

**ORDER NUMBER**

**G-8-17**

**IN THE MATTER OF**

the *Utilities Commission Act*, RSBC 1996, Chapter 473

and

FortisBC Inc.

Annual Review for 2017 Rates

**BEFORE:**

W. M. Everett, QC, Panel Chair/Commissioner

M. Kresivo, QC, Commissioner

on January 20, 2017

**ORDER**

**WHEREAS:**

- A. On September 15, 2014, the British Columbia Utilities Commission (Commission) issued its decision and Order G-139-14 for FortisBC Inc. (FBC) approving a Multi-Year Performance Based Ratemaking (PBR) Plan for 2014 through 2019 (PBR Decision). In accordance with the PBR Decision, FBC is to conduct an annual review process to set rates for each year;
- B. By letter dated July 15, 2016, FBC proposed a regulatory timetable for its annual review for 2017 rates;
- C. By Order G-123-16 dated July 28, 2016, the Commission established the Regulatory Timetable for the annual review for 2017 rates which included the anticipated date for FBC to file its annual review materials, intervenor registration, one round of information requests, a workshop, FBC's response to undertakings requested at the workshop, and written final and reply arguments;
- D. On August 8, 2016, FBC submitted its Annual Review for 2017 Rates Application materials (Application). In the Application, FBC requested approval of, among other things, a 3.60 percent permanent rate increase for 2017 to be applied to all components of rates for all customer classes;
- E. The following interveners registered in the proceeding:
  - BC Sustainable Energy Association and the Sierra Club of British Columbia;
  - British Columbia Municipalities Electric Utilities;
  - British Columbia Old Age Pensioners' Organization *et al.*;
  - Movement of United Professionals;
  - Commercial Energy Consumers Association of British Columbia;
  - Industrial Customers Group; and
  - Irrigation Ratepayers Group;

- F. On October 5, 2016, FBC submitted, by evidentiary update, an amendment to the Application reducing the originally requested permanent rate increase of 3.60 percent to 2.76 percent;
- G. By Order G-180-16 dated December 5, 2016, the Commission approved a 2.76 percent rate increase for 2017 to be applied to all components of rates for all customer classes on an interim basis. Pursuant to Directive 1 of Order G-180-16, the Commission stated its final determination on permanent rates for 2017 will follow the completion of the FortisBC Inc. Application for Acceptance of Demand Side Management for 2017 Expenditures proceeding; and
- H. The Commission has reviewed the Application and evidence filed in the proceeding and makes the following determinations.

**NOW THEREFORE** pursuant to sections 44.2 and 59 to 61 of the *Utilities Commission Act* and for the reasons attached as Appendix A to this order, the British Columbia Utilities Commission orders as follows:

1. FortisBC Inc.'s (FBC) 2017 rates approved on an interim basis by Order G-180-16 shall remain interim until such time as the completion of the FortisBC Inc. Application for Acceptance of Demand Side Management for 2017 Expenditures (DSM) proceeding. Subsequent to the completion of the DSM proceeding, the Commission will approve permanent 2017 rates.
2. FBC is approved to establish the following five non-rate base deferral accounts and is approved to accrue financing charges on the five non-rate base deferral accounts based on FBC's short-term interest rate. The following five non-rate base deferral accounts are each approved to be amortized over a one-year period commencing in 2017:
  - Self-Generation Policy Stage II Application deferral account;
  - Net Metering Program Tariff Update Application deferral account;
  - BCUC Residential Inclining Block Report deferral account;
  - 2017 Demand Side Management Expenditure Schedule deferral account; and
  - Transmission Tariff Review deferral account.
3. FBC is approved to amortize the balance in the Zelstoff Celgar Limited Partnership Interim Period Billing Adjustment deferral account over a one-year period in 2017.
4. Z-factor treatment for the 2017 incremental operations and maintenance expenses and capital expenditures related to the Mandatory Reliability Standards Assessment Report No. 8 is approved.
5. The capital expenditure schedule for the Ruckles Substation Rebuild project is accepted. FBC is directed to file specific information on the project's progress and costs, as outlined in the reasons for decision attached as Appendix A to this order, as part of FBC's future annual review applications during the remainder of the Performance Based Ratemaking (PBR) term.
6. The capital expenditure schedule for the Upper Bonnington Old Units Refurbishment project is accepted. FBC is directed to file specific information on the project's updated scope, progress and costs, as outlined in the reasons for decision attached as Appendix A to this order, as part of FBC's future annual review applications during the remainder of the PBR term.

7. FBC is directed to include in its annual review for 2018 rates application a discussion of the impact, if any, that the customer service call back option has had on the Telephone Abandon Rate Service Quality Indicator, as outlined in the reasons for decision attached as Appendix A to this order.
8. FBC is directed to provide additional information regarding the monthly average of uncollectible accounts as part of its annual review for 2018 rates application as outlined in the reasons for decision attached as Appendix A to this order.
9. FBC is directed to file the September 30, 2016 Advanced Metering Infrastructure (AMI) Radio-Off Report as part of its annual review for 2018 rates application and to address the disposition of the AMI Radio-Off Shortfall deferral account in that application.
10. FBC is directed to submit a compliance filing and amended tariff pages within 15 days of the date of the Commission's approval of permanent 2017 rates. The compliance filing must include finalized financial schedules for the 2017 test period and must address any variance between interim and permanent 2017 rates.

**DATED** at the City of Vancouver, in the Province of British Columbia, this        20th        day of January 2017.

BY ORDER

*Original Signed By:*

W. M. Everett, QC  
Commissioner

Attachment



British Columbia  
Utilities Commission

---

**IN THE MATTER OF**

**FortisBC Inc.  
Annual Review for 2017 Rates**

**REASONS FOR  
DECISION**

**January 20, 2017**

**Before:**

**W. M. Everett, QC, Panel Chair/Commissioner  
M. Kresivo, QC, Commissioner**

## TABLE OF CONTENTS

|                                                                                                                              | PAGE NO.  |
|------------------------------------------------------------------------------------------------------------------------------|-----------|
| <b>1.0 INTRODUCTION .....</b>                                                                                                | <b>3</b>  |
| 1.1 Background.....                                                                                                          | 3         |
| 1.2 Approvals sought.....                                                                                                    | 4         |
| 1.3 Application review process .....                                                                                         | 5         |
| 1.4 Interim rate approval .....                                                                                              | 5         |
| 1.5 Issues arising.....                                                                                                      | 6         |
| <b>2.0 DETERMINATIONS ON APPROVALS SOUGHT.....</b>                                                                           | <b>6</b>  |
| 2.1 Deferral account requests.....                                                                                           | 6         |
| 2.2 Z-factor treatment for the 2017 Incremental O&M and capital expenses related to the MRS<br>Assessment Report No. 8 ..... | 7         |
| 2.3 Acceptance of capital expenditure schedules for projects outside of PBR formula .....                                    | 8         |
| 2.3.1 Ruckles Substation Rebuild project .....                                                                               | 9         |
| 2.3.2 Upper Bonnington Old Units Refurbishment project .....                                                                 | 15        |
| <b>3.0 DETERMINATIONS ON ISSUES ARISING .....</b>                                                                            | <b>22</b> |
| 3.1 Load forecast .....                                                                                                      | 22        |
| 3.1.1 Residential UPC forecast.....                                                                                          | 22        |
| 3.1.2 Wholesale load forecast .....                                                                                          | 24        |
| 3.1.3 Power loss factor .....                                                                                                | 25        |
| 3.1.4 Theft deterrence and FBC's Revenue Protection Program.....                                                             | 26        |
| 3.2 Evaluation of the PBR Plan .....                                                                                         | 27        |
| 3.2.1 SQIs .....                                                                                                             | 27        |
| 3.2.2 Cross-utilization of FBC and FEI employees.....                                                                        | 28        |
| 3.3 Uncollectible accounts forecast .....                                                                                    | 29        |
| 3.4 FBC Electric Tariff .....                                                                                                | 30        |
| 3.5 2016 AMI Radio-Off Report.....                                                                                           | 30        |

## **1.0 INTRODUCTION**

### **1.1 Background**

By Order G-139-14 dated September 15, 2014, the British Columbia Utilities Commission (Commission) approved a Performance Based Ratemaking (PBR) Plan for FortisBC Inc. (FBC) covering a six-year period commencing in 2014. The primary purpose of the PBR Plan is to create an incentive for FBC to adopt a productivity focus and seek out sustainable operating and capital savings while maintaining service quality levels as measured by Service Quality Indicators (SQIs). The PBR Plan provides for an equal sharing of any PBR-related savings between customers and FBC.

