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May 8, 2018

Anarchist Mountain Community Society and Regional District of Okanagan-Similkameen
c/o Bennett Jones LLP
2200 – 1055 West Hastings Street
Vancouver, BC V6E 2E9

Attention: Mr. David Burse

Dear Mr. Burse:

Re: FortisBC Inc. (FBC)
Project No. 1598939
2017 Cost of Service Analysis and Rate Design Application (the Application)
Response to the Anarchist Mountain Community Society and Regional District
of Okanagan-Similkameen (AMCS-RDOS) Information Request (IR) No. 1

On December 22, 2017, FBC filed the Application referenced above. In accordance with the British Columbia Utilities Commission Exhibit A-6 amending the Regulatory Timetable for the review of the Application, FBC respectfully submits the attached response to AMCS-RDOS IR No. 1.

If further information is required, please contact Corey Sinclair at (250) 469-8038.

Sincerely,

FORTISBC INC.

Original signed:

Diane Roy

Attachment

cc (email only): Commission Secretary
Registered Parties

FortisBC Inc. (FBC or the Company) 2017 Cost of Service Analysis and Rate Design Application (the Application)	Submission Date: May 8, 2018
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1 **1.0 Topic: Residential Rate (RS1) Design**

2 **Reference: FortisBC Application dated 22 December 2017 (Exhibit B-1), Section**
3 **4 Public Consultation and Appendix F**

4 In Appendix F, FBC provides copies of feedback received during the consultations.
5 However, it appears that FBC has omitted some, if not all, of the feedback it received via
6 its “electricityratedesign@fortisbc.com” website.

7 **Request:**

8
9 1.1 Please provide copies of all feedback that FBC received via its
10 “electricityratedesign” website touching on the following subjects in this review

- 11 a) the RS1 Residential Conservation Rate, and
12 b) the RS1 basic charge.

13
14 **Response:**

15 FBC has reviewed the submissions received and is not aware of any feedback via the
16 electricityratedesign@fortisbc.com inbox other than that already submitted in this Application.

17



FortisBC Inc. (FBC or the Company) 2017 Cost of Service Analysis and Rate Design Application (the Application)	Submission Date: May 8, 2018
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1 **2.0 Topic: Residential Rate (RS1) Design**

2 **Reference: FortisBC Application dated 22 December 2017 (Exhibit B-1), Section**
 3 **6.1.5, Page 73, Table 6-10: FBC Residential Rate Proposal**

4 Table 6-10 is difficult to understand since the percentage changes in annual bill impacts
 5 are calculated on different base amounts.

6 **Request:**

7
 8 2.1 Please provide a version of Table 6-10 showing annual bill impacts in both dollar
 9 amounts and percentage changes.

10
 11 **Response:**

12 Please find the information requested in the table below.

RCR Charge	Current RCR	Year 1 (Jan 2019)		Year 2 (Jan 2020)		Year 3 (Jan 2021)		Year 4 (Jan 2022)		Year 5 (Jan 2023)	
Customer Charge (\$ per mo)	16.05	16.58		17.11		17.64		18.17		18.70	
Tier 1 Rate (\$ per kWh)	0.10117	0.10394		0.10699		0.11024		0.11373		0.11749	
Tier 2 Rate (\$ per kWh)	0.15617	0.14915		0.14188		0.13421		0.12610		0.11749	
Threshold (kWh / mo)	800	800		800		800		800		800	
Annual Consumption (kWh)	Percent of Customers	Annual Bill Impact									
		%	\$	%	\$	%	\$	%	\$	%	\$
Above 35,000	2%	-3.3%	-312	-3.6%	-322	-3.9%	-340	-4.3%	-359	-4.7%	-381
30,000 - 35,000	1%	-2.7%	-126	-2.8%	-129	-3.1%	-136	-3.3%	-144	-3.7%	-153
25,000 - 30,000	2%	-2.3%	-91	-2.4%	-93	-2.6%	-98	-2.8%	-103	-3.1%	-110
20,000 - 25,000	5%	-1.8%	-56	-1.8%	-57	-2.0%	-60	-2.1%	-63	-2.3%	-67
15,000 - 20,000	10%	-0.9%	-22	-0.9%	-22	-1.0%	-23	-1.0%	-24	-1.1%	-25
10,000 - 15,000	22%	0.7%	9	0.7%	10	0.8%	11	0.8%	12	0.8%	13
5,000 to 10,000	37%	2.4%	23	2.5%	24	2.6%	25	2.7%	27	2.7%	29
0 to 5,000	21%	3.0%	15	3.0%	16	3.0%	16	3.1%	17	3.1%	18

13

14

FortisBC Inc. (FBC or the Company) 2017 Cost of Service Analysis and Rate Design Application (the Application)	Submission Date: May 8, 2018
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1 **3.0 Topic: Residential Rate (RS1) Design**

2 **Reference: FortisBC Application dated 22 December 2017 (Exhibit B-1), Section**
3 **6.1 Residential Rates**

4 Under FBC's two-tier rate system, “high consuming” customers pay higher average rates
5 than do “low consuming” customers. The requested information is required to
6 understand the different average annual rates charged to different customers under the
7 two-tier rate system and the associated bill impacts.

