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October 3, 2017

British Columbia Utilities Commission
Suite 410, 900 Howe Street
Vancouver, B.C.
V6Z 2N3

Attention: Mr. Patrick Wruck, Commission Secretary and Manager, Regulatory Support

Dear Mr. Wruck:

Re: FortisBC Inc. (FBC)

Project No. 1598920

**Multi-Year Performance Based Ratemaking Plan for 2014 through 2019
approved by British Columbia Utilities Commission (BCUC or the Commission)
Order G-139-14 – Annual Review for 2018 Rates (the Application)**

Response to the BCUC Information Request (IR) No. 1

On August 10, 2017, FBC filed the Application referenced above. In accordance with the Commission Order G-116-17 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 Joyce Martin at 250-368-0319.

Sincerely,

FORTISBC INC.

Original signed:

Diane Roy

Attachments

cc (email only): Registered Parties



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1 **A. APPROVALS SOUGHT AND REQUIREMENTS OF THE ANNUAL REVIEW**

2 **1.0 Reference: APPROVALS SOUGHT**

3 **Exhibit B-2 (Application), Section 1.2, p. 2**

4 **Z-Factor treatment**

5 On page 2 of the Application, FortisBC Inc. (FBC) includes the following in the list of
6 approvals sought:

7 Z-factor treatment for the 2018 incremental O&M and capital expenditures
8 related to the Mandatory Reliability Standards (MRS) Assessment
9 Reports No. 8 and No. 10, as described in Section 12.2 of the Application.

10 1.1 Please confirm, or explain otherwise, that FBC is also seeking approval for Z-
11 factor treatment for the incremental Mandatory Reliability Standards (MRS) costs
12 associated with the 2018 compliance audit.

13
14 **Response:**

15 Not confirmed. FBC is not seeking approval for the 2018 compliance audit as a Z-factor. The
16 Z-factor criteria, which are listed on page 106 of the Application, require that the impact of the
17 event must be unforeseen in order to qualify for Z-factor treatment. As the MRS compliance
18 audits occur every three years, the audit impacts cannot be said to be unforeseen. However, as
19 stated in the PBR Decision (page 238), "As the MRS audit is a non-recurring expenditure, it
20 therefore should not be included in FBC's Base O&M." Therefore, FBC includes the compliance
21 audit costs as a forecast expenditure outside of formula O&M, consistent with the treatment of
22 the 2015 compliance audit.

23

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B. EVALUATION OF THE PERFORMANCE BASED RATEMAKING (PBR) PLAN

2.0 Reference: EVALUATION OF THE PBR PLAN

Exhibit B-2, Section 1.4.1, pp. 4–5

Overview of operating and maintenance savings

On page 4 of the Application, FBC states that:

[the] 2017 projected O&M savings of \$1.2 million have been achieved with the Company's continued broad-based focus on productivity. While some of the savings are one-time in nature, 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. Upcoming costs related to cyber security are an example of such cost pressures.

2.1 Please provide a breakdown of the actual 2014, 2015 and 2016 and projected 2017 operating & maintenance (O&M) savings between one-time and sustainable savings.

Response:

This response addresses BCUC IRs 1.2.1 and 1.2.2 and BCOAPO IRs 1.1.1 and 1.1.2.

While some savings are labeled as sustainable, factors such as new cost pressures and the annual PIF challenge of approximately \$0.6 million may offset these savings and make it increasingly difficult to achieve the same level of Formula O&M savings that FBC has achieved in past years (the average of 2015 and 2016 O&M savings is approximately \$1.4 million). While the Company continues to investigate additional initiatives and opportunities, it is an increasingly difficult challenge to achieve sufficient incremental savings to offset both the new cost pressures and the productivity challenge embedded in the formula.

As indicated in the Application, FBC has achieved its O&M savings from 2014 to 2017 with a broad-based focus on productivity.

For 2014, the \$0.7 million of O&M savings achieved were impacted by the timing of the PBR Decision and also because of a need to focus on normalizing 2014 activities following a lengthy labour dispute with the Company's IBEW staff during the second half of 2013. As the PBR Decision was not issued until September 15, 2014, the Company did not have certainty as to what is approved O&M and capital spending envelopes would be, or in fact, whether PBR would be approved. These two events made 2014 an unusual year. Staffing levels in 2014 were impacted by the labour dispute as the Company focused on normalizing operations. Additionally, without certainty for most of 2014 as to what was the approved O&M funding, the timing of expenditures was affected. It was difficult to determine the impact of these two events

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on the 2014 O&M spending and the overall O&M savings achieved. As a result, identifying what portion of the O&M savings achieved in 2014 were sustainable and what portion of O&M savings were one time is not possible.

For 2015, FBC estimates that approximately half (i.e., \$0.5 to \$0.6 million) of the \$1.1 million 2015 O&M savings achieved were one time in nature, with the remainder of the O&M savings estimated to be sustainable. FBC followed a broad-based productivity focus for achieving efficiencies and savings, with the efficiencies consisting of smaller scale improvements in individual departments compared to Company-wide initiatives. Examples of these smaller scale improvements were listed in the 2016 Annual Review and included:

- Sharing of Gas and Electric Call Centre Staff for handling Electric customer calls and performing Gas Billing Error Correction activities (i.e. starting in 2016).
- Improvement of geographic information system (GIS) and the supervisory control and data acquisition (SCADA system updates (i.e. started in 2016).
- Implementation a new System Control Centre (SCC) phone system to provide for better call handling and improved efficiency (i.e. started in 2016).

For 2016, FBC estimates that approximately \$1.0 million of the \$1.8 million 2016 O&M savings achieved were one time nature. The remaining approximately \$0.8 million of the 2016 O&M savings are estimated to be sustainable, consisting of \$0.3 million from the sharing of Gas and Electric Contact Centre staff and \$0.5 million due to the Company's broad-based productivity focus (i.e. smaller scale improvements).

For 2017, FBC estimates that approximately \$0.6 million of the \$1.2 million O&M savings projected are one time in nature. The remaining \$0.6 million of projected sustainable savings consist of approximately \$0.3 million from the sharing of Gas and Electric Contact Centre staff and \$0.3 million of savings due to the Company's broad-based productivity focus (i.e. smaller scale improvements), partially offset by the impact of the PIF annual challenge.

The 2017 formula O&M savings of \$1.2 million are projected to decrease by \$0.6 million compared to actual 2016 O&M savings of \$1.8 million due to the impact of the ongoing annual PIF challenge of approximately \$0.6 million and the timing of expenditures. FBC notes that formula O&M savings will fluctuate from year to year naturally due to the timing of expenditures and initiatives. The projected 2017 formula O&M savings of \$1.2 million is consistent with the average of formula O&M savings achieved in 2015 (\$1.1 million) and 2016 (\$1.8 million) of approximately \$1.4 million.

FBC does not have any "new" specific initiatives to report that were initiated in 2017 and contributed to O&M savings in 2017. The focus in 2017 has been to maintain the Company's focus on productivity and continue to look for initiatives to achieve efficiencies. This is part of FBC's ongoing broad-based focus on productivity throughout the Company. While no "new"

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specific initiatives were initiated in 2017 that contributed to savings in 2017, FBC has identified and is undertaking a number of initiatives that will provide benefits in future years. These initiatives are outlined on pages 5-6 of the Application, demonstrating the Company's ongoing efforts to achieve efficiencies and savings.

2.2 Please explain the reasons for the \$0.6 million decrease in O&M savings from actual 2016 O&M savings of \$1.8 million to projected 2017 O&M savings of \$1.2 million.

Response:

Please refer to the response to BCUC IR 1.2.1.

FBC states the following on page 4 of its Application regarding cyber security cost pressures:

The cyber security landscape is changing at a rapid pace, contributing to incremental cost pressures as the Company responds to the evolving risks. While causing only moderate pressure in 2017, O&M costs for cyber security are expected to increase in 2018 by approximately \$0.2 million, along with additional and related capital expenditures. The incremental O&M funding is for third party services and additional headcount required to protect the Company's systems.

2.3 Please explain the nature of the third party services being provided and whether the third party costs are expected to be limited to 2018 or are expected to continue into the future.

Response:

The third party services provide 24/7 active monitoring of FBC systems and infrastructure. Monitoring includes reactive monitoring of attacks, as well as proactive monitoring of potential new attacks through their broad security capabilities. Third party security services are generally provided by large organizations with locations worldwide that can actively monitor for, as well as predict, threats based on technical and political trends. Use of third party cyber security services is cost effective and reliable, and is considered good cyber security practice. Incremental third party services will be required on an ongoing basis into the future.

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2.4 Please indicate how many additional employees are being added to the headcount for the cyber security activities and provide a description of the job activities.

Response:

There are no additional employees being added to the headcount for cyber security activities at FBC. The language in the Application referring to “additional headcount” was copied in error from the FEI 2018 Annual Review Application.

FBC does not intend to add any full-time equivalent or permanent contractor positions to support cyber security at FBC. FBC’s increase of \$0.2 million is for third party cyber security services only, as described in the response to BCUC IR 1.2.5.

2.4.1 Please also indicate the number of full-time equivalents (FTEs) expected to be added and/or whether these positions are permanent or contractor positions.

Response:

Please refer to the response to BCUC IR 1.2.4.

2.5 Please provide a detailed breakdown of the specific security changes, and their associated costs, that are causing the O&M costs for cyber security to increase by \$0.2 million in 2018.

Response:

The increase is due to third-party managed security services and cyber security technology. The estimated total amount for the additional services and technologies is \$0.2 million. The additional services required to continue to provide an adequate level of cyber security are:

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1. Increased active monitoring that improves response times to threats, reducing the risk of new threats referred to as “zero day attacks”. Zero day attack threats are increasing and additional third party security services are required to control the risk of new threats at a reasonable level based on good cyber security practices.
2. Increased use of mobile devices to access systems and data by employees requires additional tools and monitoring to provide adequate cyber security.
3. Increased access for customers to information requires more cyber security infrastructure and systems.
4. Additional internal and third party assessments are required to ensure the adequacy of cyber security for an increasing number of access points for mobile users and external access to systems, such as customer portals.

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3.0 Reference: EVALUATION OF THE PBR PLAN

Exhibit B-2

Staffing levels

3.1 Please provide the actual total FTEs, headcount and unfilled vacancies for each of 2013, 2014, 2015 and 2016 actual, 2017 projected and 2018 forecast.

Response:

The requested information is provided in the table below.

	<u>Average FTEs</u>	<u>Headcount</u>	<u>Unfilled Vacancies</u>
2013 Actual ¹	421	482	8
2014 Actual ¹	492	511	21
2015 Actual	518	511	9
2016 Actual	495	488	10
2017 Projected	502	517	n/a
2018 Forecast	n/a	n/a	n/a
<i>Note: ¹ 2013 and 2014 levels staffing impacted by labour action.</i>			

For the 2017 projected headcount/FTE, factors such as unanticipated staff turnover, timing of recruitment activities (i.e., being able to successfully recruit staff), changing business priorities (i.e., position no longer required) and substituting internal labour with consultants on a short term basis may affect staffing levels previously forecast. In some areas like the Customer Service department, forecasting headcount is particularly challenging given the prevalence of part-time and temporary employees. For the Customer Service department, the average FTE measure is more relevant and meaningful than the headcount measure, as headcount is measured at a specific point in time (i.e., December 31, 2016), making it difficult to forecast when part-time and temporary employees are involved.

For 2018, at this time, staffing levels are expected to remain consistent with 2017 levels.

With regard to the Unfilled Vacancies information requested, FBC understands “Unfilled Vacancies” to mean existing positions that become temporarily vacant due to turnover. For FBC, the proxy to measure this is by taking the number of job bulletins identified as for “replacement” in a given year and calculating how long the job bulletins are vacant. The days vacant estimated are then converted to an FTE basis. However, FBC is unable to determine specifically for all the job vacancies in a given year how many are related to O&M or Capital, or whether in the interim the vacancy was filled by the use of a contractor or a consultant, or by additional overtime (paid or unpaid) by existing employees. Due to the difficulties described, FBC has not forecast Unfilled Vacancies (i.e., 2017 Projected, 2018 Forecast).

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4.0 Reference: EVALUATION OF THE PBR PLAN

Exhibit B-2, Section 1.4.2, p. 5

Initiatives undertaken – sharing of gas and electric contact centre staff

On page 5 of its Application, FBC describes the sharing of gas and electric contact centre staff, which is forecast to produce annual savings for FBC of approximately \$0.3 million.

On March 1, 2017 the Commission issued Order G-25-17 in the FortisBC Energy Inc. (FEI) All-Inclusive Code of Conduct and Transfer Pricing Policy proceeding.

4.1 Please explain the method for allocating costs between FBC and FEI for shared personnel.

Response:

FBC and FEI are charging (allocating) costs between each other for shared personnel consistent with the requirements of the FEI All-inclusive Code of Conduct and Transfer Pricing Policy. Where the costs can be directly assigned, the costs of the shared personnel are charged based on timesheets and fully loaded hourly rates (i.e., including time off and benefits). Where the costs cannot be directly assigned, FBC and FEI use a cost driver approach as a fair and reasonable way to allocate the costs.

In its decision in Order G-110-12 related to FBC's 2012-2013 Revenue Requirements Application, the Commission determined that "Cross charges between FortisBC and its affiliated regulated by the Commission are approved to be based on fully loaded costs, not including overhead." Therefore, for cross charges between FEI and FBC, overhead loadings are excluded from the cost allocation, consistent with the approved FEI All-Inclusive Code of Conduct and Transfer Pricing Policy, which states:

Where is an agreement between FortisBC Energy and its Affiliate with respect to the sharing or provision of services, resources, or personnel that has been reviewed by the Commission, the terms of that agreement will govern.

In the situation of the shared personnel in Customer Service, where the costs can be directly assigned (i.e., charged), the costs of shared personnel are based on cross-charges using fully loaded hourly rates. As discussed in the 2017 Annual Review, this includes FBC workers cross charging FEI for performing FEI work. FEI is also cross charging FBC for management support for management roles that have regular oversight of both gas and electric divisions based on estimates of time worked and the fully loaded salaries of the management roles involved. Additionally, any other ad-hoc management or front line staff support would be charged at a fully loaded hourly rate.

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1 In the situation of FEI CSRs taking FBC customer calls, it is difficult to directly assign the costs of
2 the FEI CSR personnel. FEI charges FBC on a per transaction basis based on the number of
3 FBC calls handled by FEI CSR personnel.

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6
7 4.1.1 Please confirm, or explain otherwise, that the process described above
8 is consistent with the Commission approved code of conduct and
9 transfer pricing policy and any existing shared services agreements.

10
11 **Response:**

12 Confirmed. Please refer to the response to BCUC IR 1.4.1.

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5.0 Reference: EVALUATION OF THE PBR PLAN

Exhibit B-2, Section 1.4.2, p. 5

Initiatives undertaken – Interactive Voice Response enhancements

On page 5 of its Application, FBC describes Interactive Voice Response (IVR) enhancements which are “expected to reduce operating costs in the contact centre starting in 2018 with estimated annual savings of approximately \$0.075 million.”

5.1 Please provide a breakdown and description of the IVR enhancements project cost, including a breakdown between capital and O&M costs.

Response:

FBC has estimated costs of \$0.041 million in capital to implement the IVR enhancements. There are no expected O&M costs.

Costs	Amount (\$)
Contracted Labour	\$ 25,400
Internal Development	\$ 11,000
Internal Support/Testing	\$ 5,000
Total Labour Costs	\$ 41,400

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6.0 Reference: APPROVALS SOUGHT, OVERVIEW OF APPLICATION AND PROPOSED PROCESS

Exhibit B-2, Section 1.4.2, pp. 5–6

Initiatives undertaken – SAP integration

On page 6 of its Application, FBC describes the SAP Integration initiative as follows:

The project has started with completion expected in the third quarter of 2018. The total cost of the project is estimated at \$4.5 million. Based on the number of employees between the two companies (75% FEI, 25% FBC), approximately \$3.4 million of the implementation costs will be allocated to FEI with the remaining \$1.1 million to FBC. Total O&M savings for the project are expected to be approximately \$0.9 million annually, with \$0.6 million expected in FEI and \$0.3 million in FBC. The savings will be realized beginning in 2019.

On March 1, 2017 the Commission issued Order G-25-17 in the FEI All-Inclusive Code of Conduct and Transfer Pricing Policy proceeding.

