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December 8, 2022

British Columbia Utilities Commission
Suite 410, 900 Howe Street
Vancouver, B.C. V6Z 2N3

Attention: Ms. Sara Hardgrave, Acting Commission Secretary

Dear Ms. Hardgrave:

Re: FortisBC Inc. (FBC)

Application for Approval of a Deferral Account for Electric Vehicle Workplace and Fleet Charging Funding (Application)

Response to the British Columbia Utilities Commission (BCUC) Panel Information Request (IR) No. 1

On May 13, 2022, FBC filed the Application referenced above. In accordance with the amended regulatory timetable established in BCUC Order G-340-22 for the review of the Application, FBC respectfully submits the attached response to BCUC Panel IR No. 1.

For convenience and efficiency, FBC has occasionally provided an internet address for referenced reports instead of attaching lengthy documents to its IR responses. FBC intended for the referenced documents to form part of its IR responses and the evidentiary record in this proceeding.

If further information is required, please contact the undersigned.

Sincerely,

FORTISBC INC.

Original signed:

Diane Roy

Attachments

cc (email only): Registered Parties

1.0 Reference: PROGRAM ASSUMPTIONS

Exhibit B-1, Section 1.1.3, p. 2, Exhibit B-7, BCUC IR 6.3, FBC Final Argument, pp. 1,

3, 6

Timing of the Program

On page 2 of the Application, FBC states:

> FBC forecasts that it will receive 50 applications in year 2022 […] Program participants will be billed at minimum for the revenue that the assumed consumption and demand per charger would yield on an annual basis. In the case where a charging station yields less than this amount of revenue within a one-year period from the energization date, a one-time charge for the shortfall will be billed… This minimum revenue requirement is intended to incent the Program participants to encourage the efficient usage of the EV charging infrastructure installed under the Program.

In response to BCUC IR 6.3, FBC states:

> FBC is proposing to commence amortization of the deferral account on January 1, 2023.

On page 1 of FBC's Final Argument, FBC states:

> FBC proposes that the account will attract a weighted average cost of capital (WACC) return until the end of the year in which the Application is approved, and then be transferred to rate base on January 1 of the following year and continue to capture the Program costs.

1.1 Given that it is now close to the end of Year 2022, please clarify how FBC plans to implement the Program and specify the Program's effective date if the BCUC grants its approval of the Application in early 2023.

Response:

FBC plans for the Program to be effective January 2023. FBC will begin working with customers on funding applications in January 2023 and FBC plans to have program materials available in the first quarter of 2023.

In Table 1 of the Application which is reproduced on Page 3 of FBC's Final Argument, FBC provides the following funding timeline and program expenditure by year:

Table 1: Funding Timeline and Program Expenditure

Line		Reference	2022	2023	2024	2025	Total
1	New Applications		50	67	86	107	310
2	Number of Chargers per Applicant		4	4	4	4	
3	Incentive Paid Per Charger		$ 2,150	$ 2,150	$ 2,150	$ 2,150	
4	Yearly Program Expenditure	Line 1 x Line 2 x Line 3	$ 430,000	$ 576,200	$ 739,600	$ 920,200	2,666,000

In an updated Table 5 from the Application which is reproduced on page 6 of FBC's Final Argument, FBC provides the cost-effectiveness of the program:

Line	Particulars	Reference	2022	2023	2024	2025	2026	2027	2028	2029	2030
1	Tariff Revenue	Application, Section 2.3.2.1	233	565	1,015	1,581	1,613	1,645	1,678	1,711	1,746
2	Cost of Energy	Application, Section 2.3.2.2	(163)	(388)	(687)	(1,070)	(1,092)	(1,114)	(1,136)	(1,159)	(1,182)
3	Incentive Cost	Application, Table 1-2	(430)	(576)	(740)	(920)	-	-	-	-	-
4	Program Costs	Application, Section 2.3.2.2	(62)	(63)	(64)	(66)	(67)	(68)	(70)	(71)	(72)
5	Total Costs & Benefits	Sum of Lines 1 through 4	(421)	(462)	(476)	(475)	454	463	472	482	491
6	PV Total Costs & Benefits	Line 5 / (1 + Line 8)^Yr	(399)	(415)	(404)	(382)	345	333	322	311	300
7	Sum of PV	Sum of Line 6	13								
8	Annual Discount Rate (After-Tax WACC)	Application, Section 2.3.2.3	5.62%	5.62%	5.62%	5.62%	5.62%	5.62%	5.62%	5.62%	5.62%

1.2 Please restate the two tables above assuming a decision on the Application will be issued in early 2023.

Response:

For prescribed undertakings under subsections 4(3)(a) and (b) of the GGRR, the GGRR cost effectiveness test is only assessed at the time FBC decided to carry out the undertaking:

> (4) An undertaking is within a class of undertakings defined in paragraph (a) or (b) of subsection (3) only if, *at the time the public utility decides* to carry out the undertaking, the public utility reasonably expects the undertaking to be cost-effective [1]. [Emphasis added]

FBC interprets "at the time the public utility decides" as the date at which FBC internally decided to proceed with the Program, which was when FBC filed the Application with the BCUC.

