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July 7, 2022

B.C. Sustainable Energy Association
c/o William J. Andrews, Barrister & Solicitor
70 Talbot Street
Guelph, ON
N1G 2E9

Attention: Mr. William J. Andrews

Dear Mr. Andrews:

Re: FortisBC Inc. (FBC)

2021 Long-Term Electric Resource Plan (LTERP) and Long-Term Demand-Side Management Plan (LT DSM Plan) (Application) – Project No. 159924
Response to the B.C. Sustainable Energy Association (BCSEA) Information Request (IR) No. 3 on Rebuttal Evidence

On August 4, 2021, FBC filed the Application referenced above. In accordance with the regulatory timetable established in British Columbia Utilities Commission Order G-130-22 for the review of the Application, FBC respectfully submits the attached response to BCSEA IR No. 3 on Rebuttal Evidence.

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) 2021 Long-Term Electric Resource Plan (LTERP) and Long-Term Demand-Side Management Plan (LT DSM Plan) (Application)	Submission Date: July 7, 2022
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1 **25.0 Topic: Operational Flexibility and Geographic Diversity**

2 **Reference: Exhibit B-21, FBC Rebuttal Evidence, pdf pp.13-14; Exhibit C-8-7, RCIA**
3 **Response to BCSEA IR 5.10, pdf pp.47-48**

4 On pdf p.5 of its Rebuttal Evidence, FBC states in part:

5 “FBC has been maintaining the reliability and resiliency of its integrated electric
6 system for decades, and is well aware of the distinction between the two concepts
7 which is common knowledge in the utility industry and is reflected in FBC’s LTERP.
8 For example, resiliency was one of the four key attributes which FBC used to
9 evaluate resource portfolios. Diversification in terms of both resource type and
10 geographic location and portfolio operational flexibility are important
11 considerations in developing resiliency to unexpected events, as FBC notes in
12 Section 11.3.9 of the LTERP when discussing the preferred portfolio C3: [excerpt
13 omitted]”

14 In its response to BCSEA IR 5.10, RCIA states in part:

15 “In addition, and perhaps more importantly, the LTERP does not indicate what the
16 portfolios must Withstand, Adapt to, and Rapidly Recover from (i.e., the three
17 resiliency elements). Is Geographic Diversity about being on different sides of
18 constrained transmission cut planes, concerns due to wildfire, concerns due to
19 system stability, labour distribution and utilization, local airshed emission limits,
20 routing of control communications to avoid common mode failures or other?
21 Without defining the Scenario Plans, measuring Operational Flexibility and
22 Geographic Diversity is at best highly subjective, and the evidence does not
23 demonstrate that these two objectives adequately address the three resiliency
24 elements (Withstand, Adapt, Recover Quickly).”

25 25.1 What is FBC’s response to Midgard’s criticism of the LTERP, quoted above?

26
27 **Response:**

28 FBC’s response is threefold.

29 First, FBC selected two resiliency attributes, geographic diversity and operational flexibility, which,
30 along with other attributes, were selected to help assess the potential supply-side resource
31 portfolios at a high level appropriate for long-term resource planning. FBC defined both
32 geographic diversity and operational flexibility in the LTERP at Section 11 on page 192 as follows:

33 Operational flexibility refers to the ability of the portfolio to manage higher than
34 expected energy and capacity loads. These loads may occur over a short period
35 of time such as occurred this past June 2021 with record setting daily loads or over
36 a longer period of time due to unexpected load growth. A portfolio with a ‘high’



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1 rating means that it has more flexibility to meet higher than expected loads than a
2 portfolio with a 'low' rating. Geographic diversity reflects whether or not the portfolio
3 resources are located within or near the Kootenay or Okanagan regions of FBC's
4 service area. As discussed in Section 5.1, FBC's existing generation resources are
5 located within the Kootenay region, while most of FBC's customer load
6 requirements are in the Okanagan. Therefore, adding resource options to the
7 Okanagan improves FBC's resource diversity.

8 The above definitions provide a clear and objective basis to assess the operational flexibility and
9 geographic diversity of resource portfolios, as reflected in Table 11-2 of the Application.

10 Second, FBC considers that operational flexibility and geographic diversity are important
11 resiliency attributes that provide a high level, but informative view of the relative resiliency of the
12 resource portfolios. Resources portfolios that have higher operational flexibility and geographic
13 diversity (as defined above) will tend to have greater resiliency in response to "extreme" or
14 "surprise" events.

15 Third, as discussed on page 11 of its Rebuttal Evidence, FBC considers that it should expand its
16 approach to more systematically considering resiliency in its next LTERP. This could include
17 enhancing the LTERP portfolio analysis through the development of "extreme" or "surprise"
18 events and evaluating various resource portfolios against these to assess, or stress test, the
19 portfolios' resiliency.

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