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April 6, 2017

Industrial Customers Group
c/o #301 – 2298 McBain Avenue
Vancouver, BC V6L 3B1

Attention: Mr. Robert Hobbs

Dear Mr. Hobbs:

Re: FortisBC Inc. (FBC)

Project No. 3698896

**2016 Long Term Electric Resource Plan (LTERP) and Long Term Demand Side
Management Plan (LT DSM Plan)**

Response to the Industrial Customers Group (ICG) Information Request (IR) No. 1

On November 30, 2016, FBC filed the Application referenced above. In accordance with the British Columbia Utilities Commission Order G-197-16 setting out the Regulatory Timetable for the review of the Application, FBC respectfully submits the attached response to ICG IR No. 1.

If further information is required, please contact Joyce Martin at 250-368-0319.

Sincerely,

FORTISBC INC.

Original signed:

Diane Roy

Attachments

cc (email only): Commission Secretary
Registered Parties

1 **1. Reference: LONG-TERM LOAD FORECAST**

2 **Exhibit B-1, Volume 1, p. 54; Appendix E, p. 2, p. 11 and p. 16**
 3 **System losses and Advanced Metering Infrastructure (AMI) impact**

4 1.1 Please provide the difference between the total billed (and metered) electricity
 5 and the sum of the total purchased and generated electricity on an annual basis
 6 since 2011. Please express this amount as both an energy quantity and as a
 7 percentage of the sum of the total purchased and generated electricity.

8
 9 **Response:**

10 Table 1 below shows the total billed and metered electricity (Net Billable Load) and the sum of
 11 the total purchased and generated electricity (Gross Load).

12 **Table 1: Gross Load and Net Billable Load 2011 - 2016**

	2011	2012	2013	2014	2015	2016
Gross Load (MWh)	3,452,054	3,413,513	3,488,038	3,449,580	3,383,793	3,387,199
Net Billable Load (MWh)	3,144,943	3,143,012	3,210,836	3,178,426	3,116,254	3,120,469
Difference (MWh)	307,111	270,501	277,202	271,154	267,539	266,730
Percent of Gross Load (%)	8.90%	7.92%	7.95%	7.86%	7.91%	7.87%

13
 14
 15

16
 17 1.2 Please provide a table that shows on an annual basis since 2011 the losses
 18 assigned to each of FortisBC's transmission and distribution systems. Please
 19 also provide a table that shows the total distribution-connected loads, direct
 20 transmission-connected loads (less transmission- connected industrial loads) and
 21 transmission-connected industrial loads in each of the same years.

22
 23 **Response:**

24 FBC does not have metering in place to accurately delineate losses between transmission and
 25 distribution losses. The following table shows FBC's total system losses, total distribution-
 26 connected loads, direct transmission-connected loads (less transmission-connected industrial
 27 loads) and transmission-connected industrial loads from 2011 to 2015. 2016 data is not
 28 available at the time of filing.



FortisBC Inc. (FBC or the Company) 2016 Long Term Electric Resource Plan (LTERP) and Long Term Demand Side Management Plan (LT DSM Plan) (the Application)	Submission Date: April 6, 2017
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Table 1: FBC loads 2011 to 2015 (MWh)

Year	Distribution Connected Loads	Transmission Connected Loads (less transmission connected industrial loads)	Transmission-connected industrial loads	Net Billable Load	Losses	Gross Load
2011	1,964,148	909,338	271,457	3,144,943	307,111	3,452,054
2012	1,955,763	896,477	290,772	3,143,012	270,501	3,413,513
2013	2,187,571	671,459	351,806	3,210,836	277,202	3,488,038
2014	2,225,634	571,879	380,913	3,178,426	271,154	3,449,580
2015	2,174,895	561,683	379,676	3,116,254	267,539	3,383,793

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3



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1 **2. Reference: LONG-TERM DEMAND-SIDE MANAGEMENT PLAN**

2 **Exhibit B-1, Volume 2, Section 3.1, pp. 14-15;**

3 **DSM Scenario Consultation**

4 “Customer feedback to key aspects of the LT DSM Plan was sought through an online
5 “bulletin board” approach delivered by Sentis Research (Sentis). Sentis recruited both
6 residential and commercial participants and hosted and moderated four sets of bulletin
7 board discussion groups. Three groups engaged residential customers (in the regions of
8 Central Okanagan, South Okanagan and Kootenay/Boundary) and one group engaged
9 commercial customers (for the entire FBC service area). The consultation findings are
10 reported in Appendix B of the LT DSM Plan.”