A key element of the PBR Plan is the provision for an annual review. As part of the FBC Application for Approval of a Multi-Year PBR Plan for 2014 through 2018 Decision (PBR Decision), the Commission set out the following items to be addressed at each annual review:

- a. Evaluation of the operation of the PBR Plan in the past year(s) and identification by any party of any deficiencies/concerns with the operation of the PBR Plan that have become apparent.
- b. Review of the current year's projections and the upcoming year's forecast.
- c. Identification of any efficiency initiatives that FBC has undertaken, or intends to undertake, that require a payback period extending beyond the PBR Plan period and make recommendations to the Commission with respect to the treatment of such initiatives.
- d. Review of any exogenous events that FBC or stakeholders have identified that should be put forward to the Commission for decision as to their exclusion from the PBR Plan.
- e. Review of FBC's performance with respect to SQIs. Bring forward recommendations to the Commission where there has been a "sustained serious degradation" of service.
- f. Assess and make recommendations with respect to any SQIs that should be reviewed in future annual reviews.
- g. Assess and make recommendations to the Commission on the scope for future annual reviews.<sup>1</sup>

On August 8, 2016, FBC filed its Annual Review for 2017 Rates Application (Application). In the Application, FBC forecasts a 3.60 percent rate increase for 2017, which equates to an increase of approximately \$4.49 to the monthly bill for an average residential customer. The largest drivers of the rate increase are: (i) an increase in power supply expense primarily due to higher gross load and increases to the Brilliant, Waneta Expansion and British Columbia Hydro and Power Authority (BC Hydro) contract rates; (ii) an increase in depreciation and amortization expense primarily due to amortization of the Zelstoff Celgar Limited Partnership (Celgar) Interim Period Billing Adjustment; and (iii) amortization of the 2016 variances captured in the Flow-through deferral account.<sup>2</sup>

With regard to savings achieved under the PBR Plan, FBC projects its 2016 operating and maintenance (O&M) expenditures will be \$0.803 million lower than the PBR formula amount. However, FBC forecasts its capital

---

<sup>1</sup> FortisBC Inc. (FBC) Application for Approval of a Multi-Year PBR Plan for 2014 through 2018 (PBR), Decision dated September 15, 2014 (PBR Decision), pp. 179-180.

<sup>2</sup> Exhibit B-2, Application, pp. 1, 7, 8.

expenditures will be above the capital formula amount. Overall, FBC projects that \$0.344 million of earnings sharing savings will be distributed to customers in 2017.<sup>3</sup>

Subsequent to the filing of the Application, FBC filed an evidentiary update on October 5, 2016 (Evidentiary Update). FBC describes a number of items which result in changes to the forecast 2017 rates. The item with the greatest impact on 2017 rates is a reduction to the forecast power purchase expense of \$2.463 million. FBC explains that the reduction to the power purchase expense is due to market activities recently undertaken in 2016, a reduction to the forecast BC Hydro Power Purchase Agreement (PPA) expense to take into account the potential for additional real-time market opportunities and an updated forecast rate for Brilliant power purchases.<sup>4</sup>

As a result of changes to the forecast power purchase expense and other minor changes identified in the Evidentiary Update, FBC has revised its 2017 forecast revenue deficiency from \$12.701 million to \$9.739 million, which equates to a revised rate increase of 2.76 percent from 3.60 percent.<sup>5</sup>

## **1.2 Approvals sought**

FBC applies for approval of the following, pursuant to sections 59 to 61 of the *Utilities Commission Act* (UCA):

1. Permanent rates for all customers effective January 1, 2017, resulting in a general rate increase of 2.76 percent compared to 2016 rates for all customer classes;
2. The creation of five non-rate base deferral accounts for the following regulatory proceedings to be financed at FBC's short-term interest rate, as described in Section 12.4.1 of the Application:
  - Self-Generation Policy Stage II Application;
  - Net Metering Program Tariff Update Application;
  - BCUC Residential Inclining Block Report;
  - 2017 Demand Side Management Expenditure Schedule; and
  - Transmission Tariff Review;
3. Amortization of the Celgar Interim Period Billing Adjustment deferral account in 2017 as described in Section 12.4.2 of the Application; and
4. Z-factor treatment for the 2017 incremental O&M and capital expenditures related to the Mandatory Reliability Standards (MRS) Assessment Report No. 8, as described in Section 12.2 of the Application.

FBC also requests, pursuant to section 44.2(3) of the UCA, acceptance of a capital expenditure schedule consisting of capital expenditures for:

1. The Ruckles Substation Rebuild project, as described in Appendix C of the Application; and
2. The Upper Bonnington Old Units Refurbishment project, as described in Appendix D of the Application.<sup>6</sup>

---

<sup>3</sup> Ibid., p. 4.

<sup>4</sup> Exhibit B-2-2, Evidentiary Update, pp. 1-2.

<sup>5</sup> Ibid., Table 2, p. 3.

<sup>6</sup> FBC Reply Argument, pp. 1-2.

The approvals and acceptances sought are addressed in Section 2 of the reasons for decision.

### **1.3 Application review process**

By Order G-123-16 dated July 28, 2016, the Commission established a regulatory timetable for the review of the Application which included the following:

- One round of Commission and intervener information requests (IRs);
- A workshop open to all participants on October 12, 2016;
- An opportunity for FBC to file responses to undertakings arising from information requested at the workshop;
- Written final arguments from interveners filed on November 2, 2016; and
- Written reply argument from FBC filed on November 9, 2016.

The following seven interveners registered and actively participated in the proceeding:

- BC Sustainable Energy Association and the Sierra Club of British Columbia (BCSEA);
- British Columbia Municipalities Electric Utilities (BCMEU);
- British Columbia Old Age Pensioners' Organization *et al.* (BCOAPO);
- Movement of United Professionals (MoveUP);
- Commercial Energy Consumers Association of British Columbia (CEC);
- Irrigation Ratepayers Group (IRG); and
- Industrial Customers Group (ICG).

### **1.4 Interim rate approval**

FBC filed its Application on August 8, 2016. On the same day, FBC also submitted, pursuant to section 44.2 of the UCA, its Application for Acceptance of Demand Side Management (DSM) Expenditures for 2017 (DSM Application). The DSM Application is currently being reviewed in a separate proceeding.

Pursuant to section 44.2 of the UCA, the Commission may not consent under section 61 of the UCA to an amendment to a schedule filed under section 61 to the extent that the amendment is for the purpose of, among other things, recovering expenditures on demand-side measures the public utility anticipates making during the period addressed by the schedule, unless the amendment is for the purpose of setting an interim rate.

Accordingly, by Order G-180-16 dated December 5, 2016, the Commission approved an interim rate increase of 2.76 percent to be applied to all components of FBC rates for all customer classes effective January 1, 2017. Pursuant to Directive 1 of Order G-180-16, the Commission stated its final determination on permanent rates for 2017 will follow the completion of the DSM proceeding.



## 1.5 Issues arising

In addition to the approvals sought by FBC in the Application and subsequently updated in the Evidentiary Update, the following issues arose during the course of the proceeding, requiring further discussion and/or determinations:

1. Various issues related to FBC's load forecast, including:
  - Residential use per customer (UPC) forecast;
  - Wholesale load forecast;
  - Power losses; and
  - Theft deterrence;
2. Issues related to the overall evaluation of the PBR Plan, including:
  - SQIs; and
  - Cross-utilization of FBC and FortisBC Energy Inc. (FEI) employees;
3. FBC's forecast for uncollectible accounts;
4. FBC's Electric Tariff; and
5. Implications of the filing of the 2016 Advanced Metering Infrastructure (AMI) Radio-Off Report.

