain the current level of reliability and support distribution contingency planning criteria. This project has been deferred from the original 2024-25 construction schedule to accommodate the Duck Lake Second Transformer Addition. This project is now planned for 2025-26 with an estimated in-service date of 2026. This project is thus not included in Table C2-2.

2.2 DISTRIBUTION GROWTH

Similar to its transmission system, FBC evaluates distribution system capacity on an annual basis, based on the projected loads. FBC's Distribution Growth capital includes two ongoing programs, small (planned) growth projects and unplanned growth projects. Larger individual distribution growth projects are also included.

The table below shows the original spend profile of the projects greater than $1 million in this category during the MRP term, as provided in the MRP Application.[2]

Table C2-3: FBC Distribution Growth Capital Expenditures on Projects Greater than $1 million in MRP Application ($000s)

	2020	2021	2022	2023	2024
DG Bell Feeder 4 Addition	1,970	-	-	-	-

The table below shows the updated forecast spend profile of the projects greater than $1 million in this category during the MRP term.

[2] MRP Application, Section 3.4.1.1.2, Table C3-24, pp. C-83 and C-84.

Table C2-4: Updated FBC Distribution Growth Capital Expenditures on Projects Greater than $1 million ($000s)

	2020	2021	2022	2023	2024
DG Bell Feeder 4 Addition	-	26	1,870	-	-
Huth CoP 13KV Supply	1,219	62	-	-	-

Each of these projects is described further below.

- **DG Bell Feeder 4 Addition:** This project was deferred due to the timing of City of Kelowna road construction from 2020 to 2022; however, the total actual project cost is lower than forecast in the MRP Application.
- **Huth CoP 13KV Supply:** This project was added in 2020. The project was required to ensure that FBC continues to meet the terms of its Wholesale Agreement with the City of Penticton at the Huth substation Point of Delivery.

2.3 *NEW CONNECTS*

There are no projects over $1 million that have been completed or are planned to be completed during the MRP term.

3. SUSTAINMENT CAPITAL

3.1 *GENERATION SUSTAINMENT*

FBC operates and maintains four generating facilities with a total of 15 units. FBC regularly monitors its infrastructure to ensure it meets industry standards and guidelines, complies with regulations, and operates safely to minimize risk to the public and employees. FBC's Generation capital is grouped into four capital programs: (i) Hydraulic Dam Structures; (ii) Generating Equipment; (iii) Generation Auxiliary Equipment; and (iv) Buildings and Structures.

The table below shows the original spend profile of the projects greater than $1 million in this category during the MRP term, as provided in the MRP Application[3].

Table C2-5: FBC Generation Sustainment Capital Expenditures on Projects Greater than $1 million in MRP Application ($000s)

	Category	2020	2021	2022	2023	2024
Concrete Structures Rehabilitation	Hydraulic Dam Structures	685	821	979	1,128	1,019
LBO Spillway Gates Refurbishment	Hydraulic Dam Structures	1,467	1,396	-	-	-

[3] MRP Application, Section 3.4.1.2.1, pp. C-84 to C-88.

	Category	2020	2021	2022	2023	2024
Other Gates Upgrades	Hydraulic Dam Structures	481	100	414	241	545
Dam Safety Instrumentation	Hydraulic Dam Structures	715	765	-	-	806
Guarding of Rotating Parts	Hydraulic Dam Structures	194	324	458	295	287
UBO Unit 6 Turbine Runner Replacement	Generating Equipment	-	35	582	2,035	-
Generator Excitation System and Control Systems	Generating Equipment	-	67	556	556	-
Generator Thrust Bearing Cooling System	Generating Equipment	247	271	295	198	198
Dewatering and Drainage Systems	Generation Auxiliary Equipment	116	349	349	349	349
Station Service Upgrade	Generation Auxiliary Equipment	333	495	286	286	300
COR Annex Building Replacement	Buildings and Structures	-	-	-	198	1,606

The table below shows the updated forecast spend profile of the projects greater than $1 million in this category during the MRP term.