8 **Request:**

9

10 3.1 Please provide the following information for each year from July 1, 2012 to the
11 end of 2022 for each of FBC’s groupings of customers by annual consumption as
12 shown in the various tables in Section 6.1 (i.e. for customers using 0 to 10,000
13 kWh; 10,000 to 15,000 kWh above 35,000 kWh)

14 1) Number of Customers

15 2) Average annual rate under RCR

16 3) Average annual bill under RCR

17 4) Average annual bill if charged that year's flat rate instead of the two- tier rate

18 5) The amount above or below the flat rate paid by the average customer [i.e.
19 item (3) minus item (4)]

20 6) The total amount above or below the flat rate paid by the sum of all the
21 customers in that grouping [i.e. item (5) multiplied by item (1)]

22

23 **Response:**

24 Please find the requested information for the years contained in the tables in Section 6 of the
25 Application (Current RCR and 2019 through 2022). The analysis for prior years is not
26 comparable since the RCR rates for those years were calculated based on the rates from the
27 revenue requirement applications as applied to the load for the year in which they were in effect.
28 All of the rates (current through 2022) used in the Application are based on the same load and
29 are therefore revenue neutral to each other and comparable. Redoing the model for the
30 previous years utilizing the appropriate load and rates for each year would require several days
31 of work and would yield results that are consistent with the Current RCR table but at slightly
32 lower per kWh rates.

33 The information is provided on the same basis as in the Application for other examples
34 contained within it. Rates are those from Table 6-10 applied to 2016 consumption in all cases.



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- 1 The average rate shown in column 2 is calculated from the sum of Tier 1 and Tier 2 charges
2 divided by annual kWh.
- 3 The results are as expected. As the rates are compressed, the average rate also compresses
4 and the rate impacts show less variation due to consumption.
- 5 Note that the revenue deficiency shown as the sum of column 6 reflects the fact that the rates
6 are derived from the forecast 2017 load used in the COSA now applied to a sample of 2016
7 consumption. It is not expected to be zero, and at 0.2 percent or less of the flat rate energy
8 revenue, can be considered as confirmation of revenue neutrality.
- 9 FBC does not agree that customers pay different “average rates” based on consumption. All
10 customers pay in accordance with the same approved rates and these rates are different when
11 a certain consumption level is reached. What the analysis does show is that as consumption
12 rises, the average all-in cost of electric service (the Customer Charge and sum of energy
13 charges) divided by the total consumption rises as well. This is to be expected as more energy
14 is billed at the higher Tier 2 rate.
- 15

