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March 21, 2019

British Columbia Public Interest Advocacy Centre
Suite 803 470 Granville Street
Vancouver, B.C.
V6C 1V5

Attention: Ms. Leigha Worth, Executive Director

Dear Ms. Worth:

Re: FortisBC Inc. (FBC)

Project No. 1598987

Application for a Certificate of Public Convenience and Necessity (CPCN) for the Grand Forks Terminal Station Reliability Project (the Application)

Response to the British Columbia Public Interest Advocacy Centre representing the British Columbia Old Age Pensioners' Organization, Active Support Against Poverty, Disability Alliance BC, Council of Senior Citizens' Organizations of BC, and the Tenant Resource and Advisory Centre *et al.* (BCOAPO) Information Request (IR) No. 2

On November 19, 2018, FBC filed the Application referenced above. In accordance with the British Columbia Utilities Commission Order G-43-19 setting out a further Regulatory Timetable for the review of the Application, FBC respectfully submits the attached response to BCOAPO IR No. 2.

If further information is required, please contact the undersigned.

Sincerely,

FORTISBC INC.

Original signed:

Doug Slater

Attachments

cc (email only): Commission Secretary
Registered Parties



FortisBC Inc. (FBC or the Company) Application for a Certificate of Public Convenience and Necessity (CPCN) for the Grand Forks Terminal Station Reliability Project (the Application)	Submission Date: March 21, 2019
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1 **15.0 Reference: Exhibit B-2, BCUC 1.1**
2 **Exhibit B-1, page 18**

3 15.1 Please provide a Table similar to 3-1 setting out the 9L and 10L outage statistics
4 at the time of the 2012-2013 Capital Expenditure Plan.

5
6 **Response:**

7 The outages on 9L and 10L in 2012 and 2013 were as follows:

Cause	Number of Outages	Avg Duration (hrs)	Min Duration (hrs)	Max Duration (hrs)
Snow	3	0.99	0.28	2.65
Tree Into Line	10	52.95	0.03	686.28
Equipment Failure	0	N/A	N/A	N/A
Pole Issue	0	N/A	N/A	N/A
Lightning	1	0.02	0.02	0.02
Human Interference	1	5.29	5.29	5.29
Conductor Issue	2	122.03	91.69	152.36
Flood	0	N/A	N/A	N/A
Forest Fire	0	N/A	N/A	N/A
Unknown	0	N/A	N/A	N/A
Total Outages	17			

8



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1 **16.0 Reference: Exhibit B-2, BCUC 2.3**

2 **Preamble:** The response states: “FBC considers that an acceptable risk of failure
3 (RoF) for a transmission station should be no higher than 2 percent based on industry
4 standards.”

5 16.1 Please explain what is meant by “industry standards”. Is there a published
6 standard? If so, what is it, what is it based on and by whom is it established?

7
8 **Response:**

9 Please refer to the response to BCUC IR 2.17.1.1.

10
11

12
13 16.2 Please provide a copy of the source establishing these “industry standards”.

14
15 **Response:**

16 Please refer to the response to BCUC IR 2.17.1.1.

17

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1 **17.0 Reference: Exhibit B-1, page 13 (lines 3-7)**

2 **Exhibit B-2, BCUC 3.3, 3.4 and 3.5**

3 17.1 Does the fact that 10L is normally de-energized impact the outage statistics
4 reported in the responses to BCUC 3.4 and 3.5 and the resulting comparability to
5 the outages reported for all other 60 kV lines (per BCUC 3.3) or the comparability
6 between outages on 9L versus 10L (per BCUC 3.5)?
7

8 **Response:**

9 Yes, since 10L is de-energized the outage statistics under-report the number of outages to that
10 line compared to the number that would occur if normally energized. The poor condition of 10L
11 means there would likely be disproportionately more outages on 10L than other lines if this line
12 remained continuously in service.

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16

17 17.2 If so, can the reported outages for 10L be “normalized” so as to make them more
18 comparable?
19

19

20 **Response:**

21 FBC assumes the reference is to adjusting the statistics for the proportion of time the line is de-
22 energized. Pro-rating the number and duration of outages by the proportion of time energized
23 would not necessarily be representative of the outcome if the line were continuously energized.
24 In part, this is because the line is more likely to be energized when conditions are favourable, so
25 that outages are expected to be less frequent and severe. It would also not be appropriate to
26 “normalize” 10L outages using 9L data. Although 9L and 10L run parallel to one another, it
27 cannot be assumed that outages would occur at the same time and have the same duration on
28 the two lines because 10L is in poorer condition and thus likely to experience more outages.

29



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1 **18.0 Reference: Exhibit B-2, BCUC 7.1 and 7.1.1**

2 **Preamble:** The response to BCUC 7.1 states: FBC confirms that none of the other
3 options considered for 9L and 10L would result in a lower total lifecycle cost than
4 removing both lines as proposed”.

