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March 20, 2018

Industrial Customers Group
c/o Bennett Jones LLP
2200 – 1055 West Hastings Street
Vancouver, BC V6E 2E9

Attention: Mr. David Bursey

Dear Mr. Bursey:

Re: FortisBC Energy Inc. (FEI)
Project No. 3698899
2016 Rate Design Application (the Application)
Response to the Industrial Customers Group (ICG) Information Request (IR) No. 3

On December 19, 2016, FEI filed the Application referenced above. In accordance with the British Columbia Utilities Commission Order G-5-18 setting out the remainder of the Regulatory Timetable for the review of the Application, FEI respectfully submits the attached response to ICG IR No. 3.

If further information is required, please contact the undersigned.

Sincerely,

FORTISBC ENERGY INC.

Original signed:

Diane Roy

Attachments

cc (email only): Commission Secretary
Registered Parties

FortisBC Energy Inc. (FEI or the Company) 2016 Rate Design Application (the Application)	Submission Date: March 20, 2018
Response to Industrial Consumers Group (ICG) Information Request (IR) No. 3	Page 1

1 **1.0 Topic: Rate Rebalancing – Rate 22A**

2 **Reference: FEI Application Update dated 6 February 2018, pages 1.-4 and 1-5**

3 On page 1-5, FEI presents Table 1-1: R:C and M:C Results before and after Rate
4 Design Proposals and Rebalancing, which summarizes the revenue shifts resulting from
5 FEI's rate design proposals and the rebalancing the rates to a R:C ratio within a +/- 5%
6 range of reasonableness.

7 On page 1.4, FEI states that it is not proposing to rebalance RS 22A.

8 **Request:**

9 1.1 Please present a revised Table 1-1 showing the results with RS 22A rebalanced
10 to a R:C ratio within a +/- 5% range of reasonableness.

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12 **Response:**

13 FEI has provided an updated table below and for consistency has assumed that the RS 22A
14 rebalancing amount is picked up by RS 1.

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Table 1.1 (Revised): R:C and M:C Results before and after Rate Design Proposals and Rebalancing

Rate Schedule	Initial COSA		Revenue Shifts and Rebalance Amount (\$000)	Approximate Annual Bill Change	COSA after Rate Design Proposals and Rebalancing	
	R:C	M:C			R:C	M:C
Rate Schedule 1 <i>Residential Service</i>	95.6%	93.1%	2,545.3	0.3%	96.6%	94.7%
Rate Schedule 2 <i>Small Commercial Service</i>	101.3%	102.5%	(1,174.1)	-0.5%	102.2%	104.1%
Rate Schedule 3/23 <i>Large Commercial Sales and Transportation Service</i>	101.6%	103.3%	1,174.1	0.6%	103.6%	107.6%
Rate Schedule 5/25 <i>General Firm Sales and Transportation Service</i>	104.9%	112.2%	(1,093.3)	-1.2%	105.0%	112.6%
Rate Schedule 6/6P <i>Natural Gas Vehicle Service</i>	131.2%	159.1%	(75.9)	-20.3%	105.0%	109.5%
Rate Schedule 22A <i>Transportation Service (Closed) Inland Service Area</i>	109.5%	109.8%	(544.5)	-7.1%	105.0%	105.1%
Rate Schedule 22B <i>Transportation Service (Closed) Columbia Service Area</i>	99.7%	99.7%			103.1%	103.1%
Rate Schedule 22 <i>Large Volume Transportation Service</i>	1425.5%	1864.4%	(754.2)	-3.4%	100.0%	100.0%

Rate Schedule <i>(rates not set using allocated costs)</i>	Initial COSA		Revenue Shifts and Rebalance Amount (\$000)	Approximate Annual Bill Change	COSA after Rate Design Proposals and Rebalancing	
	R:C	M:C			R:C	M:C
Rate Schedule 4 <i>Seasonal Firm Gas Service</i>	147.4%	550.9%	13.3	1.9%	150.2%	578.3%
Rate Schedule 7/27 <i>General Interruptible Sales and Transportation Service</i>	139.6%	712.3%	(90.7)	-0.3%	139.3%	713.6%

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1 **2.0 Topic: Adjustments to RS 5/25 Basic Charge**

