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March 25, 2015

<u>Via Email</u> Original via Mail

British Columbia Utilities Commission Sixth Floor 900 Howe Street Vancouver, B.C. V6Z 2N3

Attention: Ms. Erica M. Hamilton, Commission Secretary

Dear Ms. Hamilton:

#### Re: FortisBC Inc. (FBC)

Multi-Year Performance Based Ratemaking Plan for 2014 through 2019 approved by British Columbia Utilities Commission Order G-139-14 - Annual Review for 2015 Rates (the Application)

Response to the British Columbia Utilities Commission (BCUC or the Commission) Information Request (IR) No. 1

On February 6, 2015, FBC filed the Application referenced above. In accordance with Commission Order G-21-15 setting out the Regulatory Timetable for the review of the Application, FBC respectfully submits the attached response to BCUC IR No. 1.

If further information is required, please contact the undersigned.

Sincerely,

FORTISBC INC.

Original signed:

Diane Roy

Attachments

cc (email only): Registered Parties



RTIS BC"		FortisBC Inc. (FBC or the Company) Application for Approval of 2015 Delivery Rates pursuant to the Mulit-Year Performance Based Ratemaking Plan (the PBR Plan) approved for 2014 through 2019 by Order G-139-14 (the Application)	Submission Date: March 25, 2015		
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B.	LOAD F	FORECAST	4		
C.	POWER PURCHASE EXPENSE2				
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E.	RATE BASE				
F.	FINANCING AND TAXES				
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H.	SERVIO	77			



#### 1 A. FORMULA DRIVERS

2	1.0 R	eference:	INFLATION FACTOR		
3			Exhibit B-1, Section 2.1, pp. 9–10		
4			Calculation of Inflation Factor		
5	Fo	ortisBC Inc. (	(FBC) states on pages 9 10 of the Application:		
6 7 8 9 10		To cor PST [F factor CPI [C 0.530 p	rect for the impact of the transition from HST [Harmonized Sales Tax] to Provincial Sales Tax] in the calculation, 9/12ths of the annual adjustment must be considered. Since the annual impact of the transition to PST on onsumer Price Index] is estimated to be 0.700 percent, the 2015 impact is percent (0.700% X 9/12 = 0.530%).		
11 12 13 14 15	1. <u>Respons</u>	1 To be confirm percen	consistent with the balance of the data presented in Table2-1, please a that when rounded to three decimal places, the 2015 impact is 0.525 t, not 0.530 percent.		
16	Confirme	d.			
17 18					
19 20 21 22 23	1. <u>Respons</u>	2 Using Operat	the inflation impact of 0.525 percent, please calculate the impact to the ions and Maintenance (O&M) and capital formulae as a result.		
24 25 26 27	Revising the 2015 inflation impact to 0.525 percent results in a reduction of approximately \$1 thousand to each of formula O&M and formula capital expenditures, and does not affect the rate change in 2015. FBC will update its calculated I-Factor to reflect a 0.525 percent adjustment to CPI for the PST impact when it submits its compliance filing for final 2015 rates.				
28 29					



1	2.0 I	Reference:	GROWTH FACTOR
2			Exhibit B-1, Section 2.1, pp. 9 and 10
3			Calculation of Growth Factor
4	F	FBC provides	the growth factor calculation as: [1 = ((ACt-1/ACt-2)/ ACt-2) x 50%)].
5 6 7	2	2.1 Please a <i>plus</i>	e confirm that the <i>equal</i> sign in the above formula should be corrected to be sign.
8	Respon	ise:	
9	Confirm	ed. The corre	ect expression of the formula is as follows:
10	[1 + ((A	C <sub>t-1</sub> – AC <sub>t-2</sub> ) /	AC <sub>t-2</sub> ) x 50%)]



#### 1 B. LOAD FORECAST

2	3.0 Re	eference:	LOAD FORECAST
3			Exhibit B-1, Appendix A4, Tables 2.1, 2.2, 3, 4.1
4			Historical Accuracy
5 6 7	3.1	I Please spread 2015 f	e use the template below to produce tables in a functional excel sheet for each customer class and FBC total for each year from 2009 to or:
8		i. Ye	ar-End Customer Account Totals;
9		ii. An	nual Customer Additions;
10		iii. Av	erage Normalized Use Per Customer (UPC); and
11		iv. To	tal Normalized Energy Demand (GWh).
12 13	<u>Response</u>	<u>e:</u>	

14 Please refer to Attachment 3.1 for the Excel tables with customer counts and energy demand 15 from 2009 to 2015. In these tables, the 2009, 2010, and 2011 forecast values are from the approved annual revenue requirement applications (RRAs), the 2012 and 2013 values are from 16 17 the 2012-2013 RRA, the 2014 values are from the 2014-2018 PBR Application, and the 2015 18 values are from the current Application. For 2009 and 2010, the lighting and irrigation customer 19 count forecasts were combined in the original applications. Since the 2012-2013 RRA did not 20 forecast the City of Kelowna (CoK) integration (in Q2 2013), to properly validate this forecast, 21 the actual customer counts and load data were adjusted as if CoK were still a wholesale 22 customer to the end of 2013. For 2014, the actual loads will not be available until April 30, 2015.

In the variance tables, positive values are due to underforecasts (the forecasts are lower than
 actual data) while negative values are due to overforecasts (the forecasts are higher than actual
 data).

In general, the gross forecasting accuracy for the past three years has been in the range of 1
percent to 3 percent. This is on par with the current industry benchmark of 1.5 percent on
average. In addition, there is no evidence of systematic bias in FBC's load forecast.

The Company forecasts customer counts directly, and does not develop a forecast of customer additions in order to forecast customer counts. Additionally, FBC only forecasts before-savings residential UPC, not after-savings UPC. FBC also does not directly forecast before or aftersavings UPCs for any other load classes. Therefore, the tables for customer additions and UPCs in Attachment 3.1 were derived from the tables for customer counts and energy, and are



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supplied as required only to fulfill the request. The corresponding tables should not be used for the purpose of validating the load forecast.

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Customer Class		2009	2010	 2015
	Actual			
	Forecast			
	Variance (units)			
	Variance (%)			

- 3.1.1 Please produce the same table to compare actual vs. forecast results for FBC winter system peak and FBC summer system peak.

#### **Response:**

The table requested is provided below. 

Winter Peak (MW)	2009	2010	2011	2012	2013	2014	2015
Actual	704	707	737	639	699	671	
Forecast	697	698	723	721	731	750	749
Variance (MW)	7	9	14	(82)	(32)	(79)	
Variance (%)	1.0%	1.3%	1.9%	-12.8%	-4.6%	-11.8%	
Summer Peak (MW)	2009	2010	2011	2012	2013	2014	2015
Actual	561	554	519	551	581	601	
Forecast	557	560	578	567	575	582	582
Variance (MW)	4	(6)	(59)	(16)	6	19	
Variance (%)	0.7%	-1.1%	-11.4%	-2.9%	1.0%	3.2%	



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3.2 Please discuss the impact, if any, of further improvements in the accuracy of
FBC's 2015 weather normalized load forecast on: FBC's power purchase cost
(including those relating to nominations under the new Rate Schedule [RS] 3808
and Waneta Expansion Capacity Purchase Agreement [WAX CAPA]), capital
planning, reliability risk, and shareholder earnings.

#### 8 Response:

9 FBC notes that due to the nature of forecasting, there will always be some variance between10 actual and forecast load.

11 The response to BCUC IR 1.3.1 indicates that, overall, the Company's forecasting error ranges 12 from 1 percent to 3 percent. This is on par with the current industry benchmark of 1.5 percent on 13 average. In addition, there is no evidence of systematic bias in FBC's load forecast. Therefore,

14 FBC concludes that its current forecast methodology is sound.

FBC estimates that a 1 percent increase to the load forecast would result in an increase in power purchase expense of approximately \$1.6 million. However, since all power purchase expense and revenue variances are captured in the Flow-through deferral account and amortized into future revenue requirements, any change in the load forecast or power purchase expense would not have an impact on shareholder earnings. There is also no impact on shareholder earnings by way of the earnings sharing mechanism because the PBR formula is based on prior actual, not forecast, customer count.

22 FBC's capital planning and reliability risk would not be affected by increased accuracy of the 23 load forecast used for revenue requirement purposes. The load forecast used for revenue 24 requirements purposes provides an expected load based on normal weather conditions and is 25 used primarily for determining power purchases. Capital planning and system reliability relies on 26 recent historical peak loads and incorporates the expectation of weather variation; this is 27 necessary to ensure that sufficient system infrastructure is available to meet peak loads during 28 weather extremes. Further, capital planning is based on a long-term forecast to ensure sufficient 29 construction lead time once a growth-related project is identified.

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- 333.3In table form, please compare the 2014 and 2015 load forecast provided in the34Application to the load forecast provided for those periods in the original35performance based rate (PBR) application, and explain any differences. Please36include the following categories: FBC normalized and forecast gross load energy



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consumption (FBC total, and for each customer class), UPC and customer
 additions (for residential, commercial and industrial customers), summer peak
 and winter peak.

4

#### 5 **Response:**

6 The requested information is provided in the table below; however, the UPCs for commercial 7 and industrial classes are not available as the Company did not develop a commercial or

8 industrial UPC since they are not inputs to the load forecast. The 2014 numbers in the Annual

9 Review for 2015 Rates column in the table below are a forecast, except the customer counts

10 which are actual.



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		Annual Review		
Year	2014-2018 PBR	for 2015 Rates	Difference	Explanation
1.Residential				
Residential C	ount			
2014	113,229	113,431	202	-2013 and 2014 data points included
				-CoK included in the regression
2015	114,100	114,855	754	-FBC population by BC Stats updated
Before-savin	gs Residential UI	PC (MWh)		
				-Base year changed from 2013 to 2014 with 2013 data
2014	12.75	12.44	-0.31	point included in the average.
2015	12.75	12.44	-0.31	-CoK data integrated
After-savings	Energy (MWh)			
2014	1,395,096	1,389,246	-5,850	-UPC and customer count changed
2015	1,396,883	1,397,241	358	-DSM, RCR, CIP, rate-driven savings changed
2. Commercia	al			
Commercial (	Count			
2014	13,739	14,363	624	-2013 and 2014 data points included
2015	14,046	14,531	485	-CoK included in the regression
After-saving	Energy (MWh)			
				-CBOC's provincial GDP changed
2014	803,477	797,822	-5,655	-CoK data integrated
2015	818,291	808,279	-10,012	-DSM, rate-driven savings changed
3. Wholesale	· · · ·	· · · ·	,	
After-saving	s Energy (MWh)			
2014	581.255	586.661	5,406	-Load surveys updated
2015	584,208	593,384	9,176	-DSM, rate-driven savings changed
4. Industrial			,	
After-saving	Energy (MWh)			
	37( 7			-Load surveys updated
2014	388,400	369,029	-19,371	-CBOC's GDP growth per industrial sector updated
2015	392,258	370,926	-21,333	-DSM, rate-driven savings changed
5. Irrigation			,	
After-saving	Energy (MWh)			
2014	40,687	40,798	111	-2013 data included in the average formula
2015	40,505	40,442	-63	-DSM, rate-driven savings changed
6. Lighting	-			
After-savina	s Enerav (MWh)			
2014	12.648	13.876	1.228	-2013 data included in the regression
2015	12,648	13,379	731	-DSM, rate-driven savings changed
6. Gross	,			
After-savina	s Enerav (MWh)			
2014	3.498.308	3.472.716	-25.593	-Reasons stated above
2015	3.521.725	3.498.745	-22,980	
7. Winter pe	ak	-,, -	,	
After-savina	s Peak (MW)			
, ij ter sarnige				-Energy growth rate changed
2014	750	744	-6	-2013 data included
2015	756	749	-7	-DSM changed
8. Summer n	eak	. 15	,	
After-saving	S Peak (MW)			
				-Energy growth rate changed
2014	5,82	579	-3	-2013 data included
2015	587	5,5	-5	-DSM changed



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#### 1 4.0 Reference: LOAD FORECAST

Exhibit B-1, Section 3.3, pp. 15–19; Appendix A4, pp. 4–6;

FBC 2015/2016 DSM Decision G-186-14, pp. 14, 28

#### Energy Load Forecast by Customer Class

- 4.1 Please compare this methodology to the approach used for the Multi-Year Performance Based Ratemaking Plan for 2014 through 2018 Application (2014-2018 PBR Application) and explain any differences.
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#### 9 **Response:**

10 This Application used the same methodologies as were used in the 2014-2018 PBR Application 11 except for some adjustments to fully address CoK integration. In the 2014-2018 PBR 12 Application, due to the unavailability of historical CoK load data and uncertainty of obtaining 13 such data, CoK was first forecast separately and then its load class components were added to 14 the corresponding FBC rate classes. In this Application, with the confirmed unavailability of 15 further CoK historical load data and the addition of recent data points from 2013 and 2014, 16 adjustments were made to fully address CoK as an integrated part of the FBC system. In 17 particular, the existing regression methods for residential and commercial customer counts now 18 used the whole system data including CoK. To forecast the residential before-savings UPC, 19 historical UPCs were adjusted to include CoK. Finally, the commercial load methodology 20 integrates the step change in the historical load due to the CoK integration through the use of a 21 dummy variable. 22

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- 24
- 4.2 Please provide calculations, with explanations, showing how the 2015 UPC and customer addition forecast was developed for residential and commercial customer classes. Include an explanation on how historical data was incorporated into the development of the forecasts and factors that were considered.
- 30
- 31 Response:
- 32 **Residential**

The residential before savings load forecast is the product of the UPC and the average customer count.

The 2015 forecast UPC is the average of the three years from 2011 to 2013. 2014 is excluded as the UPC information for 2014 was unavailable at the time of the forecast.



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Year		Normalized UPC
	2011	12.55
	2012	12.28
	2013	12.48
Avg		12.44

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3 The residential customer count is forecast through a regression model with the population data

4 that is specific to FBC's service area. This population data (historical as well as forecast) is 5 provided from BC STATS as a customized report.

6 The model to calculate the expected residential customer count is

#### 7 Residential count<sub>t</sub> = $b_0 + b_1^*FBC$ Service Area Population<sub>t</sub>

where coefficients b<sub>0</sub> and b<sub>1</sub> are obtained from an OLS regression analysis on the 2007 to 2014 8

data. The results for 2015 are as follows: 9

Number of Data Points	8	p-value
Intercept b <sub>0</sub>	-4,199	0.70
Population b <sub>1</sub>	0.47	< 0.01
Adjusted R-sq	0.94	
F statistic		< 0.01

10

11 The forecast residential customer count for 2015 is calculated as follows:

Year-End	RES
2014	113,431
2015	114,855
2015 Avg	114,143

12

13 Therefore, the 2015 before savings residential load forecast is calculated as 12.44\*114,143=

14 1,419,491 MWh.

- 15 The 2015 after savings residential load forecast is the before savings residential load forecast
- net of all the savings applicable to the residential rate class as follows: 16



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2015 Residential Load	MWh	Calculation
Before Savings	1,419,491	
AMI	10,231	Recovered Sales
ĊIP	(2,129)	0.15%*1,419,491
RIB	(19,329)	1.36%*1,419,491
Price Elasticity	(1,845)	0.13%*1,419,491
DSM savings	(9,177)	2015 DSM Plan
After Savings	1,397,241	

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#### 2 Commercial

3 The Company does not use the commercial UPC to forecast the commercial load. Instead, the

4 commercial load is forecast as a whole and as a result, the commercial UPC is calculated as the

5 forecast commercial load divided by the forecast customer count.

- 6 The model to calculate the expected commercial customer count is
- 7 Commercial count<sub>t</sub> =  $b_0 + b_1^*$  Provincial GDP<sub>t</sub>

8 where coefficients  $b_0$  and  $b_1$  are obtained from an OLS regression analysis on the 2007 to 2014

9 data. The results for 2015 are as follows:

Number of Data Points	8	p-value
Intercept b <sub>0</sub>	-1,210	0.58
GDP b <sub>1</sub>	0.091	< 0.01
Adjusted R-sq	0.87	
F statistic		< 0.01

10

- 11 Using these results and the forecast 2015 GDP by the CBOC, the year-end 2015 commercial
- 12 customer count is forecast at 14,531 and therefore the 2015 average count is 14,447.