Table C2-6: Updated FBC Generation Sustainment Capital Expenditures on Projects Greater than $1 million ($000s)

	Category	2020	2021	2022	2023	2024
Concrete Structures Rehabilitation	Hydraulic Dam Structures	715	745	1,128	651	1,061
LBO Spillway Gates Refurbishment	Hydraulic Dam Structures	1,436	2,893	-	-	-
Dam Safety Instrumentation	Hydraulic Dam Structures	896	287	1,059	100	100
Rehabilitation of Dam Stability Anchors	Hydraulic Dam Structures	78	442	392	326	-
UBO Unit 6 Turbine Runner Replacement	Generating Equipment	-	22	501	1,395	2,085
Generator Excitation System and Control Systems	Generating Equipment	-	271	344	485	836
Dewatering and Drainage Systems	Generation Auxiliary Equipment	126	217	655	1,166	222

	Category	2020	2021	2022	2023	2024
Station Service Upgrade	Generation Auxiliary Equipment	298	577	834	512	260
COR Annex Building Replacement	Buildings and Structures	4	4	186	200	1,606

Each of these projects is described in further detail below:

- **Concrete Structures Rehabilitation Project:** This is a continuation of the program started in 2014 to address requirements of the BC Dam Safety Regulation and deterioration of concrete structures. The cost for this project is $0.332 million lower than forecast in the MRP Application due mainly to reduced scope at the Lower Bonnington Dam as safety issues are restricting access to lower areas of the construction scaffold in the tailrace during unit start-up. FBC is working on designing a solution to this issue.
- **Lower Bonnington Dam (LBO) Spillway Gates Refurbishment Project:** This project was completed in 2021 at a higher cost than forecast due to complexities encountered during construction and the implementation of a monorail system for the installation of stoplogs that was not considered initially.
- **Other Gates Upgrade Project:** This project is now forecast to cost less than $1 million due to FBC implementing a simpler solution for strengthening the LBO intake superstructure. This project is thus not included in Table C2-6.
- **Dam Safety Instrumentation Project:** This project addresses the requirement in section 19(1) of the BC Dam Safety Regulation for instrumentation to adequately monitor the dam and the area surrounding or adjacent to the dam. The project began in 2018 and includes the installation of dam monitoring systems at FBC's plants. FBC has thus far completed the installation of dam safety instrumentation at LBO and UBO and will complete the installation of dam safety instrumentation at South Slocan (SLC) in 2022. The higher costs are primarily due to higher drilling costs. The installation of the dam safety instrumentation at Corra Linn (COR) has been delayed with only the engineering being planned to occur in 2023-2024.
- **Guarding of Rotating Parts Project:** This project is now forecast to cost less than $1 million due to a reduction in scope. The original forecast included installing guards on spillway and intake gates, but during detail design, more effective administrative and operational methods were developed and implemented which have resulted in cost reductions. This project is thus not included in Table C2-6.
- **Rehabilitation of Dam Stability Anchors:** This project was included in the Other Hydraulic Dam Structures Projects category in the MRP Application, as at the time of filing it was expected to cost less than $1 million. However, the scope of work has increased from $0.302 million to $1.238 million due to damage to the anchors' heads being more extensive and the number of anchor heads that required repairs being higher than initially anticipated; the degree of the anchor head damage could only be established while

inspecting the anchors which are located on the overflow spillway. The rehabilitation of the LBO dam stability anchors will be competed in 2022. Rehabilitation of the COR dam stability anchors will commence in 2023 and will complete in 2025.

- **Upper Bonnington Dam (UBO) Unit 6 Turbine Runner Replacement Project:** This project includes the replacement of the UBO Unit 6 turbine runner that has reached the end of its service life. Work on this project was accelerated to mitigate the anticipated delays in the global supply chain due to the COVID-19 pandemic. The estimated cost of this project is approximately $1.445 million higher than originally forecast due to the costs of the runner being higher. The expected in-service date is December 2024.
- **Generator Excitation System and Control System Replacement Project:** This project addresses the replacement of some of the generator excitation systems beginning in 2022 with Unit 6 at UBO. The updated cost of this project is approximately $0.765 million higher due mainly to higher costs with the procurement of the control and excitation systems.
- **Generator Thrust Bearing Cooling System Upgrade Project:** This project is now forecast to cost less than $1 million as FBC has implemented a better designed solution that has resulted in cost savings. This project is thus not included in Table C2-6.
- **Dewatering and Drainage Systems Rehabilitation Project:** This project was budgeted based on costs including rehabilitation of pipes valves and other components of the dewatering and drainage systems. During detail design it was discovered that this solution was not feasible and a new solution was designed and is being implemented which is based on a pump in gate design that has an increased cost of $0.690 million. The first system is planned to be put in service at SLC in 2023 and engineering for the next plant will occur in 2024.
- **Station Service Upgrade Project:** This project includes upgrading the protection system of FBC's station service system and neutral grounding in order to address safety hazards, replacement of station service transformers that have reached the end of their service life and other small station service improvements. The estimated cost of this project is $0.186 million higher due to the need to address deficiencies related to LBO powerhouse grounding and bonding issues that were uncovered while doing investigations in 2021.
- **Corra Linn Annex Building Replacement Project:** FBC has decided to start the preliminary engineering in 2022 and is planning to complete the project in 2024.

