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October 5, 2021

Industrial Customers Group
c/o #301 – 2298 McBain Avenue
Vancouver, BC V6L 3B1

Attention: Mr. Robert Hobbs

Dear Mr. Hobbs:

Re: FortisBC Inc. (FBC)
Project No. 1599231
Annual Review for 2022 Rates (Application)
Response to the Industrial Customers Group (ICG) Information Request (IR) No. 1

On August 6, 2021, FBC filed the Application referenced above. In accordance with the regulatory timetable established in British Columbia Utilities Commission Order G-226-21 for the review of the Application, FBC respectfully submits the attached response to ICG IR No. 1.

If further information is required, please contact the undersigned.

Sincerely,

FORTISBC INC.

Original signed:

Diane Roy

Attachments

cc (email only): Commission Secretary
Registered Parties

1. Reference: Exhibit B-2, Section 1.1, Introduction, p. 1

"Approximately $0.9 million of the total O&M savings were primarily due to labour savings, reflecting the impact of variances in customer contact needs as well as vacancies due to employee movement. Approximately $0.7 million of the savings were due to the timing of expenditures, such as unfilled vacancies and consulting expenditures, and lower general and miscellaneous expenditures."

1.1 Which positions were unfilled and what were the total savings?

Response:

FBC does not have a list of every position that was unfilled and the resulting impact. When vacancies occur, FBC managers are expected to review the requirements of the positions to determine how best to fill them. FBC has been able to achieve savings with this approach. For example, in the Internal Audit department, due to a maternity leave situation, a vacancy occurred in 2020. Instead of filling the position as is, the Internal Audit group was able to achieve net savings of approximately $100 thousand, in part by adjusting the amount of discretionary audits done. Additionally, consultant resources were used to backfill part of the maternity leave. This prioritization of resources was done without impacting the Internal Audit service to FBC's customers.

1.2 What work was not done because of vacancies, and what was impact on service and customers?

Response:

All required work to ensure safe and reliable service for customers was completed for 2020.

In 2020, overall service quality level was met as evidenced by the SQI performance. For the eight SQIs with benchmarks, six met or were better than the benchmark, with two better than the threshold.

2. Reference: Exhibit B-2, Section 1.4.3, Other Revenue, p. 4

"The main driver of this decrease is lower forecast Contract Revenue resulting from the timing of work expected to be performed on an asset refurbishment project for a third party, partially offset by higher Transmission Access Revenue."

2.1 How many resources were allocated to third party asset refurbishment (estimated in advance and actual) and how were those underutilized resources redeployed?

Response:

Please refer to the response to RCIA IR1 11.2.

3. Reference: Exhibit B-2, Section 2.2, Inflation, p. 7; Appendix A1, Table A1-2

3.1 Please provide the BC-AWE shown in Appendix A1, Table A1-2 for the "Utilities" category of the Statistics Canada information instead of the "Industrial Aggregate" category.

Response:

BC-AWE data for the Utilities category of the Statistics Canada information is provided below.

		Average weekly earnings including overtime for all employees[6]
Geography	Reference period	Utilities
		Dollars
British Columbia (map)	July 2019	1,920.08[A]
	August 2019	1,825.84[A]
	September 2019	1,898.21[C]
	October 2019	1,966.78[B]
	November 2019	1,919.92[A]
	December 2019	1,911.72[B]
	January 2020	2,044.50[B]
	February 2020	2,019.05[B]
	March 2020	1,937.44[B]
	April 2020	1,906.10[B]
	May 2020	2,085.18[C]
	June 2020	2,167.06[B]
	July 2020	1,642.97[B]
	August 2020	1,827.67[A]
	September 2020	1,778.15[B]
	October 2020	2,089.19[B]
	November 2020	1,847.56[A]
	December 2020	1,817.71[A]
	January 2021	1,936.33[B]
	February 2021	1,933.90[A]
	March 2021	1,750.17[A]
	April 2021	1,950.14[B]
	May 2021	1,825.94[B]
	June 2021	2,001.31[A]

3.2 Why is the "Utilities" category not more appropriate as the index for inflation calculations?

Response:

As can be seen by the data included in the Utilities category provided in response to ICG IR1 3.1, the month by month trend of the AWE data is quite volatile. FBC considers the AWE data from the Industrial Aggregate category to be a more accurate representation of the economy-wide labour inflation in BC, as it uses data from multiple industries and uses a wider sample size of data than would be used by isolating a specific industry. FBC has consistently used the Industrial Aggregate category of BC-AWE in calculating the inflation factor under its previous approved 2014-2019 PBR Plan and the current approved MRP. FBC submits that adjustments to the approved MRP are not within the scope of annual reviews.

4. Reference: Exhibit B-2, Section 2.3, Table 2-2, p. 9, Growth Factor Calculation Summary

4.1 Please explain why the Forecast 2022 customer additions are higher than Actual 2020 and Projected 2021 in Table 2-2, Line 16. What factors are contributing to this increase?

Response:

As shown in Appendix A2 of the Application, Section 3.2 (page 6), FBC's 2022 forecast of customer additions is 2,766 with the majority of the additions coming from residential and commercial rate classes. Please refer to the response to CEC IR1 7.1 for factors contributing to the increase in residential customer additions, and please refer to the responses to CEC IR1 7.2 and 7.3 for factors contributing to the increase in commercial customer additions.

4.2 Please explain the calculation of the 12-month Weighted Average Additions in Table 2-2, Line 17.

Response:

Please refer to the response to BCUC IR1 4.1.

5. Reference: Exhibit B-2, Section 2.4, p. 9, Table 2-3; Inflation and Growth Calculation Summary; Annual Review for 2020 and 2021 rates, Exhibit B-4, BCOAPO IR No. 1, 4.3

"Further, while in 2021 the increase to the Formula O&M has been higher due to the higher I-Factor, this trend will likely reverse in 2022 as the labour impacts from Covid-19 lessen and AWE returns to more normal levels. The potential decrease in BC-AWE in 2021 will reduce, or potentially even create a negative I-Factor, which when applied to the calculation of 2022 Formula O&M would result in a smaller increase or decrease to the 2022 Formula O&M amount relative to 2021. Therefore, the impact on 2021 revenue requirements may be offset in subsequent years."