11 2.1 Please explain whether and how industrial customers’ feedback was sought and
12 incorporated in the LT DSM Plan.

13
14 **Response:**

15 The LTERP/LT DSM Plan consultation was directional in nature, seeking feedback on the
16 aggregate DSM energy savings level targeted versus supply side options. The participants
17 were chosen at random, and the make-up of the Commercial group is shown on page 29 of
18 Appendix B of the LT DSM Plan. The make-up of Group 4 (Commercial customers) includes
19 one manufacturing (Industrial) customer.

20
21

22
23 2.2 Please provide a table that shows on an annual basis since 2011 the approved,
24 forecast and actual spending on industrial DSM programs and initiatives. For
25 each program and initiative please provide the cost, the amount of forecast and
26 realized energy savings, and the forecast and realized Benefit/Cost ratio.

27
28 **Response:**

29 The table below shows Approved and Actual amounts for spending, energy savings and
30 Benefit/Cost Ratios for Industrial DSM programs and initiatives for the period 2011 to 2015.
31 Forecast numbers are the same as Approved.



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Industrial Program	Spend (\$000s)		Energy Savings (MWh)		B/C Ratio	
	Approved	Actual	Approved	Actual	Approved	Actual
2011						
EMIS	10	9	80	-	0.5	-
Industrial Efficiencies	603	128	9,280	794	5.2	2.5
Industrial Total	613	137	9,360	794	4.8	2.4
2012						
EMIS	27	10	190	-	0.8	-
Industrial Efficiencies	323	163	2,290	937	5.7	2.0
Industrial Total	350	173	2,480	937	3.3	1.9
2013						
EMIS	41	17	290	-	0.8	-
Industrial Efficiencies	323	307	2,290	2,500	5.7	1.0
Industrial Total	364	324	2,580	2,500	3.3	1.0
2014						
Industrial Efficiencies	148	188	800	614	2.8	1.2
2015						
Industrial Efficiencies	202	226	1,537	1,087	3.4	2.0

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2



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1 **3. Reference: LONG-TERM DEMAND-SIDE MANAGEMENT PLAN**

2 **Exhibit B-1, Volume 2, Section 3.1, p. 22;**

3 New in 2016 was the offer of subsidized facility-wide energy efficiency assessments and
4 detailed feasibility studies to qualifying industrial customers.

5 FBC will offer rebates through the Custom Business Efficiency program... .

6 3.1 Please comment on whether self-generation customers will be eligible for
7 subsidized facility- wide energy efficiency assessments and detailed feasibility
8 studies?
9

10 **Response:**

11 Self-generation customer facilities that otherwise meet the program terms and conditions are
12 eligible for the Plant Wide Audit; they may also be eligible for Feasibility Study energy
13 assessment offers based on whether the identified project will reduce FBC energy sales to that
14 customer.

15
16

17
18 3.2 Please comment on whether self-generation customers will be eligible for the
19 Custom Business Efficiency program, and identifies any restrictions that may be
20 unique to self-generation customers?
21

22 **Response:**

23 Self-generation customers are eligible for measure incentives through the Custom Business
24 Efficiency Program if the energy efficiency project meets the terms and conditions of the
25 program and the project results in electricity savings that are realized by FBC. FBC prorates the
26 financial incentives from the Custom Business Efficiency Program in proportion to the share of
27 electricity savings from the energy efficiency project that are realized by FBC.