6.1 Please separately estimate the expected reduction in licensing costs and annual contractor costs (for FBC) resulting from the SAP integration.

Response:

The annual forecast O&M savings related to licensing and contractor costs expected from the SAP Integration project for FBC is approximately \$0.1 million in reduced licensing costs and \$0.2 million in reduced contracted support costs. These cost reductions are estimates only and are subject to change pending completion of the various build, test and implementation phases.

6.2 Is the planned common SAP platform currently being utilized by either FEI or FBC, or are both companies moving to a new common SAP platform? Please explain.

Response:

Although FBC utilizes SAP for many of the same functions as FEI does, the planned common SAP platform is the one currently being used by FEI. The FEI platform was recently upgraded to new infrastructure and the most current version of SAP as part of scheduled sustaining work. Configuration changes and improvements will be made to the existing up to date FEI SAP platform to align business processes, adopt best practices, allow for upcoming and potential

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future projects that provide efficiencies and the implementation of paperless expense management and single sign on module.

6.2.1 If both companies are moving to a new common SAP platform, please explain why neither of the existing platforms was deemed appropriate for integration.

Response:

Please refer to response to BCUC IR 1.6.2.

6.3 Please provide a breakdown and description of the estimated \$4.5 million project cost including how much of the total cost is capital and how much is O&M.

Response:

Capital costs are estimated to be approximately \$4.2 million, of which approximately 75 percent will be allocated to FEI and 25 percent to FBC. The capital costs are categorized as follows:

Phase	Internal Labour (millions)	External Labour (millions)	Total (millions)
Build/Design	\$1.2	\$1.1	\$2.3
Test	\$0.2	\$0.4	\$0.6
Cutover/Deployment	\$0.2	\$0.4	\$0.6
Project Management		\$0.2	\$0.2
Contingency			\$0.5
Total	\$1.6	\$2.1	\$4.2

The remaining \$0.3 million relates to O&M costs, of which approximately \$0.2 million and \$0.1 million is allocated to FEI and FBC, respectively. The O&M costs are primarily for training.

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6.4 Please clarify if the \$4.5 million estimated project cost includes costs for training. If training costs are not included, please provide the estimated costs for training.

Response:

Confirmed. Please refer to the response to BCUC IR 1.6.3.

6.5 Please explain how the method of allocating costs between FEI and FBC (i.e. based on the number of employees) was chosen and determined to be appropriate.

Response:

This IR response addresses BCUC IRs 1.6.5 through 1.6.5.3.

Given the company-wide focus of the project and the impact on employees (i.e., users of the SAP system), FBC and FEI determined that using the number of employees within each company is a fair and reasonable cost allocation methodology to share the SAP Integration costs between the two regulated entities. The number of employees as a cost allocator is representative of the drivers of the costs being incurred for the project and is consistent with the cost-causality approach (i.e., causal relationship between the cost driver and the costs incurred). For example, the employees in each of FEI and FBC are the primary users of the paperless expense management and single sign on module of the SAP integration project, which supports the number of employees as an appropriate cost driver for the project costs.

This cost allocation approach is an approach that is often used for shared IT platforms that are used internally by both organizations. This approach was also used for the Training and Development initiative, a company-wide process implemented in 2015 which involved employees of each company, with the costs allocated between the two utilities using the number of employees of each company.¹ However, the choice of the appropriate methodology and cost driver to allocate common costs that cannot be directly assigned does need to be considered based on the circumstances of the situation. While the number of employees between FEI and FBC was determined to be the appropriate cost driver to allocate costs, three other methods of allocating the SAP Integration Project costs were considered.

First, the application of the Massachusetts Formula to allocate costs is extensively used in the utility industry and has been previously approved by the Commission in Order G-139-14. The Massachusetts Formula is composed of the arithmetical average of (1) operating revenue, (2) payroll, and (3) average net book value of capital assets plus inventories. The use of these

¹ FBC 2017 Annual Review – BCUC IR 1.3.2.

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factors represents the total activity of all business segments as a means to allocate costs that cannot be directly assigned. Using the Massachusetts Formula would result in approximately 24 percent of the SAP Integration costs being allocated to FBC with 76 percent to FEI. The Massachusetts Formula is approved by the Commission for allocating pooled Executive Management costs between FEI and FBC. The Massachusetts Formula would result in an allocation similar to that using the number of employees.

Second, the number of customers for each company was considered as another method of allocating the SAP Integration costs. As at December 31, 2016, FBC reported approximately 133 thousand customers compared to approximately 994 thousand customers for FEI. This would have resulted in an allocation of approximately 88 percent of the costs to FEI and approximately 12 percent of the costs to FBC. However, this allocation method was not considered appropriate since the costs of the SAP Integration project are not influenced by the number of customers for each company.

Third, the benefits to be derived from the project were considered as a potential cost allocation driver. The O&M savings forecast to be attributed to FEI and FBC are approximately 63 percent and 37 percent, respectively. While these forecast O&M savings derived are an important factor in proceeding with the SAP integration project, there are other qualitative benefits expected to be derived such as:

- the reduction in redundancy when implementing process changes across the companies;
- allowing for consistent reporting across both companies;
- alignment of processes such as payment of invoices, credit card expense reconciliations, preparation and reimbursement of employee expenses, and time entry;
- elimination of the more manual and time-intensive process for intercompany cross-charging and allocation of costs in a more-timely manner; and
- the implementation of financial reporting software, which will allow for better integrity of data through increased controls and logging of changes to financial information.

All of the above provide qualitative benefits in the form of efficiencies for the primary users of the system (employees), but do not necessarily provide quantitative O&M savings. The qualitative benefits of the project are more closely aligned with the efficiencies provided to the end users, which supports the use of number of employees in the respective utilities as a driver of cost allocation.

Having reviewed all of the cost allocation methods discussed above, FBC and FEI concluded that number of employees is the most appropriate, given that it best reflects the driver of the costs. Given the circumstances regarding the SAP Integration initiative, FEI and FBC believe

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that using the cost driver of number of employees within each company will provide a fair and reasonable allocation of the project costs.

Finally, as requested in BCUC IR 1.6.5.2, FBC confirms that its proposed cost allocation approach using the number of employees within each company is consistent with the Commission approved FEI All-Inclusive Code of Conduct (COC) and Transfer Pricing Policy (TPP) which provides guidance on interactions between FEI and its affiliated natural monopoly utility, FBC. The policy states:

Where is an agreement between FortisBC Energy and its Affiliate with respect to the sharing or provision of services, resources, or personnel that has been reviewed by the Commission, the terms of that agreement will govern.

In its Decision in Order G-110-12 related to FBC's 2012-2013 Revenue Requirements Application, the Commission determined that "Cross charges between FortisBC and its affiliates regulated by the Commission are approved to be based on fully loaded costs, not including overhead." The proposed cost allocation approach for SAP Integration costs excluding overhead is consistent with the direction provided by this Decision.

6.5.1 Please also discuss if this is a standard practice for allocating costs between the utilities or specific to the SAP integration.

Response:

Please refer to the response to BCUC IR 1.6.5.

6.5.2 Please confirm, or explain otherwise, that the method described above is consistent with the Commission approved code of conduct and transfer pricing policy.

Response:

Please refer to the response to BCUC IR 1.6.5.

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1
2 6.5.3 Please describe any other methods of allocating costs that were
3 considered and discuss why they weren't chosen.
4

5 **Response:**

6 Please refer to the response to BCUC IR 1.6.5.

7

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7.0 Reference: EVALUATION OF THE PBR PLAN

Exhibit B-2, Section 1.4.2, p. 6

Initiatives undertaken – Outage Management System

On page 6 of its Application, FBC describes the project to implement an Outage Management System (OMS).

7.1 Please provide a breakdown and description of the OMS project cost including how much of the total cost is capital and how much is O&M.

Response:

The requested information is provided below.

OMS Project Costs (\$000s)			
	External	Internal	Total
Capital Implementation Costs			
Hardware	\$ -	\$64	\$64
Software Licensing	\$146	\$0	\$146
Planning & Design	Incl.	\$62	\$62
Project Management	\$10	\$76	\$86
Internal Development	\$ -	\$85	\$85
Implementation	\$98	\$83	\$181
Capital Costs Summary	\$254	\$370	\$624
Contingency 15%	\$38	\$55	\$93
Capital Costs plus Contingency	\$292	\$425	\$717
O&M Implementation Costs			
Training	\$-	\$25	\$25
O&M Costs Summary	\$-	\$25	\$25

7.1.1 Please explain if the OMS project cost was part of the overall cost of the Advanced Metering Infrastructure (AMI) project.

Response:

The OMS project was not part of the AMI project and the costs were not included in the AMI project.

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8.0 Reference: APPROVALS SOUGHT, OVERVIEW OF APPLICATION AND PROPOSED PROCESS

Exhibit B-2, Section 1.4.3.1, pp. 6–9

Capital spending results

On pages 7 and 8 of its Application, FBC submits that:

The Highway 97 forced relocation and customer-driven modifications at RG Anderson Terminal projects contribute \$4.2 million to formula capital expenditures in 2017. Both projects are customer-funded, and are therefore offset by Contributions in Aid of Construction (CIAC). However, as recognized during the Annual Review for 2017 Rates, the CIAC for customer-funded projects, while a reduction to rate base, is excluded from the capital expenditure formula envelope under FBC's PBR Plan.

8.1 Please explain the impact, if any, of the CIAC for customer-funded projects being excluded from the capital expenditures formula envelope under FBC's PBR plan and provide an illustrative example of how CIAC is treated under the current PBR plan and how CIAC would be treated if it were included in the capital expenditures formula envelope.

Response:

In this response, FBC illustrates the impact on (i) the formula capital expenditure variances and (ii) rate base, in the hypothetical case in which the PBR capital formula had been determined net of CIAC. For this purpose, FBC assumed the 2013 base value for CIAC to be included in formula to be the approved 2013 CIAC value of \$11.068 million². The base value is then escalated using the same factors as formula capital, which are shown in Section 11, Schedule 4.

Impact on Formula Capital Expenditure Variance

In Table 1-2 of the Application, FBC provided a summary of capital expenditures compared to formula for each year beginning in 2014. Under FBC's PBR plan, CIAC is excluded from the capital expenditures formula envelope.

In Table 1 below, FBC provides a similar table, assuming that the capital formula was net of CIAC as described above. For comparison, the variance under the current PBR plan is also shown in the table below as the "Variance excluding CIAC". As seen in Table 1, if the formula were net of CIAC, the variance from formula would be greater in all years. Had the formula been calculated net of CIAC in the manner described above, FBC would have exceeded the dead band in every year except 2014.

² FBC compliance filing to Order G-110-12.

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Table 1: Capital Expenditures Net of CIAC, 2014 – 2107 (\$ millions)

	2014			2015			2016		
	Actual	Formula	Variance	Actual	Formula	Variance	Actual	Formula	Variance
Formula Capital	\$ 42.665	\$ 42.193	\$ 0.472	\$ 44.791	\$ 42.384	\$ 2.407	\$ 45.838	\$ 42.874	\$ 2.964
CIAC	(8.967)	(11.152)	2.185	(7.054)	(11.202)	4.148	(8.435)	(11.331)	2.896
Pension/OPEB	6.396	6.396	-	4.253	4.253	-	3.674	3.674	-
Total	\$ 40.094	\$ 37.437	\$ 2.657	\$ 41.990	\$ 35.435	\$ 6.555	\$ 41.077	\$ 35.217	\$ 5.860
Variance			7.10%			18.50%			16.64%
Variance excluding CIAC			0.97%			5.16%			6.37%

	2017			Cumulative		
	Forecast	Formula	Variance	Actual	Formula	Variance
Formula Capital	\$ 58.560	\$ 43.254	\$ 15.306	\$ 191.854	\$ 170.705	\$ 21.149
CIAC	(11.945)	(11.431)	(0.514)	(36.401)	(45.116)	8.715
Pension/OPEB	3.539	3.539	-	17.862	17.862	-
Total	\$ 50.154	\$ 35.362	\$ 14.792	\$ 173.315	\$ 143.451	\$ 29.864
Variance			41.83%			20.82%
Variance excluding CIAC			32.71%			11.22%

2

3 Impact on Rate Base

4 The manner in which additions to plant and to CIAC are recognized in rate base would not
5 change if the formula were to be calculated net of CIAC. The formula amount of gross capital
6 expenditure (before CIAC and excluding consideration of any expenditures outside of the dead
7 band) is recorded in plant in service, and the CIAC is recorded as a reduction to rate base.
8 Under FBC's existing PBR Plan, the net addition to rate base is the formula capital amount less
9 the actual CIAC. If calculating the formula net of CIAC, the amount of CIAC recorded would be
10 the "formula" value of CIAC as escalated using the capex formula factors rather than the actual.
11 The hypothetical variance in the two approaches (the difference between) is shown in Table 2
12 below.

13

Table 2: Rate Base Impact of CIAC in Formula, 2014 – 2107 (\$ millions)

	2014	2015	2016	2017	Cumulative
Formula Excluding CIAC					
Formula Capital	\$ 48.589	\$ 46.637	\$ 46.548	\$ 46.793	\$ 188.567
Actual CIAC	(8.967)	(7.054)	(8.435)	(11.945)	(36.401)
Net Addition to Rate Base	\$ 39.622	\$ 39.583	\$ 38.113	\$ 34.848	\$ 152.166
Formula Calculated Net of CIAC					
Formula Capital	\$ 48.589	\$ 46.637	\$ 46.548	\$ 46.793	\$ 188.567
Formula CIAC	(11.152)	(11.202)	(11.331)	(11.431)	(45.116)
Net Addition to Rate Base	\$ 37.437	\$ 35.435	\$ 35.217	\$ 35.362	\$ 143.451
Difference	\$ 2.185	\$ 4.148	\$ 2.896	\$ (0.514)	\$ 8.715

14

15 For the reasons set out in the response to BCUC IR 1.12.9, FBC does not recommend that any
16 adjustment be made to the capital formula at this time. FBC will propose a new capital base
17 and a revised capital formula, or alternative approach to the treatment of capital, in the next
18 PBR Plan where a review of the formula in the context of all of the other components will take
19 place.

20

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9.0 Reference: APPROVALS SOUGHT, OVERVIEW OF APPLICATION AND PROPOSED PROCESS

Exhibit B-2 (Application), Section 1.4.3, p. 7; FEI Annual Review of 2018 Rates proceeding, Exhibit B-2, Table 1-4, p. 11³

Overview of capital expenditures

Table 1-2 of the Application includes capital expenditures for each of 2014–2017 and cumulative. Table 1-4 of Exhibit B-2 in the FEI Annual Review of 2018 Rates proceeding includes capital expenditures for each of 2014–2017 and cumulative, with a breakdown of formula capital between growth and other.

9.1 Please provide a revised Table 1-2 in the same format as Table 1-4 in the FEI Annual Review of 2018 Rates proceeding, specifically to include a breakdown of the formula capital line item between growth and sustainment/other capital.

Response:

Unlike FEI, FBC does not have different calculations for formula growth capital and formula sustainment/other capital and therefore does not have separate capital spending envelopes for growth and sustainment/other capital under PBR.

Notwithstanding this, the table below shows the hypothetical escalation under the PBR Plan of the growth capital and other/sustainment capital categories based on the 2013 approved forecast capital expenditures which formed the basis for the capital expenditures formula. FBC emphasizes that this is an arbitrary calculation of the escalation of 2013 growth and other/sustainment capital and reflects neither the Commission determination of FBC's PBR formula capital, nor FBC's internal budgets for growth and other/sustainment capital. Rather, FBC calculates and applies the formula to the combination of growth and other/sustainment capital.

³ http://www.bcuc.com/Documents/Proceedings/2017/DOC_49752_B-2_FEI_Annual_Review_2018_Rates.pdf.

