

Diane Roy Vice President, Regulatory Affairs

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November 19, 2020

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

Attention: Ms. Marija Tresoglavic, Acting Commission Secretary

Dear Ms. Tresoglavic:

Re: FortisBC Inc. (FBC)

Project No. 1598940

Application for Approval of Rate Design and Rates for Electric Vehicle (EV) Direct Current Fast Charging (DCFC) Service – Revised Application dated September 30, 2020 (Revised Application)

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

On September 30, 2020, FBC filed the Revised Application referenced above. In accordance with BCUC Order G-254-20 setting out the Regulatory Timetable for the review of the Revised Application, FBC respectfully submits the attached response to BCUC IR No. 1.

If further information is required, please contact the undersigned.

Sincerely,

FORTISBC INC.

Original signed:

Diane Roy

Attachments

cc (email only): Registered Parties



FortisBC Inc. (FBC or the Company) Application for Approval of Rate Design and Rates for Electric Vehicle (EV) Direct Current Fast Charging (DCFC) Service (Revised Application)	Submission Date: November 19, 2020
Response to British Columbia Utilities Commission (BCUC) Information Request (IR) No. 1	Page 1

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GENERAL 1 Α.

2	1.0	Reference:	INTRODUCTION
3 4			Exhibit B-5 (Revised Application), section 1.2, pp. 2-3, section 2.6, pp. 10-11, and section 3.2.1, p. 16
5 6			General information – FortisBC Inc.'s Electric Vehicle (EV) Direct Current Fast Charging (DCFC) Stations
7		On page 2 of	the Revised Application, FortisBC states:
8 9 10		FBC within 40 sta	currently owns and operates 23 DCFC stations across 16 sites located FBC service territory By the end of 2021, FBC plans to own and operate ations across 23 sites.
11 12		On page 16 of stations and	of the Revised Application, FBC indicates that there are 34 individual 50 kW six 100 kW stations in its model to calculate rates.
13 14 15		In Figure 1-1 existing and network.	on page 3 of the Revised Application, FBC provides the following map of planned stations and sites in the BC Southern Interior EV fast charging





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The Greenhouse Gas Reduction (Clean Energy) Regulation (GGRR) was amended on
 June 22, 2020 by B.C. Reg. 139/2020. The amendment added electric vehicle charging
 stations as a class of prescribed undertakings in section 5 of the GGRR for the purposes
 of section 18 of the Clean Energy Act.

5 In Table 2-2 on page 10, FBC provides a summary table for each existing and planned 6 station and site and how it meets the criteria of the GGRR.

- In a new table or by way of expanding Table 2-2, please provide the following at each site in FBC's EV fast charging network:
 - a. Physical address of the site;
 - b. Number of charging stations at each site;
 - c. Charging capacity of each station (i.e. 50 kW or 100 kW);
 - d. In-service date of each station (i.e. actual or planned);
- 13 e. Capital cost (including construction work in progress) of each station;
- 14 f. Number of charging ports at each station;
 - g. Maximum number of vehicles that can be charge at a time per station;
- 16h. Current customer rates of each station (if different than the approved17interim rates under G-9-18); and
 - i. Proposed future customer rates of each station.
- 20 **Response:**

Please see the following table. FBC notes that a maximum of one vehicle per active charging port can be charged at a time at its stations.



FortisBC Inc. (FBC or the Company) Application for Approval of Rate Design and Rates for Electric Vehicle (EV) Direct Current Fast Charging (DCFC) Service (Revised Application)	Submission Date: November 19, 2020
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22 114 Tapton Ave, Princeton, BC 1 1 1 x 100 kW (planned) March 31, 2021 5 1 port per station (\$2 session min.) ³ \$0.55 per minute (1 (\$2 session min.) ³ 23 Kootenay Bay BC-3A Ferry Terminal, Craw ford Bay, BC 0 2 2 x 50 kW (planned) April 30, 2021 96 1 port per station not applicable \$0.27 per minute (1 (\$2 session min.) ³ 24 214 Robinson Ave., Naramata, BC 0 1 1 x 50 kW (planned) June 30, 2021 49 1 port per station not applicable \$0.27 per minute (1 (\$2 session min.) ³) 25 524 Central Ave, Grand Forks, BC 0 1 1 x 50 kW (planned) June 30, 2021 - 1 port per station not applicable \$0.27 per minute (1 (\$2 session min.) ³) 1 Total 25 15 1 total 1 port per station not applicable \$0.27 per minute (1 (\$2 session min.) ³)	╞							50	i port per station	(42 30331011 11111.) \$0.35 per kwh	\$0.27 per minute (50 KW)
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	1		Total	25	15						



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- 1 ¹ One 50 kW station to be upgraded to 100 kW in 2021 with existing 50 kW station deployed to another planned site.
- 2 ² Stations are proposed to be transferred to BC Hydro and are therefore excluded from the total.
- 3 ³ Stations are currently owned by BC Hydro and the rates set by the municipal operator.



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1.2 Please list any FBC owned or operated EV charging stations that are no longer in operation and explain why they are no longer in operation for each station.

Response:

5 There are no FBC owned or operated EV fast charging stations or sites that have been 6 decommissioned to date.



1	2.0	Reference:	INTRODUCTION
2			Order G-9-18 dated January 12, 2018
3			Exhibit B-5, section 1.1, p. 1; Order G-9-18 dated January 12, 2018
4			Interim rates and new proposed rates
5 6 7 8 9		By Order G-S (or \$0.30/min Schedule (RS the service, F service and t permanent ra	9-18, the BCUC approved a time-based rate of \$9.00 per 30-minute period nute) for EV charging at FBC owned DCFC stations, as set out in Rate S) 96, on an interim basis effective January 12, 2018. Due to the nature of FBC submitted that it does not have the ability to track users of the charging therefore will not charge or refund customers on a retroactive basis once a late is determined.
11 12		On page 1 of items:	the Revised Application, FBC seeks approval of the following, among other
13 14 15 16 17		Final includ 50 kV owned Sectio	approval of Rate Schedule (RS) 96 – Electric Vehicle Charging, which les a \$0.27 per minute EV charging rate for service at FBC-owned DCFC V stations and a \$0.54 per minute EV charging rate for service at FBC- d DCFC 100 kW stations, attached as Appendix B, and described in on 3 of this Application

- 182.1Please provide FBC's proposed effective date for the new rates contained in the19Revised Application. Discuss the rationale for the proposed effective date.
- 20

21 Response:

FBC proposes that the updated RS 96 rates included in the Revised Application would be effective within 30 days of the date the BCUC renders its final decision. FBC will require that amount of time to update the rates in effect at stations that are operational at the time the Decision is issued. The updated draft Final Order attached to the response to BCUC IR1 17.9 includes a clarification in the implementation date as suggested here.

If the BCUC were to direct FBC to implement the revised rates prior to a final decision, EV customers would benefit from a slightly lower rate sooner, and FBC would have fewer stations at which to implement the final rate than would be the case if the interim rate remained in place until a final decision was reached. If, however, the final rate differs from that applied for, the rates would need to be changed an additional time, creating additional cost for FBC and potentially causing customer confusion.

In the view of FBC, the best outcome for FBC and its customers (EV and general) would be an
 efficient regulatory process resulting in a final decision early in Q1 2021.

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2	2	2.1.1	Suppose the BCUC directs FBC to now amend the existing
3			\$0.30/minute interim rate to FBC's proposed new rates during the
4			review of the Revised Application, please discuss the pros and cons of
5			this approach and the implications to FBC and its customers.
6			
7	<u>Response:</u>		
8	Please refer to	the resp	oonse to BCUC IR1 2.1.
9			
10			
11		24.0	If FRC requests the new rotan he effective on the data the RCIIC
12 12	4	2.1.2	If FBC requests the new rates be enective of the date the BCOC
13			pros and cons of this approach and the implications to EBC and its
14			customers
16			
17	Response:		
	Respenser		
18	Please refer to	the resp	onse to BCUC IR1 2.1.
19			



1 B. FBC EV 2 3.0 Reference 3	 STATIONS AND THE GGRR ce: OVERVIEW OF GGRR CRITERIA Exhibit B-5, section 2.4, p. 9; the GGRR, Sections 5(2)(1), 5(2)(b)(ii) Limited municipality site limit test 5(2)(b)(ii) of the GGRR states a public utility's undertaking is a prescribed ing for the purposes of section 18 of the Clean Energy Act if the public utility by expects, on the date the public utility decides to construct or purchase an harging station, that: the station will be located in a limited municipality, the number of eligible harging sites in the municipality on the date the station will come into operation
 2 3.0 Referen 3 4 5 Section 	 ce: OVERVIEW OF GGRR CRITERIA Exhibit B-5, section 2.4, p. 9; the GGRR, Sections 5(2)(1), 5(2)(b)(ii) Limited municipality site limit test 5(2)(b)(ii) of the GGRR states a public utility's undertaking is a prescribed ing for the purposes of section 18 of the Clean Energy Act if the public utility oby expects, on the date the public utility decides to construct or purchase an harging station, that: the station will be located in a limited municipality, the number of eligible harging sites in the municipality on the date the station will come into operation
3 4 5 Section	Exhibit B-5, section 2.4, p. 9; the GGRR, Sections 5(2)(1), 5(2)(b)(ii) Limited municipality site limit test 5(2)(b)(ii) of the GGRR states a public utility's undertaking is a prescribed ing for the purposes of section 18 of the Clean Energy Act if the public utility by expects, on the date the public utility decides to construct or purchase an harging station, that: the station will be located in a limited municipality, the number of eligible harging sites in the municipality on the date the station will come into operation
4 5 Section	Limited municipality site limit test 5(2)(b)(ii) of the GGRR states a public utility's undertaking is a prescribed ing for the purposes of section 18 of the Clean Energy Act if the public utility bly expects, on the date the public utility decides to construct or purchase an harging station, that: the station will be located in a limited municipality, the number of eligible harging sites in the municipality on the date the station will come into operation
5 Section	5(2)(b)(ii) of the GGRR states a public utility's undertaking is a prescribed ing for the purposes of section 18 of the Clean Energy Act if the public utility oly expects, on the date the public utility decides to construct or purchase an harging station, that: the station will be located in a limited municipality, the number of eligible harging sites in the municipality on the date the station will come into operation
6 undertak 7 reasonal 8 eligible c	the station will be located in a limited municipality, the number of eligible
9 lf 10 c 11 w	ill not exceed the site limit for the municipality on that date;
12 Section s	5(1) of the GGRR includes the following definitions:
13 "o 14 s	eligible charging site" means a site where one or more eligible charging tations are located;
15 "	eligible charging station" means a fast charging station that
16	(a) is available for use 24 hours a day by any member of the public,
17	(b) does not require users to be members of a charging network, and
18	(c) is capable of charging electric vehicles of more than one make;
19 "f 20 v	ast charging station " means a fixed device capable of charging an electric ehicle using a direct current;
21 "I	imited municipality" means a municipality with a population of 9 000 or more;
22 "	site limit", in relation to a limited municipality, means the number calculated by
23	(a) dividing the population of the municipality by 9 000, and
24	(b) if applicable, rounding the quotient up to the nearest whole number.
25 FBC stat	es on page 9 of the Revised Application:
26 C 27 a 28 ir 29 p 30 li 31 p	of the 16 sites currently in operation, four are located in a "limited municipality" and are therefore subject to the "site limit". Three of these four sites are located a Kelowna and one is located in Nelson. None of these municipalities exceed the rescribed site limit. Additionally, FBC expects to own and operate a site in the mited municipality of Penticton beginning October 1, 2020 with another site langed for deployment in Penticton in 2021. The following table details the count



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3

of non-exempt utility sites (existing and planned) as well as exempt4 utility sites (existing and planned).

Municipality	Population (2016 Census)	Non- exempt utility site count (current)	Non- exempt utility site count (planned)	Exempt utility site count (current)	Exempt utility site count (planned)	Total existing & planned sites	Site Limit (2016 Census Pop./ 9,000)
Kelowna	142,146	3	0	2	0	5	16
Penticton	43,432	0	2	0	1	3	5
Nelson	10,664	1	0	0	0	1	2

Table 2-1:	Stations	in	Limited	Municipalities
	oraciono			manuolpanaoo

- 4 Footnote 4 on page 9 of the Revised Application states:
- ⁴"Exempt" sites are those owned and/or operated by entities that are not
 otherwise public utilities and are therefore not subject to regulation by the BCUC,
 except with respect to safety.
 - 3.1 Please confirm, or explain otherwise, that a "public utility" as used in section 5 of the GGRR consists of both non-exempt and exempt utilities.
- 9 10

8

11 Response:

- 12 Confirmed.
- 13
- 14
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- 16 3.2 Please confirm, or explain otherwise, that section 5(2)(b)(ii) of the GGRR limits 17 the total number of non-exempt and exempt eligible charging sites in a limited 18 municipality. For example, if an exempt utility already owns and operates eligible 19 charging stations in a total of 2 eligible charging sites in Nelson prior to when 20 FBC decides to construct any of its eligible charging stations in a separate site in 21 Nelson, then FBC's eligible charging stations would not be considered prescribed 22 undertakings since Nelson is a "limited municipality." Please confirm or explain 23 otherwise.
- 24

25 **Response:**

- 26 Confirmed.
- 27
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stations would be considered prescribed undertakings.

Under the same scenario as the example in the preceding question,

with the exception that FBC decides to place its eligible charging

stations in the pre-existing site(s) where the exempt utility has eligible

charging stations, please clarify whether these FBC eligible charging

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7 Response:

3.2.1

8 In a scenario where no additional charging sites are being added, any additional charging 9 stations added to pre-existing eligible charging sites would be prescribed undertakings 10 (assuming the additional charging stations would meet the other eligibility criteria outlined in the 11 GGRR). This would be the case regardless of who owned the pre-existing eligible charging site 12 or the pre-existing eligible charging stations already installed there.

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3.3 Please provide FBC's definition of a charging station versus a charging port for the purposes of section 5 of the GGRR.

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19 **Response:**

FBC defines charging port as the physical connection from a charging station to an EV for providing charging service. Some charging stations have more than one charging port. Stations with multiple charging ports may or may not be able to charge from all of the charging ports at the same time. The fast charging stations used by FBC currently have two ports, but only one is active at any time. For this reason, FBC has indicated that each station has only one active charging port for the purposes of the response to BCUC IR1 1.1.

For the purposes of section 5 of the GGRR, "charging port" has no significance, as the term "charging port" does not appear.

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 31 3.4 Please confirm, or explain otherwise, that section 5 of the GGRR does not limit the number of charging ports or charging stations per eligible charging site.
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 34 <u>Response:</u>
 35 Confirmed.
- 37



1 2 3.5 Please confirm, or explain otherwise, that section 5 of the GGRR does not limit 3 the number of eligible charging sites that are located in a municipality that has a 4 population of less than 9,000 or in a location that is not considered a municipality. 5 For example, could a public utility potentially own and operate eligible charging 6 stations, as prescribed undertakings under the GGRR, in more sites in Kaslo 7 (with a population of 968) than it could in Kelowna (with a population of 8 142,146)? 9

10 Response:

- 11 Confirmed.
- 12
- 13 14

153.6Please provide FBC's definition of a charging site for the purposes of section165(2)(b)(ii) of the GGRR and discuss any identifiable boundaries in that definition.17For example, does FBC consider each parcel of land with a unique permanent18parcel identifier number recognized under BC's Land Title Act as a separate19charging site?

20

21 **Response:**

FBC considers a charging site to be defined by a contiguous area (e.g. a parking lot) for the provision of EV charging services. These sites may overlap multiple parcels of land, and may include multiple metered services for the different charging services available at the site.

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3.7 Please explain how FBC determines the number of eligible charging sites that
are already operational and the number of eligible charging sites that are planned
by other parties in a limited municipality.

32 **Response:**

FBC determines the number of eligible charging sites that are already operational by referencing Plugshare. Planned stations are determined by way of reference to Plugshare (which notes future sites), as well as by way of reference to NRCan's listing of successful applications for projects funded by NRCan. Lastly, FBC may also become aware of potential future EV charging sites through its new connect process for customers requesting service extensions and/or upgrades. FORTIS BC

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3.7.1 Please explain how FBC determines the date that an eligible charging station(s) at an eligible charging site will come into operation in a limited municipality when the station(s) is owned and operated another party.

8 **Response:**

9 FBC cannot reliably determine when exactly a third-party charging station may become 10 operational. However, this determination is not important as FBC will consider any planned (as 11 determined by the methods outlined in the response to BCUC IR1 3.7) or operating charging 12 sites to be an "eligible charging site" for the purposes of enumerating charging sites and 13 comparing to the site limit of a limited municipality.

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173.8Please explain how FBC determines "the date the public utility decides to18construct or purchase an eligible charging station" as outlined in section 5(2)(b)19of the GGRR. For example, does FBC consider the date to be when it receives20management or board approval for the construction or purchase of an eligible21charging station.

23 **Response:**

FBC considers "the date the public utility decides to construct or purchase an eligible charging station" to be the date in which it enters into a financial commitment to purchase, construct or install the required charging station infrastructure for the eligible charging station.

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30 3.8.1 Please explain what type of documentation (e.g. board minutes), if any, would be necessary to demonstrate that FBC has made the "decision" to construct or purchase an eligible charging station.
33
34 <u>Response:</u>

35 As all of FBC's currently-planned charging stations will be operational before December 31,

36 2025 and not exceed the site limit, if applicable, it is not necessary to prove the date FBC made

37 the decision to construct and purchase an eligible charging station.



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However, if needed, the contract or letter of intent making the financial commitment to purchase,
construct or install the required charging station infrastructure referenced in the response to
BCUC IR1 3.8 would provide documentation of the date that the decision to construct or
purchase an eligible charging station was made.

- 3.8.2 To the extent that another party defines their position differently under section 5(2)(b) of the GGRR, please discuss the considerations that the BCUC must take into account in order to reasonably determine that any charging station would be eligible as a prescribed undertaking.
- 13 **Response:**

For the purpose of section 5(2)(b) of the GGRR, the BCUC must consider whether, on a balance of probabilities, "the public utility reasonably expected, on the date the public utility decides to construct or purchase an eligible charging station," that the station will come into operation by December 31, 2025 and meet the requirement of 5(2)(b)(ii) regarding limited municipalities.

FBC cannot speculate how other utilities may meet the requirements of section 5(2)(b), but does not expect that the requirements will be difficult to satisfy at this time. December 31, 2025 is more than four years away, and a charging station typically takes only a few months to construct.

Generally, the decision date in section 5(2)(b) of the GGRR will only be relevant if there is reason to believe that a station will <u>not</u> be constructed before December 31, 2025 or will <u>not</u> meet the limited municipality requirement. If the station will not meet these requirements, the public utility may nonetheless provide evidence to establish that, on the date it made its decision to construct or purchase the station, it reasonably expected it would meet the requirements.

- For this reason, FBC submits that the BCUC can approach the requirements of section 5(2)(b) in this order:
- On a balance of probabilities, will the eligible charging station come into operation by
 December 31, 2025?
- 32 2. On a balance of probabilities, will the eligible charging station meet the limited33 municipality requirements?
- 3. If the answers to 1 and 2 are yes and yes, then section 5(2)(b) is satisfied.



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- 4. If the answer to either 1 or 2 is no, only then consider whether "the public utility reasonably expected, on the date the public utility decides to construct or purchase an eligible charging station," that the requirements were met.
- 3 4

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5 As all of FBC's currently-planned charging stations will be in operation well before December 6 31, 2025, and meet the limited municipality requirement, the date of FBC's decision to construct 7 or purchase the charging stations is irrelevant. However, as noted in the response to BCUC IR1 8 3.8, FBC considers the "date the public utility decides to construct or purchase an eligible 9 charging station" is the date that a financial commitment to purchase, construct or install the 10 required charging station infrastructure has been made. While possible that a decision could 11 have been made earlier, an executed and dated contract or letter of intent clearly demonstrates 12 that a decision was made by the date of the contract or letter of intent. The reasonableness of 13 the expectation that the station will come into operation by December 31, 2025 and meet the 14 limited municipality requirement, if applicable, can then be determined by reference to whether 15 there is enough time from the decision date to construct or purchase the charging station, and 16 reasonably available information at that time about the location of charging stations.

