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October 18, 2022

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By Electronic Filing

British Columbia Utilities Commission
Suite 410, 900 Howe Street
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Attention: Ms. Sara Hardgrave, Acting Commission Secretary

Dear Ms. Hardgrave:

Re: FortisBC Inc.
Application for Approval of a Deferral Account for Electric Vehicle Workplace and Fleet Charging Funding (Application)
Final Argument of FortisBC Inc.

In accordance with the regulatory timetable (G-261-22) set for the above referenced proceeding, we enclose for filing the Final Argument of FortisBC Inc. dated October 18, 2022.

Yours truly,

FASKEN MARTINEAU DuMOULIN LLP

[Original signed by Niall Rand]

Niall Rand

Enclosure
cc (email only): Registered Parties

British Columbia Utilities Commission

FortisBC Inc.

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

Final Argument of

of

FortisBC Inc.

October 18, 2022

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PART ONE: INTRODUCTION AND APPROVAL SOUGHT

1. FortisBC Inc. (FBC) filed its Application for Approval of a Deferral Account for Electric Vehicle Workplace and Fleet Charging Funding (Application) with the British Columbia Utilities Commission (BCUC) on May 13, 2022.[1] As set out in the Application, FBC is seeking approval of a new non-rate base deferral account, entitled the "EV Fleet and Workplace Charging Funding Account", pursuant to section 59 to 60 of the *Utilities Commission Act* (UCA), for the Electric Vehicle (EV) Fleet Charging Funding Program (Program). 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. A Draft Order is provided as Attachment 7.3.1 to BCUC IR1 7.3.1.

2. The remainder of this Final Argument is organized around the following points:

- FBC has designed the Program to address barriers to installing EV charging infrastructure at workplaces and businesses with fleet EV vehicles.
- The Program is a prescribed undertaking under the *Clean Energy Act* and reasonably expected to meet the cost-effectiveness test under the Greenhouse Gas Reduction (Clean Energy) Regulation (GGRR).
- FBC's proposed treatment of costs and the creation of a new deferral account to capture Program costs is reasonable and appropriate.

PART TWO: PROGRAM OVERVIEW

3. In this section, FBC provides an overview of the Program. FBC designed the Program to provide incentives to organizations to acquire and install EV charging infrastructure, which will displace other sources of energy in the transportation sector, such as gasoline and diesel, which produce greenhouse gas emissions. One of the largest barriers to deployment of EV charging infrastructure for light-duty fleets and workplace charging is the upfront costs associated with

[1] Exhibit B-1.

the design, materials and installation of charging equipment and the associated electrical infrastructure.[2] Therefore, the Program promotes the adoption of EVs for workplaces and businesses with EV fleets by reducing the cost of purchasing and installing charging equipment.[3]

4. The Program aligns with the provincial government's stated target of 90 percent new zero emission vehicles (ZEVs) by 2030[4] and targets the particular requirements of fleet charging, including overnight charging and security of premises that cannot reasonably be provided by public facilities.[5] FBC expects that the Program will be used by:

- Workplaces with parking spaces who want to support employees with electric vehicles;[6]
- Businesses with fleets looking to convert to electric vehicles, including owners of localized return-to-base fleets such as last mile delivery trucks, public transit, school buses, and cab companies;[7]
- Multi-Unit Residential Buildings (MURBs), as these buildings have load characteristics that are similar to those of electric fleet and workplace charging.[8]

5. Table 1 of the Application, reproduced below, summarizes the funds anticipated to be contributed by FBC and the number of applications FBC expects during the enrollment period (i.e., to 2025).[9] The incentive paid by FBC for each charger will cover up to a maximum of 75 percent of all charger installation costs when funding is combined with other incentives.[10] Based on conversations with prospective customers, FBC estimates 40 percent of applications are expected to be for workplace charging and 60 percent for light-duty fleet charging.[11]

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2 Exhibit B-3, BCSEA-VEVA IR1 1.2.

3 Exhibit B-3, BCSEA-VEVA IR1 1.1.

4 Exhibit B-7, BCUC IR1 2.3.

5 Exhibit B-5, Flintoff IR1 1.1.4.2.

6 Exhibit B-6, CEC IR1 1.2.

7 Exhibit B-6, CEC IR1 1.2.

8 Exhibit B-7, BCUC IR1 8.6.

9 FBC notes that the actual funding is dependent on the number of applications received in a given year: Exhibit B-1, Application, p. 2.

