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March 3, 2014

**Via Email**  
**Original via Mail**

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)**

**Application for Approval of a Multi-Year Performance Based Ratemaking Plan  
for 2014 through 2018 (the Application)**

**Rebuttal Evidence to the Evidence of Messrs. John Plunkett and Paul Chernick,  
on behalf of the B.C. Sustainable Energy Association and the Sierra Club  
British Columbia (BCSEA)**

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FBC respectfully submits the attached Rebuttal Evidence to the Evidence of Messrs. John Plunkett and Paul Chernick, on behalf of BCSEA, in accordance with the British Columbia Utilities Commission (BCUC or the Commission) Order G-10-14, establishing the Regulatory Timetable for the above noted proceeding.

If further information is required, please contact the undersigned.

Sincerely,

**FORTISBC INC.**

***Original signed:***

Dennis Swanson

Attachments

cc (email only): Registered Parties

**FortisBC Inc. (FBC) Application for  
Approval of a Multi-Year Performance Based Ratemaking Plan for  
2014 through 2018**

**Rebuttal Evidence  
of  
FortisBC Inc.  
to Evidence of John Plunkett and Paul Chernick (BCSEA)**

**March 3, 2014**

1 **Q1: What is the purpose of this Rebuttal Evidence?**

2 A1: The purpose of this Rebuttal Evidence is to provide FBC's response to aspects of the  
3 evidence of Mr. John Plunkett and Mr. Paul Chernick (FBC Exhibit C8-9) filed on behalf  
4 of the B.C. Sustainable Energy Association and the Sierra Club British Columbia  
5 (BCSEA). FortisBC disagrees with a number of aspects of BCSEA's evidence. Our  
6 silence on particular matters raised by BCSEA's evidence should not be construed as  
7 agreement.

8 **Q2: Messrs Plunkett and Chernick say that that FBC has "not convincingly"**  
9 **explained why it has not increased its expenditures in program**  
10 **components that are "relatively more cost-effective" such as in the**  
11 **commercial/industrial sector (FBC Exhibit C8-9, p.44, lines 9-22).**

12 **What is FortisBC's response to this statement?**

13 A2: The DSM program savings targets are fundamentally a function of the economic  
14 potential and a market take-up (ramp rate), adjusted for past program results – which  
15 are a measure of the market's capacity. Increasing the "relatively more cost-effective"  
16 programs requires higher measure incentives, which drives up program costs for all  
17 participants – not just for the incremental participants.

18 Mr. Plunkett's suggestion ignores the inequities that may arise as a result of increasing  
19 DSM expenditures in the Commercial/Industrial sectors relative to residential customers.

20 In establishing the mix of customer DSM programs, FBC looks at a number of factors,  
21 including addressing key end uses, the cost-effectiveness tests, customer payback  
22 periods, and the take-up rate of customers.

23 The FBC commercial/industrial programs already have higher Participant Cost Test  
24 ratios (7.9 and 6.4 respectively) than the Residential programs (2.9), meaning that where  
25 everything else is held equal, the payback is faster for Commercial/Industrial customers  
26 as compared to Residential customers. Based on FBC's considerations in establishing  
27 incentives, this disparity is a basis for concern in increasing incentives for commercial or  
28 industrial customers.

29 **Q3: Under the heading "FBC's Under-Estimation of Short-term Marginal Cost",**  
30 **Messrs Plunkett and Chernick refer to FBC's supposed "Failure to account**  
31 **for the exchange rate from US dollars to Canadian dollars." (FBC Exhibit C8-**  
32 **9, page 60, line 12)**

33 **What is FortisBC's response?**

1 A3: This statement is incorrect and deliberately misleading

2 As described in its IR responses, FBC directed Midgard to use the exchange rate  
3 assumptions in the January 2013 GLJ Product Price and Market Forecast for the  
4 Canadian Oil and Gas Industry. In his testimony, Mr. Plunkett acknowledges this, and  
5 tries to summarize FBC's rationale for using the GLJ exchange rate assumptions.<sup>1</sup>  
6 However he omits to include a key factor which was explained in FBC's response to  
7 BCSEA IR 2.49.5 (Exhibit B-21, page 28), which states:

