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October 13, 2015

Via Email
Original via Mail

Commercial Energy Consumers Association of British Columbia
c/o Owen Bird Law Corporation
P.O. Box 49130
Three Bentall Centre
2900 – 595 Burrard Street
Vancouver, BC V7X 1J5

Attention: Mr. Christopher P. Weafer

Dear Mr. Weafer:

Re: FortisBC Inc. (FBC)

**Multi-Year Performance Based Ratemaking Plan for 2014 through 2019
approved by British Columbia Utilities Commission (Commission) Order G-139-
14 (the PBR Plan) – Annual Review for 2016 Rates (the Application)**

**Response to the Commercial Energy Consumers Association of British
Columbia (CEC) Information Request (IR) No. 1**

On September 11, 2015, FBC filed the Application referenced above. In accordance with Commission Order G-139-15 setting out the Regulatory Timetable for the review of the Application, FBC respectfully submits the attached response to CEC IR No. 1.

Due to a small number of updates to the forecasts in the Application, FBC will be filing an Evidentiary Update prior to the Annual Review Workshop. The Evidentiary Update will include the items listed below:

- Update to incorporate the forecast 2016 reduction in property taxes (see response to BCUC IR 1.16.3);
- Update to the balance in the Capacity and Energy Purchase and Sale Agreement with Powerex Corp. Application deferred account (see response to BCUC IR 1.21.3); and

- Update to 2015 and 2016 revenue to give effect to certain determinations of the Commission in the Stage IV Decision regarding Celgar's Stand-by Billing Demand (Order G-14-15).

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

Sincerely,

FORTISBC INC.

Original signed by: Joyce Martin

For: Diane Roy

Attachments

cc: Commission Secretary
Registered Parties (email only)

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1 **1. Reference: Exhibit B-1-1, Page 4**

FBC is projecting O&M expenses in 2015 excluding items forecast outside of the PBR formula to be approximately \$0.983 million lower than formula amounts, representing approximately a two percent variance. The expected savings are a result of the Company applying a broad based focus on productivity. While some of the savings are one-time in nature (such as delays in filling vacancies), some of the savings are the result of efficiencies which are expected to continue into the future, recognizing that cost pressures in the future may offset such savings.

FBC is continuing to explore opportunities for major productivity initiatives, although it has not implemented any initiatives to date. FBC along with FEI are currently working on a company-

2

3 1.1 Please provide an estimate of the savings that are a result of delays in filling
4 vacancies.

5

6 **Response:**

7 FBC has not specifically quantified the savings that are one-time in nature or that are a result of
8 delays in filling vacancies, but at a high level, FBC estimates that over half of the 2015 savings
9 are vacancy-related.

10 As indicated in the PBR Application, FBC has a broad-based productivity focus for achieving
11 efficiencies and savings. This requires FBC and its employees to continually assess work and
12 ensure that it is being performed as efficiently and productively as possible. Expenditures and
13 filling of staff vacancies are reviewed and assessed before proceeding. Departments are
14 required to maintain or increase their outputs and activity levels while keeping cost increases to
15 a minimum. Furthermore, FBC expects the efficiency improvements to come not only from the
16 broad-based, smaller scale improvements in individual departments, but also from larger, wider-
17 scale initiatives.

18 Following this approach, FBC is appropriately measuring O&M related PBR savings at the
19 aggregate O&M expense level, representative of the broad-based approach to productivity,
20 instead of measuring and monitoring a myriad of small, incremental efficiency gains. Further,
21 FBC's view is that the inclusion of a productivity improvement factor in FBC's PBR Plan
22 provides a comprehensive productivity measurement that requires each department to consider
23 continuous improvement, which is preferred to measurement of individual activity.

24 FBC, consistent with the approach taken by FEI and directed by the Commission in FEI's
25 Annual Review for 2015 Rates, will include in each annual review filing a discussion of the major
26 initiatives that have been implemented, and a table providing information on the initiative such
27 as capital and O&M expenditures incurred and annual labour and non labour savings. A further

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breakdown of the O&M savings is not consistent with the basic concept of PBR, under which a utility is free to manage its costs within the formula amounts of the PBR plan.

1.2 Please identify the source of savings that are one-time in nature and provide an estimate of those savings.

Response:

Please refer to the response to CEC IR 1.1.1.

1.3 What are the efficiencies that are expected to continue into the future?

Response:

FBC has not definitively identified and quantified which efficiencies are expected to continue into the future. However, FBC expects that some of the positions that have not been filled as a result of FBC's broad based focus on productivity will result in sustainable savings. The fact that the projected O&M savings for 2015 is greater than the O&M savings realized in 2014 supports the view that some of the projected O&M savings can continue into the future, recognizing that cost pressures in the future may offset such savings.

Please also refer to the response to CEC IR 1.1.1.

1.4 Please provide an estimate of the efficiencies that are expected to continue into the future.

Response:

Please refer to the response to CEC IR 1.1.3.

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1 **2. Reference: Exhibit B-1-1, Page 9**

As noted above, the Commission approved for FBC a growth factor of 50 percent of the ratio of the average number of customers (AC) one year previous to the average number of customers two years previous expressed as $[1 + ((AC_{t-1}/AC_{t-2})/ AC_{t-2} \times 50\%)]$.

2

3 2.1 Please confirm that the calculation is $[1+(AC_{t-1} - AC_{t-2})/AC_{t-2} \times 50\%]$.

4

5 **Response:**

6 Confirmed. The correct expression of the formula is as follows:

7 $[1 + ((AC_{t-1} - AC_{t-2}) / AC_{t-2}) \times 50\%]$

8 FBC will correct the presentation of the growth factor in its next Annual Review.

9

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1 3. **Reference: Exhibit B-1-1, Appendix A3, Page 2**

2 **1.2 ENERGY FORECAST**

This section discusses methodologies to forecast energy requirements for different load classes for before savings. Savings is defined as the sum of DSM, the Residential Conservation Rate (RCR), Customer Information Portal (CIP), Advanced Metering Infrastructure Project (AMI), and rate-driven impacts. Note that the RCR, the CIP, and AMI forecasts are only available for the residential class. A general formula for an after-saving load in year t is

$$\text{After-saving Load}_t = \text{Before-saving Load}_t - \text{Saving}_t$$

2

3 3.1 Please explain why the CIP and AMI forecasts are only available for the
4 residential class.

5

6 **Response:**

7 To date, FBC has only considered the CIP load impacts for 2016 based on readily available
8 information for residential customers as discussed in the AMI CPCN. While this portal is likely
9 to prove useful for commercial customers, there is little data available as to how this type of
10 information might impact commercial load and be included in load forecasts.

11 The AMI impact on load is related to electricity theft detection. Electricity theft is generally found
12 only in residential services.

13

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1 **4. Reference: Exhibit B-1-1, Appendix A3, Page 4**

1.2.3 Wholesale

The Company forecast its wholesale load using the results of load surveys from all wholesale customers. The response rate was 100 percent, FBC then summed over the Wholesale customers' forecasts to come up with the before-saving wholesale load forecast. The main assumption in this approach is that in the near to medium-term, the Wholesale customers have the best knowledge of their service territory's load with respect to their customer mix, load behaviors, development projects with associated energy requirements, etc.

1.2.4 Industrial

The before-saving industrial load is the sum of forecasts supplied by the current FBC 49 individual customers. For each customer, its forecast in each year was used if it responded to the load survey. Otherwise, its load was forecast by escalating its preceding year's load with the CBOC forecast GDP growth rates for the industrial sector that it is in. The majority of the FBC industrial customers responded to the surveys (86 percent of customers accounting for 91 percent of 2014 load.)

2

3 4.1 How many wholesale customers does FBC have?

4

5 **Response:**

6 FBC has six wholesale customers.

7

8

9

10 4.2 How many of the 49 Industrial customers responded to the load survey?

11

12 **Response:**

13 As stated at page 19, line 10 of the Application, 42 of 49 or 86 percent of customers responded
14 to the survey.

15

16

17

18 4.3 What proportion of the total load do the responders represent?

19

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1 **Response:**

2 As indicated in Sections 3.5.3 and 3.5.4, Wholesale responders represent 100 percent of the
3 total Wholesale load and Industrial survey responders account for approximately 91 percent of
4 the total Industrial load.

5

6

7

8 4.4 What activities did FBC undertake to promote responses in the Industrial
9 customers' load survey?

10

11 **Response:**

12 FBC emailed survey requests to each individual industrial customer. Where responses were
13 not received a reminder email was sent a week later. A second reminder was sent to customers
14 that still had not responded by the following week. Towards the end of the survey, account
15 managers attempted to contact non-responsive customers by telephone.

16

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1 **5. Reference: Exhibit B-1-1, Appendix A3, Page 5**

AMI impacts, include two components with their offsetting impacts on the gross load:

- sales recovered from illegal grow-op sites, considered here as AMI savings increases gross load
- loss reduction due to closing illegal grow-op sites, not considered here as savings but covered under losses decreases loss load

The updated RCR savings forecast is consistent with the Residential Conservation Rate Information Report submitted to the BCUC in November 2014.