When FBC decided to carry out the undertaking and filed its Application, FBC reasonably expected the Program to be cost-effective based on the level of incentive and a start date of the Program in 2022.[2] At the time of its Application, however, FBC reasonably did not anticipate the length of this regulatory proceeding reaching the end of 2022 and into 2023.

As indicated in response to Panel IR 1.1, FBC has decided to implement the Program as of January 2023. Based on the start-date of January 2023, Table 1 and Table 2 below show that the Program will be cost-effective under the GGRR on a forecast basis if the incentive is reduced by approximately $230 per charger from $2,150 to $1,920. FBC notes that the analysis shown in

1 http://www.bclaws.ca/civix/document/id/crbc/crbc/102_2012.
2 See Part Three of FBC's Final Argument.

Table 2 below incorporates FBC's 2023 proposed rate increase of 3.98 percent [3] and the 2023 proposed capital structure.[4]

FBC maintains that it reasonably expected the Program to be cost-effective when it decided to undertake the Program, based on a 2022 start-date as set out in the Application. However, to be responsive to the Panel's questions and to ensure that the Program is a prescribed undertaking, FBC has decided to implement the program using an incentive of $1,920 per charger. As shown in Tables 1 and 2 below, the Program is cost effective on this basis.

Table 1: Revised Funding Timeline and Program Expenditure (2023 Start-date)

Line		Reference	2023	2024	2025	2026	Total
1	New Applications		50	67	86	107	310
2	Number of Chargers per Applicant		4	4	4	4	
3	Incentive Paid Per Charger		$ 1,920	$ 1,920	$ 1,920	$ 1,920	
4	Yearly Program Expenditure	Line 1 x Line 2 x Line 3	$384,000	$514,560	$660,480	$821,760	$2,380,800

Table 2: Revised Cost-Effectiveness (2023 Start-date)

Line	Particulars	Reference	2023	2024	2025	2026	2027	2028	2029	2030
1	Tariff Revenue		182	588	1,040	1,620	1,653	1,686	1,719	1,754
2	Cost of Energy		(124)	(396)	(701)	(1,092)	(1,114)	(1,136)	(1,159)	(1,182)
3	Incentive Cost		(384)	(515)	(660)	(822)	-	-	-	-
4	Program Costs		(61)	(62)	(63)	(65)	(66)	(67)	(68)	(70)
5	Total Costs & Benefits	Sum of Lines 1 through 4	(387)	(385)	(385)	(358)	473	483	492	502
6	PV Total Costs & Benefits	Line 5 / (1 + Line 8)^Yr	(366)	(344)	(325)	(286)	358	345	333	321
7	Sum of PV	Sum of Line 6	35							
8	Annual Discount Rate (After-Tax WACC)	2023 Annual Review	5.73%	5.73%	5.73%	5.73%	5.73%	5.73%	5.73%	5.73%

[3] https://docs.bcuc.com/Documents/Proceedings/2022/DOC_68952_B-13-FBC-Interim-Rates-Request.pdf.
[4] https://docs.bcuc.com/Documents/Proceedings/2022/DOC_67371_B-2-FBC-2023-AnnualReview-Application.pdf

2.0 Reference: PROGRAM ASSUMPTIONS

Exhibit B-2, Section 2.3.2.2, p. 8, Exhibit B-5, Flintoff IR 3.2.2, Exhibit B-6, CEC IR 7.1, FBC Final Argument, p. 6; FBC Annual Review of 2023 Rates, Exhibit B-2, Section 2.4,

p. 13

Inflation

On page 8 of the Application, FBC states:

> Annual administration related to customer account maintenance and review and any billing adjustments is estimated to be $60 thousand in year 1, and then increases yearly by an annual inflation factor of 2 percent. […] [*Emphasis added*]

On page 13 of FBC's Annual Review of 2023 Rates Application, FBC states:

> […] the Net Inflation Factor for 2023 is 4.017 percent […]