2 **Reference: FEI Application Update dated 6 February 2018, pages 1-6, 1-7 and 30**

3 On pages 1-6 and 1-7, FEI states

4 FEI's General Firm Service (RS 5 and RS 25) is designed to serve process load
5 customers with efficient utilization of the system. For this reason, RS 5 and RS
6 25 have a Demand Charge designed to provide lower average rates to higher
7 load factor customers. Based on peak daily consumption information that was not
8 available when the RS 5 and RS 25 Demand Charge was originally designed,
9 FEI is proposing to update the multiplier in the peak day demand formula from
10 1.25 to 1.1 (the multiplier estimates the peak day demand from the average peak
11 Monthly demand). As a result of the above change, FEI is also proposing to raise
12 the Demand Charge for RS 5 and RS 25 by \$3.00/GJ/Month to continue to
13 provide a price signal for only high load factor customers to take General Firm
14 Service. As the R:C ratio before rebalancing is 106%, FEI proposes to shift
15 \$1.093 million of revenue responsibility to RS 1 as explained in section 12.2.2.
16 The R:C ratio after rebalancing is 105%, which is within the range of
17 reasonableness directed by Order G-4-18. FEI is proposing to reduce the
18 revenue responsibility of RS 5/25 by decreasing the Basic Charge by \$118 per
19 month.

20 On page 1-10, FEI presents Table 1-2 FEI Rate Proposal Summary

Rate Schedule	Estimated COSA ¹⁰ Based 2018 Rate	Proposed Rate Changes	Estimated 2018 Rates After Proposed Changes
Basic Charge (daily)	\$0.8161	\$0.1324	\$0.9485
Delivery Charge (\$/GJ)	3.850	(\$0.186)	3.664
<i>RS 3/RS 23 – Large Commercial</i>			
Basic Charge (daily)	\$4.3538	\$0.4357	\$4.7895
Delivery Charge (\$/GJ)	\$3.189	\$0.001	\$3.190
<i>RS 4</i>			
Basic Charge (Monthly)	\$439	Nil	\$439
Delivery Charge (\$/GJ) Off Peak	\$1.278	\$0.114	\$1.392
Delivery Charge (\$/GJ) Extended Period	\$2.183	(\$0.018)	\$2.165
<i>RS 5/RS 25</i>			
Basic Charge (Monthly)	\$587.00	(\$118.00)	\$469.00
Delivery Charge (\$/GJ)	\$0.887	Nil	\$0.887
Demand Charge (\$/Month/GJ)	\$21.596	\$3.00	\$24.596

1 **Request:**

2 2.1 Please provide the firm demand that FEI assumed for RS 5/25 customers – in
3 aggregate or otherwise – in the model used to calculate the changes resulting
4 from the adjustments to the RS 5/25 Basic Charge.

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6 **Response:**

7 The cumulative firm daily demand for RS 5 and RS 25 using the 1.1 multiplier is 68,450 GJ. The
8 change made to the Basic Charge did not involve using the cumulative firm demand of 68,450
9 GJ. The change to the Basic Charge was based on the reduction required to achieve an R:C
10 ratio of 105 percent divided by 12 divided by the number of customers.

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14 2.2 Will the RS 25 customers at the low load (less efficient) end of the customer
15 range see a greater reduction in their overall rates than the RS 25 customers at
16 the high load (high efficient) end of the customer range? Please explain your
17 analysis in support of your response to this question.

18
19 **Response:**

20 All customers will see the same reduction of \$118 per month; however, the percentage
21 decrease will vary from customer to customer depending on the customers' annual throughput
22 and daily demand. Generally, it is expected that customers with larger annual throughput will
23 have a lower percentage decrease.

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27 2.3 How does rebalancing through reducing the Basic Charge change to encourage
28 process load customers to use the system efficiently?

29
30 **Response:**

31 Reducing the Basic Charge only keeps the price signal of the Demand Charge in place, which
32 encourages customers to use the system efficiently. As demonstrated in Section 9, Table 9-14
33 of the Application, customers with higher load factors will experience a lower average effective
34 rate per GJ. This is how the customer is rewarded for using the system efficiently.