These issues are addressed in Section 3 of the reasons for decision.

## 2.0 DETERMINATIONS ON APPROVALS SOUGHT

### 2.1 Deferral account requests

No issues were raised by interveners with respect to the following FBC deferral account requests and based on the evidence filed in this proceeding, **the Panel finds the following requests to be reasonable and approves them:**

- **The establishment of the following five non-rate base deferral accounts to be financed at FBC's short-term interest rate and to be amortized over a one-year period commencing in 2017:**
  - Self-Generation Policy Stage II Application deferral account;
  - Net Metering Program Tariff Update Application deferral account;
  - BCUC Residential Inclining Block Report deferral account;
  - 2017 Demand Side Management Expenditure Schedule deferral account; and
  - Transmission Tariff Review deferral account.
- **Amortization of the Celgar Interim Period Billing Adjustment deferral account over a one-year period in 2017.**

## **2.2 Z-factor treatment for the 2017 Incremental O&M and capital expenses related to the MRS Assessment Report No. 8**

As part of the PBR Decision, the Commission established the following criteria for evaluating whether the impact of an event qualifies for exogenous factor (also referred to as Z-factor) treatment:

1. The costs/savings must be attributable entirely to events outside the control of a prudently operated utility;
2. The costs/savings must be directly related to the exogenous event and clearly outside the base upon which the rates were originally derived;
3. The impact of the event was unforeseen;
4. The costs must be prudently incurred; and
5. The costs/savings related to each exogenous event must exceed the Commission defined materiality threshold.<sup>7</sup>

The materiality threshold for FBC was defined as 0.5 percent of its 2013 Base O&M or approximately \$0.301 million.<sup>8</sup>

FBC applies for approval of Z-factor treatment for its 2017 incremental O&M and capital expenditures related to the MRS Assessment Report No. 8. FBC forecasts incremental costs of \$1.400 million, comprised of \$0.050 million in incremental O&M expenses and \$1.350 million in incremental capital expenditures in 2017 associated with complying with MRS Assessment Report No. 8.<sup>9</sup> FBC submits that these costs “continue to exceed the Commission-defined materiality threshold of \$0.301 million and satisfy the other Z-factor criteria on the same basis as accepted by the Commission in Order G-202-15.”<sup>10</sup>

### Intervener arguments

ICG submits that the costs related to the MRS program do not continue to meet the criteria established for Z-factor treatment.<sup>11</sup> ICG argues that “these costs can be forecast and FortisBC [FBC] should be accountable for variances from approved forecast.”<sup>12</sup> ICG submits that “treating these costs as exogenous factors and not holding FortisBC [FBC] accountable for variances from approved forecast is no longer appropriate. In the alternative, these costs should be the subject of a deferral account.”<sup>13</sup>

CEC supports FBC’s proposal “with the proviso that actual costs are tracked outside formula and the variance is either returned to or recovered from ratepayers the following year.”<sup>14</sup>

---

<sup>7</sup> FBC PBR Decision, p. 94.

<sup>8</sup> Ibid., p. 95.

<sup>9</sup> Exhibit B-2, p. 93.

<sup>10</sup> Ibid.

<sup>11</sup> ICG Final Argument, p. 2.

<sup>12</sup> Ibid.

<sup>13</sup> Ibid.

<sup>14</sup> CEC Final Argument, pp. 23, 25.

All other interveners either support approval for Z-factor treatment for the 2017 Incremental O&M and capital expenses related to the MRS Assessment Report No. 8 or provide no comment.

#### FBC reply argument

FBC disagrees with ICG's position that costs related to the MRS program do not continue to meet the criteria established for Z-factor treatment. FBC submits that "the ability to forecast the costs is not one of the criteria for exogenous factor treatment approved by the Commission." FBC submits the incremental 2017 MRS costs continue to meet the Z-factor criteria, for the following reasons:

- Changes to BC's MRS program approved by Order R-38-15 are the collective purview of U.S. regulatory bodies, BC Hydro and the Commission. This event is outside the control of FBC and FBC is legally obligated to comply with the new reliability standards.
- The costs are directly and solely attributable to complying with the changes to the BC MRS program, have not been previously incurred, and were not known at the time 2013 base O&M and capital were determined.
- At the time the PBR base was set, the costs to comply with the changes to the BC MRS program could not have been foreseen as the new standards were either non-existent or under preliminary development at that time.<sup>15</sup>

FBC confirms for CEC that "the approved treatment under the PBR Plan is that the [incremental MRS] costs are tracked outside of formula" and "variances from forecast cost are captured in the Flow-through variance account" to be returned to, or recovered from, customers in 2018.<sup>16</sup>

#### **Commission determination**

**The Panel approves Z-factor treatment for the 2017 incremental O&M and capital expenses related to the MRS Assessment Report No. 8.** The Panel considers these costs to be outside the control of FBC as changes to the MRS program are determined by an external regulatory body and FBC is legally obligated to comply with the reliability standards. Further, the Panel agrees with FBC that these incremental costs were not known at the time of the establishment of FBC's Base O&M and the forecast 2017 costs exceed the materiality threshold for Z-factor treatment. Thus, it is appropriate to account for these costs outside of FBC's formula-driven O&M spending. The Panel also notes that all variances between forecast and actual MRS costs are captured in FBC's Flow-through deferral account; thus, FBC is ultimately recovering the actual costs incurred from ratepayers, not the forecast costs.

### **2.3 Acceptance of capital expenditure schedules for projects outside of PBR formula**

Commission Order G-80-16 dated June 3, 2016 directed FBC to seek approval of the Ruckles Substation Rebuild (Ruckles) project and Upper Bonnington Old Units Refurbishment (UBO Refurbishment) project as part of the PBR annual review process. Directive 3 of Order G-80-16 also approved Flow-through treatment of the actual capital expenditures for these two projects for inclusion in rate base on January 1 of the year following the in-

---

<sup>15</sup> FBC Reply Argument, pp. 44-45.

<sup>16</sup> Ibid., p. 45.

service date, subject to Commission approval of the projects and the final costs being reviewed as part of a PBR annual review.

In the Application, FBC provides business cases to support its request for approval of the Ruckles project and the UBO Refurbishment project. FBC is seeking acceptance of the expenditure schedules for each project pursuant to section 44.2 of the UCA. Section 44.2 of the UCA provides that the Commission, after reviewing FBC's proposed capital expenditure schedules, must either accept the schedules, in whole or in part, if the Commission considers that making the expenditures referred to in the schedules would be in the public interest, or reject the schedules, in whole or in part.

### 2.3.1 Ruckles Substation Rebuild project

In Appendix C of the Application, FBC provides its business case for the proposed Ruckles project. In the business case, FBC describes the project need, scope, including alternatives, timing, cost estimate and rate impact.<sup>17</sup>

#### Project need, description, alternatives, scope and timing

The proposed Ruckles project is the rebuilding of the existing Ruckles substation on the existing substation site. The Ruckles substation is used to provide electricity to the City of Grand Forks' municipal electric utility, an adjacent industrial sawmill and the surrounding FBC service area customers.

FBC states that the Ruckles project is required to address the following issues/objectives:

- Eliminate the risk of damage and environmental and employee safety concerns due to the substation's location in the Kettle River flood zone;
- Address safety and reliability risks presented by obsolete equipment, including the risk of arc flash hazard; and
- Address system reliability concerns and capacity constraints.<sup>18</sup>

These project objectives are further described in Section 2 of FBC's business case regarding project need.

FBC states the scope of the Ruckles project involves the following:

- Increasing the site elevation to reduce risks (safety, environmental reliability and damage to equipment) from flooding due to the existing site location within the flood zone of the Kettle River;
- Replacing equipment at or near end of life and equipment that poses a personnel safety issue (arc flash hazard);
- Upgrading obsolete protection, control and metering equipment to current FBC standards; and
- Increasing the capacity of the substation to reliably meet expected load.

