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September 25, 2018

B.C. Sustainable Energy Association
c/o William J. Andrews, Barrister & Solicitor
1958 Parkside Lane
North Vancouver, B.C.
V7G 1X5

Attention: Mr. William J. Andrews

Dear Mr. Andrews:

Re: FortisBC Inc. (FBC)
Project No. 1598967
Annual Review for 2019 Rates (the Application)
Response to the B.C. Sustainable Energy Association and Sierra Club of British Columbia (BCSEA) Information Request (IR) No. 1

On August 10, 2018, FBC filed the Application referenced above. In accordance with the British Columbia Utilities Commission Order G-142-18 setting out the Regulatory Timetable for the review of the Application, FBC respectfully submits the attached response to BCSEA 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

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1 **1.0 Topic: Evaluation of the PBR Plan**

2 **Reference: Exhibit B-2, section 1.4, pdf pp. 13-19**

3 1.1 Is it FBC's position that the current proceeding is an appropriate venue in which
4 to review and evaluate the current PBR system? Please explain.

5
6 **Response:**

7 Consistent with past PBRs, FBC's position is that the appropriate venue to review and evaluate
8 the current PBR Plan is in the regulatory period or periods following the current PBR Plan. As
9 FBC is planning on filing an application for a next generation PBR plan to replace the current
10 PBR Plan expiring at the end of 2019, the proceeding for review and consideration of a next
11 Generation PBR application would be the appropriate venue to consider the experiences and
12 incorporate the successes from the current PBR Plan.

13
14

15

16 1.2 Do the O&M savings given in Table 1-2 represent savings relative to spending
17 that FBC estimates would have taken place under a cost-of-service ratemaking
18 formula, had PBR not been used?

19

20 **Response:**

21 FBC cannot speculate on whether the O&M savings, including both the formula O&M and PIF
22 related savings indicated in Table 1-2, would have taken place under a cost-of-service
23 ratemaking regime had PBR not been used, as the conditions under a cost service ratemaking
24 regime would have been different, including a shorter test period (i.e. one to two years) versus
25 the six-year test period for the current PBR Plan.

26 Please also refer to the response to MoveUP IR 1.3.2.

27

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29

30 1.2.1 If so, please detail FBC's methodology in making that assessment.

31

32 **Response:**

33 Please refer to the response to BCSEA IR 1.1.2.



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1

2

3

4 1.2.2 If not, please explain how PBR should be assessed against cost-of-
5 service ratemaking, in terms of savings.

6

7 **Response:**

8 Please refer to the response to BCSEA IR 1.1.2.

9



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1 **2.0 Topic: Outage Management System (OMS)**
2 **Reference: Exhibit B-2, section 1.4.2.4, pdf 15; Exhibit B-2, section**
3 **13.2.3, pdf 139 - 141; FBC Annual Review for 2018 Rates, IR**
4 **response to BCSEA-SCBC 5.2 (Exhibit B-6), pdf 8**

5 FBC states:

6 “[Advanced Distribution Management System] implements an Outage Management
7 System (OMS) and replaces the existing Dispatch system with a Mobile Workforce
8 Management System (MWM), enabling the Company to improve its outage response
9 through fault location prediction using customer calls and AMI meter messages, as well
10 as update outages from the field using the MWM. Customers are provided with access
11 to an outage map that is updated automatically from the OMS. The project was
12 completed in late 2017 with benefits including streamlining of the manual outage
13 management processes and the manual dispatch processes, with estimated annual
14 savings of \$0.2 million starting in 2018.” [pdf 15]

15 2.1 Please describe the OMS in more detail. For example, how does it improve fault
16 location prediction, and how does it affect the dispatch of repair teams and cause
17 savings?
18

19 **Response:**

20 Please refer to the response to BCUC IR 1.5.2.
21
22

23 2.1.1 How has the manual outage management process been streamlined?
24
25

26 **Response:**

27 Please refer to the response to BCUC IR 1.5.2.
28
29

30 2.2 Is the estimate of annual savings of \$200,000 sensitive to annual variations in
31 weather or otherwise variable?
32
33

34 **Response:**

35 No.



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Responding to BCSEA-SCBC IR 5.2 in the annual review for FBC’s 2018 rates (Exhibit B-6), FBC stated:

“FBC expects that AMI will reduce restoration time for customers, but any improvement will be difficult to measure. ... It is anticipated, however, that the more accurate and complete data available with AMI will allow FBC to conduct an improved post outage analysis of time off/time on, duration (SAIDI), and frequency (SAIFI), which may prove useful in addressing and resolving customer complaints.” [pdf 8, underlines added; footnote reference removed]

