



Diane Roy
Vice President, Regulatory Affairs

Gas Regulatory Affairs Correspondence
Email: gas.regulatory.affairs@fortisbc.com

Electric Regulatory Affairs Correspondence
Email: electricity.regulatory.affairs@fortisbc.com

FortisBC
16705 Fraser Highway
Surrey, B.C. V4N 0E8
Tel: (604)576-7349
Cell: (604) 908-2790
Fax: (604) 576-7074
www.fortisbc.com

November 19, 2020

Attention: Mr. D.J. Flintoff

Dear Mr. Flintoff:

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 D.J. Flintoff (Flintoff) 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 Flintoff IR No. 1.

If further information is required, please contact the undersigned.

Sincerely,

FORTISBC INC.

Original signed:

Diane Roy

Attachments

cc (email only): Commission Secretary
Registered Parties



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 D.J. Flintoff (Flintoff) Information Request (IR) No. 1	Page 1

	Table of Contents	Page no.
1	A. RATE SCHEDULE 96	1
2	B. MOTOR FUEL TAX	5
3	C. FLO SERVICES INC. (FLO)	6
4	D. ASSUMPTIONS	10
5	E. SAFETY	14

7

8 **A. RATE SCHEDULE 96**

9 **1.0 Reference: INTRODUCTION AND APPROVALS SOUGHT**

10 **Exhibit B-5, Section 1.1, p. 1**

11 **Levelized Approach**

12 Approval that Rate Schedule 96 shall not be subject to general rate increases, unless
 13 otherwise directed by the BCUC. [Exhibit B-5, p. 1] Using a levelized approach allows
 14 FBC to set an EV charging rate that remains flat over the analysis period and collects
 15 the cost of service associated with the EV stations over that period. [Exhibit B-5, p. 17]
 16 Having a flat rate over the analysis period, rather than a rate that follows the cost of
 17 service profile, will allow customers to have stability and consistent rates as opposed to
 18 having rates that vary each year with the cost of service and forecast usage. [Exhibit B-
 19 5, p. 18]

20 1.1 Is there an undesirable risk of negative rate impact on the FBC ratepayers as a
 21 result of allowing EV customers to have stability and consistent rates as opposed
 22 to having rates that vary each year with the cost of service and forecast usage?

23 1.1.1 If yes, please provide the estimated monetary negative impact.
 24

25 **Response:**

26 Any rate schedule, including RS 96, carries with it the risk of having revenues not equal costs at
 27 any given time, although revenue to cost ratios are designed to be within a range of
 28 reasonableness.

29 Regarding RS 96's rate design specifically, the risk of a negative or positive rate impact to other
 30 customers is offset by the benefit of rate stability to EV charging customers and other rate
 31 design considerations as discussed in response to BCUC IR1 7.1.3.

32 As can be seen in Appendix E, Schedule 1, lines 11 to 16, the impact of the EV Program is itself
 33 minor, and any variances would be smaller still.



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 D.J. Flintoff (Flintoff) Information Request (IR) No. 1	Page 2

1 FBC has committed to reviewing RS 96 on a periodic basis (please refer to the response to
2 BCUC IR1 6.7) and has provided criteria which may trigger an additional review (please refer to
3 the response to BCUC IR1 6.9).

4
5

6

7 1.2 As FBC uses purchased power contracts to provide service to its ratepayers,
8 would it be more appropriate to provide varying or floating rates to its EV
9 customers to protect its ratepayers against providing additional subsidies to EV
10 customers?

11 1.2.1 If not, please explain why not.

12

13 **Response:**

14 No. Varying or floating rates for electric service to eligible charging sites and stations would not
15 be appropriate. FBC uses a combination of Company-owned generation entitlements, firm
16 contracted supply and market purchases to meet its load requirements, with market purchases
17 comprising a relatively small portion of the total.

18

19

20

21 1.3 Is there any adjustment in the rates required for ambient charging temperature?
22 Please provide information on charge accepted in ½ hour period and ambient
23 charging temperature.

24

25 **Response:**

26 There is no adjustment in the rates for ambient temperature or other factors that may impact
27 charging speed. Please also refer to the response to BCUC IR1 7.9.

28

29

30

31 1.3.1 Will a Li-Ion battery accept a charge at low temperatures (less than
32 0°C)?

33 1.3.1.1 If not, has any rate accommodation been allowed for a failure
34 to accept a charge?

35



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 D.J. Flintoff (Flintoff) Information Request (IR) No. 1	Page 3

1 **Response:**

2 FBC is unable to comment on the charging characteristics of Li-Ion batteries; however, EV
3 manufacturers generally include battery management technologies to manage battery charging
4 at low temperatures (less than 0° C). If there is a failure to accept a charge for any reason,
5 including issues related to temperature, a charge session will not be initiated. Since rates are
6 not in effect until a charge session is initiated and some amount of energy is delivered to the
7 vehicle, no rate accommodation is required in this instance.