Current RCR						
Annual Consumption	1 Number of Customers	2 Average Annual Rate under the RCR (\$/kWh)	3 Average Annual Bill Under RCR (\$)	4 Average Annual Flat Rate Bill (\$)	5 (3-4) Average Bill Difference (RCR Bill - Flat Rate Bill) (\$)	6 (5x1) Total (\$)
Above 35,000	1572	0.14547	8,849	7,134	1,716	2,697,014
30,000 - 35,000	850	0.13981	4,697	4,009	688	584,759
25,000 - 30,000	1900	0.13681	3,911	3,417	495	939,637
20,000 - 25,000	4240	0.13251	3,131	2,828	303	1,284,662
15,000 - 20,000	9293	0.12593	2,359	2,243	116	1,081,539
10,000 - 15,000	19853	0.11512	1,602	1,657	- 55	- 1,098,050
5,000 to 10,000	32817	0.10409	961	1,089	- 128	- 4,187,531
0 to 5,000	19136	0.10135	511	594	- 82	- 1,576,641
Total	89661					- 274,611
2019						
Annual Consumption	Number of Customers	Average Annual Rate under the RCR	Average Annual Bill Under RCR	Average Annual Flat Rate Bill	Average Bill Difference (RCR Bill - Flat Rate Bill)	Total
Above 35,000	1572	0.14035	8,537	7,134	1,403	2,205,654
30,000 - 35,000	850	0.13570	4,571	4,009	562	477,610
25,000 - 30,000	1900	0.13324	3,820	3,417	404	766,872
20,000 - 25,000	4240	0.12970	3,075	2,828	247	1,046,469
15,000 - 20,000	9293	0.12429	2,337	2,243	94	874,460
10,000 - 15,000	19853	0.11541	1,611	1,657	- 46	- 920,342
5,000 to 10,000	32817	0.10634	984	1,089	- 105	- 3,450,086
0 to 5,000	19136	0.10409	526	594	- 67	- 1,289,857
Total	89661					- 289,220
2020						
Annual Consumption	Number of Customers	Average Annual Rate under the RCR	Average Annual Bill Under RCR	Average Annual Flat Rate Bill	Average Bill Difference (RCR Bill - Flat Rate Bill)	Total
Above 35,000	1572	0.13509	8,214	7,134	1,081	1,699,069
30,000 - 35,000	850	0.13150	4,442	4,009	433	367,895
25,000 - 30,000	1900	0.12960	3,727	3,417	311	590,630
20,000 - 25,000	4240	0.12687	3,018	2,828	190	805,886
15,000 - 20,000	9293	0.12270	2,315	2,243	72	673,038
10,000 - 15,000	19853	0.11584	1,621	1,657	- 36	- 709,699
5,000 to 10,000	32817	0.10884	1,008	1,089	- 81	- 2,654,762
0 to 5,000	19136	0.10711	542	594	- 52	- 987,531
Total	89661					- 215,474



2021						
Annual Consumption	Number of Customers	Average Annual Rate under the RCR	Average Annual Bill Under RCR	Average Annual Flat Rate Bill	Average Bill Difference (RCR Bill - Flat Rate Bill)	Total
Above 35,000	1572	0.12955	7,874	7,134	741	1,164,513
30,000 - 35,000	850	0.12708	4,305	4,009	297	252,079
25,000 - 30,000	1900	0.12577	3,630	3,417	213	404,644
20,000 - 25,000	4240	0.12390	2,958	2,828	130	551,908
15,000 - 20,000	9293	0.12103	2,293	2,243	50	460,245
10,000 - 15,000	19853	0.11632	1,633	1,657	- 25	- 488,718
5,000 to 10,000	32817	0.11151	1,033	1,089	- 55	- 1,819,893
0 to 5,000	19136	0.11032	558	594	- 35	- 673,097
Total	89661					- 148,319

2022						
Annual Consumption	Number of Customers	Average Annual Rate under the RCR	Average Annual Bill Under RCR	Average Annual Flat Rate Bill	Average Bill Difference (RCR Bill - Flat Rate Bill)	Total
Above 35,000	1572	0.12369	7,515	7,134	381	599,577
30,000 - 35,000	850	0.12242	4,161	4,009	153	129,753
25,000 - 30,000	1900	0.12175	3,526	3,417	110	208,263
20,000 - 25,000	4240	0.12078	2,895	2,828	67	283,942
15,000 - 20,000	9293	0.11930	2,269	2,243	25	236,427
10,000 - 15,000	19853	0.11687	1,645	1,657	- 13	- 252,636
5,000 to 10,000	32817	0.11439	1,060	1,089	- 29	- 936,902
0 to 5,000	19136	0.11377	576	594	- 18	- 344,570
Total	89661					- 76,146

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2



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1 **4.0 Topic: Residential Rate (RS1) Design**

2 **Reference: FortisBC Application dated 22 December 2017 (Exhibit B-1), Section**
3 **6.1 Residential Rates and FBC Website: Natural Gas; Homes; Switch to Natural**
4 **Gas; Southern Interior; Approximate Annual Fuel Cost – Space Heating**

5 FBC’s analysis does not take into account that electricity consumption accounts for
6 virtually all of the total energy bill of many “high” electricity customers while representing
7 only a fraction of the total energy bill of many “low” electricity users.

8 Therefore, FBC’s analysis does not show the full energy impact on different customers
9 associated with switching from two-tier rates to a flat rate.

10 **Request:**

11
12 4.1 On the FBC natural gas website, there is a comparison of the cost of home
13 heating by natural gas versus electricity for a typical single family home (2300
14 square feet) in the Southern Interior. For this same typical family home, provide a
15 comparison of fuel costs and consumption levels for all of the end-uses as per
16 the table below under the assumption that the home with access to natural gas
17 uses this fuel for both space and water heating.