2

3 5.1 Please provide further details with respect to the sales recovered from illegal
4 grow-op sites including quantification of the amounts and whether they are
5 estimates or actuals.

6

7 **Response:**

8 FBC estimates that approximately 2.8 GWh and 3.5 GWh in incremental sales occurred in 2014
9 and 2015 respectively due to an increase in paying marijuana grow operations. FBC is
10 forecasting recovered sales of approximately 3.8 GWh in 2016 related to an increase in paying
11 marijuana grow operations. These estimates are based on the theft reduction information
12 provided as part of the AMI CPCN as adjusted by the Commission determinations provided in
13 Order C-7-13 which included direction to FBC to lower its assumed annual energy consumption
14 per theft site from 151,200 kWh to 113,400 kwh.

15

16

17

18 5.2 Please provide further details with respect to the loss reduction from closing
19 illegal grow-op sites including quantification of the amounts estimated.

20

21 **Response:**

22 FBC estimates that losses were reduced by approximately 1.8 GWh and 2.4 GWh in 2014 and
23 2015 respectively due to a reduction in the number of marijuana grow operations engaged in
24 electricity theft. FBC is forecasting a further loss reduction of 2.7 GWh in 2016 related to
25 reduced electricity theft associated with marijuana grow operations. These estimates are based
26 on the theft reduction information provided as part of the AMI CPCN as adjusted by the
27 Commission determinations provided in C-7-13 which included direction to FBC to lower its
28 assumed annual energy consumption per theft site from 151,200 kWh to 113,400 kwh.

29

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1 **6. Reference: Exhibit B-1-1, Page 15**

Table 3-3 below shows the normalized after-savings gross load by customer class as well as the system peak. For 2016 the residential customer class is forecast to account for 39% of the normalized after-savings gross load.

2

3 6.1 Please confirm that the Commercial class is forecast to account for about 25% of
4 the normalized after-savings gross load.

5

6 **Response:**

7 Confirmed.

8

9

10

11 6.2 Please provide a breakdown of the number of customers by rate class.

12

13 **Response:**

14 Customer count by rate class is shown in Table 3-2 on page 15 of the Application. For
15 convenience the 2016 customer forecast is reproduced below.

Residential	115,758
Commercial	15,042
Wholesale	6
Industrial	49
Lighting	1,620
Irrigation	1,103
Total	133,578

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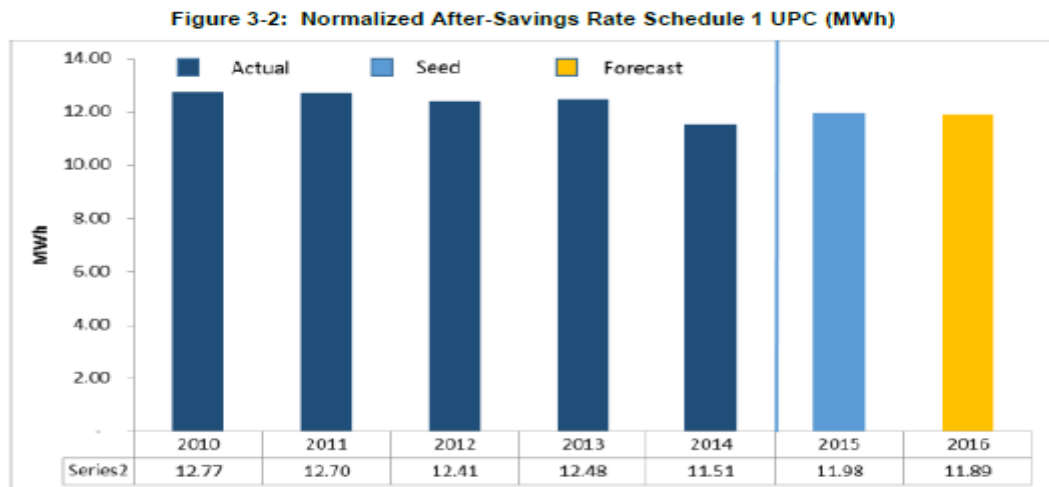
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1 **7. Reference: Exhibit B-1-1, Page 116**

3.5.1.1 Residential UPC

The normalized historical UPCs were obtained by dividing the normalized historical residential load by the average customer count in each year. The 2015 before-savings UPC is forecast by averaging the most recent 3 years' normalized historical UPCs (2012, 2013, 2014), and the 2016 before-savings UPC is assumed to remain constant at the 2015 level. The before-savings UPC forecast is then multiplied by the forecast average customer count to derive the before-savings load forecast. Incremental savings are then deducted from the before-savings load forecast to determine the after-savings load forecast. The 2016 after-savings UPC forecast is then computed by dividing the 2016 after-savings load forecast with the average customer count. As shown in Figure 3-2 below, the residential after savings UPC is forecast to decrease slightly by 0.09 MWh during 2016.



2

3 7.1 Please provide FBC's views as to why the Normalized After Savings Rate
4 Schedule 1 UPC rates are expected to increase in 2015 (seed year).

5

6 **Response:**

7 The higher UPC in 2015 UPC is the result of the forecast being based on an average of three
8 years. Consistent with the methods described in the Load Forecast Technical Committee report,
9 the 2015S before-savings UPC is calculated by taking the average of the previous three years'
10 normalized UPC values. Incremental savings are then deducted to arrive at the forecast of
11 11.98 MWh. The calculation is shown below. Note that there is a step change due to the CoK
12 integration in 2013. To calculate a proper UPC forecast for the residential customers with the
13 CoK, the historical UPCs in 2012 and 2013 were adjusted.

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	A	B	C = A+B	D	E = C/D	
MWh	Normalized Residential Energy	CoK adjustment	Total Residential Energy	Average Customer Count	Normalized Residential UPC	
2012	1,228,709	147,620	1,376,329	112,069	12.28	
2013	1,352,945	45,988	1,398,932	112,079	12.48	
2014	1,296,452		1,296,452	112,647	11.51	
Before savings UPC forecast = Average of E = 12.09 MWh						
MWh	F	G	H = F * G	I	J	K = I/J
	Before Savings UPC Forecast	Average Customer Count Forecast	Forecast Before Savings Residential Energy	After Savings Residential Energy	Customer Count Forecast	After Savings UPC
2015	12.09	113,787	1,375,750	1,363,088	113,787	11.98
2016	12.09	114,950	1,389,816	1,366,678	114,950	11.89

The 3-year average method smooths the changes over the past three years, including the drop in 2014. FBC believes that this method reduces the load variances and is an appropriate proxy to the future before-savings UPC for the residential class.

7.2 Please provide FBC's views as to why the Normalized After Savings Rate Schedule 1 UPC rates are expected to decrease slightly in 2016 (forecast year).

Response:

The three year average before savings UPC is calculated based on normalized actuals from 2012, 2013 and 2014. The before savings UPC is then held constant for 2015S and 2016F. The after savings UPC is forecast to decrease slightly due to the cumulative impact of incremental DSM and other savings, which are higher in 2016F than in 2015S.

7.3 Please provide the historical accuracy of the residential load forecast for the last 10 years (i.e., comparison of forecast and actuals).

Response:

The historical accuracy of the residential load forecast for the last 10 years is provided below.



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Residential Load (GWh)	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Forecast	1,064	1,080	1,099	1,193	1,222	1,248	1,261	1,264	1,276	1,402
Actual	1,070	1,091	1,160	1,221	1,273	1,216	1,254	1,224	1,265	1,304
Variance	0.6%	1.0%	5.3%	2.3%	4.0%	-2.7%	-0.6%	-3.3%	-0.9%	-7.6%

1

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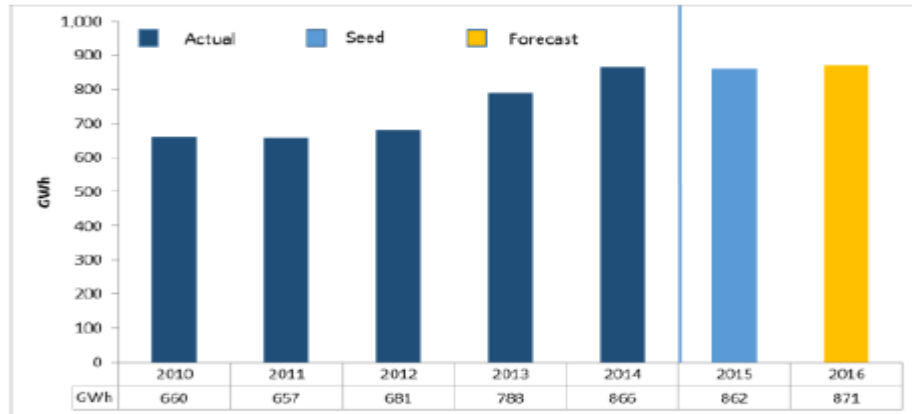
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8. Reference: Exhibit B-1-1, Page 18

3.5.2 Commercial

The commercial class is forecast based on a regression of load on the provincial GDP supplied by the CBOC. As shown in Figure 3-4 below, Commercial after-savings energy is forecast to increase by 9 GWh in 2016.