On page 6 of FBC's Final Argument, FBC provides the following table outlining the cost-effectiveness of the program:

Line	Particulars	Reference	2022	2023	2024	2025	2026	2027	2028	2029	2030
1	Tariff Revenue	Application, Section 2.3.2.1	233	565	1,015	1,581	1,613	1,645	1,678	1,711	1,746
2	Cost of Energy	Application, Section 2.3.2.2	(163)	(388)	(687)	(1,070)	(1,092)	(1,114)	(1,136)	(1,159)	(1,182)
3	Incentive Cost	Application, Table 1-2	(430)	(576)	(740)	(920)	-	-	-	-	-
4	Program Costs	Application, Section 2.3.2.2	(62)	(63)	(64)	(66)	(67)	(68)	(70)	(71)	(72)
5	Total Costs & Benefits	Sum of Lines 1 through 4	(421)	(462)	(476)	(475)	454	463	472	482	491
6	PV Total Costs & Benefits	Line 5 / (1 + Line 8)^Yr	(399)	(415)	(404)	(382)	345	333	322	311	300
7	Sum of PV	Sum of Line 6	13								
8	Annual Discount Rate (After-Tax WACC)	Application, Section 2.3.2.3	5.62%	5.62%	5.62%	5.62%	5.62%	5.62%	5.62%	5.62%	5.62%

2.1 Given that FBC's net inflation factor used in its Annual Review of 2023 Rates is 4.017 percent, please explain why 2 percent is the annual inflation factor in this Application.

Response:

FBC considers 2 percent to be a reasonable assumption for the purposes of this analysis as over the longer term it is likely that inflation will return to levels approximating 2 percent, consistent with the Bank of Canada's historical inflation target of 2 percent. In the short-term, if inflation were to continue to be higher than 2 percent, this higher inflation would not have an impact on the cost-effectiveness of the Program. In the response to Panel IR1 2.2, FBC demonstrates that even under a scenario of 5 percent annual inflation, which is unlikely over the long term, the Program is still cost-effective.

2.2 Please provide a sensitivity analysis and Net Present Value (NPV) of the table on page 6 of FBC's Final Argument if the inflation factor was increased to (i) 3 percent, (ii) 4.017 percent and (iii) 5 percent from 2022 to 2030.

Response:

Please see the Table 1 to 3 below, in the same format as the table on page 6 of FBC's Final Argument reference in the preamble above, for the sensitivity analysis on the NPV of the Program based on inflation factors of 3 percent, 4.017 percent, and 5 percent, respectively. FBC notes these tables are based on a Program start-date of 2022 as included originally in the Application. It can be seen that the Program will remain cost-effective under the criterion of the GGRR if inflation is assumed to be 5 percent each year until 2030.

FBC also provides Table 4 to 6 below showing the same NPV sensitivity analysis but based a program start-date of 2023 and a reduced incentive amount per charger as discussed in Panel IR1 1.2. It can be seen that based on a program start-date of 2023, the NPV of the program will be just below zero (i.e., approximately $6 thousand in deficit over an 8-year period or an average $750 per year) if inflation factor is assumed to be 5 percent each year until 2030.

However, as discussed in Panel IR1 2.1, FBC reasonably expects inflation will return to 2 percent over a long term as it is continuing to be the target by Bank of Canada. Furthermore, FBC has no evidence and there are no forecasts publicly available that would support an assumption of inflation at 5 percent over a long term, i.e., until 2030. As such, the Program is cost-effective based on reasonable forecasts of inflation factor whether the Program start-date is 2022 to 2023, and even if the inflation factor is doubled from the original assumption of 2 percent per year.

Table 1: Cost-Effectiveness Analysis for Annual Inflation Factor at 3% (2022 Start-Date)

Line	Particulars	Reference	2022	2023	2024	2025	2026	2027	2028	2029	2030
1	Tariff Revenue		233	568	1,020	1,588	1,620	1,653	1,686	1,719	1,754
2	Cost of Energy		(163)	(388)	(687)	(1,070)	(1,092)	(1,114)	(1,136)	(1,159)	(1,182)
3	Incentive Cost		(430)	(576)	(740)	(920)	-	-	-	-	-
4	Program Costs		(61)	(63)	(64)	(66)	(68)	(70)	(72)	(75)	(77)
5	Total Costs & Benefits	Sum of Lines 1 through 4	(420)	(459)	(472)	(469)	460	469	477	486	495
6	PV Total Costs & Benefits	Line 5 / (1 + Line 8)^Yr	(398)	(412)	(400)	(377)	350	337	325	314	303
7	Sum of PV	Sum of Line 6	43								
8	Annual Discount Rate (After-Tax WACC)	Application, Section 2.3.2.3	5.62%	5.62%	5.62%	5.62%	5.62%	5.62%	5.62%	5.62%	5.62%