18 **Natural Gas Home:**

19 Annual Fuel Cost Space Heating	\$560
20 Annual Fuel Cost Water Heating	
21 Annual Fuel Cost Other End-Uses (eg Appliances, Lighting)	
22 Total Annual Fuel Costs	
23 Total Annual Natural Gas Consumption (GJ)	
24 Total Annual Electricity Consumption (kWh)	

25 **All Electric Home:**

26 Annual Fuel Cost Space Heating	\$2480
27 Annual Fuel Cost Water Heating	
28 Annual Fuel Cost Other End-Uses (eg Appliances, Lighting)	
29 Total Annual Fuel Costs	
30 Total Annual Electricity Consumption (kWh)	

31
32

33 **Response:**

34 The following tables provide the requested information with the assumption that the home with
35 access to natural gas uses this fuel for both space and water heating. The space and water
36 heating assumptions are from FBC’s online calculator, as shown in the screen captures
37 included below. Current rates and updates to the calculator cause the space heat values to vary

- 1 slightly from the values shown in the question. The estimate of other end uses is taken from the
- 2 Conditional Demand Analysis conducted in FBC's 2012 Residential End Use survey.

End Use	Cost \$	Energy Use	
		GJ	kWh
Natural Gas Home			
Annual Fuel Cost Space Heating	\$562	64	382
Annual Fuel Cost Water Heating	\$199	24.5	
Annual Fuel Cost Other End Uses*	\$850		8400
Basic charge per day (annual)	\$142		
Total	\$1,753	89	8,782
All Electric Home			
Annual Fuel Cost Space Heating	\$2,544	0	16943
Annual Fuel Cost Water Heating	\$501	0	4948
Annual Fuel Cost Other End Uses*	\$850	0	8400
Total	\$3,895	0	30,291

**Includes appliances, televisions and computers, lighting, air conditioning, and plug loads*

- 3
- 4 The annual fuel cost for space heating shown in the table above is based on electric baseboard
- 5 heat compared to a 95 AFUE natural gas furnace. A high efficiency central air source heat
- 6 pump is a better solution in an electric only home, and would use approximately 8,918 kWh with
- 7 an annual fuel cost of \$1,300 for a total cost of \$2,651. This is significantly lower than the
- 8 \$3,895 shown for an All Electric Home.
- 9 FBC's response to this question does not address or necessarily accept the preamble to the
- 10 question as it is not part of the question posed. The annual energy cost differentials above do
- 11 not consider all the cost differences associated with switching from electric space and water
- 12 heating to natural gas. The capital costs for the furnace and in-house ductwork, as well as the
- 13 annual heating system maintenance costs, are examples of higher costs that would apply in the
- 14 natural gas option and that have not been considered here.

- > Energy comparison
 - > Space heating & cooling
 - Water heaters
 - Cooking equipment
 - Clothes dryers
 - Appliance cost
 - Energy costs
 - Rebates
 - Restart session

Heating systems

Change the variables in the form below, then press **Compare** to view a comparison between the two systems.

Square feet of conditioned space in your home:

Select the option that best describes the insulation in your home: ?

New electric resistance heating (baseboard)

Electric resistance baseboard heating: ?

Installed cost:

Natural gas furnace

Type: ?

AFUE: ?

Installed cost:

> Compare

System 1

Annual electricity use: **16,943 kWh** ?

Annual energy cost: **\$2,544** ?

System 2

Annual electricity use: **382 kWh** ?

Annual natural gas use: **64 GJ** ?

Annual energy cost: **\$562** ?

Estimated savings summary

System 2 is less expensive to operate. You could save an estimated **\$1,982** annually.

These figures are estimates only. Actual energy costs and usage may differ from energy comparison tool results due to fuel costs, appliance efficiency, lifes and energy efficiency measures incorporated into the household.



> Energy comparison

- Space heating & cooling
- > **Water heaters**
- Cooking equipment
- Clothes dryers
- Appliance cost
- Energy costs
- Rebates
- Restart session

Water heaters

New electric water heater vs. new natural gas water heater

Change the variables in this form, then press **Compare** to view a comparison between the two systems.

Number of occupants:

New system 1

Size of tank:

System type:

Energy factor:

Temperature setting:

Installed cost:

New system 2

System type:

Energy factor:


Size of tank:

Temperature setting:

Installed cost:


 Compare


New system 1

Annual electricity use: **4,948 kWh** 

Annual energy cost: **\$501** 

New system 2

Annual natural gas use: **24.5 GJ** 

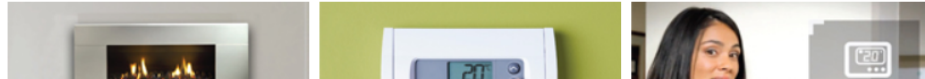
Annual energy cost: **\$199** 

Estimated savings summary

Based on the information you provided **system 2** should require less energy to operate on an annual basis.