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	2014			2015			2016		
	Actual	Formula	Variance	Actual	Formula	Variance	Actual	Formula	Variance
Growth	\$ 15,535	\$ 17,944	\$ (2,409)	\$ 17,662	\$ 18,095	\$ (433)	\$ 12,936	\$ 18,233	\$ (5,297)
Other	27,130	24,249	2,881	27,128	24,289	2,839	32,902	24,641	8,261
Total	42,665	42,193	472	44,790	42,384	2,406	45,838	42,874	2,964
Pension/OPEB	6,396	6,396	-	4,253	4,253	-	3,674	3,674	-
Total	\$ 49,061	\$ 48,589	\$ 472	\$ 49,043	\$ 46,637	\$ 2,406	\$ 49,512	\$ 46,548	\$ 2,964
Variance			0.97%			5.16%			6.37%

	2017			Cumulative		
	Actual	Formula	Variance	Actual	Formula	Variance
Growth	\$ 17,578	\$ 18,395	\$ (817)	\$ 63,711	\$ 72,667	\$ (8,956)
Other	40,982	24,859	16,123	128,142	98,038	30,104
Total	58,560	43,254	15,306	191,853	170,705	21,148
Pension/OPEB	3,539	3,539	-	17,862	17,862	-
Total	\$ 62,099	\$ 46,793	\$ 15,306	\$ 209,715	\$ 188,567	\$ 21,148
Variance			32.71%			11.22%

9.1.1 Please provide a breakdown and explanation for both the annual variances (i.e. 2014, 2015, 2016 and 2017) and the cumulative variance between formula and actual/projected growth capital, which separately quantifies the amount of the annual variance and the cumulative variance attributable to each contributing factor.

Response:

As stated in the response to BCUC IR 1.9.1, FBC's capital formula does not distinguish between growth and other types of capital and as a result no meaningful analysis of the variance to the hypothetical formula values in that response can be made.

9.1.2 Please provide a breakdown and explanation for both the annual variances (i.e. 2014, 2015, 2016 and 2017) and the cumulative variance between formula and actual/projected other/sustainment capital, which separately quantifies the amount of the annual variance and the cumulative variance attributable to each contributing factor.

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1

2 **Response:**

3 As stated in the response to BCUC IR 1.9.1, FBC's capital formula does not distinguish between
4 growth and other types of capital and as a result no meaningful analysis of the variance to the
5 hypothetical formula values in that response can be made.

6

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10.0 Reference: APPROVALS SOUGHT, OVERVIEW OF APPLICATION AND PROPOSED PROCESS

Exhibit B-2, Section 1.4.3.1, p. 7; FEI Annual Review of 2017 Rates proceeding, Exhibit B-3, BCUC IR No.9.1⁴

Capital spending results

FBC states on Page 7 of the Application:

In addition to the formula-related capital pressures noted above, FBC is experiencing capital cost pressures in 2017 due to work that had been re-prioritized from previous years of the PBR term into 2017, to manage unforeseen urgent and higher priority activities in 2017. The main pressures in 2017 are described below.

1. System improvements to accommodate customer growth;
2. Forced relocation of transmission and distribution infrastructure due to the widening of Highway 97 near Kelowna by the Ministry of Transportation and Infrastructure;
3. Customer-driven modifications at RG Anderson Terminal associated with the City of Penticton's distribution voltage conversion project; and
4. Increased cost of equipment and supplies purchased from the United States due to the unfavourable exchange rate.

The following table was provided in response to BCUC IR No. 9.1 (Exhibit B-3) in the FEI Annual Review of 2017 Rates proceeding:

Capital Pressure	2014	2015	2016	Category
Large industrial mains	YES	YES	YES	Growth Capital
Regionalization	YES	NO	YES	Other Capital
Jomar Valves	NO	YES	YES	Other Capital
Increased ILI	YES	YES	YES	Other Capital
System Improvements & new stations	YES	YES	YES	Other Capital
Burns Bog Stress Relief	YES	YES	YES	OtherCapital
Exchange Rate Impacts	NO	YES	YES	Growth and Other Capital

10.1 For each of the main pressures described on page 7 of the Application, please provide a detailed breakdown by year (i.e. 2014, 2015, 2016 and 2017) of the associated one-time and ongoing capital costs.

⁴ http://www.bcuc.com/Documents/Proceedings/2016/DOC_47628_B-3_FEI-BCUC-IR1-Response.pdf.

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Response:

Please refer to the table below for an annual breakdown of estimated capital costs associated with the two formula-driven pressures identified, as well as three of the four items listed in the preamble. FBC is unable to quantify the impact of the unfavourable exchange rate, as explained further in the response to BCOAPO IR 1.3.4.

Capital Costs (\$ millions)	2014	2015	2016	2017
Growth factor reduction for net customer additions	0.1	0.1	0.3	0.2
X factor increase by 0.53 percent	0.2	0.2	0.2	0.3
System improvements to accommodate customer growth	2.0	2.0	2.0	1.3
Forced relocation of Highway 97 infrastructure	0.1	0.4	3.1	0.6
Customer-driven modifications at RG Anderson Terminal			0.1	3.6
Subtotal	2.4	2.7	5.7	6.0

In addition to the total 2017 pressures of \$6.0 million identified in the table above, FBC notes the following two factors:

- \$5.3 million of capital work that was reprioritized into 2017, as further described in the response to CEC IR 1.8.1; and
- \$1.9 million of cost pressure that resulted from an improved understanding of project scope requirements for transmission, distribution, and generation projects. FBC is now executing projects that were originally scoped and estimated in 2011 for the 2012 Long Term Capital Plan (on which the 2014 PBR capital formula was based). Changes in equipment condition compared to that expected and other project requirements have resulted in increased costs

These factors account for approximately \$13.2 million of the spending in excess of the 2017 formula amount. FBC considers the remaining \$2.1 million to be reasonably explained by the unfavourable currency exchange rate and other miscellaneous factors.

10.1.1 If the aggregate forecast 2017 capital cost for the above-noted pressures is less than the \$15.306 million capital spending in excess of the formula amount, please provide details and quantify any additional capital cost pressures experienced by FBC that are contributing to the variance between actual and formula capital.

Response:

Please refer to the response to BCUC IR 1.10.1.

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10.1.2 For each of the pressures identified above, please explain if the pressure is expected to continue through the remainder of the PBR term.

Response:

FBC anticipates that some of the pressures identified in the preamble to the question will continue into 2019. Please refer to the following table.

Capital Pressure	2014	2015	2016	2017	2018	2019	Category
System improvements to accommodate customer growth	YES	YES	YES	YES	YES	YES	Growth Capital
Forced relocation of Highway 97 infrastructure	YES	YES	YES	YES	NO	NO	Other Capital
Customer-driven modifications at RG Anderson Terminal	NO	NO	YES	YES	YES	NO	Other Capital
Increased cost due to unfavorable US exchange rate	YES	YES	YES	YES	YES	YES	Growth and Other Capital
Re-prioritized work	-	-	-	YES	YES	YES	Other Capital

10.1.3 For each of the four identified factors, please indicate in which year(s) the impact was experienced and whether the factor was related to growth or other/sustainment capital. Please provide the information in the same format as the response to BCUC IR No. 9.1 in the FEI Annual Review of 2017 Rates proceeding.

Response:

Please refer to the response to BCUC IR 1.10.1.2.

10.2 In addition to initially delaying the above cost pressures, please elaborate on the additional steps that FBC has taken to reduce the actual costs.

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1 **Response:**

2 As described on Page 8 of the Application, capital efficiency initiatives undertaken to date
3 include comprehensive pre-construction planning, combining transmission and distribution
4 sustainment work into larger programs and resourcing through a competitive bid process, and a
5 focus on reducing design costs across various Information Systems applications. FBC has
6 implemented process improvements, explored the market and secured long term contracts in
7 order to achieve cost savings with respect to services, equipment and apparatus. Some
8 examples of these cost savings initiatives are:

- 9 1. FBC obtained a three year services contract based on unit pricing with two power line
10 construction companies. These companies conduct transmission and distribution
11 rehabilitation and rebuild work;
- 12 2. FBC has secured long term contracts and service agreements with vendors which has
13 provided flexibility of “bulk purchasing” of equipment such as high voltage circuit
14 breakers and power transformers; and
- 15 3. FBC has bundled several projects together in a competitive bid process to reduce
16 technical and administrative costs.

17 Through these activities and other cost saving activities, FBC estimates that approximately \$1.7
18 million of efficiencies were achieved in 2016.

19
20

- 21 10.3 With regards to cost pressure number 4 (i.e. increased cost of equipment and
22 supplies purchased from the United States due to the unfavourable exchange
23 rate), please discuss if FBC considered an alternative supplier to avoid the
24 unfavourable exchange rate.

26

27 **Response:**

28 FBC procures products and services through a competitive sourcing process where selection is
29 based on the best price that meets FBC’s technical and commercial requirements.

30

31

- 32 10.4 Please describe and quantify the system improvements that were required to
33 accommodate customer growth.

35

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Response:

System improvements are projects related to increased capacity, equipment and services upgrades, voltage regulation, feeder ties, and load transfers which are required to keep pace with normal load growth on the transmission and distribution systems. They also include work to connect new customers and to ensure continuing acceptable standards of service.

Please refer to the response to BCUC IR 1.9.1 for the quantification of the system improvements that are causing capital pressure.

10.4.1 Please identify the specific customer classes that are driving the need for system improvements due to customer growth, and provide the supporting customer growth data by year.

Response:

The Residential and Commercial classes are the primary drivers for system improvements required due to customer growth. The table below shows the annual direct customer additions and percentage growth in these classes.

	2014		2015		2016	
Customer Class	Customer Additions	% Growth	Customer Additions	% Growth	Customer Additions	% Growth
Residential	1,569	1.40%	735	0.65%	1,606	1.41%
Commercial	701	5.17%	613	4.22%	97	0.65%

10.4.2 Please elaborate on why capital expenditures related to system improvements due to the customer growth are contributing to spending in excess of the formula, given that the capital expenditure formula includes the customer growth factor.

Response:

FBC notes that it does not have a specific capital formula related to growth capital, such that the system improvements are only one of the items that are contributing to overall capital pressure.

In addition to the reduction in the customer growth factor by one-half, capital expenditures related to system improvements contribute to overall capital pressure because FBC's system

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improvements are not driven solely by one new customer requiring a certain amount of capital, or necessarily by the addition of new customers at all. Some examples are provided below:

- The cost to connect a single new customer can vary widely depending on proximity to existing suitable infrastructure and the capacity of existing infrastructure;
- System capacity upgrades are required at discrete load levels, such that a relatively small number of new customers can trigger the need for a system improvement project; and
- System improvement projects can also be driven by load increases for existing customers, which are not accounted for in the growth factor.

10.5 For each of pressure numbers 2 and 3 identified on page 7 of the Application, please provide the amount of the total Contribution in Aid of Construction received.

Response:

The total forecast expenditures for the Highway 97 widening project are \$4.060 million (\$0.611 million in 2017) and the Contribution In Aid of Construction received is \$0.762 million; consequently, the ratepayer funded portion is approximately \$3.298 million.

The total costs for the customer driven modifications at the RG Anderson Terminal are forecast to be approximately \$4.7 million (\$3.6 million in 2017); this project is fully funded by the City of Penticton.

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11.0 Reference: APPROVALS SOUGHT, OVERVIEW OF APPLICATION AND PROPOSED PROCESS

Exhibit B-2, Section 1.4.3.1, p.8

Work prioritization and efficiencies

FBC states on page 8 of the Application:

FBC has been successful in mitigating some of the cost pressures through efficiencies and work prioritization. However, the cost pressures have exceeded the Company's ability to re-prioritize further work within the formula capital spending envelope without incurring more risk to the system. As well, previous work that was delayed is now considered essential or mandatory work and cannot be deferred further. To mitigate this risk exposure, FBC has increased its planned sustainment activities in 2017.

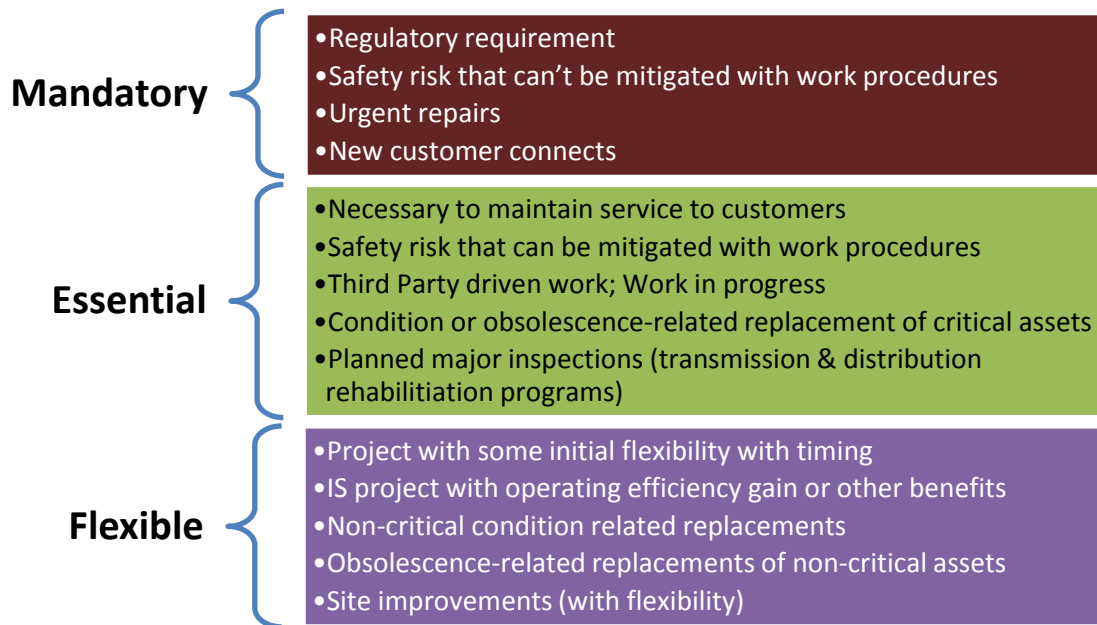
11.1 With respect to work prioritization, please elaborate on how FBC is prioritizing its capital expenditures during the remainder of the PBR term, with reference to prioritization ascribed to existing ongoing projects as well as any new projects undertaken during the PBR term.

Response:

During the current PBR term, capital expenditures have been prioritized through the following:

1. Criteria such as asset health/condition, number of customers served, location, reliability indices, and operating cost opportunities are considered through a project portfolio management process that strives to quantify the benefit of the proposed projects.
2. Each project is assigned to one of the following three classifications:

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3. Available funds are allocated towards mandatory and essential work first.

The analysis includes an evaluation of risk mitigation, financial performance, customer growth, and customer service. Each year, projects that have been rescheduled are reassessed for business value and change in classification. Projects that were classified as flexible in one year may be classified as essential or mandatory the following year.

11.1.1 Please provide a table showing a list of capital expenditures by project in 2017 which have been classified as urgent, essential and/or mandatory.

Response:

FBC categorizes capital projects as Mandatory, Essential or Flexible. The Mandatory classification would include "urgent" work. The table below provides the 2017 Projected capital expenditures classified as Mandatory and Essential.

Category	Mandatory (\$ millions)	Essential (\$ millions)
Generation	1.600	1.230
Transmission & Stations Growth	-	0.080
Distribution Growth	0.700	0.600

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Category	Mandatory (\$ millions)	Essential (\$ millions)
New Connects	13.500	-
Transmission & Station Sustainment	8.200	1.000
Distribution Sustainment	12.440	4.100
Telecom	0.500	0.500
Information Systems	2.240	3.000
Fleet	1.140	0.760
Meters and equipment	0.300	0.300
Facilities	0.800	0.980
Total	41.420	12.550

11.1.2 Please provide a description and estimated capital cost of any projects that FBC originally planned to complete during the PBR term that are now expected to be delayed until after the PBR term.

Response:

At this time, other than some Flexible projects, the projects that were originally planned to be completed during the PBR term that are now expected to be completed after the PBR term are:

- Growth projects that are not required to be in service prior to 2020 based on the most recent FBC Distribution load forecast. The required timing of these projects is reviewed on an annual basis when the load forecast is updated. These projects and their Class 5 estimated values are Glenmore Low Voltage Bus Capacity Upgrade (\$0.2 million), Summerland Transformer Replacement (\$4.5 million), Grand Forks Terminal Feeder Addition (\$2 million), and DG Bell 4 Feeder Addition (\$1.8 million); and
- The Okanagan Long Term Solution (Land). This project has been deferred until after the PBR term due to challenges associated with the procurement of land. The estimated value of the project was based on procurement of an identified parcel of land that was estimated to be approximately \$3.8 million at the time of filing the PBR Application in 2013.