Year-end	СОМ
2014	14,363
2015	14,531
2015 Avg	14,447

13

14 The regression model to forecast the expected before savings Commercial load is provided 15 below:

16 Before-saving Load<sub>t</sub> =  $b_0 + b_1^*GDP_t + b_2^*Princeton Event_t + b_3^*Kelowna Event_t$ 

17 Where:



- Princeton Event, is a binary variable for the Princeton Light and Power Company (PLP)
   integration event in 2007
- Kelowna Event, is a binary variable for the City of Kelowna (CoK) integration event in
   2013
- Coefficients b<sub>0</sub>, b<sub>1</sub>, b<sub>2</sub> and b<sub>3</sub> are obtained from an OLS regression analysis on the 2001
   to 2013 data
- 7 The results for 2015 are as follows:

Number of Data Points		
	13	p-value
Intercept b <sub>0</sub>	91,179	0.36
GDP b <sub>1</sub>	3.42	< 0.01
Princeton Event b <sub>2</sub>	47,186	0.02
Kelowna Event b <sub>3</sub>	87,267	< 0.01
Adjusted R-sq	0.96	
F statistic		< 0.01

9 Following the above methodology, the before savings commercial load for 2015 is forecast to be

10 818,089 MWh. This value divided by the average customer count of 14,447 produces the

11 before savings commercial UPC value of 56.63 MWh.

12 The net after-savings load forecast for 2015 is then obtained by subtracting DSM and rate-13 driven savings from the before-savings forecast above.

2015	Energy (MWh)	Comment
Before-saving Commercial Load	818,089	
DSM	- 8,746	
Savings due to Price Elasticity	- 1,064	= -0.13%*818,089
After-saving Commercial Load	808,279	

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15 Based on the after savings commercial load above, the after savings commercial UPC can be

16 calculated as the after savings load of 808,279 divided by the average customer count of 14,44717 which equals 55.95 MWh.

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3

4.2.1 Please explain why residential and commercial UPC shows a declining trend.

#### 4 <u>Response:</u>

5 In the Normalized UPC and After Savings Forecast table in Appendix A4, p. 5, the values before 6 2013 exclude CoK while the values from 2013 onward include CoK. CoK is considered to be 7 more metropolitan than the rest of the FBC service area, with a higher share of apartments and 8 other multiple-family dwellings which typically have smaller square footage, are equipped with 9 more energy efficient appliances, and in general have lower annual energy consumption.<sup>1</sup> CoK 10 also has more access to gas as an alternative energy source than certain parts of the FBC 11 service area. All of these factors could be expected to have some impact in lowering the overall 12 UPC.

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- 4.2.1.1 Is FBC planning to make supplemental Demand-Side Management (DSM) expenditure requests to the British Columbia Utilities Commission (Commission) in 2015 to expand DSM programs so that they support BC's fuel switching objective as encouraged by the Commission on page 14 of the 2015/2016 FBC DSM Decision? If yes, please explain how this could affect the UPC estimate. If no, please explain why not.
- 24

## 25 **Response:**

The Company is not planning a supplemental DSM expenditure request for Fuel Switching program at this time. Fuel switching measures are within the scope of the joint BC Conservation Potential Review (CPR) that is underway, and the Company will await the CPR report of the economic potential and cost-effectiveness test results, before deciding whether or not to proceed with such a program.

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<sup>&</sup>lt;sup>1</sup> 2010 FortisBC Conservation and Demand Potential Review.

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RTIS BC <sup>™</sup>	S BC"       FortisBC Inc. (FBC or the Company)         Application for Approval of 2015 Delivery Rates pursuant to the Mulit-Year Performance         Based Ratemaking Plan (the PBR Plan) approved for 2014 through 2019         by Order G-139-14 (the Application)			
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4.3	Please i FBC to f PBR Ap	dentify and explain any difference precast the 2015 Industrial custom lication.	es between the meth her load to that used f	odology used by or the 2014-2018
<u>Response:</u>				
The method load growth	ology rema using the (	ns the same, and is a combinatio BOC's GDP growth forecast of the	n of load survey, whe	ere available, and ific industries.
	4.3.1	Please explain why FBC's assum 2015 is a more likely outcome commercial customer accounts.	າption of no new indu ອ than, say, the ap	strial accounts in proach used for
Response:				
The addition reason a co to address a industrial cu mitigates the	n of an ind nsultation t any potenti istomer ad e uncertaint	istrial account has a significant in rpically takes place in advance to al capacity-related issue. The for litions once the plan to make the regarding forecasting a significant	npact on the overall attach these types o ecasting department le addition is certain nt addition of load.	load and for this f large customers is notified of any . This approach
Response:	4.3.2	Please explain the forecast increa	ase in industrial consu	Imption in 2015.
The slight in customers' forecasts. C industrial se	crease see forecasts Overall the ctors in the	n in 2015 is the result of custome vere not provided, the forecast ndustrial forecast is consistent wit FBC service area by the CBOC.	rs' forecasts of their u is based on indus h the moderate growt	isage, and where try-specific GDP th forecast for the



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4.3.2.1 Is FBC planning to request additional DSM funding for industrial customers in 2015 as encouraged by the Commission on page 28 of the 2015/2016 FBC DSM Decision? If yes, please explain how this could affect the 2015 industrial load forecast. If no, please explain why not.

#### 7 Response:

8 The Company is not planning a supplemental DSM expenditure request for Industrial customers 9 at this time. The current Industrial Efficiency program offering, in the approved 2015-16 DSM 10 Plan, is generic enough to accommodate a wide range of customer projects, and the spending 11 rules include the ability to shift up to 25 percent of sector budget (or more with Commission 12 approval), thus not limiting participation.

FBC is undertaking a number of activities, including hosting and facilitating an Industrial program design workshop on March 5<sup>th</sup>, to better understand its industrial customers' requirements including their investment criteria. In 2015 the Company will undertake further research into other program models and best practices. Additionally, the joint dual fuel BC-wide CPR now underway will review the economic potential of a wide range of industrial measures and programs.

19 The CPR results and other research activities will be incorporated into the long term DSM Plan 20 to be filed with the Company's LTERP in June 2016, and thus inform DSM expenditure filings 21 for 2017 and beyond.

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4.3.3 Please explain the survey methodology used to develop FBC's
wholesale customer load forecast, and provide the results of FBC's
survey of its wholesale customers measured in both participation rate
by customer count and by volume (GWh).

#### 30 **Response:**

There are a total of six wholesale customers. The wholesale load forecast is an aggregation of the data collected through a survey of these six customers. Given the small number of customers, emails are used to send out the initial survey and follow-ups are made when necessary on an individual customer basis to ensure timely participation as well as to clarify information, such as whether the data collected is already normalized, and to answer any questions a customer may have.



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1 The response rate is 100 percent of both customer count and volume.

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5	4.3.3.1	Has FBC consulted with its wholesale customers to determine
6		whether any other means exist to obtain a more rigorous and
7		comprehensive load forecast for this customer class? If so,
8		please report on the details of this consultation. If not, why
9		not?

#### 11 Response

12 FBC has not consulted wholesale customers specifically with regard to different methodologies.

As with industrial customers, each wholesale customer has the best knowledge about load growth in its service area. FBC believes the load survey method provides a reasonable shortterm forecast for the wholesale class. By using a survey, FBC is able to gather the results of the forecast prepared by each wholesaler in a format that is compatible with the FBC forecast model.

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- 4.4 Please explain why FBC has not reclassified the 2009-2012 City of Kelowna load
  into the residential, commercial, industrial categories. Please explain whether
  information was available to FBC in order to perform this reclassification.
- 24

#### 25 **Response:**

FBC has in fact reclassified 23 rate classes in the previous CoK billing system provided by Corix for the 2009-2012 period into its residential, commercial, and industrial load classes for forecasting the 2015 load. The reclassification helped the Company to approximate the CoK load mix (in percent) as stated on page 82 in the 2014-2018 PBR Application. However the graphs in section 3 are presented using the actual loads for all rate classes, before the CoK integration, which is consistent with reported load by class for all years.

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- 4.5 Please reproduce Tables 3-2 and 3-3 in FBC's Application including additional rows to show annual percent growth for: gross energy, winter peak, summer peak and total customer count.
- 3 4

#### 5 **Response:**

6 The requested tables follow.

Table 3-2							
Energy (GWh)	2009	2010	2011	2012	2013	2014	2015F
Residential	1,239	1,242	1,249	1,229	1,353	1,389	1,397
Commercial	675	660	657	681	788	798	808
Wholesale	908	895	910	899	675	587	593
Industrial	216	234	271	291	352	369	371
Lighting	13	14	13	13	13	14	13
Irrigation	49	40	40	38	40	41	40
Net	3,100	3,085	3,140	3,151	3,222	3,197	3,224
Losses	315	284	307	271	278	275	275
Gross	3,416	3,369	3,447	3,422	3,500	3,473	3,499
System Peak							
Winter Peak (MW)	704	726	702	723	698	743	749
Summer Peak (MW)	496	566	537	589	600	579	582

Growth Year over Year	2009	2010	2011	2012	2013	2014	2015F
Residential		0%	1%	-2%	10%	3%	1%
Commercial		-2%	0%	4%	16%	1%	1%
Wholesale		-1%	2%	-1%	-25%	-13%	1%
Industrial		8%	16%	7%	21%	5%	1%
Lighting		9%	-9%	2%	0%	3%	-4%
Irrigation		-18%	0%	-6%	4%	3%	-1%
Net		0%	2%	0%	2%	-1%	1%
Losses		-10%	8%	-12%	2%	-1%	0%
Gross		-1%	2%	-1%	2%	-1%	1%
System Peak							
Winter Peak (MW)		3%	-3%	3%	-3%	6%	1%
Summer Peak (MW)		14%	-5%	10%	2%	-4%	1%



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Table 3-3 Year-End Customer Count							
Customer Count	2009	2010	2011	2012	2013	2014	2015F
Residential	96,565	97,883	98,795	99,228	111,862	113,431	114,855
Commercial	11,308	11,419	11,525	11,811	13,662	14,363	14,531
Wholesale	7	7	7	7	6	6	6
Industrial	33	35	36	39	47	49	49
Lighting	1,874	1,830	1,803	1,739	1,644	1,620	1,620
Irrigation	1,066	1,075	1,092	1,091	1,097	1,103	1,103
Total Direct	110,853	112,249	113,258	113,915	128,318	130,572	132,164

Growth Year over Year	2009	2010	2011	2012	2013	2014	2015F
Residential		1%	1%	0%	13%	1%	1%
Commercial		1%	1%	2%	16%	5%	1%
Wholesale		0%	0%	0%	-14%	0%	0%
Industrial		6%	3%	8%	21%	4%	0%
Lighting		-2%	-1%	-4%	-5%	-1%	0%
Irrigation		1%	2%	0%	1%	1%	0%
Total Direct		1%	1%	1%	13%	2%	1%



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RTIS BC	Applicatio .∞ Ba	FortisBC Inc. (FBC or the Company) n for Approval of 2015 Delivery Rates pursuant to the Mulit-Year Performance sed Ratemaking Plan (the PBR Plan) approved for 2014 through 2019 by Order G-139-14 (the Application)	Submission Date: March 25, 2015
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5.0 Re	eference:	LOAD FORECAST	
		Exhibit B-1, Section 3.3, pp. 19–21, Appendix A4, Tab	ole 1.9
		Losses and Peak Demand	
5.1	1 Please FBC to PBR A	e identify and explain any differences between the meth o forecast system losses and peak demand to that used application.	odology used by in the 2014-2018
<u>Respons</u>	<u>e:</u>		
The meth	odology use	ed is consistent with the 2014-2018 PBR application.	
	5.1.1	Please explain how FBC currently tracks actual sys if/how this approach will change as a result of the in Advanced Metering Infrastructure (AMI). Specifically, (or plan to have) sufficient meters in place to acc system losses?	stem losses, and mplementation of does FBC have curately measure

17 18

#### 19 Response:

20 System losses are calculated as energy generated or purchased, less energy sales (if any) and 21 consumption. Energy generated, purchased, or sold is metered in real time. The resulting 22 gross load, less actual consumption, comprises system losses. Gross load recording is the 23 same in both the pre-AMI and AMI scenarios.

24 Pre-AMI, actual consumption is estimated by analyzing the bills provided by the Customer 25 Information Service system. Since meters are generally read on a monthly or bi-monthly cycle, 26 actual consumption at year end must be estimated (at December 31, some customers' 27 consumption for up to two months will not yet have been recorded).

28 Once more hourly consumption data is available from the AMI system, meter reads will be 29 available for all meters for any date, and the calculation of system losses will therefore be more 30 accurate. Nevertheless there remains a small proportion of load (less than 0.5 percent) that is 31 unmetered, such as street lighting, traffic lights and cable amplifiers, for which monthly 32 consumption is assumed and is not directly measured. To the extent that the assumed 33 consumption for these services differs from actual, the variances will be incorrectly reflected in 34 system losses under AMI.



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- 5.2 Please provide FBC's weather normalized system load factor (annual energy /peak hourly load x 8,760) for each year from 2009 to 2015. Please explain any changes in historical system load factors and explain whether the 2015 forecasts are consistent with the historical trend.
- 7 8

## 9 Response:

- 10 The system load factors are calculated with normalized annual gross energy and peak as
- 11 follows:

Year	Energy (MWh)	Peak (MW)	Load Factor
2009	3,415,766	707	0.55
2010	3,368,701	726	0.53
2011	3,447,280	722	0.55
2012	3,421,657	723	0.54
2013	3,499,779	720	0.56
2014	3,481,095	744	0.53
2015	3,498,745	749	0.53

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14 The system peaks have been consistently growing in line with the energy growth. There is not a

15 clear trend in the load factor and the forecast 2015 load factor is within a reasonable range 16 relative to the historical load factors.



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#### **Reference:** LOAD FORECAST 1 6.0

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#### Exhibit B-1, Section 3.3, p. 21; Appendix A4, Tables 2.1, 3, 4.3

#### **Demand-Side Management and Other Customer Savings**

6.1 Please provide a reconciliation of the 2015 residential and commercial load forecast from a starting point of 'forecast accounts x forecast UPC' (Tables 2.1 and 3 in Appendix A4 to the Application) to the results included in Table 3-2 of the Application.

#### 9 **Response:**

10 Please note that the Normalized After Savings UPC shown in Table 3 of Appendix A4 are 11 calculated as the net Normalized After Savings load in Table 3-2 divided by the average 12 customer count and not by the Year End customer count. The calculation for both the 2015 13 residential and commercial load forecast is provided below.

14 The average customer count in 2015 is shown in Column C, which is the average between

15 Column A and Column B. The average customer count multiplied by the UPC in Column D is

16 the After Savings load which is shown in Column E.

	А	В	C	D	E
Load Class	2014 YE Customer	2015 F Customer	Avg Customer for 2015	2015 UPC (MWh)	After Savings Load (GWh)
Residential	113,431	114,855	114,143	12.24	1,397
Commercial	14,363	14,531	14,447	55.95	808

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- 21 6.2 Please provide analysis showing how data in (i) Table 3-1 in the Application and (ii) Table 4.3 of Appendix A4 to the Application, is used in developing FBC's load 22 23 forecast in Table 3-2 in the Application.
- 24

#### 25 Response:

26 As stated in the Application, the load forecast methodology starts with the Before Savings Load

27 forecast. DSM savings as well as other savings such as Rate-driven due to price elasticity, CIP,

28 AMI and RCR savings are further deducted from the before savings load to derive the after 29 savings load forecast.

30 The summary below shows how the data in (i) Table 3-1 in the Application and (ii) Table 4.3 of

31 Appendix A4 to the Application, are used in developing FBC's load forecast for 2015.



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RTIS BC <sup>~</sup>	CTIS BC*       FortisBC Inc. (FBC or the Company)         Application for Approval of 2015 Delivery Rates pursuant to the Mulit-Year Performance         Based Ratemaking Plan (the PBR Plan) approved for 2014 through 2019         by Order G-139-14 (the Application)			Submission Date: March 25, 2015	
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		GWb	Source		
Δ		6	Appendix A4 Table 4.3		
R		(1)	Appendix A4, Table 4.3		
B		(1)	Appendix A4, Table 4.3		
	Ron Roto drivon	(ZT) (5)	Appendix A4, Table 4.3		
	Total Nen DSM Serving	(0)	Appendix A4, Table 4.3 $(D)$		
E	Total Non-DSW Saving	(Z1)	Sum (A) - (D)		
F		(28)			
G	I otal Savings	(49)			
н	Before Savings Gross	3,548	Appendix A4, Table 1.1		
I	After Savings Gross	3,499	Appendix A4, Table 1.1 and Tab	le 3-2	
Response: There is no different form Schedule fili	Application to Expenditure So substantive difference be nat. The 2015 DSM Plan S ng, as shown in Table 4-1	DSM save chedule ar tween the Savings fo 1, p.9 of th	vings forecast in FBC's 2015 nd explain any differences. two forecasts; they are simp recast in the FBC 2015-2016 I nat filing, are <i>annual</i> energy s	Accepted DSM by presented in a DSM Expenditure avings targets by	
sector, that are transformed into a cumulative <i>time-series</i> by rate class in the Forecast 2015 DSM Savings (Table 3-1).					
Please refer a result of th savings.	to the response to BCSEA e way the plan savings are	A IR 1.1.1 t e attribute	for a description of the differen d, disaggregated, and present	ces that occur as ed in the forecast	
6.3	Please describe the me for each line item in T changes in methodology	thodology Fable 4.3	used by FBC to forecast 201 of Appendix A4 to the Appl used for the FBC 2014-2018	5 energy savings lication, and any PBR Application.	