FBC evaluates three alternatives to address the project objectives: Option 1 - Do nothing; Option 2 - Full rebuild on existing site; and Option 3 - New substation at a new site.<sup>19</sup>

---

<sup>17</sup> Exhibit B-2, Appendix C.

<sup>18</sup> Exhibit B-2, p. 45; Appendix C, pp. 3-14.

FBC's first identified option, Option 1 - Do nothing, involves no modifications to the substation equipment or site. FBC states there are no advantages to this option as it would not address any of the issues previously outlined.<sup>20</sup>

Option 3 - New substation at a new site, involves constructing a new substation on the east side of Highway 3 outside of the Kettle River flood plain and preferably near the existing 9 Line and 10 Line transmission lines. Under this option, FBC would install a new transformer along with two step-down transformers and would require either a new interconnection between the new station and the existing City of Grand Forks' switching station or the relocation of the City of Grand Forks' switching station. The advantages of this option are that it addresses the issues identified with the existing Ruckles substation; however, FBC states this option has the highest estimated capital cost. Other disadvantages identified by FBC are uncertainties with regard to the acquisition and rezoning of land for construction of the substation, as well as uncertainty regarding the acquisition of Rights of Way for the required transmission and distribution interconnections.<sup>21</sup>

FBC identifies Option 2 - Full rebuild on existing site, as the preferred option. Under this option, the existing site is raised above the flood plain and a new transformer foundation with oil containment is constructed in a new location within the existing substation site. FBC states that Option 2 is the preferred option because it is the "most cost-effective alternative and achieves all of the project objectives." FBC identifies one disadvantage of this option, stating: "Construction within an existing facility location which is still interconnected with the electric power system is generally more complex than construction within a new site or property that is not interconnected to the power system until the project is put in service." FBC states there is a need to maintain 4 kilovolt (kV) and 13 kV sources of supply during construction. However, FBC submits that it has "considerable experience completing projects within an existing substation site and the risks associated with construction can be mitigated."<sup>22</sup>

FBC anticipates the Ruckles project to be completed by the winter of 2018 assuming it receives Commission approval by December 31, 2016.<sup>23</sup>

#### Cost estimate and rate impact

FBC estimates a total capital cost for the Ruckles project of \$8.288 million in as-spent dollars, which includes \$0.428 million in Allowance for Funds Used During Construction (AFUDC) and \$0.301 million of removal costs. This estimate has been developed to an AACE Class 3 degree of accuracy, as required by the Commission's Certificate of Public Convenience and Necessity (CPCN) Guidelines, and includes a cost range of 15 to 20 percent in contingency for each project component. Based on this cost estimate, FBC calculates a 50-year levelized rate impact from the project of 0.20 percent.<sup>24</sup>

---

<sup>19</sup> Ibid., Appendix C, p. 15.

<sup>20</sup> Ibid., pp. 15-16.

<sup>21</sup> Ibid., pp. 17-18.

<sup>22</sup> Ibid., pp. 16-17, 19.

<sup>23</sup> Ibid., p. 21.

<sup>24</sup> Ibid., p. 19.

FBC was asked in BCMEU IR 6.1 to provide a more detailed cost estimate of the Ruckles project. As part of this IR, BCMEU referenced a “recently built” 35 megavolt ampere (MVA) station built by Nelson Hydro “for a bit less than \$4 million.” FBC replied it was “unable to comment on the referenced Nelson Hydro substation project as it does not have the information needed to compare the two projects.”<sup>25</sup> This issue was raised again by BCMEU at the annual review workshop and FBC agreed to review the Nelson Hydro cost analysis and provide comments on the comparability of this project to the Ruckles project in an undertaking.<sup>26</sup>

FBC provided the aforementioned undertaking and compared its Ruckles project cost estimate (\$7.6 million before contingency and AFUDC) to the reported actual 2012/13 cost of the Nelson Hydro Rosemont Substation Rebuild project of \$3.5 million. The comparison provided high-level differences between the two projects in terms of scope, civil work, materials and design as well as potential impacts due to inflation and the exchange rate since 2012/13. Some of the differences identified by FBC were as follows:

- The Ruckles project requires more civil work than the Nelson Hydro Rosemont Substation Rebuild to raise the site elevation in order to address the flood risk posed by the Kettle River. FBC estimates that the incremental civil costs are approximately \$550,000;
- Incremental transformer costs due to vendor selection and due to the devaluation of the Canadian dollar since 2012/13, which FBC estimates to add approximately \$500,000 in costs;
- FBC must install step-down transformers with oil containment to supply two 4 kV distribution feeders. FBC estimates the requirement to maintain two sources of supply results in incremental costs of approximately \$500,000;
- The footprint of the existing Ruckles substation area is more than double that of Rosemont Substation; and
- Nelson Hydro was able to completely de-energize the Rosemont Substation in advance of construction whereas FBC will have to maintain supply throughout construction.<sup>27</sup>

In the cover letter to the workshop undertakings, FBC provided clarification regarding its consultation with the City of Grand Forks, as this concern was raised at the annual review workshop by CEC and BCMEU.<sup>28</sup> FBC states in the cover letter that it spoke with the City of Grand Forks in July 2016 “about how the preferred option for the Ruckles Rebuild Project considered the City’s plans to voltage convert over the long term and any potential future plans to convert to a transmission customer.” FBC states that the City of Grand Forks confirmed that no decisions had been made with respect to becoming a transmission customer and that the City of Grand Forks “did not have concrete plans with regard to the schedule for continuation of its 4kV to 13kV voltage conversion program.”<sup>29</sup>

---

<sup>25</sup> Exhibit B-4, BCMEU IR 6.1.

<sup>26</sup> Proceedings at Workshop, Transcript Volume 1, pp. 39-47.

<sup>27</sup> Exhibit B-13, Undertaking No. 1, pp. 2-3.

<sup>28</sup> Proceedings at Workshop, Transcript Volume 1, pp. 37-38.

<sup>29</sup> Exhibit B-13, p. 2.

FBC also states it has not received any request from the City of Grand Forks to become a transmission customer at this time, but should the City of Grand Forks decide to do so, the process to apply to become a transmission customer and then for the city to build its own substation would take approximately 3–5 years.<sup>30</sup>

#### Intervener arguments

None of the interveners took issue with the need for the Ruckles project or the proposed alternative of re-building the substation at the existing site. Two of the interveners, BCSEA and IRG, support Commission acceptance of the capital expenditure schedule for the Ruckles project.<sup>31</sup>

BCOAPO supports “granting FBC the orders sought,” but submits that the Commission should direct FBC to formally consult with the City of Grand Forks on its plans and demonstrate in future annual reviews that it has reflected the results of the city’s plans in the capacity planned for the new Ruckles substation.<sup>32</sup>

CEC agrees that the project need is well defined and agrees with FBC’s chosen alternative but expresses concern with the reasonableness of the cost estimate and urges the Commission to closely review it.<sup>33</sup>

BCMEU “remains of the view that the Nelson Hydro substation and the Ruckles substation, while not identical in all respects, remain very similar with aspects which increase costs and aspects which reduce costs such that estimates at over twice the price of what Nelson Hydro recently spent to build its substation seems unreasonable.”

BCMEU submits it finds the following cost differences “hard to accept”:

- FBC plans to purchase a 40 MVA transformer from an established North American based supplier. BCMEU submits “in the Waneta Expansion Project in which FBC is a shareholder, a Korean transformer was used” and “Nelson Hydro’s experience based on the recent bid [was] that a Taiwan supplier had the best price, efficiency and best warranty in comparison to five other suppliers.”
- FBC plans to install 1 station and 2 auto transformers for a total of 3 transformers with secondary containment. BCMEU submits “FBC consider installing 1 auto transformer instead of 2 thereby reducing secondary containment requirements from 3 down to 2, or install a 3 winding power transformer to eliminate the need for autotransformers... [to] reduce secondary containment needs from 3 down to 1.”<sup>34</sup>

However, BCMEU submits it “does not intend to pursue this further as it recognizes that ratepayers should not be micro managing the Utility.” BCMEU “urges” the Commission to find that the \$8.2 million Ruckles project cost is at the “very upper end” for substation costs and submits that FBC should be “encouraged to look at opportunities to reduce that cost.”<sup>35</sup>

---

<sup>30</sup> Ibid.