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1 11.2 In addition to the work prioritization, please elaborate on the other cost saving
2 measures that FBC has explored such as material, process and or technical cost
3 saving measures.
4

5 **Response:**

6 Please refer to the response to BCUC IR 1.10.2.
7

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12.0 APPROVALS SOUGHT, OVERVIEW OF APPLICATION AND PROPOSED PROCESS

Exhibit B-2, Section 1.4.3.3, p. 11–13; FEI and FBC Multi-Year Performance Based Ratemaking Plans for 2014–2019 Approved by Decisions and Orders G-138-14 and G-139-14, Capital Exclusion Criteria under PBR, Compliance Filing, Reasons for Decision and Order G-120-15, issued on July 22, 2015, p. 17⁵; FEI Annual Review of 2017 Rates proceeding, Exhibit B-3, BCUC IR No.9.1; FEI Multi-Year Performance Based Ratemaking Plan for 2014–2018, Decision and Order G-138-14, issued September 15, 2017

Treatment of capital spending outside of the dead band

On page 12 of the Application, FBC states that “by not adjusting the capital formula amount, the incentive properties of the PBR Plan remain intact and will remain consistent throughout the remainder of the PBR term.”

12.1 Please clarify how the incentive properties of the PBR Plan are expected to remain intact given that under the course of action included in the Application, any capital spending that exceeds the capital dead band will automatically be added into the following year’s opening plant in service.

Response:

The incentive properties remain intact because the PBR Plan remains as originally approved, with incentives for savings within the dead band but not outside the dead band. The incentive consistently applies to the amount of capital spending within the dead band, for which there is a sharing of savings or costs with customers, and amounts outside of the dead band consistently have no sharing and are instead added to or deducted from rate base the following year, which provides an incentive to FBC to minimize this amount due to the lag from the time of spending to the time of rate base (and rate recovery) inclusion.

The capital dead band was put in place specifically to address the situation where capital spending varied beyond a set amount from the capital formula, such that the PBR Plan would be able to carry on even with unexpected capital expenditure variances. The dead band was symmetrical in design to ensure that large variances beyond the formula amount did not disproportionately impact either customers or the Company.

Consistent with the PBR Plan, there is no PBR-specific incentive once the dead band is exceeded. However, FBC relies on prudent capital management practices, and adheres to consistent policies and procedures to execute on the required capital expenditures both to support growth in customers and to maintain the safety and integrity of the electrical system,

⁵ http://www.bcuc.com/Documents/Proceedings/2015/DOC_44209_07-22-2015_G-120-15-PBRCapitalExclusion-ReasonsforDecision.pdf.

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1 regardless of whether capital expenditures fall within the dead band or outside of the dead
2 band.

3
4
5
6 12.2 If the Commission was to determine that re-basing was required, please discuss
7 the reasonableness of undertaking a limited re-basing approach, such as limiting
8 the re-basing to specific cost pressures that relate to the majority of the capital
9 over-spend thus far in the PBR Plan term.

10
11 **Response:**

12 Please refer to the response to BCUC IR 1.12.9.
13

14
15
16 FBC states on page 12 of its Application: "To calculate the 2017 dead band adjustment,
17 FBC notes that its actual 2016 capital exceeded the formula by approximately 6.37
18 percent. FBC is further expecting to exceed the 2017 formula by 32.71 percent as shown
19 in Table 1-2."

20 Furthermore, FBC states on page 13 that "...[it] has evaluated its alternatives and
21 believes that it is in the best long-term interest of customers to pursue the capital
22 spending program it has planned that will result in the dead band being exceeded, not
23 only in 2017, but in the remaining years of the PBR term."

24 12.3 Please explain whether FEI considers the forecast 2017 amount of 32.71 percent
25 and the cumulative amount of 11.22 percent in excess of the capital dead-band
26 to be "significant."
27

28 **Response:**

29 FBC considers the 2017 capital formula variance to be significant in the context of the PBR Plan
30 because the variance is materially over the dead band. As explained in the Application, the
31 large 2017 variance is partly due to projects that were re-prioritized from earlier years in the
32 PBR term.

33 FBC expects that 2017 will be the year with the largest capital variance in the six year PBR
34 term. Overall on a cumulative basis, the capital spending variance over the entire PBR term is
35 expected to average approximately 15 percent of the formula.

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12.4 Please show the forecast 2018 and 2019 capital expenditures versus the forecast formula capital expenditures for those years and provide a detailed explanation of the specific factors that are expected to contribute to capital expenditures exceeding the dead band in each of the remaining years of the PBR term.

Response:

FBC anticipates approximately \$57.0 million in capital expenditures for 2018 as compared to \$47.4 million in forecast formula capital expenditures and approximately \$59.5 million in capital expenditures for 2019 as compared to \$49.1 million in forecast formula capital expenditures.

In addition to the items identified in the response to BCUC IR 1.10.1.2, other factors that are expected to contribute to capital expenditures exceeding the formula include:

- New projects in generation to address compliance with new legislation from WorkSafeBC;
- Unanticipated transmission projects to address safety and reliability issues; and
- Additional substation projects to address end-of life equipment replacements.

12.5 Please elaborate on why FBC has not proposed to rebase the formula capital in order to better reflect the expected future spending, given that the forecast capital expenditures are expected to exceed the dead band for the remainder of the PBR.

Response:

Please refer to the response to BCUC IR 1.12.9.

On page 12 of its Application, FBC states that:

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While FBC expects to continue to experience capital cost pressures, the dead band mechanism remains a reasonable way to deal with capital cost pressures by ensuring no sharing of negative earnings impacts with customers for capital expenditures in excess of 10 percent of the formula amount or 15 percent over two years.

12.6 Please explain if, under the course of action included in the Application for capital expenditures in excess of the dead band (i.e. add to opening plant in service), the return on equity related to this amount will be included in the revenue requirement and rates for 2018 and beyond and recovered fully from ratepayers.

Response:

Yes. Under the treatment contemplated in the PBR Plan and further approved in FEI's Annual Review for 2017 Delivery rates, in which only expenditures within the dead band are excluded from rate base, 2017 expenditures in excess of the dead band are added to rate base on January 1, 2018. The return on rate base for the amount of expenditures in excess of the dead band is likewise added to 2018 revenue requirements.

12.6.1 If confirmed, please explain how the dead band mechanism remains a reasonable way to deal with capital cost pressure by ensuring no sharing of negative earnings impacts with customers for capital expenditures in excess of the dead band.

Response:

Please refer to the response to BCUC IR 1.12.9.

In the FEI-FBC Capital Exclusion Criteria under PBR Reasons for Decision attached to Order G-120-15, the Commission stated the following on page 17:

The Panel accepts there are a number of reasons why a capital expenditure level may be higher or lower than the threshold. Some of these may support and justify raising or lowering base capital while others may demonstrate a particular result to be an anomaly, not necessarily requiring rebasing.

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12.7 Based on the information provided in response to BCUC IR No. 9.1, 9.1.1 and 9.1.2 above, please explain if FBC considers the capital expenditures in excess of the formula to be a continuing trend or an anomaly.

Response:

FBC considers the capital expenditures in excess of the formula to be a continuing trend. This trend is driven by a number of ongoing pressures as identified in the response to BCUC IR 1.10.1.2, and by newly identified work as a result of increased asset health knowledge as compared to that available during the development of the long term capital plan on which the PBR Application was based. However, given this combination of factors, and the other considerations discussed in the response to BCUC IR 1.12.9, FBC does not consider capital rebasing to be necessary at this time.

On page 13 of the Application, FEI summarizes the capital dead band “regulatory history” and states the following:

If the capital dead band is exceeded, the opening plant in service for ratemaking purposes in the following year will be adjusted up or down by the amount that actual capital expenditures vary outside of the dead band from the formula-based amount, and the capital expenditure level utilized in calculating the earnings sharing is adjusted up or down by the same amount.

12.8 Please provide the specific wording in either the FEI 2014-2018 PBR Decision issued on September 15, 2014 or the FEI-FBC Capital Exclusion Criteria Reasons for Decision accompanying Order G-120-15 where the Commission approved the treatment of capital spending in excess of the dead band in the manner described in the above preamble.

Response:

PBR Decision:

FBC provides the regulatory history regarding the capital dead band at pages 9 through 12 of the Application. This treatment was also explored in FEI’s Annual Review for 2017 Delivery Rates, including in information requests in that proceeding and was again described in the presentation material for FEI’s workshop in that proceeding.

The Commission approved the treatment of capital in excess the dead band in Order G-182-16 regarding FEI’s Annual Review for 2017 Delivery rates, following the review of all of the material discussed above, stating:

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1 The Panel approves FEI's proposal to remove the amount of formula capital
2 which has exceeded the cumulative dead-band from the earnings sharing
3 calculation, and to add the amount of capital in excess of the dead-band to FEI's
4 opening 2017 plant additions balance.

5 **Capital Exclusion Criteria Decision:**

6 The Capital Exclusion Criteria Reasons for Decision accompanying Order G-120-15 did not
7 address how the earnings sharing or opening rate base are adjusted; these were items that
8 were determined in the PBR Decision. What the Capital Exclusion Criteria decision did discuss
9 at page 17 was whether or not rebasing of the capital formula should occur when the dead band
10 is exceeded.

11 Where the dead band is exceeded for any year, FEI and FBC are directed in the
12 next Annual Review filing to include recommendations as to any adjustment to
13 base capital other than those driven by the I-X mechanism.

14
15
16
17 12.9 Does FBC consider there to be any other options for treating the capital
18 expenditures in excess of the dead band other than rebasing or adding the
19 excess capital expenditures to opening plant in service in the following year?
20 Please discuss.

21
22 **Response:**

23 The discussion below is provided to respond to BCUC IRs 1.12.2, 1.12.5, 12.6.1, and 1.12.9.1
24 which all relate to FBC's proposal to carry on with the approved PBR mechanism as compared
25 to options around re-basing of capital.

26 First, FBC is nearing the end of its fourth year of the PBR Plan, with only 2018 and 2019 left in
27 the PBR term. Given the re-basing proceeding that would be required to properly set a new
28 base capital level for the PBR term, it is likely that any change to the PBR Plan would not be
29 implemented until 2019. Given the short time span remaining in the term, any re-basing will not
30 have a material impact on cost recovery or rates in general.

31 Second, FBC does not believe it is appropriate to change one element of the PBR Plan in
32 isolation of the others; the PBR Plan is a package of interdependent components. Although
33 there is a provision in the Capital Exclusion Criteria Decision that allows for re-basing of capital,
34 a change to the capital formula itself was not contemplated; the formula is a fundamental
35 component of the PBR Plan. The best time to look at the capital formula and the level of
36 rebasing is the next time PBR comes up for review. FBC will propose a new capital base and a
37 revised capital formula, or alternative approach to the treatment of capital, in the next PBR Plan

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1 where a fulsome review of the formula in the context of all of the other components will take
2 place.

3 Third, the impact of rebasing the capital formula was examined in FEI's Annual Review for 2017
4 Rates Workshop (FEI Exhibit B-10, Slide 10) and at pages 16 to 21 of the FEI Workshop
5 Transcript. The conclusion reached was that rebasing the capital formula does not result in a
6 better outcome for customers. The end result of maintaining the current treatment as compared
7 to re-basing the capital formula is that, in both cases, the amount outside of the dead-band gets
8 added to rate base. But if the capital formula is re-based to a higher level, then the earnings
9 sharing and the dead-band itself are impacted for future years (because the formula amount is
10 now larger).

11 Given that background, FBC addresses the specific questions asked by the Commission.

12 Limited Re-basing of Specific Cost Pressures

13 There is no need to isolate specific components of capital for separate treatment. The existing
14 Z-factor mechanism was put in place to address situations where large unforeseen capital was
15 required, and FBC will put forward any projects that qualify for that treatment. FBC will continue
16 to manage the levels of capital spending over the remainder of the PBR term.

17 50/50 Sharing of Capital Spending Above the Dead-Band:

18 The Commission has asked about other alternatives, including 50/50 sharing of the difference in
19 capital spending above dead-band. FBC understands this to mean that the capital above the
20 dead-band is not added to rate base the following year, but that customers pay for one-half of
21 the return through the earnings sharing mechanism for the remaining years of the PBR term.
22 FBC understands this to be the same as removing the dead-band mechanism on capital
23 spending altogether, which would not be appropriate. As discussed above, because the PBR
24 Plan is a package of interdependent components, it is not appropriate to change one element of
25 the PBR Plan in isolation of the others. The formula is a fundamental component of the PBR
26 Plan, and removing the dead band on the capital formula would change the balance struck by
27 the Commission in its PBR Decision. For example, a symmetrical dead band was approved by
28 the Commission to protect ratepayers and the utility from the risk of capital requirements being
29 significantly lower or higher than the formula, respectively. FBC does not believe it would be fair
30 to remove the protection of a symmetrical dead band now that the risk of higher capital
31 requirements has materialized for the utility. FBC suspects that intervenor groups would
32 similarly oppose removal of the dead band on capital expenditures if FBC's expenditures were
33 below the dead band. As FBC has indicated above, the best time to look at the capital formula
34 and the level of rebasing is the next time PBR comes up for review.

35

36

37

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12.9.1 As part of the above response, please discuss whether an alternative option would be to share the impact of the capital expenditures in excess of the dead band 50/50 with ratepayers in the same manner that capital expenditures within the dead band are treated.

Response:

Please refer to the response to BCUC IR 1.12.9.

12.10 Please quantify the impact of the \$11.268 million capital expenditures in excess of the dead band on 2017 and 2018 depreciation expense, financing costs, rate base and earnings sharing for each of the following scenarios:

1. Adding the \$11.268 million to the opening plant in service in 2018 (i.e. approach included in the current application); and
2. Leaving the \$11.268 million as part of the 2017 capital expenditures (and thus exceeding the dead band).

Response:

The regulatory treatment in the first scenario is the approved treatment under FBC's PBR Plan. Although scenario two is not consistent with the PBR Plan, FBC provides below the calculations as requested. FBC has assumed the following changes from the approved treatment:

- There is no capital dead band;
- The result of no capital dead band is that all variances between actual capital spending and formula capital are subject to the earnings sharing calculation; and
- Only the formula capital amount is added to rate base.

The table below shows the contribution to revenue requirements of the components identified. For the earnings sharing, the positive number indicates a decrease in the amount of income that FBC shares with customers (a reduction in earnings sharing benefits for customers). The earnings sharing amount, although affecting rates in 2018, is calculated based on the 2017 variance and continues through the remaining term of the PBR Plan.

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Item	Description	Approved Treatment		Scenario Two	
		2017	2018	2017	2018
		(\$ millions)			
i	Rate Base (mid-year)	\$ -	\$ 11.268	\$ -	\$ -
ii	Depreciation Expense	-	0.349	-	-
iii	Interest Expense	-	0.343	-	-
iv	Equity Return (pre-tax)	-	0.557	-	-
v	Projected Earnings Sharing	n/a	-	n/a	0.279
vi	Total of items (ii), (iii), (iv), (v)	-	1.249	n/a	0.279

Items (ii) through (iv) for 2017 are zero because the capital expenditures were not included in the 2017 forecast for capital additions and therefore did not attract depreciation or financing costs in setting the 2017 cost of service. The 2018 amounts shown for items (i) through (v) are the contributions to the 2018 cost of service. Although under scenario two the capital expenditures are not included in 2018 rate base and therefore do not attract depreciation or financing costs in setting the 2018 cost of service, through the process of preparing the 2018 BCUC Annual Report, depreciation expense and interest expense will be trued up to their actual costs with the difference captured in the flow through account and recovered from customers in 2019. What this means is that whether or not the costs are added to rate base in 2018 for rate setting purposes, customers will ultimately pay the actual depreciation and financing costs in each year of the PBR term.

After considering the flow-through of the depreciation and interest expense, the only difference between the two scenarios over time is the difference between equity earnings and earnings sharing. Under the approved treatment, the capital in excess is added to rate base and the allowed equity return is earned in 2018. In scenario two the capital in excess is not added to rate base; however, earnings sharing is calculated on the amount of capital in excess and shared between ratepayers and shareholders.

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C. LOAD FORECAST AND REVENUE AT EXISTING RATES

13.0 Reference: LOAD FORECAST AND REVENUE AT EXISTING RATES

Exhibit B-2, Section 3.1, p. 21; Appendix A-2, pp. 8–9; Appendix A-3, section 1.2, pp. 3 4

Residential forecast variance

On page 9 of Appendix A-2 of the Application, FBC presents Table 6.2 showing the historical load variance from 2011 to 2016. The residential variance is replicated in the table below:

Residential	2011	2012	2013	2014	2015	2016
Variance (GWh)	(12)	(35)	(3)	(106)	(99)	(71)
Variance (%)	-1.0%	-2.9%	-0.2%	-8.2%	-7.6%	-5.5%

FBC states on page 21 of the Application :“FBC’s load forecast methods... are consistent with those used in prior years and accepted by the Load Forecast Technical Committee in 2011.”