Response:

The methodology to forecast 2015 energy savings for each of the line items remains unchanged 

from the FBC 2014-2018 PBR Application and is provided below.



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Savings	Methodology
RCR	The RCR savings are given as a percentage of the before-saving load. The RCR savings were assumed to increase steadily from 2012 to 2017, eventually reaching 1.9% of residential consumption in 2017. For 2015, it is estimated to be 1.36% of the before savings load. The assumption of 1.9% was included as part of the Residential Inclining Block application.
CIP	The CIP savings are given as a percentage of the before-saving load. The CIP savings were derived from the BC Hydro estimate in their Smart Metering & Infrastructure Business Case, filed in the AMI proceeding.
AMI	The AMI recovered sales for 2015 are those used in the AMI CPCN proceeding.
Rate-driven due to price Elasticity	Price elasticity savings are given as a percentage of the before-saving load. The current price elasticity estimate of -0.05 is consistent with BC Hydro's estimate of price elasticity. Based on the assessment of similarities between the two utilities, FBC believes that the BC Hydro estimate provides a good proxy for the price elasticity-driven savings for FBC. This price elasticity, when coupled with a rough estimate of a real rate increase of 2.6%, produces a saving of around 0.13% of the load.
	6.3.1 Please provide analysis showing how the results of each line item in Table 4.3 are incorporated into the FBC's load forecast in Table 3-2 of the Application.
<u>Response:</u>	
Table 3-2 con deducted from as well as the savings from derive the aft refer to the re- items in Table	ntains the after savings gross energy which is the energy after all the savings are in the before savings energy. These savings include AMI, CIP, RCR, Rate Driven the DSM savings. Table 4.3 lists all of the non-DSM related savings. The total Table 4.3 plus the DSM savings are deducted from the before savings energy to there savings energy forecast which is shown in Table 3-2 of the Application. Please esponse to BCUC IR 1.6.2 which shows the adjustments to the load forecast for the e 4.3 of Appendix A4.
6.4	Please provide supporting documentation to justify the estimate of a 21 GWh reduction in energy demand in 2015 from the Residential Conservation Rate.



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#### 1 Response:

- 2 The RCR saving of 19.3 GWh (21 GWh with losses) in 2015 is the product of the estimated
- 3 RCR saving rate of 1.36 percent and the forecast before-savings residential load of 1,419.5
- 4 GWh. The RCR saving rate is based on the target of 1.9 percent as specified in the 2011
- 5 Residential Inclining Block Rate Application<sup>2</sup> and an assumption that this target will be gradually
- 6 reached over five years starting from 2012, or by 2017. The percentages for 2015, 2016 and
- 7 2017 respectively are 1.36 percent, 1.74 percent, and 1.90 percent.

<sup>&</sup>lt;sup>2</sup> 2011 Residential Inclining Block Rate Application, p. 22, Table 7-2, Option 8.



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#### 1 C. POWER PURCHASE EXPENSE

#### 2 7.0 Reference: POWER PURCHASE EXPENSE

#### Exhibit B-1, Section 4.6, Table 4-3, Section 12.4, p. 87

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#### Brilliant/BC Hydro Power Purchase Agreement (PPA)

7.1 Please provide analysis and show the calculations to support the Brilliant 2015 forecast expense. Demonstrate that the 2015 cost estimate is in accordance with prior Commission approval of this energy contract.

#### 9 **Response:**

The 2015 cost estimate is in accordance with prior Commission approval of the Brilliant Power Purchase Agreement (BPPA). The forecast Brilliant expense consists of base energy costs (which include the initial return on capital charge, sustaining capital charges, annual O&M charges, and any true-ups from prior year forecasts), upgrade energy costs, and tailrace capacity charges. Each of these costs is described below.

- 15 1. The forecast cost of the BPPA Base Energy is calculated in accordance with the terms set out in the BPPA dated April 4, 1996 as approved by Commission Order E-7-96. The 16 17 Base Energy rate takes into account several elements such as the original plant return 18 on capital charge related to the initial acquisition costs of the plant by Brilliant, sustaining 19 capital charges related to the return on capital of annual routine capital work, and annual 20 O&M charges for the Brilliant plant which consist of items such as water fees, property 21 taxes and insurance which are charged to and paid by FBC throughout the year. The 22 rate for 2015 is based on an estimate of these totals which is provided by the Brilliant 23 Power Corp. Additionally, since the rate is initially based on an estimate each year, a 24 true up between the estimated cost and the actual cost to FBC is done annually in May 25 of the following year. Any difference between the estimate and actual costs is added to 26 or subtracted from the estimated cost in a future year. As a result, the 2015 base energy 27 costs also include a true-up of the contract costs from 2013, which results in a reduction 28 of 2015 base energy costs by \$1.267 million.
- The forecast cost of the BPPA Upgrade Energy is calculated based on the return on capital of periodic plant capital upgrade work that is in accordance with the terms set out in the BPPA dated April 4, 1996 as approved by Commission Order E-7-96 and the Brilliant Power Purchase Agreement Second Amendment dated March 30, 2000 as approved by Commission Letter L-57-00.
- The forecast cost of the BPPA Tailrace Capacity is calculated in accordance with the
   June 7, 2001 Letter Agreement on Tailrace Improvements as accepted by Commission
   Order E-17-01. The capacity entitlement is fixed, while the rate is subject to an annual
   escalation factor linked to the original plant return on capital charge.



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- 2 The following table shows the calculations of the forecast Brilliant expense in 2015. The rates
- 3 are the costs divided by the energy.

BPPA 2015 Costs	
Original Plant Capital Charge (\$ millions)	\$16.788
Sustaining Capital Charge (\$ millions)	\$7.389
O&M Charge (\$ millions)	\$12.044
Previous Years True up (\$ millions)	(\$1.267)
[A] Total Cost for BPPA Base Energy (\$ millions)	\$34.954
Base Energy (GWh)	859.38
Base Rate (\$/MWh)	\$ 40.67
Upgrade Capital Charge (\$ millions)	\$1.935
[B] Total Cost for BPPA Upgrade Energy (\$ millions)	\$1.935
Upgrade Energy (GWh)	65.09
Upgrade Rate (\$/MWh)	\$ 29.73
BRD Capacity Rate (\$/MW)	\$4,268
Total Capacity (MW)	42.2
[C] BPPA Tailrace Capacity Cost (\$ millions)	\$0.180
[D] Total BPPA Cost (\$ millions) = [A] + [B] + [C]	\$37.069

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7.1.1 Does FBC have any input on the Brilliant rate increases, and/or flexibility over volumes purchased? If yes, please explain.

# 10

# 11 <u>Response:</u>

Increases to Brilliant rates are mainly driven by operations, maintenance, maintaining
 compliance with regulatory requirements, and capital expenditures. FBC reviews these costs in
 its role as a member of the Brilliant Management Committee.

FBC does not have any flexibility over the volumes purchased under the BPPA. The BPPA uses a take-or-pay structure which requires that FBC pay for the Brilliant plant's Entitlement, irrespective of whether FBC actually takes it. However, in the event of an insured outage, FBC will not pay for that portion of power which is not received.



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- 7.2 Please provide an approximate breakdown of the 2015 forecast increase in the British Columbia Hydro and Power Authority (BC Hydro) PPA power purchase cost between volume related and rate related changes.
- 8 **Response:**
- 9 The following table provides the breakdown of the BC Hydro PPA purchase costs in 2014 and
- 10 2015.

PO Under DDA Durchassa	Ρ	rojected	F	orecast	Ohanana
BC Hydro PPA Purchases		2014		2015	Change
Energy (GWh)		599		760	161
Total Energy Expense (\$ millions)	\$	24.748	\$	33.671	\$ 8.923
Average Energy Rate (\$/MWh)	\$	41.35	\$	44.28	\$ 2.93
Total Annual Capacity (MW)		1,481		1,685	-
Total Capacity Expense (\$ millions)	\$	10.525	\$	12.789	\$ 2.264
Average Capacity Rate (\$/MW)	\$	7,107	\$	7,588	\$ 481
Forecast Savings (\$ millions)			\$	(1.000)	\$ (1.000)
Total BC Hydro PPA Expense (\$ millions)	\$	35.273	\$	45.460	\$10.187

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Based on the 2015 PPA volume and rates, the expected PPA cost is \$46.460 million for a total increase of \$11.187 million before the \$1.000 million forecast savings adjustment. For 2015, increased BC Hydro rates result in approximately \$3.039 million in increased PPA costs as shown in the response to BCUC IR 1.7.2.1. The increased 2015 PPA cost due to the PPA volume increases is the remaining variance of \$8.148 million.

FBC has included a \$1.000 million reduction to the forecast BC Hydro expense to account for potential real-time opportunities to displace PPA purchases with lower cost market purchases. Therefore, the total PPA increase expected in 2015 is \$10.187 million. Real-time opportunities are restricted to a maximum of 25 percent of the PPA nominated energy amount, but depending on system conditions, it could be less. For example, if loads were 50 GWh lower in a year than forecast, that must be adjusted for as part of the 25 percent PPA flexibility such that the amount of PPA energy that can be displaced by market purchases is also reduced by 50 GWh.

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127.2.137.2.1425

#### 6 **Response: 7.2.1:**

7 As detailed in the response to BCUC IR 1.7.2, the BC Hydro PPA expense increase from the

8 Projected 2014 to the Forecast 2015 as a result of BC Hydro rate increases is approximately

9 \$3.039 million. This is calculated in the following table:

[A] 2015 PPA Energy Purchase (GWh)	760
[B] Average 2014 Energy Rate (\$/MWh)	\$ 41.35
[C] Average 2015 Energy Rate (\$/MWh)	\$ 44.28
[D] 2015 PPA Capacity Purchase (MW)	1,685
[E] Average 2014 Capacity Rate (\$/MW)	\$ 7,107
[F] Average 2015 Capacity Rate (\$/MW)	\$ 7,588
Energy Cost increase due to BC Hydro Rate Increases [A] x ([C] -[B]) (\$ millions)	\$ 2.229
Capacity Cost increase due to BC Hydro Rate Increases [D] x ([F] -[E]) /1000 (\$ millions)	\$ 0.810
Total PPE Increase due to BC Hydro Rate Increases (\$ millions)	\$ 3.039

10

In Table 12-1, the 17.0 percent rate increase is the increase that would have been required in 2015, had the -6.1 percent rate decrease resulting from Order G-139-14 been made effective in November 2014 (instead, the Commission made permanent the 2014 interim increase of 3.3 percent and approved the 2014 Interim Rate Variance deferral account). The reference to "smoothing" refers to the amortization profile of the 2014 Interim Rate Variance.

The impact on 2015 rates of the increase in power purchase expense resulting from BC Hydro rate increases is properly viewed in the context of its contribution to rates relative to the amounts currently being collected (that is, at the 3.3 percent increase). The rate impact is 0.9

19 percent, as shown below.

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		(\$ millions)	Percentage	
Change in Re 1 Revenue at F	evenue Deficiency due to BC Hydro Rates Prior Year Rates (Section 11, Schedule 1, Line 28)	<u>3.039</u> 321.134	= 0.9%	

Nevertheless, the calculation, based on the -6.1 percent rate decrease in 2014, gives a similar
impact of 1.0 percent.

5			
6			
7			
8		7.2.2	For volume related BC Hydro PPA increases/decreases, please identify
9			to what extent this cost is offset by decreased/increased market and
10			contracted purchases.
11			
12	<u>Response:</u>		

As detailed in the response to BCUC IR 1.7.2, the volume-related PPA increase for 2015 is \$8.148 million while in the response to BCUC IR 1.9.3.1 the volume-related decrease of market and contracted purchases is \$6.538 million. Due to a variance in the GWh volume between the two, the amount of the offset related to the PPA increased volume is \$5.659 million as set out below.

As shown in the response to BCUC IR 1.9.1 in the Volume Purchased (GWh) table the change in energy between the PPA and market and contracted purchases do not totally offset each other due to changes in volume from other resources. The BC Hydro PPA energy purchases increased from 599 GWh in 2014 to 760 GWh in 2015, an increase of 161 GWh, while Market and Contracted Purchases decreased from 378 GWh in 2014 to 192 GWh in 2015, a decrease of 186 GWh.

Therefore, the full \$6.538 million decrease in market and contracted purchases cannot be an offset to the increased PPA costs, but only that portion of the decrease in market and contracted purchases that matches the increased PPA purchase volume. This amount is given by the ratio of 161 / 186 or 86.6 percent, expressed as a percentage.

Therefore, the increased volume related costs of \$8.148 million are offset by decreased market and contracted purchases of \$6.538 million \* 86.6% = \$5.659 million.

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 FortisBC Inc. (FBC or the Company)
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7.3 Please describe the flexibility of the PPA with regard to displacing PPA purchases with market purchases, FBC's approach in managing this flexibility and quantify power purchase cost savings achieved in 2014 and forecast for 2015 as a result.

## 6 **Response:**

7 The PPA represents FBC's access to BC Hydro supply to a maximum of 200 MW in any hour for a total of 1,752 GWh of energy per year (i.e. 200 MW \* 8760 hours). FBC provides BC 9 Hydro with an energy nomination by June 30<sup>th</sup> of each year stating FBC's expected purchases 10 for the following operating year beginning October 1st. Regardless of the PPA Nomination, FBC 11 maintains access to 200 MW in any hour or 1,752 GWh of energy under the PPA. It is only the 12 cost of that energy that will change depending on the PPA Nomination.

13 FBC's access to BC Hydro's embedded cost energy (currently at a rate of \$42.62/MWh as of 14 April 1, 2014)<sup>3</sup> under the PPA is limited to 1,041 GWh (Tranche 1 Energy). Above 1,041 GWh 15 and up to the maximum of 1,752 GWh, the cost for the energy increases to \$129.70/MWh 16 (Tranche 2 Energy), which is tied to BC Hydro's proxy for long run marginal cost based on the 17 BC Hydro 2008 Clean Power Call. If the energy delivered is above the PPA Nomination, but 18 below the Tranche 1 Energy limit, there is an additional surcharge of 50 percent. Energy delivered above the PPA Nomination and above the Tranche 1 Energy Limit is subject to a 15 19 20 percent surcharge on the Tranche 2 Energy rate.

21 FBC is required to take or pay for 75 percent of the PPA Nomination. That means FBC must 22 pay for 75 percent of the PPA Nomination even if it does not schedule the energy. FBC will 23 manage its portfolio in a manner that ensures it uses at least 75 percent of the PPA nominiation 24 in order to avoid paying for energy that it does not receive. The difference between the PPA 25 Nomination and the 75 percent minimum take provides flexibility within the operating year to 26 displace PPA purchases with lower cost resources or to manage annual loads that are below 27 forecast. If load is near forecast load, FBC has the ability to displace the 25 percent flexible 28 amount with market purchases if market conditions are such that it would create savings for 29 customers compared to the PPA energy rates.

Prior to FBC submitting the annual BC Hydro PPA nomination for the next operating year, FBC will review its expected energy requirements and may enter into firm market purchases for delivery in future periods if the available price is below the PPA rate. These purchases then result in a lower PPA nomination than would otherwise have been made. However, FBC cannot change the annual PPA Nomination by more than 20 percent from the previous year. This needs to be considered when buying market power since if the PPA nomination is set too low

<sup>&</sup>lt;sup>3</sup> BC Hydro rates will increase by 6.0 percent (to \$45.18/MWh) effective April 1, 2015, pursuant to Order G-48-14.



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for the next operating year, sufficient supplies of PPA energy to meet expected requirements may not be able to be nominated for future years. This could potentially require either buying market power that may cost more than the PPA or taking PPA supply at above the nominated level.

5 FBC's approach to managing the flexibility in its PPA usage is described more fully in the 6 Annual Electric Contracting Plan (AECP). On May 16, 2014, FBC filed its 2014/15 AECP on a 7 confidential basis with the Commission. The Commission accepted the 2014/15 AECP on June 8 19, 2014, by way of Letter L-35-14. The AECP outlines FBC's plan for portfolio optimization to 9 maximize benefits to customers, includes a review of the market environment, load forecast, 10 and available resources in determining the contracting plan, and provides the justification for

11 FBC's Annual Energy Nomination.

In 2014, FBC's total market and contracted purchases reduced power purchase expense by \$9.1 million. \$6.7 million of that amount was included in the 2014 Forecast and was imbedded in rates, and FBC's real-time management created an additional \$2.4 million in net savings. For 2015, FBC has included a total of approximately \$5.2 million in market savings, including approximately \$4.2 million in savings due to purchases already contracted for, and an additional \$1.0 million forecast reduction in BC Hydro PPA expense to take into account the potential for additional real-time market opportunities.