10 Exhibit B-7, BCUC IR1 7.3.1. FBC will require applicants to declare any additional sources of funding applied for or received: Exhibit B-7, BCUC IR1 8.4.

11 Exhibit B-3, BCSEA-VEVA IR1 3.1.

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

6. In summary, the Program will accelerate EV charging at workplaces by reducing barriers for workplaces and businesses to adopt and promote EVs and ZEVs, including for new and existing customers and in areas where private investment in public charging infrastructure is challenging.[12]

PART THREE: PROGRAM IS A PRESCRIBED UNDERTAKING

7. In this Part, FBC explains that the Program is a prescribed undertaking pursuant to section 18 of the *Clean Energy Act* (CEA)[13] as it meets the requirements of section 4 of the GGRR including the cost-effectiveness test. As the Program meets the definition of a prescribed undertaking under the CEA and the GGRR, FBC respectfully submits that the BCUC: (1) must set rates that allow for the sufficient recovery of costs incurred by a public utility in relation to the Program; and (2) must not exercise its power in a way that would directly or indirectly prevent a public utility from carrying out the Program.[14]

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[12] Exhibit B-3, BCSEA-VEVA IR1 1.4. For context, FBC currently has approximately 17,000 small-commercial and commercial customers which FBC believes are the most likely to participate: Exhibit B-3, BCSEA-VEVA IR1 3.2. Exhibit B-7, BCUC IR 2.3.

[13] *Clean Energy Act* (CEA), SBC 2010 c.22.

[14] CEA, ss. 18 (1) and (2).

A. Designed to Meet the Requirements Under the GGRR

8. FBC designed the Program to meet the requirements of section 4(3)(a)(ii) of the GGRR to be a prescribed undertaking under section 18 of the CEA.[15] This is FBC's only program currently under section 4(3)(a) or (b) of the GGRR.[16]

9. Section 4(3)(a)(ii) of the GGRR states:

> (3) Subject to subsection (4), a public utility's undertaking that is in a class defined in one of the following paragraphs is a prescribed undertaking for the purposes of section 18 of the Act:
>
> > (a) a program to encourage the public utility's customers, or persons who may become customers of the public utility, to use electricity, instead of other sources of energy that produce more greenhouse gas emissions, by
> >
> > > (ii) providing funds to those persons to assist in the acquisition, installation or use of equipment that uses or affects the use of electricity;

10. As explained in Section 2.3 of the Application, the Program is a prescribed undertaking under Section 4(3)(a)(ii) of the GGRR because it will encourage FBC's customers to use electricity, instead of other sources of energy that produce more greenhouse gas emissions, by providing funds to these persons to assist in the acquisition, installation or use of EV charging infrastructure.[17] In particular, the Program encourages the use of electricity to power light duty vehicles that would otherwise be fueled by internal combustion engines, leading to the consumption of more electricity (consistent with the GGRR).[18]

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[15] Section 18(1) of the CEA defines a prescribed undertaking as a "project, program, contract or expenditure that is in a class of projects, programs, contracts or expenditures prescribed for the purpose of reducing greenhouse gas emissions in British Columbia."

[16] Exhibit B-3, BCSEA-VEVA IR1 6.1.

[17] Exhibit B-1, Application, p. 7.

[18] This additional electricity use is defined under s. 4 (1) of the GGRR as "undertaking electricity" which means electricity that is provided to customers in British Columbia as a result of an undertaking and is in addition to electricity that would have been provided had the undertaking not been carried out. See also, Exhibit B-5, Flintoff IR1 1.1.4 and 1.1.4.1.

B. The Program is Expected to Meet the Cost-Effectiveness Test

11. The Program is reasonably expected to meet the cost-effectiveness test under section 4(4) of the GGRR, which states:

> (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. [Emphasis added]

12. "Cost effective" is a defined term under section 4(1) of the GGRR as:

> […] the present value of the benefits of all of the public utility's undertakings within the classes defined in subsection (3) (a) or (b) exceeds the present value of the costs of all of those undertakings when both are calculated using a discount rate equal to the public utility's weighted average cost of capital over a period that ends no later than a specified year.