8 *"...since the avoided cost of market purchases is being determined*  
9 *based on GLJ's natural gas commodity price forecast, it believes*  
10 *that it is appropriate to use the same exchange rate assumptions*  
11 *that are embedded in that forecast."*

12 The GLJ forecast, including the exchange rate assumptions, is updated quarterly, and in  
13 BCSEA IR 2.48.1 (Exhibit B-21, page 24), FBC was able to demonstrate that a  
14 subsequent updated GLJ exchange rate forecast was consistent with a compilation of  
15 forecasts done by industry experts forecasts of the same vintage used by the BC  
16 Government in its Budget Update, and a forecast used by BC Hydro in its 2013 IRP. Mr.  
17 Plunkett appears to be confused why FBC would want to demonstrate that an updated,  
18 and admittedly slightly lower forecast, was valid.<sup>2</sup> The point was to demonstrate that  
19 GLJ exchange rate forecast was not static but adapted to changes in expectations, and  
20 to demonstrate that in general, it compared favorably forecasts of the same vintage.

21 Mr. Plunkett also suggests a better forecast would be to use the exchange rate futures,<sup>3</sup>  
22 and then tries to make some predictions of impact based on the extrapolation of slope of  
23 the futures curve.<sup>4</sup> Although the use of futures may better support the case Mr. Plunkett  
24 is trying to develop, it is a fundamentally flawed approach, as illustrated by an apt  
25 disclaimer on the University of British Columbia Sauder School of Business Pacific  
26 Exchange Rate Service webpage:

27 ***"Is the forward rate a good predictor of the future spot rate?"***

28 *No. For example, the relationship between today's 90-day forward*  
29 *rate and the spot rate three months from now is very weak. It is not*  
30 *even a good predictor of the direction, if not the magnitude, of the*  
31 *expected change. Thus a forward rate cannot be used to predict*  
32 *future exchange rates."*<sup>5</sup>

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<sup>1</sup> Direct Testimony of John Plunkett and Paul Chernick, Exhibit C8-9, Page 61, lines 8-15.

<sup>2</sup> Direct Testimony of John Plunkett and Paul Chernick, Exhibit C8-9, Page 62, lines 8-10.

<sup>3</sup> Direct Testimony of John Plunkett and Paul Chernick, Exhibit C8-9, Page 62, lines 15-21; Page 63, lines 4-9; Page 64, lines 11-14.

<sup>4</sup> Direct Testimony of John Plunkett and Paul Chernick, Exhibit C8-9, Page 64, lines 4-14.

<sup>5</sup> <http://fx.sauder.ubc.ca/forward.html>

1 FBC acknowledges that both exchange rates and exchange rate forecasts are volatile  
2 and change with time. Some time has passed since the January 2013 GLJ Product  
3 Price and Market Forecast used in the application. Exchange rates expectations have  
4 changed, as evidenced by the January 2014 GLJ Product Price and Market Forecast  
5 exchange rate assumption of \$0.95 dollars Canadian per US dollar.

6 The sensitivity of the exchange rate forecast on the FBC LRMC of market purchases is  
7 demonstrated in the following table:

30 Year Exchange Rate: \$Cdn/\$US	1.10	1.05	1.00	0.95	0.90
LRMC (\$/MWh)	\$51.46	\$53.91	\$56.61	\$59.59	\$62.90

8  
9 These sensitivities are indicative, and the LRMC impacts would obviously would be  
10 different if the exchange rate varied with time. However these impacts would also have  
11 to take into account market shifts in commodity prices during the same period. For  
12 example, the same January 2014 GLJ Forecast also shows a decrease in natural gas  
13 commodity prices of US\$0.25 to US\$0.50 per MMBtu over the forecast period compared  
14 to the January 2013 forecast which more than offsets the change in the exchange rate  
15 assumption and on a combined basis would have the effect of pushing FortisBC's  
16 estimate of its avoided cost down.