28

FortisBC Inc. (FBC or the Company) 2016 Long Term Electric Resource Plan (LTERP) and Long Term Demand Side Management Plan (LT DSM Plan) (the Application)	Submission Date: April 6, 2017
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1 **4. Reference: LONG-TERM DEMAND-SIDE MANAGEMENT PLAN**
2 **Exhibit B-1, Volume 2, p. 24; 2007 BC Energy Plan, p. 5; Self-**
3 **generator eligibility**

4 FortisBC states on page 24 of its 2016 LT DSM Plan: “In turn, the DSM financial
5 incentives that are made available to qualified customers, under DSM programs, are
6 predicated on reduced electricity consumption or demand to the Company.”

7 The 2007 BC Energy Plan states on page 5: “... the plan supports utilities in [BC] and
8 the [Commission] pursuing all cost-effective and competitive demand side management
9 programs”.

10 4.1 Please explain whether FortisBC considers the direction provided by the 2007
11 BC Energy Plan to be a provincial objective, or one specific only to reduced
12 electricity consumption or demand to FortisBC.

13
14 **Response:**

15 FBC considers the 2007 BC Energy Plan to be a policy document that outlines provincial
16 objectives, including the excerpt shown. The Company uses it for guidance as there are no
17 specific directions to FBC within the 2007 BC Energy Plan.

18
19

20
21 4.2 Please explain how FortisBC’s self-generating customers should seek additional
22 DSM incentives for high-ranking TRC opportunities that may not be pursued if
23 FortisBC only provides incentives on a “sliding scale” basis.

24
25 **Response:**

26 FBC understands there may be other funding opportunities, whether government
27 (provincial/federal) and/or third party (Energy Service Company) that Industrial customers may
28 pursue.

29
30

31
32 4.3 Please provide any assessment or analysis FortisBC has performed to identify
33 high-ranking TRC DSM opportunities for self-generating customers that would be
34 pursued but for the reduced “sliding scale” incentive. Has FortisBC made any
35 estimate of the costs and energy savings of such foregone opportunities? Has

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1 FortisBC consulted with its self-generating customers to identify any such
2 opportunities?

3
4 **Response:**

5 The 2016 FBC CPR study includes the economic potential for self-generating customers based
6 on their full facility load, including self-generation. The Company is unable to isolate foregone
7 opportunities as the CPR report does not break out the specific opportunities for self-generating
8 customers.

9
10

11
12 4.4 Please provide on a confidential basis an example of how the financial incentives
13 might be calculated for the City of Nelson and for Celgar making illustrative
14 assumptions about load, self- generation, and energy savings?

15
16 **Response:**

17 FBC provides DSM services to customers (direct or indirect) assuming achievement of the full
18 electricity savings for energy conservation measures. In complex project situations where the
19 full savings may not be achieved, financial incentives are pro-rated based on the realized
20 electricity savings accruing to the Company.

21 Nelson Hydro is the distribution utility owned by the City of Nelson, serving 10,362 indirect
22 customers, with limited self-generation capacity that supplies just over half of its total load.
23 Subsequent to Commission Order G-24-89, the Company has provided DSM services to all
24 indirect customers served by Wholesale customers of FBC, including Nelson Hydro. FBC
25 considers that any DSM measures taken by indirect customers, including those of Nelson
26 Hydro, are fully reflected in reduced FBC sales.

27 In contrast, Celgar is a single point customer, whose native load is largely self-generated, and
28 FBC currently supplies a small percentage of its load on a standby basis. FBC is unable to
29 provide an illustrative example as there is less certainty that any DSM measures or project
30 undertaken by Celgar will be reflected in reduced FBC sales due to the smaller magnitude of
31 Celgar's FBC consumption and the inconsistent monthly profile of this consumption. FBC will
32 review the eligibility of any DSM measures undertaken by Celgar on a case-by-case basis, and
33 similar to Wholesale complex projects the appropriate processes will be undertaken to confirm
34 realized savings.