8



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 D.J. Flintoff (Flintoff) Information Request (IR) No. 1	Page 4

1 **2.0 Reference: Cost of Service and Rate Impact**
2 **Exhibit B-5, Section 3.4, p. 20**
3 **All Other FBC Ratepayers**

4 Due to the levelized nature of the rate, there will be some (early) years where the EV
5 charging revenue will be less than the cost of service. In these years, all other FBC
6 customers will bear the costs in excess of revenues. Conversely, in years where the
7 charging revenue is greater than the cost of service, all other FBC customers will benefit
8 from the excess of revenues.

9 2.1 Please explain why all other FBC ratepayers should bear any costs in excess of
10 revenues due to the implementation of EV charging stations for EV customers
11 that are already heavily subsidized by provincial and federal governments and
12 EV customers should not contribute to any road tax.

13
14 **Response:**

15 FBC designed and expects RS 96 to recover the costs associated with its public charging sites
16 over the life of the assets. Please also refer to the response to BCUC IR1 6.6.

17



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 D.J. Flintoff (Flintoff) Information Request (IR) No. 1	Page 5

1 **B. MOTOR FUEL TAX**

2 2.2 As EVs exempt from Motor Fuel Tax, how will this revenue loss be accounted for
3 in Rate 96 or otherwise? Please explain.

4
5 **Response:**

6 The exemption of EVs from the Motor Fuel Tax does not constitute a revenue loss for FBC and
7 is not a consideration in the rate that FBC has submitted to the BCUC for approval. Taxes that
8 are collected by FBC are recorded as a liability and then remitted to the relevant taxing
9 authority.

10
11

12
13 2.3 Does FortisBC have any recommendations on how the missing Motor Fuel Tax
14 might be dealt with by the Commission or Ministry in this application?

15
16 **Response:**

17 FBC does not have any comment on the Motor Fuel Tax.

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
Response to D.J. Flintoff (Flintoff) Information Request (IR) No. 1	Page 6

1 **C. FLO SERVICES INC. (FLO)**

2 **3.0 Reference: Cost of Service and Rate Impact**

3 **Exhibit B-5, Section 3.4, p. 20**

4 **FLO Services Inc. (FLO)**

5 FEI will contract FLO Services Inc. (FLO) to provide maintenance services and network
6 management services. FLO will provide customer support services for EV drivers using
7 the station, and will also be responsible for providing technical support for diagnosing
8 and remedying any breakdowns or malfunctions of the DCFC stations.

9 3.1 Why is the FLO contract with FEI for maintenance services and network
10 management services and not FBC? Please explain.

11

12 **Response:**

13 The reference to FEI in the Revised Application is a typographical error. The FLO contract is
14 with FBC.

15

16

17

18 3.1.1 Can FBC provide a copy of its contract with FEI, and the FEI contract
19 with FLO for maintenance services and network management services
20 to the Commission in confidence?

21

22 **Response:**

23 FBC can provide a copy of its agreement with FLO to the BCUC in confidence should the BCUC
24 make such a request.

25

26

27

28 3.2 How does FEI recover the cost of FLO service from FBC? Please explain.

29

30 **Response:**

31 Please refer to the response to Flintoff IR1 3.1.

32

33

34

35 3.2.1 Is FEI charging a markup of FLO services when providing FLO services
36 to FBC?



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 D.J. Flintoff (Flintoff) Information Request (IR) No. 1	Page 7

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37

Response:

Please refer to the response to Flintoff IR1 3.1.

3.3 Please describe the customer support services FLO will provide for EV drivers using the stations.

Response:

FLO customer support will assist any customers having issues either locating or activating stations, or reporting deficiencies with the station or site. Additionally, FLO will provide payment processing services as required for customers without a network membership or the ability to initiate a charge session via the credit card portal webpage. Please also refer to the response to BCOAPO IR1 4.2.

3.4 Please describe the technical support for diagnosing and remedying any breakdowns or malfunctions of the DCFC stations FLO will provide and be responsible for providing.

Response:

FLO will be responsible for providing network monitoring services (station uptime, status of power electronic devices, cellular communication status), as well documenting any issues reported by customers (e.g., broken connectors). For any failures not covered by station warranty, FLO will coordinate with FBC to arrange for the required repairs with both FLO and FBC managing station and customer messaging as required.

3.5 What is the contractual mean time to repair any breakdowns or malfunctions of the DCFC stations in the FEI contract with FLO?