FBC states (in the current application):

“Both the 2017 annual and 2018 year-to-date SAIDI results have been influenced by the implementation of the OMS, a system used to record distribution outages based on the Outage Start Time.” [pdf 139]

FBC states (in the current application):

FBC’s 2017 annual SAIDI performance was 4.05, and higher than the three-year average. The 2017 three-year rolling average was 2.76 which was higher than the threshold value of 2.62. As discussed earlier, the OMS implementation has increased reported SAIDI results. In addition, the 2017 SAIDI results were impacted by wildfires. Specifically, wildfires in the Princeton and Joe Rich areas of the Okanagan accounted for approximately 78,000 customer hours or 8 percent of the annual SAIDI. None of the wildfires in 2017 met the threshold for normalization (i.e. none qualified as a major event such that they would be excluded from the SAIDI calculation). If SAIDI were normalized for the estimated impact of the OMS, FBC’s three-year rolling average SAIDI result for 2017 would be better than the threshold. [pdf 140]

FBC states (in the current application):

“Similar to the SAIDI results, both the 2017 annual and 2018 year to date SAIFI results have been influenced, although to a lesser degree, by the implementation of the OMS, which has eliminated even the small number of outages that may previously have been inadvertently omitted from the manually-maintained outage statistics.” [pdf 141]

2.3 In the light of FBC’s experience during 2018, is it able to update the statement in the cited paragraph from the 2018 rates proceeding?

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1 **Response:**

2 AMI has provided customers with multiple benefits including improved visibility of outages as
3 they occur through integration with OMS, more accurate reporting for both SAIDI and SAIFI and
4 also improved record keeping for addressing customer complaints. Prior to OMS, the outage
5 records only captured the number of customers impacted and did not include information on the
6 customers impacted by the outage. This made it difficult for Operations to validate and follow
7 up on issues brought forward by customers. Following completion of the ADMS project, AMI
8 data is now being leveraged through OMS to capture these individual customer outages,
9 providing Operations and Engineering and Customer Service with better and more timely
10 access to address issues as they arise.

11
12

13

14 2.4 What does FBC estimate the SAIDI metric would have been for 2017 and 2018-
15 to-date in the absence of the new ADMS?

16

17 **Response:**

18 Please refer to the response to BCUC IR 1.40.2.

19

20

21

22 2.5 What does FBC estimate the SAIFI metric would have been for 2017 and 2018-
23 to-date in the absence of the new ADMS?

24

25 **Response:**

26 The implementation of the OMS has impacted SAIFI due to short-duration, single-
27 customer/transformer outages that are now being captured more accurately by the AMI meters
28 reporting outages to the OMS. While these customers are now being included in the calculation
29 of overall SAIFI, FBC does not believe they are having a major impact on SAIFI due to their
30 small number.

31 In 2017, both the transmission and distribution SAIFI values were higher than in 2015 and 2016
32 due to an increase in adverse weather, foreign interference (e.g., vehicle accidents) and the
33 impact of forest fires, all of which are outside the control of FBC, in addition to any impact of
34 OMS.



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1 Since OMS was only implemented twenty months ago and during a year impacted by increased
2 weather-related outages, the exact impact on SAIFI cannot be quantified.

3
4

5
6 2.6 How would SAIFI be affected by “more accurate and complete outage statistics”
7 that make it more difficult to determine the “cause of changes in outage
8 statistics”?
9

10 **Response:**

11 Please refer to the response to BCSEA IR 1.2.5.

12
13

14
15 2.7 How might “additional outage information provided by automated reporting
16 systems such as AMI and OMS ... result in numerically worse ... SAIFI statistics
17 (even when there is no actual change in system performance)”?
18

19 **Response:**

20 Please refer to the response to BCSEA IR 1.2.5.

1 **3.0 Topic: Historical rate increases**

2 **Reference: none**

3 3.1 Please provide a table showing the year, month and % of FBC's rate increases
4 since 2006.

