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April 9, 2024
File No.: 253248.00183

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Electronic Filing

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

Attention: Patrick Wruck, Commission Secretary

Dear Sirs/Mesdames:

**Re: FortisBC Inc. - Electric Vehicle (EV) Direct Current Fast Charge (DCFC) Energy-
Based Rate Application**

We enclose for filing in the above proceeding the Final Submission of FortisBC Inc., dated April 9, 2024.

Yours truly,

FASKEN MARTINEAU DuMOULIN LLP

[Original signed by]

Christopher Bystrom*
*Law Corporation

Encl.

cc (email only): Registered Interveners



British Columbia Utilities Commission

FortisBC Inc.

EV DCFC Energy-Based Rate

Final Argument of

of

FortisBC Inc.

April 9, 2024

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PART ONE: INTRODUCTION

1. As set out in its Application for Approval of Electric Vehicle (EV) Energy-Based Direct Current Fast Charging (DCFC) Rate Design and Rates (Application),¹ as updated,² FortisBC Inc. (FBC) respectfully requests that the British Columbia Utilities Commission (BCUC) approve the proposed energy-based rate of \$0.39 per kWh for charging service and an idling charge of \$0.40 per minute at both its 50 kW and 100 kW EV DCFC stations. More specifically, pursuant to sections 59 to 61 of the *Utilities Commission Act* (UCA), FBC is requesting approval of the following:

- Amendments to Rate Schedule (RS) 96 as set out in Appendix C of the updated Application to implement an energy-based EV charging rate of \$0.39 per kWh, which will replace the existing time-based rates.
- That the energy-based EV charging rate for RS 96 not be subject to general rate increases, unless otherwise directed by the BCUC.
- An idling charge for RS 96 of \$0.40 per minute that begins 5 minutes after the end of a charging session for service.
- The establishment of a new rate base deferral account, titled the RS 96 Energy-Based Rate Application Cost deferral account, to record the costs associated with the regulatory review of the Application, with the amortization period to be determined in a future rate-setting proceeding.

2. A draft form of order sought is included in Appendix B-2 of the updated Application in Exhibit B-1-1.

3. Further to Measurement Canada's temporary dispensation program for energy-based meters announced in 2023, FBC has filed this Application to transition to energy-based rates from

¹ Exhibit B-1.

² Exhibit B-1-1, Evidentiary Update. As explained in detail in the cover letter to the Evidentiary Update, the update was primarily required to incorporate the impact of the new *Low Carbon Fuels Act*, which resulted in FBC expecting to receive more low carbon fuel credits than previously estimated.

the time-based rates approved by Decision and Order G-341-21, dated November 24, 2021, and Order G-350-21, dated November 30, 2021. On March 15, 2024, Measurement Canada accepted FBC's application and granted FBC temporary dispensation under the *Electricity and Gas Inspection Act* to use the devices at all of FBC's EV DCFC stations using the measure of kilowatt hour (kWh). The temporary dispensation is effective immediately and valid until January 1, 2030.³ With this dispensation, FBC is positioned to implement energy-based rates subject to the BCUC's approval and the time required to implement the rates, including customer communications and changes to the stations and network to be made by FBC's service provider, FLO Services Inc. (FLO).⁴

4. FBC submits that the evidence in this proceeding demonstrates that FBC's energy-based rate are just and reasonable and should be approved. On page 16 of Decision and Order G-341-21, the BCUC stated that, when setting rates for FBC's EV DCFC charging service, "the appropriate rate design principle should be an aim to minimize any recovery from FBC's other ratepayers for this service regardless of whether that results in an over-or under collection of the cost of service in any given year, providing that the resulting rate isn't set at a rate that will undermine the competitive market." FBC's proposed energy-based rate meets this principle as it is set to recover FBC's forecast cost of service on a 10-year levelized basis and is reasonably comparable to the rates of other service providers, ensuring that FBC's rates will support a competitive market for public EV charging service.

5. FBC has organized the remainder of this Final Submission as follows:

- Part Two discusses how FBC's proposed energy-based EV charging rate of \$0.39 per kWh for service at FBC-owned DCFC 50 kW and 100 kW stations conforms with the applicable rate design principle adopted by the BCUC in Decision and Order G-341-21 and is therefore just and reasonable.
- Part Three discusses how FBC's proposed idling charge of \$0.40 per minute that begins 5 minutes after the end of a charging session for service at FBC-owned

³ Exhibit B-10.

⁴ Exhibit B-4, BCUC IR1 1.1.

DCFC 50 kW and 100 kW stations is consistent with other service providers and is just and reasonable.

- Part Four discusses how the proposed RS 96 Energy-Based Rate Application Cost deferral account, to record the costs associated with the regulatory review of the Application, is consistent with FBC's other deferral accounts and is just and reasonable.
- Part Five concludes this Final Submission.