5.1 Please confirm the above quote from the Annual Review for 2020 and 2021 rates.

Response:

Confirmed.

5.2 Please add to Table 2-3 columns for each year of the MRP Plan and provide the BC-CPI and BC-AWE data from 2016 with the average growth in BC-CPI and BC-AWE for the same period.

Response:

Please refer to the response to RCIA IR1 4.3.

5.3 Please confirm that 2022 BC-AWE has not returned "to more normal levels" as FBC expected during the Annual Review of the 2020 and 2021 rates proceeding?

Response:

Please refer to the response to BCOAPO IR1 4.3.

5.4 Please file the AUC Decision 2012-237 dated September 12, 2012 page 48, paragraphs 228-229.

Response:

Please refer below for paragraphs 228-229 of AUC Decision 2012-237, dated September 12, 2012. The complete AUC Decision is available at:
https://www.auc.ab.ca/regulatory_documents/ProceedingDocuments/2012/2012-237.pdf

> 228. Nevertheless, the Commission has decided in the previous section of this decision to use Alberta CPI for non-labour costs. The Commission observed earlier in this section that the CPI includes some embedded labour. Therefore, using this index for the non-labour component together with the AWE index for the labour component may lead to a double-counting of labour costs. In this case, the 60:40 weighting would overstate the companies' input price inflation in years when growth in the Alberta AWE exceeds the growth in the Alberta CPI. Conversely, the companies' input price inflation would be understated in years when growth in the AWE is lower than the growth in the Alberta CPI. Accordingly, to temper the possibility that inflation in the companies' input prices will be overstated or understated, the Commission considers that a 55:45 ratio of labour to non-labour expenditures should be used for calculating the I factors in the companies' PBR plans.
>
> 229. Consistent with the findings in Decision 2009-035, in order to ensure that the companies' incentives will not be influenced by the relative rates of inflation between the components in the I factor, the Commission also finds that the 55:45 ratio of labour to non-labour expenditures should be held constant throughout the PBR term.[231]

In the MRP Decision and Order G-166-20, the BCUC determined (at page 48) "that it is more appropriate to set the labour to non- labour ratio annually and to base it on the most recently completed year. This does introduce lag but relying on the previous year's ratio is likely to be more reliable and accurate than a five-year forecast."

5.5 Please compare the union labour rate increases experienced by FBC in 2020 and 2021 with the BC-AWE indices from 2020 and 2021.

Response:

Please see the table below comparing the FBC union labour rate increases to the BC-AWE indices for 2020 and 2021.

	2020	2021
IBEW	2.000%	2.000%
MoveUP	2.000%	2.000%
MoveUP CS	1.500%	1.500%
BC AWE	2.881%	5.745%

Please refer to the response to RCIA IR1 4.3 for a discussion of the BC-AWE index in comparison to FBC's union labour rate increases.

5.6 Please provide in table format the Formula driven O&M percentage increases from the first year of the MRP Plan to 2022, and include in the table the line items identified in response to ICG IR No. 1, 6.1 of the Annual Review for 2020 and 2021 rates with a "year over year formula %" increase line item for each year?

Response:

Please refer to the table below for the information requested:

Line	Particular	2020	2021	2022	Reference
1	Base Unit Cost O&M ($/Customer)	412	422	437	2020: Schedule 20, Line 2; 2021 & 2022: Prev Yr, Line 12
2					
3	CPI	2.692%	1.596%	1.281%	Schedule 3, Line 2
4	AWE	2.881%	5.745%	6.532%	Schedule 3, Line 3
5	Labour Split				
6	Non Labour	38.000%	38.000%	37.000%	Schedule 3, Line 5
7	Labour	62.000%	62.000%	63.000%	Schedule 3, Line 6
8	Inflation Factor for Costs	2.809%	4.168%	4.589%	(Line 3 x Line 6) + (Line 4 x Line 7)
9	Productivity Factor	-0.500%	-0.500%	-0.500%	G-166-20
10	Net Inflation Factor for Costs	2.309%	3.668%	4.089%	Line 8 + Line 9
11					
12	Current Year Unit Cost O&M ($/Customer)	422	437	455	Line 1 x (1 + Line 10)
13					
14	Average Customer Forecast - Rate Setting Purposes	141,594	142,473	145,378	Schedule 3, Line 22
15					
16	Inflation-Indexed O&M before prior year true-up ($000s)	59,752	62,261	66,147	Line 12 x Line 14 / 1000
17	Average Customer O&M True-up ($000s)	-	-	53	Schedule 20, Line 10
18	Inflation-Indexed O&M ($000s)	59,752	62,261	66,200	Line 16 + Line 17
19					
20	Year over year formula increase ($000s)	3,671	2,508	3,939	2020: Line 18 - 2019 formula O&M of $56,081; 2021 & 2022: Line 18: Curr Yr - Prev Yr
21	Year over year formula Increase (%)	6.547%	4.198%	6.327%	Current Yr, Line 20 / Previous Yr, Line 18

5.7 Please confirm that FBC forecasted rate increases of approximately 3.5% over the 2022-2024 period based on certain assumptions, including an O&M formula escalation of 2.0 percent. If confirmed, please revise the rate increase forecast assuming an O&M formula escalation that is equal to the average O&M formula increase of 2020 and 2021.

Response:

FBC believes ICG is referring to FBC's response to BCMEU IR1 1.7 in the 2020 and 2021 Annual Review proceeding. As discussed in the response to that information request, FBC was unable to predict future rate increases with confidence at that time. However, to assist wholesale customers in the planning and management of those customers' utilities, FBC stated: "On a preliminary basis, the Company believes that rate increases may average approximately 3.5

percent over the 2022-2024 period...” This was based on a number of simplifying assumptions as listed in the response, including a 2 percent increase in formula O&M.