17 **Q4: Messrs Plunkett and Chernick challenge FBC's treatment of Mid-C spot**  
18 **supply in its LRMC estimate. (FBC Exhibit C8-9, page 65, lines 3-6)**

19 **What is FortisBC's response to this suggestion?**

20 A4: To suggest that FBC's treatment of Mid-C spot supply in its LRMC estimate is  
21 inappropriate, Mr. Plunkett says: "The Mid-C spot supply used in Midgard's estimate is  
22 generally non-firm until the day before delivery, when the price is fixed. In addition, the  
23 transmission cost that FBC adds to the Mid-C price is non-firm.

24 However, this statement ignores the fact that Mid-C spot prices are an appropriate proxy  
25 for market purchase costs. Market purchases may be short term, or they can be locked  
26 in for a longer term. Typically, market purchases are firm when they are contracted.  
27 When spot market purchases are made, they can be shaped to FBC's needs, reducing  
28 waste. The flexibility of the BC Hydro PPA and WAX capacity allows FBC to consider  
29 this.

30 For longer-term firm purchases, in addition to offering fixed prices, power marketers are  
31 willing to offer an option of having longer term market purchases indexed to prices at the  
32 Mid-C hub. By doing this, they can reduce their risk, and do not have to add a risk  
33 premium as they do when they offer a firm price.

1 With regard to transmission, in the Pacific North West, there is very limited firm  
2 transmission available as current transmission lines are fully subscribed by firm  
3 transmission right holders. The majority of available transmission is non-firm. However,  
4 with respect to transmission costs, firm power may be delivered by way of non-firm  
5 transmission. The costs associated with this are firm, and are subject to the appropriate  
6 regulatory process in the jurisdiction of the transmission provider. Further, FortisBC  
7 typically has flexibility around the timing of these market purchases due to its ability to  
8 use its CPA storage account to work around transmission constraints. It is only in  
9 instances where FBC is buying for capacity to meet peak demands that the timing of the  
10 purchase is very important to avoid transmission issues

11 **Q5: Messrs. Plunkett and Chernick claim that transmission congestion costs should**  
12 **be included in FBC's LRMC. (FBC Exhibit C8-9, page 72, lines 18-26)**

13 **What is FortisBC's response?**

14 A5: Mr. Plunkett says that FBC "acknowledges that the BPA system is congested at some  
15 times, leading to higher prices for delivery to Teck Metals" and that these costs are not  
16 included in its LRMC.

17 While FortisBC has previously acknowledged that congestion can lead to paying higher  
18 prices to meet peak loads, the primary risk of congestion on the transmission system is  
19 that power will not flow and it is therefore a reliability risk. There is no congestion charge  
20 in the Pacific NorthWest except as congestion drives the market price. With WAX,  
21 FortisBC's peak loads are not at risk at this time or in the near future, and any potential  
22 requirements will be examined in the 2016 Resource Plan.

23 With respect to FortisBC purchasing costs for energy due to congestion of the  
24 transmission system, Mr. Plunkett's concern is irrelevant, as FBC simply defers its  
25 purchases until another hour.

26 **Q6: Messrs. Plunkett and Chernick estimate FBC's of marginal costs for transmission**  
27 **and distribution to be \$233/kW-year. (FBC Exhibit C8-9, page 74, lines 11-12)**

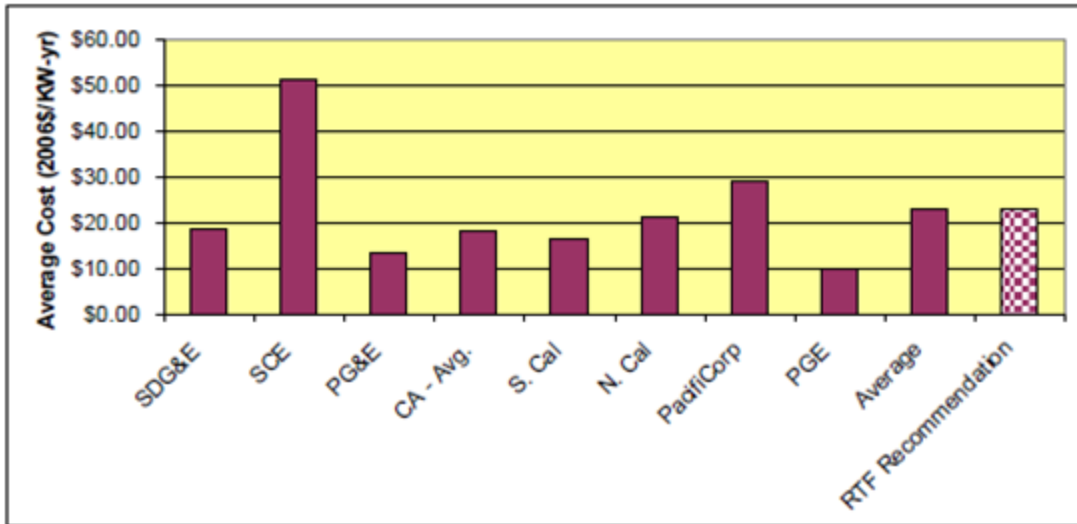
28 **What is FortisBC's response to this estimate?**