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- 7.4 Please explain whether FBC could have reduced capacity related purchases
  under the new BC Hydro PPA and/or Brilliant contract in response to the Waneta
  Expansion Capacity Purchase Agreement (WAX CAPA).
- 25

## 26 **Response:**

The capacity purchased under the Brilliant Power Purchase Agreement (BPPA) is a contractual amount and is not able to be displaced. FBC has already reduced its expected capacity purchases under the BC Hydro PPA in response to the WAX CAPA expected to become available in April 2015.

In absence of the capacity being available from the WAX CAPA, the net impact on other FBC
 power purchase costs would be an increase of approximately \$4.008 million. This is comprised
 of the following items:

The forecast BC Hydro PPA capacity usage would increase by 293 MW, at an incremental cost of \$2.254 million;



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- The Powerex capacity block contract would increase by \$1.452 million since the
   November and December amounts would continue to be required to meet load. (it
   should be noted that the Powerex contract can be terminated with 3 months notice, and
   otherwise terminates in February 2016);
  - 3. A small capacity deficit for the months of July, November and December of 2015 would increase costs by about \$0.01 million to meet peak demand requirements;
- 7 4. The WAX CAPA capacity allows FBC to make beneficial use of energy that previously would be surplus in the months of May, June and July. While the revenue from these surplus sales is therefore lost, there is a net benefit in that incremental energy purchases are also avoided. The net reduction in 2015 power purchase expense is approximately \$0.293 million.

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The overall impact of the addition of the WAX CAPA to the FBC portfolio in 2015 is therefore approximately \$21.800 million, which is the difference between the \$25.808 million forecast net cost of Waneta Expansion included in the 2015 power purchase expense forecast (Table 4-3 of Exhibit P.1, p. 97), and the \$1,000 million in additional equipment of the second

16 Exhibit B-1, p. 87), and the \$4.008 million in additional savings discussed above.



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#### 8.0 Reference: POWER PURCHASE EXPENSE

Exhibit B-1, Section 4.6, Table 4-3; Section 4.3, p. 25;

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- FBC Section 71 WAX CAPA Application,<sup>4</sup> pp. 9, 81–82;
- 4 FBC Response to BCUC IRs (September 17, 2010), p. 14

#### Waneta Expansion

- 8.1 Please provide analysis and show the calculations to support the WAX CAPA
  2015 forecast expense. Demonstrate that the 2015 cost estimate is in
  accordance with prior Commission approval of this energy contract and the
  associated Residual Capacity Agreement (RCA).
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## 11 Response:

12 The following table shows the breakdown of the Waneta Expansion costs included in the 13 forecast 2015 newer purchase expanse

13 forecast 2015 power purchase expense.

	Forecast 2015		
Waneta Expansion	(\$ millions)		
WAX CAPA Expense	\$30.751		
RCA Sales Revenue	(\$3.436)		
Other Surplus Sales Revenue	(\$1.507)		
Total	\$25.808		

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- The remainder of this response is being filed confidentially as it contains commercially sensitive information on the WAX CAPA which was determined to remain confidential pursuant to Order E-15-12, and if disclosed, could harm the competitive negotiating position of FBC with regard to
- 18 the sale of surplus capacity, and therefore, cause adverse effects for customers.

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8.1.1 Please provide the date WAX CAPA is effective from and the forecast power purchase costs related to this agreement for 2016. Please explain any significant differences from the WAX CAPA related 2015 forecast power purchase costs provided in this Application.

<sup>25</sup> 26

<sup>&</sup>lt;sup>4</sup> FortisBC Inc. Section 71 of the Utilities Commission Act, A Filing of Capacity Purchase Agreement between Waneta Expansion Power Corporation (as seller) and FortisBC (as buyer) Application, August 27, 2010.



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#### 1 Response:

The WAX CAPA is expected to commence on April 1, 2015. The 2016 forecast cost of Waneta Expansion is \$40.239 million, which is net of the forecast of RCA sales revenue and other surplus sales revenue. This increase from \$25.808 million in 2015 is a result of the additional 3 months of capacity being purchased in 2016, and a 2.1 percent increase in the capacity rate from 2015 to 2016.

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9 10 11 12 13	<u>Response:</u>	8.1.2	Please identify 2014 market capacity related costs which are not required in 2015 as a result of WAX CAPA.
14	Please refer t	the res	sponse to BCUC IR 1.7.4.
15 16			
17 18 19 20 21 22	8.2	Please smooth 2015 ar for WAX	identify how much of FBC's forecast 2015 and 2016 rate increase (before hing) is due to the Waneta Expansion cost. Please compare this to the nd 2016 rate increase forecast on page 9 of FBC's Section 71 Application X CAPA and explain any differences.
23	Response:		
24 25 26	The projected 2015 and 3.2 Company fore	d custom 2 percent ecast rate	ner rate impacts due to the Waneta Expansion costs are 6.8 percent in t in 2016. In its 2010 application for acceptance of the WAX CAPA, the e increases of 6.6 percent in 2015 and 3.0 percent in 2016.
27 28 29	The reference Rate Variance analysis of th	e to rate e deferra e WAX C	e increases "before smoothing" is to the amortization of the 2014 Interim ral account. The amortization of this account has does not affect the CAPA impact. The variance is primarily the result of reduced revenue from

surplus sales compared to the 2010 WAX CAPA application.

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	2015		2016		Reference (2015)
	(\$ millions)				
Revenue Requirement	\$ 336.057	А	\$ 353.918	а	Section 11, Sch 1, Line 26
Revenue at Prior Year Rates	321.134	В	337.941	b	Section 11, Sch 1, Line 28
Revenue Deficiency	14.923	A-B=C	15.977	a-b=c	Section 11, Sch 1, Line 29
Rate Increase	4.6%	C/B=D	4.7%	c/b=d	Section 11, Sch 1, Line 31
Incremental WAX CAPA Expense	21.800	Е	33.062	е	Response to BCUC IR 1.7.4
Revenue Requirements less WAX CAPA	314.257	A-E=F	320.856	a-e=f	
Revenue at Prior Year Rates	321.134	B=G	316.141	b-E=g	
Revenue Deficience without WAX CAPA	(6.877)	F-G=H	4.715	f-g=h	
Rate Increase without WAX CAPA	-2.1%	H/G=I	1.5%	h/g=i	
Rate Impact of WAX CAPA	6.8%	D-I=J	3.2%	d-i=j	
Rate Impact of WAX CAPA, section 71 application	6.6%	к	3.0%	k	WAX CAPA Application, page 9
Variance	0.2%	J-K=L	0.2%	j-k=l	

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8.2.1 Please provide an update of WAX CAPA's expected 20 year cumulative rate impact compared to the original 2010 WAX CAPA application. Explain any significant differences.

#### 9 Response:

10 FBC forecasts a cumulative rate impact over the 20-year period from 2015 - 2034 of 14.1 11 percent, compared to its forecast in the 2010 WAX CAPA application of 12.9 percent over the 12 same period. In its analysis, FBC has assumed rate escalation of 3.0 percent before 13 incremental WAX CAPA expense, which is consistent with its assumptions in the 2010 14 application. The average annual variance compared to the WAX CAPA application is 0.06 15 percent [(14.1%-12.9%)/20]); in each of 2015 and 2016 the WAX CAPA impact is 0.2 percent 16 higher than the 2010 forecast. The variance is primarily the result of reduced revenue from 17 surplus sales compared to the 2010 WAX CAPA application.

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- 21 8.3 Please reproduce Table 11.1.1 in the original 2010 WAX CAPA Application (pp. 22 81 82) and provide an updated table with any changes explained. Please 23 produce a similar table for the RCA and explain any significant difference in the 24 capacity price between the two tables.
- 25


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#### 1 Response:

- 2 The following tables shows the assumptions made in the RCA Application, dated May 15, 2014,
- 3 and the assumptions of the RCA that were included in the 2015 Annual Review.

	RCA Application	Annual Review for 2015 Rates
Capacity	The first 50 MW of available WAX CAPA to FBC, total annual capacity of 596 MW	No Change
Price	Based on a monthly "Demand Charge", including all rate riders and excluding any taxes, as determined pursuant to the BC Hydro PPA, and set out from time to time in Rate Schedule 3808	No Change
Rate Impact	Revenue of \$3.050 million in 2015, with an estimate rate impact of (-0.9%)	Revenue of \$3.436 million in 2015, with an estimate rate impact of (-1.0%)
Availability	Expected to commence May 1, 2015	Actual expected start date is unchanged, but a commencement date of April 1, 2015 was used in the Application as explained in the confidential response to BCUC IR 1.8.1.
Term	Expires September 30, 2025	No Change
Best alternative	The RCA is the strongest available option with the least amount of risk. It also preserves the maximum flexibility to realize value from the remaining capacity under the WAX CAPA.	No change
Alignment with BC Energy Plan and the Clean Energy Act	Consistent with FBC's 2012 Long Term Resource Plan, approved by the BCUC in order #G-161-14	No change

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5 At this time, the actual expected start date of the RCA is May 1, 2015 and the RCA revenue for 6 April is not expected to occur. Any variance between the forecast revenue and the actual 7 revenue received for surplus WAX capacity will be captured in the Flow-through deferral 8 account as part of the variance in power purchase expense.



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- 4 the sale of surplus capacity, and therefore, cause adverse effects for customers.
- 5 6 7 8
  - 8.3.1 Please quantify the amount of WAX CAPA capacity purchased under this contract that will be surplus to requirements in each of the next 10 years. If this is different from that forecast in FBC's original 2010 WAX CAPA Application, please explain.
  - 13 14 **Response:**

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- 15 This response is being filed confidentially as it contains commercially sensitive information on 16 the WAX CAPA which was determined to remain confidential pursuant to Order E-15-12, and if 17 disclosed, could harm the competitive negotiating position of FBC with regard to the sale of 18 surplus capacity, and therefore, cause adverse effects for customers.
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22 8.4 Please describe the markets available to FBC for the resale of surplus WAX
23 CAPA capacity and how FBC plans to maximize the value to its ratepayers from
24 this surplus. Please also discuss BC Hydro and BPA requirements for capacity,
25 and any changes in the 2015 capacity resale market from that assumed in 2010.

## 27 **Response:**

28 There are two types of markets available to FBC to sell surplus WAX CAPA capacity. The most 29 valuable market is the longer term market that provides the purchaser with the certainty of a 30 longer term product and that starts to move towards the cost of new construction. The WAX 31 CAPA agreement itself is an example of this type of contract as it is for 40 years and costs are 32 based on the costs to build and operate the plant. In order to capture as much of this market 33 and price premium as possible, FBC entered into the RCA agreement with BC Hydro that sells a 34 50 MW block to BC Hydro for 10 years. This was the longest time period FBC could commit to 35 in order to preserve the ability to meet future load requirements with WAX capacity.



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- 1 Since FBC has committed all surplus WAX CAPA capacity that is suitable for a longer term deal 2 through the RCA, the value of any remaining surplus will be maximized by selling it for shorter
- 3 time periods. Depending on FBC load requirements and market prices, these sales could be
- 4 made up to a year or two in advance and could be for up to several months at a time or sales
- 5 could be done on a next day or even hourly basis.
- 6 While WAX capacity can be used as a balancing resource for FBC resources, such as to 7 balance a potential FBC renewable portfolio, under the Canal Plant Agreement with BC Hydro 8 this is restricted to FBC use only and does not represent an ancillary services market 9 opportunity with BPA or other entities for surplus WAX capacity. However, if entities such as 10 BPA were to purchase surplus WAX capacity, it could potentially free up their own resources to
- 11 provide the balancing required.

To maximize the value of this remaining short-term surplus capacity to ratepayers, FBC has recently entered into the Capacity and Energy Purchase and Sales Agreement (CEPSA) with Powerex that is currently before the Commission. Through sales to Powerex, FBC expects that the maximum value obtainable for ratepayers for this short-term capacity given prevailing market conditions will be realized while at the same time retaining full flexibility to use forecast surplus WAX CAPA capacity to meet load if system conditions should require it or if it can be used to economically displace PPA capacity requirements.

19 The market price expectations for the regional power market today are considerably different 20 than it was in 2010 due to developments on a number of fronts, the most significant of which is 21 the lower price expectations for natural gas. Power price values at the Mid C are strongly 22 influenced by the price of natural gas and as the supply side potential of the development of 23 unconventional natural gas resources has unfolded, so have the expectations for sustained 24 lower power prices. Also contributing to lower prices is the increasing penetration of renewable 25 resources with low variable operating costs. The combination of large amounts of new 26 renewable resources and large supplies of hydroelectric generation, which both have low 27 variable operating costs, is helping drive spot market prices for wholesale power down to very 28 low levels more often. Another factor contributing to lower prices in the Pacific Northwest than 29 expected in 2010 has been slower economic growth resulting in sluggish demand growth.

30 These developments since 2010 have resulted in the power markets being considerably lower 31 priced today with much tighter spreads between heavy and light load prices. Today, typical 32 spreads for the balance of 2015 and into 2016 are about half of the value available from the 33 market in 2010 for forward market prices in 2015. Since the value of the short-term WAX 34 surplus capacity is based on this spread, after transmission costs are taken into account, the 35 market value of the surplus WAX capacity has shrunk significantly. Of course, the annual 36 average is considerably different than values for individual months, days or hours. FBC expects 37 that sales will be made, but that on average the volume and price will be lower than was 38 forecast in 2010.



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  8.4.1 Please compare the forecast 2015 and 2016 volume sold and price obtained for surplus WAX CAPA from that previously forecast in FBC's 2010 Application (FBC's September 17, 2010 response to BCUC Information Requests, p. 14) and explain any differences.
  8
  9 Response:
- 10 This response is being filed confidentially as it contains commercially sensitive information on
- 11 the WAX CAPA which was determined to remain confidential pursuant to Order E-15-12, and if
- 12 disclosed, could harm the competitive negotiating position of FBC with regard to the sale of
- 13 surplus capacity, and therefore, cause adverse effects for customers.



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#### 1 9.0 Reference: POWER PURCHASE EXPENSE

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#### Exhibit B-1, Section 4.6, Table 4-3; Section 4.3, p. 25

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- Other
- 9.1 Please provide two tables based on Table 4-3 in the Application (excluding
  Waneta Expansion) which replaces "\$ millions" with (i) GWh volumes purchased,
  and (ii) energy cost (\$/MWh).
- 7

#### 8 Response:

- 9 The following tables show Table 4-3 from Exhibit B-1 updated to include Volume Purchased
- 10 (GWh) and Energy Cost (\$/MWh). The Waneta Expansion is excluded as there is no energy
- 11 being purchased by FBC under the WAX CAPA.

	Volume Purchased (GWh)					
	Projected 2014 Forecast 2015 Difference					
Brilliant	890.0	920.0	30.0			
BC Hydro PPA	599.0	760.4	161.4			
Independent Power Producers	13.1	4.0	-9.1			
Market and Contracted Purchases	378.0	192.0	-186.0			
Sale of Surplus Power	-13.7	0.0	13.7			
CPA Balancing Pool	-28.0	0.0	28.0			
Special and Accounting Adjustments	0.0	0.0	0.0			
Total Energy Purchased	1838.5 1876.5 38.0					

	Energy Cost (\$/MWh)					
	Projected 2014 Forecast 2015 Differenc					
Brilliant	\$40.16	\$40.29	\$0.13			
BC Hydro PPA	\$58.89	\$59.78	\$0.89			
Independent Power Producers	\$34.00	\$40.57	\$6.57			
Market and Contracted Purchases	\$42.51	\$48.85	\$6.35			
Sale of Surplus Power	\$23.39	\$0.00	-\$23.39			
CPA Balancing Pool	\$42.32	\$0.00	-\$42.32			
Special and Accounting Adjustments	N/A	N/A	N/A			
Average Cost	\$46.96 \$49.04 \$2.08					

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9.2 Please identify and explain the reason for any changes in methodology to forecast market prices, wheeling expense and water fees from that used for the 2014-2018 PBR Application.

# 45 Response:

- 6 There are no changes in FBC's methodology for forecasting market prices, wheeling expense7 and water fees from that used for the 2014-2018 PBR Application.
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  9.3 Please provide analysis to support the Market and Contracted Purchases 2015
  12 forecast expense which provides a break down by Commission approved energy
- 13 purchase agreements.
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## 15 **Response:**

16 This response is being filed confidentially with the Commission as it contains market sensitive 17 information. Since FBC continues to operate within a competitive environment, disclosure of the 18 information contained in this response will prejudice FBC's ability to obtain favourable 19 commercial terms in future contract negotiations or renegotiation of subsequent contracts, 20 which, in turn, will harm the Companies' customers.

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- 9.3.1 Please provide a breakdown of the estimated difference between 2014 and 2015 market and contracted purchases expense between volume related and price related. Please provide an explanation for each.
- 28 **Response:**

As shown in the response to BCUC IR 1.9.3, the volume of both energy and capacity purchases

30 decreased from 2014 to 2015. The following table provides the breakdown of the average

31 market and contracted purchases cost for 2014 and 2015.