<sup>31</sup> BCSEA Final Argument, p. 9; IRG Final Argument, p. 9.

<sup>32</sup> BCOAPO Final Argument, pp. 15-22.

<sup>33</sup> CEC Final Argument, p. 28.

<sup>34</sup> BCMEU Final Argument, pp. 1–2.

<sup>35</sup> BCMEU Final Argument, p. 2.

ICG argues that “the cost comparison of the Nelson Hydro Rosemont Substation Rebuild and the Ruckles Rebuild provides a glaring example of systemic cost control issues at FortisBC. Before approving the Ruckles Rebuild, the ICG requests that the Commission do a full review of FortisBC construction and design standards and procurement policies.”<sup>36</sup>

#### FBC reply argument

FBC submits the Ruckles project is necessary for continued safe and reliable service to customers and is in the public interest.<sup>37</sup> FBC further submits it has consulted with the City of Grand Forks with respect to the Ruckles project and that the city has not communicated any concrete plans to build its own substation and become a transmission customer. With regard to the submissions made by BCMEU, FBC notes that BCMEU, in its final argument, did not object to the need for the Ruckles project nor did BCMEU request further consultation with the City of Grand Forks.<sup>38</sup> FBC further submits that delaying the project would “leave safety, reliability and environmental risks unaddressed” and that deferral of the project could also lead to “increased costs associated with addressing failures or damage resulting from the unmitigated safety, environmental, and reliability concerns.”<sup>39</sup>

FBC argues it has explained the differences between the Nelson Hydro Rosemont Substation Rebuild project costs and its estimate for the Ruckles project and that the estimate for the Ruckles project is “reasonable and based on sound engineering judgment.” In response to BCMEU, FBC states it will be “competitively tendering for the project, so the supplier of the transformer has not been determined.” Thus, “an off shore supplier from Taiwan or Korea may be chosen assuming the vendor meets FBC specifications.”<sup>40</sup> Furthermore, FBC submits it is “always looking for ways to minimize costs when conducting its projects” and it will “take BCMEU’s advice [regarding reducing the number of transformers] under consideration.” Finally, FBC states it will be reporting on actual costs of the project in future annual reviews and only actual costs will be recovered from ratepayers.<sup>41</sup>

FBC submits that ICG’s claims of “a glaring example of systemic cost control issues at FortisBC” are not supported by evidence and that FBC has completed a number of substations in recent history and has a “very good track record” in terms of completing projects for a reasonable cost compared to the original estimate.<sup>42</sup> FBC further argues that the Commission should disregard ICG’s submission that “BC Hydro and Nelson Hydro source transformers of this size from off shore” as there is no evidence in this proceeding regarding BC Hydro procurement practices and only one example of the transformer sourced by Nelson Hydro for the Rosemont Substation.<sup>43</sup>

---

<sup>36</sup> ICG Final Argument, p. 3.

<sup>37</sup> FBC Reply Argument, p. 25.

<sup>38</sup> Ibid., p. 28.

<sup>39</sup> Ibid., p. 29.

<sup>40</sup> Ibid., p. 33.

<sup>41</sup> Ibid., p. 34.

<sup>42</sup> Ibid., pp. 34-35.

<sup>43</sup> Ibid., p. 35.



FBC concludes that the capital expenditures for the Ruckles project are in the public interest and should be approved.<sup>44</sup>

### **Commission determination**

**The Panel accepts FBC's proposed capital expenditure schedule for the Ruckles Substation Rebuild project as being in the public interest.**

FBC explains the need and scope of the Ruckles project and describes the following actions to be undertaken:

- Raising the existing Ruckles substation site elevation to reduce risks (employee safety, environmental reliability and damage to equipment) from flooding due to the existing site location being located within the flood zone of the Kettle River;
- Replacing equipment at or near end of life and equipment that poses a personnel safety issue (arc flash hazard), and upgrading obsolete protection, control and metering equipment to current FBC standards; and
- Increasing the capacity of the substation to reliably meet expected load.

The Panel is satisfied based on the evidence put forth in this proceeding that FBC has demonstrated that the Ruckles project is necessary for the continued delivery of safe and reliable service to customers and that the project plan addresses current safety and environmental risks. The Panel also accepts FBC's submissions and evidence provided that the preferred option of rebuilding the Ruckles substation on the existing site is the most cost effective option and achieves the project objectives, and that FBC has the necessary experience with construction to mitigate the risk of constructing on a site which is still interconnected with the electric power system. The Panel also notes that none of the interveners took issue with the need for the Ruckles project or with the proposed option of rebuilding the substation at the existing site.

With regard to whether FBC has performed adequate consultation with the City of Grand Forks, the Panel is satisfied with FBC's statement in response to the workshop undertakings confirming that it has consulted with the City of Grand Forks with respect to the Ruckles project and that the city has not communicated any concrete plans to build its own substation and become a transmission customer. The Panel agrees that given the ambiguity of the City of Grand Forks' intentions to transition to a transmission customer, the length of time such a transition would take, and the immediate need to commence the Ruckles project to address the current safety and environmental issues, it is appropriate for FBC to proceed with the Ruckles project as proposed. The Panel further accepts that based on FBC's consultation with the City of Grand Forks there is no evidence to indicate that the city will not require energy from the Ruckles substation or that any other load will be lost or not materialize.

The Panel acknowledges the concerns raised by BCMEU and CEC with respect to FBC's projected capital costs for the Ruckles project but notes that these costs are an estimate at this time. Further, the Panel is satisfied that FBC has provided reasonable high-level explanations for the difference between its estimated costs for the Ruckles project and the reported actual costs of the Nelson Hydro Rosemont Substation Rebuild project.

---

<sup>44</sup> Ibid., p. 37.

With regard to ICG's argument that the comparison between the estimated cost of the Ruckles project and the actual costs of the Nelson Hydro substation rebuild provide a "glaring example of systemic cost control issues at FBC," the Panel rejects ICG's allegation on the basis that it is unsupported by any evidence.

Finally, the Panel encourages FBC to consider the suggestions put forward by interveners in respect of the design and selection of equipment. The Panel also re-iterates FBC's statements made in its reply argument that it will "look for cost saving opportunities, including competitive tendering for the project." The Panel also notes FBC's statement that it will report on the actual costs of the project in future annual reviews, which will provide interveners with an opportunity to monitor the project costs.

For the foregoing reasons, the Panel is satisfied the cost estimate for the Ruckles project is reasonable.

**The Panel directs FBC to report in each of its annual review applications during the remainder of the PBR term the following information on the Ruckles Substation Rebuild project:**

- **The status of the Ruckles project, including a comparison of the project timeline provided in the current Application to the updated project timeline, as at the time of filing each annual review application.**
- **Updated cost estimates and scope descriptions compared to the cost estimates and scope descriptions provided in the current Application, including explanations for any variances/changes to the cost estimates or project scope.**
- **Actual costs incurred to date on the Ruckles project as at the time of filing each annual review application.**
- **The final actual project cost, including a description of the scope of work completed relative to the cost estimate and scope description provided in the Application, with explanations for any variances.**

### 2.3.2 Upper Bonnington Old Units Refurbishment project

In Appendix D of the Application, FBC provides its business case for the proposed UBO Refurbishment project. In the business case, FBC describes the project need, scope, alternatives, timing, cost estimate and rate impact.<sup>45</sup>

#### Project need, description, alternatives, scope and timing

FBC describes the UBO Refurbishment project need as follows:

The UBO Units Refurbishment Project involves the refurbishment of the more than 100 year old generating Units 1–4 (the Old Units), at an estimated total cost of \$31.783 million (\$5.898 million in 2017). These units are at end of life and can no longer be operated in a safe, reliable, and environmentally responsible manner. This four-year project will extend the life of the Old

---

<sup>45</sup> Exhibit B-2, Appendix D.