Your estimated annual savings is **\$302**.

These figures are estimates only. Actual energy costs and usage may differ from energy comparison tool results due to fuel costs, appliance efficiency, lifestyle and energy efficiency measures incorporated into the household.



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FortisBC Inc. (FBC or the Company) 2017 Cost of Service Analysis and Rate Design Application (the Application)	Submission Date: May 8, 2018
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1 **5.0 Topic: Residential Rate (RS1) Design**

2 **Reference: FortisBC Application dated 22 December 2017 (Exhibit B-1), Section**
3 **6.1 Residential Rates and FBC Website: Natural Gas; Homes; Switch to Natural**
4 **Gas; Southern Interior; Approximate Annual Fuel Cost – Space Heating**

5 The higher rates charged under the two-tier system to customers using electricity for
6 space and water heating have increased the incentive for such customers to switch to
7 natural gas where it is available. On the FBC natural gas website, FBC states

8 “Heating your home and water consumes a whopping 78% of the total
9 energy used in your home. But with natural gas space heating equipment
10 up to 98% efficient, you'll see standout savings when you compare
11 natural gas to other types of fuel or energy choices”.

12 **Request:**

13
14 5.1 For each year, from 2012 through 2017, please provide

- 15 • the number of FBC electricity customers that switched to natural gas;
- 16 • the resulting increase in natural gas sales and associated greenhouse gas
17 emissions; and
- 18 • the change in FBC's and its affiliated gas utility company's combined profits
19 from natural gas and electricity operations resulting from this switching.
- 20

21 **Response:**

22 FBC does not have the information requested. Customers that might switch from electricity to
23 natural gas for space or water heating are free to do so without informing FBC of their changes
24 in electricity use. In any case, customers that make such a switch would still continue to be FBC
25 customers for all the other uses of electricity in their residence. Retrofitting a residence to use
26 natural gas, if it was not initially constructed for that, is a significant barrier to switching energy
27 sources as referred to in the question.

28

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1 **6.0 Topic: Residential Rate (RS1) Design**

2 **Reference: FortisBC Application dated 22 December 2017 (Exhibit B-1), Section**
3 **6.1.4 Residential Rate Options, Page 60**

4 On page 60, FBC states

5 “In its 2011 Application for Residential Inclining Block (RIB) Rates, FBC
6 suggested that a constraint on annual bill impact be considered in
7 evaluating rate options ...”

8 namely,

9 “... that 95 percent of customers should have bill increases no greater
10 than 10 percent as compared to existing rates”.

11 **Request:**

12
13 6.1 Why did FBC maintain, in its 2011 Application, that there should be no constraint
14 on the bill impacts on the remaining 5 percent of customers, many of whom are
15 entirely dependent on electricity for space and water heating?
16

17 **Response:**

18 The bill impact criterion proposed as part of the 2011 Application, and approved by the
19 Commission, was as stated above. While not stated as a further criterion in the 2011
20 Application, the bill impacts for other customers were included in the analysis of all the options
21 presented. They were thus presented to all participants and formed part of the evidentiary
22 record considered by the Commission at the time.

23 In addition to the criterion discussed above, FBC presented two additional evaluation factors,
24 maximum bill impact and percentage of customers with increases above 20 percent, for each
25 option included in the 2011 Application.

26
27

28

29 6.2 What range of rate increase did FBC expect the remaining 5 percent of customer
30 to experience and what was the actual range of increase?
31

32 **Response:**

33 In the 2011 Application, for the rate that was ultimately approved, FBC forecast that 75.7
34 percent of customers would have lower annual bills, the highest annual bill impact would be



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1 22.6 percent, and approximately 0.2 percent of customers would have bill increases above 20
2 percent.

3 In the first RCR Report to the Commission, covering the period from July 2012 to August 2014,
4 FBC reported that 68.5 percent of customers had lower annual bills, the highest annual bill
5 impact was 27.3 percent, and approximately 0.4 percent of customers had bill increases above
6 20 percent.

7 The data compiled for the Application is also consistent with the original projections since it
8 shows that the return to the flat rate would have negative bill impacts for 76 percent of
9 customers.

10

11

12

13 6.3 What rate-making principle supported FBC's decision related to the 5 percent of
14 customers who would receive a bill increase of greater than 10 percent?