The "specified year" to be incorporated into the cost effectiveness test for FBC is 2030, as the minister has not determined a specified year for FBC.[19] The discount rate applied is equal to FBC's after-tax WACC of 5.62 percent, reflecting FBC's most recently approved capital structure.[20]

13. Put simply, the GGRR's test of "cost-effectiveness" requires that the Program's costs[21] be matched by the associated benefits[22] on an NPV basis.[23] The table below shows the results of FBC's cost-effectiveness analysis, with FBC's updated regulatory cost estimate.[24] As shown in Line 7 of the table, the Program would be cost effective through 2030.

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19 Exhibit B-1, Application, p. 7; see also Exhibit B-7, BCUC IR1 1 6.2 which explains that the Program would still be a prescribed undertaking if the assumed analysis period was 2025 (rather than 2030), but result in adjustments to the Program's incentives.

20 Exhibit B-1, Application, p. 9.

21 "Costs" means costs the public utility reasonably expects to incur to implement the undertaking, including, without limitation, development and administration costs.

22 "Benefits" means all revenues the public utility reasonably expects to earn as a result of implementing the undertaking, less revenues that would have been earned from the supply of undertaking electricity to export markets. FBC does not generally have surplus energy to export, and therefore, does not have revenue to account in the calculation of the Program benefits.

23 Exhibit B-7, BCUC IR1 1.4.

24 Exhibit B-1, Application, p. 9, Table 5, as updated in Exhibit B-5, Flintoff IR1 8.1.

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%

14. As discussed below, FBC's assumptions supporting this analysis are reasonable, and incorporate a minimum billing requirement and a back-calculated incentive amount that provide assurance of the cost effectiveness of the Program.

(a) Program Benefits

15. To evaluate the Program's benefits, FBC calculated the assumed demand revenue based on the maximum demand from each incented charging station, assuming revenues derived from the sale of energy to Program participants under the existing commercial rate (Rate Schedule (RS) 21).[25] This is shown in Line 1 of Table 5 of the Application, as reproduced above. FBC expects to collect sufficient revenue to recover the costs incurred under the Program.[26]

16. To ensure that the Program is cost effective, Program participants will be billed at minimum for the revenue that the assumed consumption and demand per charger would yield on an annual basis.[27] 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.[28] Where revenue from a charging station is lower than expected, FBC will bill Program participants for the shortfall amounting to the minimum billing revenue per year, less any revenue already recovered during the year (but cumulatively less than or equal to the minimum billing revenue amount).[29] FBC will determine any shortfall for each customer on an annual basis until 2030, reflecting the duration of the cost-effectiveness analysis.[30]

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25 Exhibit B-1, Application, p. 8.

26 Exhibit B-7, BCUC IR1 8.3.

27 Exhibit B-1, Application, p. 2; Exhibit B-7, BCUC IR1 1.6 and 10.4.

28 Exhibit B-1, Application, p. 2.

29 Exhibit B-3, BCSEA-VEVA IR1 5.1

30 Exhibit B-7, BCUC IR1 10.3 and 10.5.

(b) Program Costs

17. FBC's Program costs include the cost of the incremental power required to meet the load associated with the Program, the administrative and regulatory costs, and the costs of incentives for customers. As discussed below, FBC has made reasonable assumptions to forecast these costs.

18. First, with respect to the incremental cost of power, FBC used the British Columbia Hydro and Power Authority (BC Hydro) 3808 Tranche 1 rate and the monthly demand charge associated with purchases that FBC makes under its Power Purchase Agreement (PPA) with BC Hydro as a proxy for incremental power purchase costs. FBC used this rate as it is the most likely source of the associated electricity and maintains consistency with other rates currently in effect. This approach has been accepted by the BCUC in other FBC rates such as RS 37 (Stand-by Service) and RS 95 (Net Metering).[31]

19. Second, FBC has assumed Program administration costs of approximately $60,000 in the first year of the Program, which are then escalated annually based on an inflation of 2 percent until 2030. The annual administration cost represents half of a full-time equivalent position to help administer the Program.[32] FBC's estimate is informed by its experience administering the CleanBC Go Electric Home and Workplace Program for customers in the FBC electric service territory.[33] Administration costs will continue to be incurred after 2025 to ensure FBC is recovering its minimum billing revenues per incented charging station on an annual basis.[34]

20. Third, FBC has updated its estimate of regulatory cost totalling $25,000, which reflects all costs associated with the preparation, filing and regulatory review of the Application, including intervener cost awards.[35]

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[31] Exhibit B-1, Application, p. 8; Exhibit B-3, BCSEA-VEVA IR1 7.2.