PART TWO: PROPOSED ENERGY-BASED RATE IS JUST AND REASONABLE

6. FBC's proposed energy-based rate of \$0.39 per kWh for its 50 kW and 100 kW EV DCFC stations under RS 96 is set on a 10-year levelized cost of service basis, using market comparators as a check, which is consistent with the approach approved by Decision and Order G-341-21 for the current time-based rates. This is also generally consistent with Decision and Order G-67-24, which approved BC Hydro's proposed 10-year levelized rate for its fast charging stations.⁵ As FBC's proposed rate is set on a 10-year levelized basis, it will remain the same from 2024 to 2033 (i.e., it will not be subject to FBC's general rate increases). A rate that remains flat over time is easy to understand and provides stability in EV charging costs for customers.⁶

7. As noted in the introduction above, on page 16 of Decision and Order G-341-21, the BCUC stated that, when setting rates for FBC's EV DCFC charging service, "the appropriate rate design principle should be an aim to minimize any recovery from FBC's other ratepayers for this service regardless of whether that results in an over-or under collection of the cost of service in any given year, providing that the resulting rate isn't set at a rate that will undermine the competitive market." FBC's proposed rate meets this principle. First, FBC's proposed rate is set to fully recover FBC's forecast cost of service on a 10-year levelized basis, including recovery of the actual accumulated deficiency from 2018 to 2023.⁷ Second, FBC's proposed energy-based rate of \$0.39

⁵ The Panel stated at page 20: "The Panel finds that BC Hydro has adopted an appropriate rate design and that the Proposed Rates reflect the BCUC's requirements set out in the 2022 BC Hydro EV Decision. The Panel further finds that BC Hydro has developed rates that are cost-based and designed to fully recover, on a 10-year levelized basis, the forecast cost of service, including electricity costs comparable to the costs paid in a competitive EV charging services market."

⁶ Exhibit B-1, p. 29.

⁷ Exhibit B-1-1, p. 13.

per kWh is comparable to other service providers such that it will support the competitive market.⁸

8. In the sections below, FBC addresses the issues explored in IRs, which FBC has organized around the following key points:

- The switch to energy-based rates is desirable as it is less discriminatory and supported by stakeholders.
- A common energy-based rate for 50 and 100 kW stations is the most reasonable approach.
- The proposed energy-based rate will support a competitive market.
- The proposed 10-year levelized rate is supported by reasonable assumptions.

A. Switch To Energy-Based Rates Is Desirable and Supported by Stakeholders

9. FBC submits that the BCUC should approve the switch from time-based to energy-based rates as it is less discriminatory and supported by stakeholders.

10. While energy-based rates for DC charging were not permitted by Measurement Canada until the recent temporary dispensation process,⁹ in Decision and Order G-341-21 the BCUC Panel made clear that its preference was for energy-based rates. Specifically, the BCUC determined that energy-based rates were desirable and that time-based rates for EV DCFC service “clearly amount to a discriminatory rate”:¹⁰

Participants acknowledge that energy-based rates for EV fast charging is desirable, which the Panel agrees with. Using time as the billing determinant of electricity sales may lead to varying amounts of energy being delivered to the customer depending on the circumstances. In the case of EV charging, the amount of

⁸ Exhibit B-1-1, pp. 11-12.

⁹ Exhibit B-1, p.2.

¹⁰ Decision and Order G-341-21, pp. 9-10.

electricity delivered in a charging session depends on several factors including the vehicle's charging capabilities, state-of-charge of the battery and temperature.

Different EV models can consume significantly different amounts of electricity in a charging session of equal time. The Panel calculates, based on the evidence in the proceeding, that a 30-minute charge for an older Nissan Leaf at 50 kW maximum DC charging would deliver approximately 25 kWh of electricity. The same 30-minute charge for a 2016 Hyundai IONIQ at 100 kW maximum DC charging rate would deliver approximately 50 kWh of electricity. This comparison assumes that the two EVs are at a similar battery state-of-charge using a 100 kW charging station.

This is analogous to two homeowners being charged a standard daily rate for electricity, but one home is substantially larger and consumes much more electricity. In our view, time-based EV charging rates clearly amount to a discriminatory rate.

11. While the BCUC approved FBC's time-based rates as not *unduly* discriminatory as energy-based rates were not an option, the BCUC also directed FBC to seek temporary dispensation from Measurement Canada to enable energy-based billing. In FBC's submission, the determinations in Decision and Order G-341-21 support a change to energy-based rates.

12. FBC's proposed energy-based rates will correct for the discrimination in time-based rates identified by the BCUC. For example, FBC's analysis of three different EVs with varying charging rates¹¹ shows how energy-based rates will address the disadvantage that time-based rates create for vehicles with a charging rate that is slower than the station charging rate. FBC summarized this analysis as follows:¹²

- The proposed change to a common energy-based rate will create more charging options for owners of small and medium battery capacity EVs, such as the 2019 Nissan Leaf and 2019 Kia Soul. These vehicles will not be able to take advantage of the higher charging speed of the 100 kW stations, as these EVs are either limited by the charging speed of the CHAdeMO connector for the Nissan Leaf or limited by the max charging capacity of the battery for the Kia Soul. However, the owners

¹¹ Exhibit B-4, BCUC IR1 2.1.

¹² Exhibit B-4, BCUC IR1 2.1.

can use either the 50 kW or the 100 kW stations, whichever are available, without paying a premium for the 100 kW stations and without having to wait for a 50 kW station to become available.

- For EVs with larger batteries and faster charging capabilities, such as the Audi Q4 E-Tron, the owners will pay slightly more under the proposed energy-based rate because these EV models can receive significantly more electricity during a 30-minute charging session when compared to smaller EV models. FBC considers the slightly higher cost to be reasonable because the owners of these EV models can take full advantage of the faster charging stations and will therefore be paying for the amount of electricity they receive.

13. Ultimately, each customer will simply pay for the electricity they receive regardless of the time taken to charge their particular vehicle.