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3.8.3 Please confirm, or explain otherwise, that FBC's eligible charging stations would be considered prescribed undertakings under the GGRR even if at the time the eligible charging stations come into operation, it exceeds the site limit provided in section 5(2)(b)(ii) as long as at the time it "decided" to construct or purchase the eligible charging station it reasonably expected to be within the site limit when the station comes into operation.

28 For example, on October 1, 2020, FBC decides to construct an eligible 29 charging station at a new charging site in a limited municipality that is expected to come into operation on April 1, 2021. On October 1, 2020, 30 31 FBC reasonably expects that on April 1, 2021, the total number of 32 eligible charging sites (including FBC's new site) would be within the site limit. On April 1, 2021, FBC's eligible charging station becomes 33 34 operational, but the total number of eligible sites now exceeds the site 35 limit. Is FBC's eligible charging station at the new site considered a 36 prescribed undertaking?

38 **Response:**

FBC confirms that the eligible charging station at the new site as described in the questionwould be a prescribed undertaking.



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1 Given the efforts made by FBC to identify planned charging stations described in the response

2 to BCUC IR1 3.7, the Company views it as unlikely that the scenario described in the 3 information request would occur.

However, the language of Section 5(2)(b)(ii) is clear on this point in stating that a public utility's undertaking is a prescribed undertaking if the public utility "<u>reasonably expects</u>, on the date the <u>public utility decides to construct or purchase</u>" an eligible charging station in a limited municipality that the number of eligible charging sites in the municipality on the date the station will come into operation will not exceed the site limit for the municipality on that date. (Emphasis added.)

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12133.8.414Charging station comes into operation before it can determine whether15the station is a prescribed undertaking under section 5(2)(b) of the16GGRR. Please discuss why or why not?

18 **Response:**

An eligible charging station is required to be in operation to be a prescribed undertaking, as section 5(2)(a) of the GGRR requires that the public utility must construct and operate, or purchase and operate, the eligible charging station. However, this does not prevent the BCUC from considering on a forecast basis whether, on a balance of probabilities, a charging station will be a prescribed undertaking.

For the purpose of this Revised Application, FBC is proposing an EV rate that is reasonable for both its operating charging stations that meet the GGRR requirements now, and its planned substations that will meet the GGRR requirements.

As discussed in Section 4 of the Revised Application, each year in its Annual Reviews, FBC will be including in its rates the cost recovery and revenues of EV stations as they come into service. While FBC does not expect it to be an issue, if the BCUC is concerned about whether a particular station has or will come into operation, the concern can be addressed in the Annual Review process.



1	4.0	Refere	nce: OVERVIEW OF GGRR CRITERIA
2			Exhibit B-5, section 2.5, p. 9; the GGRR, Sections 5(2)(c)
3			Open Charge Point Protocol (OCPP)
4		Sectio	5(2)(c) of the GGRR states:
5 6			if an eligible charging station comes into operation on or after January 1, 2022, the station uses or is configured to use the Open Charge Point Protocol.
7		FBC s	ates on page 9 of the Revised Application:
8 9 10 11 12 13 14 15 16			While FBC expects all of its planned stations to come into operation prior to January 1, 2022, all of its charging stations (both current and planned) will be configured to use the OCPP [Open Charge Point Protocol]. OCPP refers to a network communication protocol between DCFC stations and a charging station management system. FBC's DCFC stations currently use a communication protocol referred to as the Open Network Protocol (ONP)-Intranetworking for communication between the stations and the charging station management system. However, FBC's vendor AddEnergie is committed to achieving OCPP compliance by mid-2021 for all stations owned and operated by FBC.
17 18 19 20 21		4.1	Please identify any obstacles that could reasonably delay any of FBC's planned stations from coming into operation by January 1, 2022. If applicable, please identify the steps FBC is taking to overcome these obstacles to ensure all of its planned stations come into operation by January 1, 2022.
22	<u>Respo</u>	nse:	
23 24 25 26 27	FBC ha coming current can ac date, a	as not i into ly plan hieve i lthough	dentified any obstacles that could reasonably delay FBC's planned stations from peration by January 1, 2022. FBC's current project schedule forecasts all ned DCFC stations and sites being completed by Q2 2021. FBC is confident it s current project schedule based on its experience with DCFC deployments to additional site and/or scope changes could potentially delay some deployments.
28 29			
30 31 32		4.2	Please identify any obstacles that could reasonably delay AddEnergie from achieving OCPP compliance by January 1, 2022. If applicable, please identify the

steps FBC and AddEnergie are taking to overcome these obstacles to ensure

compliance by January 1, 2022.

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1 Response:

FBC is not aware of any obstacles that could reasonably delay AddEnergie from achieving
OCPP compliance by January 1, 2022. However, should AddEnergie not achieve OCPP
compliance by mid-2021, FBC will delay the purchase of any charging stations not already
planned until compliance is achieved.

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- 9 4.3 If AddEnergie has not achieved OCPP compliance by January 1, 2022, please 10 discuss whether FBC's eligible charging stations that have not come into 11 operation by January 1, 2022 should still be considered prescribed undertakings 12 under the GGRR. Why or why not?
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14 **Response:**

FBC's charging stations that come into operation on or after January 1, 2022 would not be considered eligible charging stations as defined under the GGRR until AddEnergie has achieved OCPP compliance or the stations are otherwise configured to use the OCPP. However, FBC does not intend to purchase any charging stations that would become operational on or after January 1, 2022 that are not OCPP compliant.

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- 22 23 4.3.1 Please discuss whether FBC's eligible charging stations in the 24 preceding question would be considered prescribed undertakings under 25 the GGRR on the date that AddEnergie achieves OCPP compliance. 26 For example, if FBC had an eligible charging station that became operational on January 1, 2022 and AddEnergie became OCPP 27 28 compliant on February 1, 2022, would the earliest date that the eligible 29 charging station be considered a prescribed undertaking and enter 30 FBC's rate base be February 1, 2022?

32 **Response:**

FBC agrees that the earliest date that the costs related to a charging station could be added to rate base is the date it achieves full compliance with the criteria under the GGRR, which in the case described in the guestion would be February 1, 2022.

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FORTIS BC ^{**}	FortisBC Inc. (FBC or the Company) Application for Approval of Rate Design and Rates for Electric Vehicle (EV) Direct Current Fast Charging (DCFC) Service (Revised Application)	Submission Date: November 19, 2020
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4.3.2 In the example in the preceding questions, please discuss whether any revenues and costs associated with the eligible charging station for the period from January 1 to 31, 2022 would be payable to or recoverable from FBC's ratepayers. Why or why not?

6 Response:

7 On the date that the charging station becomes a prescribed undertaking, all costs and 8 revenues, including those that occurred prior to that date, would be eligible to enter FBC's 9 regulated accounts. The rationale for the inclusion of these costs is the same as that discussed 10 in the response to BCUC IR1 5.6 regarding the "retrospective" effect of Section 18 of the CEA 11 and section 5 of the GGRR.

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4.4 Please discuss whether FBC plans to provide confirmation to the BCUC on or
before December 31, 2021 to identify which of its planned stations have met the
criteria in section 5(2)(c) of the GGRR. Why or why not?

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19 Response:

As noted in the response to BCUC IR1 16.2, FBC proposes to provide the BCUC with information regarding the DCFC charging program as part of the Annual Review process. Confirmation that its planned stations have met the criteria in section 5(2)(c) of the GGRR will be provided at that time.



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5.0 Reference: **OVERVIEW OF GGRR CRITERIA** 2 Exhibit B-5, Section 1.2, p. 2; Section 2.1, p. 7, Section 2.6, Table 2-2, p. 10; the GGRR, Sections 5(2)(b)(i), 5(2)(c) 3 4 **Operational date of charging stations** 5 The GGRR was amended on June 22, 2020 by B.C. Reg. 139/2020 to add electric 6 vehicle charging stations as a class of prescribed undertakings in section 5 of the GGRR 7 for the purposes of section 18 of the Clean Energy Act. 8 FBC states on page 7 of the Revised Application: 9 FBC is requesting acceptance of the rates for EV DCFC service on the basis that 10 the DCFC stations to which they apply are prescribed undertakings under section 18 of the Clean Energy Act and section 5 of the GGRR. 12 On page 2 of the Revised Application, FBC states that it has installed 23 DCFC stations 13 in its service territory and it is planning to install a further 17 stations by the end of 2021. 14 In Table 2-2 of the Revised Application, FBC summarizes its existing and planned station by site and how it meets the criteria of the GGRR. 15 16 Section 5(2)(b)(i) of the GGRR states a public utility's undertaking is a prescribed 17 undertaking for the purposes of section 18 of the Act if "the public utility reasonably 18 expects, on the date the public utility decides to construct or purchase an eligible 19 charging station, that the station will come into operation by December 31, 2025." 20 Section 5(2)(c) of the GGRR states: if an eligible charging station comes into operation on or after January 1, 2022, 22 the station uses or is configured to use the Open Charge Point Protocol. 23 5.1 Please provide FBC's definition of "come into operation" for the purposes of 24 section 5(2)(b)(i) and 5(2)(c) of the GGRR. 25 26 Response: 27 FBC considers that an electric vehicle charging station has "come into operation" on the date 28 when it is first available for use by the general public. 29 30 31 32 5.2 Under a scenario where FBC has an operational electric vehicle charging station on January 1, 2020, but does not meet the criteria to be a prescribed

33 34 undertaking under the GGRR (e.g. it can only charge electric vehicles of one



1 2	ma to	ake) mee	and, on January 1, 2021, FBC spends \$500 to bring that charging station at the GGRR criteria. Please discuss:
3 4 5		i.	when that station would be considered a prescribed undertaking and enter rate base (e.g. on January 1, 2020, on the GGRR amendment date of June 22, 2020 or on January 1, 2021); and
6 7 8 9		ii.	what portion of the capital cost of the station would enter FBC's rate base (e.g. the original cost of the station less accumulated depreciated plus the \$500 or alternatively, only the \$500 incremental cost).
10	<u>Response:</u>		
11 12	In the scenario de that it fully met th	escri ne cr	bed, the station would be considered a prescribed undertaking on the date iteria as required by the GGRR (January 1, 2021). Once the station meets

that it fully met the criteria as required by the GGRR (January 1, 2021). Once the station meets all the criteria to be considered a prescribed undertaking, the entire depreciated capital cost of the station including the \$500 incremental cost would enter FBC's rate base. This is because all of the costs of the station are the costs incurred on the prescribed undertaking and, under section 18(2) of the Clean Energy Act, "the commission must 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."

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- 5.2.1 Under the same scenario as the preceding question, but the \$500 was spent on January 1, 2026, please discuss whether the station would be considered to have "come into operation" by December 31, 2025 for the purposes of section 5(2)(b)(i) of the GGRR. Please also discuss what portion of the capital cost of the station, if any, would enter FBC's rate base and when.
- 29 **Response:**

The test for eligibility as a prescribed undertaking in this scenario is not whether the station has "come into operation" by December 31, 2025, but rather whether or not FBC reasonably expected, on the date the date it decided to construct that station, that the station would "come into operation" by December 31, 2025. If FBC could demonstrate that it reasonably had this expectation, the station would qualify as a prescribed undertaking and the full cost of the station (net of depreciation and including the \$500 incremental cost) would enter FBC's rate base on January 1, 2026 (in this example).

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5.3 Please confirm, or explain otherwise, that, as at June 22, 2020, all of FBC's charging stations that came into operation prior to June 22, 2020, meet the criteria set out in section 5 of the GGRR to be a prescribed undertaking for the purposes of section 18 of the *Clean Energy Act*.

- 6 **Response:**
- 7 Confirmed.
- 8 9
- 10115.3.1If not confirmed, please identify the stations that did not meet the
criteria to be prescribed undertakings as at June 22, 2020, the total
capital cost and net book value of these stations as at June 22, 2020,
the date that these stations met the criteria to be prescribed

to meet the criteria.

undertakings and the incremental cost incurred to bring those stations

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- 18 Response:
- 19 Please refer to the response to BCUC IR1 5.3.
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 23 5.4 With respect to the eligible charging stations that came into operation prior to
 24 June 22, 2020, please confirm, or explain otherwise, that the earliest date that
 25 those stations could enter FBC's rate base is June 22, 2020.
- 26

27 Response:

Confirmed because, prior to the amendment to the GGRR on June 22, 2020, the BCUC directed FBC to exclude all charging stations from rate base until directed otherwise. Regardless of when the existing stations became operational, they can be included in rate base once the BCUC overrides its previous direction and approves the addition of the charging stations into rate base, as required by section 18 of the Clean Energy Act and section 5 of the GGRR.

Please refer to the response to BCUC IR1 5.6 for a discussion of the recovery of costs incurredon the charging stations.

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FORTIS BC*		Applicat	FortisBC Inc. (FBC or the Company) ion for Approval of Rate Design and Rates for Electric Vehicle (EV) Direct Current Fast Charging (DCFC) Service (Revised Application)	Submission Date: November 19, 2020
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1 2 3		5.4.1	If confirmed, please explain why the stations can enter before the date of a BCUC Order that makes the stations are prescribed undertakings.	r FBC's rate base finding that the
4 5	<u>Response:</u>			
6	Please refer	to the res	sponse to BCUC IR1 5.4.	
7 8				
9 10 11 12 13	5.5	Please to ques cost an	specifically identify which of the stations in the table pro- stion 1.1 above were in-service prior to June 22, 2020 an id net book value of those stations as at June 22, 2020.	vided in response id the total capital

Response:

Please see the below table for a summary of the DCFC charging sites in service prior to June22, 2020.

	DCFC Charging Sites as at June 22, 2020					
Capital Cost as of June 22, 2020 (\$000s) \$2,874						
NBV as of June 22, 2020 (\$000s)		\$2,735				
No.	Site Address	# of DCFC Stations on Site				
1	423 Davies Ave, Salmo,BC	1				
2	1675 Hwy 3, Christina Lake, BC	1				
3	1102 Cook St, Creston, BC	1				
4	1995 6th Ave, Castlegar, BC	1				
5	187 Government St. Greenwood, BC	1				
No.	Site Address	# of DCFC Stations on Site				
6	1424 Ellis St, Kelowna, BC	2				
7	250 Rutland Rd. N., Kelowna, BC	2				
8	5538 Airport Way, Kelowna, BC	2				
9	5842 Highway 33, Beaverdell, BC	2				
10	2045 Washington St, Rossland, BC	2				
11	305 Hall St, Nelson, BC	2				
12	6201 45th St, Osoyoos, BC	1				
13	111 Enterprise Way, Oliver, BC	2				
14	312 4th St. Kaslo, BC	1				
15	Slocan Ave. & Kootenay St., New Denver, BC	1				
16	92 6th Ave. NW. Nakusp, BC	1				
	Total	23				



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5.6 Please explain why section 5 of the GGRR can be applied to charging stations that came into operation prior to June 22, 2020, when the GGRR does not explicitly state that the criteria can be applied retroactively.

6 Response:

7 This response was prepared by legal counsel.

8 There is a legal distinction between a statutory provision with "retroactive" effect and one with

9 "retrospective" effect.¹ A statutory provision with "retroactive" effect changes results in the past.

10 Section 18 of the Clean Energy Act (CEA) and section 5 of the GGRR do not have a

11 "retroactive" effect. They are not, for example, authorizing the changing of rates in past years.

A statutory provision with "retrospective" effect operates on a forward-looking basis but creates new results in respect of past events. Section 18 of the CEA and section 5 of the GGRR have a "retrospective" effect, as they require the recovery of the costs of all charging stations that come

"retrospective" effect, as they require the recovery of the costs of all charging stations that come into operation by December 31, 2025, which by definition includes stations in operation prior to

16 June 22, 2020.

17 The operative statutory provision is section 18(2) of the CEA, which states:

18 In setting rates under the *Utilities Commission Act* for a public utility carrying out

19 a prescribed undertaking, the commission must set rates that allow the public

20 utility to collect sufficient revenue in each fiscal year to enable it to recover its

21 <u>costs incurred with respect to the prescribed undertaking</u>. [Emphasis added.]

As emphasized in the quote above, the CEA requires the recovery of "costs incurred" (in the past tense). It does not require the recovery of only forecast costs or only those costs incurred *after* a certain date.

Section 5 of the GGRR describes a class of prescribed undertakings for charging stations. Amongst other criteria, a charging station must come into operation by December 31, 2025. There is no requirement for the charging station to come into operation *after* a particular date. Therefore, any charging station that is in operation on or before June 22, 2020 (and satisfies the other criteria in section 5 of the GGRR) is a prescribed undertaking. As noted above, section 18(2) of the CEA requires the recovery of the "costs incurred" with respect to prescribed undertakings.

32 The following provides a more detailed legal analysis to support the above interpretation.

¹ EA Driedger, "Statutes: Retroactive, Retrospective Reflections" (1978) 56 Canadian Bar Review 264 at 268-69 as cited in Ruth Sullivan, *Statutory Interpretation*, 3rd edition (Toronto: Irwin Law, 2016) at p. 347.



1 Statutory provisions are generally presumed to be "prospective", meaning that after coming into

2 force they only apply to events going forward. According to Dreidger, the presumption against

3 retrospectivity does not apply:²

- 4 1. unless the consequences attaching to the prior event are prejudicial; or
- 5 6

2. if the statute is prejudicial but has effects that are intended to protect the public.

An example of a prejudicial consequence would be new or harsher criminal charges to be applied to an action. The presumption against the retrospective effect of statutory provisions that have a prejudicial effect is to avoid the arbitrariness, unfairness, or surprise created by such statutes – for example, where a person who is surprised when their past actions, previously legal in all respects, become criminal due to a statute with retrospective effect. Where the statutory provision is beneficial, there is no similar concern with arbitrariness, unfairness or surprise.

Thus, the presumption against retrospectivity does <u>not</u> apply here because section 18 of the CEA and section 5 of the GGRR are not prejudicial. Instead, they respond to the pressing public interest concern of reducing British Columbia's greenhouse gas emissions, as set out in section 18 of the CEA.³ By creating a new class of prescribed undertaking, the legislature is encouraging public utilities such as FBC to invest resources in the development of electric vehicle charging stations. This investment is enabled by the recovery of incurred costs through rates.

In the alternative, even if the presumption against retrospectivity were held to apply to section 5 of the GGRR, such a presumption may be rebutted: (i) where a statue expressly states that the provision has retrospective effect; or (ii) where this effect is apparent by necessary implication.⁴ As the CEA and GGRR do not expressly state that they apply retrospectively, a decision-maker may rely on interpretive tools to undertake a contextual analysis. Applying this approach, the wording of the legislative scheme supports the presumption against retrospectivity being rebutted for the following reasons, as noted above:

- First, section 18 of the CEA applies to costs "incurred" by a public utility without temporal restriction, indicating that its scope extends to past events including costs incurred prior to June 22, 2020.
- Second, section 5 of the GGRR limits the definition of the class of prescribed undertaking by requiring that charging stations come into operation by December 31, 2025, which by definition includes charging stations that came into operation before the regulation came into force.

² Ibid., Sullivan at p. 359.

³ SBC 2010, c.22.

⁴ See, for example, *Gustavson Drilling (1964) Ltd. v. Minister of National Revenue*, [1977] 1 SCR 271 at p. 279.



- 1 Finally, applying a strict prospective approach would undermine the purpose and policy 2 behind section 18 of the CEA and section 5 of the GGRR, resulting in the exclusion of 3 the cost incurred on most of the charging stations owned by FBC, as well as many of the 4 stations owned by BC Hydro, from recovery. This would fundamentally undermine the 5 purpose of encouraging investment in electric vehicle charging stations in response to 6 consumer demand and in the furtherance of the public interest in reducing greenhouse 7 gas emissions in British Columbia. Moreover, it would encourage waste and inefficiency 8 as the utility could dismantle existing stations and rebuild them so that they qualify under section 5 of the GGRR. As Ruth Sullivan notes:5 9
- 10 ...the purpose of most legislative initiatives is to change the law in order 11 to implement new policies that the legislature considers to be in the public 12 interest. This purpose is defeated to the extent the application of the new
- 13 legislation is limited to avoid interference with vested rights or other forms 14 of retrospectivity.
- 15 The addition of section 5 of the GGRR recognizes consumer demand, and the efforts of public 16 utilities to invest in charging stations, and therefore should not be interpreted restrictively so as 17 to undermine the public interest.
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- 5.6.1 Please provide examples in which retroactive application of a regulation to a pre-existing asset had been accepted.
- 24 **Response:**

25 The BCUC applied retrospective treatment of GGRR prescribed undertaking 1 to incentives 26 granted by FEI in 2010 and 2011.