15

16 **Response:**

17 The desired attributes of sound rates are often in tension. With respect to conservation rates in
18 particular, there is a trade-off between achieving conservation and the resulting bill impacts that
19 must be managed. In the original RIB Rate Application, FBC proposed the referenced criterion
20 as a means to balance these two attributes. Managing the rate impacts, or a principle of rate
21 stability for customers, is a key element or principle of rate design. In its Decision regarding the
22 RIB rate, the Commission recognized this trade-off and agreed with FBC that the additional
23 conservation that could be achieved by allowing for a greater rate impact was not worth the
24 additional burden on customers. It agreed with the criterion that the Company had proposed.

25

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1 **7.0 Topic: Residential Rate (RS1) Design**

2 **Reference: FortisBC Application dated 22 December 2017 (Exhibit B-1), Section**
3 **6.1.4 Residential Rate Options**

4 FBC's application presents a comparative assessment of two options: Immediate return
5 to the flat rate (Table 6-8) and a Transitional return to the flat rate (Table 6- 10). This
6 assessment only examines the “principle” of constraining annual bill impacts for the
7 majority of customers.

8 FBC provides no comparative assessment of the two options against the rate- making
9 principles of “price signals that encourage efficient use” and “avoidance of undue
10 discrimination”.

11 Nor does FBC undertake any comparative analysis of the two options against the
12 provincial government's policy objectives related to reducing emissions that contribute to
13 climate change and air pollution.

14 **Request:**

15
16 7.1 Please provide FBC’s comparative assessment, with numerical examples where
17 possible, of the two options – immediate and transitional return to the flat rate –
18 against the following objectives:

- 19 • price signals that encourage efficient use;
- 20 • avoidance of undue discrimination;
- 21 • mitigation of air emissions that contribute to climate change; and
- 22 • mitigation of emissions that contribute to air pollution.
- 23

24 **Response:**

25 As explained in the response to BCUC IR 1.47.2, FBC’s proposal to phase-in the proposed rate
26 changes mainly relates to the rate design principle number six (rate stability), that is to manage
27 the impact of the rate changes on customers’ bills and to eliminate the possibility of rate shock.
28 The phase-in also ensures that those customers currently paying more under the RCR will
29 receive successively lower bills in each year until the flat rate is the default rate. This will provide
30 them with immediate and incremental benefits during the phase-in period. The proposed phase-
31 in can improve customer acceptance of the new rates but has little to no impact on other rate
32 design principles in and of itself.

33 FBC does not believe that the proposed phase-in approach has any considerable adverse
34 impact on the objectives of reducing GHG emissions or air pollution nor on efficient use of the
35 system (flat rates are considered to be a neutral option - not encouraging or discouraging a



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1 particular way of consumption). Further, the phase-in approach has no impact on the principle
2 of avoidance of undue discrimination since as stated in Section 6.1.4.1.2 of the Application, the
3 RCR rates have been found by the Commission not to be unduly discriminatory to begin with.

4

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1 **8.0 Topic: Residential Rate (RS1) Design**

2 **Reference: FortisBC Application dated 22 December 2017 (Exhibit B-1), Section**
3 **6.1.4 Residential Rate Options, pages 60-61; BC Hydro’s 2008 Residential Inclining**
4 **Block Application dated February 2008, page 1-9; FBC’s Residential Inclining**
5 **Block Application to the British Columbia Utilities Commission dated September**
6 **30, 2016, page 7; FBC’s Residential Conservation Rate Information Report dated**
7 **October 31, 2013, page 33.**

8 On pages 60-61, FBC lists “promote conservation” as one of its “other principles”;
9 supplemental to its “Rate Design Principle” of encouraging efficient use.

10 On page 1-9 of its 2008 Residential Inclining Block Application of February 2008, BC
11 Hydro stated:

12 “The desire to incorporate an incentive for conservation into its rates has
13 prompted BC Hydro to apply for approval of a rate structure that sends a
14 price signal to customers that better reflects the higher long-run cost of
15 new electricity supply. In the current and foreseeable future, where the
16 long-run cost of new electricity supply is substantially higher than the
17 embedded cost of BC Hydro’s existing assets, such a rate structure
18 sends price signals that will encourage economically efficient electricity
19 consumption choices and, thus, electricity conservation”.

20 On page 7 of the Residential Inclining Block Rate Submission to the British Columbia
21 Utilities Commission of September 30, 2016, FBC stated

22 “The fact that the Tier 2 rate is 36% higher than the LPMC (Long-Run
23 Marginal Cost) suggests that the Tier 2 rate exceeds the level that leads
24 to economically efficient purchase decisions on the part of customers”.