FBC explains on page 3 of Appendix A-3 of the Application that “residential before savings load = Use per Account (UPC) x average customer count.” FBC further states on page 4 that “the before savings UPC forecast was based on a trend analysis of historical actual UPC values from 2014 to 2016.”

13.1 Please confirm, or explain otherwise, that the methodology used to produce the residential forecast for each year from 2011 to 2016 is the same as the methodology used to produce the 2017S and 2018F forecast, as explained in the Application.

Response:

The method used to produce the residential forecast in the years 2011 to 2016 is the same as the method used to produce the 2017S and 2018F forecast, except that for the 2017S and 2018F the residential UPC was calculated using a three-year trend rather than a three-year average. FBC found a statistically significant trend in the UPC data and therefore updated the UPC method. An average was used to forecast the UPC in prior years because a statistically significant trend did not exist in the historical data.

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13.2 Please explain the factors that FBC considers may have contributed to the larger forecast variance in the residential load in 2014 to 2016 compared to the variance in 2011 to 2013.

Response:

The residential load forecast is the product of the residential UPC forecast and the residential customer forecast. Each of those forecasts are subject to many factors and influences each year. FBC cannot identify any single factor with certainty in either the UPC or customer forecast that would be responsible for the demand forecast variance. FBC believes that forecast performance needs to be evaluated over time, using the mean absolute percent error (MAPE). The MAPE for the residential demand forecast from 2011 through 2016 is 4.2 percent.

Notwithstanding the above, the cause of the higher forecast variances in 2014 to 2016 may be related in part to the acquisition of the City of Kelowna. Due to the unavailability of sufficient historical load information prior to the transaction, for forecasting purposes FBC was required to approximate the actual CoK consumption in 2009 through 2013 for each rate group using an estimate of the historical load mix. The adjusted actuals were then used to prepare the forecast for 2014 through 2016. FBC is now able to use only post-CoK historical data, so the approximation step is no longer needed. To the extent that the approximation step contributed to the forecast variance, it has been eliminated from future forecasts.

13.3 Please explain whether the methodology used to forecast the 2017S and 2018F forecast accounts for the factors that may have contributed to the forecast variance experienced in 2014 to 2016 as explained above.

Response:

As explained in the response to BCUC IR 1.13.2, the cause of the higher forecast variances in 2014 to 2016 may be related to the unavailability of sufficient historical load information prior to the acquisition of the City of Kelowna. As FBC is now able to use only post-CoK historical data in its forecast, this factor has been eliminated from the 2017S and 2018F forecasts.

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14.0 Reference: LOAD FORECAST AND REVENUE AT EXISTING RATES

Exhibit B-2, Appendix A-3, pp. 1–3

Commercial class weather normalization

On page 1 of Appendix A-3, FBC states: “The commercial class data started being normalized in 2017 since a correlation presented itself in 2016, therefore there is no historical normalized data for that class at this time.” FBC shows the adjusted R² in the commercial regression table (Table A3-2) on page 2, and explains the weather normalization process on pages 2 to 3.

14.1 Please state the commercial class load forecast with and without weather normalization, and quantify the impact of weather normalization, for 2017S and 2018F, respectively.

Response:

The historical data required to prepare the commercial forecast was not normalized because the trend only became significant in 2015, and was confirmed in 2016. As a result, normalized data for the commercial class will be available starting in 2017. The forecasts as filed for 2017S and 2018F were prepared without normalized data and FBC is unable to provide weather normalized forecasts because the historical data is not well correlated to weather.

14.2 Please replicate the commercial regression table presented in Table A3-2 for 2014 and 2015.

Response:

The requested information is provided in the two tables below. Table 1 is for 2015, using 2006 to 2015 data, and Table 2 is for 2014, using 2005 to 2014 data.

Table 1: Commercial Regression Table for 2015

Commercial	Winter	Spring	Summer	Fall
Intercept	46,672	52,109	53,076	53,288
Slope HDD	21	2	-	(5)
Slope CDD	-	-	27	-
Adjusted R ²	0.76	0.80	0.86	0.83

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Table 2: Commercial Regression Table for 2014

Commercial	Winter	Spring	Summer	Fall
Intercept	47,386	49,144	52,130	52,180
Slope HDD	18	11	-	(4)
Slope CDD	-	-	30	-
Adjusted R ²	0.63	0.52	0.79	0.75

14.3 With reference to the results presented in the commercial regression table for 2016, please explain the criteria to determine whether a correlation is present.

Response:

FBC determines if there is a strong correlation in a regression by examining the R² value. R² is a statistical measure of how close the data is to the fitted regression line, which is represented as a percentage. In the case of the commercial class, R² was above 80 percent for the spring, summer and fall months and above 60 percent for the winter months. FBC therefore concluded that a trend did exist in the data.

14.4 Please explain the factors that FBC believes resulted in the commercial class exhibiting weather influence during 2016, contrary to the historical consumption pattern.

Response:

FBC cannot say definitively why the commercial class has recently started to show a statistically significant trend with weather. However, FBC believes the factors include, but may not be limited to, the changing mix of commercial sectors, climate change, technology, and building codes.

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15.0 Reference: LOAD FORECAST AND REVENUE AT EXISTING RATES

Exhibit B-2, Section 3.2, p. 22

Impact from City of Kelowna electric utility acquisition

FBC states on page 22 of the Application that “[it] acquired the utility assets and customers of the City of Kelowna’s electric utility effective March 31, 2013, resulting in an increase in direct customers and changes in the composition of customers and sales load by class, which are reflected in the data and figures in this section.”

15.1 Please confirm, or explain otherwise, that the change in customer mix resulting from FBC’s acquisition of the City of Kelowna electric utility in 2013 has been fully accounted for in the 2018 forecast, as the 2018 forecast for the impacted rate classes relies on data from 2014 onwards.

Response:

Confirmed. The change in customer mix resulting from FBC’s acquisition of the City of Kelowna electric utility in 2013 has been fully accounted for in the 2018 forecast by either using data from 2014 onward (as this data fully includes and integrates CoK customers) or by applying a dummy variable to any regression that relies on historical data that was affected by the acquisition before 2014.

15.1.1 If not confirmed, please explain any adjustments necessary to account for the impact from the City of Kelowna electric utility acquisition to produce the 2018 load forecast for each impacted customer class.

Response:

Please refer to the response to BCUC.IR1.15.1

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16.0 Reference: LOAD FORECAST AND REVENUE AT EXISTING RATES

Exhibit B-2, Section 3.5.5, pp. 28–29

Lighting

On page 28 of the Application, FBC states: “Consistent with past practice FBC checks for trends in the historical load data. There is a statistically significant trend for the most recent five-year period, which was used to forecast load for this class.”

Figure 3-7 on page 29 of the Application shows the historical actuals increased from 13 GWh in 2012 to 16 GWh in 2016, and the forecast is 16 GWh for 2017S and 15 GWh for 2018F.

16.1 Please present the result of the analysis showing a statistically significant trend for the most recent five-year period, and explain whether the trend is increasing or decreasing.

Response:

The following table provides the result of the analysis showing a statistically significant trend for the most recent five-year period for lighting load. Table A3-6 in Appendix A3 of Exhibit B-2 was improperly labeled. The Table name should have been Results of Lighting Load Trend Analysis and the Slope UPC label should have been Slope. Also, a CoK Dummy variable was included to account for the addition of CoK lighting load to FBC within the 5 year time frame used.

Table A3-6: Results of Five Year Lighting Load Trend Analysis

Regression	Lighting Load
Start Year	2012
End Year	2016
R ²	0.9973
Adjusted R ²	0.9946
df	4
Intercept	-221671.2321
Slope	116.85
CoK Dummy	2042.94

The trend in the lighting load is increasing slightly on an annual basis by less than one GWh a year. These increases are offset by the effect of DSM programs such as LED street lights, which lowers the forecast lighting load. FBC forecasts the lighting load for the seed year and then assumes the before-savings load to be constant, since historically the change from year to year has been minimal for this class.

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16.1.1 Please explain how the trend from the analysis explained above is used to produce the 2017S and 2018F forecast.

Response:

The trend uses the lighting loads for the years 2012 to 2016 and includes a “dummy” variable in the regression for 2012 and 2013 to account for the City of Kelowna acquisition. The trend in the lighting load is increasing slightly on an annual basis. FBC uses the trend to forecast the seed year and then assumes the before savings load will remain constant. The forecasts for 2017S and 2018F are not showing an increase since they are after-savings and include DSM measures such as LED street lights which reduce the load.

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17.0 Reference: LOAD FORECAST AND REVENUE AT EXISTING RATES

Exhibit B-2, Section 3.1, p. 21, Section 3.5.7.1, p. 32; Appendix A-2, p. 7; Appendix A-3, pp. 6–7; FBC Annual Review for 2017 Rates proceeding, Exhibit B-3, BCUC IR 6.1.2; FBC Application for Acceptance of Demand Side Management (DSM) Expenditures for 2017 (FBC 2017 DSM Application), Appendix A, p. A16

DSM and other savings

On page 7 of Appendix A-2 of the Application, FBC presents table 5.3 showing the DSM and other savings without losses, and is replicated below:

Energy (GWh)	2012	2013	2014	2015	2016	2017S	2018F
Demand Side Management	(30)	(28)	(14)	(12)	(11)	(23)	(37)
Advanced Metering	-	2	3	4	4	5	9
Customer Information Portal (CIP)	-	-	-	-	-	(2)	(4)
Residential Conservation Rate	(8)	(14)	(14)	(4)	(4)	(4)	(4)
Rate-Driven	-	-	(5)	(5)	(3)	(3)	(3)
Total Net	(38)	(40)	(30)	(17)	(14)	(27)	(38)

In the FBC Annual Review for 2017 Rates proceeding, FBC explains in response to BCUC IR 6.1.2 how FBC validates its savings estimates.

17.1 Please confirm that FBC's methodology to validate its savings estimate is the same as explained in response to BCUC IR 6.1.2 in the FBC Annual Review for 2017 Rates proceeding. If not confirmed, please explain any changes and the rationale for the change in methodology.

Response:

Confirmed.

FBC states on page 6 of Appendix A-3 of the Application that "the forecast of DSM savings is consistent with the Company's approved 2017 DSM Plan." Table A6-1 on page A16 of Appendix A to the FBC 2017 DSM Application shows that the program savings for 2017 is 25,715 MWh.

17.2 Please explain the difference between FBC's DSM savings for 2017S of 23 GWh versus 25.7 GWh in FBC's 2017 DSM Application.

Response:

Please refer to the response to BCUC IR 1.17.3.

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17.3 Please provide the basis for the estimated DSM savings for 2018, and explain the increase in DSM savings from 23 GWh in 2017S to 37 GWh in 2018F.

Response:

As discussed in other proceedings, the savings values are not directly comparable between the 2017 DSM Plan savings (25,715 MWh) and the Forecast DSM savings values (13 GWh in 2017S, as corrected in the response to BCOAPO IR 1.8.1). The forecast is based on the DSM Plan savings. However, the difference occurs as a result of the way that the DSM Plan savings are presented, attributed, and disaggregated in the load forecast.

The main reason for the difference is that the 2017 Forecast presents the DSM savings numbers as cumulative starting in 2016 (DSM savings are embedded in historical data), whereas the DSM Plan shows the savings as incremental (the savings for each plan year are shown separately).

The DSM Plan represents annualized energy savings for the DSM projects, by major customer sector, planned to be undertaken in that calendar year only. The forecast presented in FBC's Annual Review factors in the timing of DSM projects: some of the DSM project savings are attributed to the year following the project. For example, if a project with 12,000 kWh of savings was planned to be completed in December 2015, the DSM Plan shows all of those savings in 2015. The forecast numbers, however, reflect 1/12 of the savings in 2015 (1,000 kWh of savings in December 2015) and the remaining 11/12 of the project's savings are reflected in 2016 (11,000 kWh of savings from January to November 2016). As a result, the 13 GWh savings in 2017S is approximately one half of the 2017 DSM Plan savings of 25,715 MWh.

Furthermore, FBC disaggregates a number of sub-categories of DSM that are not shown in the DSM Plan savings for forecasting purposes. For example, "Residential" in the plan savings includes the residential portion of the "Wholesale" savings (for the City of Penticton and the other municipal utilities) presented in the load forecast. Similarly, the "Commercial" plan savings contain the "[Street] Lighting" and "Irrigation" values shown separately in the load forecast. The forecast also isolates the (line) "Losses" associated with the DSM program savings.

FBC states on pages 6 to 7 of Appendix A-3 of its Application: "The [AMI] estimates and forecasts of incremental savings are based on the theft reduction information provided as part of the AMI CPCN Application as adjusted by the Commission determination provided in Order C-7-13."

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On page 32 of the Application, FBC presents Table 3-2 showing the system losses before and after AMI for 2013 to 2019. The incremental AMI impact as presented in Table 3-2 is 3.9 GWh in 2017 and 7.0 GWh in 2018.

17.4 Please provide in table form i) the AMI estimates and forecast of incremental savings based on the theft reduction information provided as part of the AMI Certificate of Public Convenience and Necessity (CPCN) Application, ii) the adjustments directed by Order G-7-13, and iii) the adjusted forecast incremental savings from 2013 to 2021.

Response:

The requested information is provided in the table below. Note that the incremental savings identified in 2013 relate to the difference in the forecast number of theft sites assumed in the “status quo” scenario as compared to the “AMI” scenario. All other years are based on the forecast annual change in the number of theft sites assumed in the “AMI” scenario.

As noted in s. 3.5.7.1 of Exhibit B-2, current forecast loss reductions remain unchanged from those provided as part of the AMI CPCN application (as adjusted by Order C-7-13). As noted in Table 3-4, the 2018 forecast reduction of 7.0 GWh includes a 2017 forecast reduction of 3.9 GWh plus a 2018 forecast reduction of 3.0 GWh.

	2013	2014	2015	2016	2017	2018	2019	2020	2021
	(MWh)								
As Filed	(4,628)	(2,342)	(3,261)	(3,636)	(5,241)	(4,062)	(3,148)	(2,440)	(735)
Adjusted by Order C-7-13	(3,471)	(1,757)	(2,445)	(2,727)	(3,931)	(3,047)	(2,361)	(1,830)	(551)

17.4.1 Please explain whether the increase in AMI savings from 5 GWh in 2017S to 9 GWh in 2018F is consistent with the adjusted forecast incremental savings for 2017 and 2018 from the AMI CPCN Application.

Response:

FBC notes that AMI savings in 2017S and 2018 are 3.9 GWh and 7.0 GWh respectively as noted in the preamble to the question. This is consistent with the adjusted forecast incremental savings from the AMI CPCN Application as adjusted by Order C-7-13.

Please refer to the response to BCUC IR 1.17.5 for a reconciliation between Table 3-4 and Table 5.3 in Appendix A-2.

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1
2 17.5 Please reconcile the AMI savings of 5 GWh in 2017 and 9 GWh in 2018
3 presented in Table 5.3 in Appendix A-2, versus the incremental AMI impact on
4 losses of 3.7 in 2017 and 7.0 in 2018 as presented in Table 3-2 in the
5 Application.

6
7 **Response:**

8 The 3.9 GWh in 2017 and 7.0 GWh in 2018 values in Exhibit B-2, page 32, Table 3-4 are the
9 incremental impacts of AMI on losses, while the 5 GWh in 2017 and 9 GWh in 2018 values in
10 Exhibit B-2, Appendix A2, page 7, Table 5.3 are the AMI incremental impacts to the residential
11 load and do not include losses. Losses decrease due to theft reduction while the residential
12 load increases due to theft reduction that is replaced with paying customers.

13 Both the losses and residential forecasts for AMI are calculated based on the year-to-year
14 forecast change in the number of paying high load sites (as provided as part of the AMI CPCN),
15 multiplied by the assumed annual energy usage per high load site (as modified by Order C-7-
16 13).

17
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20 17.5.1 Please explain the methodology used to account for energy savings
21 from AMI and a reduction in losses from AMI in the normalized after-
22 savings annual forecast used for rate setting.