27 BCUC Order G-67-13⁶ directed FEI to account for incentives granted⁷ in 2010 and 2011 to four 28 FEI customers, to acquire natural gas vehicles, in the NGT Incentives deferral account⁸. The 29 prudency and accounting for the 2010 - 2011 incentives was explored in the Application by 30 FortisBC Energy Inc. for Approval of the Rate Treatment of Expenditures under the Greenhouse 31 Gas Reductions (Clean Energy) Regulation and Prudency Review of Incentives under the 2010 32 - 2011 Commercial NGV Demonstration Program proceeding. In its Reasons for Decision to 33 Order G-67-13 the BCUC stated:

Sullivan at p. 366. 5

⁶ Dated April 30, 2013

⁷ Incentives were accounted for in the NGV Incentives Account, a regulatory asset account, approved with Order G-44-12

Approved with Order G-161-12, issued October 29, 2012. 8



1 The Panel believes that the same accounting treatment that is approved in Order 2 G-161-12 for prescribed Undertaking 1, should also apply to the \$5.6 million 3 2010-2011 Incentives.

4 The NGV incentives were granted in 2010 and 2011 prior to the GGRR being enacted on May 5 14, 2012. In its Reasons for Decision issued on April 30, 2013⁹, the BCUC determined that the 6 2010 and 2011 incentives were to be afforded the same accounting treatment as those approved in Order G-161-12 for prescribed undertaking 1. In its Reasons for Decision the BCUC 7 8 also stated:

- 9 ... the Panel finds that the most fair and reasonable treatment is to include these 10 expenditures as part of the \$62 million funding limit established for prescribed 11 undertaking 1 under the GGRR. As a result, FEI is not permitted to spend more 12 than \$56.4 million in any further funding in this area.
- 13 The reduction of the allowed incentives under prescribed undertaking 1 further enforces that the 14 BCUC's decision was to applying the regulation retrospectively to the 2010 and 2011 incentives.
- Section 4 of Direction No. 8 to the BCUC is another example of a regulation that applies to pre-15
- 16 existing assets. It states:
- 17 4 (1) In setting rates for the authority, the commission must not disallow for any 18 reason the recovery in rates of the balance of the authority's regulatory accounts as at March 31, 2019 and the costs incurred by the authority with respect to the 19 20 following:
- 21 (a) the construction of extensions to the authority's plant or system that came into 22 service before April 1, 2016;
- 23 (b) energy supply contracts entered into before April 1, 2016;
- 24 (c) debt servicing costs on amounts borrowed in relation to the rate smoothing 25 regulatory account.
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29 5.7 If the BCUC deems that some of FBC's charging site or charging station are not 30 eligible as a prescribed undertaking under the GGRR, please discuss how the 31 BCUC should proceed to address these assets. Please include in the discussion, 32 whether these assets should be considered regulated assets, whether FBC 33 would need a tariff approved by the BCUC to charge rates related to these

⁹ Order G-167-13.



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assets, and/or whether FBC would need to segregate the revenue and costs related to these assets from its other regulated assets.

4 Response:

5 At this time, FBC has not constructed and does not own a DCFC EV charging station that is not 6 eligible as a prescribed undertaking under the GGRR. However, should the BCUC find that a 7 charging site or charging station is not eligible as a prescribed undertaking under the GGRR, 8 unless directed otherwise, FBC would separately track and account for all costs (and revenue) 9 associated with the EV station(s), and exclude all such costs and revenues from its utility rate 10 base as directed by BCUC Order G-9-18. In the view of FBC, the rates described in RS 96 11 which are approved, apply to, "...electric vehicle charging at FortisBC-owned Direct Current 12 Fast Charging stations..." and therefore would be sufficient for use at any such excluded 13 stations with similar cost characteristics.



1	C.	RATES AND	RATE DESIGN					
2	6.0	Reference:	RATE DESIGN					
3			Exhibit B-5, section 3.1, p. 12, section 3.4, p. 20, Appendix B					
4			Cost of service rationale					
5 6		On page 12 of the Revised Application, FBC cites section 18(2) and 18(3) of the <i>Clean Energy Act</i> , which states:						
7 8 9 10		(2) In setting rates under the Utilities Commission Act for a public utility carrying out a prescribed undertaking, the commission must 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.						
11 12 13		(3) 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 subsection (2) from carrying out a prescribed undertaking.						
14 15 16 17 18 19		FBC states that it "is proposing two rates: a time-based rate of \$0.27 per minute at FBC's 50 kW DCFC stations, and a rate of \$0.54 per minute at FBC's 100 kW stations." The proposed rate for the 100 kW station will recover FBC's cost of service on a 10-year levelized basis, and the 50 kW station will recover FBC's cost of service on a 13-year levelized basis. On page 1 of the Revised Application, FBC requests that RS 96 to not be subject to general rate increases, unless otherwise directed by the BCUC.						
20 21 22		6.1 Please explain whether FBC has considered market-based rates that may still allow the public utility to collect sufficient revenue to recover its costs, as an alternative to cost of service-based rates.						
23 24		6.1.1	If so, please evaluate the pros and cons between cost of service-based rates versus market-based rates.					
25 26		6.1.2	If not, please explain why market-based rates were not considered.					

27 **Response:**

Although RS 96 is based on cost-of-service recovery principles, FBC considers the rate schedule to be similar in price to DC fast charging options currently available in the market from exempt utilities.

Due to the close alignment of RS 96 with the limited number of exempt utility rates, FBC has not considered designing an EV charging rate based solely on market comparisons at this time. Should circumstances arise that are substantially different than what was modeled in the cost of service-based rates (e.g. changes to the Zero-Emission Vehicles Act or drastically increased investment from the private sector), market-based rates may be considered.



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6.2 Given that the rates charged by exempt utilities are not regulated by the BCUC, please discuss the public perception and the impact on customer's behaviour when the rates for EVCS may be different depending on who owns and operates the station.

89 Response:

FBC recognizes the value in aligning the price of DCFC services with the rest of the market, including vendors not regulated by the BCUC. Differences in price per minute by a few cents up or down are likely unavoidable, but manageable in terms of public perception. Larger price differences, should they arise, will be more difficult to manage and may cause FBC to review the use of market-based versus cost of service-based rates for its charging stations.

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- 186.3Please explain FBC's rationale to propose a levelized rate that would not be19subject to general rate increases.
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- 6.3.1 Please clarify if the proposed levelized rate would be subject to general rate decreases.
- 22

23 **Response:**

FBC's proposal that the levelized DCFC rate would not be subject to general rate increases would also apply to rate decreases, and could best be characterized as an exemption from general rate changes.

FBC is proposing that RS 96 be exempt from general rate changes because the model used to determine the levelized rate already includes reasonable estimates of the annual general rate change to RS 21, which represents the cost of electricity in the calculation, and also includes inflation factors for O&M and property taxes which would factor into a general rate change impacting all rates.

- Furthermore, a general rate increase based on escalating overall utility costs is unlikely to be agood proxy for EV charging infrastructure costs which are materially different in nature.
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6.4 Please discuss whether it is appropriate to specify that the rates contained in the RS 96 tariff are not subject to general rate "changes".

4 <u>Response:</u>

- 5 It would be appropriate to specify that the rates contained in the RS 96 tariff are not subject to 6 general rate changes. Please refer to the response to BCUC IR1 6.3.
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- 9
- 106.5Please provide any alternative rate designs considered other than the proposed11levelized rates. Discuss the pros and cons of each alternative versus the12proposed levelized rates.
- 1314 **Response:**

FBC has reviewed and considered the rates utilized in other jurisdictions, but did not propose them as they were either not able to be implemented due a lack of approved metering or were undesirable at this time. For example:

- FBC considered the use of rates based in part on energy use (kWh), but has dismissed them as they cannot currently be implemented in Canada due to a lack of Measurement Canada-approved metering. Please refer to the response to BCUC IR1 7.7.
- FBC considered, but dismissed the option of adding an idling fee and considers it unnecessary at this time as it has not experienced idling issues to date. If an idling fee becomes necessary in the future, FBC would prefer a fee that it is based on whether the other stations at a charging site are in use or not; however, it is not currently possible to implement such a feature. Please also refer to the response to BCUC IR1 7.3.
- 26
- 27 28
- 29 On page 20 of the Revised Application, FBC states:
- 30Due to the levelized nature of the rate, there will be some (early) years where the31EV charging revenue will be less than the cost of service. In these years, all other32FBC customers will bear the costs in excess of revenues. Conversely, in years33where the charging revenue is greater than the cost of service, all other FBC34customers will benefit from the excess of revenues.
- 356.6Section 18(2) of the Clean Energy Act specifies that the BCUC must set rates36that allow the public utility to collect sufficient revenue in each fiscal year to37enable it to recover its costs incurred with respect to the prescribed undertaking.



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4

2 3 Would the levelized nature of the proposed rate where in some years FBC may collect less revenue than the cost of service not meet the requirements of section

18(2) of the *Clean Energy Act*? Please discuss.

5 **Response:**

6 While Section 18(2) of the Clean Energy Act specifies that the BCUC must set rates that allow 7 the public utility to collect sufficient revenue in each fiscal year to enable it to recover its costs 8 incurred with respect to the prescribed undertaking, it does not mandate from whom the 9 revenue is collected. As described in the Revised Application, in years where FBC under recovers the costs from EV charging customers, the balance of the costs will be covered by all 10 11 of FBC's other customers and conversely, in years where EV charging revenues exceed costs, 12 these benefits flow back to all of FBC's other customers. Over the life of the assets, the 13 levelized rates as proposed in the Revised Application will balance costs and revenues.

FBC considers it important to recover costs with stable, levelized rates that will encourage EV drivers to use eligible charging stations and maximize revenues over the life of the assets. For example, relatively low station usage in the early years of operation would require an annual rate high enough to recover costs in that period and could result in rates high enough to discourage use and impede cost-recovery

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In Appendix B of the Revised Application, the proposed RS 96 – Electric Vehicle
 Charging tariff states "[t]he rate for electric vehicle charging will be reviewed on a
 periodic basis."

- 6.7 Please elaborate on FBC's statement that RS 96 will be review on a periodic
 basis. When is the appropriate time to review RS 96 and who should initiate the
 review?
- 28

29 <u>Response:</u>

FBC would periodically review RS 96 as part of its Cost of Service Analysis (COSA), such as
the one filed by FBC in 2017. The COSA would consider whether the revenues from RS 96
were reasonably recovering the cost of service under RS 96. Consistent with past practice,
FBC initiates a COSA every 5 to 7 years. Please refer to the response to BCUC IR1 6.9 for
discussion of the criteria that may cause FBC to conduct an additional review of RS 96.

FBC is also proposing a general review of the DCFC Program as part of its Annual Reviewunder the Multi-year Rate Plan (MRP).

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1											
2 3	6.8	Please performa	discuss ance of F	whether S 96.	a review	should	include	the	evaluation	on	the
4 5 6		6.8.1	If so, what and why	hat evalua y?	ation criteri	a should	be includ	led to	gauge perf	orma	nce
7	Response:										
8 9 10 11 12	FBC's Annual Review will include updated annual forecasts for the EV Program. In this review, the BCUC and interveners can inquire into any aspect of the program, including comparative station usage, demand and consumption statistics, revenue and cost figures as well as customer feedback and site buildout. The criteria against which each measure would be evaluated would be the forecast values included in the Revised Application.										
13 14											
15 16 17 18 19	<u>Response:</u>	6.8.2	If the B please i	CUC cons ndicate a	siders that timeline fo	a formal r when su	evaluatic uch a revi	on of ew wo	RS 96 is wa ould take pla	arrant ace.	ted,
20	Please refer to the responses to BCUC IR1 6.8 and 6.9.										
21											
22 23											
24 25 26 27 28	6.9	Please e indicator explain.	explain w s that m If not, wh	whether FE hay warran hy not?	3C has cor nt any cha	nsidered a inges to	any off-ra or review	imps, / of F	triggers, or RS 96. If sc	warr), ple	ning ase
29	Response:										
30	FBC would co	onsider ini	tiating a	review of	RS 96 in th	ree scen	arios:				
31	1. If there	e were an	y materia	al deviatio	ns from for	ecast rev	enues fro	om exi	isting statior	າຣ;	
32 33	 If there were any material deviations in the cost of new stations as compared to existing stations; or 							ting			
34 35 36	 A new rate structure is identified that is preferable to the current RS 96 structure and that is technically possible to implement and legally permissible (e.g. rates based partly on charging speed or kWh). 							that ⁄ on			



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- 1 2 FBC would file an application to the BCUC for approval of any change in RS 96 that was
- 3 warranted as a result of a review of the rate.



Page 35

1 7.0 Reference: **RATE DESIGN**

2

Exhibit B-5, section 3.1, p. 12, section 3.3, p. 19; Exhibit D-2-2

3

Rate design principles

4 In Table 3-3 on page 19 of the Revised Application, FBC provides an EV rate 5 comparison across Canada. The table shows the fee structure of the EV charging 6 service providers, which are all time-based rates. Canadian Tire / Electrify Canada and 7 Petro-Canada operate fast chargers that have various power levels ranging from 50 kW 8 to 350 kW. The fee structure at Canadian Tire / Electrify Canada stations is time-based, 9 tiered by power level, and has an idling fee. However, the fee structure of Petro-Canada stations is time-based, but not tiered by power level. 10

- 11 7.1 Please provide FBC's rate design principles and objectives. How does FBC's 12 proposed fee structure that vary depending on station capacity meet these rate 13 design principles and objectives?
- 14

15 **Response:**

16 FBC relies on a set of principles when reviewing rates that are based on those identified by Dr.

Bonbright¹⁰ as set out in the response to BCUC IR1 7.1.3. 17

18 Of the principles set out in that response, Principle 2 (Fair Apportionment of Costs among 19 Customers) and Principle 3 (Price signals that encourage efficient use and discourage inefficient 20 use) are the most relevant to setting rates that vary depending on station capacity.

21 The 100 kW rate is higher than the 50 kW rate to reflect the higher electricity and capital costs 22 associated with the 100 kW charging station. The higher electricity costs are due to the 23 increased electrical demand from the 100 kW station during the same charging period. The 24 higher peak demand associated with the 100 kW station increases the demand charges and 25 thus the overall cost of the electricity. FBC's proposal to have a separate rate for the 50 kW and 26 100 kW stations reduces the potential for subsidization that may have resulted from a blended 27 rate given that the cost for each service is different.

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¹⁰ James C. Bonbright, *Principles of Public Utility Rates*, 2nd Edition (Public Utility Reports, Inc., 1961) March 1988.

^{7.1.1} Please indicate whether FBC has done any recalculations of the existing interim rate of \$0.30/minute that does not depend on station capacity. If so, please provide the updated rate.


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1 Response:

No, FBC did not prepare a recalculation of the existing interim rate of \$0.30/minute that does not
depend on station capacity. Given the difference in capital and electricity demand charges
associated with the 100 kW stations as compared to the 50 kW stations, FBC determined that a
separate rate for the 100 kW station was warranted.

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7.1.2 Please explain whether FBC has received customer feedback or consulted with EV customers to arrive at the proposed rates.

12 Response:

Given the current Measurement Canada restrictions and reliance on cost-causation, there werea limited number of rates to consider.

FBC has received customer feedback through third-party, publicly-available station location/status applications such as PlugShare as well as through FBC's customer service call centre. Customer comments regarding rates generally note that the current \$0.30/minute rate is high. However, this perspective is likely relative to customer experience at other charging stations in the province that are currently free to use. FBC believes its decision to set DCFC rates on a cost causation basis is important not only for investment recovery, but also to stimulate a market for private investment public EV fast charging services.

- 22
 23
 24
 25 7.1.3 Please explain whether FBC has assessed the proposed rates against the Bonbright¹¹ rate design principles. If so, please provide the assessment. If not, why not?
 28
 29 <u>Response:</u>
- Yes, FBC was guided by the following Bonbright rate design principles when setting its EV
 rates. FBC has used the following categories to summarize the principles, consistent with a
 similar discussion contained in the FEI 2016 Rate Design Application.
- Principle 1: Recovering the Cost of Service; the aggregate of all customer rates and revenues
 must be sufficient to recover the utility's total cost of service.

¹¹ James C. Bonbright, Albert L. Danielsen and David R. Kamerschen, Principles of Public Utility Rates (2nd Edition; Public Utilities Report, Inc.: Arlington, Virginia, 1988).



- FBC has set its EV rates based on recovering the total cost of service.
- 1 2
- 3 Principle 2: Fair apportionment of costs among customers (appropriate cost recovery should
 4 be reflected in rates).
- The proposed EV rates recover the total cost of the EV service.
 - Higher rates for higher power stations are supported by a higher cost of service for those stations.
- 7 8

- 9 **Principle 3:** Price signals that encourage efficient use and discourage inefficient use.
- Time-based rates encourage efficient use when the charging rate slows down, such as when the state-of-charge increases above 80 percent. Unlike an energy-only rate, a time-based rate provides an incentive for drivers to unplug when the charging rates slows and before the EV reaches 100 percent if they do not require the additional energy.
- By setting the EV rates on a per minute basis and by setting the 50 kW and 100 kW
 stations on separate rates, FBC has structured the EV rates in a way that discourages
 inefficient use.
- 18
- 19 **Principle 4:** Customer understanding and acceptance.
- FBC has achieved this by setting all comparable EV stations to one easy to understand
 levelized rate, regardless of site location. In addition, the structure of the rates is similar
 to other rates in the EV charging services market, making them easy to understand and
 accept.
- 24
- Principle 5: Practical and cost-effective to implement (sustainable and meet long-term
 objectives).
- A levelized rate is practical and cost-effective in that it is easy to understand and FBC
 does not need to incur any additional costs associated with tracking and regularly
 updating the rates.
- 30
- 31 **Principle 6:** Rate stability (customer rate impact should be managed).
- Since the EV rates are levelized and exempt from general rate increases, the rates are
 stable and EV customers won't have to worry about future price fluctuations.
- 34
- 35 **Principle 7:** Revenue stability.
- The levelized EV rate will also help with revenue stability and predictability year over year for FBC as demand will not be negatively impacted by increasing rates that may discourage consumer use of the DCFC stations. The static nature of the EV rate will help



stabilize demand and provide improved revenue stability and predictability year over
 year.

- 4 **Principle 8:** Avoidance of undue discrimination (interclass equity must be enhanced and maintained).
 - The proposed EV rate is designed to recover the total cost of service from EV drivers such that interclass equity is maintained.
- 7 8

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7.2 To the best of FBC's knowledge, please expand Table 3-3 to add EV charging service providers with a fee structure that is time-based and tiered by power level across North America.

15 **Response:**

As an addendum to Table 3-3, the following Electrify America and EVgo rate information is presented to illustrate various fee structures. The Electrify America dataset is an example of

18 rates tiered by power level, while EVgo demonstrates the variety of rates found across different

19 locations.