Units for an additional twenty years or more, and will reduce the safety and environmental risks associated with failures of the aged equipment.<sup>46</sup>

Units 1 to 4, each with a nameplate rating of 5.7 megawatts, were commissioned between 1907 and 1916. These units are situated in the Upper Bonnington plant along with two larger units (Units 5 and 6). Units 1 to 4 were not included in the Upgrade and Life Extension (ULE) program completed in 2011 in which FBC refurbished eleven of its fifteen generating units on the Kootenay River.<sup>47</sup>

As part of FBC's business case for the UBO Refurbishment project, FBC provides inspection and repair reports prepared by third parties covering Unit 1 and Unit 3. FBC submits that the conditions identified in those reports and through its own inspections are representative of the condition to be expected of the other units, given the similar vintage, design, construction and operating conditions.<sup>48</sup>

FBC provides a table of safety, reliability and environmental risks posed by the major components of the Old Units and describes the project objectives as follows:

- To ensure the availability of reliable supply to FBC's customers at the lowest reasonable cost;
- To mitigate the safety risks to FBC's employees that result from the obsolete design and poor condition of the generating units; and
- To mitigate the environmental risks posed by the increasing likelihood of failure of the aged equipment.<sup>49</sup>

FBC presents three alternatives in its business case: Option 1 - Decommission the Old Units; Option 2 - Full Life Extension; and Option 3 - Refurbishment (the preferred option).

FBC stated that "to ensure a consistent comparison," a 50-year analysis period was used for all three options because the assets of each option "will be mostly depreciated over 50 years based on the weighted-average depreciation rates of each option."<sup>50</sup>

FBC stated that Option 1 was rejected as a result of having the highest rate impact; this is due to the costs of purchasing 115 GWh (gigawatt hours) of replacement power annually at the currently approved BC Hydro Rate Schedule 3808 and assuming an annual escalation of three percent.<sup>51</sup> Comparing Option 2 and 3, FBC provided an updated and corrected 50-year incremental revenue requirement and levelized rate impact table in support of its preferred option as shown below in Table 1.<sup>52</sup>

---

<sup>46</sup> Exhibit B-2, p. 45.

<sup>47</sup> Exhibit B-2, Appendix D, pp. 1-2.

<sup>48</sup> Ibid., p. 4.

<sup>49</sup> Exhibit B-2, Appendix D, Table 2-1, pp. 17-18.

<sup>50</sup> Exhibit B-3, BCUC IR 38.2.

<sup>51</sup> Ibid., p. 21.

<sup>52</sup> Exhibit B-3, BCUC IR 38.6.

Table 1 – Revised UBO Refurbishment Project Options Comparison

|                                                            | Option 1 –<br>Decommissioning<br>(Revised) | Option 2 – Full Life<br>Extension<br>(BCUC IR 1.38.2) | Option 3 –<br>Refurbishment<br>(BCUC IR 1.38.2) |
|------------------------------------------------------------|--------------------------------------------|-------------------------------------------------------|-------------------------------------------------|
| NPV of Incremental Revenue Requirement (50 years)          | \$118.967 million                          | \$46.892 million                                      | \$34.038 million                                |
| Levelized % Rate Increase to 2016 Approved Rate (50 years) | 2.14%                                      | 0.84%                                                 | 0.61%                                           |

FBC explained that the main difference between the Full Life Extension (Option 2) and the proposed Refurbishment option (Option 3) is the forecast life expectancy (40 years for Option 2 and 20 years for Option 3). With additional capital expenditures beyond the 20-year timeframe, FBC stated the productive life of the Old Units could be increased to 40 years for Option 3, although it is not seeking approval of the future expenditures at this time.<sup>53</sup> FBC's financial analysis of the net present value (NPV) and rate impact shown in the above table includes approximately \$24 million of future expenditures to extend the life of Option 3 from 20 years to 40 years.<sup>54</sup> FBC states that Option 3 provides the appropriate balance between continued safe and reliable operation of the assets and minimizing the customer rate impacts.<sup>55</sup> FBC calculates the levelized rate impact over 50 years for its preferred option to refurbish the Old Units to be 0.61 percent.

#### Cost estimate

FBC estimates the total capital cost for the UBO Refurbishment project to be \$31.783 million (including financing and removal costs). This estimate is at a Class 4 degree of accuracy as defined by AACE. FBC provides the following table showing the timing of the work to be completed and the cost estimate by generating unit.<sup>56</sup>

Table 2 – Schedule of Phased Inclusion in Rate Base

| Year of Construction Complete | Construction Work to be completed | Estimated amount of capital (As-Spent) transfer to Plant-in-Service <sup>18</sup> (\$millions) |
|-------------------------------|-----------------------------------|------------------------------------------------------------------------------------------------|
| 2017                          | Unit 3                            | \$5.412                                                                                        |
| 2018                          | Unit 4                            | \$8.004                                                                                        |
| 2019                          | Unit 2                            | \$6.793                                                                                        |
| 2020                          | Unit 1                            | \$9.579                                                                                        |
| 2021                          | Plant Wrap-up                     | \$0.116                                                                                        |

FBC states that the costs vary by unit reflecting the different scope of work planned for each unit based on FBC's assessment of equipment condition and whether refurbishment or replacement of components will address the

<sup>53</sup> Ibid., Appendix D, p. 1.

<sup>54</sup> Exhibit B-2, Appendix D-4, Revenue Requirements Analysis, Upper Bonnington - Alternative 3 (Preferred) - Refurbishment, p. 1.

<sup>55</sup> Exhibit B-2, Appendix D, pp. 26-27.

<sup>56</sup> Exhibit B-2, Appendix D, p. 33.

operational risks identified.<sup>57</sup> Unit 1 has the highest estimated cost as a result of the expected scope of work, including a new generator step-up transformer, oil containment and cables. In response to BCUC IR 31.1, FBC provided a 50-year NPV assessment for decommissioning Unit 1 compared to refurbishing Unit 1 (the most expensive individual unit to refurbish). The NPV analysis is shown below in Table 3.

Table 3 – NPV Analysis for Unit 1

|                                          | Decommission Unit 1<br>(\$ million) | Refurbish Unit 1<br>(\$ million) |
|------------------------------------------|-------------------------------------|----------------------------------|
| NPV of Revenue Requirement<br>(50 years) | \$21.314                            | \$10.312                         |

The NPV for “Decommission Unit 1” is based on estimated decommissioning costs of \$1.084 million plus \$1 million (2016 dollars) annually for purchased power to replace the loss of 20.7 GWh of energy entitlement that would result from the loss of the first unit under the Canal Plant Agreement (CPA). FBC states that the loss of energy entitlement to decommission a second unit would increase incrementally by 31.3 GWh under the CPA. FBC refers to this analysis to support its position that “decommissioning any of the Old Units would not be cost-effective or in the interest of [its] customers.”<sup>58</sup>

In response to BCUC IR 31.1.1, FBC provided the actual generation history for the Old Units spanning ten recent quarters totalling 92.350 GWh or an average annual per unit actual generation of 9.24 GWh. FBC explained that the difference between the actual generation at the Old Units and the entitlement received is a result of the coordination benefits of the CPA and stated the following:

The CPA enables BC Hydro and the Entitlement Parties (FBC, Teck Metals Ltd. (Teck), Brilliant Power Corporation, Brilliant Expansion Power Corporation, and Waneta Expansion Limited Partnership) through coordinated use of water flows and storage reservoirs, and through coordinated operation of generating plants, to generate more power from their combined generating resources than they could if they operated independently.<sup>59</sup>

FBC further stated that:

Under the CPA, BC Hydro takes into its system all power actually generated by the Entitlement Parties’ plants. In exchange for permitting BC Hydro to determine the output of these facilities, the Entitlement Parties are contractually entitled to their respective ‘entitlements’ of capacity and energy from BC Hydro. The Entitlement Parties receive their entitlements irrespective of actual water flows to the Entitlement Parties’ generating plants. The financial impact to FBC ratepayers to replace the energy and capacity received from the UBO old plant would be based on the entitlements received under the CPA, and not on the actual generation of the units.<sup>60</sup>

---

<sup>57</sup> Ibid., p. 28.