25
26 On page 33 of the Residential Conservation Rate Information Report of October 31,
27 2013, FBC stated

28 “...the Company accepts that although the current RCR is cost based in
29 the sense that it is based on the flat rate confirmed pursuant to a cost of
30 service analysis (COSA), the levels of the given rate components are not,
31 and are based on policy and legislative imperatives for rates reflecting a
32 conservation price signal”.

33 **Request:**

34 8.1 Please elaborate on the “policy and legislative imperatives” that require a
35 “conservation price signal” that is above the Long-Run Marginal Cost of new
36 electricity generation; citing the relevant policy documents.



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1
2 **Response:**
3 FBC is not aware of policy and legislative imperatives that require a conservation price signal
4 that is above the Long-Run Marginal Cost (LRMC) of new electricity generation and has not
5 stated or inferred that this is the case.
6 The term “policy and legislative imperatives” refers to the objectives articulated under the *Clean*
7 *Energy Act* (CEA). Section 3 (1) (b) (iv) of CEA discusses “the use of rates, including rates to
8 encourage energy conservation or efficiency”.
9 However, government regulations and the CEA in particular are not prescriptive as to how these
10 objectives should be achieved and do not require a “conservation price signal” that is above the
11 LRMC of new electricity generation.
12 The Commission may consider what type of rate structure can better achieve these objectives
13 or other objectives, and how the elements of the determined rate structure should work
14 together. In the 2012 RIB rate decision, the Commission determined to set the tier two rate
15 above the FBC generation LRMC.

16



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1 **9.0 Topic: Residential Rate (RS1) Design**

2 **Reference: FortisBC Application dated 22 December 2017 (Exhibit B-1), Section**
3 **6.1 Residential Rates, page 61.**

4 FBC's "promote conservation" principle, as reflected in the design of the RCR, does not
5 distinguish between peak and non-peak periods.

6 **Request:**

7
8 9.1 Please describe the benefits from customers conserving electricity during non-
9 peak periods.

10
11 **Response:**

12 As FBC has stated in the Application regarding the design of the TOU rates, there are power
13 supply benefits that may result in rate mitigation from the shifting of consumption from on-peak
14 to off-peak periods. Simple conservation of energy during off-peak periods will not have the
15 same result and the lost revenue resulting from such conservation would likely place upward
16 pressure on rates.

17

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1 **10.0 Topic: Residential Rate (RS1) Design**

2 **Reference: FortisBC Application dated 22 December 2017 (Exhibit B-1), Section**
3 **6.1.4, Residential Rate Options, Page 61**

4 FBC states on page 61

5 “it is in agreement with the customer sentiment that the impact of the
6 RCR has become overly burdensome on high consuming customers, but
7 also notes that the BCUC has determined that it does not find that the
8 RIB rate causes a subsidy between customers in areas with and without
9 access to natural gas”.

10 The second part of this statement does not appear to be relevant to the first part
11 because there are both high electricity consuming customers and low electricity
12 consuming customers in the category of customers that are without access to natural
13 gas.

14 **Request:**

15

16 10.1 Please elaborate on what FBC meant by “overly burdensome” in the context of
17 the comment cited above.

18

19 **Response:**

20 Please refer to the response to BCSEA IR 1.10.1.

21

22

23

24 10.2 Does FBC’s analysis show that the revenue-to-cost profile for high electricity
25 consuming customers is the same as the revenue-to-cost profile for low
26 electricity consuming customers within RS1?

27

28 **Response:**

29 The Company consulted with EES to provide the following response.

30 FBC does not calculate the RC ratio for individual customers. Given that the customer charge is
31 below the unit cost associated with customer-related costs, FBC would expect, all else being
32 equal, a customer with high use would be paying more than its cost of service and a customer
33 with low use would be paying less than its cost of service. Further, because the COSA results
34 do not indicate a cost difference by rate block, customers with larger than average consumption
35 would have greater quantities subject to the upper block price and would likely be paying more

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1 than their cost of service. However, these are general observations only and should not be
2 extended to the individual customer. There are also cost differences, unrelated to consumption
3 levels, that are involved in serving individual residential customers that are not apparent from
4 the aggregated customer class analysis performed in a COSA study. For example, rural
5 customers may be more costly to serve than urban customers because of longer line extensions
6 or distances between customers. In other cases, customers may be served by an older more
7 depreciated (i.e. lower cost) portion of the distribution system. However, such distinctions are
8 not made in an aggregated COSA. With reference to geographic distinctions, those do not
9 inform rate structures designed in the context of postage stamp ratemaking.

10

11

12

13 10.3 Does FBC's analysis reveal any cross-subsidy between the high electricity
14 consuming customers and the low electricity consuming customers?