Location	Electrify America Rates ¹		EVgo Rates ²
Location	1 – 90 kW	1 – 350 kW	1 – 50 kW
Alabama	\$0.16/min	\$0.32/min	n/a
Alaska	n/a	n/a	n/a
Arizona	n/a	\$0.43/min	\$0.35/min
Arkansas	n/a	\$0.43/min	\$0.30/min
California	n/a	\$0.43/min	\$0.27 – \$0.32/min
Colorado	n/a	\$0.43/min	\$0.30/min
Connecticut	n/a	\$0.43/min	\$0.35/min
Delaware	n/a	\$0.43/min	n/a
District of Columbia	n/a	\$0.43/min	\$0.30/min
Florida	n/a	\$0.43/min	\$0.35/min
Georgia	\$0.16/min	\$0.32/min	\$0.30/min
Hawaii	n/a	n/a	n/a
Idaho	\$0.16/min	\$0.32/min	n/a
Illinois	n/a	\$0.43/min	\$0.29/min
Indiana	\$0.16/min	\$0.32/min	\$0.30/min
lowa	n/a	\$0.43/min	n/a
Kansas	\$0.16/min	\$0.32/min	n/a
Kentucky	\$0.16/min	\$0.32/min	\$0.35/min
Louisiana	\$0.16/min	\$0.32/min	n/a
Maine	n/a	\$0.43/min	\$0.35/min



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Location	Electrify America Rates ¹		EVgo Rates ²
LUCATION	1 – 90 kW	1 – 350 kW	1 – 50 kW
Maryland	n/a	\$0.43/min	\$0.30/min
Massachusetts	\$0.16/min	\$0.32/min	\$0.30/min
Michigan	n/a	\$0.43/min	\$0.35/min
Minnesota	n/a	\$0.43/min	n/a
Mississippi	\$0.16/min	\$0.32/min	n/a
Missouri	n/a	\$0.43/min	\$0.30/min
Montana	\$0.16/min	\$0.32/min	n/a
Nebraska	\$0.16/min	\$0.32/min	n/a
Nevada	n/a	\$0.43/min	\$0.30/min
New Hampshire	\$0.16/min	\$0.32/min	\$0.35/min
New Jersey	n/a	\$0.43/min	\$0.35/min
New Mexico	\$0.16/min	\$0.32/min	\$0.35/min
New York	n/a	\$0.43/min	\$0.30/min
North Carolina	n/a	\$0.43/min	\$0.30/min
North Dakota	n/a	n/a	n/a
Ohio	n/a	\$0.43/min	\$0.30/min
Oklahoma	\$0.16/min	\$0.32/min	n/a
Oregon	n/a	\$0.43/min	\$0.29/min
Pennsylvania	\$0.16/min	\$0.32/min	\$0.30/min
Rhode Island	n/a	\$0.43/min	\$0.35/min
South Carolina	\$0.16/min	\$0.32/min	\$0.35/min
South Dakota	n/a	n/a	n/a
Tennessee	\$0.16/min	\$0.32/min	\$0.35/min
Texas	\$0.16/min	\$0.32/min	\$0.30/min
Utah	n/a	\$0.43/min	\$0.35/min
Vermont	n/a	\$0.75/min	\$0.35/min
Virginia	n/a	\$0.43/min	\$0.30/min
Washington	n/a	\$0.43/min	\$0.29/min
West Virginia	n/a	n/a	n/a
Wisconsin	\$0.16/min	\$0.32/min	\$0.30/min
Wyoming	n/a	n/a	n/a

1 <u>Notes:</u>

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- 2 ¹ Electrify America rates:
 - All rates are time-based and in USD
 - Pass+ Members save approx. 25% on the regular rates listed above
 - An idling fee of \$0.40 /min is applied after a 10 minute grace period
 - More information can be found at <u>https://www.electrifyamerica.com/pricing</u>
- 7 ² Notes for EVgo rates:
 - All rates are time-based and in USD
- 9 Rates are for 50 kW stations
- Members save approx. 10% on the regular rates listed above
- 11 More information can be found at <u>https://www.evgo.com/charging-plans</u>

FORTIS BC^{*}

1 2

3 4 Please explain whether FBC has considered implementing an idling fee. If so, 7.3 5 why is an idling fee not part of FBC's proposed fee structure? If not, why not? 6 7 Response: 8 FBC did consider implementing an idling fee, but an analysis of station usage patterns indicates 9 that such a fee is not necessary. Based on charging behavior observed to date for FBC 10 stations, drivers tend to charge at stations for around 30 minutes and then leave after charging their vehicles. Although FBC doesn't believe an idling fee is currently required (please also 11 12 refer to BCUC IR1 6.5), any future idling fees would be subject to BCUC review and approval as 13 modifications to RS 96. 14 15 16 17 7.4 Suppose FBC installs EV stations that are greater than 100 kW capacity in the 18 future, please clarify whether FBC will seek BCUC approval to amend RS 96 or 19 use the \$0.54/minute rate for 100 kW stations (if approved). 20 21 Response: 22 In its proposed form, RS 96 contains rates that are specific to 50 kW and 100 kW stations. 23 Should FBC install a standard station size that differs from these sizes, FBC will apply to the 24 BCUC to amend RS 96 to accommodate the new station size(s). 25 26 27 28 7.5 Please explain whether it is possible for multiple EVs to be charging at the same 29 time at one station. If so, in the event that two EVs are charging at the same time 30 at a 100 kW station, would this mean each customer will receive a maximum of 31 50 kW service? In this case, would the customer be charged at \$0.27/minute or 32 \$0.54/minute? 33

34 **Response:**

35 As discussed in the response to BCUC IR1 3.3, it is not possible for multiple EVs to charge at the same time on either of the 50 kW or 100 kW stations described in this Revised Application. 36

FORTIS BC^{**}

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1 2 If the FBC EV charging station does not allow multiple EVs to charge at 7.5.1 3 the same time, please explain whether this should be specified in the 4 RS 96 tariff. 5 6 Response: 7 FBC does not believe that the fact that its EV stations are limited to one charging event at a time 8 needs to be described in the RS 96 tariff as this has no effect on the overall rate charged to the 9 customer. The RS 96 tariff accurately describes the rates that are in effect for the service 10 currently offered. 11 12 13 14 Certain EV models have charging capability of less than 100 kW.¹² Please 7.6 15 confirm, or otherwise explain, that an EV with a 50 kW maximum charging capability that charges at a 100 kW station will pay \$0.54/minute. 16 17 18 Response: 19 Confirmed. All 100 kW stations will be co-located with 50 kW stations ensuring that the option 20 to charge at a 50 kW station and to pay the 50 kW rate is available at all sites. As part of the 21 100 kW station deployments, FBC will also ensure the on-site signage as well as any third-party 22 charging station map services (e.g., Plugshare) clearly identify the different rates between the 23 50 kW and 100 kW stations. 24 25 26 27 28 7.6.1 If confirmed, in this situation, please provide FBC views as to whether 29 charging the \$0.54/minute time-based rate is not unjust, unreasonable 30 and not unduly discriminatory. 31 32 **Response:** 33 FBC's view is that the \$0.54/minute time-based rate is not unjust, unreasonable and not unduly 34 discriminatory. As described in response to BCUC IR1 7.1, the 100 kW rate is higher than the 35 50 kW rate to reflect the higher electricity and capital costs associated with the 100 kW charging

³⁶ station. For the reasons outlined in the response to BCUC IR1 7.6, customers will be well-

¹² <u>https://www.wheels.ca/top-ten/heres-a-look-at-every-ev-available-in-canada/.</u>



1 informed about the rate options and be able to make a choice about whether they use the 50 2 kW or 100 kW station (as both options will be available at charging sites with 100 kW stations). 3 4 5 6 7.6.2 If confirmed, please explain whether FBC has signage on each of its 7 charging stations to communicate this technical aspect to customers. 8 9 Response: 10 Since FBC has not yet deployed any 100 kW stations, no signage specific to rates for 100 kW 11 stations as compared to 50 kW stations has been deployed. However, FBC will enhance the 12 signage at sites planned for 100 kW stations to communicate the details of the rate to 13 customers. 14 15 16 17 18 7.6.3 In the above scenario, please discuss whether there are any safety 19 considerations or protocols for an EV with a 50 kW maximum charging 20 capability that charges at a 100 kW station. 21 22 **Response:**

An EV with a 50 kW maximum charging capability that charges at a 100 kW station does notpresent any safety concerns.

The amount of power delivered to a vehicle from an EV charging station is restricted by what the vehicle can handle. The vehicle "calls" for a certain level of power based on a variety of factors including the capability of the vehicle, battery condition, and temperature. As a result, charging limits including maximum permitted charge rates are set by the vehicle, not the charger.

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On page 12 of the Revised Application, FBC states that "[r]ates based partly or wholly on
 energy use (kWh) cannot currently be implemented by FBC due to the lack of
 Measurement Canada-approved metering."

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367.7Please explain whether the lack of Measurement Canada-approve metering is37the only reason preventing FBC from implementing energy-based rates. What



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3

are the other reasons for FBC not offering an energy-based rates at this time? Please discuss.

Please provide the status of Measurement Canada's progress to date to

offer Measurement Canada-approved metering. What are the key

issues that Measurement Canada is considering? Has FBC had

discussions with Measurement Canada regarding energy-based

4 Response:

5 The lack of Measurement Canada-approved DC metering is the limiting factor preventing FBC 6 from offering energy-based rates. Although approved revenue-grade AC metering is used to 7 measure the utility supply to the charging sites, no commercially available solution exists for 8 integrating this equipment with the billing system used for the DC fast charging stations. When 9 Measurement Canada approved metering becomes available, FBC will examine the potential to 10 offer wholly or partially energy-based rates, but cannot speculate at this time on the extent to 11 which other impediments will be encountered.

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21 Response:

7.7.1

metering?

FBC understands that Measurement Canada is currently working to determine how to address similar issues related to non-approved metering for adaptive streetlight technologies. The outcome is expected to help inform possible options for addressing non-approved DC metering for billing based on kWh, as opposed to billing based on time currently used in DC fast charging stations. FBC has routine engagement and is an active participant on working groups with Measurement Canada through the Canadian Electricity Association.

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- 317.8Please confirm, or otherwise explain, that the rate at which an EV battery32charges is non-linear. For example, an EV with near 0% battery level would likely33receive 50 kWh of energy if it charges at a 50 kW station for one hour. However,34an EV with at around 50% battery level would likely receive less than 50 kWh of35energy if it charges at a 50 kW station for one hour because the rate of charge36slows down as the battery fills.¹³
- 37

¹³ <u>https://www.chargepoint.com/files/Quick_Guide_to_Fast_Charging.pdf</u> (p. 4); Exhibit D-2-2.



1 Response:

- 2 The rate at which an EV battery charges can generally be described as non-linear. Depending 3 on the state-of-charge of the battery, as well as a number of other factors, an EV may receive
- 4 differing amounts of energy in two different charging sessions of the same duration.
- 5
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7.8.1 If confirmed, would implementing an energy-based component improve fairness in the fee structure? Why or why not?

9 10

11 Response:

An advantage of an energy-based component of the rate could be an improved perception of fairness of the fee structure; however, FBC believes there are a number of other factors that need to be considered. For example, these factors may include the relative scarcity of DC fast charging options for EV drivers, and the need to incent efficient use of these limited resources and prevent unnecessary congestion. The use of a time-based component of the rate incents the efficient use of charging stations as described in the response to BCUC IR1 7.1.3.

- In any case, due to the lack of Measurement Canada-approved metering, time-based rates are
 the only viable alternative at this time.
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- In the letter of comment in Exhibit D-2-2, Mr. Noble indicates that the temperature can
 affect the rate of electric energy delivered in a charging session.
- 7.9 Please clarify how temperature fluctuation may (or may not) affect the time
 required to charge an EV, for a given amount of electricity. If temperature plays a
 factor, how wide is the time variance? Are DCFC stations equipped to ensure
 that the charging rate is consistent under different temperatures?
- 29
- 30 Response:

EVs have battery management systems that manage the charging rate and battery temperature based on ambient temperature, state-of-charge and a number of other factors. As a result, the charge rate that a vehicle is capable of accepting may not vary significantly due to temperature. FBC has not observed a consistent drop in charging rates in winter months versus summer months.



- 1 FBC has deployed DCFC stations that are rated for operation from -40 °C to 50 °C, ensuring
- 2 stations are capable of supplying a charge rate at whatever level a customer's EV is capable of
- 3 accepting across this temperature range, including up to the station's full rated output.



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1	8.0	Refer	ence:	RATES
2				Exhibit B-5, section 3.2.1, p. 13
3				Electricity and station usage assumptions
4 5		On pa chargi	age 13 o ng event	of the Revised Application, regarding the electric consumption per EV t, FBC states:
6 7 8 9			FBC ha historic historic chargir	as assumed consumption of 20 kWh per charge event based on average cal kWh volumes per charge session at FBC's existing stations. Based on cal usage patterns, 20 kWh corresponds to approximately 30 minutes of ng.
10 11 12 13 14	Resp	8.1 onse:	Please charge from Fl	confirm, or otherwise explain, that the electric consumption of 20 kWh per event based on average historical kWh volumes per charge session is BC's experience of 50 kW stations.
15	Confi	med.		
16 17				
18 19 20 21 22 23	Resp	onse:	8.1.1	If confirmed, please explain whether FBC has made assumption adjustments to the 20 kWh per charge event for 100 kW stations. Why or why not?
24 25 26 27 28	No ac reaso rather sessio minut	djustmer nable to than cl on durat es (50 k	nts were expect hange a tion at th W statio	made to the 20 kWh per charge event for the 100 kW stations as it is that the higher output stations will reduce the duration of a charging event, customer's energy requirements. FBC expects that the overall average he higher-powered 100 kW stations will decrease from an average of 30 ns) to approximately 17.5 minutes.
29 30				
31 32 33 34 35			8.1.2	If not confirmed, please clarify what is the assumed consumption of kWh per charge event for 100 kW stations. What is the basis for this assumption?



5 6 No. 1

1 Response:

- 2 Please refer to the response to BCUC IR1 8.1.1.
 - On page 13 of the Revised Application, regarding station usage, FBC states:
- 7 To understand current use, FBC reviewed historical usage (in minutes) at 8 existing FBC-owned DCFC stations across FBC's service territory. Average 9 usage was approximately 0.3 sessions (9 minutes) per station per day in 2018, 10 and 0.7 sessions (21 minutes) per station per day in 2019. Data from 2020 was 11 not included due to the impact of COVID-19 on EV charging patterns (i.e. fewer 12 customers driving resulting in lower-than-anticipated DCFC usage compared to 13 historical trends).
- 14To estimate future usage of DCFC stations, FBC reviewed year-over-year15projected growth rates of EV registrations in FBC's service territory based on EV16sales targets from the Province's Zero Emissions Vehicles (ZEV) Act. FBC has17assumed that the growth rate in EV registrations will be reflected in the growth18rate of DCFC usage, which aligns with observations from 2018 and 2019 data.
- 19
- 8.2 Please provide the average usage per station per day in 2020 to date.

20 21 **<u>Response:</u>**

- The average usage in 2020 to date (January through October) was 0.5 sessions (15 minutes)per station per day.
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 26
 27
 8.2.1 Please re-state the 50 kW station and 100 kW station rates if 2020 data is to be included in the model to calculate rates.
 29
 30 <u>Response:</u>

The overall impact to the 50 kW rate is minor: the rate goes from \$0.2654/per minute to \$0.2704/per minute when the 2020 data is incorporated. FBC would still propose a rate of \$0.27/per minute if the 2020 data was incorporated. Nevertheless, FBC does not recommend making this calculation change due to the unusual nature of the 2020 station demand. As discussed in the Revised Application, travel restrictions in 2020 related to COVID-19 had a sizable impact on EV charging patterns (i.e. fewer customers driving resulting in lower-than-



1 anticipated DCFC usage compared to historical trends). FBC removed the 2020 data in order to 2 provide a more accurate picture of the growth in EV station usage.

3 The rate calculation for the 100 kW station did not incorporate 2020 data, so it is not impacted 4 by this analysis.

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8.3 Please confirm, or otherwise explain, that the average usage in 2018, 2019, and 2020 are based on 50 kW stations.

10 11 **Response:**

12 Confirmed. The DCFC average usage in 2018, 2019 and 2020 described in the Revised 13 Application, and in response to BCUC IR1 8.2, is based on 50 kW stations.

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8.3.1 If confirmed, please explain whether it is necessary to make assumption adjustments for the usage of 100 kW stations. Why or why not?

19 20 **Response:**

21 It is reasonable to assume that customers' energy requirements per charge session will not 22 change and that the required energy will simply be delivered over a shorter period of time when 23 using 100 kW stations. As a result, FBC has modelled adjustments to the duration of charge 24 sessions for the 100 kW stations as detailed in the response to BCUC IR1 8.1.1. Please also 25 refer to the response to BCUC IR1 8.5.

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- 29 8.4 Please provide the supporting data from the ZEV Act that shows the projected 30 growth rates of EV registrations in FBC's service territory. Compare the territorial 31 data against the BC provincial average.
- 33 **Response:**

34 The ZEV Act does not directly provide EV registration forecasts, but rather only provides a sales forecast based on the requirement to achieve EV sales targets as outlined in the ZEV Act. As 35 36 such, FBC's methodology for projecting growth in EV registrations is based on the targets in the

37 ZEV Act as follows:



- a) Base Start with the current number of existing EV registrations in the FBC territory.
 FBC uses EV registration data as it is available and region-specific;¹⁴ and
- b) Growth Calculate the number of new EVs each year by applying the annual sales target set out in the B.C. Zero Emissions Vehicle Act: Regulations Intentions Paper¹⁵ to a projection of annual sales of all light duty vehicles in the FBC territory.
- 6

FBC has not used the growth rate of BC's provincial average EV registrations to estimate the growth rate of DCFC usage because this data is not available on a forecast basis and the historical data may not be representative of future trends. FBC believes that *ZEV Act* sales targets will provide a better basis for forecasting EV registration, and ultimately DCFC usage, as the targets in the *ZEV Act* are legislatively mandated and therefore FBC expects them to be achieved.

Finally, FBC believes that applying region-specific data, as opposed to province-wide data,
where possible, provides a more accurate forecast of EV registrations, and ultimately DCFC
usage, within FBC's service territory.

- 16
 17
 18
 19 8.4.1 Please provide statistical evidence to show the correlation between DCFC station usage and growth rates of EV registrations in FBC's service territory.
- 23 **Response:**

Given that FBC's stations have only been in operation since 2018, there is limited data from which statistical evidence can be derived. However, FBC has compared EV registrations and DCFC station usage for 2018 and 2019 in the table below. As demonstrated in the table, the growth in EV registrations is comparable to the growth in station usage.

Year	LD EV Registrations in FBC Service Territory	Sessions per station per day
2018	350	0.3
2019	669	0.7
Correlation (2019 ÷ 2018)	1.9	2.3

¹⁴ https://public.tableau.com/profile/icbc#!/vizhome/VehiclePopulationIntroPage/VehiclePopulationData.

¹⁵ <u>https://www2.gov.bc.ca/assets/gov/farming-natural-resources-and-industry/electricity-alternative-energy/transportation/zev_act_regulations_intentions_paper-1-final_-updated_29oct2019.pdf.</u>



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1 2			
3 4 5 6 7 8		8.4.2	Please explain whether FBC has information on what type/level of charging is commonly used for EV owners living in FBC's service territory. Do they charge at home/work or at public fast charging stations?
9	<u>Response:</u>		
10 11 12 13 14	FBC does no Vehicles: Insig level. The rep percent, 19 p 75 percent of	t have da ghts from ort states ercent ar home cha	ta specific to its service area; however, the 2015 SFU study "Electrifying the Canadian Electric Vehicle Study" provides some insight on a national that the breakdown between home, workplace and public charging is 63 and 18 percent, respectively. The report also suggests that approximately arging is done with Level 2 chargers. ¹⁶
15 16			
17 18 19 20 21	<u>Response:</u>	8.4.3	Please explain why FBC did not use the growth rate of BC's provincial average EV registrations to estimate the growth rate of DCFC usage.
22	Please refer t	o the resp	ponse to BCUC IR1 8.4.
23			
24 25			
26 27 28 29 30		8.4.4	Please estimate how the proposed rates will change if FBC uses the growth rate of BC's provincial average EV registrations to estimate the growth rate of DCFC usage.
31	<u>Response:</u>		
32	Please refer t	o the resp	conse to BCUC IR1 8.4.
33 34			

¹⁶ <u>http://rem-main.rem.sfu.ca/papers/jaxsen/Electrifying_Vehicle_%28Early_Release%29-The_2015_Canadian_Plug-in_Electric_Vehicle_Study.pdf</u>

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8.4.4.1 To the extent possible, please provide a similar estimate to include growth rates of EV registrations in neighbouring jurisdictions (i.e. Alberta and Washington state) to estimate the growth rate of DCFC usage.