14. Further, various BCUC proceedings have demonstrated the strong desire by interveners and the public for energy-based rates,¹³ as noted in Decision and Order G-341-21 and intervener submissions and the letters of comment received from the public in that proceeding, as well as in the proceedings for BC Hydro's Application for Public Electric Fast Charging Service Rates in 2021 and BC Hydro's application filed on July 28, 2023, which was recently approved by Decision and Order G-67-24. FBC has not received any feedback in support of retaining time-based rates.¹⁴

15. As Measurement Canada has now granted dispensation for energy-based meters at FBC's EV DCFC stations, there are no longer any barriers to switching to energy-based rates. FBC submits that the change is well supported and warranted.

B. A Common Rate for 50 kW and 100 kW Stations Is Most Reasonable

16. FBC is proposing a common rate for 50 kW and 100 kW stations (i.e., the same \$ per kWh rate), as it is the most reasonable and appropriate approach. First, the levelized cost of service

¹³ Exhibit B-1-1, p. 4.

¹⁴ Exhibit B-6, BCSEA-VEVA IR1 3.1.

per kWh for the 50 kW stations is essentially the same as the 100 kW stations (i.e., \$0.39 vs. \$0.38 per kWh).¹⁵

17. Second, a lower rate for 50 kW stations is unlikely to promote increased utilization of those stations. Based on FBC's experience to date, the lower rate for the 50 kW stations relative to the 100 kW stations did not promote more utilization in the lower-powered 50 kW stations. For example, in 2023, the average utilization of the 100 kW stations at the eight sites where both 50 kW and 100 kW stations are available was almost 20 percent higher than the 50 kW stations at the same site. In short, EV customers are choosing the higher-powered station for reasons other than price.¹⁶

18. Third, except for Tesla, all other service providers in BC with energy-based rates currently have or are proposing to have common rates between different charging powers.¹⁷ Notably, in Decision and Order G-67-24, the BCUC approved a common energy-based rate for BC Hydro, which BC Hydro referred to as a rate designed "on a portfolio basis". The Panel stated (at page 21): "the Panel finds that it is appropriate for BC Hydro to set rates on a portfolio basis to support customer acceptance and ease of understanding and to provide pricing consistency and flexibility." FBC submits that its proposed common rate for its EV DCFC stations will similarly support customer acceptance and understanding and provide pricing consistency and flexibility.

19. Finally, a common rate for both 50 and 100 kW stations is consistent with the concept of an energy-based rate. FBC explained:¹⁸

Having common energy-based rates for all power levels is also consistent with the general concept of energy-based rates, i.e., EV charging customers will pay for the actual energy dispensed into their vehicle which would be the same regardless of the different power of the EV DCFC stations. Since there is no difference in terms of the energy that the EV charging customers receive from the different power levels, it is reasonable that, regardless of whether a 50 kW or 100 kW station is used, the premium EV model with a bigger battery capacity and capability of faster

¹⁵ Exhibit B-1-1, pp. 30-31.

¹⁶ Exhibit B-1-1, p. 31.

¹⁷ Exhibit B-1-1, pp. 30-32.

¹⁸ Exhibit B-1-1, p. 32.

charging ultimately pays more in total because it consumes more energy (more electricity is dispensed into this EV) during a charging session than a regular EV model with a smaller battery capacity and lower charging speed.

20. Therefore, FBC submits that a common energy-based rate for both 50 kW and 100 kW stations is the most reasonable and appropriate approach, and neither unduly discriminatory nor unduly preferential.

C. Proposed Energy-Based Rate Supports a Competitive Market

21. FBC's proposed energy-based rate of \$0.39 per kWh is similar to the rates charges by other service providers and therefore supports the development of a competitive market.

22. On page 16 of Decision and Order G-341-21, the Panel stated that it considered "a rate that supports the development of a competitive market to be just and reasonable." The Panel also noted the following statement from the EV Inquiry Report Phase 2:

It is in the public interest to ensure that the playing field remains as level as possible. There is an opportunity for thoughtful regulation to ensure that non-exempt public utility investments don't have the end effect of crowding out exempt utility investment.

23. Given these considerations, FBC has compared its proposed rate to those of other service provides to ensure it supports the competitive market. Specifically, FBC's proposed energy-based rate of \$0.39 per kWh is higher than BC Hydro's approved energy-based rate of \$0.34 per kWh, and is generally comparable to other service providers in BC, such as Shell, Couche-Tard, and Charger Quest. For example, it is at the lower end of the range of Charger Quest's offering of between \$0.40 and \$0.45 per kWh and at the higher end of Tesla's offering in FBC's service area of between \$0.26 and \$0.42 per kWh.¹⁹ As such, FBC's energy-based rate at \$0.39 is within the range of offerings from other service providers and will not undermine the competitive market.

24. Further, just as with FBC's currently approved time-based rate, FBC's energy-based rate is designed to recover FBC's cost of service, including the same electricity costs that will be paid

¹⁹ Exhibit B-1-1, p. 30; Exhibit B-6, BCSEA-VEVA IR1 2.1.

by EV charging service providers in FBC's service territory based on FBC's RS 21.²⁰ The fact that FBC's rate includes these electricity costs is another indicator that its rate will not undermine the competitive market. This point was recently endorsed again by the BCUC when it approved BC Hydro's rate for its fast-charging stations, which adopted this same approach. The BCUC concluded that "BC Hydro has developed rates that are cost-based and designed to fully recover, on a 10-year levelized basis, the forecast cost of service, including electricity costs comparable to the costs paid in a competitive EV charging services market."²¹ [Emphasis added.]