Figure 3-4: Normalized After-Savings Commercial Energy (GWh)



2

3 8.1 Please provide the historical accuracy of the commercial load forecast for the last
4 10 years (i.e., comparison of forecast and actuals).

5

6 **Response:**

7 The historical accuracy of the commercial load forecast for the last 10 years is provided below.

Commercial (GWh)	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Forecast	570	589	620	686	678	682	671	696	709	813
Actual	568	598	636	666	675	660	657	681	699	866
Variance	-0.4%	1.5%	2.5%	-3.0%	-0.4%	-3.4%	-2.1%	-2.3%	-1.4%	6.1%

8

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1 **9. Reference: Exhibit B-1-1, Page 18**

3.5.3 Wholesale

FBC sells wholesale power to municipalities within its service territory that own and operate their own electrical distribution systems. These wholesale customers have a load composition that is a mix of residential, commercial, industrial and street lighting.

Consistent with past practice the wholesale class is forecast from survey information from each of the individual wholesale customers. FBC believes that the individual wholesalers are best able to forecast their future load. All of the wholesale customers responded with their forecast growth projections. As shown in Figure 3-5 below, after-savings wholesale energy is forecast to increase by 7 GWh in 2016.

2

3 9.1 Please provide the historical accuracy of the Wholesale load forecast for the last
4 10 years (i.e., comparison of forecast and actuals).

5

6 **Response:**

7 The historical accuracy of the Wholesale load forecast for the last 10 years is provided below.

Wholesale (GWh)	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Forecast	964	935	948	891	921	915	940	926	935	581
Actual	916	948	881	892	931	881	909	896	902	572
Variance	-5.2%	1.4%	-7.6%	0.1%	1.1%	-3.9%	-3.4%	-3.3%	-3.6%	-1.6%

8

9

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1 **10. Reference: Exhibit B-1-1, Page 19**

3.5.4 Industrial

Consistent with past practice, the industrial forecast is determined through a combination of customer load surveys and, when not available, escalation of the most recent annual loads by the corresponding provincial GDP growth rates for individual industries.

FBC sends all industrial customers a load survey that requests the customer's anticipated use for the next 5 years. A survey methodology is utilized because FBC believes that individual industrial customers have the best understanding of what their future energy usage will be. This year FBC received a response from 86 percent (42 of 49) of the surveys sent out. The responding customers represent approximately 91 percent of the total industrial load.

As shown in Figure 3-6 below, after-savings industrial energy is forecast to increase by 5 GWh in 2016.

2

3 10.1 Please confirm that FBC sends out the survey annually, although it is for a five
4 year period.

5

6 **Response:**

7 Confirmed.

8

9

10

11 10.2 Please provide the historical accuracy of the industrial load forecast for the last
12 10 years (i.e., comparison of forecast and actuals).

13

14 **Response:**

15 The historical accuracy of the industrial load forecast for the last 10 years is provided below.

Industrial Load (GWh)	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Forecast	343	369	352	240	224	291	233	250	255	389
Actual	357	344	352	252	216	234	271	291	291	381
Variance	3.9%	-7.3%	0.0%	4.8%	-3.8%	-24.5%	13.9%	14.1%	12.4%	-2.2%

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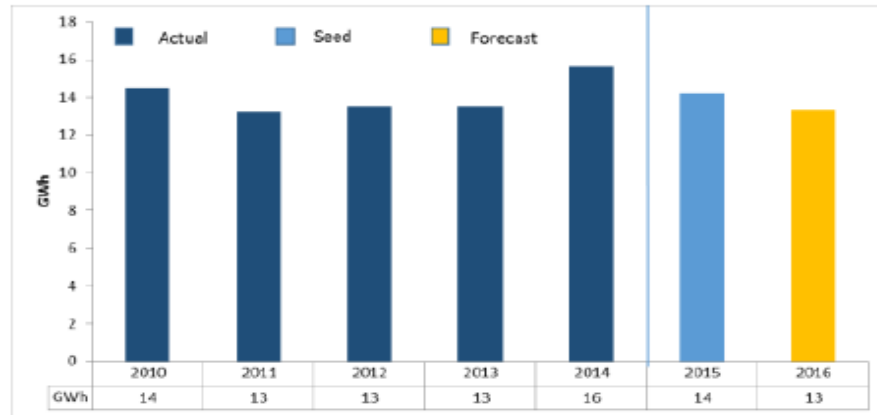
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1 **11. Reference: Exhibit B-1-1, Page 20**

3.5.5 Lighting

Consistent with past practice the trend analysis for the most recent years for which FBC has actual data (2010 to 2014 in this case) is used to forecast this class. As shown in Figure 3-7 below, after-savings lighting energy is forecast to decrease by 1 GWh in 2016.

Figure 3-7: After-Savings Lighting Energy (GWh)



2

3 11.1 Please provide FBC's views as to why the Lighting load experienced a jump in
4 2014.

5

6 **Response:**

7 FBC is unable to identify a cause of the increase in lighting load in 2014. The incremental
8 change in 2014 was 2,155 MWh and a change of this magnitude is still in line with past
9 experience. For example, in 2001, lighting load experienced a drop of 1,932 MWh while in 2006
10 lighting load increased by 1,526 MWh. An outlier test was completed prior to using the historical
11 data in the forecast for 2015S and 2016F and no outliers were identified. FBC believes this
12 difference is immaterial given that the lighting load accounts for less than 0.5 percent of the total
13 load, and an increase of 2 GWh would account for less than 0.1 percent of the load.

14

15

16

17 11.2 Please provide FBC's views as to why the Lighting load is expected to decline in
18 2015 (seed year) and again in 2016 (forecast year).

19

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1 **Response:**

2 Consistent with the past methodology, the before savings lighting load for the 2015 Seed Year
3 and 2016 Forecast is based on a trend analysis using 2007 to 2014 Actual data. The 2015
4 before savings forecast is in line with the overall past experience but relatively lower than the
5 2014 level. The before savings forecast for 2015 then is reduced by the incremental savings to
6 derive the after savings forecast for 2015. The further decline in 2016 on the after savings
7 lighting energy is due to the cumulative impact of DSM and other savings (0.5 GWh in 2015 and
8 1.5 GWh in 2016.)

9

10

11

12 11.3 Please provide the historical accuracy of the Lighting load forecast for the last 10
13 years (i.e., comparison of forecast and actuals).

14

15 **Response:**

16 The historical accuracy of the Lighting load forecast for the last 10 years is provided below.

Lighting Load (GWh)	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Forecast	10	12	12	13	14	15	12	14	14	13
Actual	11	13	13	13	13	14	13	13	13	16
Variance	9.6%	4.7%	6.5%	3.0%	-5.3%	-3.6%	10.4%	-3.5%	-1.5%	18.2%

17

18

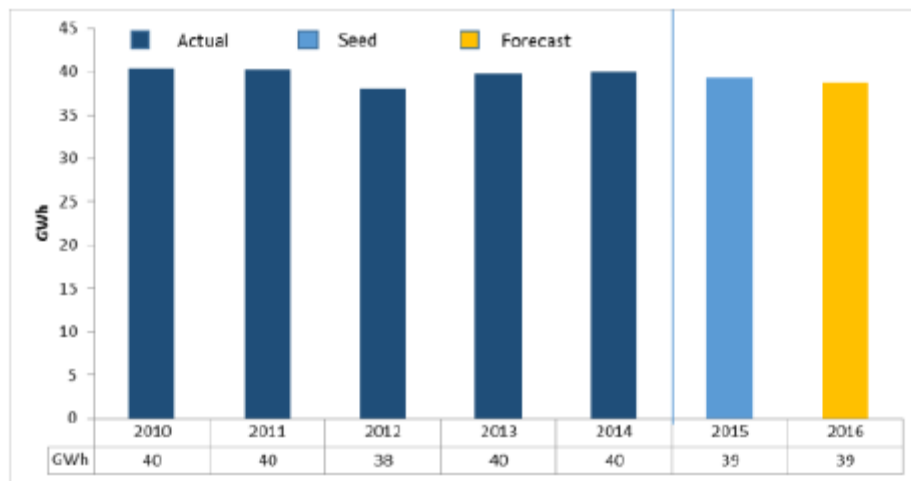
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12. **Reference: Exhibit B-1-1**

3.5.6 Irrigation

The before-savings forecast is developed using a five-year average for the most recent years for which FBC has actual data (from 2010 to 2014 in this case). This method is consistent with past practice. As shown in Figure 3-8 below, after-savings irrigation energy is forecast to remain unchanged in 2016.

Figure 3-8: After-Savings Irrigation Energy (GWh)



12.1 Please provide FBC's views as to why the Irrigation forecast is expected to experience a slight decline in 2015 (seed year) and remain there in 2016 (forecast year).