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Market and Contracted Purchases	F	Projected 2014	F	Forecast 2015	Ch	ange
Energy (GWh)		377		192		(185)
Total Energy Expense (\$ millions)	\$	11.367	\$	6.273	\$	(5.094)
Average Energy Rate (\$/MWh)	\$	30.11	\$	32.63	\$	2.52
Total Annual Capacity (MW)		748		595		(153)
Total Capacity Expense (\$ millions)	\$	4.701	\$	3.107	\$	(1.594)
Average Capacity Rate (\$/MW)	\$	6,283	\$	5,218	\$	(1,065)
Total Market and Contracted Expense (\$ millions)	\$	16.068	\$	9.380	\$	(6.688)

## 1 2

The lower volume of purchases of both energy and capacity reduces power purchase expense by \$6.538 million in 2015, while the changes to the average rates decrease power purchase expense by \$0.150 million. In total the market and contracted expense decreases by \$6.688 million from 2014 to 2015.

Please provide an explanation for the 2015 forecast and any increase/decrease

from 2014 for: sale of surplus power, CPA balancing pool and special and

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13 14 **Response:** 

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accounting adjustments.

#### 15 The decrease in surplus sales from \$0.320 million in 2014 to \$0 in 2015 is due to the WAX 16 CAPA capacity being available such that energy which previously would have been surplus is 17 now used with the WAX CAPA capacity to meet load. Prior to the WAX CAPA capacity being 18 available, FBC would have purchased a resource that included both energy and capacity to 19 meet this load, as surplus entitlement capacity to make use of this formerly surplus entitlement 20 energy was not available. Therefore, the surplus energy was sold to the market. The decreased 21 surplus sales is offset by reduced purchases from either the market or from the BC Hydro PPA 22 that would have been required to meet load prior to the availability of the WAX CAPA.

The CPA balancing pool accounts for year over year timing differences in the volume of entitlement energy stored under the CPA. In 2014, FBC accumulated 27.71 GWh in its CPA storage account, resulting in a \$1.185 million reduction to power purchase expense, equal to an average cost of \$42.76/MWh, which is based on the PPA energy rate when the energy is stored



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or used. The 2014 balancing pool reduction to power purchase expense is necessary because FBC purchased 27.71 GWh of energy in 2014 that was not used in 2014. This energy remains in the CPA balancing pool for future use and when FBC uses this energy to meet its load, it will be deducted from the balancing pool and a cost to power purchase expense will be shown. Actual use of the CPA balancing pool will depend on actual loads and market conditions throughout the year.

2014 special and accounting adjustments are due to year-end timing differences of payments
between years, adjustments to correct for foreign exchange US dollar based transactions,
accounting adjustments under the PPA with BC Hydro to account for changes in the amount of
power purchased from BC Hydro under the PPA, and adjustments to correct for the insurance
claim receivery due to the extended outgoe at Correct inp from July 2013 to Japuary 2014.

- 11 claim recovery due to the extended outage at Corra Linn from July 2013 to January 2014.
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9.5 Please describe the objective of FBC's resource acquisition policy and the steps
FBC undertakes to optimize its power supply portfolio.

#### 18 **Response:**

On an annual basis, FBC's resource acquisition policy and plan to optimize its power supply portfolio are detailed in FBC's Annual Electric Contracting Plan (AECP). On May 16, 2014, FBC filed its 2014/15 AECP on a confidential basis with the Commission, which was accepted by the BCUC on June 19, 2014, by way of Letter L-35-14. The objectives of FBC's AECP are as follows:

- To ensure a firm supply of resources to meet expected annual energy and peak capacity
   requirements and to maintain an appropriate balance of:
- a. cost minimization for FBC customers through optimization of FBC resources and
   market purchases
- 28 b. reliability and security, to ensure that cost effective power is available when
  29 needed to meet load;
- c. flexibility, to minimize the risk of changes to load forecast, generation and
   transmission availability, wholesale power market and BC Hydro rates; and
- 32 d. operational efficiency, in order to be able to supply load requirements while 33 maintaining contractual compliance.



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- To be consistent with FBC's most recent 2012 Long-Term Resource Plan (LTRP), included as part of the 2012 Integrated System Plan dated June 30, 2011<sup>5</sup>, as accepted by the Commission per Order G-110-12 dated August 15, 2012<sup>6</sup>
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5 FBC's 2015/16 AECP was submitted to the Commission on March 18, 2015.

For further information around the steps FBC takes to accomplish these objectives please refer
to the response to BCUC IR 1.7.3 which discusses the flexibility of the PPA. In addition to
optimizing the PPA purchases, FBC also actively seeks to maximize the value of the surplus
WAX capacity through the RCA contract with BC Hydro and the recently signed CEPSA
agreement with Powerex that is currently before the Commission.

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9.6 Please describe initiatives undertaken by FBC to reduce network losses,
specifically technical losses, company use and unaccounted for energy (meter
reading errors, theft). Does FBC consider it could cost-effectively do more in this
area to reduce losses? Please explain.

18

#### 19 Response:

FBC considers that is currently undertaking all cost-effective initiatives to reduce network losses.

FBC conducts feeder load balancing to reduce distribution technical losses and is currently investigating changing its distribution transformer specification for higher efficiencies and updating its Design Criteria to assist with optimal deployment/sizing of distribution transformers.

FBC is implementing AMI technology which will facilitate the detection of energy theft. Electricity theft is currently recorded as part of FBC's energy losses. It is anticipated that, once detected, individuals engaged in energy theft will either cease operations, which will reduce gross energy volume, or remain on the grid and begin paying for the energy consumed, which will increase billable load and sales revenue.

AMI technology will also provide better information for calculating losses than is currently available, since all metered consumption will be available on an hourly basis, rather than a monthly or bi-monthly basis. The increased granularity of the metered consumption data will

<sup>&</sup>lt;sup>5</sup> http://www.bcuc.com/Documents/Proceedings/2011/DOC\_28033\_B-1-2-FBC-Volume-2.pdf

<sup>&</sup>lt;sup>6</sup> <u>http://www.bcuc.com/Documents/Proceedings/2012/DOC\_31462\_G-110-12\_FBC-2012-13RRA\_Decision-%20WEB.pdf</u>



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1 minimize the need to estimate the unbilled load and therefore increase the precision of loss 2 calculations.

9.7 Please quantify in dollars the power purchase expense related to network losses for each year from 2010 to 2015 and explain any significant differences.

#### 9 Response:

10 The following table shows the actual network losses from 2010 to 2013, 2014 Projected, and an

11 estimate for 2015. Network losses shown in this table include technical losses and unaccounted

12 for energy (meter reading errors, theft, etc). It specifically excludes company use and station

13 service at the generation stations. The differences in the impact on power purchase expense of

14 losses from year to year are due to changes in the volume of network losses due to variances in

15 load as well as system operations and the annual average BC Hydro PPA energy rate as shown

16 in the table below.

Year	Network Losses (GWh)	Annual Average BC Hydro PPA Energy Rate (\$/MWh)		Es E	timated Cost at the PPA Energy Rate (\$ millions)
2010	267.882	\$	34.02	\$	9.113
2011	293.460	\$	34.92	\$	10.248
2012	258.081	\$	37.96	\$	9.797
2013	264.979	\$	38.96	\$	10.324
2014	257.736	\$	41.74	\$	10.758
2015	263.909	\$	44.54	\$	11.754

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Response to British Columbia Utilities Commission (BCUC or the Commission) Information Request (IR) No. 1

#### **OPERATIONS AND MAINTENANCE EXPENSE** 1 D.

- **O&M EXPENSE OUTSIDE OF FORMULA** 2 10.0 Reference:
  - Exhibit B-1, Section 6.3, pp. 34–35
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- **O&M Portion Pension/Other Post-Employment Benefits (OPEB)**
- 10.1 Please clarify what is meant in following statement on page 34 of the Application: "In accordance with Commission Order G-139-14, all pension and OPEB costs, including current service and retiree portions, are included in labour loadings." [emphasis added]
- 9
- 10 Response:

11 Order G-139-14 should not have been specifically referenced in FBC's Application with respect 12 to including pension and OPEB costs in labour loadings. In Order G-138-14, the Commission 13 approved FortisBC Energy Inc.'s request to include the retiree portion of pension and OPEB 14 expenses in benefit loadings for O&M and Capital. However, this was the existing practice for

- 15 FBC and therefore not the subject of Order G-139-14.
- 16 The labour loading cost, which includes pension and OPEB expenses, is attributed to each 17 employee's regular base pay, net of time away, so that when that base pay is charged to capital 18 or O&M, a portion of pension and OPEB expenses is similarly allocated to capital or O&M.

19 The use of labour loadings to allocate pension and OPEB costs was described in the response 20 to BCUC IR 1.144.7 in the 2014-2018 PBR Application proceeding, as follows: "FortisBC 21 includes its pension and OPEB expenses in its labour loadings, therefore the allocation between 22 O&M and capital, along with other labour loadings, is based on where labour is expected to be 23 charged or allocated."

24 Including pension and OPEB expenses in labour loading is the mechanism used to allocate the 25 costs between capital and operating and maintenance expense. It results in the allocation or pension/OPEB costs in the amounts of \$3.925 million to O&M and \$4.253 million to capital in 26 27 2015, as shown in Table 6-4 of the Application.

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32 10.2 Please provide the reference in the 2014-2018 PBR Application where this was 33 explained. Please also provide the reference within Order G-139-14 and 34 Reasons where this was determined.



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#### 1 2 **Response:**

As discussed in the response to 10.1, Order G-139-14 should not have been referenced in section 6.3.1 of the Application.

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However, there were a number of responses to BCUC information requests in the 2014-2018
PBR proceeding which made it clear that pension and OPEB expenses are included in labour
loadings, alternatively referred to as general benefit loadings:

- 8 • The response to BCUC IR 1.144.7, stated the following [emphasis added]: "To clarify the 9 concept of fully loaded costs, this would include regular base pay (net of time away) plus 10 a general benefits loading. Since FBC and FEI do not forecast individual benefits 11 attributable for each Executive or employee, such as post-employment benefits, 12 incentives, etc., a general benefit loading rate is applied to regular base pay (net of time 13 away) to incorporate all such benefits for each employee. Included in the general 14 benefit loadings are pension and OPEB expenses, short-term incentives and other benefits." 15
- The response to BCUC IR 1.144.7 stated the following [emphasis added]: "FortisBC includes its pension and OPEB expenses in its labour loadings, therefore the allocation between O&M and capital, along with other labour loadings, is based on where labour is expected to be charged or allocated."
- The response to BCUC IR 2.21.5 stated the following [emphasis added]: "Since the Company does not track or forecast its <u>pension and OPEB expense</u> on a departmental basis, but rather <u>includes it as part of the general benefit loading rate</u>..."
- The response to BCUC IR 2.23.1 stated the following [emphasis added]: "The Company does not track or forecast its pension and OPEB expense on a departmental basis, but rather includes it as part of the general benefit loading rate..."
- The response to BCUC IR 2.25.5 stated the following [emphasis added]: "<u>the actual</u>
   <u>benefit loading rate is subject to fluctuation as a result of the components of</u>
   <u>general benefit loading rate which includes various items such as pension and</u>
   <u>OPEB expense</u> for all employee groups."
- The response to BCUC IR 2.48.2 stated the following [emphasis added] "<u>Pension and</u>
   <u>OPEB expense are included in loadings that affect capital expenditures</u> and rate
   base."
- 33



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- Page 197 of the Decision accompanying Order G-139-14 (PBR Decision) states: "The
   Commission Panel accepts the FBC proposal, which allows for pension and OPEB, insurance
   expense premiums (with the exception of first and third party liability insurance expense), and
- 4 AMI project costs to be tracked outside of the formula."
- Page 210 of the PBR Decision states that [emphasis added] "<u>The Commission Panel accepts</u>
  that there is a need to accommodate amounts for <u>Pension/OPEB</u>, PCB Compliance
  (substations) and the AMI project and <u>these are to be tracked outside of the formula</u>....<u>the</u>
  <u>Commission Panel approves FBC's 2013 Base Capital as applied for</u>, subject to further
  adjustment as directed elsewhere in this Decision."
- In short, consistent with past FBC revenue requirement applications and approvals by the Commission, the 2014-2018 PBR Application was prepared, and approved by Order G-139-14, by allocating pension and OPEB costs to both capital expenditures and operating and maintenance expenses costs by way of inclusion in labour loadings, alternatively referred to as general benefit loadings.
- 15 16 17 18 19 In the 2014-2018 PBR Application, FBC stated that: 20 "FBC has forecast employee future benefits expense for 2013 through 2018. The 21 2015 through 2018 forecast amounts are excluded from the proposed PBR O&M 22 formula and are forecast to demonstrate the expected trends over the PBR Period."7 23 24 10.3 If pension and OPEB costs are included in labour loadings, please explain 25 whether these costs reside within the formula driven O&M spending envelope 26 and/or how these costs are otherwise tracked in the O&M outside of the formula. 27 A detailed explanation on the accounting transaction is expected. 28
- 29 Response:

Pension and OPEB expense are re-forecast each year outside of the O&M (and capital) formula. Page 197 of the PBR Decision states: "The Commission Panel accepts the FBC proposal, which allows for pension and OPEB, insurance expense premiums (with the exception of first and third party liability insurance expense), and AMI project costs to be tracked outside of

<sup>&</sup>lt;sup>7</sup> FBC 2014-2018 PBR Application, p. 174



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the formula." It is necessary for these costs to be outside of the formulaic O&M and capital asthese costs are not controllable in nature.

3 The Company's third party, independent actuary provides the forecast pension and OPEB 4 expense which is then charged to the labour loading pool. Any variance between forecast and 5 actual amounts is captured in the Pension/OPEB Variance deferral account.

6 Pension and OPEB expense is allocated to O&M and capital based on the forecast of where 7 labour is expected to be charged or allocated. The actual dollar amount of pension/OPEB 8 expense included in O&M at the end of the year is equal to the dollar amount of pension/OPEB 9 expense that is forecast and approved for rate-setting purposes.

10 For example, to recognize the pension/OPEB expense in 2015, the entry will be as follows:

11	Debit Labour loadings – O&M (line 1 of Table 6-3 in the Application)	\$3.925
12	Debit Labour loadings – Capital (line 1 of Table 7-3 in the Application)	\$4,253

13Credit Pension/OPEB funding liability (line 16 of Schedule 23)\$8,178

14 The above is representative of how the pension & OPEB expense has been included in forecast

15 O&M for setting rates in 2015.



Response to British Columbia Utilities Commission (BCUC or the Commission) Information Request (IR) No. 1

#### 1 11.0 Reference: O&M EXPENSE OUTSIDE OF FORMULA

#### Exhibit B-1, Section 6.3, pp. 34–35

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#### Exhibit B-1, Section 0.5, p

#### AMI Costs/Savings

FBC states that the 2014 AMI-related costs and savings were lower than approved due to delays in project timing and regulatory processes. FBC also states that forecast savings in 2015 are also now delayed.

- 11.1 Please provide a breakdown of the AMI item (Line 3) in Table 6-3 of the Application to separately show AMI costs versus AMI savings. Please compare these costs/savings from the original estimates in the Certificate of Public Convenience and Necessity application. Aside from the issue of *timing*, please discuss whether these costs/savings are in line with FBC's original estimates. If not, please discuss.
- 13

#### 14 **Response:**

The breakdown of the AMI item (Line 3) in Table 6-3 of the Application between annual AMI operating costs and annual AMI operating savings, and comparing projected and forecast

17 operating costs/savings to the estimates in the CPCN application, is provided below:

			2014			)15	Total			
						CPCN/	Projected + Approved +			
		Projected	Approved	CPCN	Forecast	2013 Fcst	Forecast	2013 Fcst	Change	
		(a)	(b)	(c)	(d)	(e)	(f)=(a)+(d)	(g)=(b)+(e)	(h)=(f)-(g)	
	AMI Costs	531	750	1,116	1,591	1,859	2,122	2,975	(853)	
	AMI Savings	(100)	(150)	(516)	(1,139)	(1,977)	(1,239)	(2,493)	1,254	
18	Net AMI Costs	431	600	600	452	(118)	883	482	401	

19 The CPCN cost estimates above have been adjusted for this comparison, to reflect the 20 Commission's directive in the PBR Decision that certain software costs previously classified as 21 capital expenditures be recorded as O&M Expense. Also shown is a comparison of the 2014 22 projected plus 2015 forecast costs to the total 2014/2015 costs forecast at the time of the PBR 23 Application Compliance Filing.