As FBC is now requesting approval of 2022 rates in the current annual review, there is no need for FBC to provide a preliminary estimate for 2022. FBC has provided its detailed forecast revenue requirement and proposed rates for 2022 using the MRP approved net inflation factor for O&M.

Please refer to the response to BCUC IR1 2.2 for a high level estimate of 2023 and 2024 rates. In the response to BCUC IR1 2.2, FBC has used the same net inflation factor as has been applied to 2022 rates, rather than the approach requested by ICG in this IR. FBC does not consider the approach suggested by ICG to be relevant as FBC’s formula O&M is approved to be escalated annually by a net inflation factor; thus, there would be no informational value to providing the requested analysis.

6. Reference: Exhibit B-2, Section 3.3, Table 3-1, p. 13, Demand Side Management Savings

6.1 Please explain the loss reduction calculation that resulted in the loss savings of 5 GW.h identified in Table 3-1, Line 8.

Response:

DSM savings are forecast on an end-use basis (net of losses) and therefore the related losses must also be calculated on a net load basis. This is achieved by multiplying the net DSM savings by 8.23 percent, which is the net loss rate (losses as a proportion of sales or net load).

- The gross load loss rate is 7.6% of gross load before savings.
- The net loss rate is 8.23% = 7.6%/(1-7.6%).
- Net 2022 DSM savings (after losses) = 56 GWh.
- DSM Losses of 4.6 GWh = 56 GWh * 8.23%, rounded to 5 GWh.

7. Reference: Exhibit B-2, Section 4.6, Table 4-3, p. 30, 2022 Forecast Power Purchase Expense

7.1 Please provide the energy and capacity associated with line items 1 through 5 in Table 4-3.

Response:

Please refer to the response to BCOAPO IR1 19.1 for the energy associated with Lines 1 through 5 in Table 4-3. The winter peak capacity associated with Lines 1 through 5 in Table 4-3 is detailed in the table below. Please note that under the BC Hydro PPA, FBC has the ability to purchase up to 200 MW of capacity, but forecasts purchasing only the required amount to serve its load.

Line No.	Description	Approved 2021	Projected 2021	Forecast 2022
1	Brilliant	143	143	143
2	BC Hydro PPA	150	140	142
3	Waneta Expansion	218	217	217
4	Market and Contracted Purchases	45	45	45
5	Sale of Surplus Power	0	0	0

8. Reference: Exhibit B-2, Section 5.4, p. 36, Other Revenue

"The 2021 Projected review is higher than 2021 Approved due to a transmission customer exceeding their nomination at the beginning of 2021."

8.1 Please identify the tariff that required the nomination?

Response:

The tariff that required nominated wheeling demand is Electric Tariff Supplement No. 9 as part of RS 110 – General Wheeling Service for BC Hydro.

9. Reference: Exhibit B-2, Section 6.2.1, p. 40

"Incremental activities and costs of approximately $0.309 million in the "Other" Operations Integrity and Security category were incurred for tree management and dam rock trap clearing activities."

9.1 Why were these activities captured in "Other" rather than "Tree Management" and "Generation Dam Safety?

Response:

Please refer to the response to CEC IR1 16.1.

9.2 What were the actual expenditures within the "Other" category for tree management and dam rock trap clearing activities?

Response:

Please refer to the response to CEC IR1 16.1.

10. Reference: Exhibit B-2, Section 6.3.5, p. 44, MRS Incremental Operating Expenses

10.1 Please explain why FBC did not propose Flow-through Capital Expenditure treatment of the MRS AR13 incremental costs in the Annual Review for 2021 rates, given the issue date of the MRS Assessment Report No. 13 (AR13)?

Response:

Please refer to the response to BCUC IR1 24.1.

10.2 Please provide and compare the criteria for use of a deferral account for MRS triennial Audit Costs and for use of Flow-Through Capital Expenditure treatment for incremental costs of the MRS Assessment Report No. 13?

Response:

The difference in treatment of the MRS triennial audit costs and the incremental costs to comply with MRS Assessment Report No. 13 (AR13) is related to the nature of the costs and the matching of costs and benefits.

FBC explained the rationale for deferral account treatment for the triennial audit costs in its response to BCUC IR1 19.1 as part of FBC's 2020 and 2021 Annual Review proceeding. In that response, FBC stated that deferral account treatment for the periodic MRS compliance audits is a more appropriate means of recognizing costs because it permits recovery over the period between audits and results in a level spending profile, compared to recovering the full costs of the audit in a single year, as would result from expensing the audit costs. The BCUC approved deferral account treatment for the 2021 triennial MRS audit costs as part of the Annual Review for 2020 and 2021 Rates Decision and Order G-42-21[1].

With regard to the incremental costs to comply with AR13, there are both O&M and capital costs included in the forecast for 2022. As explained in the response to ICG IR1 15.1, FBC was directed to seek exogenous factor treatment for incremental MRS costs arising from new MRS policies and standards. The regulatory accounting treatment for exogenous factor costs are that they are forecast annually for the relevant years based on the information known at that time and the variances between forecast and actual costs (O&M or capital) are recorded in the Flow-through deferral account. While it is possible that exogenous factor costs could be recorded directly into a deferral account and the actual costs be amortized over a specified number of years, this treatment does not align as well with the nature of the incremental AR13 MRS costs. As explained in the Application, FBC expects to incur ongoing incremental costs in 2023 and beyond related to

[1] Annual Review for 2020 and 2021 Rates Decision and Order G-42-21, p. 21.

AR13; thus, the costs are not considered periodic but continual/ongoing and are more appropriately forecast annually with other O&M (and potentially capital) costs outside of the formula.