23
24 **Response:**

25 The method used to calculate the energy savings and loss reduction due to AMI is based on the
26 year-to-year forecast change in the number of high load sites (paying and theft), multiplied by
27 the assumed annual energy usage per high load site. This forecast method is consistent with
28 the information provided as part of the AMI CPCN application, adjusted for the Commission's
29 determinations as provided in Order C-7-13, which reduced the assumed annual energy per
30 high load site from 151.2 MWh to 113.4 MWh.

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34 17.6 Please replicate Table 3-2 in the Application to include the forecast vintage on
35 losses before AMI and losses after AMI for years 2014 to 2016, consistent with
36 the format presented for 2017 Seed and 2018 Forecast.

37

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1 **Response:**

2 FBC has replicated Table 3-4 in the table below and believes that the question is referencing
3 that table instead of Table 3-2 in the Application. Consistent with the format of the 2018
4 forecast provided in Table 3-4, the incremental AMI Impact (GWh) for each year shown below is
5 the cumulative amount of the seed year and the forecast year (e.g. 2014 is the sum of the
6 forecasts for 2013S and 2014F). Please note, the annual forecasts of the incremental AMI
7 impact are independent of one another and are not cumulative.

Line No.	Year	Before AMI		After AMI			
		Normalized Actuals and Before- Savings Gross Load (GWh)	% of Gross Load	Normalized Actual and Forecast Losses (GWh)	Incremental AMI Impact (GWh)	% of Gross Load	Losses (GWh)
1	2014 RRA Forecast	3,570.5	7.94%	283.6	(5.2)	7.80%	278.4
2	2015 RRA Forecast	3,498.7	7.98%	279.3	(4.2)	7.86%	275.1
3	2016 RRA Forecast	3,539.7	8.00%	283.0	(5.2)	7.85%	277.8

On page 21 of its Application, FBC states: "CIP savings refer to potential savings due to the implementation of the Customer Information Portal, which allows customer to view historic billing and consumption data. The CIP was implemented in June, 2017."

17.7 Please explain, with reference to any data source, how the Customer Information Portal (CIP) savings forecast for 2017S and 2018F are calculated.

Response:

The Customer Information Portal (CIP) savings, originally referenced in the 2012 Long Term Resource Plan, were based on the BC Hydro Smart Metering & Infrastructure Business Case estimate of savings related to Conservation Tools. CIP savings are calculated by taking the before-savings load and then multiplying it by the annual CIP cumulative target, which is shown in the table below for 2017S and 2018F. The 2017 savings are half of the 2018 savings due to the mid-year implementation of the program in 2017.



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	Before- Savings Residential Load (GWh)	CIP Cumulative Target (%)	CIP Savings (GWh)
2017	1,296	0.15%	2
2018	1,293	0.30%	4

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2

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18.0 Reference: LOAD FORECAST AND REVENUE AT EXISTING RATES

Exhibit B-2, Section 3.5, p. 24; Section 3.6, p. 34

Revenue forecast

On page 24 of the Application, FBC presents Table 3-3 showing the normalized after-savings gross load and system peak by customer class.

On page 34 of the Application, FBC states that “the forecast of revenues has been developed by applying approved 2017 rates to the forecast billing determinants for each customer class.” FBC further presents Table 3-5 showing the approved 2017, projected 2017, and forecast 2018 sales revenue at 2017 approved rates.

18.1 In a functional excel spreadsheet, please show the input and calculations to produce the approved 2017, projected 2017 and forecast 2018 sales revenue in Table 3-5.

Response:

FBC cannot provide the requested Excel spreadsheet. Revenue at prior year rates are output values from the FIS system which multiplies forecast billing determinants by existing rates. FIS is a complex database system and outputs cannot be exported or saved as working Excel models. The calculation of forecast revenue at prior year rates, by rate class, is shown in Section 11, Schedule 18.

18.2 Please explain the effect on FBC’s flow-through deferral account balance and 2019 rates from a +/- 3 percent over/under-forecast in 2018 on each of the following, all else equal:

- a) gross load forecast;
- b) winter system peak; and
- c) summer system peak

Response:

A three percent increase to the gross load compared to forecast, or an under-forecast of three percent, would result in a net amount of \$5.431 (revenue in excess of expense), approximately 1.5 percent of 2018 rates, which would be flowed through as a reduction to 2019 revenue requirements. FBC has not forecast 2019 revenue requirements and therefore has not calculated a 2019 rate impact. Conversely, a three percent decrease to gross load would result

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1 in a net amount of \$(5.137) million, approximately 1.4 percent of 2018 rates, which would
2 increase 2019 revenue requirements.

3 The impact of a three percent variance to the forecast winter system peak is approximately
4 \$0.18 million or 0.05 percent of 2018 rates. The impact on summer system peak is
5 approximately \$0.15 million or 0.04 percent of 2018 rates. An increase in system peak
6 compared to forecast would increase 2018 expense and consequently increase 2019 rates by
7 way of the Flow-through deferral account.

8

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D. OPERATING & MAINTENANCE (O&M) EXPENSE

19.0 Reference: O&M EXPENSE

Exhibit B-2, Section 6.3.3, pp. 47–49

AMI Project

On page 48 of its Application, FBC discusses the AMI savings related to meter reading as follows:

The manual meter reading cost forecasts used in the CPCN for 2013 and 2014 (the last full years of manual meter reading) were higher than the costs actually experienced in those years. These savings resulted largely from efficiencies found in absorbing the City of Kelowna manual meter reading work. As a result, the savings potential was diminished in 2015 and beyond.

19.1 Please elaborate on the efficiencies found in absorbing the City of Kelowna manual meter reading work and identify the specific meter reading cost components that were impacted by these efficiencies.

Response:

The referenced efficiencies were related to absorbing the City of Kelowna meter reading with fewer than the 2.5 FTEs forecast in the CPCN based on the number of new customers that required reading. Only approximately one additional meter reader and vehicle was required, most likely due to the relatively dense nature of the City of Kelowna meters as compared to the overall meter density in the FBC service territory.

Both labour and vehicle-related costs were lower as a result of these efficiencies.

On page 49 of its Application, FBC discusses the AMI savings related to Measurement Canada Compliance as follows:

The CPCN application forecast the number of Measurement Canada compliance meter exchanges to double in 2018 over 2017 levels (in the absence of AMI), increasing avoided costs by approximately \$0.250 million over 2017. This avoided cost does not result in a reduction to 2018 O&M costs, but will still result in lower rates for customers than in the absence of AMI.

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19.2 Please provide the CPCN forecast and actual 2017 and 2018 number of meter exchanges.

Response:

Measurement Canada compliance exchanges in 2017 and 2018 were forecast to be zero in the CPCN.

The actual values in 2017 and 2018 are expected to be less than 50 each year; these compliance exchanges are required because of the approximately 100 non-AMI meters remaining in the field.

The Measurement Canada compliance exchanges in 2017 and 2018 in the absence of AMI were forecast to be 1,583 and 3,060, respectively.

19.3 Do the forecast AMI savings included in Line No. 5 of Table 6-5 include savings related to Measurement Canada compliance? If not, please explain why not.

Response:

Yes, Line No. 5 includes savings related to Measurement Canada compliance.

19.4 Please provide the amount of Measurement Canada compliance costs included in base experienced in 2014, 2015, 2016 O&M and the actual Measurement Canada compliance costs and forecast 2017, 2018.

Response:

Total costs related to Measurement Canada compliance are not tracked separately from costs related to incoming meter inspection costs, warranty claim processing and troubleshooting.

However, costs from 2014-2016 are estimated at approximately \$5 thousand per year related to maintaining compliance of the remaining MV90 meter fleet.

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- 1 In 2017 and 2018, FBC expects to spend approximately \$10 thousand in each year related to
- 2 maintaining compliance (by removing from service) the approximately 100 remaining non-MV90
- 3 legacy meters.

4

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20.0 Reference: O&M EXPENSE

Exhibit B-2, Section 6.3.4, pp. 49 - 51

MRS incremental operating expense

On page 49 of its Application, FBC submits that it will incur \$1.070 million in incremental O&M in 2018 related to MRS. Table 6-6 includes a breakdown for Approved 2017, Projected 2017 and Forecast 2018 MRS costs between Assessment Report No. 8, Assessment Report No. 10 and 2018 Compliance Audit.

20.1 For each of Line item 1, 2 and 3 in Table 6-6, please provide a breakdown of the Approved 2017, Projected 2017 and Forecast 2018 costs between one-time and ongoing costs.

Response:

The requested information for each line item from Table 6-6 identifying one-time and ongoing O&M costs is provided in the table below.

Line	Description	Approved 2017		Projected 2017		Forecast 2018	
		One Time	Ongoing	One Time	Ongoing	One Time	Ongoing
1	Assessment Report 8	\$0.030	\$0.020	\$0.030	\$0.020		\$0.540
2	Assessment Report 10					\$0.180	
3	2018 Compliance Audit					\$0.350	
4	Forecast O&M	\$0.030	\$0.020	\$0.030	\$0.020	\$0.530	\$0.540

20.2 Please expand table 6-6 to provide a breakdown of forecast and actual operating costs from 2015- 2019 driven by MRS overall and discuss any variance. Please specifically show how much of the cost can be attributed to CIP V5 overall.

Response:

The table below provides the breakdown of O&M Expense outside of formula from 2015 to 2019. The variance of approximately 7 percent for the 2015 audit was primarily due to the scope and volume for the CIPv3 effort which was higher than anticipated. The 2016 variance for AR8 is approximately 2 percent.

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	Forecast 2015	Actual 2015	Forecast 2016	Actual 2016	Forecast 2017	Projected 2017	Forecast 2018	Forecast 2019
Audit (not Z-factor)	0.350	0.375					0.350	
AR8 Costs			0.455	0.464	0.050	0.050	0.540	0.540
AR10 Costs							0.180	TBD

- 1
- 2 The operating costs related to AR8 can be categorized into CIPv5 and O&P (Operations and
- 3 Planning). The AR8 costs begin in 2016 and are summarized in the table below.

	2016	2017	2018	2019
CIPv5	\$0.347	\$0.030	\$0.520	\$0.520
O&P	\$0.117	\$0.020	\$0.020	\$0.020

- 4
- 5
- 6
- 7 20.3 With respect to the Assessment Report No. 8 costs included in Table 6-6, please
- 8 provide a breakdown of the approved 2017, projected 2017 and forecast 2018
- 9 O&M costs, including at a minimum the following categories: CIP V5 labour, CIP
- 10 V5 licensing fees, training and any other relevant categories.

11

12 **Response:**

- 13 The following tables provide a breakdown of the operating cost for Assessment Report No. 8,
- 14 divided between Critical Infrastructure Protection (CIP) version 5 (v5) costs and Operations and
- 15 Planning (O&P) costs.

16 **Table 1: CIPv5 O&M (\$000)**

	2017 Approved	2017 Projected	2018 Forecast
Labour	\$ 28.0	\$ 7.5	\$ 450.0
Contract	-	20.0	-
Licensing	-	-	35.0
Training	-	-	15.0
General Operating Expenses	2.0	2.4	20.0
Total	\$ 30.0	\$ 29.9	\$ 520.0

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Table 2: O&P O&M (\$000)

	2017 Approved	2017 Projected	2018 Forecast
Labour	\$ 18.5	\$ 18.9	\$ 18.5
Contract	-	-	-
Licensing	-	-	-
Training	-	-	-
General Operating Expenses	1.5	1.0	1.5
Total	\$ 20.0	\$ 19.9	\$ 20.0

FBC forecasts the 2018 costs related to the MRS audit to be \$0.350 million.

20.4 Please provide the actual O&M costs for the most recent MRS audit and provide an explanation for the variance between the actual costs and the forecast costs for the upcoming 2018 audit.

Response:

The actual O&M cost for the 2015 MRS audit was \$0.375 million. FBC has forecast the 2018 Audit at \$0.350 million.

The 2018 audit costs are anticipated to be lower than the actual audit costs in 2015 due to experience gained during the 2012 and 2015 compliance audits. However, the actual costs will be determined by the scope of the audit, which will not be known until the Annual Implementation Plan is issued by the Commission, typically in November of the year prior, in this case November 2017.

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E. RATE BASE

21.0 Reference: RATE BASE

Exhibit B-2, Section 7.8.2, pp. 61–63

Other Working Capital – Uncollectible Accounts

On page 62 of the Application, Table 7-9 includes a summary of Uncollectible Accounts in Working Capital.

21.1 Please expand Table 7-9 to include a column for forecast 2018 Uncollectible Accounts in Working Capital.

Response:

The requested table is provided below.

Line		Forecast	Projected	Actual				
No.	Description	2018	2017	2016	2015	2014	2013	2012
1	Decision		1.520	0.697	1.224	1.124	0.937	0.930
2	Projected/Actual	1.700	1.700	1.653	1.504	1.247	1.124	1.011
3								
4	Sales Revenue	356.340	360.392	335.186	323.375	317.330	308.532	282.943
5	Uncollectible Accounts as % of Revenue	0.48%	0.47%	0.49%	0.47%	0.39%	0.36%	0.36%

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22.0 Reference: RATE BASE

Exhibit B-2, Section 7.3, p. 57

CPCN and Special Projects capital expenditures

On page 57 of the Application, FBC lists the projects related to capital expenditures to be included in the 2018 rate base.

22.1 Please confirm the approved budget and level of class estimation for the Cora Linn Dam Spillway Gate Replacement Project.

Response:

The forecast cost for implementing the Corra Linn Dam Spillway Gate Replacement project identified in the CPCN application is \$62.694 million. The project estimate was developed in accordance with AACE International Recommended practice No. 69R-12 to Class 3 requirements. During the Open Book Phase of the project, the project estimate is advanced in accordance with AACE International Recommended practice No. 69R-12 from a Class 3 to a Class 1 level.

22.2 Please discuss the project expenditures to date (Q1, Q2, Q3, 2017) detailing any variance in estimated costs.

Response:

Expenditures for 2017 Q1, Q2 and Q3 (forecast) are \$0.137 million, \$0.625 million and \$0.951 million, respectively. Total project expenditures to the end of Q3 are forecast to be \$2.647 million. In the Corra Linn CPCN Application, FBC anticipated spending more in 2017; however, some of these costs will be realized in early 2018 following the award of the Design Build contract. At this time FBC is not anticipating any variance in total project costs or schedule.

22.3 Please discuss any potential variances in forecast costs for the Corra Linn Dam Project.

Response:

FBC is not currently anticipating any variance in forecast costs for the project.

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F. FINANCIAL SCHEDULES

23.0 Reference: FINANCIAL SCHEDULES

Exhibit B-2, Section 11, Schedule 11 and 12, pp. 88–89; Section 12.4.1.1, p. 119

Deferral accounts

Section 11 includes Schedule 11 (Unamortized Deferred Charges and Amortization – Rate Base) and Schedule 12 (Unamortized Deferred Charges and Amortization – Non Rate Base).

On page 119 of its Application, FBC states that it intends to file an application for approval of a DSM Expenditure Schedule for 2018 and future years by the first quarter of 2018.

23.1 In the same format as provided in Schedules 11, 12 and 12.1 of the Application, please provide the previous years' information on unamortized deferred charges by starting with Actual 2016 ending balances and including the projected 2017 deferral account additions and the projected 2017 amortization.

Response:

Please refer to the following schedules.

FBC has updated its 2017 forecasts for certain deferral accounts, as described below.

Deferred Debt Issue Costs (Schedule 11, Line 3): The income tax impact and amortization in Columns 5 and 6 were calculated incorrectly and have been revised.

Net Metering Program Tariff Update (Schedule 12, Line 12): On August 18, 2017, the Commission established a written public proceeding for the review of FBC's application for reconsideration of Order G-199-16 in FBC's Net Metering Tariff application proceeding. The forecast costs in the Application did not include a provision for the reconsideration proceeding. FBC now forecasts an increase of approximately \$0.050 million (before tax) in deferred costs.

BCUC Residential Inclining Block Rate Report (Schedule 12, Line 13): 2017 costs have been updated to include Commission charges to FBC for this process, an increase of \$0.016 million before tax.

2017 DSM Expenditure Schedule (Schedule 12, Line 14): a 2017 credit to this account has been updated by \$0.006 million before tax.

Community Solar Pilot Project (Schedule 12, Line 16): As explained in the response to BCUC IR 1.25.2, FBC has increased its forecast for this project by \$0.050 million (before tax) as a result of a greater scope of review and higher intervenor funding.