25. FBC therefore submits that its proposed rate will support the competitive market and is just and reasonable.

D. Levelized Rate Is Supported by Reasonable Assumptions

26. FBC submits that its 10-year levelized rate is supported by reasonable assumptions, which are set out in detail in the Application with supporting studies and analysis. Notably, FBC engaged Dunsky Energy + Climate Advisors (Dunsky)²² to provide a forecast of light-duty EV sales in the FBC service area to 2040 and applied the growth rate to FBC's existing DCFC stations to forecast the utilization over the 10-year period from 2024 to 2033, which FBC in turn used to forecast the number of charging minutes as well as dispensed electricity for each station, the result of which formed the basis of the 10-year forecast cost-of-service. The potential rate impact due to a reduced forecast of utilization is small: if Dunsky's low growth scenario of EV sales materializes, the potential rate impact to the average residential customer is approximately 32 cents per year over the 10-year period.²³

27. FBC submits that it is important to recognize that the standard for the assumptions used in its rate design is reasonableness, rather than certainty. This is reflected in the just and reasonable standard in section 59 of the UCA, as well as in Decision and Order G-341-21, where the BCUC concluded "the Panel considers that the assumptions and inputs used to derive the

²⁰ Exhibit B-1-1, p. 25.

²¹ Decision and Order G-67-24, p. 20.

²² Exhibit B-1, Appendix F.

²³ Exhibit B-1-1, pp. 32 and 37.

\$0.26/minute rate for 50 kW stations and \$0.54/minute rate for 100 kW stations are reasonable.” [Emphasis added.] Similarly, in Decision and Order G-67-24, approving BC Hydro’s EV charging rate, the Panel stated (at page 20): “We accept that uncertainty regarding the underlying assumptions is inevitable...” In short, when forecasting over a 10-year period, there are too many variables to allow for certainty; it is sufficient for FBC’s forecast assumptions to be reasonable.

28. FBC’s assumptions underlying its levelized rate were explored during this proceeding and FBC has demonstrated that its analysis is supported and reasonable in all cases. In the subsections below, FBC highlights the key issues explored during the IR process.

(a) FBC’s Levelization Period Is Reasonable

29. FBC’s levelized rate is set to recover FBC’s forecast cost of service over the 10-year period from 2024 to 2033. FBC included in its levelized rate calculation the recovery of the actual accumulated deficiency from 2018 to 2023, as well as the full cost of service over the 10-year levelization period, including future costs of like-for-like replacements of its stations at the end of their 10-year expected service life. Therefore, as FBC has incorporated into the rate calculation both the deficiency from the previous rate calculation and the costs for future sustainment capital expenditures, the 2024-2033 levelized rate period is reasonable and reflects a cost-based rate.²⁴

30. FBC’s decision to use this 10-year period, rather than using the period out to 2030 that was used for the current time-based rates, is reasonable. If FBC shortened the levelization period to seven years (i.e., 2024 to 2030), the rate would increase to \$0.61 per kWh. This would create a significant risk of underutilization of FBC’s stations and increased subsidization by other FBC customers. FBC explained:²⁵

At \$0.61 per kWh, FBC’s rate would be the highest of all DCFC charging stations in BC; in particular, the rate would be approximately 79 percent higher than BC Hydro’s proposed energy-based rate of \$0.34 per kWh (which is set based on a 10-

²⁴ Exhibit B-4, BCUC IR1 3.1.

²⁵ Exhibit B-4, BCUC IR1 3.1.

year period) and approximately 53 percent higher than Tesla's offering of \$0.40 per kWh during the peak hours according to their Time-of-Use (TOU) rates.

If the energy-based rate for FBC's DCFC stations is set at \$0.61 per kWh, there would be significant risk of reduced or no station utilization, as there are alternative offerings by other service providers at much lower rates. This will result in an overall under-recovery and ultimately lead to rate impacts for FBC's other customers, with stations being under-utilized or not utilized at all.

31. The BCUC recognized this pricing dynamic on page 16 of Decision and Order G-341-21, stating that setting the charging rate too high could 'essentially price FBC's service "out of the market" and result in more subsidization to recover the cost of service than would be required than if the rate were set lower.' It is therefore reasonable for FBC to use market rates as a check on its analysis and rule out a shorter levelization period as a result.

(b) Dunsky's Medium Growth Rates Are Reasonable

32. To support its proposed energy-based rates, FBC updated its forecasts from 2024 onwards reflecting the current utilization rates of its stations and the expected growth of light-duty EV sales in FBC's service area²⁶ using the medium growth rates as estimated by Dunsky.²⁷ Dunsky's methodology and market analysis are presented in detail in their report in Appendix F of the Application. FBC submits that Dunsky's analysis is robust, and it is reasonable to rely on Dunsky's forecasts for the purpose of setting its energy-based rates.

33. FBC considered that both Dunsky's medium and high growth scenarios are reasonably reflective of the current trend of legislative support of EV adoptions. However, FBC conservatively decided to use the medium growth scenario given the rate impact between the medium and high scenarios is small, as shown in Table 3-7 of the Application.²⁸ Further, if the high growth scenario were assumed, the 10-year levelized energy-based rate would decrease to \$0.35 per kWh, which

²⁶ Exhibit B-7, CEC IR1 3.2.

²⁷ Exhibit B-1, pp. 19-21 and Appendix F.