7 **Response:**

8 FBC is unable to provide information related to forecast growth rates specific to the jurisdictions 9 identified in the question. FBC believes it is reasonable to base forecasts of DCFC usage on provincial EV growth rates as determined by BC's ZEV Act as further discussed in the response 10

- to BCUC IR1 8.4. 11
- 12
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15 8.5 Please explain whether FBC has considered reducing future FBC DCFC stations usage recognizing that there may be a growth of competing DCFC stations 16 17 available by other service providers. If so, what is the estimated impact and how is this reflected in FBC's model? If not, why not? 18

19 20 Response:

21 Although usage of FBC stations will be impacted by the growth in the number of competing 22 stations, FBC has not reduced the growth forecast for station usage prior to 2030 based on 23 potential competitors. Instead, FBC has assumed it will not have to add additional stations and 24 that any growth in excess of the FBC forecast will be addressed by other service providers. 25 Therefore, FBC has assumed all 50 kW and 100 kW stations will reach maximum practical 26 capacity at 12 and 16 sessions a day in 2030.

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- 30 8.6 Please provide a rate sensitivity analysis on the \$0.27/minute rate at 50 kW 31 stations and \$0.54/minute rate at 100 kW stations for the following variances in 32 FBC's forecast usage: +/- 10 percent, +/- 25 percent, and +/- 50 percent.
- 33

34 Response:

35 Please see the table below for the rate sensitivity analysis. This analysis incorporates the 36 correction to the 100 kW Station rate to \$0.55/minute discussed in response to BCUC IR1 12.1.



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	EV 50%	Usage Lower	EV 25%	Usage Lower	E\ 10	/ Usage % Lower	E\ 109	/ Usage % Higher	E\ 259	/ Usage % Higher	EV 50%	′ Usage ⁄₀ Higher
\$/minute Rate for the 50 kW Station	\$	0.58	\$	0.37	\$	0.30	\$	0.24	\$	0.20	\$	0.16
\$/minute Rate for the 100 kW Station	\$	1.18	\$	0.76	\$	0.62	\$	0.49	\$	0.42	\$	0.34

- ~

- 8.6.1 Please provide \$/minute 50 kW station and \$/minute 100 kW station rates that FBC considers to be a reasonable high usage scenario and a low usage scenario. Specify the variance percentage.
- 9 <u>Response:</u>

10 FBC considers that the +/- 50 percent usage identified in BCUC IR1 8.6 reasonably represents

11 the lowest and highest usage thresholds.



No. 1

1 9.0 Reference: RATES

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Exhibit B-5, section 3.2.1.4, pp. 13-14

Carbon credits

- 4 FBC submits that the electricity sales from its DCFC stations will generate carbon 5 credits. On page 13 of the Revised Application, FBC states:
- 6 FBC's DCFC stations will allow FBC to monetize carbon credits as a supplier of 7 low carbon fuels. FBC has forecast an average value for the carbon credits as 8 described in this section to be factored into the calculation of the EV rate, while 9 actual revenue realized from the sale of carbon credits, net of administration 10 costs, will be returned to all customers through FBC's revenue requirements in 11 the year subsequent to monetization of the carbon credits, through a forecast 12 (and subsequent true-up to actuals) included in Other Revenue.
- 9.1 In tabular format on a quarterly basis since the inception of FBC owning or
 operating EV DCFC stations, please provide the actual number of carbon credits,
 number of transfers, average sale price, minimum sale price, maximum sale
 price, and any other relevant actual data.

17

18 **Response:**

- 19 FBC has not yet sold any of the carbon credits related to its public DCFC stations. The table
- 20 below provides a summary of the calculated carbon credits related to FBC's EV DCFC stations.
- 21 Please note that carbon credits are calculated on an annual basis such that quarterly amounts
- 22 cannot be provided.
- 23

Table 1: FBC DCFC Carbon Credits Volumes

	Compliance Period (January 1 – December 31)									
	2018	2019								
Credits	25	50								

24

The table provided below summarizes the RLCFRR market report since the inception of the EV DCFC stations. The RLCFRR report highlights the number of transfers, total credit volume, average price per credit and the minimum and maximum price per credit sold within the entire RLCFRR. As the FBC DCFC carbon credits have not yet been sold, the market report does not include these credits but does reflect the range and average price per credit. Note that the average price per credit since Q4 2019 is greater than \$200, which was the pricing used in the cost of service analysis. FORTIS BC

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Table 2: RLCFRR Market Report Summary

Time Period	Transfers (number)	Total Volume (credits)	Average Price (\$ per credit)	Minimum Price (\$ per credit)	Maximum Price (\$ per credit)
Q2 2020	8	41,630	206.23	85.00	330.45
Q1 2020	9	30,233	235.49	32.50	345.00
Q4 2019	23	200,125	297.71	176.00	324.08
Q3 2019	2	5,500	178.18	176.00	200.00
Q2 2019	4	9,412	187.25	176.00	200.00
Q1 2019	6	48,475	178.46	32.93	200.00
Q4 2018	30	211,817	200.64	164.30	210.50
Q3 2018	9	149,571	199.96	55.00	207.00
Q2 2018	2	2,741	170.30	165.00	172.00
Q1 2018	7	71,092	159.23	55.00	176.00

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3 FBC intends to sell the carbon credits related to its public DCFC stations by the end of 2020 or 4 in 2021, and has included carbon credits in the calculation of the rates.

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- 9.2 Please clarify the rationale for FBC to include the forecast average value of carbon credits in the calculation of RS 96 but have the actual net revenue from 10 carbon credits benefit all FBC customers.
- 11

12 **Response:**

13 The rationale for the treatment of the carbon credit revenue is one of practicality that stems 14 primarily from the nature of the EV rate and the potential impact to other customers.

15 The rate is designed such that, on a forecast basis, all EV revenues and costs (including the 16 credit from carbon credit sales) fall to EV customers. However, FBC recognizes that variances 17 from forecast carbon credit sales are likely to occur due to volumes, prices, or timing, and these 18 variances can result in either a benefit or a cost to other customers. These variances will be 19 small, particularly in relation to the FBC's larger revenue requirement

20 Due to the variability in carbon credits, in order to have actual net carbon credit revenue 21 reflected in the EV rate, RS 96 would need to be adjusted as often as annually, requiring BCUC 22 approval and resulting in a fluctuating rate. FBC views this as undesirable. And given the 23 inability to identify individual EV customers, there is no means to ensure that past EV customers 24 would receive the net benefit of the adjustment.



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FBC considers that the potential for other customers to have to bear the impact of not achieving the carbon credit sales forecast, which is balanced by the opportunity to benefit from exceeding the forecast, to be the preferable alterative. This outcome is consistent with rate setting in general, in which all customers are inevitably exposed to the impact of any forecast variance that occurs in the revenues expected from any other customer class, is administratively efficient and leads to rate stability for EV customers.

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- 109.3Please discuss whether the actual net revenue from carbon credits should11benefit the EV class of customers only, rather than all FBC customers. Please12compare the pros and cons of this approach versus the FBC's proposal to have13the actual net revenue from carbon credits benefit all FBC customers.

15 **Response:**

- 16 Please refer to the response to BCUC IR1 9.2.
- 17

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20 On page 14 of the Revised Application, FBC provides an overview of the *Renewable* 21 *and Low Carbon Fuel Requirements Regulation* (RLCFRR). The RLCFRR implements a 22 maximum allowable carbon intensity limits for transportation fuels, with which all fuel 23 suppliers including suppliers of electricity for EV charging must comply in each reporting 24 period. FBC states:

- All fuel suppliers who are in a debit position, meaning that the carbon intensity of the fuel they supplied exceeds the limit mandated by the RLCFRR during the reporting period, must pay a penalty of \$200 per tonne of CO2e. Alternatively, these fuel suppliers may obtain carbon credits from another supplier who supplies lower carbon fuels and has generated a net credit position in each reporting period.
- FBC projects that it will generate low carbon fuel credits of 1,342 tonnes of CO2e annually on average.¹⁷ FBC states "[a]ssuming the price for carbon credits matches the penalty for failing compliance with RLCFRR of \$200 per tonne, FBC would receive \$268,400 per year on average over ten years." Further, FBC also states:
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¹⁷ On page 14 of the Revised Application, FBC explains that Carbon intensity is the amount of carbon dioxide equivalent emitted (CO2e) per unit of energy consumed, and is measured in tonnes.

FORTIS BC

1 2 3		As a fra generate sale pric	ame of reference, each 20 kWh charging session has the potential to e between \$2.58 and \$3.03 in carbon credits, depending on negotiated ces for the credits of between \$170 and \$200 per tonne.
4 5 6	9.4	Please account	confirm, or otherwise explain, that FBC has used \$200 per tonne to for the sale of carbon credits to calculate the proposed EV rates.
7	Response:		
8	Confirmed.		
9 10			
11 12 13 14 15 16	D	9.4.1	If confirmed, please explain why FBC considers that the penalty of \$200/tonne is appropriate to calculate the value of carbon credits when FBC states that the value depends on negotiated sale prices (e.g. between \$170/tonne and \$200/tonne).
17	<u>Response:</u>		
18 19 20 21 22	The assumed given that FB the \$200/cred could be sold However, the	d pricing C believe dit penalty for, whic RLCFRR	of \$200/credit is appropriate as it represents a conservative approach es that the average negotiated price to sell the credits will likely exceed y. FBC identified \$170/credit as the lower bound price that the credits th aligns with the \$176/credit minimum price sold between 2019 Q2-Q4. It market report shows that the average price per credit has exceeded the

\$200/credit average from Q4 2019 to Q2 2020. This indicates that fuel suppliers required to
purchase carbon credits to meet the RLCFRR requirements are willing to purchase credits
above the \$200/credit to avoid paying the penalty and being non-compliant with the regulation.
This supports FBC's use of the \$200/credit as a reasonable input into the rates.

- 9.4.2 Please calculate the lower range of the carbon credit revenue in dollars per year on average over ten years if FBC assumes a sale price of \$170/tonne for the carbon credit transaction.
- **Response:**

If FBC assumes a sale price of \$170/tonne for the carbon credits, the average revenue per year
is \$190,231 for the 50 kW station and \$49,174 for the 100 kW station.



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Please re-calculate the proposed EV rate if FBC assumes a sale price 9.4.3 of \$170/tonne for the sale of carbon credits.

7 **Response:**

8 The re-calculated rate for 50 kW and 100 kW stations based on a \$170/tonne carbon credit is 9 \$0.29 per minute for the 50 kW station and \$0.59 per minute for the 100 kW station. This 10 analysis incorporates the adjustment to the 50 kW station rate as discussed in the response to BCUC IR1 12.1. 11

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9.4.4 Please discuss whether there can be circumstances where FBC might sell carbon credits at prices greater than \$200/tonne.

18 Response:

19 Confirmed that FBC could sell carbon credits at prices greater than \$200/tonne. As shown in 20 Table 9.1b in the response to BCUC IR1 9.1, there have been periods where both the average 21 and maximum prices in the RLCFRR Market have exceeded \$200 per tonne and FBC believes 22 this could occur in the future as well.

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- 26 9.5 Please explain what mechanisms are in place to ensure that FBC is generating 27 the maximum benefit from carbon credit trading.

28 29 Response:

- 30 FBC is requesting interested organizations to submit a bid for FBC's available carbon credits.
- 31 This allows FBC to sell the credits to the fuel supplier with the highest competitive bid. FBC
- also reviews the RLCFRR "Low Carbon Fuel Credit Market Report Quarterly" to ensure that 32
- 33 the price aligns with the historical average market transfer price.
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1 The BC Government publishes monthly and quarterly credit market reports pertaining to 2 low carbon fuel credit market.¹⁸ The reports include information on the number of credit 3 transfers, volume of credits transferred, and credit prices. FortisBC Energy Inc. is 4 recognized as a Part 3 fuel supplier by the Ministry of Energy, Mines and Petroleum 5 Resources.¹⁹

- 6 9.6 Please confirm, or otherwise explain, that FBC is a recognized fuel supplier 7 under Part 3 of the *Greenhouse Gas Reduction (Renewable and Low Carbon* 8 *Fuel Requirements) Act.* If confirmed, is FBC operating under FortisBC Energy 9 Inc. interchangeably? If not confirmed, please explain how FBC is selling its 10 carbon credits?
- 11

12 Response:

FBC is not currently a recognized fuel supplier under Part 3 of the RLCFRR, but is in the registration process. However, FBC anticipates that FEI (who is registered) will be able to sell the credits on behalf of FBC to reduce administrative costs. Further, by bundling their credits together, FBC and FEI will be able to increase their sales volume in order to pursue a higher price per credit, thereby maximizing credit sales revenue for both entities.

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9.7 To FBC's understanding, please clarify what is the credit price "\$CAD/credit." For example, is one credit equal to one tonne of CO2e?

24 **Response:**

The credit price "\$CAD/credit" is the price that fuel suppliers are paying for each credit sold or being sold in the market under the RLCFRR. The number of credits generated is equal to the positive difference, in tonnes of carbon dioxide equivalent emissions, between the fuel being consumed for transportation (in this case electricity) and the limit set by the Ministry. Fuel suppliers generate credits for supplying fuels with a carbon intensity below the targets and receive debits for supplying fuels with a carbon intensity above the targets. The debits and credits are proportional to the emissions a fuel generates over its full life cycle.

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¹⁸ <u>https://www2.gov.bc.ca/gov/content/industry/electricity-alternative-energy/transportation-energies/renewable-low-carbon-fuels/credits-market.</u>

¹⁹ <u>https://www2.gov.bc.ca/assets/gov/farming-natural-resources-and-industry/electricity-alternative-energy/transportation/renewable-low-carbon-fuels/rlcf-013.pdf.</u>



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9.8 Please explain whether FBC has considered the prevailing market prices from these credit market reports in its financial model analysis. If so, please explain how this information and what market prices were considered. If not, why not?

5 **Response:**

6 FBC considered the average price per credit as a basis for the forecasted price per credit to 7 determine the carbon credit revenue generated from DCFC stations. From Q4 2019 to Q2 2020, the average carbon credit price exceeded the \$200/credit penalty that fuel suppliers are 9 required to pay to become compliant under the RLCFRR. FBC anticipates that the average 10 price per credit sold in the market will remain above the \$200/credit price. As a conservative 11 measure, FBC used \$200/credit, which is the penalty amount, to forecast the carbon credit 12 revenue.



No. 1

1	10.0	Reference:	RATES
2			Exhibit B-5, section 3.2.1, p. 15, section 3.2.2, p. 16
3			Transaction fees and O&M
4		On page 15 o	of the Revised Application, FBC states:
5 6 7 8 9 10		A trai FLO transa FLO teleph collec	nsaction fee of 15 percent for global management services is charged by [FLO Services Inc.] and is added to the calculated EV rate before the action fee. This fee covers the network management services provided by (station status monitoring, remote diagnostics/upgrades, etc.), 24/7 none support for customers using the DCFC stations, as well as payment stion and processing.
11 12 13 14		On page 10 maintenance maintenance expenses inc	6 of the Revised Application, FBC estimates that the operating and cost is in the range of \$4,900 to \$5,193 annually per station. This includes , travel, repairs outside of warranty, and FBC network management cluding half of a full-time equivalent (FTE) employee.
15 16 17 18	_	10.1 Pleas provid netwo	e explain the difference between the "network management services ded by FLO" covered in the 15 percent transaction fee and the "FBC ork management expenses" pertaining to O&M expenses.
19 20 21	The F	onse: LO network m : overlap with F	anagement services described in the preamble to this information request
22 23 24	•	The FLO r diagnostics accounting s	network management services are station status monitoring, remote and upgrades, data storage, and payment processing, collection and ervices.
25 26 27 28 29 30 31	•	FBC networ messaging of maintenance may be required messaging of reporting required management	k management expenses consist of the labour required to maintain lisplayed on the signage and at the stations, coordination of repairs and outages, monitor usage patterns to determine where new sites or stations uired, management of station status notifications, pricing and customer in third-party maps of EV charging sites (e.g., PlugShare) and oversight of puirements (e.g. carbon credits from DCFC kWh volumes). FBC network t expenses also include payments to FLO related to modem rental cellular

data backhaul for the DCFC stations.

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10.2 Please provide a breakdown of the O&M cost line items that shows maintenance, travel, repairs outside of warranty and FBC network management expenses for the forecast period.

5 **Response:**

6 Please see the tables below for a breakdown of the 50 kW and 100 kW O&M expenses for the

7 forecast period.

	50 kW O&M Costs													
		2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
	Maintenance			3,170	18,488	22,497	22,947	23,406	23,874	24,352	24,839	25,335	25,842	26,359
	Travel			507	2,958	3,600	3,672	3,745	3,820	3,896	3,974	4,054	4,135	4,217
	Repairs (outside of warranty)			8,877	51,767	62,992	64,252	65,537	66,848	68,185	69,548	70,939	72,358	73,805
	FBC Network Management Expenses	450	1,750	13,784	80,386	97,818	99,774	101,769	103,805	94,484	96,374	98,301	100,267	102,273
8		450	1,750	26,339	153,599	186,906	190,644	194,457	198,346	190,917	194,735	198,630	202,602	206,654
	100 kW O&M Costs													
			2021	2022	2023	2024	2025	2026	2027	2028	2029	<u>2030</u>		
	Maintenance		1,946	3,970	4,049	4,130	4,213	4,297	4,383	4,471	4,560	4,652		
	Travel		311	635	648	661	674	688	701	715	730	744		
	Repairs (outside of warranty)		5,449	11,116	11,339	11,565	11,797	12,033	12,273	12,519	12,769	13,024		
	FBC Network Management Ex	penses	8,462	17,262	17,607	17,959	18,318	16,674	17,007	17,347	17,694	18,048		
9		13	16,168	32,983	33,643	34,316	35,002	33,691	34,365	35,052	35,753	36,468		

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- Please discuss FBC's vendor selection process for its global management 10.3 services. How does the 15 percent transaction fee compare to industry average and other competitive vendors?
- 16

17 **Response:**

18 FBC's initial DCFC investments for the first five stations were completed in partnership with the 19 Community Energy Association (CEA) with funding provided by municipal, provincial, and 20 federal partners in addition to FBC. The CEA led the design and procurement aspects of the 21 "Accelerate Kootenays" initiative under which the stations were deployed, with FBC only 22 becoming a partner on the project subsequent to the completion of that work. As part of that 23 work, the CEA led the vendor selection and procurement process that resulted in the selection 24 of AddEnergie and FLO for the DCFC station and global management service. In addition to 25 overall capital cost, a key criterion of the CEA's selection process included stations being 26 capable of operating at -40 °C given the cold weather temperatures commonly experienced throughout the southern interior of BC. AddEnergie was the only proponent whose equipment 27 28 met this criterion.

29 In 2018, following a successful application to NRCan under the Electric Vehicle and Alternative 30 Fueling Infrastructure Deployment Initiative (EVAFIDI) for funding to support an additional 12



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1 DCFCs, FBC conducted a request for proposals (RFP) to assess the current market for DCFC 2 stations and network solutions. AddEnergie/FLO were again selected as the preferred vendor 3 through this process based on the total capital cost of the 12 DCFCs (35 percent less than the 4 next proponent), as well as due to the ongoing level of station reliability already experienced by

5 FBC for the first five stations previously deployed.

6 FBC notes that the only other proponent in FBC's RFP with a similar transaction fee model to 7 recover network management costs was set at 10 percent, 5 percent less than FLO. FBC 8 estimates the industry average for this transaction fee is 12 - 14 percent in Canada (weighted 9 by approximate market share). Despite this, the increased capital costs of the other vendor's 10 equipment would have resulted in a rate approximately 30 percent higher than the \$0.27 per 11 minute rate currently proposed. Please also refer to the response to BCUC IR1 10.3.1.

12 13 14 15 10.3.1 Please confirm, or otherwise explain, that the 15 percent transaction fee 16 is fixed in FLO's global management services agreement. Are there any 17 expiration or renegotiation opportunities in the agreement? 18 19 **Response:**

20 Confirmed. FBC has separate global management service agreements with FLO for individual 21 stations. FBC is discussing renegotiation of the existing transaction fee as part of the renewal 22 of FLO's global management services agreements for the individual stations, the first of which 23 are up for renewal in 2021.