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- 1 2017 Rate Design Application (Schedule 13.1, Line 6): FBC has revised its forecast costs for
- 2 this proceeding as described in the response to BCUC IR 1.23.2, an increase of \$0.550 million
- 3 in 2017.
- 4 These revisions are included in FBC's Evidentiary Update.



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1

FORTISBC INC.

**UNAMORTIZED DEFERRED CHARGES AND AMORTIZATION - RATE BASE
FOR THE YEAR ENDING DECEMBER 31, 2017
(\$000s)**

Schedule 11

Line No.	Particulars	12/31/16	Opening Bal./ Transfer/Adj.	Gross Additions	Less Taxes	Amortization Expense	12/31/17	Mid-Year Average	Cross Reference
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1	<u>Benefits Matching Accounts</u>								
2	Demand Side Management	\$ 20,221	\$ -	\$ 7,610	\$ (1,979)	\$ (3,257)	\$ 22,595	\$ 21,408	
3	Deferred Debt Issue Costs	3,520	-	750	(36)	(202)	4,032	3,776	
4	Preliminary and Investigative Charges ¹	601	-	(436)	-	-	165	383	Note 1
5	Right of Way Reclamation (Pine Beetle Kill)	346	-	-	-	(173)	173	260	
6	Accounting Treatment of non-AMI Meters	3,245	-	-	-	(1,082)	2,163	2,704	
7		<u>\$ 27,932</u>	<u>\$ -</u>	<u>\$ 7,924</u>	<u>\$ (2,015)</u>	<u>\$ (4,714)</u>	<u>\$ 29,128</u>	<u>\$ 28,530</u>	
8	<u>Other Accounts</u>								
9	Pension and OPEB Liability	(16,995)	-	(546)	-	-	(17,541)	(17,268)	
10		<u>\$ (16,995)</u>	<u>\$ -</u>	<u>\$ (546)</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ (17,541)</u>	<u>\$ (17,268)</u>	
11									
12	Total Rate Base Deferral Accounts	<u>\$ 10,937</u>	<u>\$ -</u>	<u>\$ 7,378</u>	<u>\$ (2,015)</u>	<u>\$ (4,714)</u>	<u>\$ 11,587</u>	<u>\$ 11,262</u>	

2 14 Note 1: Gross additions for Preliminary and Investigative Charges are net of transfers to Construction Work in Progress.

3



<p>FortisBC Inc. (FBC or the Company)</p> <p>Multi-Year Performance Based Ratemaking Plan for 2014 through 2019</p> <p>Annual Review for 2018 Rates (the Application)</p>	<p>Submission Date:</p> <p>October 3, 2017</p>
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FORTISBC INC.

UNAMORTIZED DEFERRED CHARGES AND AMORTIZATION - NON-RATE BASE
FOR THE YEAR ENDING DECEMBER 31, 2017
(\$000s)

Schedule 12

Line No.	Particulars	12/31/16	Opening Bal./ Transfer/Adj.	Gross Additions	Less Taxes	Amortization Expense	12/31/17	Mid-Year Average	Cross Reference
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1	Deferral Accounts Financed at Short Term Interest Rate								
2									
3	<u>Forecast Variance Accounts</u>								
4	Revenue and Power Supply ⁽¹⁾	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
5	Flow-Through Accounts	5,165	-	(6,215)	-	(6,051)	(7,102)	(969)	
6	Pension & Other Post Retirement Benefits (OPEB) Variance	(2,492)	-	(59)	-	2,182	(369)	(1,430)	
7		<u>\$ 2,673</u>	<u>\$ -</u>	<u>\$ (6,274)</u>	<u>\$ -</u>	<u>\$ (3,869)</u>	<u>\$ (7,470)</u>	<u>\$ (2,399)</u>	
	<u>Benefit Matching Accounts</u>								
	2014 Interim Rate Variance	\$ (12,547)	\$ -	\$ -	\$ -	\$ 12,547	\$ -	\$ (6,274)	
8	<u>Benefit Matching Accounts</u>								
9	2014-2019 Performance Based Ratemaking Application	739	-	-	-	(246)	493	616	
10	Annual Reviews for 2015-2019 Rates	137	-	156	(41)	(151)	102	120	
11	Self-Generation Policy Application, Stage II	8	-	64	(17)	(74)	(18)	(5)	
12	Net Metering Program Tariff Update	32	-	150	(39)	(56)	88	60	
13	BCUC Residential Inclining Block Rate Report	40	-	16	(4)	(74)	(22)	9	
14	2017 Demand Side Management Expenditure Schedule Application	80	-	(19)	5	(56)	11	46	
15	BC Hydro Application for Power Purchase Agreement with FBC	64	-	-	-	(71)	(7)	29	
16	Community Solar Pilot Project	-	-	175	(46)	-	130	65	
17	Tariff Applications	-	-	100	(26)	(74)	-	-	
18		<u>\$ 1,101</u>	<u>\$ -</u>	<u>\$ 642</u>	<u>\$ (167)</u>	<u>\$ (802)</u>	<u>\$ 775</u>	<u>\$ 938</u>	
19	<u>Other Accounts</u>								
20	2014-2019 Earnings Sharing Account	\$ (610)	\$ -	\$ (351)	\$ 91	\$ 254	\$ (615)	\$ (612)	
21		<u>\$ (610)</u>	<u>\$ -</u>	<u>\$ (351)</u>	<u>\$ 91</u>	<u>\$ 254</u>	<u>\$ (615)</u>	<u>\$ (612)</u>	
22									
23	Total Deferral Accounts at Short Term Interest	<u>\$ (9,383)</u>	<u>\$ -</u>	<u>\$ (5,982)</u>	<u>\$ (76)</u>	<u>\$ 8,129</u>	<u>\$ (7,310)</u>	<u>\$ (8,346)</u>	
24									
25	Financing Costs at STI	\$ (360)	\$ -	\$ (178)		\$ 177	\$ (361)	\$ (360)	
26									

1 27 Note 1: Revenue and Power Supply Variances are included in the Flow-Through Accounts during the PBR Term.



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UNAMORTIZED DEFERRED CHARGES AND AMORTIZATION - NON-RATE BASE cont'd
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(\$000s)

Schedule 12.1

Line No.	Particulars	12/31/16	Opening Bal./ Transfer/Adj.	Gross Additions	Less Taxes	Amortization Expense	12/31/17	Mid-Year Average	Cross Reference
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1	Deferral Accounts Financed at Weighted Average Cost of Debt								
2									
3	<u>Benefit Matching Accounts</u>								
4	CPCN Projects Preliminary Engineering	\$ 933	\$ -	\$ (701)	\$ -	\$ -	\$ 231	\$ 582	
5	2016 Long Term Electric Resource Plan	248	-	615	(160)	-	704	476	
6	2017 Rate Design Application	-	-	650	(169)	-	481	241	
7	Transmission Customer Rate Design	71	-	-	-	(69)	2	37	
8	Celgar Interim Billing Adjustment	6,301	-	-	-	(6,301)	-	3,150	
9	2020 Revenue Requirements	-	-	30	(8)	-	22	11	
10	Multi-Year DSM Expenditure Schedule	-	-	125	(33)	-	93	46	
11	2018 Joint Pole Use Audit	-	-	-	-	-	-	-	
12		<u>\$ 7,553</u>	<u>\$ -</u>	<u>\$ 719</u>	<u>\$ (369)</u>	<u>\$ (6,370)</u>	<u>\$ 1,533</u>	<u>\$ 4,543</u>	
13									
14	<u>Other Accounts</u>								
15	US GAAP Pension and OPEB Transitional Obligation	\$ 3,555	\$ -	\$ (827)	\$ -	\$ -	\$ 2,728	\$ 3,141	
16	Advanced Metering Infrastructure Radio-Off Shortfall	38	-	120	(31)	-	127	83	
17		<u>\$ 3,593</u>	<u>\$ -</u>	<u>\$ (707)</u>	<u>\$ (31)</u>	<u>\$ -</u>	<u>\$ 2,855</u>	<u>\$ 3,224</u>	
18									
19									
20	Total Deferral Accounts at Weighted Average Cost of Debt	<u>\$ 11,147</u>	<u>\$ -</u>	<u>\$ 12</u>	<u>\$ (400)</u>	<u>\$ (6,370)</u>	<u>\$ 4,388</u>	<u>\$ 7,767</u>	
21									
22	Financing Costs at WACD	<u>\$ 418</u>	<u>\$ -</u>	<u>\$ 416</u>		<u>\$ (335)</u>	<u>\$ 499</u>	<u>\$ 458</u>	
23									
24	Deferral Accounts Financed at AFUDC								
25									
26	<u>Benefit Matching Accounts</u>								
27	On Bill Financing (OBF) Participant Loans	\$ 12	\$ -	\$ (5)	\$ 1	\$ -	\$ 8	\$ 10	
28									
29	Total Deferral Accounts at AFUDC	<u>\$ 12</u>	<u>\$ -</u>	<u>\$ (5)</u>	<u>\$ 1</u>	<u>\$ -</u>	<u>\$ 8</u>	<u>\$ 10</u>	
30									
31	Financing Costs at AFUDC	<u>\$ 2</u>	<u>\$ -</u>	<u>\$ -</u>		<u>\$ (1)</u>	<u>\$ 1</u>	<u>\$ 2</u>	
32									
33	Deferral Accounts Non-Interest Bearing	<u>\$ 50</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ 50</u>	<u>\$ 50</u>	
34									
35	Total Non Rate Base Deferral Accounts (including financing)	<u>\$ 1,886</u>	<u>\$ -</u>	<u>\$ (5,738)</u>	<u>\$ (475)</u>	<u>\$ 1,600</u>	<u>\$ (2,725)</u>	<u>\$ (420)</u>	

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1
2 23.2 Schedule 12.1 includes a \$600k 2018 addition to the 2017 Rate Design
3 Application deferral account. Please provide a breakdown of the forecast \$600k
4 addition.

5
6 **Response:**

7 FBC has revised its original forecast of \$0.700 million (over two years) for the 2017 Rate Design
8 Application, based on its experience with the 2012 RDA as well as experience to date in FEI's
9 Rate Design Application. The revised forecast, which is approximately the same as FBC's
10 experience in 2012, is also shown in the response to BCUC IR 1.23.1 and will also be included
11 in the Evidentiary Update.

12 The revised forecast costs for the 2017 Rate Design Application (in \$ millions) are as follows:

13 Commission Costs	\$	0.300
14 Intervener Costs		0.300
15 Consulting		0.750
16 Legal		<u>0.500</u>
17 Total	\$	1.900

18
19 FBC expects to incur approximately \$0.650 million of these costs in 2017 with the remainder in
20 2018.

21
22
23
24 23.3 Schedule 11 includes a \$7.9 million 2018 addition to the Demand Side
25 Management (DSM) deferral account. Please confirm, or explain otherwise, that
26 the \$7.9 million addition is FBC's best estimate of 2018 DSM spending levels,
27 which will be included in the Multi-Year DSM Expenditure Schedule Application.

28
29 **Response:**

30 Confirmed.

31

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G. ACCOUNTING MATTERS AND EXOGENOUS ITEMS

24.0 Reference: ACCOUNTING MATTERS AND EXOGENOUS ITEMS

Exhibit B-2, Section 6.3.4, p. 49; FEI Multi-Year Performance Based Ratemaking Plan for 2014–2018, Decision and Order G-138-14, issued September 15, 2017; FBC Annual Review of 2016 Rates proceeding, Exhibit B-2, BCUC IR 13.7⁶

MRS

The following direction was included on page 99 of the Commission Decision in the FEI 2014-2018 PBR proceeding (PBR Decision):

The Commission Panel further directs that exogenous events not be aggregated. The materiality threshold must be applied to the costs/savings of each exogenous factor event and the costs/savings for a specific event must exceed the materiality threshold in order to be eligible for exogenous factor treatment.

FBC notes, in response to BCUC IR 13.7 in the FBC Annual Review of 2016 Rates proceeding:

The amount included in the 2013 Base O&M for MRS was \$2.150 million. These are the ongoing O&M costs required to maintain compliance with the MRS standards that were applicable to FBC in 2013 and continue to be applicable today.

On page 49 of the Application, Table 6-6 provides a breakdown of the MRS Incremental O&M expense, as follows:

27 **Table 6-6: MRS Incremental O&M Expense (\$ millions)**

Line No.	Description	Approved 2017	Projected 2017	Forecast 2018
1	Assessment Report No. 8	\$ 0.050	\$ 0.050	\$ 0.540
2	Assessment Report No. 10	-	-	0.180
3	2018 Compliance Audit	-	-	0.350
28 4	Forecast O&M	\$ 0.050	\$ 0.050	\$ 1.070

24.1 Please confirm, or explain otherwise, that all of the MRS standards that were applicable to FBC in 2013 continue to be applicable today.

⁶ http://www.bcuc.com/Documents/Proceedings/2015/DOC_44821_B-2_FBC_BCUC-IR1-Response.pdf.

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Response:

In 2013, there were 115 standards that were adopted and applicable to FBC and in 2017, 122 standards have been adopted and are applicable to FBC. 47 standards have not changed since 2013.

Since 2013, the Commission has adopted standards (new or revised) as a result of four assessment reports as shown below. Two assessment reports (AR8 and AR10) have had incremental costs associated with them that meet the Z-factor criteria. When determining the incremental costs of revised standards, FBC takes into account any aspects of the previous versions that are no longer required, ensuring that there is no cost recovery for discontinued requirements.

Assessment Report	Order	Adopted Standards	Applicable to FBC	Incremental Costs that Meet Z-factor Criteria
7	R-32-14	22	18	no
8	R-38-15	34	29	yes
9	R-32-16	15	14	no
10	R-39-17	35	26	yes

24.2 Please discuss if FBC considers the total forecast 2018 incremental MRS costs (O&M and capital) to be related to one specific event or the aggregate of three specific events (i.e. Assessment Report No. 8, Assessment Report No. 10 and 2018 Compliance Audit).

Response:

Each of the Assessment Reports is considered to be a separate event, although FBC confirms that it has not applied for Z-factor treatment for the 2018 compliance audit. Each of Assessment Reports No. 8 and No. 10 meets the criteria for Z-factor treatment.

In the Application, FBC provided only the forecast 2018 costs related to Assessment Report No. 10 (\$0.180 million in O&M Expense).

As part of the assessment report process, FBC identified high level estimates of approximately \$3.3 million of one-time and approximately \$2.8 million of ongoing costs which were included in the BC Hydro Assessment Report No. 10 that was submitted to the Commission on May 1, 2017. FBC will be engaging consultants and reaching out to other entities in 2018 to determine and evaluate all options available to meet the requirements. The 2018 expenditures are primarily required for assessing and determining the strategy and detailed scope required to

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1 comply with the revised standards, which include: performing real-time pre and post-
2 contingency assessments every 30 minutes; meeting outage coordination requirements,
3 implementing outage scheduling timelines and next day studies, and development of an
4 operating plan to address all the above tasks. The 2019 and future expenditures associated
5 with Assessment Report No. 10 will be addressed in future filings.

6 The criteria for Z-factor treatment require that “the costs/savings related to each exogenous
7 event must exceed the Commission-defined materiality threshold” of \$0.301 million. As the
8 forecast costs shown above demonstrate, the costs associated with Assessment Report No. 10
9 will exceed the materiality threshold.

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25.0 Reference: ACCOUNTING MATTERS AND EXOGENOUS ITEMS

Exhibit B-2, Section 12.4.1, pp. 113–121

New deferral accounts

On page 119 of its Application, FBC describes the proposed Multi-Year Demand Side Management Expenditure Schedule Application deferral account and states that “FBC is seeking approval of a deferral account attracting a WACD return, to capture costs related to the multi-year DSM Expenditure Schedule application. FBC will propose the disposition of this account in a future application.”

25.1 Please discuss why WACD return, as opposed to STI, is proposed for the Multi-Year Demand Side Management Expenditure Schedule Application deferral account.

Response:

The rationale for determining the financing for FBC’s deferral accounts is provided on page 113 of the Application. Consistent with the Commission’s direction in Order G-110-12 regarding FBC’s 2012-2013 RRA, FBC finances its new deferral accounts at the STI rate where recovery is over a one-year period or at the WACD for longer-term deferrals.