²⁸ Exhibit B-7, CEC IR1 6.1.

would be notably lower than the Charger Quest offering, which is between \$0.40 per kWh and \$0.45 per kWh.²⁹

34. Dunsky's low growth scenario would not be a reasonable assumption as it would not be reflective of the current trend of legislative support for EV adoption.³⁰ Further, if the low growth scenario were assumed, the 10-year levelized energy-based rate would increase to \$0.47 per kWh, which would be the most expensive in FBC's service area, and approximately 38 percent more expensive than BC Hydro's energy-based rate of \$0.34 per kWh.³¹

35. FBC explained that it applied the growth rates from the Dunsky medium growth scenario to each station individually, but that the growth rates for the forecast charging minutes in aggregate do not perfectly align with the growth rates from Dunsky's medium scenario due to the maximum station utilization rate of 54 percent and the need to prorate the charging minutes of the Castlegar station because of a closure at that station. FBC has provided examples to illustrate how the growth rates from Dunsky's medium scenario and the maximum station utilization of 54 percent were applied.³²

36. FBC submits that its reliance on, and application of, Dunsky's medium growth scenario is reasonable.

(c) FBC's Maximum Utilization Rate Is Reasonable

37. FBC has reasonably assumed a maximum station utilization rate of 54 percent considering the limited utilization of its stations between 11 pm and 6 am.³³ The steps for calculating, and the assumptions involved in, the maximum utilization of 54 percent can be summarized as follows:³⁴

²⁹ Exhibit B-7, CEC IR1 6.2.

³⁰ Exhibit B-7, CEC IR1 6.1.

³¹ Exhibit B-7, CEC IR1 6.2.

³² Exhibit B-4, BCUC IR1 4.1.

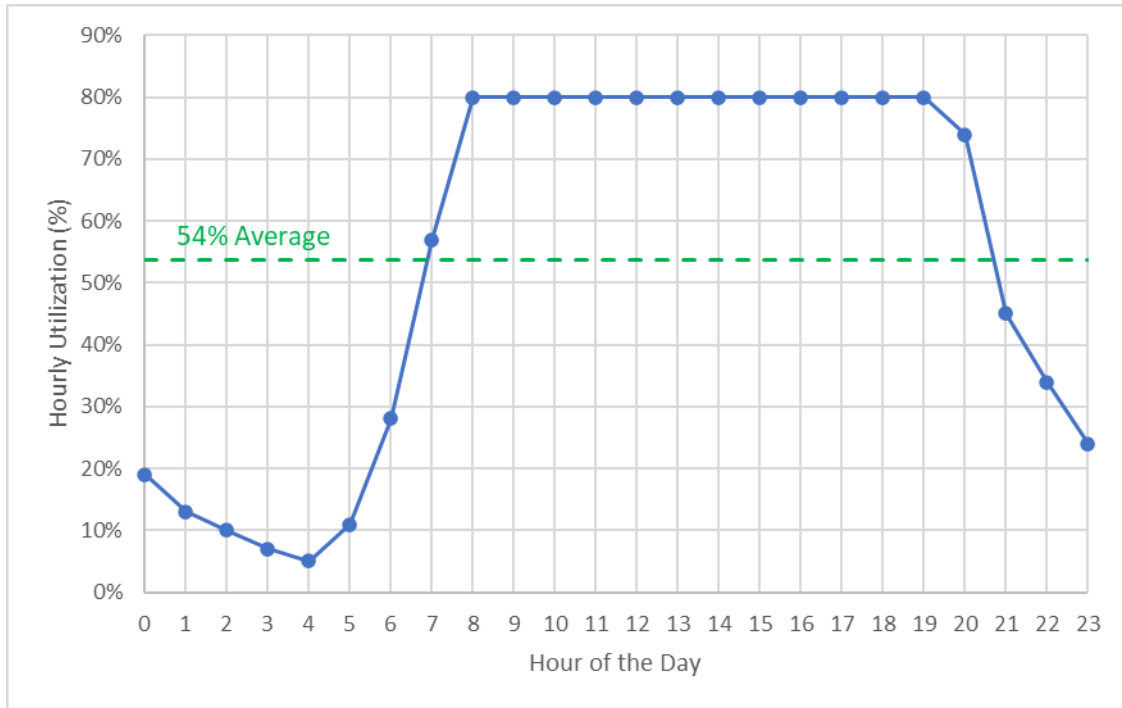
³³ Exhibit B-4, BCUC IR1 4.2.

³⁴ Exhibit B-4, BCUC IR1 4.2.

- Step 1: FBC developed the demand profile of its DCFC stations for charging at each hour over a 24-hour period by using the total number of actual charging events in each hour during a day divided by the total number of charging events from 2018 to 2023. Notably, approximately 96.3 percent of charging at FBC's stations took place between 6 am and 11 pm, while only 3.7 percent of charging took place between 11 pm and 6 am.
- Step 2: Based on a total of 1,440 minutes per day (i.e., 60 minutes x 24 hours per day), FBC estimated the number of charging minutes at each station using the demand profile of charging at each hour from Step 1.
- Step 3: FBC assumes that a maximum 48 minutes will be used for charging per hour. As most charging events complete in around 30 minutes, it is reasonable to assume there will be at least one vehicle switch over within each hour. To complete the switch, time is needed for the first driver to end the charging event (either through the display panel or through the mobile app or through the car), unplug and put the charging cable back in place and drive away. Time is also needed for the next driver to park, connect the charging cable, and initiate the charging event. Taking into account that drivers may not be ready to move their vehicles as soon as the charging is complete, it is reasonable to assume that it would take an average of 6 minutes for the existing driver to end the charging event and drive away from the parking spot at the station and an average of 6 minutes for the new driver to park their EV and initiate charging.
- Step 4: Based on the demand profile for charging in each hour, and a maximum of 48 minutes per hour, the maximum usage of each hour in percentage over a 24-hour period can be calculated.