29 A6: The \$233/kW-year figure advanced by Mr. Plunkett is not adequately supported and is  
30 clearly an outlier when it is compared with the load-growth incremental costs of other  
31 utilities. Below are tables obtained from the Northwest Power and Planning Council,  
32 Appendix E of the Sixth Northwest Conservation and Electric Power Plan<sup>6</sup>, showing a  
33 range of avoided Transmission and Distribution cost:

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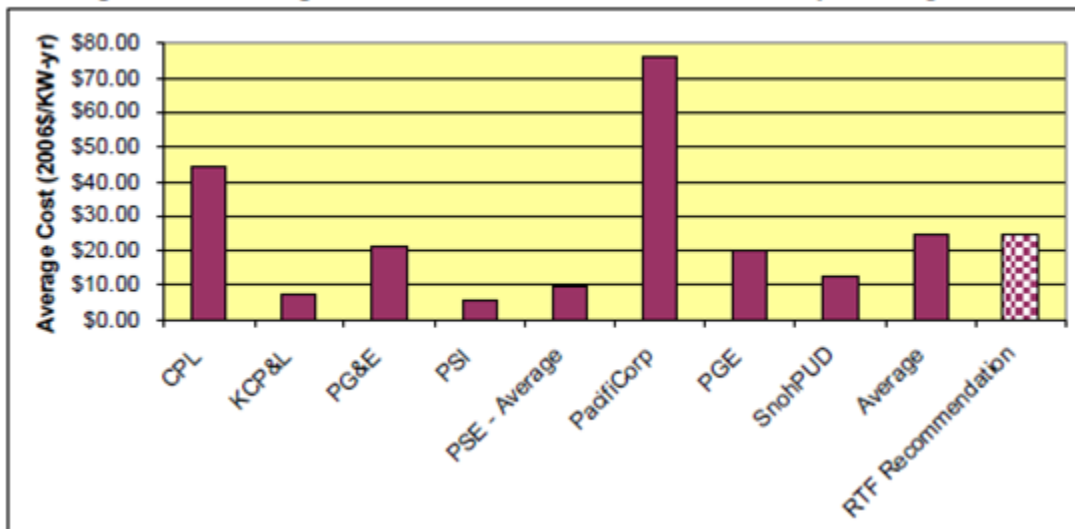
<sup>6</sup> [http://www.nwcouncil.org/media/6305/SixthPowerPlan\\_Appendix\\_E.pdf](http://www.nwcouncil.org/media/6305/SixthPowerPlan_Appendix_E.pdf)

Figure E-5: Average Avoided Cost of Deferred Transmission System Expansion



1

Figure E-6: Average Avoided Cost of Deferred Distribution System Expansion



2

3 The Northwest Power and Planning Council states that “After reviewing this data the  
4 RTF [Regional Technical Forum) recommended a value of \$23/kW-yr for  
5 “representative” of avoided transmission system expansion cost and \$25/kW-yr as  
6 “representative” of avoided cost of distribution system expansion.”

7 This recommended value much more closely accords with FBC’s estimate of \$35/kW-yr,  
8 rather than Mr. Plunkett’s estimate of \$233/kW-year.

9 **Q7: Does this conclude your Rebuttal Evidence?**

10 A7: Yes.

11