<sup>58</sup> Exhibit B-3, BCUC IR 31.1, p. 73.

<sup>59</sup> Ibid., BCUC IR 32.1.4.

<sup>60</sup> Ibid.

The majority of actual generation from the Old Units generally coincides with the freshet period (April through June) as shown in the table provided by FBC below where Q1 refers to the calendar quarter January through March.<sup>61</sup>

Table 4 – UBO Old Plant Actual Generation (GWh)

| GWh          | Q1/14        | Q2/14         | Q3/14         | Q4/14        | Q1/15        | Q2/15         | Q3/15        | Q4/15        | Q1/16        | Q2/16         | Total         |
|--------------|--------------|---------------|---------------|--------------|--------------|---------------|--------------|--------------|--------------|---------------|---------------|
| Unit 1       | 0.000        | 8.338         | 6.115         | 4.062        | 0.430        | 2.846         | 0.010        | 0.000        | 0.000        | 7.928         | 29.728        |
| Unit 2       | 0.000        | 8.506         | 5.538         | 3.490        | 0.498        | 2.978         | 0.001        | 0.000        | 0.000        | 7.264         | 28.276        |
| Unit 3       | 0.000        | 0.000         | 0.000         | 0.022        | 0.029        | 3.328         | 0.000        | 0.000        | 0.000        | 4.034         | 7.412         |
| Unit 4       | 0.000        | 8.207         | 6.928         | 0.332        | 0.452        | 2.317         | 0.000        | 0.000        | 0.000        | 8.697         | 26.933        |
| <b>Total</b> | <b>0.000</b> | <b>25.051</b> | <b>18.581</b> | <b>7.905</b> | <b>1.409</b> | <b>11.469</b> | <b>0.011</b> | <b>0.000</b> | <b>0.000</b> | <b>27.923</b> | <b>92.350</b> |

### Intervener arguments

IRG and BCMEU support Commission acceptance of the capital expenditure schedule.<sup>62</sup> BCOAPO also supports acceptance but raises concern with the uncertainty associated with the level of expenditures that will be required over the 2037–2057 time period for the preferred alternative. BCOAPO states that:

...given the risk-associated with these cost estimates it is unlikely that the risk-adjusted cost advantage of the Refurbishment alternative would be as much as indicated in Appendix C... However, the cost advantage is still material and based on the currently available information the Refurbishment alternative appears to be preferable.<sup>63</sup>

CEC and ICG raise concerns with the UBO Refurbishment project. CEC submits that FBC should be required to provide a Class 3 cost estimate for the project as required by the Commission’s CPCN Guidelines. CEC argues that projects outside of the PBR formula should be “no less-well costed than required for CPCN’s.” CEC raises a concern over the increased cost estimates for the project, stating FBC originally estimated the project to cost \$21.0 million in the 2014–2019 PBR Application, subsequently increased its cost estimate to \$26.8 million in the Major Capital Projects application, and now has further increased its cost estimate to the current estimate of \$31.8 million. CEC notes that a Class 4 estimate has an accuracy range of -30 percent to +50 percent.<sup>64</sup>

ICG objects to FBC’s request and submits: “The FortisBC justification for the refurbishment and replacement upgrades relies entirely on the negative financial impacts to customers as a result of the loss of entitlements from the Canal Plant Agreement.” ICG further submits: “FortisBC relies on financial consequences of contractual provision, which are within the authority of the Commission to change, not the loss of power generation...”<sup>65</sup>

ICG argues that “but for the potential loss of entitlement under the CPA, it would be far better to discontinue operations or limit operations to the freshet, than refurbish and replace the units as planned by FortisBC. Given the CPA is within the jurisdiction of the Commission, the Commission should not approve the project unless it

<sup>61</sup> Exhibit B-3, BCUC IR 32.1.1.

<sup>62</sup> IRG Final Argument, p. 10; BCMEU Final Argument, p. 1.

<sup>63</sup> BCOAPO Final Argument, p. 16.

<sup>64</sup> CEC Final Argument, pp. 28-31.

<sup>65</sup> ICG Final Argument, p. 2.

has determined that there are power generation benefits to BC Hydro. Simply put, until there is evidence of power generation benefits, the Commission cannot conclude that this project is in the public interest.”<sup>66</sup>

BCSEA submits “there is no persuasive evidence that attempting to renegotiate the entitlements regarding the Upper Bonnington Old Units is a viable approach that would support entertaining a decommissioning option.” Therefore, BCSEA supports the refurbishment option and acceptance of the capital expenditure schedule.<sup>67</sup>

#### FBC reply argument

Regarding its cost estimate, FBC argues it has provided an estimate that is Class 3 in all respects except for the submerged and embedded components for which it would be impractical to define further without “significant effort, disruption and expense.” FBC further submits that “in these circumstances it would not be reasonable or in the interest of customers to require the expenditure of significant resources to define the scope of the submerged and embedded components. Any risk related to these components has been adequately addressed by the addition of contingency and assumptions regarding the replacement of some of the submerged components.” Therefore, FBC submits that the UBO Refurbishment project cost estimate is “reasonable and should be accepted.”

With regard to ICG’s arguments, FBC replies that the 2005 CPA and the Entitlement Adjustment Agreement (Agreements) are not within the Commission’s jurisdiction having specifically exempted the Agreements from the UCA by Order G-41-06 pursuant to section 88(3) of the UCA. FBC further refers to the Commission’s reasons for decision, attached as Appendix A to Order G-41-06, to note that FBC and BC Hydro sought the exemption to remove uncertainty relating to possible alterations to the Agreements through any current or future Commission process. FBC also submits that the Commission’s CPCN Guidelines do not apply to the UBO Refurbishment project and therefore consultation with BC Hydro regarding the project is not required.<sup>68</sup>

FBC concludes by stating the following:

FBC’s financial analysis in the Business Case for the UBO [Refurbishment] Project correctly considers the loss of entitlements under the 2005 CPA if the Old Plants were to be decommissioned. Under the 2005 CPA, BC Hydro receives the actual generation from the UBO plants and FBC receives an entitlement of energy and capacity, regardless of actual generation. The forecast cost of replacing the energy entitlement with PPA energy purchases would be \$5.574 million in 2017, increasing to \$8.707 million in 2032. The high cost of replacing the energy entitlements makes decommissioning even one of the Old Plants uneconomic. FBC’s business case for the UBO Project is sound and demonstrates that the project is in the public interest. FBC has no obligation to demonstrate that there are power generation benefits to BC Hydro as requested by ICG. FBC submits that ICG’s argument is without merit and must be rejected.<sup>69</sup>

---

<sup>66</sup> Ibid.

<sup>67</sup> BCSEA Final Argument, p. 10.

<sup>68</sup> FBC Reply Argument, p. 42.

<sup>69</sup> FBC Reply Argument, p. 42.

## Commission determination

**The Panel accepts the capital expenditure schedule for the Upper Bonnington Old Units Refurbishment project as being in the public interest.** The Panel is convinced of the need and the relative urgency of the project to address the safety and environmental risks posed by the four Old Units. Specifically, the Panel accepts that the expenditures will ensure availability of reliable supply to FBC's customers at the lowest reasonable cost, mitigate the safety risks to FBC's employees that result from the obsolete design and poor condition of the generating units and mitigate the environmental risks posed by the increasing likelihood of failure of the aged equipment.

The Panel does not agree with ICG's argument that the CPA is within the Commission's jurisdiction and that the Commission "should not approve the project unless it has determined that there are power generation benefits to BC Hydro." Order G-41-06, issued by the Commission and approved by the Lieutenant Governor in Council of BC, specifically exempts the CPA and the Entitlement Adjustment Agreement from the Commission's jurisdiction. Further, the Panel is persuaded that the financial benefits to FBC ratepayers of maintaining safe and reliable operation of the Old Units are compelling based on the existing entitlements under the CPA which will continue for at least the next 19 years.