38. Based on the above, Figure 1 below illustrates the 54 percent maximum utilization rate of a station.

Figure 1: Maximum Hourly Utilization Capped at 80%



39. FBC submits that its calculation of the 54 percent maximum utilization is reasonable and is reasonably used to inform the estimated utilization of its EV DCFC stations.

(d) FBC Has Accounted for Decreasing Charge Speeds

40. FBC’s forecast reasonably accounts for decreasing charge speeds as vehicles reach a 100 percent state of charge. As FBC’s base charging minutes and dispensed electricity were based on actual historical data, actual trends and behaviour of EV owners at FBC’s DCFC stations are embedded in the base charging minutes and dispensed energy used in the forecast.³⁵ Further, FBC expects there will be limited charging at high states of charge, as the charging speed of EVs will be at its slowest, presenting diminishing returns for drivers. Thus, FBC expects most drivers to spend only approximately 30 minutes at charging stations, rather than waiting to reach a 100 percent charge. However, as noted above, any trend in this regard would be reflected in the actual data FBC used in the forecast.³⁶

³⁵ Exhibit B-4, BCUC IR1 5.1.

³⁶ Exhibit B-4, BCUC IR1 5.1.

41. FBC also notes that the functionality to implement maximum state of charge limitations based on the number of chargers in use at a particular site to promote efficient use is not expected to be available from FLO in the near future and therefore will not be available to implement. FBC will, however, continue to consider state of charge options, particularly at sites and times where sites are most congested, and might propose such an option if this functionality is developed and made available by FLO.³⁷

(e) Electricity Rate Increases of 4% Are Reasonable

42. FBC's assumption regarding a general rate increase of 4 percent is reasonable given recent historical rate changes. Specifically, FBC updated its cost of electricity forecast under RS 21 from 2025 onward to be more conservative and to better align with FBC's most recently approved rate changes, which have been 4.36 percent, 3.47 percent, 3.98 percent and 6.74 percent, over the past four years.³⁸ Further, if FBC were to recalculate the forecast cost of electricity based on an annual rate increase of 2 percent, the proposed energy-based rate would decrease to \$0.36 per kWh.³⁹ This would be notably lower than the Charger Quest offering, which is between \$0.40 per kWh and \$0.45 per kWh.⁴⁰

(f) FBC Has Incorporated a Reasonable Price of Carbon Credits

43. As part of the calculation of the proposed 10-year levelized energy-based rate, FBC has included a forecast of the revenue it expects to receive from the carbon credits obtained under the BC Low Carbon Fuel Standard (BC-LCFS).⁴¹ This is based on a reasonable forecast of the price of carbon credits.

44. First, FBC has used the current market price of \$500 to forecast the value of the carbon credits as this is the most representative of how the credits are actually valued and monetized.⁴²

³⁷ Exhibit B-6, BCSEA-VEVA IR1 11.3.

³⁸ Exhibit B-4, BCUC IR1 5.3.

³⁹ Exhibit B-4, BCUC IR1 5.3.

⁴⁰ Exhibit B-1, p. 14.

⁴¹ Exhibit B-6, BCSEA-VEVA IR1 8.2

⁴² Exhibit B-1, Section 3.2.1.8; Exhibit B-4, BCUC IR1 6.1.

45. Second, FBC conservatively assumed that the market price will begin to decline at a rate of 10 percent per year starting in 2026 as part of the calculation for the proposed energy-based rate.⁴³ FBC explained:⁴⁴

While there is no publicly available forecast for the BC carbon market, FBC does not expect the market price will remain at the current high level in the long term. Therefore, FBC has assumed the market price for carbon credits will decline over time. This assumption is based on FBC's expectations that the target for low carbon fuel will become more stringent over time and that industries will continue to convert toward low carbon fuel, which will increase the supply and decrease the demand for carbon credits in the future. The 10 percent annual decline assumed by FBC reduces the market price for carbon credits from \$500 per credit in 2026 to approximately \$215 per credit by 2033. FBC considers this decline reasonable as it assumes the market price 10 years from now will return to a level similar to 2018 before the rapid increase seen in the market in 2019 as shown in Figure 1 below. Furthermore, ...the assumed price of \$215 per credit by 2033 is similar to the minimum price of approximately \$200 per credit seen in 2023.

46. FBC considers this to be the most reasonable assumption of how the carbon credits related to its EV DCFC service will be valued over the next 10 years.

47. It is also clear that alternative carbon credit prices quickly lead to unreasonable rates. For example, if FBC were to use the updated penalty under the BC-LCFS of \$600 per credit, FBC's EV DCFC service would be free, as the carbon credit revenue would more than offset FBC's cost of service. Alternatively, using the old penalty amount of \$200 per credit, which FBC used in the forecast for the current time-based rates, the energy-based rate would be \$0.53 per kWh, which would be so high as to risk pricing FBC out of the market, leading to rate impacts to FBC's other customers.⁴⁵

(g) FBC Has Reasonably Included an Estimate of Future Capital Expenditures

48. FBC's proposed levelized energy-based rate reasonably includes an estimate of future capital expenditures for minor repairs or part replacements, as well as future like-for-like replacement costs when individual stations reach the end of their expected service life. The

⁴³ Exhibit B-1, Section 3.2.1.8; Exhibit B-4, BCUC IR1 6.1.

⁴⁴ Exhibit B-7, CEC IR1 11.1.