5

6 **Response:**

7 The requested table is provided below.

Year	Rate Increase
Jan 2006	5.9%
Jan 2007	1.2%
Apr 2007	2.1%
Jan 2008	2.9%
May 2008	0.8%
Jan 2009	4.6%
Sep 2009	2.2%
Jan 2010	6.0%
Sep 2010	2.9%
Jan 2011	6.6%
Jun 2011	1.4%
Jan 2012	1.5%
Jan 2013	4.2%
Jan 2014	3.3%
Jan 2015	3.5%
Aug 2015	1.6%
Jan 2016	2.96%
Jan 2017	2.76%
Jan 2018	0.00%
Jan 2019 (Proposed)	0.00%

8

1 **4.0 Topic: DSM and Other Savings without Losses**

2 **Reference: Exhibit B-2, FBC Annual Review for 2019 Rates,**
 3 **Appendix A2, 1. Introduction, pdf 149; and Table 5.3, pdf 156**

4 FBC states:

5 “Table 5.3 shows the DSM and Other-Savings that were deducted from the before-
 6 savings forecast to provide the after-savings forecast for 2019.” [pdf 149]

5.3 DSM AND OTHER SAVINGS (GWh) WITHOUT LOSSES

Energy (GWh)	2013	2014	2015	2016	2017	2018S	2019F
Demand Side Management	(28)	(14)	(12)	(11)	(28)	(14)	(39)
Advance Metering	2	3	4	4	5	4	8
Customer Information Portal	-	-	-	-	(2)	(4)	(4)
Residential Conservation Rate	(14)	(14)	(4)	(4)	(4)	-	-
Rate - Driven	-	(5)	(5)	(3)	(3)	(0)	(0)
Total Net	(40)	(30)	(17)	(14)	(32)	(14)	(36)

7

8 4.1 Please provide a table with forecast and actually achieved DSM savings for 2013
 9 through 2017, including forecast figures for 2018 and 2019.

10

11 **Response:**

12 The following table shows DSM Plan and actual savings in MWh as approved, filed and/or
 13 reported, including line losses.

Year	2013	2014	2015	2016	2017	2018	2019
Approved/Plan	31,506	12,800	26,159	27,188	25,715	27,485	32,647
Actual	29,600	14,580	12,608	22,766	27,838		

14

15

16

17 4.2 Please discuss how close actual DSM savings have come to FBC’s predicted
 18 savings between 2013 and now.

19

20 **Response:**

21 The following table presents the percentage of the approved plan savings that were achieved
 22 and the variance from plan, based on the figures presented in the response to BCSEA IR 1.4.1.

Year	2013	2014	2015	2016	2017
Achieved	94%	114%	48%	84%	108%
Variance	-6%	14%	-52%	-16%	8%

1 With the exception of 2015, the energy savings variance from plan ranged from +14 percent to -
 2 16 percent which FBC believes is a reasonable variation considering the voluntary nature of
 3 DSM program participation and other market effects. The Company considers 2015 to be an
 4 outlier due to the step change, i.e., doubling of the savings target, compared to 2014, and the
 5 time lag required for program participation to ramp up.

6
7

8

9 4.3 Since 2013, has FBC recalibrated its DSM forecasts in response to variances
 10 between forecasts and actual results? Please discuss.

11

12 **Response:**

13 FBC revises its DSM energy savings forecasts annually based on a number of inputs, including
 14 the achieved past years' savings. The DSM forecasts are prepared using the most recent DSM
 15 plan(s), which use actual results from previous years as inputs.

16
17

18

19 4.4 Has the implementation of DSM measures by FBC customers been higher or
 20 lower than FBC forecast for 2017 and 2018-to-date? Please respond in terms of
 21 the major customer classes, both for total energy used and for UPC.

22

23 **Response:**

24 There are many factors other than DSM programs that can influence the total energy use and
 25 use per customer (UPC). FBC's response is based on actual 2017 DSM savings reported,
 26 rather than total energy used and UPC, to better reflect customer uptake (implementation) of
 27 DSM measures.

28 The following table shows the 2017 DSM savings (in MWh), by major customer class.

Program Area	Approved	Actual	Achieved
Residential & Low Income	10,493	10,847	103%
Commercial	13,666	16,115	118%
Industrial	<u>1,556</u>	<u>876</u>	<u>56%</u>
Programs Total	25,715	27,838	108%

29

1 FBC anticipates achieving its 2018 DSM savings target, although 2018 mid-year sector results
 2 are 20 percent, 56 percent and 17 percent for residential, commercial and industrial customer
 3 classes, respectively. FBC cautions against undue reliance on these preliminary 2018 YTD
 4 results as they are not fully vetted and DSM historical patterns indicate a significant increase in
 5 DSM activities in the second half of the year.

6
7

8

9 4.5 Please provide a table with FBC's forecast and actual DSM spending from 2013
 10 to 2017, including forecasts for 2019 and 2018.

11

12 **Response:**

13 The following table shows Approved/Plan, and Actual/Forecast DSM expenditures for the years
 14 indicated, in \$000's. The 2018 Projection figures use August year-to-date information.