10.3 Please provide a detailed breakdown of costs and an explanation of each of the major activities required to comply with MRS AR13?

Response:

Please refer to the response to BCUC IR1 24.2.

10.4 Please provide the results of FBC's most recent MRS audit?

Response:

For the 40 BC Reliability Standard Requirements identified in the scope of the 2021 Compliance Audit, the Compliance Audit determined that 33 requirements had no findings, five were not applicable and two had open action items.

The audit also included nine recommendations where there may be opportunity for improving compliance related processes, procedures, or tools as well as one positive observation where FBC's documentation was comprehensive and included detailed elements to reduce the risk to the Bulk Electric System.

10.5 Please explain why the annual costs of compliance with MRS AR13 are incremental costs and not a change to costs already being incurred to ensure system reliability and stability?

Response:

The annual costs of compliance with MRS AR13 are incremental costs due to the addition of requirements to the standards within AR13. This is additional/new work to be done in order to achieve and maintain compliance. Please also refer to the response to BCUC IR1 24.2.

1

11. Reference: Exhibit B-2, Section 6.4, Net O&M Expense, p. 45

11.1 What is the dollar value of capitalized overhead that has been removed from O&M?

Response:

Please refer to Table 6-1 of the Application which shows the 2022 Forecast capitalized overhead is $10.177 million.

12. Reference: Exhibit B-2, Section 7.2.1, Table 7-2 and Section 7.4, Table 7-4, Approved Capital Expenditures

12.1 Please explain why the Approved 2021 column has not been updated in the Projected 2021 column of Table 7-2. For Major Capital Expenditures, please add to Table 7-2 an Approved 2021 column and a Projected 2021 column?

Response:

FBC did not include a 2021 Projected column for Table 7-2 because, consistent with the MRP framework, FBC manages its overall spending and does not report in the annual reviews on the variances between formula/forecast and actual O&M and capital expenditures that are subject to earnings sharing. Portraying some Projected values for items that affect ROE and earnings sharing (like variances between 2021 Approved and Projected/Actual regular capital expenditures) without a full picture of all of the various impacts could be misleading. The variance between the approved and actual (once it is known) regular capital will be trued-up in 2023 and subject to earnings sharing.

However, to be responsive to this IR, FBC has provided the following updated Table 7-2 which includes 2021 Projected regular capital expenditure estimates along with major capital expenditures as requested. FBC has also included 2020 actual expenditures to align with the response to ICG IR1 12.2.

Line No.	Description	Actual 2020	Approved 2021	Updated Projected 2021	Forecast 2022	Reference
1	Growth Capital	$ 28.799	$ 23.042	$ 29.148	$ 24.339	Section 11, Schedule 4, Line 2
2	Sustainment Capital	47.325	49.818	50.910	43.110	Section 11, Schedule 4, Line 3
3	Other Capital	16.036	14.712	14.086	14.756	Section 11, Schedule 4, Line 4
4	Total Forecast Capital	$ 92.160	$ 87.573	$ 94.144	$ 82.205	Section 11, Schedule 4, Line 5
5	Flow-Through Capital	-	-	-	0.935	Section 11, Schedule 4, Line 9
6	Special Projects and CPCNs	23.049	21.938	35.514	19.401	Section 11, Schedule 5, Line 10
7	Total Capital	$ 115.209	$ 109.511	$ 129.658	$ 102.541	

With regard to CPCNs and special projects, the annual amount shown in the table does not reflect an annual "approved" amount, but is simply the amount of the total project spending incurred or forecast to be incurred in a specific year. FBC also notes the amount shown on Line 6 of the table above represents the capital expenditure excluding AFUDC and change in work in progress for CPCNs and special projects[2].

As discussed in the Evidentiary Update filed concurrently with these IR responses, FBC is requesting approval of an exogenous factor for the costs of one wildfire which occurred this summer. The capital costs associated with the exogenous factor wildfire are not included in the updated table; however, these costs are included in the Evidentiary Update.

[2] Equals to the sum of Lines 11 to 15 in the table in ICG IR1 12.2.

12.2 Please revise Table 7-4 by adding an additional column for actual 2020 and projected 2021?

Response:

Please refer to the revised Table 7-4 below with 2020 Actuals and 2021 Projected (note that the figures in the table are in $ millions). The capital expenditures shown in the table below equal the capital expenditures in the updated Table 7-2 in the previous response, but also have separate lines for capitalized overhead (where applicable), AFUDC and change in work in progress.

Line No.	Description	Actual 2020	Approved 2021	Updated Projected 2021	Forecast 2022	Reference
1	Forecast Capital Expenditures	$ 92.160	$ 87.573	$ 94.144	$ 82.205	Section 11, Schedule 5, Line 2
2	Flow-Through Capital Expenditures	-	-	-	0.935	Section 11, Schedule 5, Line 3
3	Total Gross Regular Capital Expenditures	92.160	87.573	94.144	83.140	Sum of Lines 1 and 2
4						
5	Capitalized Overhead	9.330	9.767	9.795	10.177	Section 11, Schedule 5, Line 18
6	AFUDC	0.296	0.542	0.503	0.214	Section 11, Schedule 5, Line 19
7	Change in Work in Progress	(7.636)	5.717	-	-	Section 11, Schedule 5, Line 21
8	Total Regular Additions to Plant	**94.150**	**103.599**	**104.442**	**93.531**	Sum of Lines 3 through 7
9						
10	Special Projects and CPCN Capital Expenditures					
11	Corra Linn Spillway Gate Replacement	13.122	8.640	13.147	6.019	Section 11, Schedule 5, Line 7
12	Grand Forks Terminal Station	3.545	2.806	2.171		
13	Upper Bonington Old Units Refurbishment	5.732	1.782	1.707		
14	Playmor Substation Rebuild Project	0.650	8.710	8.730	1.297	Section 11, Schedule 5, Line 8
15	Kelowna Bulk Transformer Capacity Addition	-	-	9.759	12.085	Section 11, Schedule 5, Line 9
16	AFUDC	2.032	1.857	1.892	2.158	Section 11, Schedule 5, Line 25
17	Change in Work in Progress	(4.660)	16.612	(9.290)	10.803	Section 11, Schedule 5, Line 27
18	Total Special Projects and CPCN Additions to Plant	**20.421**	**40.407**	**28.116**	**32.362**	Sum of Lines 11 through 17
19						
20	Total Plant Additions	**$ 114.571**	**$ 144.006**	**$ 132.558**	**$ 125.893**	Line 8 + Line 18

12.3 Please identify the 2022 rate base increase for the Playmor Project?

Response:

There are no rate base capital additions related to the Playmor Project in 2022. As discussed in Section 7.3 of the Application, the project is currently forecast to enter rate base in 2023.