3.2 *TRANSMISSION SUSTAINMENT*

Transmission Sustainment expenditures are required to proactively manage the condition and integrity of FBC's transmission line facilities, manage the risk to employees and public safety, and maintain an acceptable level of service for customers.

The table below shows the original spend profile of the projects greater than $1 million in this category during the MRP term, as provided in the MRP Application[4].

Table C2-7: FBC Transmission Sustainment Capital Expenditures on Projects Greater than $1 million in MRP Application ($000s)

	2020	2021	2022	2023	2024
30 Line Rehabilitation	1,100	-	-	-	-
30, 32, 19 Lines Right of Way	647	651	658	656	652

The table below shows the updated forecast spend profile of the projects greater than $1 million in this category during the MRP term.

Table C2-8: Updated FBC Transmission Sustainment Capital Expenditures on Projects Greater than $1 million ($000s)

	2020	2021	2022	2023	2024
30 Line Rehabilitation	1,087	91	-	-	-
30, 32, 19 Lines Right of Way	458	637	652	652	648

Each of these projects is described in further detail below:

- **30 Line Rehabilitation between the South Slocan and Coffee Creek Substations:** This project included expenditures for structural stabilization of the transmission line, based on the 2018 condition assessment, including stubbing poles and replacing poles and cross-arms. The project was completed as planned in 2020.
- **30, 32 and 19 Line Right of Way Improvements:** The scope of this multi-year project involves acquiring an additional right of way predominantly upslope of the existing right of way for 30 Line (Nelson to Coffee Creek Substation), 32 Line (Creston to Crawford Bay), and 19 Line (Slocan Valley) and clearing the additional right of way to reduce the number of tree-related outages. Portions of these lines are in steep terrain. Of FBC's 72 transmission lines, tree contacts on 30 Line account for 17 percent of the transmission related outages. Tree contacts on 32 Line and 19 Line each account for approximately 8 percent of FBC's transmission related outages. These projects are in progress, with FBC implementing land owner agreements to widen the right of way.

3.3 *STATIONS SUSTAINMENT*

FBC's substation sustainment capital expenditures are driven by a combination of time-based and condition-based scheduling. Currently, FBC employs a substation Computerized Maintenance Management System (CMMS) which tracks basic equipment data and condition information for FBC's substation assets and is used to assist in scheduling maintenance tasks.

[4] MRP Application, Section 3.4.1.2.2, pp. C-89 and C-90.

The table below shows the original spend profile of the projects greater than $1 million in this category during the MRP term, as provided in the MRP Application.[5]

Table C2-9: FBC Stations Sustainment Capital Expenditures on Projects Greater than $1 million in MRP Application ($000s)

	2020	2021	2022	2023	2024
AS Mawdsley Tranformer Replacement	-	-	-	-	3,802
Trout Creek Transformer Replacement	2,263	-	-	-	-
Kaleden Transformer Replacement	-	-	-	-	2,716
Salmo Station Upgrade	3,718	7,154	-	-	-
Fruitvale Station Upgrade	-	-	-	-	3,802

The table below shows the updated forecast spend profile of the projects greater than $1 million in this category during the MRP term.

Table C2-10: Updated FBC Stations Sustainment Capital Expenditures on Projects Greater than $1 million ($000s)

	2020	2021	2022	2023	2024
Trout Creek Transformer Replacement	153	2,660	1,568	-	-
Keremeos 2nd Transformer Addition	-	-	-	543	2,700
Salmo Station Upgrade	4,778	5,143	-	-	-
Fruitvale Station Upgrade	-	-	-	1,087	7,021

Each of these projects is described in further detail below:

- **AS Mawdsley Transformer Replacement:** FBC is now planning to file a Certificate of Public Convenience and Necessity (CPCN) application for this project as the cost is forecast to be above the $20 million materiality threshold. This project is thus not included in Table C2-10**.**
- **Trout Creek Transformer Replacement:** This project is driven by asset condition, as the transformer is 52 years old and uses the most unreliable Load Tap Changer (LTC) in the FBC fleet (Pioneer TC546). The acetylene levels and a barrel collecting the excess oil moving from the main tank to LTC indicated a cracked LTC terminal board. The project is currently in execution with an estimated in-service date of 2022. Increases in project costs are due to delays related to the lands purchase and ALR approval, along with significant additional work related to other end of life station equipment. Further

[5] MRP Application, 3.4.1.2.3, Tables C3-34 and C3-35, pp. C-91 to C-93.

investigation of the station after the MRP proceeding revealed that the entire station was in a similar condition as the transformer which resulted in a rebuild of the station.