In determining amortization periods for its deferral accounts, FBC’s first consideration is the appropriate period to match the costs and benefits. FBC expects to propose an amortization period commensurate with the term (benefit period) of the multi-year expenditure schedule application.

On page 119 of its Application, FBC describes the Community Solar Pilot Project Application deferral account and states that “FBC is seeking approval of a deferral account attracting a STI return, to capture an estimated \$0.125 million (\$0.093 million after tax) related to this tariff application. FBC proposed to amortization the costs over one year, in 2018.”

25.2 Please provide a breakdown of the forecast \$0.125 million additions to the above-noted deferral account.

Response:

FBC has revised its original forecast of \$0.125 million to recognize the greater extent of regulatory process in the review of the Community Solar Pilot Application. Initially FBC had not

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1 anticipated a second round of information requests or the magnitude of the Intervener costs
2 reflected in the PACA budget submissions received.

3 The Company now expects that actual costs for this process will be closer to \$0.175 thousand
4 in 2017. The revised forecast is shown in the response to BCUC IR 1.23.1 and will also be
5 included in the Evidentiary Update.

6 The forecast costs for the Ellison Solar Application process are as follows:

7	Commission Costs	\$ 20,000
8	Intervener Costs	\$ 60,000
9	Research	\$ 55,000
10	Legal	<u>\$ 40,000</u>
11	Total	\$175,000
12		
13		

14
15
16 On page 121 of its Application FBC describes the 2018 Joint Use Pole Audit deferral
17 account and states that the estimated costs are \$0.200 million.

18 25.3 Please provide a breakdown of the \$0.200 million additions to the 2018 Joint Use
19 Pole Audit deferral account.

20
21 **Response:**

22 The 2018 forecast is shown below. Total costs of the audit are expected to exceed the 2013
23 audit costs as the scope of the audit has been expanded to include audits of all third party
24 customers (including five small customers who were not included in the previous audit) in
25 addition to the cost escalations over the five-year period since the previous audit. In
26 accordance with Order G-107-15, incremental FBC labour costs are now charged to O&M
27 Expense and will be captured under formula O&M; therefore, the final costs to be recorded in
28 the deferral account are expected to be slightly lower than 2013.

	2013 Audit	2018 Audit
	(000s)	
Contract Labour	\$ 222	\$ 260
Internal Labour	52	-
Expenses	2	5
Third Party Recoveries	(61)	(65)
FBC Audit Costs	<u>\$ 215</u>	<u>\$ 200</u>

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1

2

3

4 25.3.1 Please provide the actual cost of the last Joint Use Pole Audit in 2013
5 and explain any variance between the actual 2013 costs and the
6 forecast 2018 costs.

7

8 **Response:**

9 Please refer to the response to BCUC IR 1.25.3.

10

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26.0 Reference: ACCOUNTING MATTERS AND EXOGENOUS ITEMS

Exhibit B-2, Section 12.4.2.2, pp. 121–124

Flow-through deferral account

Line 29 of Table 12-5 on page 123 of the Application includes \$(0.886) million for “2015 ending deferral account balance true-up.”

26.1 Is Line 27 of Table 12-5 intended to read as “2017 after-tax flow-through addition to deferral account” and is Line 29 of Table 12-5 intended to read as “2016 ending deferral account balance true-up” as opposed to 2015?

Response:

Yes. Lines 27 and 29 are incorrectly labelled. Line 27 is the sum of the 2017 cost account variances in Lines 1 to 25 and Line 29 is the true-up to the prior year (2016) variances.

26.2 Please provide a table in the same format as Table 12-5 to provide the 2016 Approved and 2016 Actual flow through data and the resulting variances in order to explain the 2016 ending deferral account balance true-up amount of \$(0.886) million.

Response:

The true-up to the 2016 Flow-through deferral account additions is shown in the table below.

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Line No.	Particulars	Approved	Actual	Actual Variance	Projected	Projected Variance	Change in Variance
1	Revenue	\$ (350,593)	\$ (335,186)	\$ 15,407	\$ (337,283)	\$ 13,310	\$ (2,097)
2							
3	Power Purchase Expense	133,907	123,169	(10,738)	124,864	(9,043)	1,695
4							
5	Water Fees	10,291	10,182	(109)	10,187	(104)	5
6							
7	Wheeling	4,764	4,815	51	4,779	15	(36)
8							
9	O&M Tracked Outside of Formula						
10	Insurance Premiums	1,347	1,306	(41)	1,305	(42)	(1)
11	Advanced Metering Infrastructure Project	(1,800)	(1,391)	409	(1,335)	465	56
12	Mandatory Reliability Standards	445	464	19	455	10	(9)
13							
14	Property Tax	15,407	15,493	86	15,574	167	81
15							
16	Depreciation and Amortization	51,694	51,240	(455)	51,323	(371)	83
17							
18	Other Revenue	(8,177)	(8,630)	(453)	(7,981)	196	649
19							
20	Interest Expense	38,906	38,040	(866)	38,497	(409)	457
21							
22	Income Tax	8,310	7,186	(1,123)	7,193	(1,117)	7
23							
1	24 2016 After-Tax Flow-Through Addition to Deferral Account			\$ 2,191		\$ 3,078	\$ 886

26.2.1 Please provide an explanation for any significant variances identified in the table provided in response to IR No. 26.2 above.

Response:

The most significant changes from approved to actual are revenue and power purchase expense (-\$ 0.402 million on a net basis), other revenue (\$0.649 million), and interest expense (\$0.457 million).

Full-year 2016 Actual revenue and power purchase expense both decreased compared to the 2016 Projected values. Power purchase expense was down mainly as a result of reduced gross load, which was primarily driven by weather, as well as increased market purchases and FBC generation availability offsetting more expensive PPA purchases. The decrease in revenue was due to the reduction to load and exceeded the reduction to power purchase expense, resulting in the -\$0.402 million change in variance on a net basis.

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1 Other revenue was higher than the 2016 Projected primarily due to higher pole contact revenue
2 from other utilities and businesses, such as telephone and cable television providers, that attach
3 their facilities to FBC infrastructure to deliver services to their customers. Revenue is accrued
4 until billed to customers, and then the accrued revenue is trued up or down based on the
5 invoices issued. This reconciliation occurred after the 2016 Projection was filed, and resulted in
6 an increase in pole contact revenue. Additionally, connection charges billed in the period after
7 the 2016 Projection was filed were higher than forecast, leading to an increase in other revenue.

8 The variance in 2016 Approved interest expense and 2016 Projected interest expense is due to
9 the projected short term debt balances and interest rates being lower than forecasts. The 2016
10 Approved interest expense included a forecast long term debt issuance of \$100 million in
11 October 2016 at 4.60 percent, whereas the 2016 Projected interest expense included a similar
12 issuance at 4.00 percent. Furthermore, 2016 Approved interest expense included a short term
13 interest rate of 2.65 percent, compared to the 2016 Projected short term interest rate of 2.49
14 percent. The 2016 Actual interest expense is lower than both the 2016 Approved and Projected
15 interest amounts as the forecast long term debt issuance of \$100 million did not take place in
16 2016. The forecast long term issuance amount was therefore included in the actual short term
17 debt balance for the year, and the related expense was determined at the lower short term debt
18 rate.

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1 **H. SERVICE QUALITY INDICATORS**

2 **27.0 Reference: SERVICE QUALITY INDICATORS**

3 **Exhibit B-2, Section 13.2.2, p. 126, 132-134; Section 1.4.2, p. 5; FBC**
4 **Annual Review of 2017 Rates Reasons for Decision and Order G-8-**
5 **17, issued on January 20, 2017, p. 28**

6 **Service quality indicators - responsiveness to customer needs**

7 On page 5 of the Application, FBC describes the sharing of gas and electric contact
8 centre staff initiative.

9 27.1 Please discuss the impact, if any, that the sharing of gas and electric contact
10 centre staff has had or is expected to have on the Telephone Service Factor
11 (Non-Emergency), Customer Satisfaction Index and Telephone Abandon Rate
12 service quality indicators (SQIs) or any other SQIs.

13
14 **Response:**

15 Shared gas and electric contact centre staff contribute to each utility's ability to achieve their
16 target SQIs. For example, gas contact centre staff support electric customers during times of
17 peak requirements if gas service levels can be maintained while providing this support. In this
18 way, the SQIs of each utility are considered such that attaining gas service level targets are not
19 compromised by providing support to electric operations.

20 Further, absent the sharing of resources, each utility would require additional FTE resources to
21 meet target SQI levels, thus the sharing of resources between gas and electric contact centre
22 staff allows for a more efficient way to achieve the target SQIs and other informational
23 indicators.

24
25

26
27

28 On page 134 of the Application, Table 13-10 shows that the Telephone Abandon Rate is
29 2.7% in 2015, 3.9% for 2016 and 4.4% for June 2017 YTD.

30 Page 28 of the Reasons for Decision accompanying Order G-8-17 in the FBC Annual
31 Review of 2017 Rates proceeding, included the following directive:

32 ...the Panel directs FBC to include in its annual review for 2018 rates
33 application a discussion of the impact, if any, that the new call back option
34 has had on the Telephone Abandon Rate Service Quality Indicator and to

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1 discuss whether there are other measures, such as “Time Until Call Back
2 is Received,” which may provide additional value to FBC’s existing
3 informational indicators.

4 On page 134 of its Application, FBC states: “The requested measurement of ‘Time Until
5 Call Back is Received’ is therefore not available.”

6 27.2 Please explain the factors that are contributing to the increase in Telephone
7 Abandon Rate from 2015 to 2017 YTD.

8
9 **Response:**

10 Please note that the 2017 result is not a full year result and therefore not comparable to prior
11 years.

12 The abandon rate can vary depending on the frequency and nature of large outages often
13 caused by storms. The increase may also reflect an increase in customers self-serving through
14 the interactive voice response (IVR) messages during power outages and/or an increase in
15 customer related abandons (hanging up prior to entering a queue). To the extent that IVR
16 messages provide the customer with the information about the outage that they are looking for,
17 the Abandon Rate would be expected to increase during outage periods.

18 As shown in the response to CEC IR 1.38.4, the average speed of answer has remained
19 relatively consistent and the Telephone Service Factor benchmarks have been met⁷ over this
20 period, thus FBC believes that it is reasonable to largely attribute the increase in Abandon Rate
21 over this period to outages.

22
23

24
25 27.3 Please discuss whether there are other measures, other than “Time Until Call
26 Back is Received”, which may provide additional value to FBC’s existing
27 informational indicators considering the introduction of the new call back option in
28 2016.

29
30 **Response:**

31 FBC believes that the existing performance measures and informational indicators provide a
32 reasonable basis to evaluate whether FBC is responsive to customer needs.

⁷ Exhibit B-2, Table 13-8, pg 132.

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1 First, call-backs are included in the existing performance measures. The Telephone Service
2 Factor, and First Contact Resolution performance measures have been met and the Customer
3 Satisfaction Index remains stable and at a high level. Further, as demonstrated in the response
4 to CEC IR 1.38.4, the average speed of answer has remained consistent and less than one
5 minute.

6 Second, the percentage of calls using the call-back feature is relatively small. Any additional
7 informational indicators on this group of customers would represent a small portion of the overall
8 customer base and customer experience.

9 As such, there are no indications to suggest that additional informational indicators are
10 necessary or would provide additional value considering the introduction of the new call-back
11 option in 2016.

12

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I. AMI RADIO-OFF METER OPTION ORDER G-220-13 COMPLIANCE FILING

28.0 Reference: AMI RADIO-OFF METER OPTION

Exhibit B-2, Section 11, Schedule 12.1; Appendix C; FBC Annual Review of 2016 Rates proceeding, Exhibit B-1-1, p.39⁸ ; FBC Annual Review of 2016 Rates Decision and Order G-202-15⁹

AMI Radio-off Shortfall deferral account

On page 39 of Exhibit B-1-1 in the FBC Annual Review of 2016 Rates proceeding, FBC states:

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.

In the FBC Annual Review of 2016 Rates Reasons for Decision accompanying Order G-202-15, the Commission directed FBC to record the shortfall amounts in a deferral account for future determination.

Schedule 12.1 of Section 11 of the Application, FBC includes a 2018 continuity schedule for the deferral accounts financed at the weighted average cost of debt, which includes the AMI Radio-off Shortfall deferral account on Line No. 15.

28.1 Please provide a continuity schedule in the same format as Schedule 12.1 of the AMI radio-off shortfall deferral account for each of 2015 actual, 2016 actual and 2017 projected.

Response:

The continuity schedule, including the components requested in BCUC IR 1.28.1.1, is provided below

⁸ http://www.bcuc.com/Documents/Proceedings/2015/DOC_44559_B-1-1_FBC-Annual-Review-Materials.pdf

⁹ <http://www.ordersdecisions.bcuc.com/bcuc/orders/en/item/127119/index.do?r=AAAAAQAIRy0yMDItMTUB>

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2015

	12/31/14	Opening Bal./Transfer/ Adj.	Gross Additions	Less Taxes	Amortization Expense	12/31/15
Advanced Metering Infrastructure Radio-Off Shortfall						
Meter Reading Costs		0	40	(10)		30
Bi-Monthly Per-Read Fee Revenue		0	(42)	11		(31)
Total Balance		0	0	(2)	0	(1)

2016

	12/31/15	Opening Bal./Transfer/ Adj.	Gross Additions	Less Taxes	Amortization Expense	12/31/16
Advanced Metering Infrastructure Radio-Off Shortfall						
Meter Reading Costs		30	327	(85)		272
Bi-Monthly Per-Read Fee Revenue		(31)	(273)	71		(233)
Total Balance		(1)	0	53	(14)	0

2017P

	12/31/16	Opening Bal./Transfer/ Adj.	Gross Additions	Less Taxes	Amortization Expense	12/31/17
Advanced Metering Infrastructure Radio-Off Shortfall						
Meter Reading Costs		272	380	(99)		553
Bi-Monthly Per-Read Fee Revenue		(233)	(258)	67		(424)
Total Balance		38	0	122	(32)	0

2018F

	12/31/17	Opening Bal./Transfer/ Adj.	Gross Additions	Less Taxes	Amortization Expense	12/31/18
Advanced Metering Infrastructure Radio-Off Shortfall						
Meter Reading Costs		553	380	(99)		834
Bi-Monthly Per-Read Fee Revenue		(424)	(258)	67		(615)
Total Balance		128	0	122	(32)	0

28.1.1 For each of 2016 actual, 2017 projected and 2018 forecast, please reconcile the additions to the deferral account to a breakdown of meter reading costs and bi-monthly per-read fee revenue.

Response:

Please refer to the response to BCUC IR 1.28.1.

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1 28.2 Please confirm, or explain otherwise, that the additions to the AMI radio-off
2 shortfall deferral account include the shortfall related to the difference between
3 the revenue from the bi-monthly per-read fee and the meter reading costs.
4

5 **Response:**

6 Confirmed.
7

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29.0 Reference: AMI RADIO-OFF METER OPTION

Exhibit B-2, Section 12.4.2.1, p. 121; Appendix E

Report on Radio-off AMI Meter Option participation and costs

As noted on page 1 of Appendix E, Order G-220-13 included the following directive:

FortisBC must track the actual number of Radio-Off AMI Meter Option participants and the actual annual manual meter reading costs separately from other costs and submit a report on these items with the British Columbia Utilities Commission on or before September 30, 2016.

On page 121 of the Application, FBC states:

The Radio-Off Report, based on the Company's experience between June 2016 and August 2016, concluded that the shortfall between radio-off costs and revenues should be minimal and that no revision to RS 81 was required. Since the completion of the Radio-Off Report, however, the shortfall has grown to an estimated \$0.120 million on an annual basis. FBC therefore intends to address RS 81 and to propose the disposition of the deferral account in its upcoming Rate Design Application.

29.1 Does FBC intend on filing the AMI Radio-off Report, updated to include the data for September 2016 onward, as part of its upcoming Rate Design Application? Please discuss why or why not.

Response:

FBC does not intend to file an updated AMI Radio-off Report in its upcoming Rate Design Application. However, FBC's upcoming Rate Design Application will include current data and analysis of its standard charges, including the AMI Radio-off charges, and based on the analysis FBC may propose updated standard charges where appropriate.

29.2 Please discuss if FBC intends on addressing both the per-premises setup fee and the bi-monthly per-read fee as part of its upcoming Rate Design Application.

Response:

Please refer to the response to BCUC IR 1.29.1.