1

13. Reference: Exhibit B-2, Section 7.3, pp. 48-49, Major Projects Capital Expenditures

13.1 Please provide a reconciliation of the current estimated final cost against the approved and/or initially estimated cost for each of the major projects identified in Section 7.3.

Response:

Please refer to the response to BCOAPO IR1 27.2.

14. Reference: Exhibit B-2, Section 7.6.2.5, 2021 LTERP, p. 61

14.1 How often does FBC perform the LTERP? How does the proposed amortization period compare to this frequency?

Response:

Please refer to the response to CEC IR1 24.2.

15. Reference: Exhibit B-2, Section 12.2.1, pp. 103-104, MRS Incremental Operating Expenses

15.1 Mandatory Reliability Standards were implemented in British Columbia over 10 years ago. At what point do MRS expenditures cease to qualify for exogenous factor treatment?

Response:

While the MRS framework has been in place for many years, the MRS themselves continue to evolve and new MRS adopted in BC continue to meet the criteria for exogenous factor treatment as approved by the BCUC. FBC considers that flow-through treatment, as opposed to exogenous factor treatment, would likely be more appropriate for incremental costs to comply with the MRS program. FBC requested this change in treatment (from exogenous factor to flow-through) as part of the MRP Application. However, the BCUC disagreed and directed that FBC continue to file for exogenous factor treatment of incremental MRS costs, stating that "continuing with exogenous factor treatment for costs associated with future policy changes will still allow the Utilities to recover costs that have been reviewed and approved by the BCUC, subject now to a reduced materiality threshold"[3].

Therefore, for the duration of the MRP, FBC will continue to apply for exogenous factor treatment for incremental MRS costs that exceed the exogenous factor threshold and meet the other four exogenous factor criteria, consistent with FBC's approach during the 2014-2019 PBR Plan term.

15.2 Please provide a reconciliation of MRS related actual operating and capital expenditures against the estimates provided in FBC's responses to BC Hydro's questionnaires for each Assessment Report since 2015.

Response:

Since 2015, and including the assessment report for which FBC is seeking exogenous factor treatment in this Application, there are three reports which meet the Z-Factor criteria: Assessment Report (AR) No. 8 (AR8), AR No. 10 (AR10) and AR No. 13 (AR13).

FBC provided estimated cost ranges at the time of the assessment period for AR8, AR10 and AR13. FBC did not differentiate between capital and O&M in the estimated costs at that time. FBC refined the estimates and separated O&M and capital once the revisions to the standards were adopted and effective dates established by the BCUC. FBC then put forward the estimates as part of the annual review process. These are shown in the tables below.

[3] MRP Decision and Order G-166-20, p. 75.

Assessment Report Submission ($000s)				
	One-time		Ongoing	
	Low	High	Low	High
AR8	965	1,430	475	650
AR10	3,315	4,270	2,843	3,470
AR13	700	1,020	280	500

1

FBC Actual Incremental MRS O&M Expenses 2015-2019 ($000s)					
	One-time			Ongoing	
	2015	2016	2017	2018	2019
Z-Factor - AR8	0	464	53	532	541
	One-time				
	2015	2016	2017	2018	2019
Z-Factor - AR10	0	0	0	51	350

2

FBC Actual Incremental MRS Capital Expenditures 2015-2019 ($000s)					
	One-time			Ongoing	
	2015	2016	2017	2018	2019
Z-Factor - AR8	0	0	1,371	72	50
	One-time				
	2015	2016	2017	2018	2019
Z-Factor - AR10	0	0	0	0	1,579

3 With regard to the ongoing incremental O&M and capital costs for AR8 and AR10 provided in the
4 above tables, these amounts were incorporated into FBC's Base O&M and Forecast regular
5 capital as part of the MRP; therefore, these costs are no longer being tracked separately outside
6 of regular indexed O&M and regular sustainment/other capital.

7 Please refer to the response to BCUC IR1 24.2 for a breakdown of the forecast incremental O&M
8 and capital costs for AR13.

9

16. Reference: Exhibit B-2, Section 13.2.3, pp. 125-129, Reliability Service Quality Indicators

16.1 Please provide the language in the Joint Operating Orders with the Wholesale Customers that establishes the protocols for unplanned outages?

Response:

The language that establishes the protocol for unplanned outages with the City of Penticton is provided below as an example. This section in the Joint Operating Order was added during a recent update to both the City of Penticton and City of Summerland Joint Operating Orders. Similar language will be added to the City of Nelson and City of Grand Forks Joint Operating Orders during the next update.

Protocol for Unplanned Outage Notification

1. Outage occurs.
2. FortisBC Portal Updates with affected customers shown.
3. FortisBC updates as information comes available.
4. City of Penticton checks the FortisBC Outage Portal (https://outages.fortisbc.com) for updates.
5. City of Penticton may call the FortisBC Control Centre for additional information as necessary.
6. Upon restoration, City of Penticton may contact FortisBC Control Centre for outage cause.
7. FortisBC may call City of Penticton Foreman or Person On-Call as necessary.