Response:

Consistent with the approved methodology, FBC forecasts the before savings irrigation load based on the 5-year average consumption. The 5-year average consumption is held constant to forecast the before savings load in 2015S and 2016F. There is a further decline in 2016 on the after savings irrigation energy forecast because of the incremental DSM and other savings.

12.2 Please provide the historical accuracy of the Irrigation load forecast for the last 10 years (i.e., comparison of forecast and actuals).

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1 **Response:**

2 The historical accuracy of the Irrigation load forecast for the last 10 years is provided below.

Irrigation Load (GWh)	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Forecast	47	46	46	51	48	50	45	44	43	42
Actual	44	43	48	46	49	40	40	38	40	40
Variance	-6.4%	-7.1%	4.9%	-10.3%	2.0%	-23.8%	-10.8%	-14.9%	-8.7%	-4.9%

3

4

10

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1 **14. Reference: Exhibit B-1-1, Page 23**

The continued implementation of AMI technology will improve the Company's ability to detect and deter energy theft, and will also facilitate initiatives such as feeder load balancing on an ongoing basis, reducing physical system losses. The number of theft sites identified annually since 2012 has been decreasing and has decreased from 19 to 3 between 2012 and 2014.

FBC believes the reduction in the number of identified instances of power theft is likely due to a number of factors, including the ongoing deployment of FBC's AMI project which includes a detailed meter base inspection for all customer premises, as well as due to the deployment of BC Hydro's Smart Metering Infrastructure (SMI) project in advance of FBC's AMI project and the associated perception that electricity theft (provincially) is becoming increasingly difficult to hide. Indeed, BC Hydro has noted in its reports to the Commission that its theft deterrence benefits are exceeding the expectations initially set out in the SMI business case⁹. Although current forecast loss reductions remain unchanged from those provided as part of the CPCN application FBC expects to have an improved understanding of electric theft trends once the deployment of the AMI system is complete and the feeder meter energy balancing program implemented in 2016. The ability of the AMI system to provide time-synchronized meter reads for the determination of overall system losses will provide FBC a more accurate understanding of annual loss trends, and if warranted will allow FBC to update its forecast loss reductions related to theft detection and deterrence. The table provided below details the normalized losses for 2012 – 2014, as well as the forecast losses (both with and without the AMI impact) for 2015 – 2019.

2

3 14.1 Please provide a rough estimate of the energy savings that accrue as a result of
4 the reduction in theft sites, with quantification of the financial value of those
5 savings.

6

7 **Response:**

8 The requested information is provided in the following table, and reflects the Commission's
9 determination to lower the assumed annual energy usage per high load site from 151,200 kWh
10 to 113,400 kWh. Loss reductions have been valued at FBC's long-run marginal cost of
11 \$125.80/MWh, per the Commission determination provided in Order C-7-13. Incremental sales
12 to high-load sites have been valued at FBC's current Tier 2 residential rate as modeled in the
13 AMI CPCN application.

14 Please note, the cumulative and incremental AMI savings cited in the Application only reflect
15 those savings for 2015 onwards as 2013 and 2014 AMI savings are considered embedded for
16 the purposes of determining the load forecast.

Year	2013	2014	2015	2016	2017	2018	2019
Estimated cumulative loss reductions (GWh)	(3.5)	(5.2)	(7.7)	(10.4)	(14.3)	(17.4)	(19.7)
Cumulative value of loss reduction (\$000s)	437	658	965	1,308	1,803	2,186	2,483

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Year	2013	2014	2015	2016	2017	2018	2019
Cumulative sales to paying high-load sites (GWh)	2.4	5.2	8.8	12.6	17.6	21.7	25.2
Value of incremental sales to paying high-load sites (\$000s)	357	773	1,293	1,855	2,597	3,210	3,723
Net Load Impact (GWh)	(1.1)	0	1.1	2.2	3.3	4.4	5.5
Net Revenue Impact (\$000s)	(80)	116	327	547	794	1,024	1,240

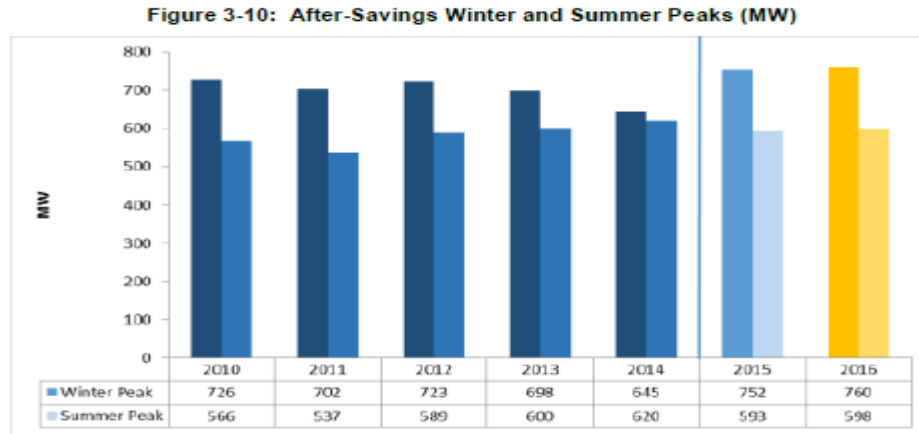
14.2 Please provide an approximation of the portion of savings that is attributable to the implementation or awareness of the AMI technology, and please provide an estimate of the financial savings that have already accrued.

Response:

FBC estimates that the majority of savings related to FBC's AMI-based revenue protection program are as a result of awareness of AMI technology (the deterrent impact). Please refer to the response to CEC IR 1.14.1 which provides an estimate of the financial value of those savings. The estimated value of savings in 2013 and 2014 is \$36 thousand (\$-80 thousand + \$116 thousand).

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1 **15. Reference: Exhibit B-1-1, Page 25**



2

3 15.1 Please explain why the winter peaks are expected to be higher in 2015 (seed
4 year) and 2016 (forecast year) than they have been since 2010.

5

6 **Response:**

7 In line with the previously accepted peak demand methodology, the winter peaks are assumed
8 to grow in proportional to the load growth. 2015 and 2016 energy forecasts are increasing and
9 therefore this is reflected in the winter peak forecast in 2015 and 2016.

10 Part of the gap between the actual historical peak demand and the peak demand forecast is due
11 to volatility of the peak demand for Celgar. The Celgar coincident peak forecast is assumed to
12 be 16MW, but was zero for some of the winter peaks in the past.

13

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1 **16. Reference: Exhibit B-1-1, Page 34**

2 **5.3 CONTRACT REVENUE**

FBC performs work under contract to third parties at the Waneta and Brilliant hydroelectric generating facilities. This third party work, and the associated management fees earned, fluctuates from year to year based on customer requirements which include routine and non-routine work planned at the start of the customer's fiscal year. 2015 Projected and 2016 Forecast are both higher than 2015 Approved due to higher levels of third party activity.

The Company also operates and maintains a number of other facilities for third party entities through its non-regulated affiliate FortisBC Pacific Holdings Inc. (FPHI). Transactions between

2

3 16.1 Is the higher third party activity already contracted for 2016?

4

5 **Response:**

6 The third party activity is attributable to work performed under longstanding contracts. These
7 contracts are not renegotiated each year; however, the annual work to be performed under the
8 contracts is determined based on the requirements of the third parties who estimate on an
9 annual basis. At this point in time, the contract activity in 2016 has not been formally approved
10 or established by the third parties.

11

12

13

14 16.1.1 If no, when will does FBC expect to contract the third party work?

15

16 **Response:**

17 For most of the contracts, the work to be performed will be approved prior to the start of the
18 owner's fiscal year, which is April 1, 2016. There are two contracts in place where the work will
19 be approved prior to January 1, 2016.

20

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1 **17. Reference: Exhibit B-1-1, Page 35**

2 **5.5 INTEREST INCOME**

3 Interest income is primarily comprised of DSM loan interest income. The Company is
4 experiencing a decline in the number of DSM loans. Hence, as loans mature a corresponding
5 drop in interest income is expected.

6 17.1 Please provide FBC's views as to why it is experiencing a decline in the number
7 of DSM loans.

8 **Response:**

9 The DSM loans referred to in section 5.5 of the Application are loans to residential customers to
10 support their purchase of electric heat pumps. This heat pump loan program has been running
11 since 1999, and it is the Company's view that the drop-off in customer participation in this
12 program is due to market saturation for electric heat pumps. Additionally, FBC's 4.9 percent
13 interest rate is less attractive to customers than lower consumer loan rates offered by financial
 institutions.

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1 **18. Reference: Exhibit B-1-1, Page 35**

2 **5.7 OTHER RECOVERIES**

Other recoveries are primarily comprised of the recovery of costs for miscellaneous services, such as street light maintenance charged to municipalities. Other recoveries projected in 2015 are expected to be similar to 2015 Approved amounts. In 2016, revenue is forecast to be lower than 2015, in which (non-tariff) fees were earned from performing improvements to a substation on behalf of a municipality.