Response:

As noted in the response to Flintoff IR1 3.1, the contract with FLO is with FBC and not FEI. FBC does not currently have any contractual service level agreements (SLA) for remedying



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 D.J. Flintoff (Flintoff) Information Request (IR) No. 1	Page 8

1 breakdowns or malfunctions in a specified time. Rather, contractual agreement with FLO
2 establishes two tiers of diagnostic service:

3 Tier 1 - FLO will monitor stations and make a first diagnosis of breakdown or malfunction
4 and attempt to remedy the situation remotely.

5 Tier 2 - Where onsite presence is required, FLO will engage a suitably qualified
6 technician, as approved by FBC, to attend site, diagnose the breakdown or malfunction
7 and attempt to remedy the situation.

8 For issues reported between 8 a.m. to 5 p.m. (Pacific Time) Monday through Friday except
9 statutory holidays, Tier 1 support is provided within four hours from any reported breakdown or
10 malfunction, with Tier 2 support to be provided within four business days when on-site presence
11 is required. For issues reported from 5 p.m. to 8 a.m., all days including statutory holidays and
12 weekends, Tier 1 support is provided within 24 hours, with Tier 2 support provided within four
13 business days.

14



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 D.J. Flintoff (Flintoff) Information Request (IR) No. 1	Page 9

1 **4.0 Reference: Transaction Fees**
2 **Exhibit B-5, Section 3.2.1.5, p. 15**
3 **FLO Services Inc. (FLO)**

4 A transaction fee of 15 percent for global management services is charged by FLO and
5 is added to the calculated EV rate before the transaction fee.

6 4.1 Are the FLO Service amounts shown in Appendix E?

7 4.1.1 If not, please un-consolidate the information so that the FLO amounts
8 can be exposed.

9
10 **Response:**

11 Yes, the 15 percent transaction fee charged by FLO is located in Appendix E, Schedule 2, Line
12 16. The 15 percent transaction fee is then incorporated into the \$.0.27 per minute rate in
13 Appendix E, Schedule 2, Line 17.

14
15
16 4.1.2 If FEI has the FLO contract, does FEI request any fee from FBC?

17
18 **Response:**

19 Please refer to the response to Flintoff IR1 3.1.

20
21
22
23 4.2 Please provide justification for a 15% transaction fee charge by FLO.

24
25 **Response:**

26 Please refer to the response to BCUC IR1 10.3.

27
28
29
30 4.2.1 What is the transaction fee charged by other potential bidders for a
31 similar service?

32
33 **Response:**

34 Please refer to the response to BCUC IR1 10.3.

35

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 D.J. Flintoff (Flintoff) Information Request (IR) No. 1	Page 10

1 **D. ASSUMPTIONS**

2 **5.0 Reference: Key Assumptions**

3 **Exhibit B-5, Section 3.4, p. 20**

4 **Sensitivity Analysis**

5 The sensitivity analysis below examines the rate impact to other FBC electricity
6 customers if actual EV usage varies by +/- 10 percent and +/- 25 percent from the
7 forecast embedded in the financial models.

8 5.1 Please provide a sensitivity analysis that shows the rate impact to other FBC
9 electricity ratepayers if gasoline prices continue at below normal (pre-COVID-19)
10 levels for 4 years.

11

12 **Response:**

13 Gasoline prices are not an input to the RS 96 rate calculation and fluctuations thereof would
14 have no rate impact.

15

16

17

18 5.2 If gasoline prices continue at below normal (pre-COVID-19) levels for 4 years,
19 what is the risk of the EV charging stations becoming stranded assets?

20

21 **Response:**

22 The avoidance of gasoline purchases is one of a number of reasons that individuals may
23 choose to purchase an EV. While depressed gasoline pricing may impact the payback
24 consideration for some drivers, FBC does not believe that this presents any real risk that
25 charging assets may be stranded. Electric vehicle sales in BC remain strong and are supported
26 by the legislated targets with the *ZEV Act*.

27

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 D.J. Flintoff (Flintoff) Information Request (IR) No. 1	Page 11

1 **6.0 Reference: Key Assumptions**

2 **Exhibit B-5, Section 3.2.1.3, p. 13**

3 **Inflation Rates**

4 Inflation for the cost of electricity under (RS) 21 is based on FBC's indicative rate
5 increases for 2022- 2024, which average 3.5 percent. Inflation for 2020-2021 O&M is set
6 at 2.309 percent and 3.793 percent for 2020 and 2021, respectively, as set out in FBC's
7 Annual Review for 2020 and 2021 Rates.

8 6.1 As there has been a shift in inflation rates due to COVID-19, please provide the
9 current forecasted inflation rates for the years 2020-2024.

10

11 **Response:**

12 FBC does not have an alternative or more current inflation forecast that differs from what it has
13 provided in the Revised Application.

14

15

16

17

18 6.2 When compared to BC Ferries fuel cost projections, please explain why a fuel
19 inflation rate greater than 2% is required.