[32] Exhibit B-1, Application, p. 8.

[33] Exhibit B-3, BCSEA-VEVA IR1 2.3.

[34] Exhibit B-7, BCUC IR1 7.2.

[35] Exhibit B-5, Flintoff IR1 8.1.

21. Fourth, to ensure that it could deliver the Program cost-effectively over a period that ends no later than 2030, FBC set the maximum contribution amount at $2,150 per charger. This amount is both reasonable for Program applicants[36] and ensures that the Program is cost effective considering the forecast number of applicants, costs to administer the Program and the energy consumption.[37] FBC relied on the following assumptions:

- Each charger will have an annual energy requirement of 2,500 kWh[38] and an estimated demand of 6 kVA per charger, based on a light duty EV vehicle driven for 10,000 km annually at 0.25 kWh per km.[39]
- An average of four Level 2 chargers per applicant, based on customer outreach. The number of chargers per site will also be capped at 7, thus ensuring the average number of installed chargers across all participants is close to the assumed value of four that was proven to be cost effective.[40]
- Fifty applicants in year 1 (four chargers per applicant), with annual growth equal to the anticipated growth rate of EV registrations in the FBC service area. FBC is not proposing an annual or overall cap on applicants.[41]
- The Program incentives will be offered to applicants from 2022 to 2025.

22. These assumptions are reasonable[42] and incorporate an element of conservativism so that the Program remains cost effective even if the assumptions are modified. For example, the average number of chargers per applicant or the number of applicants in year 1 of the Program can be lower than assumed without impacting overall cost-effectiveness.[43]

23. Based on the costs and benefits as outlined above, the Program is cost effective pursuant to section 4(4) of the GGRR. In other words, as the costs directly related to the Program will be

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36 FBC expects that lowering the incentive amount would reduce applicants: Exhibit B-7, BCUC IR1 2.3.

37 Exhibit B-7, BCUC IR1 7.2.

38 The 2,500 kWh assumption is based on FBC's 2021 Long Term Electricity Resource Plan: Exhibit B-6, CEC IR1 3.2.

39 Exhibit B-1, Application, p. 2; Exhibit B-3, BCSEA-VEVA IR1 5.1.

40 Exhibit B-1, Application, p. 1; Exhibit B-7, BCUC IR1 7.5; Exhibit B-6, CEC IR1 7.2.

41 Exhibit B-6, CEC IR1 8.1.

42 Exhibit B-6, CEC IR1 3.1.

43 Exhibit B-7, BCUC IR1 2.1.1.

offset by the additional tariff revenue received from the Program participants, the Program is not expected to be subsidized by non-EV customers.[44]

C. FBC Will Adhere to the Reporting Requirements in the Clean Energy Act

24. As described in Section 2.4 of the Application, the CEA requires that FBC report on the prescribed undertakings to the Minister of Energy and Mines (Minister). While specific reporting requirements have yet to be determined, FBC expects that regular reporting reviewing the Program results and determining if any changes are required will be required. FBC also intends to provide information on the Program to the BCUC as part of its Annual Reviews for Rates on an information basis, consistent with the Program's status a prescribed undertaking.[45]

PART FOUR: PROPOSED TREATMENT OF COSTS IS APPROPRIATE

25. In this Part, FBC addresses it's proposed treatment of Program costs. FBC seeks approval of a new deferral account, attracting a WACC return, to capture the costs of incentives, administration and regulatory costs,[46] until the end of the year in which this Application is approved. On January 1 of the following year, FBC would transfer the deferral account, and the accumulated balance on a net of tax basis within it, to rate base to be amortized over a ten-year period. FBC's proposed treatment is consistent with past BCUC practice and approvals and is appropriate and reasonable.