Table 2: Cost-Effectiveness Analysis for Annual Inflation Factor at 4.017% (2022 Start-Date)

Line	Particulars	Reference	2022	2023	2024	2025	2026	2027	2028	2029	2030
1	Tariff Revenue		233	568	1,020	1,588	1,620	1,653	1,686	1,719	1,754
2	Cost of Energy		(163)	(388)	(687)	(1,070)	(1,092)	(1,114)	(1,136)	(1,159)	(1,182)
3	Incentive Cost		(430)	(576)	(740)	(920)	-	-	-	-	-
4	Program Costs		(61)	(63)	(66)	(68)	(71)	(74)	(77)	(80)	(83)
5	Total Costs & Benefits	Sum of Lines 1 through 4	(420)	(460)	(473)	(471)	457	465	473	481	489
6	PV Total Costs & Benefits	Line 5 / (1 + Line 8)^Yr	(398)	(412)	(401)	(378)	348	335	322	310	299
7	Sum of PV	Sum of Line 6	25								
8	Annual Discount Rate (After-Tax WACC)	Application, Section 2.3.2.3	5.62%	5.62%	5.62%	5.62%	5.62%	5.62%	5.62%	5.62%	5.62%

Table 3: Cost-Effectiveness Analysis for Annual Inflation Factor at 5% (2022 Start-Date)

Line	Particulars	Reference	2022	2023	2024	2025	2026	2027	2028	2029	2030
1	Tariff Revenue		233	568	1,020	1,588	1,620	1,653	1,686	1,719	1,754
2	Cost of Energy		(163)	(388)	(687)	(1,070)	(1,092)	(1,114)	(1,136)	(1,159)	(1,182)
3	Incentive Cost		(430)	(576)	(740)	(920)	-	-	-	-	-
4	Program Costs		(61)	(64)	(67)	(70)	(74)	(77)	(81)	(85)	(89)
5	Total Costs & Benefits	Sum of Lines 1 through 4	(420)	(460)	(474)	(472)	455	462	468	475	482
6	PV Total Costs & Benefits	Line 5 / (1 + Line 8)^Yr	(398)	(413)	(402)	(380)	346	332	319	307	295
7	Sum of PV	Sum of Line 6	7								
8	Annual Discount Rate (After-Tax WACC)	Application, Section 2.3.2.3	5.62%	5.62%	5.62%	5.62%	5.62%	5.62%	5.62%	5.62%	5.62%

Table 4: Cost-Effectiveness Analysis for Annual Inflation Factor at 3% (2023 Start-Date)

Line	Particulars	Reference	2023	2024	2025	2026	2027	2028	2029	2030
1	Tariff Revenue		182	588	1,040	1,620	1,653	1,686	1,719	1,754
2	Cost of Energy		(124)	(396)	(701)	(1,092)	(1,114)	(1,136)	(1,159)	(1,182)
3	Incentive Cost		(384)	(515)	(660)	(822)	-	-	-	-
4	Program Costs		(61)	(63)	(65)	(66)	(68)	(70)	(73)	(75)
5	Total Costs & Benefits	Sum of Lines 1 through 4	(387)	(386)	(386)	(360)	470	479	488	497
6	PV Total Costs & Benefits	Line 5 / (1 + Line 8)^Yr	(366)	(345)	(326)	(288)	356	343	330	318
7	Sum of PV	Sum of Line 6	22							
8	Annual Discount Rate (After-Tax WACC)	2023 Annual Review	5.73%	5.73%	5.73%	5.73%	5.73%	5.73%	5.73%	5.73%

Table 5: Cost-Effectiveness Analysis for Annual Inflation Factor at 4.017% (2023 Start-Date)

Line	Particulars	Reference	2023	2024	2025	2026	2027	2028	2029	2030
1	Tariff Revenue		182	588	1,040	1,620	1,653	1,686	1,719	1,754
2	Cost of Energy		(124)	(396)	(701)	(1,092)	(1,114)	(1,136)	(1,159)	(1,182)
3	Incentive Cost		(384)	(515)	(660)	(822)	-	-	-	-
4	Program Costs		(61)	(63)	(66)	(68)	(71)	(74)	(77)	(80)
5	Total Costs & Benefits	Sum of Lines 1 through 4	(387)	(386)	(387)	(362)	468	476	484	492
6	PV Total Costs & Benefits	Line 5 / (1 + Line 8)^Yr	(366)	(345)	(328)	(290)	354	340	327	315
7	Sum of PV	Sum of Line 6	8							
8	Annual Discount Rate (After-Tax WACC)	2023 Annual Review	5.73%	5.73%	5.73%	5.73%	5.73%	5.73%	5.73%	5.73%