2

3 18.1 What was the revenue earned from the improvements to a substation on the
4 behalf of the municipality.

5

6 **Response:**

7 A municipally owned electric utility in FBC's service territory requested upgrades to a substation
8 for their benefit as opposed to the benefit of FBC's direct customer base. As a result, a contract
9 for work performed was negotiated with a management fee of \$0.6 million charged. This fee
10 was recognized in Other Recoveries in 2014 and 2015.

11

12

13

14 18.2 Does FBC undertake any initiatives to stimulate revenue generation?

15

16 **Response:**

17 FBC is always looking for opportunities to increase recoveries for miscellaneous services to
18 reduce revenue requirements, including the following:

19 • Identifying instances where fees should be earned, such as the case of earning fees
20 from performing improvements to a substation on behalf of a municipality. The effort
21 involved in securing this work and ensuring an adequate management fee is charged
22 resulted in a significant percent increase in Other Recoveries.

23 • Identifying opportunities where longstanding contracts can be obtained to provide
24 operating and management services to third-party customers, such as the Waneta and
25 Brilliant hydroelectric facilities, thus increasing Contract Revenue earned going forward.

26

27

28

29

18.2.1 If so, what types of activities does FBC undertake.

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1

2 **Response:**

3 Please refer to the response to CEC IR 1.18.2.

4

5

6

7 18.2.2 If not, please explain why not.

8

9 **Response:**

10 Please refer to the response to CEC IR 1.18.2.

11

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1 **19. Reference: Exhibit B-1-1, Page 39 and 46**

The 2014 AMI-related O&M costs were lower than approved due to delayed project timing following an extensive CPCN review process and the Commission's directive to file for approval of an opt-out program prior to meter installation. The projected 2015 AMI O&M costs less savings remain at \$0.452 million which is the same amount approved for 2015 in the Annual Review for 2015 Rates. AMI-related costs and savings in 2016 are forecast to continue to lag those estimated in the AMI CPCN application due to the delay in starting the project. Net savings for customers are forecast to be \$1.800 million as compared to \$2.084 million. AMI costs and savings are expected to be approximately as forecast in the CPCN application in 2017.

Table 6-5: AMI Costs and Savings (\$ millions)

	2014			2015			2016			Total		
	Estimated Actual (a)	Approved (b)	CPCN (c)	Projected (d)	Approved (e)	CPCN/ 2013 Fcst. (f)	Forecast (g)	CPCN/ 2013 Fcst. (h)	Projected + Forecast (i)=(a)+(d)+(g)	Approved + 2013 Fcst. (j)=(b)+(e)+(h)	Change (k)=(i)-(j)	
AMI Costs	531	750	1,116	1,591	1,591	1,859	1,738	1,892	3,860	4,867	(1,007)	
AMI Savings	(100)	(150)	(516)	(1,139)	(1,139)	(1,977)	(3,538)	(3,976)	(4,777)	(6,469)	1,692	
Net AMI Costs	431	600	600	452	452	(118)	(1,800)	(2,084)	(917)	(1,602)	685	

- FBC's AMI project was approved by Order C-7-13 with an estimated cost of \$50.898 million. Project components include the replacement of existing customer meters (excluding certain Industrial customers) with AMI enabled meters and the installation of the associated infrastructure to support the transmission of metering information from the AMI meters to FBC. Actual expenditures to June 30, 2015 are \$38.946 million with the balance of 2015 expenditures estimated to be \$9.149 million. The 2016 forecast expenditures are \$1.327 million. The project will be complete during 2016 and is expected to meet the approved costs. Capital costs associated with the radio-off option discussed in Section 6.3.4 are forecast to be \$0.498 million in 2015 and \$0.073 million in 2016.

2

3 19.1 What was the amount of delay that was experienced by the AMI project as a
4 result of the later start?

5

6 **Response:**

7 Originally scheduled to commence in August 2013, the AMI project did not fully commence until
8 after receipt of the Commission's Decision in FBC's Application for a Radio-Off AMI Meter
9 Option (Order G-220-13, dated December 19, 2013), which is approximately a four to five month
10 delay.

11

12

13

14 19.2 Please confirm or otherwise explain that the delay in the AMI implementation is
15 the only source of delay in the project.

16

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1 **Response:**

2 The need to receive approval for an opt-out provision is the only source of delay for the project.

3

4

5 19.3 Is having the net costs and savings approximately as forecast in the CPCN
6 application by 2017 indicative of the project being caught up?

7

8 **Response:**

9 It is more accurate to say that having the net costs and savings approximately as forecast in the
10 CPCN application by 2017 is indicative of the project being complete. Following project
11 completion, the costs and savings achieved will be approximately as forecast.

12

13

14

15 19.3.1 If not, please explain why not.

16

17 **Response:**

18 Please refer to the response to CEC IR 1.19.3.

19

20

21

22 19.4 Please confirm that beyond the delay, there is no indication that the AMI project
23 will not deliver the savings that were originally projected.

24

25 **Response:**

26 Confirmed. Following project completion, the savings are expected to be approximately as
27 forecast.

28

29

30

31 19.4.1 If not confirmed, please explain why not and quantify any reductions in
32 the savings that were originally proposed.

33

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1 **Response:**

2 Please refer to the response to CEC IR 1.19.4.

3

4

5

6 19.5 Please provide the estimated total project costs for AMI and the approved costs.

7

8 **Response:**

9 The figures quoted above from page 46 of the Application, lines 22 to 27 are incorrect, and
10 should read:

11 *“Actual expenditures to June 30, 2015 are \$38.946 million with the balance of 2015*
12 *expenditures estimated to be \$10.850 million. The 2016 forecast expenditures are*
13 *\$1.103 million. The project will be complete during 2016 and is expected to meet the*
14 *approved costs. Capital costs associated with the radio-off option discussed in Section*
15 *6.3.4 and forecast to be \$0.523 million in 2015 and \$0.107 million in 2016.”*

16 Therefore, the estimated total AMI project cost (excluding radio-off) is \$50.898 million.

17

18

19

20 19.6 Will there be capital costs for the radio-off option beyond 2016?

21

22 **Response:**

23 No, FBC is not forecasting any additional radio-off customers beyond 2016. If there are any,
24 there will be small capital costs offset by the per-premise fees associated with installing those
25 radio-off meters.

26

27

28

29 19.6.1 If yes, please provide estimated capital costs beyond 2016.

30

31 **Response:**

32 Please refer to the response to CEC IR 1.19.6.

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1 **20. Reference: Exhibit B-1-1, Page 39**

AMI Radio-off fees are designed so that those customers selecting a Radio-off AMI meter will cover the associated costs so as not to reduce the AMI benefits accruing to all other customers. For transparency, FBC is recording the radio-off costs net of customer fees. With respect to the per-premise Radio-off fees, the approved tariff fees are expected to be less than the cost associated with providing the Radio-off service, with a net cost to all customers of \$0.168 million and \$0.392 million expected in 2015 and 2016 respectively. As radio-off meter reading services commenced in the last week of July, 2015, no cost versus revenue information was available at the time of preparing this Application.

2

3 20.1 Please provide the estimated \$ impact on a customer's bill as a result of the radio
4 off service.

5

6 **Response:**

7 The revenue requirements impact of the radio-off O&M Expense in 2016 will be \$0.560 million
8 (comprised of \$0.168 million incurred in 2015 and flowed through to 2016 revenue requirements
9 plus \$0.392 million in 2016). This is equivalent to a general rate increase of 0.16 percent
10 (\$0.560 million divided by \$343.152 million revenue at 2015 rates), an approximate increase of
11 \$0.21 per month for the average residential customer using 1,050 kWh per month.

12

13

14

15 20.2 Please confirm or otherwise explain that the increase in 2016 radio off costs
16 above 2015 is a result of the full year being accounted for and does not represent
17 an expected increase in the proportion of customers choosing radio off.

18

19 **Response:**

20 Confirmed, although the number of radio-off customers is likely to change in small amounts on a
21 go-forward basis.

22

23

24

25 20.3 Does FBC anticipate that the costs of \$0.392 million will continue at the same
26 level over time, or change? Please explain.

27

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1 **Response:**

2 Assuming the number of radio-off customers remains constant and that radio-off fees are not
3 adjusted, the net costs are likely to increase over time due to inflationary pressures on costs.

4

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1 **21. Reference: Exhibit B-1-1, Page 42**

The Commission indicated on page 197 of the PBR Decision that the actual expenditures related to generation unit inspections should be monitored through the Annual Review process:

"Given the background and assurances provided by FBC, the Commission Panel finds that the proposal to include the \$350,000 within the Base O&M is reasonable and is not persuaded there is a need to make it a flow through item at this time. However, in consideration of the concerns raised and the magnitude of the estimate, actual expenditures should be monitored through the Annual Review process."