⁴⁵ Exhibit B-4, BCUC IR1 6.1.

minor capital expenditures could be used, for example, to retrofit existing stations with NACS connectors or implement small accessibility improvement work.⁴⁶

E. Periodic Monitoring and Evaluation Will Occur in Future Rate Setting Proceedings

49. FBC will continue to provide updates to its RS 96 EV DCFC service as part of its annual review or revenue requirement proceedings. If FBC determines the energy-based rate needs to be adjusted prior to the end of the 10-year levelization period, FBC will propose the changes as part of its rate-setting processes.⁴⁷

50. While FBC does not have plans for additional stations at this time, as directed by Order G-341-21, FBC will also include the evaluation of any additional stations as part of FBC's rate-setting proceedings, including an assessment of whether the levelized rate under RS 96 needs to be recalculated due to any new station.⁴⁸ FBC will follow a similar approach if it replaces any of its existing 50 kW stations with 100 kW stations, which is not something it currently plans to do.⁴⁹

51. However, FBC notes that variances between actual and forecast amounts are expected to occur and, since the rates are set on a levelized basis, FBC expects that the DCFC service will be in a deficiency position in the early years of the levelization period, with the service moving to a surplus position towards the end of the period.⁵⁰ As noted by the BCUC Panel in Decision and Order G-67-24, at page 20:

Although BCOAPO and the CEC are concerned that the proposed levelized rate structure creates potential risks for ratepayers because the Proposed Rates under-recover during the first eight years of the 10-year rate modeling period, we accept BC Hydro's observation that under-recovery of current costs in the early years and over recovery in the final years is an intended outcome of the levelized rate structure. We agree with BC Hydro's submission that it is reasonable for a new

⁴⁶ Exhibit B-1, p. 24; Exhibit B-4, BCUC IR1 7.1; Exhibit B-6, BCSEA-VEVA IR1 5.1; Exhibit B-5, BCOAPO IR1 18.2 and 18.3.

⁴⁷ Exhibit B-1, Section 4.2.

⁴⁸ Exhibit B-1, pp. 23-24.

⁴⁹ Exhibit B-6, BCSEA-VEVA IR1 13.1.

⁵⁰ Exhibit B-9, RCIA IR1 7.1.

service offered in a competitive market, such as the public EV charging service, to take a few years to achieve full cost recovery.

52. Further, the impact of annual variances should be considered in the context of the overall cumulative deficiency, the timing of revenues and costs, and the resulting rate impact to FBC's other customers.⁵¹ Taking into account factors such as these, FBC will continue to report the performance of its EV DCFC service as part of its annual review or revenue requirement processes, which will provide the opportunity to review the annual forecast versus actual results and assess whether any adjustments are needed.⁵²

F. Accounting For General Rate Increases

53. Consistent with its existing time-based rates, FBC is seeking approval for clarity that its proposed energy-based rate will not be subject to general rate increases. In Decision and Order G-324-21, the BCUC accepted this approach (at page 19):

As noted above, some interveners suggest that FBC's EV rates should not be exempt from general rate increases. However, FBC's proposal is premised on levelized rates where the calculated rate is averaged out over a fixed period. In the Panel view, if one agrees with FBC's levelized rates approach, then this implies that general rate changes over the levelized period must have no impact. The Panel agrees with FBC that the escalation factors that are already embedded in the financial model for the rate calculation would need to be removed otherwise. Therefore, the Panel finds FBC's proposal to not adjust its RS 96 EV fast charging rates to reflect any general rate changes to be appropriate.

54. FBC submits that this treatment continues to be reasonable given the levelized basis of the proposed rate and should continue to be approved.

G. Flow-Through Treatment of Variances Remains Reasonable

55. In Decision and Order G-341-21, the BCUC approved the inclusion of revenues and expenses associated with the EV DCFC stations in FBC's regulated accounts, with variances between annual forecast and actual revenues/costs to be subject to flow-through treatment in FBC's revenue requirement. As such, any variances between actual and forecast EV-related costs

⁵¹ Exhibit B-9, RCIA IR1 7.1.

⁵² Exhibit B-9, RCIA IR1 7.1.

and revenues are captured in the Flow-through deferral account and amortized into the rates of FBC's other customers.⁵³

56. FBC submits that the approved flow-through treatment of revenue and costs is required to implement the 10-year levelized rate, and therefore should be continued. Pursuant to Order G-215-21, FBC's EV DCFC stations have been determined to be prescribed undertakings and are approved to be included in FBC's rate base.⁵⁴ As such, per section 18 of the *Clean Energy Act*, the BCUC must allow FBC to recover its costs of its prescribed undertakings. Given this requirement, the alternative to flow-through treatment would be to reset the approved levelized rates for any variances between forecast and actual amounts each year, whether for carbon credits or for other cost-of-service items. This approach would be inefficient and inconsistent with the levelized approach to rate-setting. Annual increases or decreases to the charging rates would also lead to confusion for EV charging customers.⁵⁵

57. Furthermore, considering the annual cost of service of FBC's EV DCFC service is relatively small (less than \$1 million each year) when compared to FBC's revenue requirement (approximately \$457 million in 2024), the impact of any variances in the EV-related revenues and costs to the rates of FBC's other customers is negligible.⁵⁶ For example, if the low or high growth rate were to materialize, the bill impact would range from a charge of \$1.31 per year to a credit of \$1.37 per year for the average commercial customer,⁵⁷ and a charge of \$0.32 per year to a credit of \$0.33 per year for the average residential customer.⁵⁸

H. Implementation Timeline

58. As Measurement Canada has now granted dispensation for FBC's stations,⁵⁹ if the BCUC approves energy-based rates, FBC will be able to implement the rates on the first day of the

⁵³ Exhibit B-1, p. 2.