15

16 **Response:**

17 The Company consulted with EES to provide the following response.

18 FBC does not have specific analysis to respond to the question posed. However, given the
19 response to AMCS IR 1.10.2 and other factors being equal, the general expectation would be
20 that low use customers are in general and to some degree being subsidized by high use
21 customers. This issue has been explored in previous Commission processes with regard to the
22 RCR, such as the 2011 RIB Rate proceeding and the 2015 BCUC RIB Rate Review. In the
23 context of all goals and objectives for residential electricity rates, such as achieving a
24 satisfactory level of cost recovery from customers (and other Bonbright principles) and at the
25 same time serving provincial policy objectives like energy conservation and efficiency, any
26 inherent cross-subsidization between high and low use customers has not been found by the
27 Commission to be inappropriate. The current regulatory process is the context in which the
28 various aspects of the RCR, including its relative fairness to high and low use customers, is
29 being revisited.

30

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1 **11.0 Topic: Residential Rate (RS1) Design**

2 **Reference: FortisBC Application dated 22 December 2017 (Exhibit B-1), Section**
3 **6.1.5, Default Residential Rate Recommendation, Page 72 and Section 6.1.4.2**
4 **Changes to the Existing RCR, Page 65**

5 On page 72, FBC states

6 “...continuing with the RCR into the future ...may create inequity
7 amongst customers with regard to the ability to take steps to reduce
8 consumption”.

9 This statement implies that over the past five years, there was “equity” amongst
10 customers with regard to the ability to reduce consumption and hence the impact of the
11 RCR.

12 **Request:**

13
14 11.1 Does FBC assert that over the past five years there has been equity amongst
15 customers with regard to the ability to take steps to reduce consumption and the
16 impact of the RCR on billing? If so, please provide evidence to support this
17 assertion.

18
19 **Response:**

20 The ability to initiate conservation measures has always varied across the customer base, and
21 has done so across all consumption levels. To the extent that in every consumption strata there
22 will be customers that have pursued conservation and others that have not, the opportunities for
23 some customers are diminished as compared to the past. This is common at all consumption
24 levels. FBC has no particular issue with a position that some degree of inequality has always
25 existed between customers with respect to the opportunities to conserve. This is a function of
26 differing customer characteristics. However, FBC does not believe equity amongst customers
27 should be narrowly defined or measured against one particular parameter such as the
28 opportunity to conserve. Customers vary from each other in numerous ways and an assessment
29 of equity or inequity should proceed from a broader basis that recognizes these differences. The
30 statement on page 72 said “may create inequity” rather than “will create inequity” in recognition
31 of these broader considerations.

32 Nothing in the Application hinges on whether the phraseology is “creating” or “increasing”
33 inequity. In the view of FBC, some customers have reacted to the price signals in the RCR to
34 the extent possible and should not continue to be subject to the Tier 2 rate. This is a supporting
35 reason for discontinuance of the rate – as has been applied for.

36

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1 **12.0 Topic: Residential Rate (RS1) Design**

2 **Reference: FortisBC Application dated 22 December 2017 (Exhibit B-1), Section 8**
3 **Optimal Time Of Use Rates**

4 FBC states, on page 110, the “objective is to incent customers to shift the time of
5 consumption in a manner that would allow FBC to reduce costs or generate incremental
6 revenue such that a rate benefit will accrue to all customers”.

7 **Request:**

8
9 12.1 What end-uses does FBC believe residential customers are most likely to shift to
10 non-peak periods?

11
12 **Response:**

13 Please refer to the response to BCUC IR 1.76.9.

14
15

16

17 12.2 What percentage of total residential electricity consumption does FBC estimate
18 will opt for TOU rates?

19

20 **Response:**

21 FBC assumes that the question is requesting the total kWh savings that FBC has forecast to
22 result from the implementation of TOU (electricity consumption cannot opt for TOU rates).

23 Please refer to the response to BCUC IR 1.94.1.

24
25

26

27 12.3 What cost savings and revenue gains does FBC estimate will result from this
28 load shifting?

29

30 **Response:**

31 Please refer to the response to BCUC IR 1.94.2.



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12.4 What portion of these savings/revenues does FBC expect to credit back to TOU customers and what would their average residential rate be as compared to the default rate being paid by non-TOU customers?

Response:

Please refer to the responses to BCOAPO IRs 1.59.3, 1.59.3.1 and 1.59.3.2 for a discussion of how revenue variances resulting from the implementation of the TOU rate would be handled. It is premature to attempt to place a specific value on the outcome as experience with the program will be required prior to doing so.