24 The variances shown above between the 2014 Projection/2015 Forecast and the estimates in 25 the CPCN application are due to project timing. In both 2014 and 2015 the project had not 26 advanced to the stage expected; therefore both the annual costs and the savings are below 27 forecasts. With completion of the project in 2016, however, FBC expects that annual costs and 28 savings will reach (approximately) the forecast levels. Benefits may be slightly lower than the 29 CPCN forecast in 2016, depending largely on whether full AMI network coverage (98.5 percent 30 of meters read remotely) is achieved by the end of 2015. Note that network coverage will be 31 less than 100 percent even when all meters are deployed.



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	FortisBC Inc. (FBC or the Company)							
RTIS BC <sup></sup>	Application for Approval of 2015 Delivery Rates pursuant to the Mulit-Year Performance Based Ratemaking Plan (the PBR Plan) approved for 2014 through 2019 by Order G-139-14 (the Application)	Submission Date: March 25, 2015						
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12.0 Refe	erence: O&M EXPENSE OUTSIDE OF FORMULA							
	Exhibit B-1, Section 6.3, p. 36							
	2015 Mandatory Reliability Standards (MRS) Audit							
In 2 thou this	In 2012, FBC has budgeted \$231 thousand for the MRS audit yet it incurred \$807 thousand and sought subsequent approval for the recovery of the incremental cost. In this Application, FBC forecasts the 2015 audit expense to be \$350 thousand.							
12.1	12.1 In the event that actual audit expenses exceed forecast, please confirm whether the incremental expenditures will accrue to the flow through variance deferral account? If not, please discuss the treatment.							
Response:								
Confirmed. expenses w	Any variance (positive or negative) between forecast and actual ir ill be captured in the Flow-through deferral account.	ncremental audit						
	12.1.1 On the other hand, if actual expenditures are lower please explain the treatment of the variance.	r than forecast,						
Response:								
Please refe	to the response to BCUC IR 1.12.1.							



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#### 1 E. RATE BASE

2 13.0 **Reference:** 2015 PLANT ADDITIONS 3 Exhibit B-1, Section 7.3, p. 42 4 Table 7-4 5 13.1 Please show the calculations to support the direct overhead amount of \$5.0 6 million, Line 6 of Table 7-4. List the assumption made to determine this amount. 7 8 Response:

9 As discussed in section 3.8 of the FBC 2014-2019 PBR Application, direct overhead loading 10 refers to charges for the recovery of supervisory and administrative costs that are not directly 11 charged to specific capital projects, but are directly attributable to Transmission and Distribution 12 (T&D) capital projects. The purpose of the direct overhead loading is to simplify the treatment of 13 costs that relate to T&D capital projects, avoiding the administrative burden associated with 14 charging labour time and costs to individual projects. Instead, some direct costs are charged to 15 a direct overhead loading pool. A mechanism is then used to charge the cost to individual 16 projects on a prorated basis. Although it is possible to direct charge every cost to capital 17 projects, this mechanism is a much more efficient approach for FBC. In the FBC PBR Decision, 18 the Panel approved the use of the T&D direct overhead loading allocation during the PBR 19 period.

20 Under the direct overhead loading methodology, FBC performed a detailed analysis of the 21 estimated capital cost for each of the departments that performed work for T&D projects. This 22 was determined by estimating the total time to be charged to T&D capital projects on an 23 employee basis or individual cost basis.

For non-labor T&D capital costs, the costs are either charged directly to projects or, if not, allocated to the direct overhead loading cost pool.

The costs that are included in the direct overhead recovery are deducted from the respective department O&M budgets prior to determining the O&M subject to the capitalized overhead rate.

A summary table below shows the build-up of the direct overhead load pool for 2015. The table

shows that a total of \$5.0 million of capital-related costs will be allocated to the direct overhead

30 pool and capitalized.



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#### (\$000's)

Department	Function	201 O\	.5 Direct verhead
			Cost
Network Services - Stations Capital	Supervisory & administrative support	\$	144
Asset Management	Asset Management planning and support	\$	364
Okanagan Network Services	Management and Supervisory time	\$	454
Okanagan Line Construction	Management and Supervisory time	\$	295
Finance	Accounts payable	\$	114
Environment, Health and Safety	Reporting, auditing project work	\$	61
Procurement & Materials Handling	Supply Chain support	\$	501
Kootenay Network Services	Management and Supervisory time	\$	350
Kootenay Line Construction	Management and Supervisory time	\$	395
System Control	System monitoring & communication	\$	464
Engineering	Engineering and cost estimating	\$	325
Distrubtion Engineering	Capital engineering, design & cost estimating	\$	117
Engineering Standards	T&D Standards development & maintenance	\$	164
Planning	T&D planning and engineering	\$	659
Project Management Office	Scheduling and administrative support	\$	594
Total		\$	5,000

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13.2 Please show the calculations to support the AFUDC amount of \$0.592 million, Line 7 of Table 7 4. Please clarify whether this amount is a function of Line 10 in the table.

#### 9 **Response:**

10 AFUDC is applicable to capital projects that exceed \$100,000 and 3 months' duration.

AFUDC is not a function of Line 10 in Table 7-4, which shows the change in total CWIP.
AFUDC is a function of the opening balance CWIP and current year expenditures for projects
that are subject to AFUDC. (CWIP Subject to AFUDC is shown in Section 11 Schedule 4 Line
18).

FBC calculated the 2015 AFUDC separately for Formula Capital and Forecast Capital. Thecalculation for Formula capital is shown below.



RTIS BC	FortisBC Inc. (FBC or the C Application for Approval of 2015 Delivery Rates pursu Based Ratemaking Plan (the PBR Plan) appr by Order G-139-14 (the Ap	Submission Date: March 25, 2015			
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		Opening CWIP	Expe (\$ m	nditures nillions)	Total
	Capital Expenditures Subject to AFUDC Less Forecast Capital Subject to AFUDC Formula Capital Subject to AFUDC	\$ 7.549 (5.560) 1.989	\$	42.434 (35.329) 7.106	
	Mid-Year value Subject to AFUDC	1.989		3.553	5.541
	times AFUDC Rate				6.01%
	AFUDC on Formula Capital				0.333
	AFUDC on Forecast Capital			_	0.259
	Total AFUDC				\$ 0.592
AFUDC fo was calcu	or Forecast Capital Expenditures is almost lated on the monthly CWIP balance, time	entirely a s 1/12 of	attribut the AF	able to th UDC rate	e AMI project and e. FBC will update

3 was c 4 its AFUDC rates to reflect the final WACC in its compliance filing following a decision on 2015 5 rates.

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10 13.3 Please show the calculations to support the amount of (\$4.485) million for Cost of 11 Removal charged to Accumulated Depreciation, Line 9 of Table 7-4. List the 12 assumption made to determine this amount.

13

#### 14 Response:

15 Since Cost of Removal (COR) is part of the formula capital expenditures, it is calculated as 16 shown in Table 7-2 of the Application. The amount calculated for COR is removed from the 17 capital expenditures that are added to Plant in Service and is instead charged to Accumulated 18 Depreciation, and for this purpose FBC estimates the costs to remove assets based on the 19 nature of the capital. Overall the capital expenditures and rate base are not affected by the 20 allocation of COR to Accumulated Depreciation. The table below provides the COR estimates 21 by asset class for 2015.

	FortisBC Inc. (FBC or the Company)											
FORTIS BC*Application for Approval of 2015 Delivery Rates pursuant to the Mulit-Year Performance Based Ratemaking Plan (the PBR Plan) approved for 2014 through 2019 by Order G-139-14 (the Application)								Submission Date: March 25, 2015				
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	Generation Transmission Distribution General Plant							Total				
							(\$	millions)				
	Formula Cap	ital	\$	180	\$	1,043	\$	1,742	\$	(133) \$	2,833	
	Non-Formula	Capital		-		937		715		-	1,652	
1			\$	180	\$	1,980	\$	2,457	\$	(133) \$	4,485	
2 3 4 5 6	The reconci subtracted f Table 7-4 of	liation orm ca the Ap	of cap pital e plicatic	ital exp xpendit on.	endi ures	itures to I and cha	Plant	t in Servi I to Accu	ce a mula	dditions, in w ated Deprecia	hich the tion, is sl	COR is nown in
7												
8												
9												
10	13.4	For	Line 10	0 in Tal	ble 7	7-4, Chan	ge i	n Work in	Prc	gress, the so	urce refei	ence is
11		Sect	ion 11	, Schec	lule	4. Please	con	firm the f	igure	e of \$7.479 m	illion and	provide
12 13		the s	support	ting calo	culat	ions with	refer	ence to th	ne so	ource data in S	Schedule 4	4.

### 14 **Response:**

- 15 FBC confirms the figure of \$7.479 million for the Change in Work in Progress found in Line 10 of
- 16 Table 7-4. The calculation and the references are clarified in the table below.

		[	Dec 31 2014		Dec 31 2015	Change	Reference
17	Plant under construction not subject to AFUDC Plant under construction subject to AFUDC Construction Work in Progress (CWIP)	\$	8,175 7,549 15,724	\$	7,656 589 8,245	\$ 7,479	Section 11, Sch 4, Line 16 Section 11, Sch 4, Line 18



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#### 1 F. FINANCING AND TAXES

2	14.0	Refere	ence: FINANCING
3			Exhibit B-1, Section 8.3.3, p. 45
4			Forecast Interest Rates
5		14.1	Given the recent downward adjustments to interest rates by Canada's central
6			bank, does FBC believe that its 2015 forecast of interest costs should also be
7			adjusted downwards? If so, please provide an updated forecast and sources of
8			reference. If no update is necessary, please explain why.
9			

#### 10 Response:

11 Below is an updated forecast for 2015 short term rates based on updated economic forecasts

12 obtained from January 26 to February 19.

	2015
Banker's Acceptances	
3 month T Bills <sup>1</sup>	0.47%
Spread to CDOR	0.29%
Acceptance Fee Rate	1.00%
Bankers' Acceptance (Rounded)	1.80%
Prime Lending Rate	
Prime Rate <sup>2</sup>	2.63%
Prime Rate Margin	0.00%
Prime Lending Rate	2.63%
Weighted Average Short-term rate <sup>3</sup>	1.90%

13 <u>Notes:</u>

<sup>1</sup> Based on forecasts from 3 Canadian Banks

15 <sup>2</sup> Based on forecast Bank of Canada Overnight 3 Canadian banks with historical 200bps spread applied

- <sup>3</sup> Assumes a 90/10 mix of BAs/Prime Loans
- 17

18 FBC does not usually consider it necessary to update its financial schedules for changes in

19 forecast interest rates, both because interest rates can be volatile, and because of the existence

20 of the Flow-through deferral account. In this case, due to the materiality of the impact, FBC will

21 update its short term interest rate forecast when it files its final calculation of its 2015 permanent

22 rates.



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14.2 Please explain the spike in short term debt borrowing in 2015 as evidenced in Section 11, Schedule 27. Is this to take advantage of the lower cost of borrowing compared to FBC's long term debt?

Schedule 27

#### 8 Response:

RETURN ON CAPITAL

(\$000s)

FOR THE YEAR ENDING DECEMBER 31, 2015

9 No, the change in short-term debt borrowing year over year is primarily impacted by the amount

- of rate base to be financed and by the amount of long-term debt financing rate base. 10
- 11 The long-term and short-term debt balances, as shown below in Section 11 Schedule 27 of the

12 Application, reproduced below, must in aggregate equal 60 percent of forecast mid-year rate

13 base in accordance with the deemed capital structure approved pursuant to Order G-47-14.

Line		A	pproved		Forecast			
No.	Particulars		2014		2015	0	Change	Cross Reference
	(1)		(2)		(3)		(4)	(5)
1	Secured and Senior Unsecured Debt	¢	711 247	ç	685,000	ç	(26.247)	Section 11 Sch 28
2	Proportion	Ψ	59.08%	*	54 06%	*	-5.02%	00000111,00120
3	Embedded Cost		5.86%		5.48%		-0.38%	
4	Cost Component		3.46%		2.96%		-0.50%	
5	Return		41,685		37,545		(4,140)	Section 11, Sch 28
6								
7	Short Term Debt		11,131		75,330		64,199	
8	Proportion		0.92%		5.94%		5.02%	
9	Embedded Cost		8.63%		3.67%		-4.96%	
10	Cost Component		0.08%		0.22%		0.14%	
11	Return (including fees)		960		2,763		1,803	
12								
13	Common Equity		481,585		506,886		25,301	
14	Proportion		40.00%		40.00%		0.00%	
15	Embedded Cost		9.15%		9.15%		0.00%	
16	Cost Component		3.66%		3.66%		0.00%	
17	Return		44,065		46,380		2,315	
18								
19	TOTAL CAPITAL/ RATE BASE	\$	<mark>1,203,963</mark>	\$	1,267,216	\$	63,253	Section 11, Sch 2

14

15

- The 2014 short term debt balance of \$11,131 thousand represents the difference between the 16
- 17 required debt financing of 60 percent of 2014 Approved rate base of \$1,203,963 thousand and

18 the Approved 2014 long term debt balance of \$711,247 thousand.



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- 1 The higher 2015 short term debt balance of \$75,330 thousand represents the difference
- 2 between the required debt financing of 60 percent of 2015 Forecast Rate Base of \$1,267,216
- 3 thousand and the Forecast 2015 long term debt balance of \$685,000 thousand.
- 4 In summary, the increase in the forecast short-term borrowing balance from Approved 2014 to
- 5 Forecast 2015 is due to an increase in rate base, and also to a lower forecast 2015 long-term

6 debt balance relative to rate base, which increased the short-term borrowing requirements.



#### 15.0 **Reference:** 1 **INCOME TAX**

2 3

#### Exhibit B-1, Section 9.3, p. 49; Section 11, Schedule 25, p. 77

#### **Income Tax**

4 FBC states that its 2015 income tax is forecast to increase by \$3.486 million compared 5 to approved 2014 primarily due to increased revenues.

- Please clarify whether FBC means to imply that its accounting income has 15.1 increased in 2015 as a result of an increase in depreciation and amortization as opposed to an increase in revenues. If this is not the case, please explain.
- 8 9

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#### 10 **Response:**

11 In responding to this question, it is assumed that the term accounting income is referring to net 12 earnings before income taxes, which would be equivalent to Earned Return less the interest on 13 Debt on lines 2 and 3, under column 3 of Schedule 24, Section 11, page 76 of the Application. 14 To clarify, when forecasting revenue requirements and income tax expense for rate-setting 15 purposes, a bottom up approach is taken. Therefore, an increase in accounting depreciation 16 and amortization increases revenues (rates), which in turn increases taxable income and 17 income tax expense. The higher income tax results because depreciation and amortization is 18 not a tax-deductible item.

19 2014 Approved revenues, which exclude the 2014 Interim Rate Variance account, are lower 20 than 2015 Forecast revenues as a result of 2012 and 2013 variances between forecast for rate-21 setting purposes and actual which were deferred and flowed back to customers through 22 amortization of deferred charges.

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- 26 15.2 Please explain the apparent large swing in Line 3 of Schedule 25, Amortization of 27 Deferred Charges between 2014 and forecast 2015.
- 29 Response:

30 The change of approximately \$9 million in the amortization of deferred charges from 2014 Approved as compared to 2015 Forecast, as shown on line 3 of Schedule 25, is primarily due to 31 32 2012 and 2013 variances between forecasts for rate-setting purposes and actuals which were 33 deferred and flowed back to customers through amortization of deferred charges in 2014 as a 34 reduction to 2014 Approved Revenue Requirements. For 2015 Forecast, there is not the same 35 magnitude of variances to be flowed back to customers as a reduction in 2015 forecast revenue



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- 1 requirements which then accounts for the variance between 2014 Approved and 2015 Forecast
- 2 Amortization of Deferred Charges, the details of which are shown below.
- 3

#### Table: Amortization of Deferred Charges 2014 & 2015

	Approved	Forecast	
Amortization of Deferred Charges	2014	2015	Change
		(\$000s)	
Amortization of Non-Rate Base Deferred Charges			
Amortization of Variances included in the Flow-through Accounts			
Revenue Variance	4,859	4,494	
Power Purchase Variance	(14,963)	(611)	
Water Fee Variance	(427)	(243)	
Wheeling Variance	-	(68)	
Property Tax Variance	-	(822)	
Other Income Variance	-	(1,007)	
Interest Variance	-	(1,740)	
Insurance Premiums Variance	-	(88)	
Income Tax Variance	-	708	
AMI Savings	-	(125)	
Amortization of Flow-through Accounts	(10,531)	498	11,029
Generic Cost of Capital Revenue Requirements Impact	(3,611)	-	3,611
City of Kelowna Acquisition Customer Benefit	(2,610)	-	2,610
Amortization of 2014 Earnings Sharing	-	(244)	(244)
Amortization of 2014 Interim Rate Variance	-	(4,387)	(4,387)
	(16,752)	(4,133)	12,619
Pension and OPEB Variance	2,358	1,024	(1,334)
Amortization of Other Non-Rate Base Deferred Charges <sup>(1)</sup>	3,697	750	(2,947)
Total Amortization of Non-Rate Base Deferred Charge [Sec 11, Sch 7, Col 7]	(10,697)	(2,359)	8,338
Amortization of Rate Base Deferred Charges			
Amortization of Other Rate Base Deferred Charges	3,408	3,013	(395)
2011 Flow-Through and ROE Sharing Mechanism Adjustments	(1,046)	-	1,046
Total Amortization of Rate Base Deferred Charges [Sec 11, Sch 21, Col 2]	2,362	3,013	651
Amortization of Deferred Charges [Sec 11, Sch 25, Line 3]	(8,335)	654	8,989

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<sup>(1)</sup> Note that this line item includes the amortization of debt financing costs, therefore the Non-Rate base
 deferral amounts shown above this line item are presented as excluding the amortization of debt
 financing costs.