FBC completed a major unit inspection on Corra Linn Unit 3 (P4U3) on June 2, 2015. The unit, which had no known issues prior to the inspection, was taken offline on May 3, 2015 and through inspecting and testing was found to be in better than average condition overall. The scope of the inspection included dismantling of the unit at the coupling, removing the rotor and performing in-depth mechanical and electrical inspection as well as a thorough cleaning of the unit. The unit was successfully restored back into service, with validated test results confirming the integrity of the unit.

The project was successful and by performing this project the unit should continue to provide a dependable source of power.

The following table compares the estimated costs, based on "average" machine condition, to the actual cost and hours for Corra Linn Unit 3.

Table 6-5: 2015 Unit Inspection Costs, Corra Linn Unit 3 (Expense in \$ millions)

Line No.	Description	Budget			Actual		
		Hours		Expense	Hours		Expense
		Electrical	Mechanical		Electrical	Mechanical	
1	Project Total	1,004	2,109	\$ 0.271	611	1,752	\$ 0.265
2	Contingency			0.041			-
3	Total	3,113		\$ 0.312	2,363		\$ 0.265

2

3 21.1 Please confirm that FBC will earn approximately \$42,500 as a result of the
4 machine being in better condition than average condition.

5

6 **Response:**

7 Not confirmed. FBC's earnings are impacted by the total after-tax O&M variances from the
8 formula, after accounting for earnings sharing. One contributor to the total O&M in 2015 is the
9 unit inspection costs. Specifically for this item, \$42,500 is the (before-tax) amount by which
10 FBC's net earnings is reduced, and the amount by which customers benefit, through the
11 Earnings Sharing Mechanism under the PBR Plan (compared to the average estimated unit
12 inspection cost, \$350,000 - \$265,000 = \$85,000 x 50% = \$42,500). In the absence of the
13 Earnings Sharing Mechanism, all of the favourable cost variance, after tax, would be to the
14 account of the shareholder.

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21.2 How did FBC determine that the Corra Linn Unit 3 should be inspected in 2015?

Response:

The current criteria to determine the inspection schedule is primarily based on unit run time hours - approximately 80,000 hours since the ULE for the unit was completed.

21.3 Which unit will be inspected in 2016?

Response:

The Lower Bonnington Unit 1 Major Unit Inspection is scheduled to take place in October/November 2016.

21.4 What is the anticipated condition of the unit that will be inspected in 2016?

Response:

By reviewing the maintenance history since the ULE completion, as well as visually inspecting the external components of the unit at each annual outage, it is likely that the condition for the LBO Unit 1 is comparable to that of Corra Linn Unit 3.

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1 **22. Reference: Exhibit B-1-1, Pages 47 and 95**

- 2015 Wildfire Damage – In August 2015 FBC experienced significant damage to transmission and distribution facilities as a result of wildfires which occurred in a widespread portion of its service area, to an extent not previously experienced by the Company. The fire damage and restoration efforts are described below. As explained in Section 12.2.1, this event meets the Exogenous Factor criteria under the PBR Plan and FBC is therefore tracking the estimated \$3.043 million in capital expenditures required to repair the damage from these wildfires outside of the PBR formula.
- As described in section 7.2.2, the costs are directly and solely attributed to the wildfire events. Previous wildfires in recent years have generally resulted in damage to approximately three or four structures; as such, costs of the magnitude experienced in 2015 were not included in the 2013 base capital used to determine capital expenditures under the PBR formula.
- As noted above, the wildfires in 2015 were due to the unusually dry conditions and were unprecedented in their scale. These events and their impacts could not have been foreseen at the time the 2013 base capital was set.
- All of the costs to repair on an emergency basis the damage caused by the wildfires have been or will be prudently incurred.
- The projected costs of \$3.043 million to repair the damage caused by the wildfires exceed the materiality threshold of \$0.301 million.

2

3 22.1 Please provide estimates of the capital costs that have been attributed to wildfire
4 damage in the past 5 years, by year.

5

6 **Response:**

7 Please refer to the response to BCUC IR 1.14.4.

8

9

10

11 22.2 Does FBC have a capital budget to deal with wildfires and other damage?

12

13 **Response:**

14 FBC does not have a capital budget under its PBR Plan to deal with wildfires, since, as
15 discussed in response to BCUC IR 1.14.4, there have been no wildfires in the past 10 years and
16 thus no fire-related capital expenditures were embedded in the 2013 capital expenditures, upon
17 which the PBR formula amount is based.

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1 The Company does have a budget for Urgent Repairs (Sustainment Capital) that captures
2 capital expenditures caused by the failure or imminent failure of equipment, but this does not
3 include the typically large expenditures associated with extensive wildfire damage.

4
5
6
7 22.2.1 If yes, please provide the budget.
8

9 **Response:**

10 Please refer to the response to CEC IR 1.22.2.
11
12

13
14 22.3 Please confirm that the \$3.043 million in capital expenditures is an estimate, and
15 is not an actual 2015 figure.
16

17 **Response:**

18 The \$3.043 million in expenditures is an estimate as the Testalinden Fire was still active at the
19 time of filing. FBC expects to complete the repairs to its facilities in October 2015 and to have
20 final costs for inclusion in its compliance filing following a decision in this Application.
21
22

23
24 22.4 Please confirm or otherwise explain that the actual costs will be tracked outside
25 the PBR formula and any variation will be trued up after the fact.
26

27 **Response:**

28 FBC confirms that the actual costs will be tracked outside of the PBR formula. As identified in
29 response to BCUC IR 1.14.2, final expenditures for the fire-related repairs will be included in
30 FBC's compliance filing following a decision on the Application. No true-up will be required.
31
32
33

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22.5 Please confirm or otherwise explain that the \$3.043 million is the total estimated capital cost, and does not deduct the Exogenous factor materiality threshold from the total cost.

Response:

Confirmed. The exogenous factor materiality threshold is the cost threshold that determines whether the costs associated with an exogenous event qualify for cost recovery. There is no provision in the PBR Plan to reduce the costs associated with the event by the materiality threshold prior to recovery (or return in the case of reductions in costs).

22.6 Do the repairs to the transmission and distribution facilities have the ability to result in a cost savings in the future, such as might occur from reduced maintenance associated with newer facilities? Please explain why or why not.

Response:

As assets are renewed/rebuilt, the repairs may reduce future asset rehabilitation costs (which are capitalized). The reduction in costs will be in the deferred rehabilitation of the plant due to age. This reduction will decrease over time as the newer assets age. Costs associated with O&M activities such as annual line patrols are not reduced by the asset replacements.

22.6.1 If yes, please provide FBC's estimate of any cost savings (either capex or opex) that may accrue as a result of the capital expenditures recorded under the Exogenous Factor.

Response:

Capital expenditures for rehabilitation of overhead power lines average \$220 per pole once every 8 years. The 8 year period is the cycle that each pole is visited and assessed for its condition. For the anticipated 135 affected poles, this would result in potentially deferring \$40,750 in maintenance costs after 16 years (2 cycles). It should be noted that most of this reduction is beyond the PBR term.

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1 As discussed in the response to CEC IR 1.22.6, there are no O&M savings associated with the
2 asset replacements.

3
4

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6 22.6.2 If yes, does FBC propose to report any potential savings that may occur
7 in the future as a result of the capital expenditures recorded under the
8 Exogenous Factor? Please explain why or why not.

9

10 **Response:**

11 No FBC does not propose to report any potential savings in the future as a result of the capital
12 expenditures recorded under the Exogenous Factor. As noted in the response to CEC IR
13 22.6.1, there are no O&M savings and a very limited effect on capital expenditures within the
14 PBR term as a result of the exogenous factor spending.

15

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1 23. Reference: Exhibit B-1-1, Pages 41 and 95

By letter to the Commission dated June 11, 2015¹⁵, FBC identified that its preliminary estimates of the one-time costs to achieve compliance are in the range of \$0.780 million to \$1.230 million, and preliminary estimates of its ongoing (annual) costs to maintain compliance are in the range of \$0.395 million to \$0.525 million.

FBC is forecasting incremental O&M expenses of \$0.445 million in 2016, approximately \$0.500 million in 2017 and \$0.425 million in 2018 and beyond, which it has included in its O&M forecast outside the formula. In addition, capital expenditures to achieve compliance are forecast at \$0.445 million in 2017.

During 2016 FBC will be evaluating, scoping and implementing additions/changes to procedures and processes to comply with those standards that come into effect in 2016, which would include changes such as modifying the protection testing and maintenance program, training documents, and updating processes/procedures as required.

In addition, FBC will be assessing and determining the detailed scope and strategy required to implement additions/changes to meet the effective dates of all the standards defined by Order R-38-15 in order to meet in the timelines required. The work will be primarily focused on version 5 of the CIP standards and would include evaluating such things as physical and cyber security controls, continuous monitoring, change management and vulnerability assessments. It would include reviewing industry practices, assessing available market solutions and determining the appropriate solutions to meet the requirements for FBC assets. It will also define the scope of work required in 2017 and 2018 as well as determining the ongoing costs which may result in additional staffing requirements. The 2016 estimate is primarily labour with approximately \$0.040 million of miscellaneous/other expenses. The labour cost is estimated to be approximately 40% internal and 60% external with internal labour comprised of resources typically focused on capital work, which will then be performed by contractors/consultants.