35 The level of the Demand Charge, combined with differences in the Basic Charge and Delivery
36 Charges between RS 5/25 and other rate schedules, provide the incentive for customers with an

1 approximate annual load of 10,000 GJ or higher and with a load profile that is generally 40%
 2 and higher to take service under General Firm Service, as it would result in a lower annual cost
 3 under RS 5/25 compared to another rate schedule. These factors also encourage customers
 4 whose annual load is generally less than 10,000 GJ and whose load factor is in the mid 30%
 5 range to take service under Large Commercial RS 3/23.

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9 2.4 Please show the results of rebalancing rate 5/25 to an R:C within a +/- 5% range
 10 of reasonableness, by reducing the demand charge rather than the Basic
 11 Charge.

12

13 **Response:**

14 The following table shows the adjustment to the demand charge that would result in an R:C ratio
 15 of 105 percent. \$1,138.5 thousand is the total adjustment used to derive the demand charge as
 16 it accounts for the rate design proposals and the rebalancing required to move RS 5/25 to an
 17 R:C ratio of 105 percent. To be clear, a total revenue shift of \$1,138.5 thousand is required to
 18 move RS 5/ 25 to an R:C ratio of 105 percent.

Revenue Adjustment to achieve 105% R:C ratio			\$(1,138.5)
Cumulative Daily Demand	GJ	68,450	
X 12 Months		x 12	821,400
Adjustment to the Demand Charge			\$ (1.386)
Proposed Demand Charge \$ / GJ / Mo.			\$ 24.596
Adjustment to the Demand Charge			\$ (1.386)
Demand Charge post Rebalancing \$ / GJ / Mo.			<u>\$ 23.210</u>

19

20 In addition to the impact on RS 5/25 by changing the Demand Charge, the Delivery Charge for
 21 RS 7/27 would also be decreased from the proposed rate of \$1.443 per GJ to \$1.412 per GJ¹.
 22 The 3.1 cents per GJ reduction results in a further decrease of General Interruptible revenues of
 23 \$207 thousand (6.691 TJ x \$0.031) which would have to be shifted to the residential (RS 1)
 24 customers.

¹ As described in Section 9.6.1 of the Application, RS 7/27 delivery charge is determined using RS 5/25 Demand and Delivery charges.

Impact on Rate 7 / 27 Delivery Charge	2018 RS 5/25 Proposed
RS 5/25 Demand Charge	\$ 23.210
RS 7/27 Equivalent Load Factor	62.5%
RS 5/25 Effective Load Factor	90.9%
Demand Charge Equivalent	\$ 0.839
Delivery Charge	\$ 0.887
Firm Equivalent	\$ 1.726
Interruptible Rate	\$ 1.412
Discount	\$ 0.315
% of Firm Equivalent	18.23%

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2 The RS 7/27 Delivery Charge in this IR response is derived by the following formula: $\$23.210 \times$
 3 $12 \text{ months} / 365 \text{ days} \times 62.5\% / 90.9\% + \0.887 . In Exhibit B-1-5, see Page 9-31 for the
 4 discussion on load factors used in deriving the General Interruptible Delivery Rate.

5 There would also be an impact, albeit a small one, on the Delivery Charges for RS 4 Seasonal
 6 Service.

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10 2.5 Explain the analysis that FEI undertook to arrive at the optimum adjustment
 11 between the Basic Charge and the Demand Charge for RS 5/25 to achieve the
 12 design objective of RS 5/25 – i.e. to serve process load customers with efficient
 13 utilization of the system.

14

15 **Response:**

16 FEI does not support the alternative of reducing the Demand Charge instead of reducing the
 17 monthly Basic Charge for RS 5/25. As explained in the response to ICG-FEI IR 3.2.4 and below,
 18 the primary reason for not changing the Demand Charge is the follow-on rate impact that occurs
 19 to RS 7/27, the additional revenue shift to RS 1 and the relative pricing relationship between
 20 General Firm Service (RS 5/25) and Large Commercial Service (RS 3/23).