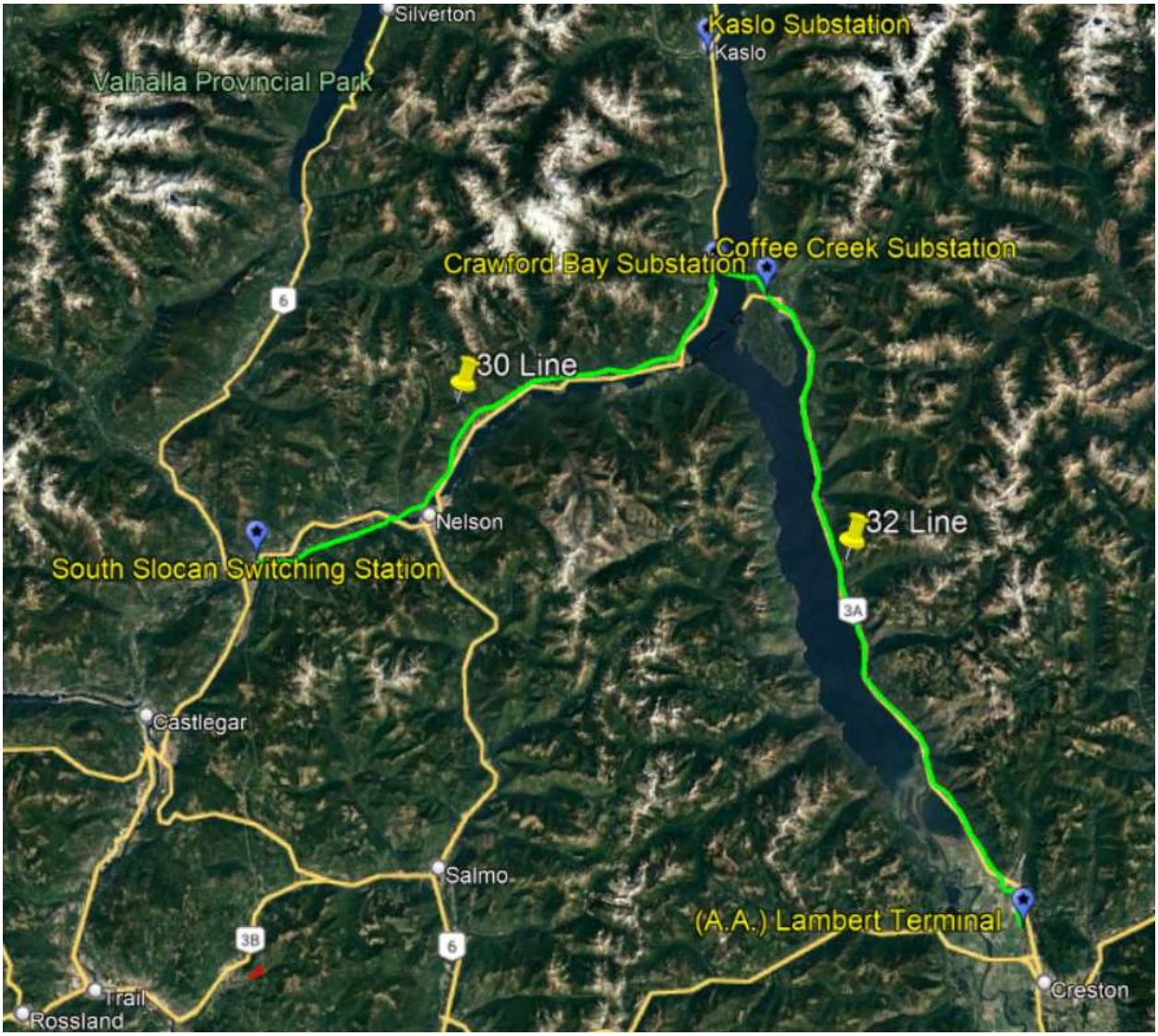
16.2 Please describe the challenges faced at the Coffee Creek substation and steps taken to improve reliability at the Coffee Creek substation? Did the challenges faced at the Coffee Creek substation contribute to any of the Major Events?

Response:

The main issue impacting the reliability of the Coffee Creek substation is the loss of transmission supply, which impacts all of the customers supplied by the substation. The substation is located on the west side of Kootenay Lake, approximately 45 km north of Nelson. Coffee Creek's primary transmission supply is from 30 Line (shown in the map below) which originates in South Slocan. The transmission line is located upslope of Highway 3A in steep and heavily forested terrain. The

line's proximity to the lake also leaves it exposed to the frequent storms which travel through the valleys in the area.

Backup transmission supply is also available via 32 Line (shown in the map below) which originates in Creston and runs along the east shore of Kootenay Lake. However, many of the same issues that impact 30 Line also affect 32 Line. Steep slopes, dense forest and frequent storms leave 32 Line as an unreliable backup supply.



It is common for storms to impact both lines at the same time, leaving Coffee Creek (as well as Kaslo and Crawford Bay) substations without transmission supply for extended periods. The majority of these outages involve damage to the transmission line structures due to trees, which take time to assess and repair due to the length of the line and the difficulties accessing many sections of the line. This exact scenario is what occurred during three out of the four Major Events in 2020.

To improve reliability for all customers fed from 30 and 32 Lines, a multi-year program is under development that will focus on improving vegetation management within the existing Right of Way. FBC is also planning to engage with local landowners to identify and remove danger trees that are outside of the Right of Way.

16.3 Please provide further details of the September 7, 2020 Major Event, and explain why all of the outages resulting from the September 7, 2020 storm are grouped as a single Major Event?

Response:

As stated in the Application, a major wind event on September 7, 2020 caused widespread outages to both transmission and distribution facilities across the West Kootenay. The main communities impacted were the Slocan Valley (Playmor, Winlaw, Slocan), Coffee Creek, Kaslo, Crawford Bay and Creston. In addition to the damage caused by trees contacting FBC infrastructure, much of the damage was in remote and mountainous terrain which is difficult to access.