⁵⁴ Exhibit B-1, pp. 1-2.

⁵⁵ Exhibit B-7, CEC IR1 11.4.

⁵⁶ Exhibit B-7, CEC IR1 11.4.

⁵⁷ Exhibit B-7, CEC IR1 14.1.

⁵⁸ Exhibit B-1-1, p. 32.

⁵⁹ Exhibit B-10.

month following FLO's completion of the station and network changes required to implement the energy-based rates. FBC expects that FLO's work will require approximately four weeks. While FLO is undertaking this work, FBC will undertake the other transitional activities to implement the energy-based rates, such as communication to customers and billing system configurations. If the proposed energy-based rate is approved, FBC proposes to file a compliance filing with the BCUC at least 15 days prior to the effective date of the energy-based rates for endorsement of the revised RS 96 tariff.⁶⁰

PART TWO: PROPOSED IDLING CHARGE IS JUST AND REASONABLE

59. FBC is proposing an idling charge of \$0.40 per minute after the end of a charging session,⁶¹ with a 5-minute grace period, for all of its stations at all times.⁶² An idling charge of \$0.40 per minute is consistent with other service providers in BC that have implemented an idling charge,⁶³ including the \$0.40 per minute idling charge the BCUC recently approved for BC Hydro.

60. The purpose of the proposed idling charge is to encourage customers to move their vehicles once charged to discourage unnecessary congestion at charging stations.⁶⁴ While FBC has not received any complaints to date about idling or congestion at its EV DCFC stations, FBC expects the issue of congestion is likely to arise in the near future with the increase in EV sales and as the utilization of FBC's stations continues to grow, especially at high traffic stations such as the Kelowna Museum and Princeton.⁶⁵ As stated by the BCUC Panel in Decision and Order G-67-24:

We accept that there is a trade-off between inconveniencing customers when there are no customers waiting to charge their vehicles and achieving benefits in terms of reduced congestion, and in our view that trade-off is achieved by permitting the five-minute grace period. Because EV adoption is in its early stages,

⁶⁰ Exhibit B-1, p. 35; Exhibit B-4, BCUC IR1 1.1.

⁶¹ Exhibit B-4, BCUC IR1 9.1: FBC defines the end of a charging session as when electricity stops being delivered to the electric vehicle by the FortisBC-owned DCFC station.

⁶² Exhibit B-4, BCUC IR1 9.2.

⁶³ Exhibit B-1, p. 15.

⁶⁴ Exhibit B-6, BCSEA-VEVA IR1 11.1.

⁶⁵ Exhibit B-1, p. 33.

we consider this to be the appropriate time to proactively educate drivers of the necessity of moving on once their vehicles have charged.

61. However, at this time, FLO's system is not capable of accommodating both an energy-based rate and a time-based idling charge. FLO has indicated that they do not expect to upgrade their system to accommodate an idling charge until late 2024.⁶⁶

62. Therefore, while FBC is seeking approval of an idling charge of \$0.40 per minute, FBC is not requesting approval of an effective date to implement the idling charge at this time. Rather, if the BCUC approves the idling charge, then once FLO has upgraded its system to enable the charge, FBC will file a compliance filing with a revised RS 96 tariff for BCUC endorsement at least 15 days prior to the effective date.⁶⁷

63. FBC will capture the revenue from the idling charge as a flow-through in FBC's revenue requirements, as the purpose of the idling charge is to encourage EV customers to exit the station, not generate a revenue stream. Ideally, there would be no revenue recovered through the idling charge if all EV customers, as intended, exit the station within 5 minutes of the end of their charging session. As such, FBC expects limited revenue from the idling charge.⁶⁸

PART THREE: APPLICATION COST DEFERRAL ACCOUNT IS JUST AND REASONABLE

64. FBC is also requesting approval of a new rate base deferral account, titled the RS 96 Energy-Based Rate Application Cost deferral account, to record the costs associated with the regulatory review of the Application, with the amortization period to be determined in a future rate-setting proceeding. Consistent with FBC's other regulatory proceeding cost deferral accounts, including the regulatory proceeding costs associated with FBC's previous two applications for EV DCFC service, the costs recorded in the requested RS 96 Energy-Based Rate Application Cost deferral account are proposed to be recovered from FBC's other (non-EV) customers through amortization of the deferral account. While the proposed energy-based rate is specific to FBC's RS 96 (i.e., EV) customers, the purpose of this Application is to propose an

⁶⁶ Exhibit B-1, p. 33.

⁶⁷ Exhibit B-1, p. 33.

⁶⁸ Exhibit B-4, BCUC IR1 10.1.

energy-based rate that results in the recovery of the cost of FBC's EV DCFC service from EV customers (on a levelized basis), in order to mitigate the potential for FBC's other customers to bear the costs of under-recoveries. The Application is therefore important for all of FBC's customers, and it is reasonable and consistent with FBC's other regulatory proceeding cost deferral accounts for the regulatory proceeding costs for this Application to be recovered through the rates of FBC's other customers.⁶⁹

PART FOUR: CONCLUSION

65. FBC submits that its approvals sought, including its proposed energy-based rate and idling charge for its EV DCFC stations, should be approved as set out in its updated Application.

ALL OF WHICH IS RESPECTFULLY SUBMITTED

Dated:

April 9, 2024

[original signed by Christopher Bystrom]

Christopher Bystrom

Counsel for FortisBC Energy Inc.

⁶⁹ Exhibit B-5, BCOAPO IR1 3.2.