- **Keremeos Second Transormer Addition:** This project is driven by asset condition. The Keremeos transformer has a 48 year old LTC that is not functioning. Based on the resulting operational challenges with the control of customer voltages, this transformer replacement is a high priority.
- **Kaleden Transformer Replacement:** This project has been deferred until after the end of the MRP term to accommodate the previously unforeseen Keremeos Transformer Replacement project. The existing Keremeos transformer presents a larger risk at this time, but planning remains underway for replacement of the Kaleden transformer in 2025-26. This project is thus not included in Table C2-10.
- **Salmo Station Upgrade:** This project was driven by equipment condition issues and aging infrastructure at the Salmo and Ymir substations. The project rebuilt the Salmo substation on the existing station footprint and decommissioned the Ymir substation. The Ymir substation customers were permanently transferred to the Salmo substation. Construction began in 2020 and was completed in 2021. The total cost of this project was $9.9 million. The overall total project cost was less than forecast due primarily to lower actual costs for the distribution and transmission line work. The replacement of the Salmo Station 13 kV Switchgear was also included in this project.
- **Fruitvale Station Upgrade:** This project is driven by equipment condition issues and aging infrastructure at the Fruitvale and Hearns substations. The Hearns single phase transformer units are approximately 72 years old, and the Fruitvale metal-clad switchgear is approximately 55 years old; this equipment is at risk of failing. The project seeks to rebuild and relocate the Fruitvale substation, while decommissioning the Hearns substation. The Hearns substation customers would be permanently transferred to the Fruitvale substation. The existing Fruitvale substation footprint is too small to accommodate the rebuild, and land will need to be acquired for the upgrade. To meet planning criteria and continue to provide a reliable supply to the Fruitvale area, the existing transformer will be replaced, and a second transformer will be installed. The estimated total project cost including direct overhead is $12.5 million. FBC forecasts spending $1.1 million in 2023, $7.0 million in 2024, and $4.4 million in 2025 with an estimated in-service date of 2025. The total project costs have increased since the MRP Application due to several factors, including land acquisition requirements and increases in engineering, material and construction costs.

3.4 *DISTRIBUTION SUSTAINMENT*

There are no projects over $1 million that have been completed or are planned to be completed during the MRP term.

3.5 *TELECOMMUNICATIONS SUSTAINMENT*

FBC's telecommunications system is an integral component in the protection relaying system, remedial action schemes, substation operations and control, and generation dispatch systems. The system requires ongoing investment to replace aging or failed systems for safe and reliable operation of the system and to ensure business needs continue to be met.

The table below shows the original spend profile of the projects greater than $1 million in this category during the MRP term, as provided in the MRP Application[6].

Table C2-11: FBC Telecommunications Sustainment Capital Expenditures on Projects Greater than $1 million in MRP Application ($000s)

	Category	2020	2021	2022	2023	2024
Backbone Transport Technology Migration	Systems Upgrades and Replacements	-	-	937	953	-
SCADA System Replacement	Systems Upgrades and Replacements	-	1,086	2,192	2,188	1,086
VHF Radio System Replacement	Systems Upgrades and Replacements	-	-	548	875	-

The table below shows the updated forecast spend profile of the projects greater than $1 million in this category during the MRP term.

Table C2-12: Updated FBC Telecommunications Sustainment Capital Expenditures on Projects Greater than $1 million ($000s)

	Category	2020	2021	2022	2023	2024
Backbone Transport Technology Migration	Systems Upgrades and Replacements	-	-	-	841	853
SCADA System Replacement	Systems Upgrades and Replacements	-	-	-	543	1,080
VHF Radio System Replacement	Systems Upgrades and Replacements	-	-	-	-	540

Each of these projects is described in further detail below:

- **Backbone Transport Technology Migration:** This project will replace FBC's existing SONET network with a new high-speed data network supporting all present and anticipated future applications needed to provide safe and reliable service. The project, which was originally forecast to start in 2022, is now expected to commence in 2023.
- **SCADA System Replacement Project:** This project was planned to start in 2021; however, due to limited resources the business analysis was not initiated until late 2021,

[6] MRP Application, Section 3.4.1.2.5, pp. C-99 to C-101.

resulting in delays to determine the best SCADA solution. The estimated cost of this project has decreased to approximately $6 million.