Per IEEE Standard 1366 (Electric Power Distribution Reliability Indices), any interruption that spans multiple days is accrued to the day on which the interruption begins. Therefore, all the outages resulting from the September 7, 2020 storm are grouped as a single Major Event.

16.4 Please calculate SAIDI and SAIFI including the Major Event outages attributable to storms?

Response:

The non-normalized system SAIDI and SAIFI results for 2020 and August 2021 year-to-date including all Major Events are presented below:

Date	SAIDI	SAIFI
2020	5.83	1.99
August 2021 YTD	5.48	1.59

16.5 Please explain why storm related events and wildfire related events should both be grouped together as Major Events.

Response:

As per IEEE Standard 1366 (Electric Power Distribution Reliability Indices), Major Event days are realized when the total customer hours interrupted in a single day exceeds the threshold value based on historical performance. The underlying cause of the outages (storm, wildfire or other) is not a factor in determining Major Events.

16.6 Should storm related events and wildfire related events be considered distinct events for transmission planning purposes? If so, would it be reasonable to expect a change to transmission plans for capital expenditures?

Response:

The main criteria for FBC Transmission Planning is to ensure adequate system capacity to maintain system reliability, and includes analysis of contingencies related to transmission level outages. FBC is constantly monitoring and evaluating its system performance based on feedback from Operations as well as participation in industry groups such as CEA, CEATI and others. This feedback allows FBC to strive for continuous improvement in design standards, material selections and installation methodology. There are no specific plans at this time to make any changes to Transmission Planning criteria related to storm or wildfire events.

16.7 Please provide the running hours of each generator in the FBC fleet in 2020 and 2021, and any comparable CEA statistics.

Response:

Running hours and Operating Factor (OP%) for each generator in the FBC fleet in 2020 and June 2021 year-to-date are presented below. Operating Factor is a measurement of the time that a generating unit was running versus total hours in a year. For comparison, the 2019 CEA total Operating Factor for hydro generating units was 70.57 percent.

Unit	2020 Running Hours	2020 OP%	June 2021 YTD Running Hours	June 2021 YTD OP%
Lower Bonnington - 01	8608	98%	4334	100%

Unit	2020 Running Hours	2020 OP%	June 2021 YTD Running Hours	June 2021 YTD OP%
Lower Bonnington - 02	4005	46%	1908	44%
Lower Bonnington - 03	8675	99%	4053	93%
Upper Bonnington - 01	2425	28%	765	18%
Upper Bonnington - 02	10	0%	1040	24%
Upper Bonnington - 03	3216	37%	801	18%
Upper Bonnington - 04	3149	36%	1062	24%
Upper Bonnington - 05	7276	83%	2707	62%
Upper Bonnington - 06	4959	56%	3269	75%
South Slocan - 01	5579	64%	1622	37%
South Slocan - 02	8245	94%	4343	100%
South Slocan - 03	7185	82%	4344	100%
Corra Linn - 01	8653	99%	3650	84%
Corra Linn - 02	8677	99%	4334	100%
Corra Linn - 03	3379	38%	2057	47%

16.8 Please explain whether any changes in the way FBC counts customers contributed to the customer-hours of interruption for either the September 7, 2020 outage or the April 18, 2021 outage as compared to previous years. For instance, is the loss of a wholesale municipal customer considered as a single customer, or the number of individual customers within that municipal customer's service territory?

Response:

There has been no change in the way that FBC counts customers as compared to previous years which have impacted the accounting of customer-hours of interruption for either the September 7, 2020 or April 18, 2021 events. A wholesale municipal customer is still considered as a single customer.

17. Reference: Exhibit B-2, Appendix A-2, Section 6.3, Normalized After-Savings Annual Percent Growth

17.1 In the Section 6.3 table, FBC presents the normalized actual to forecast load by customer class for each year from 2015 to 2020 and includes the forecast variance in terms of volume and percentage. For each customer class that experienced variance of greater than 3% (in absolute value terms) in 2020, please explain the forecast variance.

Response:

FBC assumes that this question is referring to Section 6.2 of Appendix A-2.

The load variance in the irrigation class exceeded 3 percent in 2020. Load variances in all other classes was lower than 3 percent in 2020.

The irrigation class load is both small (accounting for 1 percent of the FBC gross load) and subject to many factors including weather, precipitation, planting cycles and demand for goods produced. FBC does trend analysis on weather and precipitation for the irrigation class but at this time has not found a strong correlation. FBC is not able to objectively identify the combination of factors that resulted in the 2 GWh variance in 2020.

17.2 For the industrial customer class, please explain the difference in the year over year change in 2019 and 2020?

Response:

The industrial class experienced a 54 GWh decrease in load in 2020 compared to 2019. Approximately 68 percent of the decline is attributable to lower loads at two large industrial customers. A two percent reduction is attributable to nine small industrial customers that were switched into the commercial class because they were unable to maintain industrial-level loads. One customer closed their account. The remaining reduction was due to the net impact of 29 customers experiencing lower loads in 2020 compared to 2019, offset by 12 customers that recorded larger loads. While FBC cannot identify the specific causes of these changes, FBC assumes the COVID-19 pandemic played a significant role.

18. Reference: Exhibit B-2, Appendix A-3, p. 6, Load Forecast Methods

"…the forecast of DSM savings is consistent with the approved 2019-2022 DSM Plan."

"… the DSM peak forecast was calculated by subtracting DSM capacity savings forecast from the before DSM peak forecast for each month in each year."

18.1 Please provide in table format the DSM capacity savings from the 2019-2022 DSM Plan and the "DSM capacity savings forecast from the DSM peak forecast for each month in each year".

Response:

The incremental DSM capacity savings from the 2019-2022 DSM Plan from 2019 are shown below.