No. 1

1	11.0	Refere	ence:	RATES				
2				Exhibit B-5, sect	ion 1.1, p. 1, s	ection 3.2.2,	p. 16	
3				Depreciation				
4		On pag	ge 1 of t	the Revised Applic	ation, FBC see	ks the followin	ig approval:	
5 6			Approv owned	al for FBC's prop EV DCFC stations	osed straight li s, as set out in t	ne 10 percent Section 3.2.2	depreciation	a rate for FBC- ation;
7 8		On paç	ge 16 of	f the Revised Appli	ication, FBC sta	ates:		
9 10		FBC is at a 10	reques	sting approval to us nt depreciation rate	se straight line e, based on a se	depreciation for ervice life of te	or the EV cha n years.	arging stations,
11 12 13 14		11.1	Please of ten industr	e explain why FBC years. For examp y standards, manu	estimates that ble, is the serv ifacturers' warra	its DCFC stat ice life of ten anty, and/or of	tions will have years based ther factors?	e a service life d on accepted
15	<u>Respo</u>	onse:						
16 17	FBC's guidan	estimat ice prov	ed ten y ided by	year service life for its vendor AddEne	⁻ both the 50 kV ergie.	V and 100 kW	DCFC statio	ns is based on
18 19	As we various	II, FBC s jurisdio	notes ctions h	that a number of ave utilized a ten y	recent EV rela /ear service life	ted regulatory	/ filings and e:	discussions in
20 21	•	The Va	ancouve ;	er EV Ecosystem S	Strategy ²⁰ assu	mes a ten-yea	ar linear depi	reciation of EV
22 23 24 25	•	The re Transp Southw State re	ecent a oortatior vestern egulato	pplication by the Electrification F cited two cases v rs. ²²	Southwestern Plan. ²¹ In its where a 10 pe	Public Servic evidence sup rcent deprecia	e Company oporting it p ation rate wa	as part of its roposed rate, s accepted by
26 27 28	•	The Or propos owned	regon F ed by EV cha	Public Utilities Con Portland General argers. ²³	nmission appro Electric that s	ved multiple I pecified a 10	EV charging)-year useful	pilot programs life for utility-

²⁰ <u>https://vancouver.ca/files/cov/EV-Ecosystem-Strategy.pdf</u> page 38.

 ²¹ See <u>https://www.xcelenergy.com/company/rates and regulations/filings/transportation electrification plan.</u>
 ²² Direct Testimony of Arthur P. Freitus, at p. 10. Available at

https://www.xcelenergy.com/company/rates_and_regulations/filings/transportation_electrification_plan
 ²³ See Order 18-054 in Proceeding UM-1811, Stipulation Agreement, item 13. Available at

https://apps.puc.state.or.us/orders/2018ords/18-054.pdf



1 2 3	 The Government of New Zealand issued Tax Depreciation Rates General Determination Number 100 (Determination DEP100) setting the useful life of Rapid DC car charging stations at ten years.²⁴ 								
4 5 6	FBC believes that a useful life of ten-years for rapid charging assets such as DCFC stations is reasonable assumption to use in the derivation of RS 96.								
7 8									
9 10 11 12 13	Response:	11.1.1	Please explain why FBC's 50 kW and 100 kW stations have the same depreciation rates.						
14 15	FBC has rec applies to bot	eived gui h the 50 ł	dance from the AddEnergie that an estimated service life of ten years kW and 100 kW stations.						
16 17									
18 19 20 21 22	11.2 <u>Response:</u>	Please zero for	confirm, or otherwise explain, that FBC is assuming a salvage value of the EV DCFC stations after a service life of ten years.						
23	Confirmed.								
24 25									
26 27 28 29 30	<u>Response:</u>	11.2.1	If confirmed, please explain why is FBC assuming that these charging stations will be worth zero after a service life of ten years.						
31 32	FBC believes due to both	it is reas technolog	onable to assume the charging stations will be worth zero after ten years y obsolesce as well as equipment degradation and reduced reliability.						

33 FBC does not believe it reasonable to assume the stations could be sold to another party for 34

continued operation, but rather would simply be scrapped. Given the service life reliability

²⁴ <u>https://www.taxtechnical.ird.govt.nz/determinations/depreciation/general/dep100-depreciation-rate-for-</u> rapid-dc-car-charging-stations.



1 concerns of the various components at 10 years, it is reasonable to assume salvage value 2 would be negligible/zero.

3 4			
5 6 7 8	<u>Response:</u>	11.2.2	If not confirmed, please clarify.
9	Please refer t	o the resp	ponse to BCUC IR1 11.2.
10 11			
12 13 14 15 16	<u>Response:</u>	11.2.3	Please clarify whether FBC has considered that 50 kW and 100 kW stations would potentially have different salvage values.
17 18 19	FBC expects technology of the response	that both psolescen to BCUC	the 50 kW and 100 kW stations will have zero salvage value due to the ice and reliability concerns with 10-year-old stations. Please also refer to IR1 11.2.1.
20 21			
22 23 24 25 26 27	11.3	Please remedia costs ar kW and	explain whether FBC will be responsible for any disposal fee or site ation costs at the end of the EV charging station service life. Specify these and how are they reflected in each of the rate calculation models for the 50 100 kW stations.
28	<u>Response:</u>		
29 30 31	FBC has not costs of disp replacement of	included bosal are costs.	disposal or site remediation costs for the EV stations as the estimated e expected to be relatively small and will be incorporated into any
32 33 34	For the asser poles, towers incorporate a	ts for wh & fixture net salva	ich FBC will incur material disposal or site remediation costs, such as s, conductors & devices and line transformers, FBC's depreciation rates age cost provision (a collection of the costs of removal/disposal over the

lives of the assets). The poles, towers & fixtures are depreciated at 2.67 percent, of which 0.83 percent is the net salvage cost provision. The conductors & devices are depreciated at 2.89 36

percent, of which 0.91 percent is the net salvage cost provision. The line transformers are 37



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- 1 depreciated at 2.74 percent, of which 0.45 percent is the net salvage cost provision. These
- 2 depreciation rates (including net salvage) for these assets required to provide DCFC service
- 3 have been included in the calculation of the EV charging rate.



No. 1

1	12.0	Refere	ence:	RATES
2				Exhibit B-5, Appendix E, 100 kW Stations, Schedule 1, p. 2
3 4				Depreciation expense and allowance for funds used during construction
5 6 7 8		In Appo calcula gross p before	endix E ates dep plant in allowan	to the Revised Application, for the 100 kW stations, line 58 of Schedule 1 preciation expense as line 48 multiplied by 8.97 percent. Line 48 is the service at the beginning of year which equals the project capital spending nee for funds used during construction (AFUDC) (line 36).
9 10 11 12		12.1	Please expens ratepay	explain why the AFUDC is not included in the calculation of depreciation se for the 100 kW stations and how the AFUDC would be recovered from yers.
13	<u>Respo</u>	onse:		
14 15 16 17 18	This w expense station provide the upo	as an o se for th s is \$0 ed in re dated A	versight he 100 0.55/per sponse ppendix	t. The AFUDC should have been included in the calculation of depreciation kW stations. With this correction, the new charging rate for the 100 kW minute. The revised rate will be included with the revised draft Order to BCUC IR1 17.9, Attachment 17.9. Please refer to Attachment 12.1 for a E 100kW – Revised Financial Schedules.
19 20				
21 22 23 24 25 26	_	12.2	If the please financia expens	AFUDC should be included in the calculation of depreciation expense provide the new proposed charging rate for the 100 kW stations and new al schedules for the 100 kW stations updated for the depreciation se.
27	<u>Respo</u>	onse:		
28	Please	e refer to	o the res	sponse to BCUC IR1 12.1.



No. 1

1	13.0	Refer	ence:	RATES
2				Exhibit B-5, section 3.2.2.8, p. 17
3				Earned return
4 5 6		On pa service of 9.18	age 17 e inputs 5 percer	of the Revised Application, for earned return component in its cost of s, FBC submits that an equity thickness of 40 percent and a return on equity nt have been used in its model for 2018 through 2030. FBC further states:
7 8 9 10 11			While produc <u>the 20</u> <u>curren</u> was ap	it is FBC's practice to use the latest approved capital structure when cing forward looking financial analysis, <u>FBC felt it was appropriate to use</u> 020 and 2021 applied for capital structures in this analysis to reflect the ot short term and long term interest rates, both of which are lower than what pproved for 2019. [Emphasis added]
12 13 14		13.1	Please 2021 a	e clarify what is meant by "FBC felt it was appropriate to use the 2020 and applied for" items in the analysis of calculating the EV rates.
15	Respo	onse:		
16 17 18 19	To cla short t While as the	arify, the term de not yet y are th	e "applie bt ratios approve e most	ed for" components of the capital structure includes FBC's long term and s and rates, which are embedded in FBC's 2020 and 2021 Annual Review. ed, FBC used these debt ratios and rates in the EV station financial models current figures.
20 21	The ca and 9.	apital st 15 perc	ructure ent, res	for equity thickness and return on equity for FBC is approved at 40 percent spectively.
22 23				
24 25 26 27 28 29		13.2	Please referrin their re structu	e confirm, or otherwise explain, that FBC in the underlined sentence is ng to the split between the short-term and long-term debt interest rates and espective portions within the 60 percent debt component in the FBC capital ure.
30	Respo	onse:		
31	Please	e refer t	o the re	esponse to BCUC IR1 13.1.
32 33				
34 35 36		13.3	Please the E\	e explain whether any adjustments would be necessary in the calculation of V rates in this proceeding if the BCUC in the FBC Annual Review for 2020



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3

and 2021 Rates approves short-term and long-term interest rates that are different than FBC's applied for rates.

4 <u>Response:</u>

5 While FBC considers that an adjustment is unlikely to be necessary, FBC could adjust the EV

6 rate model and its proposed EV rates if the 2021 approved debt ratios and interest rates result

7 in a different EV charging rate than what has been proposed.



3

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1 14.0 **Reference:** RATES

Exhibit B-5, section 3.4, p. 20

Rate impact sensitivity

4 On page 20 of the Revised Application, FBC provides a sensitivity analysis of the rate 5 impact to other FBC electricity customers if actual EV usage varies by +/- 10 percent and +/- 25 percent from the forecast embedded in the financial models. The table below 6 7 shows that if actual EV usage was 25 percent lower than forecast, the rate impact to 8 other FBC customers is at 0.033 percent for 50 kW stations and 0.010 percent for 100 9 kW stations.

Table 3-4: Rate	Impact Sensitivity
-----------------	--------------------

	EV Usage 25% Lower	EV Usage 10% Lower	EV Usage 10% Higher	EV Usage 25% Higher
Rate Impact to Other FBC Customers 50 kW Station	0.033%	0.013%	-0.013%	-0.033%
Rate Impact to Other FBC Customers 100 kW Station	0.010%	0.004%	-0.004%	-0.010%

- 10
- 11 12

Please provide the supporting calculations for Table 3-4 and for the expanded 14.1 and re-stated information requested below.

13

14 Response:

When responding to BCUC IR1 14.1, FBC found a calculation error in the Rate Impact 15 16 Sensitivity Table 3-4. FBC has corrected that error and has provided an updated table below along with the supporting calculations. The rate impact analysis below also incorporates the 17 correction to the 100 kW station rate identified in BCUC IR1 12.1. The requested supporting 18 19 calculations are provided below the revised table.

Table 3-4: Rate Impact Sensitivity												
	EV Us 50% Lo	age ower	E\ 259	/ Usage % Lower	E\ 10'	/ Usage % Lower	E\ 109	/ Usage ⁄⁄6 Higher	E\ 25%	/ Usage % Higher	E 50	V Usage % Higher
Rate Impact to Other FBC Customers 50 kW Station	0.06	1%	C	.029%	C	0.010%	-(0.008%	-(0.022%		-0.044%
Rate Impact to Other FBC Customers 100 kW Station	0.018%		0.008%		0.002%		-0.002%		-0.005%			-0.011%
(\$) per customer impact to Other FBC Customers 50 kW Station	\$	1.55	\$	0.74	\$	0.25	\$	(0.21)	\$	(0.55)	\$	(1.10)
(\$) per customer impact to Other FBC Customers 100 kW Station	\$	0.46	\$	0.20	\$	0.05	\$	(0.05)	\$	(0.14)	\$	(0.28)



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50 kW Rate Impact Calculations

			EV Usage Lowe	50% r	EV Usage 25% Lower	EV U	sage 10% .ower	EV Usage 10% Higher	EV Usage 25% Higher	EV	Usage 50% Higher
Line	Particulars	Reference									
	1 Total PV of Annual Revenue Requirement	Appendix E, Page 6, Line 7 (Under different Usage Scenarios)	3	,792	3,637		3,544	3,665	3,767		3,956
	2										
	3 Total PV of Charging Minutes per year	Appendix E, Page 6, Line 13 (Under different Usage Scenarios)	7,889	,462	11,834,193	14	,201,032	17,356,816	19,723,655	2	3,668,386
	4										
	5 Levelized \$ per minute rate to recover Cost of Service	Appendix E, Page 6, Line 15		0.23	0.23		0.23	0.23	0.23		0.23
	5 Transaction Fee Percentage	Appendix E, Page 6, Line 16		0.15	0.15		0.15	0.15	0.15		0.15
	6 Levelized \$ per minute rate (incl. Trans Fee)	Appendix E, Page 6, Line 17		0.27	0.27		0.27	0.27	0.27		0.27
	7										
	8 Total PV of Annual Revenue	(Line 3 x Line 5) / 1,000	1	,792	2,687		3,225	3,941	4,479		5,375
	9 Revenue Surplus/(Deficiency)	Line 8 - Line 1	(2	,000)	(950)		(320)	276	711		1,418
	10 Total PV of 2021 Approved Revenue Requirement	Appendix E, Page 1, Line 19	3,259	,414	3,259,414	3	,259,414	3,259,414	3,259,414		3,259,414
	11										
	12 Rate Impact to other FBC Customers	(-Line 9 / Line 10)	0.0	061%	0.029%		0.010%	-0.008%	-0.022%	5	-0.044%
	13 2021 FBC Proposed Revenue Requirement	Appendix E.1, Page 1, Line 15	362	,255	362,255		362,255	362,255	362,255		362,255
	14 Revenue (Surplus) Deficiency	(Line 12 X Line 13) X 1,000	222	,304	105,573		35,534	(30,721)	(79,072))	(157,614)
	15 Average Number of Customers for 2021	(Line 12 X Line 13) X 1,000	143	,325	143,325		143,325	143,325	143,325		143,325
	16 Average Dollar Impact for other FBC customers	Line 14 / Line 15	\$	1.55	\$ 0.74	\$	0.25	\$ (0.21)	\$ (0.55	\$	(1.10)
	100 kW Bate Impact Calculations										
			FV Usage	e 50%	EV Usage 25%	6 FV I	Isage 10%	EV Usage 10%	FV Usage 259	6 FV	Usage 50%
			L. Obuge		L. OSABC LSA		Sabe Tow	L. Coage 10/	L. COUBC LO		osube son

			Lower	Lower	Lower	Higher	Higher	Higher
Line	Particulars	Reference						
	1 Total PV of Annual Revenue Requirement	Appendix E.1, Page 6, Line 7 (Under different Usage Scenarios)	964	931	912	996	1,045	1,130
	2							
	3 Total PV of Charging Minutes per year	Appendix E.1, Page 6, Line 12 (Under different Usage Scenarios)	1,013,077	1,519,616	1,823,539	2,228,770	2,532,693	3,039,231
	4							
	5 Levelized \$ per minute rate to recover Cost of Service	Appendix E.1, Page 6, Line 14	0.47	0.47	0.47	0.47	0.47	0.47
	5 Transaction Fee Percentage	Appendix E.1, Page 6, Line 15	0.15	0.15	0.15	0.15	0.15	0.15
	6 Levelized \$ per minute rate (incl. Trans Fee)	Appendix E.1, Page 6, Line 16	0.55	0.55	0.55	0.55	0.55	0.55
	7							
	8 Total PV of Annual Revenue	(Line 3 x Line 5) / 1,000	476	714	857	1,048	1,191	1,429
	9 Revenue Surplus/(Deficiency)	Line 8 - Line 1	(487)	(217)	(55)	52	146	298
	10 Total PV of 2021 Approved Revenue Requirement	Appendix E.1, Page 1, Line 19	2,696,403	2,696,403	2,696,403	2,696,403	2,696,403	2,696,403
	11							
	12 Rate Impact to other FBC Customers	(-Line 9 / Line 10)	0.018%	0.008%	0.002%	-0.002%	-0.005%	-0.011%
	13 2021 FBC Proposed Revenue Requirement	Appendix E.1, Page 1, Line 15	362,255	362,255	362,255	362,255	362,255	362,255
	14 Revenue (Surplus) Deficiency	(Line 12 X Line 13) X 1,000	65,459	29,143	7,352	(6,953)	(19,598)	(40,089)
	15 Average Number of Customers for 2021		143,325	143,325	143,325	143,325	143,325	143,325
	16 Average Dollar Impact for other FBC customers	Line 14 / Line 15	\$ 0.46 \$	0.20	\$ 0.05	\$ (0.05)	6 (0.14) 5	(0.28)
	15 Average Number of Customers for 2021 16 Average Dollar Impact for other FBC customers	Line 14 / Line 15	143,325 \$ 0.46 \$	143,325 0.20	143,325 \$ 0.05	143,325 \$ (0.05) \$	143,325 (0.14) \$	14

14.1.1 Please expand Table 3-4 to show the +/- 50 percent scenario.

Response:

9 Please refer to the response to BCUC IR1 14.1.

10 11		
12 13 14 15 16 17 Respo	14.1.2	Please re-state Table 3-4 to show the annual average dollar (\$) per customer impact for +/- 10 percent, +/- 25 percent, and +/- 50 percent scenarios.

18 Please refer to the response to BCUC IR1 14.1.


Please explain why the rate impact to other FBC customers for 50 kW stations is

about 3 times more sensitive than the rate impact to other FBC customers for

Page 72

- 1
- 2

- 3 4
- 5
- 6

- 7
- 8 **Response:**
- 9 Please note that FBC has revised Table 3-4 as discussed in the response to BCUC IR1 14.1.
- 10 Under the sensitivity scenarios, the 50 kW stations have a larger rate impact on FBC's other
- customers because the forecast of capital²⁵ invested in the 50 kW stations is greater than the 11
- 100 kW stations, with the resulting cost of service for 50 kW stations being approximately 4 12
- 13 times that of 100 kW stations.

14.2

100 kW stations.

²⁵ Net of CIAC.



4

 FortisBC Inc. (FBC or the Company)
 S

 Application for Approval of Rate Design and Rates for Electric Vehicle (EV) Direct Current Fast Charging (DCFC) Service (Revised Application)
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1 D. REGULATORY TREATMENT OF FBC EV DCFC STATIONS

2 15.0 Reference: REGULATORY TREATMENT OF FBC'S EV DCFC STATIONS

Exhibit B-5, section 4, pp. 22, 23

Regulatory treatment of revenue and costs incurred

5 FBC states on page 22 of the Revised Application:

6 FBC has 23 EV charging stations already constructed and open to the public. 7 The capital and all other costs, revenues and contributions (CIAC) for these 8 stations a being accounted for outside of FBC's regulated rate base. With this 9 Application, FBC proposes to account for the existing stations and all future 10 stations¹¹ in FBC's regulated rate base and book of accounts. As discussed in 11 Section 2, all of the stations that FBC has already constructed are in the class of 12 prescribed undertakings set out in section 5 of the GGRR. Upon approval of this Application, FBC will account for the net book value of these stations and the net 13 book value of the CIAC received for these stations in rate base. 14

15 [...]

16 FBC recognizes that since 2018, both expenses and revenues have been 17 accounted for in its non-regulated books. When FBC receives approval of this 18 Application, as discussed above, the assets associated with the EV charging 19 stations, and related revenues and expenses, will be reflected in FBC's regulated 20 accounts.