The remainder of the one-time costs estimated to become compliant with the new MRS will occur in 2017. The ongoing costs to maintain compliance will begin to be recognized in 2017 and then continue in future years

12.2.2 Mandatory Reliability Standards

In Section 6.3.6, FBC identified incremental O&M Expense in 2016 and future years (and incremental capital expenditures in 2017) related to MRS that qualify as exogenous events. By Order R-38-15 dated July 24, 2015, the Commission adopted 34 reliability standards and the NERC (North American Electric Reliability Corporation) Glossary of Terms as recommended for adoption by BC Hydro in MRS Assessment Report No. 8. In that Order, the Commission also identified that one standard is pending and two standards are held in abeyance. The Commission accepted BC Hydro's recommendation of adoption given that the major portion of costs identified by the entities relate to the implementation of new cyber security requirements, new modelling and testing requirements for generators and synchronous condensers, and an overhaul of the protection system maintenance program requirements.

This event and the costs required as a result of the adoption of the reliability standards meet the exogenous factor criteria identified above.

- The costs are entirely attributed to complying with the changes to BC's MRS program approved by Order R-38-15, which is an event outside the control of FBC. These changes were developed by regulatory bodies in the U.S., assessed for adoption by BC

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23.1 Please confirm that the major portion of costs for FBC are for similar expenditures as those for BC Hydro.

Response:

While BC Hydro is required to be compliant with some of the same standards, BC Hydro's selection of possible solutions to become compliant with the standards is designed for its infrastructure and operations and may therefore be different. In BC Hydro's MRS Assessment Report No. 8, BC Hydro estimated an incremental one-time cost of at least \$33.9 million and annual ongoing costs estimated to be at least \$7.7 million.

23.1.1 If not confirmed, please discuss how the types of expenditures will differ between FBC and BC Hydro.

Response:

Please refer to the response to CEC IR 1.23.1.

23.2 Does FBC expect to experience any savings either immediately or in the future as a result of either the operating or capital expenditures being made under the Exogenous Factor?

Response:

No. The nature of the expenditures is described in response to BCUC IR 1.13.8. These activities are specific to the newly-adopted reliability standards and do not affect capital or O&M expenditures in other business areas of the Company.

23.2.1 If yes, please provide FBC's estimate of any cost savings (either capex or opex) that may accrue as a result of the capital expenditures recorded under the Exogenous Factor.

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1 **Response:**

2 Please refer to the response to CEC IR 1.23.2.

3

4

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23.2.2 If yes, does FBC propose to report any potential savings that may occur
in the future as a result of the capital expenditures recorded under the
Exogenous Factor? Please explain why or why not.

8

9

10 **Response:**

11 Please refer to the response to CEC IR 1.23.2.

12

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1 **24. Reference: Exhibit B-1-1, Page 96**

- The forecast O&M costs of \$0.445 million in 2016, \$0.500 million in 2017, and \$0.425 million in 2018 and beyond, and the forecast capital expenditures of \$0.445 million in 2017 exceed the materiality threshold of \$0.301 million.

2

3 24.1 If there was a delay or other event impacting spending, such that the O&M
4 expenditures did not exceed the Exogenous Factor materiality threshold in a
5 given year, would FBC be required to absorb the actual expenditures for that
6 year into the formulaic spending? Please explain.

7

8 **Response:**

9 No, FBC understands the exogenous factor evaluation to be a one-time test for a particular
10 event that would then qualify for exogenous factor treatment throughout the PBR term. In the
11 evaluation of whether an event qualifies as an exogenous factor, one of the criteria to be met is
12 the materiality threshold.

13 FBC considers that how the materiality threshold is applied may be different depending on the
14 nature of the particular event.

15 In the case of a one-time capital expenditure, such as the forest fires discussed in the
16 Application, it is appropriate that the materiality threshold be applied to the total capital
17 expenditures caused by the event. In FBC's view, the timing of the capital expenditures is not
18 relevant, but rather the total capital expenditures due to the event.

19 In the case of ongoing O&M costs, such as for the MRS discussed in the Application, it is
20 appropriate that the event qualify only if the annual O&M impact exceeds the materiality
21 threshold in any given year of the PBR. As the costs are ongoing year after year, it is the
22 annual cost which is relevant, rather than the total cost incurred in respect to the event.

23

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1 **25. Reference: Exhibit B-1-1, Pages 109 and 111**

Table 13-1: Approved SQL, Benchmarks and Actual Performance

Performance Measure	Description	Benchmark	Threshold	2015 June YTD Results
Safety SQLs				
Emergency Response Time	Percent of calls responded to within two hours	93%	90.6%	91%
All Injury frequency rate (AIFR)	3 year average of lost time injuries plus medical treatment injuries per 200,000 hours worked	1.64	2.39	2.86
Responsiveness to the Customer Needs SQLs				
First Contact Resolution	Percent of customers who achieved call resolution in one call	78%	72%	75%

The June 2015 year-to-date results have been impacted by a widespread outage in the Kootenay area due to a windstorm at the end of June, where restoration efforts took several days. Due to the number of outages to the distribution system during the storm, the monthly response time in June dropped to the lowest level of the year at 83%. Prior to June's monthly results the 2015 year-to-date results were at the benchmark level of 93%.

The Company's 2009 to 2014 emergency response times are provided below. While the results which have been relatively consistent, variables such as outages described above contribute to the observed volatility in the annual performance for this metric.

Table 13-2: Historical Emergency Response Time

2009	2010	2011	2012	2013	2014
92%	95%	92%	91%	94%	91%

2

3 25.1 Does FBC have plans to bring the Emergency Response Time up to Benchmark
4 in 2016? Please explain why or why not.

5

6 **Response:**

7 FBC is targeting the benchmark for 2016 and expects the emergency response time
8 performance to improve for the reasons discussed below.

9 FBC emergency response to trouble calls is facilitated almost exclusively by FBC's internal
10 Power Line Technicians (PLTs) workforce. During 2014/2015, FBC hired a total of 15 Pre-
11 Apprentice, Apprentice and Journeyman PLTs to fill vacant positions and for succession
12 planning purposes. Returning to normal staffing levels is expected to improve emergency
13 response time performance. Further, as these resources become fully trained PLTs, FBC will
14 have additional resources to respond to trouble calls during storms and other larger events,
15 which has a direct impact on Emergency Response Time performance.

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1 In addition, with almost all the PLT vacancies now filled, FBC has restructured the service
2 territory between South Okanagan, Kootenay and Kelowna to provide a better opportunity for
3 emergency response to FBC customers.

4
5
6
7 25.1.1 If yes, please discuss FBC's plans to improve Emergency Response
8 time to benchmark levels.
9

10 **Response:**

11 Please refer to the response to CEC IR 1.25.1.
12
13

14
15 25.1.2 If not, why not.
16

17 **Response:**

18 Please refer to the response to CEC IR 1.25.1.
19

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1 **26. Reference: Exhibit B-1-1, Pages 111 and 112**

As of June 30, the 2015 annual AIFR is 2.55 as a result of 1 Medical Treatment and 5 Lost Time injuries. This compares to the June year-to-date AIFR result of 4.29 in 2013 and 1.35 in 2014. The three year rolling average of annual results including 2015 June year-to-date results is 2.86, which is outside of the performance range of 2.39. The lost time injuries that have been reported to WorkSafeBC include a strained shoulder, crushed finger, pulled groin and two slip and fall injuries resulting in 131 lost days of work. One employee received medical treatment as a result of a small cut on the leg.

The annual AIFR June year-to-date result in 2015 is 2.55, With the use of three-year rolling average methodology, the lowest three-year AIFR that could be achieved for 2015 would be approximately 2.43, assuming no more injuries the remainder of the year. This is above the approved threshold of 2.39. As discussed in the above, the Company is taking steps to improve performance.

The Company's 2009 to 2014 AIFR results are provided below.

Table 13-3: Historical All Injury Frequency Rate Results

All Injury Frequency Rate	2009	2010	2011	2012	2013	2014
Annual Results	1.41	1.72	1.48	1.72	2.82	3.21
Three year rolling average	2.00	2.00	1.54	1.64	2.01	2.58

2

3 26.1 What is the maximum number of injuries that can occur in 2016 that will bring the
4 AIFR below benchmark?

5

6 **Response:**

7 It is not possible for FBC to bring the three year rolling AIFR below the benchmark of 1.64 in
8 2016. In order to do so, there would have to be a negative number of injuries. Assuming the
9 2015 AIFR of 2.6 as of August 31, 2015 is maintained through the rest of the year, zero injuries
10 in 2016 would result in a three year rolling average AIFR of 1.94 in 2016.

11

12

13

14 26.2 What is the maximum number of injuries that can occur in 2016 that will bring the
15 AIFR below threshold?