21 The Commission Decision accompanying Order G-4-18 set the R:C range of reasonableness as
 22 95 percent to 105 percent. With the revenue shifts to move RS 5/25 and RS 6/6P to 105

1 percent, the residential RS 1 R:C ratio now exceeds 95 percent (Exhibit B-1-5, Page 12-8, Table
 2 12-3, R:C ratio after Rate Design Proposals and Rebalancing is 96.6 percent). Since RS 1 is
 3 already within the range of reasonableness with this adjustment, it is unnecessary to adjust the
 4 RS 5/25 Demand Charge, which results in additional revenue shifts to RS 1 from the impact on
 5 changing the Delivery Charge to RS 7/27 and RS 4 (refer to the response to ICG-FEI IR 3.2.4).

6 The general intent of RS 5/25 is to provide firm service to customers whose load factor is 40
 7 percent or greater. By decreasing the Demand Charge for RS 5/25 while the charges for RS
 8 3/23 remain unchanged from proposed, the annual volume at which customers could
 9 beneficially switch from RS 3/23 to RS 5/25 would be lower. This is shown in Table 1 below
 10 summarizing the results from Tables 2 and 3. Consequently, customers with a load profile of a
 11 large commercial customer but at substantively reduced annual volume would be incented to
 12 switch to RS 5/25. Consequently, FEI chose to adjust the basic charge for RS 5/25 to retain the
 13 relative pricing signal between RS 5/25 and RS 3/23².

14 **Table 1: Summary of Economic Crossover Volumes at Various Load Factors Based on Proposed**
 15 **Adjustment to Basic Charge vs. Adjusting Demand Charge for Rebalancing**

Load Factor	Rebalancing Adjustment to			
	Basic Charge		Demand Charge	
	Annual Volume	Daily Demand	Annual Volume	Daily Demand
50%	5,656 GJ	31 GJ	4,993 GJ	27 GJ
45%	7,665 GJ	47 GJ	6,387 GJ	39 GJ
40%	13,783 GJ	94 GJ	9,811 GJ	67 GJ
39%	16,895 GJ	119 GJ	11,197 GJ	79 GJ
38%	22,162 GJ	160 GJ	13,151 GJ	95 GJ
37%	33,010 GJ	244 GJ	16,117 GJ	119 GJ
36%	68,298 GJ	520 GJ	21,153 GJ	161 GJ

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17 **Table 2: Large Commercial / General Firm Economic Crossover at Varying Load Factors at**
 18 **Proposed Rates for RS 3/RS 23 and RS 5/RS 25 With Proposed Multiplier**

		RS 23	RS 25
Monthly Charges (Basic + Admin. Fee)		\$184.78	\$508.00
Demand Charge		N / A	\$24.596
Delivery Charge		\$3.190	\$0.887
		Economic Cross-over (GJ/Year)	Daily Demand
Load Factor	50%	5,656 GJ	31 GJ
	45%	7,665 GJ	47 GJ
			Peak Winter Month With 1.1 multiplier
			845 GJ
			1,273 GJ

² At proposed rates

	RS 23		RS 25	
	40%	13,783 GJ	94 GJ	2,575 GJ
	39%	16,895 GJ	119 GJ	3,237 GJ
	38%	22,162 GJ	160 GJ	4,358 GJ
	37%	33,010 GJ	244 GJ	6,666 GJ
	36%	68,298 GJ	520 GJ	14,176 GJ

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Table 3: Large Commercial / General Firm Economic Crossover at Varying Load Factors at Proposed Rates for RS 3/RS 23 but RS 5/RS 25 Adjustment for Rebalancing Applied to Demand Charge With Proposed Multiplier

		RS 23		RS 25
Monthly Charges (Basic + Admin. Fee)		\$184.78		\$626.00
Demand Charge		N / A		\$23.210
Delivery Charge		\$3.190		\$0.887
		Economic Cross-over (GJ/Year)	Daily Demand	Peak Winter Month With 1.1 multiplier
Load Factor	50%	4,993 GJ	27 GJ	746 GJ
	45%	6,387 GJ	39 GJ	1,060 GJ
	40%	9,811 GJ	67 GJ	1,833 GJ
	39%	11,197 GJ	79 GJ	2,145 GJ
	38%	13,151 GJ	95 GJ	2,586 GJ
	37%	16,117 GJ	119 GJ	3,255 GJ
	36%	21,153 GJ	161 GJ	4,390 GJ

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