#### 1 G. ACCOUNTING MATTERS

2	16.0	Reference	INTRODUCTION
3			Exhibit B-1, Section 1.2, p. 2
4			2015 Interim and Permanent Rates
5		FBC states	on page 2 of the Application that it:
6 7		 peri	will be unable to collect the difference between 2015 interim rates and manent rates from customers by way of a bill adjustment reflecting their
8		con	sumption from January 1, 2015. As an alternative, FBC proposes to collect
9		the	difference by way of a general rate increase to be in implemented as soon as
10		reas	sonably possible following the Commission's decision.
11		16.1 Plea	ase explain why FBC is unable to process bill adjustments for customer

- 12
- 13

### 14 **Response:**

The full integration and testing of the AMI system with the existing billing system requires the involvement of all existing FBC Information Systems staff that are normally involved in supporting the operation of the billing system. FBC has backfilled a small number of these staff in order to ensure it can continue to perform standard scheduled tasks to support ongoing customer billing, but has not added enough staff to take on any other project work related to customer billing.

consumptions from January 1, 2015.

It has been several years since FBC has implemented retroactive rate charges or refunds from its billing system, and it has never done so with the residential conservation rate. Although the Company is confident that the billing system is capable of performing this function, the amount of configuration and testing is significant and would negatively impact the AMI implementation since it would require the attention of staff currently dedicated to that project.

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- 2916.2Please discuss FBC's proposal and the potential impact for those customers or30customer classes who may have seasonal consumption patterns, fuel switching31opportunities or implementation of DSM strategies during the year. How will the32proposed methodology impact these customers when the interim rates were33established?
- 34



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#### 1 Response:

2 Because FBC proposes to implement the changes mid-year (depending on the timing of a 3 decision from the Commission), any seasonal impacts from higher winter consumption should 4 be mitigated for the majority of customers due to the fact that total billable load in the first and 5 second half of the year is similar. Those customers that use more electricity in the second half 6 of the year will pay more than they would if a retroactive rate increase were implemented. 7 Customers who use less electricity in the second half of the year, perhaps due to fuel switching 8 or DSM implementation, will benefit from the FBC rate increase proposal. The prevalence of 9 fuel switching is low overall (FBC's 2012 Residential End Use Survey showed that only 6 10 percent of customers changed their main space heating fuel over a period of five years) and 11 FBC expects that the instances of customers moving to electric heating and therefore 12 experiencing higher usage in the second half of the year is extremely low.

FBC agrees that retroactive bill adjustments are a more accurate means of aligning final 2015 rates with actual usage and intends to make the necessary changes to the billing system to accommodate retroactive adjustments, once the resource constraints imposed by the AMI project implementation are removed.



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#### 17.0 **Reference:** DISCONTINUATION OF DEBT FINANCING OF PENSION AND OPEB

#### Exhibit B-1, Section 12.3.2, pp. 84-85

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## Pension and OPEB financing

4 In this Application, FBC seeks to discontinue the practice of recording a debt return on 5 the pension and OPEB funding liability account, currently treated as non-rate base, so 6 that it could avoid the stranded financing costs being accumulated outside of rate base. 7 FBC instead proposes this account to be included in rate base because it reasons that "it 8 is appropriate for the Company to earn a return on the account if the Company has 9 made contributions in excess of amounts that have been recovered from ratepayers (a 10 debit balance) or for ratepayers to see a reduction in their rates if contributions are less than amounts recovered in rates through expensing (a credit balance)." 11

Prior to the approval of the pension/OPEB liability deferral account in

Order G-110-12, what was FBC's treatment of this funding liability?

Please clarify the accounting treatment and any carrying costs.

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#### 16 Response:

17.1.1

17 Prior to Order G-110-12, the Pension/OPEB Funding Liability was included in rate base and as 18 such was financed at the Weighted Average Cost of Capital (WACC) which consists of both a 19 debt and equity return. Since the Pension/OPEB Funding Liability was in a credit balance, the 20 WACC incurred was also a credit balance. Under this methodology, the debt and equity carrying 21 cost credits on the Pension/OPEB Funding Liability reduced revenue requirements in the year 22 incurred (as a decrease to current cost of service).

23 This treatment differed from that ordered in Order G-110-12 which required a debt only carrying 24 cost credit on the pension/OPEB liability to be capitalized and subsequently amortized as a 25 refund in rates. This was explained on page 3 of the September 17, 2012 clarification letter to 26 Order G-110-12 which stated "The Commission confirms the following: i) With respect to 27 financing costs applicable during the test period, financing costs are to be added to the deferred 28 account and amortized concurrently with principal amounts." As noted in the Application on 29 page 84, since the Pension/OPEB Funding Liability balance will never be amortized into rates, it 30 is not possible to follow Order G-110-12 for this particular account.

31 Since 2011 FBC has sought to comply with Order G-110-12, and has been amortizing the prior year's financing costs in the subsequent year. However, as the Pension/OPEB Funding Liability 32 33 balance does not get amortized into rates, FBC realized that this treatment has not been 34 consistent with the Commission's direction to amortize financing costs "concurrently with 35 principal amounts".



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Further, FBC has concluded that the Commission could not have intended for FBC to apply the 1 treatment directed in Order G-110-12 to the Pension/OPEB Funding Liability account. First, the 2 3 Pension/OPEB Funding Liability is not a deferral account in the usual definition, in that it exists 4 independently of any order from the Commission. While the Commission approves the 5 regulatory treatment of this account, non-regulated entities also recognize a Pension/OPEB 6 Funding Liability. It is therefore not clear whether the Commission's directions with respect to 7 deferral accounts properly apply to this account. Second, the use of debt financing instead of 8 the WACC results in a reduction in the credits that would otherwise accumulate for the benefit of 9 customers. Third, since the Pension/OPEB Funding Liability account does not amortize, a 10 proper interpretation of the Commission's direction to amortize financing costs "concurrently 11 with principal amounts" would result in FBC not returning to customers any credits that 12 accumulate in the account. All of these factors have led FBC to the conclusion that the 13 treatment of this account is uncertain under the Commission's Orders and needs to be clarified.

14 FBC's proposal for the treatment of this account is the simplest option and is to revert to the 15 previously approved methodology, which would be to include the account in rate base, such that 16 ratepayers receive a WACC return through a reduction to the cost of service in the same year 17 that the Pension/OPEB Funding Liability increases. As an alternative, the Commission could 18 direct FBC to continue with the treatment FBC applied from 2011 to 2015, where the debt return 19 credit is amortized in the following year. FBC notes that this alternative would be inconsistent 20 with the treatment of other liabilities which reduce rate base and would be less beneficial to 21 ratepayers than FBC's proposed treatment.

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- 2617.2Please provide a continuity schedule showing FBCs' calculation of its pension27and OPEB asset/ liabilities for the period 2009–2015. Please clarify whether it is28the after-tax pension asset/ liability that FBC is proposing to be included in rate29base starting in 2015.
- 3031 **Response:**

The following is a continuity schedule for the Pension/OPEB Funding Liability from 2009 to 2015.



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	2009 Actual	2010 Actual	2011 Actual	<b>2012</b> Actual (\$000s)	2013 Actual	2014 Forecast	2015 Forecast
Pension/OPEB Funding Liability - Opening Balance	3,665	2,503	(419)	(3,008)	(12,399)	(17,560)	(18,719)
Expense	(6,714)	(8,043)	(10,134)	(11,572)	(12,090)	(7,499)	(7,351)
Acctg Transition Adjustments	(480)	(480)	(480)	(7,682)	-	-	-
Contributions	5,534	4,436	7,092	7,244	5,978	8,103	7,464
Tax Effect	498	1,165	933	2,796	1,393	(1,636)	-
Debt Financing (net of tax)	-	-	-	(177)	(442)	(127)	(10)
Pension/OPEB Funding Liability - Ending Balance	2,503	(419)	(3,008)	(12,399)	(17,560)	(18,719)	(18,616)

<sup>1</sup> 

2 As per the above schedule, FBC is proposing to include the \$18,719 thousand total closing 3 balance for 2014/opening balance for 2015, which ties to the balance in Section 11, Schedule 4 23, line 16, column 2 of the Application, for inclusion in rate base beginning in 2015. The 2015 5 Forecast Debt Financing in the above schedule includes the 2014 accrued debt return of \$745 6 thousand (financing cost credit), net of tax, to be returned to customers as a reduction in 2015 7 revenue requirements, netted against the 2015 accrued debt return of \$755 thousand (financing 8 cost credit) that would be refunded/amortized to customers in 2016 if FBC followed the same 9 methodology as it did from 2012 to 2014.

10 If the Pension/OPEB Funding Liability is included in rate base beginning in 2015, then the 2015 11 ending balance would be \$17.861 million rather than the \$18.616 million shown above, since 12 the 2015 accrued debt financing of \$755 thousand would be removed from the account.

13 This balance is net of tax for years prior to 2014, as that was the approved treatment at the 14 time. In 2014, there is a reversal of tax effect in the Pension/OPEB Funding Liability account 15 which is the offset of reversing the tax effect on the Pension and OPEB transitional obligation 16 deferral accounts, resulting in no net effect on the aggregate of the balances.

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21	1	17.2.1	What is the 2015 rate impact for this rate base proposal?
22			
23	Response:		
24 25 26	Inclusion of the increase by ap rate increase o	e Pensi proxima f approx	ion/OPEB Funding Liability in rate base would reduce the 2015 rate itely 0.10 percent from 4.60 percent, as set out in the Application, to a ximately 4.50 percent, due to the lower rate base and associated return
27	that results fron	n ⊢BC′s	proposal.



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17.3 Please clarify whether FBC's pension expense for financial reporting purposes is the same as the pension expense that is being recovered in rates. If there are any differences, explain and show the calculations.

### 9 **Response:**

- 10 The pension and OPEB expense for financial reporting purposes is equal to the pension and 11 OPEB expense being recovered in rates. Both are based on the forecast/approved amount, 12 with any variance captured in the Pension and OPEB Variance deferral account for future
- 13 recovery/refund.
- The Pension and OPEB Variance deferral account is a separate account from the Flow-through deferral account, which captures variances in a number of other forecast items. This account is also a separate account from the Pension and OPEB Funding Liability account, which captures the difference between the amounts funded by the Company and the amounts expensed and collected from ratepayers.
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- 20
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- 17.4 Please explain whether FBC has a mechanism to true up its annual pension expense forecast to actuals during the PBR. Will this be trued up in the Flow Through deferral account?
- 24 25

## 26 **Response:**

- 27 Please refer to the response to BCUC IR 1.17.3.
- 28
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- 3217.5What is the amount of debt return that has accrued in the pension and OPEB33funding liability account as a result of Order G-110-12?
- 34



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#### 1 Response:

Please refer to the response to BCUC IR 1.17.2 which discusses the 2014 accrued debt return
of \$745 thousand (financing cost credit), net of tax, to be returned to customers as a reduction
in 2015 revenue requirements.

5 Also discussed in that response, there is a further \$755 thousand relating to 2015 which would 6 be removed from the account if the account is instead included as a reduction in rate base.

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- 9 10
- 17.5.1 What does FBC propose as a treatment to this accrued debt return?

#### 11 Response:

FBC proposes that the accrued debt return credit of \$745 thousand, net of tax, incurred in 2014 be returned to ratepayers (amortized in rates) in 2015. The determination of 2015 revenue requirements filed on February 6, 2015 already included the amortization of this \$745 thousand credit as per line 16, Schedule 23, Section 11 of the 2015 Application. The \$755 thousand accrued debt return for 2015 would be removed from the account before it was included in rate base and no further financing would be recorded in the account in future years.

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- 2117.6Please clarify the rationale behind FBC's proposal to include in rate base. By22moving this liability account from non-rate base to rate base treatment, FBC will23be allowed to accrue a rate base return. Is FBC seeking this treatment so that it24will be allowed to recover its carrying costs annually, as opposed to the current25accrual of a debt return which does not get recovered? If this interpretation is26incorrect, please explain.
- 27

#### 28 **Response:**

Although the attraction of a rate base return results from the requested rate base treatment of the account, it is not the primary rationale behind FBC's proposal. The rationale for the request is that existing treatment is uncertain and the proposed treatment is the most appropriate and would allow ratepayers to receive a WACC return through a reduction to the cost of service in the same year that the Pension/OPEB Funding Liability increases. Please refer to the response to BCUC IR 1.17.1.1.



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1 2 3	FBC notes th rates for custo	at the financing amounts for this account are a credit and represent a reduction of omers, as opposed to being an amount which is not recovered from customers.
4 5		
6		
7 8	17.7	Please clarify whether FEI has been granted similar rate base treatment of its pension and OPEB liability account. Please provide any references that support
9		the rationale behind FEI's approved treatment.
10	Bosponsor	
	<u>Response.</u>	
12 13	Yes, FEI has incurred in 19	maintained this rate base treatment since the Pension/OPEB Funding Liability was 099 when the accounting guidelines were changed to require the current treatment

14 of OPEBs. The treatment was first approved for FEI by Order G-135-99.



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#### 1 18.0 Reference: NON RATE BASE DEFERRAL ACCOUNTS

## 2 3

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5 6

## Exhibit B-1, Section 12.4.1.1, p. 86

#### Residual Capacity Agreement Tariff Supplement 10 & RS 11

FBC states that it incurred \$0.110 million (before tax) in costs related to this proceeding in 2014, which include legal fees, Commission expenses and intervener funding. FBC seeks approval for a deferral account and proposes amortization over one year in 2015.

- 7 18.1 If the Commission does not approve this deferral account, please explain how
  8 FBC will treat these costs.
- 9

### 10 Response:

FBC does not believe there is any basis upon which to change the accepted treatment of regulatory application costs, which should continue to be recovered from customers. If the Commission does not approve the deferral account and also does not approve an alternate recovery method, FBC would have to write off the costs of this proceeding to O&M Expense in 2015.

Incremental regulatory application costs are the subject of deferral accounts because the costs of regulatory processes are not controllable by the Company and are variable from year to year, depending on factors including the number and type of processes, the extent of the review process ordered by the Commission, and the number of and extent of participation by interveners. Therefore the accepted practice of deferring the costs of regulatory proceedings is the appropriate treatment of such costs.

If deferral account treatment is not approved for its regulatory application deferral accounts, FBC requests that these non-controllable costs be forecast each year and excluded from the PBR O&M formula so that costs are fully recoverable from customers through the Flow through variance account.

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29		18.1.1	Alternatively, please discuss whether FBC is still able to recover these
30			costs in 2015 without the use of a deferral account.
31			
32	<u>Response:</u>		
33	Please refer	to the res	ponse to BCUC IR 1.18.1.
34			



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#### 1 19.0 Reference: NON RATE BASE DEFERRAL ACCOUNTS

#### Exhibit B-1, Section 12.4.1.2, p. 86

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## 2015-2016 DSM Plan Application

FBC states that it incurred \$0.016 million (before tax) in costs related to this proceeding
in 2014 and expects to incur an additional \$0.036 million (before tax) in 2015. FBC
seeks approval for a deferral account and proposes amortization over two years in 2015
and 2016.

- 8 19.1 If the Commission does not approve this deferral account, please explain how
  9 FBC will treat these costs.
- 10

#### 11 Response:

12 Please refer to the response to BCUC IR 1.18.1.



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#### 1 20.0 Reference: NON RATE BASE DEFERRAL ACCOUNTS

#### Exhibit B-1, Section 12.4.1.2, p. 86

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#### 2016 Long Term Electric Resource Plan (LTERP) Development

FBC states that it will file its LTERP on or before June 30, 2016 and proposes to collect its incremental costs of the preparation, including expert and consulting fees, public consultation and incremental staff expenses, in a deferral account. FBC anticipates \$0.461 million (before tax) in 2015 to begin preparing for the application.