- In Table 4-1 of the Revised Application, FBC provides the approximate net book value of its existing EV station charging assets and the approximate net book value of contributions received as at December 31, 2020.
- 24 FBC states the following on page 23 of the Revised Application:
- FBC has not included a forecast of any of the above items in its Annual Review for 2020 and 2021 rates and does not expect a decision on this Application in time to include the EV Charging Stations in 2021 Rates. Therefore, FBC will begin to account for the above costs in rate base and its regulated books in 2022. Consequently, the variances between forecast (of zero) and actuals for 30 2021 will be accounted for in the Flow-through Deferral account for 2021.¹²
- 15.1 Please confirm, or explain otherwise, that if the Revised Application is approved,
 FBC proposes to add its existing stations to its rate base on December 31, 2020.
- 3315.1.1If confirmed, please explain why FBC is proposing to add its existing34stations to its rate base on December 31, 2020 instead of another date,35such as the date that electric vehicle charging stations were added to



1 the GGRR as prescribed undertakings (June 22, 2020) or the actual 2 date the application is approved by the BCUC. 3 If not confirmed, please provide the date that FBC is proposing to add 15.1.2 4 its existing stations to its rate base and explain why that date is 5 reasonable. 6 7 **Response:** 8 Not confirmed. FBC notes that the preamble from page 23 in this Revised Application may have 9 caused confusion. FBC is proposing to add the existing stations to its rate base on the actual

10 date the Revised Application is approved by the BCUC. The approval date is appropriate and 11 reasonable because the approval date represents the date that the BCUC will have confirmed 12 that the existing stations are eligible to be added to rate base, pursuant to section 18 of the

13 Clean Energy Act.

On page 23 of the Revised Application, FBC wrote *"Therefore, FBC will begin to account for the above costs in rate base and its regulated books in 2022"*. FBC intended this to reflect that FBC would account for the costs and revenues associated with the EV stations <u>when setting rates for the test year</u> starting in 2022. Therefore, starting with the Annual Review for 2022 Rates²⁶, FBC will begin including in its forecast of rate base, O&M, and revenue the costs and revenues associated with the EV stations, both existing and any forecast to be added in the test year.

- 20
- 21
- 22
- 15.2 Please provide the total revenue and expenses incurred from 2018 to December 31, 2020 related to FBC's charging stations (actuals from 2018 to date and forecast up to December 31, 2020). Please also provide a breakdown by year of the total revenue and expenditures by category (e.g. tariff revenue, carbon credits, cost of energy or electricity, depreciation, amortization, operating and maintenance, financing, earned return, financing, and taxes).
- 2930 **Response:**

Please note the response to this information request incorporates the 2020 demand data
 included in the response to BCUC IR1 8.2.1. Please see below the summary of total revenue
 and expenses incurred/projected from 2018 to December 31, 2020.

²⁶ Expected to be filed in August 2021.



 FortisBC Inc. (FBC or the Company)
 Submission Date:

 Application for Approval of Rate Design and Rates for Electric Vehicle (EV) Direct
 Submission Date:

 Current Fast Charging (DCFC) Service (Revised Application)
 November 19, 2020

 Response to British Columbia Utilities Commission (BCUC) Information Request (IR)
 Date 35

No. 1

FortisBC Inc.

EV Charging Stations Review - 50 kW Stations 2018 - 2020 November 2020 \$000s natural sign

Line	Particulars	<u>2018</u>	<u>2019</u>	<u>2020</u>
1	Power Purchases	2	7	19
2	0&M	0	2	26
3	Depreciation	-	60	197
4	Amortization of CIAC	-	(35)	(70)
5	Property Taxes	-	-	(0)
6	NR Can Repayment	-	-	193
7	Income Tax	(9)	(361)	(220)
8	Earned Return	6	53	114
9	Total	(0)	(275)	261
10				
11	Reveune (@ Interim Rates)	(4)	(24)	(32)
12	(Surplus) / Deficiency	(4)	(299)	229
13	Total Surplus	(74)		

1

For this response, FBC has used BC Hydro's Rate Schedule 3808 for determining Power
 Purchase expense as these are the energy costs that are embedded in the interim rate²⁷.

4 However, as discussed by FBC during the BCUC EV Inquiry, FBC has used RS 21 to determine

5 the proposed rates.

6 Years 2018 and 2019 are in a revenue surplus position, primarily due to favourable CCA 7 deductions that result in an income tax recovery in those years. Year 2020 is in a revenue 8 deficiency position due to lower than anticipated revenues as a result of the pandemic 9 restrictions on travel and a forecasted NRCan repayment to be made in that year. As discussed 10 in the response to BCUC IR1 9.1, FBC has not yet sold any of the carbon credits related to its 11 public DCFC stations; therefore, carbon credit revenues are not shown in this summary.

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15.2.1 Please clarify the amount, how and when FBC plans to recover the actual costs (less revenues) associated with its EV charging stations incurred from 2018 to December 31, 2020 from its ratepayers assuming this application is approved in 2021. For example, does FBC plan to transfer these amounts to its Flow-through deferral account in 2021 for inclusion in its 2022 revenue requirement?

²⁷ Approved with Order G-9-18



FortisBC Inc. (FBC or the Company) Application for Approval of Rate Design and Rates for Electric Vehicle (EV) Direct Current Fast Charging (DCFC) Service (Revised Application)	Submission Date: November 19, 2020		
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1 Response:

- 2 FBC plans to propose a method to recover actual costs (less revenues) associated with its EV
- 3 charging stations in its Annual Review. FBC will consider the option of transferring net
- 4 cumulative historical credits as set out in response to BCUC IR1 15.2 as well as a projection for
- 5 2021 to its Flow-through deferral account in 2021, and will bring forward this or another proposal
- 6 for the BCUC's review in the Annual Review process for setting 2022 rates.



No. 1

1 16.0 **Reference: REGULATORY TREATMENT OF FBC'S EV DCFC STATIONS**

- 2
- 3 4

BCUC Inquiry into the Regulation of Electric Vehicle Charging Service, Phase Two Report, dated June 24, 2019 (Phase 2 Report), pp. 38–39

5

Regulatory treatment of future EV DCFC stations

6 On pages 38 to 39 of the BCUC's Phase 2 Report, the BCUC recommended that non-7 exempt public utilities be required to develop an "EVCS [electric vehicle charging 8 service] Resource Plan" for review by the BCUC.

- 9
- As the number and usage of FBC's EV charging stations can impact future rates, 16.1 please specify whether FBC has developed any EVCS resource plans.
- 10 11

12 Response:

13 FBC has not developed an EVCS resource plan. Based on the number and locations of the 14 planned stations and sites as detailed in the Revised Application, it is not clear whether additional investment will be required to further support public DC fast charging services in 15 16 FBC's service territory. This lack of clarity is primarily due to uncertain future usage patterns 17 and unknown exempt utility investments in additional infrastructure.

18 Although FBC does not believe a formal EVCS resource plan is required at this time, nor that it 19 would be particularly accurate, FBC will continue to monitor station use to ensure that 20 customers are receiving available, reliable public charging service. If it becomes necessary to 21 add stations to address customer issues, FBC will do so whether or not an EVSC resource plan 22 is in place.

23 Ultimately, FBC does not intend to compete with private investment in providing public DC fast 24 charging services. Rather, it is expected that FBC's ability to recover EV charging investments 25 over a longer period of time will help to support overall EV adoption while the short-term 26 economics for the provision of public DC fast charging services remain challenging. As growth 27 in EV adoption continues, it is also expected that short-term economics will improve and help 28 encourage private investment. FBC believes it is already seeing this occur in the Central 29 Okanagan/Kelowna region with the addition of two private DCFC sites in 2020, and numerous 30 conversations with other private parties who have expressed interest in deploying further public 31 DCFC infrastructure in this region. As a result, FBC does not have any additional planned 32 investments in its service territory at this time and, as such, an EVCS resource plan is not 33 required.

- 34
- 35 36

- 16.1.1 If yes, please provide FBC's short-term, medium and long-term EV charging infrastructure build-out plans.
- 38 39



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4

16.1.2 If not, please explain why FBC does not have such plans. Discuss the resources and time required to develop a short-term, medium and long-term plan.

5 **Response:**

As detailed in the response to BCUC IR1 16.1, FBC has not developed an EVCS ResourcePlan and does not believe that one is necessary or helpful at this time.

8 The BCUC recommendation contained in the Phase 2 Report was made to Government, and

9 was followed in the same report by a further recommendation that,"... the BCUC develop EVCS
 10 Resource Plan filing guidelines....", noting that the, "...filing guidelines for non-exempt utility

Resource Plan filing guidelines....", noting that the, "...filing guidelines for
should set out the public interest issues that need to be addressed".

To date, Government has not acted upon this specific recommendation and no filing guidelineshave been developed.

As also discussed in the response to BCUC IR1 16.1, FBC does not have any additional planned investments in public DC fast charging infrastructure at this time and an EVCS Resource Plan would not be beneficial in its particular circumstance.

However, were such a plan to be developed, FBC anticipates that an EVCS Resource Plan
detailing short, medium and long-term plans could be developed with a twelve month timeframe.
At this time, such a plan would not include any future investment by FBC in public DC fast
charging (beyond that detailed in the Revised Application), and thus the costs to develop would
not be warranted.

FBC notes that its existing and planned sites contained in the Revised Application cover almost every town and/or region within FBC's service territory, limiting the potential need for future investment beyond that proposed. FBC also notes that these circumstances may be different for other non-exempt utilities with a larger service territory footprint and a larger number of underserved areas for public DC fast charging.

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 30
 16.2 Please discuss the timing of when FBC plans to request the BCUC to review any future stations not included in its Revised Application to assess whether they meet the criteria to be a prescribed undertaking under the GGRR.
- 3334 <u>Response:</u>

As part of its Annual Review of rates, FBC intends to provide sufficient information for the BCUC
 to assess whether any future stations not included in its Revised Application meet the criteria to

37 be a prescribed undertaking under the GGRR. FBC would also provide information regarding



the actual or planned addition of DCFC stations in the period since the previous review. FBC is not proposing to advise the BCUC of each decision to add a station or site, but rather will provide confirmation in the Annual Review that costs associated with any additions since the previous review are eligible to be included in rate base once in operation.

5 6			
7			
8		16.2.1	Please discuss when this request would be made (e.g. when FBC
9			decides to construct or purchase the station or when FBC requests the
10			charging station be added to its rate base).
11			
12	<u>Response:</u>		
13	Please refer t	to the res	ponse to BCUC IR1 16.2.



No. 1

1 E. OTHER MATTERS

- 2 17.0 **Reference:** INTRODUCTION 3 Exhibit B-5, section 1.2, Figure 1-1, p. 3, section 2.6, p. 10 4 FBC New Denver and Nakusp stations for British Columbia Hydro 5 and Power Authority (BC Hydro) Keremeos and Princeton stations 6 On page 3 of the Revised Application, FBC states that it "plans to transfer ownership of 7 the sites in New Denver and Nakusp to BC Hydro in exchange for sites in Keremeos and 8 Princeton." On page 10 of the Revised Application, FBC states: 9 10 ... site ownership and operation of the DCFC stations in New Denver and 11 Nakusp are to be transferred to BC Hydro prior to March 31, 2021. FBC will 12 assume ownership and operation of equivalent existing BC Hydro sites in 13 Keremeos and Princeton in exchange, resulting in a total of 23 sites planned for 14 operation by Q2 2021. According to Figure 1-1: Map of DCFC Stations and Sites (Existing and Planned) in the 15 16 B.C. Southern Interior EV Fast Charging Network, the existing FBC sites in the Village of 17 New Denver and Village of Nakusp have one station at each site location. The existing 18 BC Hydro sites in the Village of Keremeos and the Town of Princeton have two stations 19 at each site location.
- 2017.1Please clarify whether the exchange of EV charging sites and operation of the21DCFC stations will be a physical transfer of assets (i.e. uninstall equipment at old22site, transport equipment to new site, and re-installing equipment at new site) or23a financial transaction (i.e. swapping ownership of assets).
- 24

25 **Response:**

FBC intends to physically transfer only the charging stations themselves between the sites (i.e. uninstall stations at existing sites and reinstall at new site). All other equipment will remain as installed at the existing sites with ownership transferred to FBC/BCH as part of the transaction.

FBC has constructed the New Denver and Nakusp sites to BC Hydro's existing standards for DCFC sites, including the installation of sufficient capacity to support the install of a second station at both of these locations. Keremeos and Princeton will require upgrades to support the installation of a second station at both locations. BC Hydro will be responsible for these costs in recognition of the costs incurred by FBC for provisioning the New Denver and Nakusp locations with capacity to support the addition of second stations at both locations, which supports the "like-for-like" nature of this transaction.



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- Please explain the reasons why FBC is exchanging its Nakusp and New Denver 17.2 sites for BC Hydro's Keremeos and Princeton sites.
- 5 6

7 Response:

8 FBC and BC Hydro are working to exchange these sites as it is generally more efficient for each 9 utility to operate stations located in closer proximity to the areas served by the utility operating 10 the station. This is due to the proximity of local crews and contract resources who may be 11 required to provide disconnects/reconnects to facilitate work, conduct maintenance and repairs, 12 or to help triage any unanticipated failures or interruptions in charging service.

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16 17.3 Please provide the net book value of the site and stations in Nakusp and New 17 Denver and the sites and stations in Keremeos and Princeton that will be 18 exchanged between FBC and BC Hydro.

20 **Response:**

21 Please see the table below for the net book value as at October 31, 2020 for the Nakusp and 22 New Denver sites. As stated in the response to BCUC IR1 17.4, FBC plans to add the stations 23 in Keremeos and Princeton to its rate base at the net book value of the stations in Nakusp and 24 New Denver. At this time, FBC cannot confirm the timing or the allocation of the net book value 25 between the Keremeos and Princeton station.

Station	Gross Value (\$000s)	Accumulated Depreciation (\$000s)	Net Book Value (\$000s)
Nakusp	\$174	\$(12)	\$162
New Denver	\$209	\$(13)	\$196

Please confirm, or explain otherwise, that FBC plans to add the stations in

Keremeos and Princeton to its rate base at the net book value of the stations in

If confirmed, please provide the rationale for this approach.

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17.4

17.4.1

Nakusp and New Denver.

FORTIS BC [*]		Application	FortisBC Inc. (FBC or the Company) on for Approval of Rate Design and Rates for Electric Vehicle (EV) Direct Current Fast Charging (DCFC) Service (Revised Application)	Submission Date: November 19, 2020
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1 2 3 4 5 6		17.4.2	If not confirmed, please clarify the amount that FBC prits rate base with respect to the stations in Keremeos a it will receive from BC Hydro, the rationale for the whether any differences in net book value are reflected to FBC's customers.	roposes to add to and Princeton that at approach, and cted in the rates
7	<u>Response:</u>			
8 9	Confirmed. this transact	FBC belie\ ion on a "li	es this to be the appropriate approach given the object ke-for-like" basis such that there is no impact to custome	ive of completing ers.
10 11				
12 13 14 15	17.5	Please Nakusp Princeto	confirm, or otherwise explain, that FBC is trading a total and New Denver for BC Hydro's total of four stations on.	of two stations in in Keremeos and
16 17 18 19		17.5.1	If confirmed, please explain whether FBC is providir other form of compensation to BC Hydro in this exchar explain why additional compensation is not required.	ng cash or some nge. If not, please
20	<u>Response:</u>			
21 22 23 24 25 26 27	Not confirme two stations this transact either party. Keremeos a recognition Nakusp sites	ed. FBC is , one in Ke tion on a " BC Hydro and Prince of the cap s.	a trading a total of two stations, one in Nakusp and one in premeos and one in Princeton. The parties are endeave like-for-like" basis such that no additional compensation o will be responsible for the costs to increase the availab- eton sites to allow for the future installation of a s pacity already installed and paid for by FBC for the I	New Denver, for oring to complete is required from le capacity of the econd station in New Denver and
28 29				
30 31 32 33	17.6	Please and Prir	provide the charging capacity of each BC Hydro station nceton sites.	at the Keremeos
34	<u>Response:</u>			
35 36	The existing each.	BC Hydro	o stations in Keremeos and Princeton have a charging o	apacity of 50 kW
37				



2 3

4

17.7 Please provide the existing (i.e. BC Hydro) and new (i.e. FBC) fee structure and rates for the Keremeos and Princeton EV charging stations.

5 **Response:**

6 Please see the following table. FBC plans to add a second station for Princeton (100 kW) and a

- 7 second station for Keremeos (50 kW).
- 8

Table 1: Keremeos and Princeton DCFC Fee Structure

Location	Existing Rate ¹	Proposed Rate(s)					
Keremeos (702 4 th St.)	\$0.35/kWh with \$2 minimum	\$0.27 per minute (50 kW)					
Princeton (114 Tapton Ave.)	\$0.35/kWh with \$2 minimum	\$0.27 per minute (50 kW) \$0.55 per minute (100 kW)					

9 <u>Note:</u>

¹ Energy-based rates set by the local municipality as the station operator and are not subject to BCUC
 review. FBC is not aware of any municipal exemption from Measurement Canada standards.

- 12

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- 14
- 1517.8Please provide the existing (i.e. FBC) and new (i.e. BC Hydro) fee structure and16rates for the New Denver and Nakusp EV charging stations.
- 17

18 **Response:**

FBC is currently charging \$0.30 per minute at the New Denver (Slocan Ave. and Kootenay St.) and Nakusp (92 6th Ave. NW.) charging stations. FBC understands that BC Hydro is currently not charging for the use of its stations (although the host municipalities for these stations may

- 22 charge a fee).
- 23
- 24
- 25
- 2617.9Please clarify whether FBC is seeking BCUC approval of this exchange of site27and station ownership and operation with BC Hydro. If so, specify under which28section of the Utilities Commission Act (e.g. section 52) is FBC seeking the29approval sought. If not, explain why BCUC approval is not required.
- 30

31 Response:

32 FBC clarifies that it is seeking BCUC approval pursuant to section 52 of the *Utilities Commission*

33 Act to transfer ownership and operation of the DCFC stations in New Denver and Nakusp to BC



FortisBC Inc. (FBC or the Company) Application for Approval of Rate Design and Rates for Electric Vehicle (EV) Direct Current Fast Charging (DCFC) Service (Revised Application)	Submission Date: November 19, 2020
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Hydro. The transfer will facilitate each utility operating the charging stations in their respective
 service areas.

FBC does not require any approval to acquire the stations from BC Hydro as they are
 prescribed undertakings and BC Hydro is exempt from section 52 of the *Utilities Commission Act*, pursuant to section 32(7)(x) of the *Hydro and Power Authority Act*.

6 Please refer to the response to BCUC IR1 17.9, Attachment 17.9 for a revised Final Order7 reflecting this additional approval request.