- **VHF Radio System Replacement Project:** The existing FBC Electric VHF Radio system is at the end of its service life (>20 years old) and the technology is obsolete. Parts are still available but are becoming more difficult to source and the legacy technology is difficult to support as new hires are not trained or experienced with the legacy technology. New 2-way radio technologies bring significant benefits with respect to sharing of channels, ease of maintenance, superior coverage and ability to send data in addition to voice. In 2024, the first stages of the VHF radio replacement project are expected to start, with the project continuing into 2025.

Appendix D

DRAFT ORDER

bcuc
British Columbia
Utilities Commission

Suite 410, 900 Howe Street
Vancouver, BC Canada V6Z 2N3
bcuc.com

P: 604.660.4700
TF: 1.800.663.1385
F: 604.660.1102

ORDER NUMBER
G-xx-xx

IN THE MATTER OF
the *Utilities Commission Act*, RSBC 1996, Chapter 473

and

FortisBC Inc.
Annual Review for 2023 Rates

BEFORE:
E. B. Lockhart, Panel Chair
C. M. Brewer, Commissioner
A. Pape-Salmon, Commissioner

on Date

ORDER

WHEREAS:

A. On June 22, 2020, the British Columbia Utilities Commission (BCUC) issued its Decision and Order G-166-20 approving a Multi-Year Rate Plan (MRP) for 2020 through 2024 (2020-2024 MRP Decision) for FortisBC Inc. (FBC). In accordance with the 2020-2024 MRP Decision, FBC is to conduct an annual review (Annual Review) process to set its rates for each year;

B. By letter dated June 28, 2022, FBC proposed a regulatory timetable for the Annual Review of its 2023 rates;

C. By Order G-193-22 dated July 15, 2022, the BCUC established the regulatory timetable for the Annual Review of FBC's 2023 rates, which included FBC filing its Annual Review materials, intervener registration, one round of information requests, a workshop, FBC's responses to undertakings at the workshop, and written final and reply arguments;

D. On August 5, 2022, FBC submitted its materials for the Annual Review for 2023 Rates Application (Application). In the Application, FBC requests a 3.99 percent rate increase over 2022 rates, effective January 1, 2023, among other things; and

E. The BCUC has reviewed the Application, evidence and arguments filed in the proceeding and makes the following determination.

NOW THEREFORE pursuant to sections 59 to 61, 89 and 99 of the *Utilities Commission Act*, for the reasons stated in the decision issued concurrently with this order, the BCUC orders as follows:

1. FBC is approved to recover the 2023 revenue requirement and resultant rate change on an interim basis, effective January 1, 2023, as filed in the Application and subject to any adjustments identified by FBC during

the regulatory process and from any directives or determinations made by the BCUC in its decision on the Application. Rates will remain interim pending the outcomes of Stage 1 of the BCUC's current generic cost of capital (GCOC) proceeding and FBC's 2023-2027 Demand Side Management (DSM) Plan proceeding.

2. The level of forecast growth, sustainment and other capital to be incorporated in rates for the years 2023 and 2024, as set out in Section 7.2.1, is approved.

3. FBC is approved to:

    a. Create a rate base deferral account for the 2023 Joint Pole Use Audit and amortize the deferral account over five years commencing January 1, 2023; and

    b. Amortize the existing COVID-19 Customer Recovery Fund Deferral Account over three years commencing January 1, 2023.

4. FBC is approved to cease reporting on the COVID-19 Customer Recovery Fund Deferral Account.

5. Directive 6 of Order 42-21 is varied as follows: "FBC is approved to record COVID-19 incremental costs and related savings from 2020 and 2021 into the Flow-through deferral account".

6. Directive 2 of Order G-83-14 is varied as follows: "Approval is granted until such time as FBC no longer has an exemption to prepare and file its financial statements in accordance with US GAAP or is no longer reporting under US GAAP for financial reporting purposes".

7. FBC is directed to file with the BCUC as a compliance filing, within 15 days of the issuance of this order, amended tariff pages and finalized financial schedules for 2023, in accordance with the terms of this order.

DATED at the City of Vancouver, in the Province of British Columbia, this (XX) day of (Month Year).

BY ORDER

(X. X. last name)
Commissioner