Year:	2013	2014	2015	2016	2107	2018	2019
Approved/Plan	7,878	3,001	7,292	7,532	7,610	7,940	10,900
Actual/Projected	6,855	3,473	3,531	6,533	7,309	7,273	n/a
Achieved/Projected	87%	116%	48%	87%	96%	92%	n/a

15

16

17

18 4.5.1 Has FBC been spending all its approved DSM budgets? If not, has
 19 under-spending affected actual DSM savings achieved?

20

21 **Response:**

22 Please refer to the responses to BCSEA IRs 1.4.1 and 1.4.5.

23 Generally, the energy savings achieved are commensurate with the DSM budget expenditure.
 24 However, in 2017, the most recent year completed, FBC achieved 108 percent of its target
 25 savings while expending 96 percent of the approved budget. FBC notes that the 2017 gross
 26 expenditure was \$7.7 million (101 percent of plan), which was reduced by \$0.4 million of partner
 27 co-funding.

28

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30



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1 4.6 Please confirm that “Advance Metering” means increased recovered sales from
2 the AMI-based revenue protection program; otherwise, please explain.

3

4 **Response:**

5 Confirmed.

6

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1 **5.0 Topic: Demand forecast & DSM savings**

2 **Reference: Exhibit B-2, pdf pp. 33 - 49**

3 5.1 Please confirm that in FBC's 2019 – 2022 DSM Expenditure Schedule, FBC
4 proposes increased levels of DSM spending and savings in 2019 to 2022 above
5 the approved spending levels for 2014 to 2018.

6
7 **Response:**

8 Confirmed.

9
10

11
12 5.2 Are proposed levels of DSM savings taken into account in the demand forecasts
13 in the present application?

14
15 **Response:**

16 FBC includes approved DSM savings in its forecasts. Proposed DSM savings from unapproved
17 plans and filings are not included in demand forecast updates.

18

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1 **6.0 Topic: Residential Conservation Rate (RCR) savings**

2 **Reference: Exhibit B-2, section 3.3 Demand Side Management and**
3 **Other Savings, pdf 28**

4 FBC states:

5 “In prior years the Residential Conservation Rate (RCR) also reduced the residential
6 load but the customer changes in consumption are assumed to have been fully realized
7 in 2017 and therefore no additional savings are projected for 2018S and 2019F.”

8 6.1 What is FBC’s basis for assuming that savings from the RCR have been “fully
9 realized”?

10

11 **Response:**

12 The assumption that the savings attributable to the RCR would be fully realized in 5 years was
13 put forward during the original 2011 RIB Application process where the total rate-related
14 conservation impact was assumed to be fully realized by 2017.

15 In the 2011 RIB Application, a range of potential outcomes was presented. The block 2 elasticity
16 and resulting kWh savings as measured in the 2014 RCR Information Report showed the
17 measured elasticity and kWh savings were slightly lower than the “medium” case estimated in
18 the FBC 2011 RIB Rate proceeding, but higher than the “low” case.

19 Because the measured conservation impact was only slightly below the medium case results,
20 FBC expects that the timeline for achieving the expected savings would be similar to the initial
21 assumptions and that the majority of the expected savings have been realized.

22

23

24

25 6.1.1 If FBC has carried out studies on the full realization of conservation
26 rates within FBC’s territory, or if it has studies on this from other
27 jurisdictions, please provide them.

28

29 **Response:**

30 FBC has not carried out such studies, nor has it researched studies from this or other
31 jurisdictions. Please refer to the response to BCSEA IR 1.6.1.

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1 6.2 To FBC’s knowledge, has BC Hydro determined that savings from its Residential
2 Inclining Block (RIB) rate have been “fully realized”?

3

4 **Response:**

5 FBC is aware that BC Hydro has provided an estimate of the RCR-driven conservation for the
6 period October 2008-F2017¹; however, the Company is not aware of any estimates for BC
7 Hydro RCR-related conservation going forward or for the extent to which opportunities for such
8 conservation may have been exhausted.

9

¹ BC Hydro 2015 Rate Design Application, page 5-3.



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1 **8.0 Topic: Service Quality Indicators**

2 **Reference: Exhibit B-2, section 13.2, Table 13-1, pdf 131-132**

3 8.1 Please provide the appropriate units for the “System Average Interruption
4 Duration Index (SAIDI) – Normalized” and the “System Average Interruption
5 Frequency Index (SAIFI) – Normalized” metrics.
6

7 **Response:**

8 SAIDI is defined as the average interruption duration for customers served per year. It is a
9 measure of how many hours per year, on average, a customer would have experienced an
10 outage during that period.

11 SAIFI is the average number of interruptions for customers served per year. It is a measure of
12 how many outages per year, on average, a customer would have experienced during that
13 period.
14