- 8 20.1 Given that FBC's base O&M includes the departments of: Finance & Regulatory, 9 Operations Support, Engineering Services & Project Management, Governance 10 (which includes legal services) and Communications & External Relations, 11 please explain and provide a detailed breakdown of the anticipated \$0.461 12 million that FBC considers to be incremental to the spending envelope already 13 available in the 2015 formula driven O&M.
- 14

### 15 **Response:**

16 FBC's Base O&M includes regular O&M costs associated with the development of its long term 17 plans, including long term resource plans, but does not include incremental O&M expense, as 18 described in this response. The preparation of the LTERP requires participation by a significant 19 number of employees throughout FBC, and their participation is generally included in the Base 20 O&M expenses. The incremental costs captured in the deferral account are related to 21 stakeholder consultation, external consulting, resource options collaboration with BC Hydro, 22 portfolio analysis software and incremental labour. These incremental costs for the LTERP 23 have been recovered in deferral accounts in the past, as approved by the Commission, and are 24 therefore not part of FBC's Base O&M. More detail of these incremental costs is provided 25 below.

FBC mistakenly included the forecast costs of the regulatory review process in its estimates for 2015; the regulatory review process will not occur in 2015, but rather in 2016. The forecast 2015 costs associated with the development of the LTERP should therefore be \$0.335 million. Because no costs are being amortized into rates in 2015, FBC will correct the additions to this non-rate base deferred account in its compliance filing following the Commission's Decision on 2015 rates.

The following table provides a breakdown of the forecast \$0.335 million of incremental costs for the development of the LTERP in 2015.


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	(millions)
Stakeholder consultation	\$ 0.048
External consultant work or studies	0.100
Resource options collaboration with BC Hydro	0.060
Portfolio analysis software	0.008
Incremental labour	0.119
Total	\$ 0.335

- 1
- 2 A description of each of the items in the table above is as follows:
- Stakeholder consultation includes estimates of costs related to workshops led by FBC
   within its service area communities as well as advisory group workshops held in
   Vancouver.
- External labour or consultant work or studies costs relate to any incremental work,
   research or analysis that FBC might require to develop its LTERP. This could include,
   for example, research regarding regional electricity market developments.
- Resource options collaboration costs relate to the collaboration work FBC is conducting
   with BC Hydro in developing and updating resource options within BC. This
   collaboration saves time and costs compared to FBC and BC Hydro doing this work
   separately and results in a more consistent set of resource options and associated
   costs.
- Portfolio analysis software is required to perform the portfolio analysis that FBC was directed to undertake by the Commission in its decision regarding the 2011 LTERP.<sup>8</sup>
- Incremental labour is that required above the amounts included in Base O&M, such as
   overtime paid to unionized employees or temporary positions required exclusively for the
   development of the LTERP.
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- 20.2 What is FBC's total budget for the preparation of the LTERP? Provide a breakdown by year if possible.
- 23 24

<sup>&</sup>lt;sup>8</sup> BCUC Order G-110-12 dated August 15, 2012.



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# 1 Response:

- 2 FBC's total budget for the LTERP at this time is \$0.6 million. As noted in the response to BCUC
- 3 IR 1.20.1, the regulatory review of the LTERP will occur in 2016, not in 2015. The breakdown
- 4 by year of these costs is as follows:

\$ millions	2015	2016	Total
Preparation and Development	0.335	0.115	0.450
Regulatory Process	-	0.150	0.150
Total Costs	0.335	0.265	0.600



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#### 1 21.0 Reference: NON RATE BASE DEFERRAL ACCOUNTS

#### Exhibit B-1, Section 12.4.2.2, p. 88

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#### Flow-Through Deferral Account

FBC states that the Flow-Through deferral account will be used to capture the annual variances between the approved and actual amount of costs and revenues which are included in rates on a forecast basis.

- 7 21.1 To the extent that actual customer additions vary from the forecast customer additions for each year in the PBR, please explain FBC's understanding of how this difference will be treated in terms of (i) the revenue requirements as calculated under the PBR formulas, and (ii) through the use of the Flow Through deferral account.
- 12

#### 13 Response:

Customer growth forecasts do not affect the PBR formulas because the formula growth factorsrely on actual (past) customer growth, not forecast growth.

16 Customer count, which includes customer additions, impacts FBC's revenue requirements outside the PBR formulas because it is a key determinant of sales load, which in turn 17 18 determines both forecast power purchase expense and forecast revenue. Variances from both 19 forecast power purchase expense and forecast revenue are included in the Flow-through 20 deferral account. Therefore, any variances in the revenue requirements outside the PBR 21 formula resulting from differences between forecast and actual customer counts are trued up 22 and amortized into the subsequent year's revenue requirements through the use of the Flow 23 Through deferral account.

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- 21.1.1 In a hypothetical situation where the actual number of customers is lower than the forecast number of customers used to drive the PBR formulae, please explain how this difference is treated in terms of its impact on the flow-through deferral account and the earnings sharing mechanism.
- 33 **Response:**

The forecast number of customers is not a determinant of the PBR formulas and therefore does not affect earnings sharing – the growth factors in the PBR formulas are based on actual



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customers. Please refer to section 2.3 of the Application which discusses the growth factor
 calculation for the PBR formulas.

3 If the actual number of customers is lower than the forecast number of customers used to 4 calculate revenue and power purchase expense, then the actual revenues and the actual power 5 purchase expense will be lower than forecast, all else equal. This variance will be captured in 6 the Flow-through deferal account in the year the variance is realized and the impacts will be 7 amortized into rates in the following year.

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  11 21.2 In terms of the "revenue variances" that will accrue to the Flow Through deferral account on an annual basis, does this imply that the customer additions will be trued-up?
- 14
- 15 **Response:**
- Yes, if "trued up" is defined to mean adjusted to actual. Please refer to the response to BCUCIR 1.21.1.



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#### 1 22.0 Reference: NON RATE BASE DEFERRAL ACCOUNTS

#### Exhibit B-1, Section 12.4.2.3, p. 90

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5 6 BC Hydro Application for Power Purchase Agreement with FBC

FBC forecasts to incur an additional cost of \$0.025 million in 2015 related to the Section 2.5 Guidelines, Self-Generation Policy and Zellstoff Celgar Partnership Limited's appeal process.

- Given that FBC's base O&M should already include legal and regulatory
   services, please explain and provide a detailed breakdown of the anticipated
   \$0.025 million that FBC considers to be incremental to the spending envelope
   already available in the 2015 base O&M.
- 11

#### 12 Response:

FBC's Base O&M provides for regular labour of the employees in its regulatory departments, some of which is related to regulatory proceedings. Incremental regulatory application costs have historically been recovered by way of deferral accounts and therefore are not included in FBC's Base O&M. These incremental costs include external legal and consulting fees, Commission and intervener costs, miscellaneous facilities and supplies, and incremental labour and staff expenses.

20 139-14 related to FBC's participation in BC Hydro's Application for approval of a new PPA with

21 FBC are for external legal fees (approximately \$20 thousand) and incremental staff and other

22 expenses (approximately \$5 thousand).



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#### 1 H. SERVICE QUALITY INDICATORS

- 2 23.0 Reference: ALL INJURY FREQUENCY RATE
  - Exhibit B-1, Section 13.4.1, p. 94

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Severity and Duration of Injuries

FBC states on page 94 of the Application, "During 2013 and 2014, the number of recordable safety incidents was 11 and 14, respectively, representing an increase from the prior year 2012 when a total of 8 incidents were recorded."

- 8 23.1 Please provide details of the recordable safety incidents for 2013 and 2014 so
  9 that the severity and duration of these incidents can be better understood.
- 10

### 11 Response:

12 The table below provides details of the recordable safety incidents for 2013 and 2014. The 13 incidents are classified into the following two injury types:

- Medical treatment injury (MT) is an occupational injury or illness that required treatment by a licensed health care professional beyond first aid, typically at a hospital or clinic, and does not result in the injured employee missing a complete shift beyond the day of the injury. Medical treatment includes but is not limited to:
- Prescribing non-prescription medications at prescription strength
- Immunization such as Hepatitis B vaccine or rabies related to an injury
- Applying rigid support devices designed to immobilize parts if the body
  - Wound closing devices (sutures, staples)
  - Physiotherapy, oxygen therapy, and chiropractic treatment.

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- Lost-time injury (LTI) is an occupational injury that occurs where the employee is unavailable because of the injury for his/her next scheduled shift.
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The lost days referred to in the tables below are calendar days including weekends that are lost as a result of an injury.



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# Summary of Incidents in 2013 and 2014

2013								
	Injury Type	Date	Affiliation	Description	Body Part	Lost Days	Description of Event	
	LTI	1/04/2013	M&E	Strain	Back	15	Moving steel on a pallet.	
	LTI	1/07/2013	IBEW	Strain	Back	15	Loading poles onto trailer.	
	LTI	1/15/2013	IBEW	Strain	Back	16	Slipped exiting forklift.	
Q1	LTI	2/26/2013	IBEW	Strain	Back	2	Pulling and positioning 750mcm aluminum underground primary cable	
	MT	2/27/2013	IBEW	Foreign Object in eye	Eye	N/A	Grit lodged in eye lashes welding helmet and safety glasses.	
	LTI	3/01/2013	IBEW	Strain	Knee	11	Bending and kneeling to pick up paint chips.	
	MT	4/18/2013	IBEW	Bruise	Leg	N/A	ATV flipped over	
02	MT	4/18/2013	IBEW	Sprained	Ankle	N/A	Climbing off fence and rolled ankle.	
QZ	MT	4/26/2013	IBEW	Laceration	Finger	N/A	Lifting, finger caught between transformer and mounting strut.	
	MT	5/23/2013	IBEW	Strain	Back	N/A	Slipped on waxed floor	
Q4	LTI	11/01/2013	M&E	Fracture	Leg/Shoulder	34	Fell dismounting vehicle.	
			Total	11				

	2014						
	Injury Type	Date	Affiliation	Description	Body Part	Lost Days	Description of Event
Q1	MT	2/28/2014	IBEW	Strained	Shoulder	N/A	Putting on a lower rad hose on rad
02	MT	5/5/2014	IBEW	Strained	Back	N/A	Pulling conductor
42	LTI	6/6/2014	IBEW	Torn ligament	Finger	85	Loss of balance



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	2014							
	Injury Type	Date	Affiliation	Description	Body Part	Lost Days	Description of Event	
	LTI	7/9/2014	IBEW	Strained	Back	19	Strained back while installing plywood	
	MT	8/5/2014	IBEW	Strained	Shoulder	N/A	Opening 3 phase pad mount door and felt a sharp pain	
Q3	LTI	8/8/2014	IBEW	Electrocuted	Right thumb	77	Made contact with the 600/347 volt system	
	LTI	9/4/2014	IBEW	Trauma		28	Breaker created a phase to phase fault on low voltage	
	MT	9/5/2014	M&E	Strained	Leg	N/A	Tripped over hose	
	MT	11/11/2014	IBEW	Strained	Back	N/A	Removing pieces of tree from roadway, strained back	
	LTI	11/21/2014	IBEW	Strained	Knee	12	Slipped off back of truck twisting knee	
Q4	LTI	11/28/2014	IBEW	Strained	Back	9	Experienced back pain working on outage restoration	
	MT	12/5/2014	IBEW	Strained	Foot	N/A	Slipped without fall	
	LTI	12/8/2014	IBEW	Strained	Neck	6	Slipped without fall on ice	
	LTI	12/20/2014	IBEW	Whiplash	Back/Elbow	21	FBC vehicle rolled off road	
			Total	14				



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#### 1 24.0 Reference: TELEPHONE SERVICE FACTOR (NON-EMERGENCY)

Exhibit B-1, Section 13.4.2, pp. 96–97

#### Improvement

4 In the Application, FBC states, "The TSF results have improved during the last half of 2014."

- 24.1 Please provide the percentage of non-emergency calls that are answered in 30 seconds for the first and last half of 2014 to demonstrate the stated improvement in the TSF results.
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#### 10 Response:

11 The non-emergency TSF percent scores for the first and last half of 2014 were:

Year	First Half 2014 (Jan-Jun) TSF%, Weighted	Second Half 2014 (Jul-Dec) TSF%, Weighted
2014	36	62

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#### 1 25.0 Reference: TELEPHONE ABANDON RATE (EMERGENCY)

Exhibit B-1, Section 13.4.2, pp. 97-98

#### Improvement

- 4 FBC states in the Application, "The abandonment rate has improved during the last half 5 of 2014."
  - 25.1 Please provide the abandonment rate for the first and last half of 2014 to demonstrate the stated improvement in the abandonment rate.

#### 9 **Response:**

- 10 While the reference in the heading to this IR indicates "emergency", FBC does not have a
- 11 queue for emergency calls and the telephone abandon rate information indicator applies to non-
- 12 emergency calls. FBC therefore has provided the abandon rate for non-emergency calls.
- 13 The abandon rate for the first half and second half of 2014 was:

	First Half 2014	Second Half 2014
	(Jan-Jun)	(Jul-Dec)
Year	Abandonment	Abandonment
	Rate %,	Rate %,
	Weighted	Weighted
2014	19	5

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Response to British Columbia Utilities Commission (BCUC or the Commission) Information Request (IR) No. 1

# 1 26.0 Reference: GENERATOR FORCED OUTAGE RATE

#### Exhibit B-1, Section 13.4.3, pp. 99–100

#### **Cost of Additional Purchased Power**

- 4 On pages 99 and 100 of the Application, FBC states:
- 5 This FOR resulted from approximately 1,489 forced outage hours for the 6 combined 15 generating units. The main contributors were approximately 481 7 hours of outage hours due to the Corra Linn Unit 2 fire in 2013 that carried over 8 into January 2014, approximately 959 hours for the fire at South Slocan Unit 1 9 and approximately 59 outage hours for a ground fault at the Upper Bonnington 10 Unit 2 in July 2014.
- Please provide the forecasted cost to repair the generators at Corra Linn Unit 2
   and South Slocan Unit 1.
- 13

#### 14 **Response:**

The cost of repairs for the Corra Linn Unit 2 is covered by an insurance claim with the deductible component of the capital cost amounting to approximately \$651,000. All of the repairs were completed in 2014 and the unit was returned to service. The main cables also suffered irreparable damage in the fire decreasing their life expectancy and are scheduled for replacement in July 2015.

21 22 23 24 26.1.1 Please confirm that the generators' repair costs are recovered through 25 regular capital and O&M expenditures under the formulae spending envelopes. If not, please explain. 26 27 28 **Response:** 29 FBC confirms that the costs recovered through capital and O&M are included under the formula 30 spending envelopes. 31 32

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<sup>20</sup> The South Slocan Unit 1 repair was completed in 2014 at a cost of \$90,650.



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26.2 What was the estimated amount of MW and GWhs that was required to be purchased to replace the energy not generated at Corra Linn Unit 2 and South Slocan Unit 1 during the generator fires? Provide your response by year.

## 5 **Response:**

6 The outage at Corra Linn Unit 2 from July 2013 to January 2014 resulted in a loss of 50,898 7 MWh in total energy, 44,599 MWh of which was in 2013 and 6,299 MWh was in 2014. The 8 capacity lost due to this outage varied by month, and averaged 15.9 MW over the period.

9 The outage at South Slocan Unit 1 in April and May of 2014 resulted in an energy loss of 12,517
10 MWh and an average capacity loss of 16.2 MW.

11 All of the energy lost due to these outages was required to be replaced, as it all would have 12 been used to meet FBC load requirements.

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26.3 What was the estimated value of the capacity and energy purchased to replace
the energy not generated due to the generator fires at Corra Linn Unit 2 and
South Slocan Unit 1? Provide your response by year.

# 20 **Response:**

21 The estimated cost to replace the energy and capacity not available as a result of the fire at 22 Corra Linn Unit 2 was \$1.724 million (\$1.517 million in 2013 and \$0.207 million in 2014). FBC 23 has claimed this cost under its business interruption insurance, and expects a full recovery, 24 excluding the cost incurred in the first 30 days, equal to \$0.319 million. The expected insurance 25 recovery is equivalent to \$1.405 million (\$1.198 million in 2013 and \$0.207 million in 2014). After 26 taking into account the expected insurance recoveries, the net impact to FBC's power purchase 27 expense is an increase of \$0.319 million in 2013. The insurance claim remains open until final 28 repairs will be made on the unit later in 2015.

The estimated cost to replace the energy and capacity as a result of the fire at South Slocan Unit 1 was approximately \$0.242 million in 2014. There were no insurance recoveries for this outage as the losses outside of the 30 day waiting period were below the deductible.

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26.4 Please provide the estimated cost of the capacity and energy not generated at Corra Linn and South Slocan due to the generator fires at Corra Linn Unit 2 and South Slocan Unit 1. Provide your response by year.

# 5 **Response:**

- 6 The cost of the capacity and energy not generated due to the two outages is the same as the
- 7 replacement cost of the outages discussed in the response to BCUC IR 1.26.3.

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# Attachment 3.1

# **REFER TO LIVE SPREADSHEET MODEL**

Provided in electronic format only

(accessible by opening the Attachments Tab in Adobe)