35
36

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1
2 4.5 Please file and comment on the relevance of Order G-16-15 as clarified by
3 Commission letter dated March 25, 2015 to the proposed calculation of financial
4 incentives for self-generation customers?
5

6 **Response:**

7 Commission Order G-16-15 denied the retroactive payment of a DSM project at the Celgar plant
8 that was the subject of the related complaint. Aside from the determination on the matter of the
9 complaint, Order G-16-15, and the letter dated March 25, 2015 contained confirmation by the
10 Commission that, “...*Celgar is an eligible customer for demand side management (DSM)*
11 *financial incentives pursuant to Rate Schedule 90.*”¹

12 This is consistent with the position of FBC in the regulatory process leading to Order G-16-15.

13 The treatment of self-generating customers described in the LT DSM Plan continues to
14 acknowledge that such customers are eligible for DSM incentives and describes a general
15 framework for calculating incentives that seeks to balance the needs of self-generating
16 customers with the objectives of the DSM program.

17
18

19
20 4.6 Please calculate the financial incentive for the DSM measure that was the
21 subject of Order G- 16-15?
22

23 **Response:**

24 The question is moot since the decision in Order G-16-15 was that the DSM measure was not
25 eligible for a DSM incentive.

26
27

28
29 4.7 Please confirm that the proposed calculation of financial incentives for self-
30 generation customers is not contemplated by legislation or regulations?
31

32 **Response:**

33 Confirmed, to FBC’s knowledge it is not specifically addressed.

¹ March 25, 2015 letter from the Commission to Robert Hobbs, Log No. 48486

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1

2

3

4 4.8 Please comment on whether reduced financial incentives as proposed by
5 FortisBC for self- generation customers can be expected to reduce program
6 participation by self-generation customers?

7

8 **Response:**

9 Please refer to the response to BCUC IR 1.52.4.

10 FBC cannot answer this question as it is not privy to its customers' internal business cases upon
11 which proposed DSM project decisions rest.

12

13

14

15 4.9 Please comment on whether BC Hydro DSM programs reduce financial
16 incentives in proportion to the share of potential energy savings to BC Hydro for
17 its self-generation customers?

18

19 **Response:**

20 Please refer to the response to BCUC IR 1.52.2.1.

21

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1 **5. Reference: LONG-TERM DEMAND-SIDE MANAGEMENT PLAN**

2 **Exhibit B-1, Volume 2, Appendix A, Section 2.1.1.2 Conservation**
3 **Potential Review**

4 Navigant allocated the electricity generated by Nelson Hydro to the residential and
5 commercial sectors in proportion to the breakdown of sales provided by Nelson Hydro.

6 Self-generated electricity estimates were also determined for each industrial segment
7 and were added to FortisBC Electric sales.

8 5.1 Please comment on whether the BC CPR distinguishes energy savings potential
9 for self- generation customers from other customers?

10

11 **Response:**

12 Please refer to the response to ICG IR 1.4.3.

13

14

15

16 5.2 Please comment on whether electricity intensity of industrial processes used in
17 the BC CPR accounts for self-generation?

18

19 **Response:**

20 FBC's understands industrial energy intensity as the ratio of all energy used at a facility
21 (including, but not limited to utility-supplied electricity, utility-supplied natural gas and self-
22 generated thermal and electrical loads) for a given unit of output of an industrial process. The
23 energy intensity of an industrial facility or portfolio varies, not by the source of energy supply,
24 but rather by the end-use energy demands and overall industrial production (i.e. output).
25 Therefore, industrial self-generation does not impact industrial energy intensity.

26 The CPR includes industrial self-generation as a supply source of energy in the reference case
27 and forecast, but not, by definition, as an energy conservation measure.

28

29

30

31 5.3 Please comment on whether the CLEAResult model would incorporate changes
32 in electric and gas use intensity with changes in self-generation output?

33

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1 **Response:**

2 FBC is unaware if the CLEARResult model has such capabilities.

3

4

5

6 5.4 Please explain why self-generation electricity estimates were added to FortisBC
7 Electric sales?

8

9 **Response:**

10 The BC Utilities (including FBC) proactively included self-generation electricity estimates as well
11 as wholesale loads (e.g. municipal electrical distribution utilities) to ensure the BC CPR study
12 modeled the economic potential for both natural gas and electricity for the entire province.

13 Following suit, the 2016 FBC CPR included the economic potential of its customers' entire loads
14 (self-generated plus FBC sales).

15