A. FBC is Entitled to a Fair and Reasonable Return Through Rate Base Treatment of Program Costs

26. The legal framework for this Application is section 18(2) of the CEA, which requires the BCUC to "set rates that allow the public utility to collect sufficient revenue in each fiscal year to enable it to recover its costs incurred with respect to the prescribed undertaking". Section 18(3)

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[44] Exhibit B-7, BCUC IR1 8.3.1.

[45] Exhibit B-3, BCSEA-VEVA IR1 8.1.

[46] Exhibit B-7, BCUC IR1 9.2. FBC does not propose to include the associated tariff revenue in the deferral account as RS 21 rates are not designed to recover EV incentive costs in an FBC deferral account. As the cost of energy is a matching expense to FBC's tariff revenue, it should also not be captured in the deferral account.

is also relevant, as it provides that the "commission must not exercise a power under the Utilities Commission Act in a way that would directly or indirectly prevent a public utility referred to in section (2) from carrying out a prescribed undertaking". FBC interprets section 18(2) of the CEA to mean that the BCUC must set rates in such a way that FBC is not only allowed to recover its costs, but also so that there is fair and reasonable compensation for the utility, including a return on its investments in rate base. A fair return on rate base is required under section 59 of the UCA.[47]

27. Consistent with the legal framework, FBC's proposal to include its Program costs in a rate base deferral account will allow for the recovery of FBC's costs, as well as fair return on its investment. FBC's proposed rate base treatment of its Program costs is modelled on and consistent with the methodology approved by the BCUC for FEI's natural gas for transportation (NGT) Incentive Program expenditures, as approved by Order G-56-13.[48]

28. Also similar to the treatment of FEI's NGT incentives, it is appropriate to recover the costs of the Program from all customers, because all customers will benefit directly from the additional revenue derived from the Program load as well as the societal benefit of a reduction in greenhouse gas emissions and air contaminants.[49] However, as discussed in Part Three of this Final Submission, FBC does not expect that the Program will be subsidized by non-EV customers because the Program's costs and revenue are expected to be offsetting.[50]

B. Ten-Year Amortization Period is Appropriate

29. FBC considers a 10-year amortization period to be appropriate as it reasonably matches the Program costs and benefits.[51] The 10-year amortization period is based on the expected useful life of a Level 2 EV charger, based on guidance from FBC's vendor AddEnergie (FLO), which

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47 Exhibit B-1, Application, p. 10.

48 Exhibit B-1, Application, pp. 10-11; Exhibit B-6, CEC IR1 9.3.

49 Exhibit B-1, Application, p. 10.

50 Exhibit B-7, BCUC IR1 8.3.1.

51 Exhibit B-1, Application, pp. 11-12; Exhibit B-7, BCUC IR1 6.3.

has significant experience and expertise in this area.[52] A 10-year period also aligns with the period over which the benefits of the Program will be experienced and is consistent with the amortization approved by the BCUC for GGRR incentives for FEI.[53]

30. Similar to FBC's Demand Side Management (DSM) deferral account, additions to the deferral account will be captured annually and will be amortized starting in the subsequent year over 10 years.[54] As the Program incentives will be offered until 2025, all incentive amounts will be fully amortized by 2035 applying the proposed 10-year amortization period.[55]

31. In summary, a 10-year amortization period meets the ratemaking and accounting objective of matching costs and benefits which maintains intergenerational equity.[56]

PART FIVE: CONCLUSION

32. FBC respectfully submits that the Program is a prescribed undertaking under section 18 of the CEA and section 4 of the GGRR and that the BCUC should approve the EV Fleet and Workplace Charging Funding Account pursuant to section 59-60 of the UCA to allow for the recovery of FBC's costs of the Program as proposed in the Application.

ALL OF WHICH IS RESPECTFULLY SUBMITTED

Dated: October 18, 2022

[original signed by Niall Rand]

Niall Rand

Counsel for FortisBC Inc.

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52 Please refer to the response to Exhibit B-7, BCUC IR1 7.4 for a summary of FLO's experience and expertise.

53 Exhibit B-1, Application, pp. 11-12; see Appendix A to Order G-56-13, p. 15.

54 Exhibit B-7, BCUC IR1 6.3.

55 Exhibit B-6, CEC IR1 10.1.

56 Exhibit B-7, BCUC IR1 6.4.