20

21 **Response:**

22 There is no link between BC Ferries fuel cost projections and FBC's electricity rate increase
23 forecasts and, as such, FBC is unable to compare the two metrics. Please refer to the response
24 to CEC IR1 9.1 for a discussion of the rate increase forecast utilized in the EV rate calculation.

25

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 D.J. Flintoff (Flintoff) Information Request (IR) No. 1	Page 12

1 **7.0 Reference: Key Assumptions**

2 **Exhibit B-5, Section 4, Table 4-1, p. 22**

3 **Approximate Values**

4 While the above values are approximate and reflective of December 31, 2020 balances,
5 FBC will include actual values into the rate base once this Application may be approved.

6 7.1 As there is no CPCN, please provide the class of estimate used and the
7 accuracy of the estimated values in Table 4-1.

8
9 **Response:**

10 Given that the majority of expenditures shown in Table 4-1 have already been incurred and are
11 no longer estimates, FBC assumes the question is related to the class of estimate used to
12 initially to develop the forecast project expenditures. The forecasts FBC has developed for its
13 station deployments can be regarded as an AACE Class 3 estimate with a low range variation of
14 -10% to -20%, and a high range variation of +10% to +30%.

15
16

17
18

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

23 7.2 Provide the details of the FBC expenditures for the variances between forecast
24 (of zero) and actual for 2021 will be accounted for in the Flow-through Deferral
25 account for expenditures before 2021

26
27

27 **Response:**

28 Please refer to the responses to BCUC IR1 15.2 and 15.2.1. For clarity, until the BCUC issues a
29 decision on this Revised Application, FBC is not recording any actual costs related to the EV
30 stations currently operating in FBC's regulated book of accounts.

31
32

33

34 7.3 Provide the details of the FEI expenditures for the variances between forecast (of
35 zero) and actual for 2021 will be accounted for in the Flow-through Deferral
36 account for expenditures before 2021

37



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 D.J. Flintoff (Flintoff) Information Request (IR) No. 1	Page 13

1 **Response:**

2 FEI does not own any public EV charging stations.

3
4

5
6

7 FBC has not included a forecast of any of the above items in its Annual Review for 2020
8 and 2021 rates and does not expect a decision on this Application in time to include the
9 EV Charging Stations in 2021 Rates. Therefore, FBC will begin to account for the above
10 costs in the rate base and its regulated books in 2022. Consequently, the variances
11 between forecast (of zero) and actual for 2021 will be accounted for in the Flow-through
12 Deferral account for 202112.

13 7.4 Provide the details of the expenditures for the estimated variances between
14 forecast (of zero) and actual for 2021 that will be accounted for in the Flow-
15 through Deferral account for 2021.

16

17 **Response:**

18 Please refer to the response to BCUC IR1 15.2.

19

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 D.J. Flintoff (Flintoff) Information Request (IR) No. 1	Page 14

1 **E. SAFETY**

2 **8.0 Reference: Non-Exempt Utility Sites**

3 **Exhibit B-5, Section 2.4, p. 9**

4 **Permitting & Inspections**

5 “Exempt” sites are those owned and/or operated by entities that are not otherwise public
6 utilities and are therefore not subject to regulation by the BCUC, except with respect to
7 safety.

8 8.1 How does FBC address electrical safety for its DCFC stations that are non-
9 exempt sites?

10

11 **Response:**

12 All of the DCFC sites owned and operated by FBC and eligible for the rate that is the subject of
13 the Revised Application are non-exempt stations. FBC treats these assets no differently from
14 any other distribution infrastructure, ensuring that all applicable codes are adhered to, all routine
15 inspection and maintenance is completed, and any emergent and non-emergent repairs are
16 attended to as appropriate.

17

18

19

20 8.1.1 Are these sites inspected and permitted by Technical Safety BC?

21 8.1.1.1 If not, why not?

22

23 **Response:**

24 Yes, FBC’s sites are inspected and permitted by Technical Safety BC.

25

26

27

28 8.2 What electrical standards will be used for the construction and operation of these
29 non-exempt sites?

30

31 **Response:**

32 All of FBC’s sites comply with the applicable requirements as set out in the 2018 Canadian
33 Electrical Code, including section 86 regarding electric vehicle charging systems. FBC also
34 notes that the DCFC stations and associated power distribution kiosks at the charging sites are
35 fully CSA certified.



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 D.J. Flintoff (Flintoff) Information Request (IR) No. 1	Page 15

1
2
3
4
5
6
7
8
9
10

8.2.1 Please provide a copy of the electrical standards used.

Response:

As the Canadian Electrical Code is a copyrighted document, FBC is unable to provide a copy. However, several of FBC's sites have been physically inspected by Technical Safety BC safety officers who have confirmed compliance with the relevant technical standards, including the use of CSA approved equipment for providing DC fast charging service to the public.