Attachment 12.1

EV Charging Stations Review - 100 kW Stations

Schedule 1

September 2020

(\$000s), unless otherwise stated

Line	Particulars	Reference	<u>2021</u>	2022	<u>2023</u>	2024	2025	2026	2027	2028	<u>2029</u>	2030
1	Cost of Service											
2	Power Purchase		6	8	11	13	17	21	27	35	44	48
3	Operation & Maintenance	Line 27	16	33	34	34	35	34	34	35	36	36
4	Property Taxes	Line 32	-	-	(1)	1	1	1	1	1	0	0
5	Depreciation Expense	Line 58	-	67	67	67	67	67	67	67	67	67
6	Amortization Expense on CIAC	Line 71	-	(40)	(40)	(40)	(40)	(40)	(40)	(40)	(40)	(40)
7	Other Revenue - Carbon Credits	- Line 125	(18)	(24)	(30)	(37)	(44)	(55)	(69)	(86)	(104)	(111)
8	NR Can Repayment	Line 149	-	36	-	-	-	-	-	-	-	94
9	Income Taxes	Line 111	(87)	13	12	12	12	11	11	11	11	10
10	Earned Return	Line 95	10	19	17	15	13	12	10	8	6	5
11	Annual Revenue Requirement	Sum of Line 2 to Line 10	(73)	111	69	66	60	50	41	30	19	109
12	PV of Revenue Requirement (After-tax WACC of 5.76%)	Line 11 / (1 + Line 97)^Yr	(69)	99	58	52	45	36	28	19	12	62
13	Total PV of Annual Revenue Requirement	Sum of Line 12	343									
14												
15	2021 Approved Revenue Requirement (2021 Advanced N	Aaterials)	362.255	362.255	362.255	362.255	362.255	362.255	362.255	362.255	362.255	362.255
16	% Increase on 2021 Rate	Line 11 / Line 15	-0.02%	0.03%	0.02%	0.02%	0.02%	0.01%	0.01%	0.01%	0.01%	0.03%
17												
18	PV of Annual 2021 Approved Revenue Requirement	Line 15 / (1 + Line 97)^Yr	342,515	323,851	306,204	289,519	273,743	258,826	244,722	231,387	218,779	206,857
19	Total PV of 2021 Approved Revenue Requirement	Sum of Line 18	2,696,403	,	<u>,</u>		,	<u>,</u>			,	
20	Levelized % Increase (10 yrs) on 2021 Rate	Line 13 / Line 19	0.01%									
21												
22	Operation & Maintenance											
23	Labour Costs		6	11	12	12	12	12	12	13	13	13
24	Non-Labour Costs		11	22	22	23	23	21	22	22	23	23
25	Total Gross O&M Expenses	Line 23 + Line 24	16	33	34	34	35	34	34	35	36	36
26	Less: Capitalized Overhead	Overhead Rate of 0%	-	-	-	-	-	-	-	-	-	-
27	Net O&M Expenses	Line 25 + Line 26	16	33	34	34	35	34	34	35	36	36
28	····											
29	Property Taxes											
30	General, School and Other		-	-	-	-	-	-	-	-	-	-
31	1% in Lieu of General Municipal Tax ¹	1% of Line 11	-	-	(1)	1	1	1	1	1	0	0
32	Total Property Taxes	Line 30 + Line 31			(1)	1	1	1	1	1	0	0
33	1 - Calculation is based on the second preceding year e.g. 20	23 is based on 2021 revenue	-		(1)	1	1	1	1	1	0	0

EV Charging Stations Review - 100 kW Stations

Schedule 1

September 2020

(\$000s), unless otherwise stated

Line	Particulars	Reference	<u>2021</u>	2022	2023	<u>2024</u>	2025	2026	2027	2028	2029	2030
35	Capital Spending											
36	Project Capital Spending ²		725	-	-	-	-	-	-	-	-	-
37	AFUDC		21	-	-	-	-	-	-	-	-	-
38	Total Annual Capital Spending & AFUDC	Sum of Line 36 to 39	746		-	-	-	-			-	-
39	Cost of Removal		-	-	-	-	-	-	-	-	-	-
40	Contributions in Aid of Construction (CIAC)		(450)	-	-	-	-	-	-	-	-	-
41	Total Annual Project Cost - Capital	Line 38 + Line 39	296	-		-			-	-		-
42												
43	Total Project Cost (incl. AFUDC)	Sum of Line 38	746									
44	Net Project Cost (incl. Removal and/or CIAC)	Sum of Line 41	296									
45	2 - Excluding capitalized overhead; First year of analysis in	ncludes all prior year spending										
46												
47	Gross Plant in Service (GPIS)											
48	GPIS - Beginning ³	Preceding Year, Line 52	-	746	746	746	746	746	746	746	746	746
49	Additions to Plant ⁴		746	-	-	-	-	-	-	-	-	-
50	Retirements			-	-	-	-	-	-	-	-	-
51	Net Addition to Plant	Sum of Line 49 to 50	746	-	-	-	-	-	-	-	-	-
52	GPIS - Ending	Line 48 + Line 51	746	746	746	746	746	746	746	746	746	746
53	3 - Consistent with treatment of CPCN, additions (when v	vork complete and placed in-service) is shown in th	ne opening balance of plant on J	an 1 of follow	/ing year)							
54	4 - Includes capitalized overhead											
55												
56	Accumulated Depreciation											
57	Accumulated Depreciation - Beginning	Preceding Year, Line 60	-	-	(67)	(134)	(201)	(268)	(335)	(401)	(468)	(535)
58	Depreciation Expense ⁵	Line 48 @ 8.97%	-	(67)	(67)	(67)	(67)	(67)	(67)	(67)	(67)	(67)
59	Retirements											-
60	Accumulated Depreciation - Ending	Sum of Line 57 to 59	-	(67)	(134)	(201)	(268)	(335)	(401)	(468)	(535)	(602)
61	5 - Depreciation & Amortization Expense calculation is ba	sed on opening balance x composite depreciation	rate; The composite rate of all a	ssets addition	n to plant is 8.	.97%						
62												
63	Contributions in Aid of Construction (CIAC)			(450)	(450)	(450)	(450)	(450)	(450)	(450)	(450)	(450)
64 CF	CIAC - Beginning	Preceding Year, Line 67	-	(450)	(450)	(450)	(450)	(450)	(450)	(450)	(450)	(450)
65	Additions		(450)	-	-	-	-	-	-	-	-	-
66	Retirements		- (450)	- (450)	- (450)		- (450)	- (450)	- (450)	- (450)	- (450)	-
67	CIAC - Ending	Sum of Line 64 to 66	(450)	(450)	(450)	(450)	(450)	(450)	(450)	(450)	(450)	(450)
60 60	Accumulated Amertization of Contributions in Aid	f Construction (CIAC)										
70	Accumulated Amortization of CIAC - Beginning	Breceding Vear Line 73	_	_	40	Q1	121	161	202	242	283	373
71	Amortization (over 11 15 vrs)	Line 64 @ 8 97%	-	40	40	40	40	40	40	40	40	<u>ح</u> ح 40
72	Retirements		-	-	-	-	-	-	-	-	-	-
73	Accumulated Amortization of CIAC - Ending	Sum of Line 70 to 72		40	81	121	161	202	242	283	323	363
74					01					200	020	225

EV Charging Stations Review - 100 kW Stations

Schedule 1

September 2020

(\$000s), unless otherwise stated

Line	Particulars	Reference	<u>2021</u>	<u>2022</u>	<u>2023</u>	<u>2024</u>	<u>2025</u>	<u>2026</u>	<u>2027</u>	<u>2028</u>	2029	2030
75	Rate Base and Earned Return											
76	Gross Plant in Service - Beginning	Line 48	-	746	746	746	746	746	746	746	746	746
77	Gross Plant in Service - Ending	Line 52	746	746	746	746	746	746	746	746	746	746
78												
79	Accumulated Depreciation - Beginning	Line 57	-	-	(67)	(134)	(201)	(268)	(335)	(401)	(468)	(535)
80	Accumulated Depreciation - Ending	Line 60	-	(67)	(134)	(201)	(268)	(335)	(401)	(468)	(535)	(602)
81												
82	CIAC - Beginning	Line 64	-	(450)	(450)	(450)	(450)	(450)	(450)	(450)	(450)	(450)
83	CIAC - Ending	Line 67	(450)	(450)	(450)	(450)	(450)	(450)	(450)	(450)	(450)	(450)
84	-											
85	Accumulated Amortization of CIAC - Beginning	Line 70	-	-	40	81	121	161	202	242	283	323
86	Accumulated Amortization of CIAC - Ending	Line 73	-	40	81	121	161	202	242	283	323	363
87	-											
88	Net Plant in Service, Mid-Year	(Sum of Lines 76 to Line 86) / 2	148	282	256	229	203	176	150	123	97	70
89	Adjustment to 13-month average	6	-	-	-	-	-	-	-	-	-	-
90	Cash Working Capital	Line 52 x FBC CWC/Closing GPIS %	2	2	2	2	2	2	2	2	2	2
91	Total Rate Base	Sum of Line 88 to 90	150	285	258	232	205	179	152	125	99	72
92												
93	Equity Return	Line 91 x ROE x Equity %	5	10	9	8	8	7	6	5	4	3
94	Debt Component	7	4	8	7	7	6	5	4	4	3	2
95	Total Earned Return	Line 93 + Line 94	10	19	17	15	13	12	10	8	6	5
96	Return on Rate Base %	Line 95 / Line 91	6.54%	6.54%	6.54%	6.54%	6.54%	6.54%	6.54%	6.54%	6.54%	6.54%
97	After- Tax Weighted Average Cost of Capital (WACC)	8	5.76%	5.76%	5.76%	5.76%	5.76%	5.76%	5.76%	5.76%	5.76%	5.76%
98	6 - (Line 51 + Line 58 + Line 65) x [(Days In-service/365)-1/2]											

99 7 - Line 91 x (LTD Rate x LTD% + STD Rate x STD %)

100 8 - ROE Rate x Equity Component + [(STD Rate x STD Portion) + (LTD Rate x LTD Portion)] x (1- Income Tax Rate)]

FortisBC Inc. EV Charging Stations Review - 100 kW Stations

Schedule 1

September 2020

. (\$000s), unless otherwise stated

Line	Particulars	Reference	<u>2021</u>	2022	<u>2023</u>	<u>2024</u>	2025	2026	<u>2027</u>	<u>2028</u>	<u>2029</u>	<u>2030</u>
102	Income Tax Expense											
103	Earned Return	Line 95	10	19	17	15	13	12	10	8	6	5
104	Deduct: Interest on debt	Line 94	(4)	(8)	(7)	(7)	(6)	(5)	(4)	(4)	(3)	(2)
105	Add: Depreciation Expense	Line 58	-	67	67	67	67	67	67	67	67	67
106	Deduct: CIAC Amortization	Line 71	-	(40)	(40)	(40)	(40)	(40)	(40)	(40)	(40)	(40)
107	Deduct: Capital Cost Allowance	Line 119 (Include CCA from 2018)	(240)	(3)	(3)	(2)	(2)	(2)	(2)	(2)	(2)	(1)
108	Taxable Income After Tax	Sum of Line 103 to 107	(234)	34	33	33	32	31	30	29	29	28
109	Income Tax Rate		27%	27%	27%	27%	27%	27%	27%	27%	27%	27%
110												
111	Total Income Tax Expense	Line 108 / (1 - Line 109) x Line 109	(87)	13	12	12	12	11	11	11	11	10
112												
113	Capital Cost Allowance											
114	Opening Balance	Proceeding Year, Line 120	-	35	32	29	27	25	23	21	19	18
115	Additions to Plant	Line 38	746	-	-	-	-	-	-	-	-	-
116	Less: AFUDC	Line 37	(21)	-	-	-	-	-	-	-	-	-
117	Less: CIAC	Line 40	(450)	-	-	-	-	-	-	-	-	-
118	Net Addition for CCA	Sum of Line 115 through 117	275	-	-	-	-	-	-	-	-	-
119	CCA	[Line 114 + (Line 118/2)] x CCA Rate	(240)	(3)	(3)	(2)	(2)	(2)	(2)	(2)	(2)	(1)
120	Closing Balance	Line 114 + Line 118 + Line 119	35	32	29	27	25	23	21	19	18	16
121	5											
122	Carbon Credit											
123	Credit (Tonne)		91	119	151	185	222	275	344	430	521	554
124	Carbon Price (\$/tonne)		200	200	200	200	200	200	200	200	200	200
125	Carbon Credit Revenue (\$)	Line 123 x Line 124	18	24	30	37	44	55	69	86	104	111
126												

EV Charging Stations Review - 100 kW Stations

Schedule 1

September 2020

(\$000s), unless otherwise stated

Line	Particulars	Reference	<u>2021</u>	<u>2022</u>	2023	2024	2025	<u>2026</u>	<u>2027</u>	<u>2028</u>	2029	<u>2030</u>
127	NR Can Repayment											
128	Revenue	Schedule 2, Line 10 x Schedule 2, Line 14	34	49	66	85	105	134	171	218	267	285
129												
130	Expenses											
131	Cost of Electricity	Schedule 2, Line 4	60	78	84	94	100	108	119	131	144	151
132	Operation & Maintenance	Line 3	16	33	34	34	35	34	34	35	36	36
133	Property Taxes	Line 4	-	-	(1)	1	1	1	1	1	0	0
134	Depreciation Expense	Line 5	-	67	67	67	67	67	67	67	67	67
135	Amortization Expense on CIAC	Line 6	-	(40)	(40)	(40)	(40)	(40)	(40)	(40)	(40)	(40)
136	Other Revenue - Carbon Credits	- Line 125	(18)	(24)	(30)	(37)	(44)	(55)	(69)	(86)	(104)	(111)
137	Total Expenses	Sum of Lines 131 through 136	58	114	114	119	118	114	111	107	103	104
138												
139	Operating Income	Line 128 - Line 137	(24)	(65)	(48)	(35)	(13)	19	60	111	164	181
140	Interest	Line 94	4	8	7	7	6	5	4	4	3	2
141	Earnings Before income taxes	Line 139 - Line 140	(28)	(73)	(55)	(42)	(19)	14	56	107	161	179
142	Income tax (recovery)	Line 111	(87)	13	12	12	12	11	11	11	11	10
143	Net Earnings	Line 141 - Line 142	58	(86)	(68)	(54)	(31)	3	44	96	151	169
144												
145	Cumulative Net Earnings	Cumulative Sum of Line 143	58	(27)	(95)	(149)	(180)	(177)	(133)	(36)	114	283
146	Repayment to Canada (True/False)	If both Line 143 & 145 are positive, then TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	TRUE
147												
148	Repayment Ratio	NR Can funding as ratio of Capital	62%	62%	62%	62%	62%	62%	62%	62%	62%	62%
149	Repayment Amount	If Line 146 = TRUE, then Line 148 x Line 143	36	-	<u> </u>	<u> </u>	<u> </u>	-	-	-	94	105

EV Charging Stations Review - 100 kW Stations

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Schedule 2
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September 2020

(\$000s), unless otherwise stated

Line	Particulars	Reference	<u>2021</u>	<u>2022</u>	<u>2023</u>	<u>2024</u>	2025	<u>2026</u>	<u>2027</u>	<u>2028</u>	<u>2029</u>	<u>2030</u>
1												
2	Incremental Annual Revenue Requirement	Cost of Service, Line 11	(73)	111	69	66	60	50	41	30	19	109
3	Subtract: FBC Power Purchase	-1 x Cost of Service, Line 2	(6)	(8)	(11)	(13)	(17)	(21)	(27)	(35)	(44)	(48)
4	Add: FBC Commercial Service Rate (RS 21)		60	78	84	94	100	108	119	131	144	151
5	Total Annual Revenue Requirement from EV Customer	Sum of Line 2 to Line 4	(19)	181	143	147	143	137	132	126	120	212
6	PV of Revenue Requirement (After-tax WACC of 5.76%)	Line 2 / (1 + Line 19)^Yr	(18)	162	121	117	108	98	89	81	72	121
7	Total PV of Annual Revenue Requirement	Sum of Line 6	953									
8												
9	Levelized \$ per Minute Rate											
10	Number of Charging Minutes per Year		71,953	104,393	140,305	179,793	222,934	284,211	364,113	463,103	567,923	606,296
11	PV of Charging Minutes per year	Line 10 / (1 + Line 19)^Yr	68,032	93,326	118,596	143,693	168,463	203,065	245,978	295,803	342,989	346,211
12	Total PV of Charging Minutes per year	Sum of Line 11	2,026,154									
13												
14	Levelized \$ per minute rate to recover Cost of Service	Line 7 x 1,000 / Line 12	0.47									
15	Transaction Fee Percentage		15%									
16	Levelized \$ per minute rate (incl. Trans Fee)	Line 14 / (1 - Line 15)	0.55									
17												
18												
19	After- Tax Weighted Average Cost of Capital (WACC)	1	5.76%	5.76%	5.76%	5.76%	5.76%	5.76%	5.76%	5.76%	5.76%	5.76%
20	ROE Rate x Equity Component + [(STD Rate x STD Portion) + (LTD Rate x LTD Portion)] x (1- Income Tax Rate)]											

Attachment 17.9



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ORDER NUMBER

G-<mark>xx-xx</mark>

IN THE MATTER OF the Utilities Commission Act, RSBC 1996, Chapter 473

and

FortisBC Inc. Application for Approval of Rate Design and Rates for Electric Vehicle Direct Current Fast Charging Service

BEFORE:

[Panel Chair] Commissioner Commissioner

on <mark>Date</mark>

ORDER

WHEREAS:

- A. On December 22, 2017, FortisBC Inc. (FBC) submitted an application to the British Columbia Utilities Commission (BCUC) for Approval of Rate Design and Rates for Electric Vehicle (EV) Direct Current Fast Charging (DCFC) Service and Tariff Rate Schedule 96 (Original Application) pursuant to sections 59 to 61 and 90 of the Utilities Commission Act (UCA);
- B. On January 12, 2018, the BCUC issued Order G-9-18 and the associated Reasons for Decision that approved Rate Schedule 96 as set out in the Original Application on an interim basis, and adjourned the regulatory process until further notice;
- C. By Order G-10-18 dated January 12, 2018, the BCUC established an inquiry (Inquiry) into the regulation of EV charging service in British Columbia. The Inquiry was undertaken in two phases. On June 24, 2019, the BCUC issued the final report on the Inquiry. In that report, the Panel reviewed the role of the non-exempt public utility's participation in the EV charging market, and made recommendations to the Provincial Government concerning the regulatory framework for these non-exempt public utilities;
- D. By Order in Council No. 339 (OIC 339/20), as approved and issued on June 22, 2020, the Lieutenant Governor in Council amended the Greenhouse Gas Reduction (Clean Energy) Regulation (GGRR) to add Section 5 regarding prescribed undertaking – electric vehicle charging stations;
- E. By Order G-223-20, dated August 28, 2020, the BCUC established an amended regulatory timetable for the review of the Original Application including for FEI to file an evidentiary update to the Original Application;

- F. On September 30, 2020, FBC withdrew its Original Application and submitted a Revised and Updated Application (Application), including evidence showing that all of FBC's existing and planned EV charging stations are prescribed undertakings pursuant to section 18 of the *Clean Energy Act* and section 5 of the GGRR, and requested the following approvals pursuant to sections 59 to 61 of the UCA:
 - i. permanent approval of Rate Schedule 96 for EV charging at FBC-owned EV charging stations, consisting of a rate of \$0.27 per minute for 50 kW stations and \$0.55 per minute at 100 kW stations, as set out in Attachment B of the Application;
 - ii. approval that Rate Schedule 96 shall not be subject to general rate increases, unless otherwise directed by the BCUC;
 - iii. approval of a straight line 10 percent depreciation rate for FBC's EV charging stations; and
 - iv. approval for FBC to include the assets associated with the EV charging stations, and related revenues and expenses, in FBC's regulated accounts, as set out in Section 4 of the Application.
 - v. approval pursuant to section 52 of the UCA to transfer ownership and operation of the DCFC stations in New Denver and Nakusp to the British Columbia Hydro and Power Authority (BC Hydro).
- G. By Order G-254-20 the BCUC established a written hearing process for review of the Application; and
- H. The BCUC has reviewed and considered the Application and determines that the requested approvals should be granted.

NOW THEREFORE pursuant to sections 52, 59 to 61 and 90 of the UCA, the BCUC orders as follows:

- 1. Electric Tariff Rate Schedule 96 for EV charging is approved on a permanent basis for EV charging at FBCowned EV DCFC charging stations, consisting of a rate of \$0.27 per minute for 50 kW stations and \$0.55 per minute at 100 kW stations, effective 30 days from the date of this order.
- 2. Rate Schedule 96 will be exempt from general rate changes unless otherwise directed by the BCUC.
- 3. FBC is approved to include the assets associated with its EV DCFC charging stations, and related revenues and expenses, in FBC's regulated accounts as set out in Section 4 of the Application
- 4. FBC's proposed straight line 10 percent depreciation rate for FBC-owned EV DCFC charging stations is approved.
- 5. FBC is approved to transfer ownership and operation of the DCFC stations in New Denver and Nakusp to BC Hydro.
- 6. FBC is directed to comply with all other BCUC Directives as contained in the accompanying Decision.

DATED at the City of Vancouver, in the Province of British Columbia, this (XX) day of (Month Year).

BY ORDER

Order G<mark>-xx-xx</mark>

(X. X. last name) Commissioner