5 18.1 Please outline all of the options considered for 9L and 10L.

6
7 **Response:**

8 FBC commissioned DBS to perform a condition assessment of 9L and 10L between Christina
9 Lake and Cascade. Considering the deteriorated state of the 9L and 10L facilities, DBS also
10 provided other possible design options for future considerations.

11 The options considered by DBS were as follows:

- 12 • Rehabilitate 9L and 10L;
- 13 • Salvage 9L and 10L, and re-use for distribution; and
- 14 • Consolidate 9L and 10L into a single circuit.

15 For further details please refer to Confidential Appendix C (9L and 10L Condition Assessment
16 Report).

17
18

19
20 18.2 Did FortisBC consider a variation of Alternative B where instead of removing lines
21 9L and 10L they remained in-service? If so, why was it rejected?

22
23 **Response:**

24 No. If 9L and 10L were to remain in service in addition to the installation of a new second
25 transformer at GFT, the lines would still need to be rehabilitated and maintained as described
26 under Alternative C given their current condition. Therefore, the variation of Alternative B
27 proposed in the question was not considered as it would be more expensive and would not
28 result in any material gain. With the installation of a second transformer at GFT, N-1 planning
29 criteria will be achieved and there is no need to rehabilitate 9L and 10L at additional cost.

30



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1 **19.0 Reference: Exhibit B-2, BCUC 9.2**

2 **Exhibit B-3, BCMEU 2.1 Exhibit B-4, BCOAPO 9.1.1**

3 19.1 Please explain more fully why there maybe “distribution land rights covering
4 portions of the lines” (BCMEU 2.1) or properties “potentially requiring land rights
5 for distribution right of way” when there currently are distribution customers being
6 served from the under build on lines 9L and 10L.

7
8 **Response:**

9 There are several reasons that land rights might be insufficient. 9L and 10L were originally
10 constructed in 1908 and the form of SRW used by FBC has changed over time. Some older
11 SRWs may limit alterations to the lines and may need to be revised. In addition, it is possible
12 that some very old records can not be located. As stated in the response to BCUC IR 1.9.2
13 (Exhibit B-2), FBC has identified approximately 15 properties that may require land rights for the
14 distribution right of way. A more detailed analysis will occur following approval of the CPCN.

15

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- 1 **20.0 Reference: Exhibit B-4, BCOAPO 7.1**
2 **Exhibit B-5, CEC 5.1, 5.1.1, 12.1 and 14.1**
3 **Exhibit B-6, ICG 7.1**

4 20.1 Is the application of the (N-1) planning criteria to the Grand Forks area because
5 the 63 kV supply is considered part of FBC's "interconnected system" (per
6 BCOAPO 7.1 and CEC 5.1.1) or the result of the case-by- case justification
7 referenced in the response to CEC 5.1.
8

9 **Response:**

10 The Grand Forks area is part of the interconnected system, therefore the N-1 planning criteria
11 applies.
12
13

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17 20.1.1 If it is considered part of the "interconnected system" please explain
18 why when CEC 5.1 states: "FBC transmission lines operating at
19 voltage levels below 160kV are, for the most part, operated in radial
20 mode and do not meet N-1 planning criteria."
21

22 **Response:**

23 This statement is generally true for most 160 kV lines, but the 63 kV transmission lines 9L and
24 10L are not operated radially and are part of the interconnected system.
25
26

27
28

29

30 20.1.2 If not considered part of the "interconnected system", what are the
31 specific criteria that go into justifying the use of (N-1) planning criteria
32 for "important load centres" and does the Grand Forks area meet these
33 criteria?
34

35 **Response:**

36 Please refer to the response to BCOAPO IR 2.20.1.
37
38

39



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1 **21.0 Reference: Exhibit B-1, page 43**

2 **Exhibit B-2, BCUC 10.1**

3 **Exhibit B-4, BCOAPO 12.1**

4 **Exhibit B-5, CEC 19.1**

5 21.1 How is the fact the portion of the 9L and 10L lines to be removed is not fully
6 depreciated treated in the rate impact analysis? Is the remaining value written off
7 and, if so, over what period?

8

9 **Response:**

10 Please refer to the response to BCUC IR 1.11.1 (Exhibit B-2) for a discussion on group
11 accounting methods used by FBC and other utilities in Canada and more specifically the
12 responses to BCUC IR 1.10.1 (Exhibit B-2) and BCUC Confidential IR 1.5.2 (Exhibit B-2-1) for a
13 similar discussion to the following response.

14 Assets related to the 9L and 10L transmission lines that will be removed have been included in
15 the rate analysis as a credit to gross plant in service and an equal debit to accumulated
16 depreciation resulting in no change to rate base. Any remaining asset value residing in
17 accumulated depreciation will be considered in a future depreciation study.