16

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1 **Response:**

2 FBC cannot accurately determine the maximum number of injuries that can occur in 2016 to
3 bring AIFR down to below threshold. In order to determine this, one would need to know the
4 final AIFR for 2015 and the total exposure hours for 2016.

5 The annual AIFR is a measure of the number of injuries per 200,000 hours of exposure.

6
$$\text{AIFR} = \frac{\text{Number of Injuries}}{\text{(Exposure hours / 200,000)}}$$

8 The AIFRs for 2014, 2015 and 2016 are required to calculate the three year rolling average
9 AIFR for comparison to threshold in 2016. Given FBC does not have the required information, it
10 is more relevant to describe in terms of the AIFR required to be below threshold rather than the
11 number of injuries that can occur and still stay below threshold.

12 If the 2015 AIFR of 2.6, as of August 31st, was maintained until year-end, the 2016 AIFR would
13 have to be 1.35 to bring the three year rolling average AIFR below the threshold of 2.39.

14

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1 **27. Reference: Exhibit B-1-1, Page 113**

2 The June 2015 year-to-date performance is 75 percent, above the energy industry call centre
3 average of 72 percent and within the performance range (the benchmark is 78 percent and the
4 threshold is 72 percent). The benchmark was set at the same level as FEI as there were no
5 previous FBC results that could be used to establish the current level of performance. Although
6 FCR performance has been between the benchmark and threshold for two consecutive years,
7 the June 2015 year-to-date FCR levels have improved since the start of PBR (75% versus 73%
8 in the two previous years). This improvement reflects an increased focus on FCR in the
9 Company's coaching and training programs. This focus will continue in an attempt to further
10 raise the level of FCR to the benchmark level during the term of the PBR.

11 27.1 Does FBC anticipate meeting benchmark in 2016, or not until later in the PBR
12 term? Please explain.

13 **Response:**

14 FBC anticipates a further increase in FCR in 2016, which may or may not reach the level of the
15 benchmark. As stated on page 113, lines 22 to 28, of the Application, the benchmark was set at
16 the same level as FEI as there were no previous FBC results that could be used to establish the
17 current level of performance. Although FCR performance has been between the benchmark
18 and threshold for two consecutive years, the June 2015 year-to-date FCR levels have improved
19 (75 percent versus 73 percent in the two previous years). This improvement reflects an
20 increased focus on FCR in the Company's coaching and training programs. This focus will
21 continue in an attempt to further raise the level of FCR to the benchmark level during the term of
22 the PBR.

23 27.1.1 If FBC does not propose to meet benchmark in 2016, please explain
24 why not.

25 **Response:**

26 Please refer to the response to CEC IR 1.27.1.

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27.1.2 If FBC does not propose to meet benchmark in 2016, please provide an estimate of the expenditures that would be required in order to achieve benchmark by 2016.

Response:

FBC does not believe additional expenditures would have any material impact on FCR levels. FBC will be continuing its coaching focus on FCR and will continue to review processes that have lower than average FCR scores in order to identify issues and improve the CSRs' abilities to resolve the issue on the first contact.

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1 **28. Reference: Exhibit B-1-1, Page 115**

The June 2015 year-to-date performance is 97 percent, which equals the benchmark.

FBC notes that it will be challenging to maintain this level of performance in the second half of the year due to staffing challenges as the Company transitions from manual to automated meter reading. In addition, several meter reading routes had to be estimated during August due to forest fires destroying advanced metering routers and limiting road access for meter readers.

Historically, there has been no variation in performance other than in 2013, which saw a significant drop in performance (i.e. 51 percent) as the result of the IBEW labour disruption.

The Company's 2009 to 2014 results are provided below.

Table 13-6: Historical Meter Reading Accuracy Results

2009	2010	2011	2012	2013	2014
98%	98%	98%	98%	51%	98%

2

3 28.1 What level of meter reading accuracy does FBC expect to have at year end?

4

5 **Response:**

6 The level of meter reading accuracy FBC expects to have at year end is 96 percent.

7

8

9

10 28.2 Please confirm that FBC will be returning to benchmark or above in 2016?

11

12 **Response:**

13 In 2016, FBC is targeting to meet the benchmark of 97 percent.

14

15

16

17 28.2.1 If not, please explain why not.

18

19 **Response:**

20 Please refer to the response to CEC IR 1.28.2.

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28.3 Is it reasonable to expect the meter reading accuracy to improve beyond 97% once the AMI project is fully implemented? Please explain why or why not.

Response:

FBC considers it likely that meter reading accuracy will improve following AMI implementation, but notes that the result will be affected by the number of radio-off and non-connected meters (meters that, for economic reasons, are not connected wirelessly), which is not accurately known at this time. Therefore, FBC cannot state exactly what the meter reading accuracy level will be.

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1 **29. Reference: Exhibit B-1-1, Page 117**

The June 2015 year-to-date result is 2.9 percent, representing a return to performance levels close to those achieved in years prior to 2014 (e.g. 1.9 percent in 2012 and 2.0 percent in 2013) and a continuation of a trend that occurred during the last half of 2014.

As discussed in the 2015 Annual Review, the 2014 result of 12.4 percent was negatively impacted by the first verified meter readings occurring after the IBEW labour disruption ended in December of 2013; introduction of the Residential Conservation Rate; and the integration of the City of Kelowna customers.

The Company's 2009 to 2014 results are provided below.

Table 13-9: Historical Telephone Abandon Rates

2009	2010	2011	2012	2013	2014
2.2%	1.9%	1.7%	1.9%	2.0%	12.4%

2

3 29.1 Does FBC intend to reduce the Telephone Abandon Rate further in 2015 such
4 that it is closer to 2.2%? Please explain why or why not.

5

6 **Response:**

7 FBC does not intend to target the abandon rate to achieve a result closer to 2.2 percent. The
8 abandon rate is highly variable, due to the frequency of outages and other factors, and the
9 Company considers this year's results to be within normal variation and a significant
10 improvement over 2014.

11

12

13

14 29.2 Does FBC consider that a goal of 2.2% would be suitable for 2016? Please
15 explain why or why not.

16

17 **Response:**

18 No, FBC does not consider 2.2 percent to be a suitable goal for 2016. The abandon rate is
19 provided for informational purposes only and therefore should not be subject to any benchmark
20 or threshold.

21 Please also refer to the response to CEC IR 1.29.1.

22

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1 **30. Reference: Exhibit B-1-1, Pages 119 and 121**

The GFOR up to June 2015 year-to-date is 0.2 percent.

The Company's 2009 to 2014 results are provided below. The 2013 and 2014 results are higher than the other years due to forced outages that arising from fires at the Corra Linn and South Slokan generating plants. Also shown is the comparable data from the Canadian Electricity Association, demonstrating that FBC's performance has, other than 2013, been much lower than the industry average.

Table 13-12: Historical Generator Forced Outages

	2009	2010	2011	2012	2013	2014
FBC	0.9%	0.1%	0.1%	0.5%	5.2%	1.7%
CEA	1.8%	3.9%	5.0%	4.9%	4.9%	5.5%

FBC emphasizes that its GFOR has been consistently better than the industry averages published annually by the CEA and, as shown in Table 13-12, FBC's worst performing year in the recent past (i.e. year 2013 which included the Corra Linn fire) was still consistent with industry averages. The very low GFOR means that this measure will be heavily influenced by a single event. Therefore, should the Commission be persuaded to make GFOR a measurable index, FBC's performance should not be held to a standard that is much higher than other industry participants. Rather, the target should be based on the CEA average.

In summary, establishing a benchmark for GFOR metric would have limited value as it does not impact service to customers and would not result in any changes to FBC's inspection or maintenance programs. FBC already has multiple compelling reasons to maintain inspection and maintenance programs consistent with good utility practice and a GFOR SQL would not change FBC's approach to these programs in any way. Furthermore, fluctuations in the GFOR do not necessarily reflect any fault on FBC's part. The GFOR should therefore remain an informational indicator.

2

3 30.1 Would the standard of GFOR without the fires would likely have been less than
4 1%, as historically provided? Please explain why or why not.

5

6 **Response:**

7 Yes, the GFOR without the fires would have been less than 1 percent in the years shown in the
8 table.

9 The values with and without fires are:

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	2009	2010	2011	2012	2013	2014
FBC – with fires	0.9%	0.1%	0.1%	0.5%	5.2%	1.7%
FBC – without fires	0.9%	0.1%	0.1%	0.5%	0.1%	0.1%
CEA	1.8%	3.9%	5.0%	4.9%	4.9%	6.3%

Note: the CEA number for 2014 was recently finalized and is now 6.3%.

30.2 Please confirm that the intention of the service quality indicators and directional indicators is to ensure that PBR does not diminish the service levels that were originally being provided to customers under cost of service.

Response:

Not confirmed.

The intention of the service quality and directional indicators is to ensure that during the term of the PBR Plan, FBC maintains adequate service levels. The benchmarks and thresholds used as indicators of adequate service quality levels achieved are as outlined in the Consensus Recommendation agreed to by stakeholders and approved by the Commission.