Annual DSM Capacity Savings from 2019-2022 DSM Plan (MW)

Year	Annual Capacity Savings
2019	6.2
2020	11.2
2021	11.2
2022	11.4

The incremental monthly DSM capacity savings forecast for 2021 and 2022 from the Application are shown below.

Forecast Monthly DSM Capacity Savings for 2021 and 2022 (MW)

	Total	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2021	9.4	0.9	0.8	0.8	0.8	0.8	0.7	0.7	0.7	0.8	0.8	0.8	0.8
2022	9.6	0.9	0.8	0.8	0.8	0.8	0.7	0.7	0.7	0.8	0.8	0.8	0.9

The forecast annual capacity savings in 2021 and 2022 in the Application are slightly lower than what was included in the 2019-2022 DSM Plan primarily due to slightly lower than anticipated per-project capacity savings in the low-income, commercial, and industrial program areas.

18.2 Please also provide capacity savings by customer type?

Response:

The incremental monthly DSM capacity savings forecast for 2021 and 2022 by customer type are shown below.

Forecast Monthly DSM Capacity Savings by Customer Type for 2021 and 2022 (MW)

2021	Total	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Residential	2.8	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3
Commercial	2.5	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Indusial	1.9	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Wholesale	2.0	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Irrigation	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lighting	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	9.4	0.9	0.8	0.8	0.8	0.8	0.7	0.7	0.7	0.8	0.8	0.8	0.8

2022	Total	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Residential	2.9	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3
Commercial	2.6	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Indusial	1.9	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Wholesale	2.0	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Irrigation	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lighting	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	9.6	0.9	0.8	0.8	0.8	0.8	0.7	0.7	0.7	0.8	0.8	0.8	0.9

19. Reference: Exhibit B-2, Appendix B-2, pp. 11-12, UBO Project Cost Summary

19.1 Please explain why project contingency is shown as nothing spent to date in Table B2-3 when the project is forecast to be 8% over budget?

Response:

Contingency was drawn down and allocated as the work progressed and costs were incurred. Therefore, the contingency spent or forecast to be used is embedded within each of the Units, Balance of Plant, Cost of Removal and AFUDC line items' respective "Forecast Total to Complete" values. For clarity, the following table provides the amount of contingency utilized against each of the line items contained in Table B2-3:

Description	Application/ Control Budget	Spent to Date	Estimate to Complete	Forecast Total to Complete	Variance	Contingency Utilized and Forecast
	(1)	(2)	(3)	(4)=(2)+(3)	(5)=((4)-(1))/(1)	(6)=(4-1)
	($000s)				(%)	($000s)
Unit 4	6,634	8,058	0	8,058	21%	1,424
Unit 3	4,079	6,518	10	6,528	60%	2,449
Unit 2	5,641	6,587	15	6,602	17%	961
Unit 1	8,050	8,287	0	8,287	3%	237
Balance of Plant	860	1,067	*685	1,752	104%	892
Cost of Removal	1,880	1,734	35	1,769	-6%	-111
AFUDC	867	1,146	36	1,183	36%	316
					Total Contingency Utilized and Forecast	6,168
					Control Budget Contingency	3,771
					Total Forecast Project Variance	2,397

**Includes $92 thousand in contingency.*

19.2 Please provide the detailed estimates for each line item in Table B2-3, demonstrating that no contingency has been added within each of those line items.

Response:

Please refer to the response to ICG IR1 19.1.

19.3 Please confirm that if the contingency line item is removed from the Application/Control Budget, the UBO Refurbishment Project is forecast to be more than 20% over budget.

Response:

Comparing the forecast cost to complete to the control budget without contingency is not an appropriate measure, as contingency is appropriately part of the cost estimate for the Project.

The cost estimate developed for the Project, including contingency, meets the requirements for a class 4 level of project definition as defined by AACE International Recommended Practice No. 69R-12, Cost Estimate Classification System, as applied in Engineering, Procurement, and Construction for the Hydropower Industries. As such, the cost estimate for the project has an AACE class 4 expected accuracy range of -30 percent to +50 percent at an 80 percent confidence interval. The AACE accuracy range applies to the cost estimate with contingency.

However, even if contingency were entirely removed from the control budget, the forecast to complete value is more than 20 percent over budget, but well within the AACE class 4 expected accuracy range of -30 percent to +50 percent at an 80 percent confidence interval.

20. Reference: Annual Review for 2020 and 2021 Rates, Exhibit B-6, BCUC IR No. 1, 3.1

20.1 Please add columns for 2021P and 2022F to update the table provided in the response to BCUC IR No. 1, 3.1 in the Annual Review for 2020 and 2021 Rates proceeding?

Response:

BCUC IR1 3.1 in the 2020 and 2021 Annual Review requested the calculation for forecast losses. The table has been updated below. 2021S is used in the current Application since there are no 2021P values in the filing.

		2020 and 2021 Annual Review		2022 Annual Review		
Line No.	Year	2020P	2021F	2021S	2022F	Reference
1	Losses/Gross Load	7.6%	7.6%	7.6%	7.6%	
2	Losses/ Net Load	8.2%	8.2%	8.2%	8.2%	Line 1 ÷ (1-Line 1)
3			GWh			
4	Before Savings Net Load	3,304.4	3,404.6	3,337.6	3,362.1	Appendix A2, Table 2-2
5	Before Savings Losses	271.8	280.0	274.5	276.5	Line 2 x Line 4
6	DSM	(1.5)	(4.3)	(2.3)	(4.6)	Section 3, Table 3-1
7	After Savings Losses (Calculated)	270.3	275.7	272.2	271.9	Line 5 + Line 6
8	After Savings Losses (Filed)	276.4	278.7	272.2	271.9	Section 3, Figure 3-10
9	Difference	(6.1)	(3.0)	0.0	0.0	Line 7 - Line 8

The response to BCUC IR1 3.1 in the 2020 and 2021 Annual Review noted small discrepancies between the calculated and filed, which had no material impact on the revenue requirement.