Table 6: Cost-Effectiveness Analysis for Annual Inflation Factor at 5% (2023 Start-Date)

Line	Particulars	Reference	2023	2024	2025	2026	2027	2028	2029	2030
1	Tariff Revenue		182	588	1,040	1,620	1,653	1,686	1,719	1,754
2	Cost of Energy		(124)	(396)	(701)	(1,092)	(1,114)	(1,136)	(1,159)	(1,182)
3	Incentive Cost		(384)	(515)	(660)	(822)	-	-	-	-
4	Program Costs		(61)	(64)	(67)	(70)	(74)	(77)	(81)	(85)
5	Total Costs & Benefits	Sum of Lines 1 through 4	(387)	(387)	(388)	(364)	465	472	479	487
6	PV Total Costs & Benefits	Line 5 / (1 + Line 8)^Yr	(366)	(346)	(329)	(291)	352	338	324	312
7	Sum of PV	Sum of Line 6	(6)							
8	Annual Discount Rate (After-Tax WACC)	2023 Annual Review	5.73%	5.73%	5.73%	5.73%	5.73%	5.73%	5.73%	5.73%

2.3 Please calculate how much the inflation factor would need to be for the program to not be cost effective.

Response:

Please refer Table 1 below which shows, for the original expected Program start-date of 2022, the inflation factor will need to be approximately 5.42 percent each year or higher from 2022 to 2030 before the Program to be not cost-effective.

FBC also provided Table 2 below that, based on an assumed Program start-date of 2023, the inflation factor will need to be approximately 4.56 percent each year or higher from 2023 to 2030 before the Program to be not cost-effective.

However, as discussed in Panel IR1 2.2, FBC has no evidence to support an assumption of inflation will be close to 5 percent or higher over a long term, i.e., until 2030.

Table 1: Cost-effectiveness with Annual Inflation Factor at 5.42% (2022 Start-date)

Line	Particulars	Reference	2022	2023	2024	2025	2026	2027	2028	2029	2030
1	Tariff Revenue		233	568	1,020	1,588	1,620	1,653	1,686	1,719	1,754
2	Cost of Energy		(163)	(388)	(687)	(1,070)	(1,092)	(1,114)	(1,136)	(1,159)	(1,182)
3	Incentive Cost		(430)	(576)	(740)	(920)	-	-	-	-	-
4	Program Costs		(61)	(64)	(67)	(71)	(75)	(79)	(83)	(88)	(92)
5	Total Costs & Benefits	Sum of Lines 1 through 4	(420)	(461)	(475)	(473)	453	460	467	473	480
6	PV Total Costs & Benefits	Line 5 / (1 + Line 8)^Yr	(398)	(413)	(403)	(380)	345	331	318	305	293
7	Sum of PV	Sum of Line 6	(1)								
8	Annual Discount Rate (After-Tax WACC)	Application, Section 2.3.2.3	5.62%	5.62%	5.62%	5.62%	5.62%	5.62%	5.62%	5.62%	5.62%

Table 2: Cost-effectiveness with Annual Inflation Factor at 4.56% (2023 Start-date)

Line	Particulars	Reference	2023	2024	2025	2026	2027	2028	2029	2030
1	Tariff Revenue		182	588	1,040	1,620	1,653	1,686	1,719	1,754
2	Cost of Energy		(124)	(396)	(701)	(1,092)	(1,114)	(1,136)	(1,159)	(1,182)
3	Incentive Cost		(384)	(515)	(660)	(822)	-	-	-	-
4	Program Costs		(61)	(64)	(67)	(70)	(73)	(76)	(79)	(83)
5	Total Costs & Benefits	Sum of Lines 1 through 4	(387)	(387)	(388)	(363)	466	474	481	489
6	PV Total Costs & Benefits	Line 5 / (1 + Line 8)^Yr	(366)	(346)	(328)	(290)	353	339	326	313
7	Sum of PV	Sum of Line 6	0							
8	Annual Discount Rate (After-Tax WACC)	2023 Annual Review	5.73%	5.73%	5.73%	5.73%	5.73%	5.73%	5.73%	5.73%