The Panel is satisfied with the level of estimate and agrees with FBC that it would not be cost effective to further define scope and cost estimates of the submerged and embedded components for the purpose of Commission acceptance. FBC has demonstrated experience in estimating costs and executing this type of work in completing its ULE program on eleven of its other larger generating units completed between 1998 and 2011. In response to BCUC IR 28.2, FBC provided actual versus forecast costs showing that in aggregate, its forecast costs were very close (within 1 percent) of the actual. The Panel accepts FBC's submissions that the cost estimate, as applied for, is the best estimate available without considerable additional effort, time and expense to investigate the condition of submerged and embedded components of each unit, which it will do in the course of performing the refurbishments.

**The Panel directs FBC to report in each of its annual review applications during the remainder of the PBR term the following information on the UBO Refurbishment project:**

- **The status of both the UBO Refurbishment project as a whole and of the individual units, including a comparison of the project timeline provided in the current Application to any updated project timeline as at the time of filing each annual review application.**
- **Updated cost estimates and scope descriptions compared to the cost estimates and scope descriptions provided in the current Application, including explanations for any variances/changes to the cost estimates or project scope.**
- **Actual costs incurred to date on the UBO Refurbishment project as a whole and on each individual unit as at the time of filing each annual review application.**
- **Final actual refurbishment costs at the completion of each unit, including a description of the scope of work completed relative to the conditions found and against the cost estimate.**



### 3.0 DETERMINATIONS ON ISSUES ARISING

A number of issues were raised in IRs and at the workshop as well as in final arguments. These issues are addressed in the following subsections.

#### 3.1 Load forecast

FBC forecasts an overall increase to gross load in 2017 of 19 GWh compared to the Approved 2016 forecast. FBC states that the increase in 2017 is due to increased loads in the commercial, wholesale, industrial, lighting and irrigation customer classes, which are partially offset by a decrease in the residential load. Based on the 2016 rates for each customer class, FBC forecasts 2017 revenue of \$352.389 million.<sup>70</sup>

FBC's gross system energy load is a mix of the customer classes described above as well as system losses. The gross load forecast also includes the impacts of forecast energy savings, including DSM savings, and the impacts of the Residential Conservation Rate (RCR), the Customer Information Portal (CIP), the Advanced Metering Infrastructure (AMI) program and future rate changes.

FBC states its load forecast methods are consistent with those used in prior years and that these methods were accepted by the Load Forecast Technical Committee in 2011.

The following issues related to FBC's load forecasts were raised by interveners in their final arguments:

- The impact of the addition of the City of Kelowna's residential customers to FBC's system in 2013 on FBC's 2017 residential load forecast;
- The reliance on customer survey information in preparing FBC's wholesale customer load forecast;
- The appropriate loss factor percentage; and
- The rate at which annual savings are being achieved through FBC's AMI-enabled Revenue Protection program.

##### 3.1.1 Residential UPC forecast

FBC's annual residential load forecast is determined based on the forecast customer count and the forecast average use per customer (UPC).<sup>71</sup> The UPC is forecast by averaging the most recent three years' actual UPC (i.e. 2013, 2014 and 2015).<sup>72</sup>

FBC forecasts the residential after-savings load (i.e. the before-savings energy load after subtracting DSM and other savings) for 2017 to be 1,353 GWh, which is an increase of 5 GWh from the 2016 seed year, and forecasts normalized after-savings residential UPC of 11.76 MWh and 11.71 MWh for 2016 and 2017 seed years, respectively.<sup>73</sup>

---

<sup>70</sup> Exhibit B-2, p. 14.

<sup>71</sup> Exhibit B-2, p. 14.

<sup>72</sup> Ibid., pp. 17-18.

<sup>73</sup> Exhibit B-2, pp. 18-19.

Included in the calculation of the 2017 residential load is the impact of FBC's acquisition of the assets and customers of the City of Kelowna electric utility, which was made effective March 31, 2013.<sup>74</sup> The impact of FBC's acquisition of the City of Kelowna electric utility on FBC's load was that the City of Kelowna became a direct customer of FBC and a re-distribution of load occurred from FBC's wholesale customer class to other rate classes in 2013 and 2014.<sup>75</sup>

#### Intervener arguments

CEC recommends that the Commission "direct FBC to adjust its residential load forecast for the changes to UPC arising from the addition of the City of Kelowna."<sup>76</sup>

CEC submits "it would not be unreasonable to exclude the 2013 year in the calculation of the UPC" as 2014 is the first full year in which former customers of the City of Kelowna are fully reflected in FBC's load data by customer class and it is "preferable to account for changes where they are known and continuing than it is to rely on smoothing."<sup>77</sup> CEC further submits that "the evidence is that not accounting for the UPC changes created by the addition of the CoK [City of Kelowna] has already resulted in significant residential load variation from forecast (8.2% and 7.6% in 2014 and 2015) and that this could be the expected outcome for 2017 as well."<sup>78</sup>

No other interveners raised issues with FBC's residential load forecast.

#### FBC reply argument

FBC understands CEC's suggestion to mean removing the 2013 UPC from the average UPC calculation used in the forecast methodology<sup>79</sup> and provides several reasons why it does not agree that this change should be made to its forecast methodology, including:

- Changes in residential UPC in any given year are the result of many compounding and/or offsetting factors.
- FBC has conducted a regression of the ten years of actual before-savings UPC data and demonstrated that it does not show a statistically significant trend. Using a 3-year average is appropriate in the absence of trend.
- FBC tested 2013 normalized after savings residential UPC values for the presence of outliers and none were found.
- In the absence of outliers, FBC's approach of calculating the 3-year average of historical UPCs is a common and well established smoothing practice to minimize year-over-year fluctuations.
- Variations from forecast load will be captured in the Flow-through deferral account.

---

<sup>74</sup> Exhibit B-2, Appendix A2, p. 1.

<sup>75</sup> Ibid.

<sup>76</sup> CEC Final Argument, p. 12.

<sup>77</sup> CEC Final Argument, p. 12.

<sup>78</sup> Ibid., p. 12.

<sup>79</sup> FBC Reply Argument, p. 16.

- Ad hoc adjustments to forecast methodology based on assumptions about historical causes of variances may or may not improve forecast results and make it difficult to provide historical analysis of load forecast methodology results.<sup>80</sup>

### Panel discussion

The Panel declines CEC's recommendation to direct FBC to adjust its residential load forecast for the changes to UPC arising from the addition of the City of Kelowna. We accept FBC's residential load forecast as filed in the Application. The Panel agrees with FBC that based on the evidence presented in this proceeding there is no causal link between variations in historical UPC and the acquisition of the City of the Kelowna's direct customers, as variations in UPC may be attributable to a number of factors. Further, adjusting the UPC forecast for 2017 would be inconsistent with the previous years' residential load forecasts in which the impact of the City of Kelowna acquisition was included in the calculations.

The Panel considers FBC's forecast methodology to be reasonable and consistent with prior years' forecasting methodology. The Panel also notes that all revenue variances are captured in a Flow-through deferral account; thus, customers are not impacted by any variances between forecast and actual load. In addition, since the acquisition of the City of Kelowna occurred in 2013, 2017 is the last year in which the change in customer mix will not be fully accounted for in FBC's forecast, as the forecast for 2018 will be based on 2014, 2015 and 2016 actuals.

#### 3.1.2 Wholesale load forecast

FBC sells wholesale power to municipalities within its service territory that own and operate their own electrical distribution systems. The wholesale load forecast is derived by FBC from survey information gathered from each of the whole sale customers. FBC states that all of the wholesale customers responded to the survey with their forecast growth projections.<sup>81</sup> FBC forecasts after-savings wholesale load to remain constant at 587 GWh in 2017.<sup>82</sup>

#### Intervener arguments

CEC recommends that the Commission approve the wholesale load forecast but "provide direction for FBC to assess possible means of adjusting the forecast to match experience for the future."<sup>83</sup> CEC argues the wholesale load forecast has been consistently higher than the normalized actual for the last six years, ranging from a variance of 2.2 percent in 2010 and 2015 to 3.4 percent in 2011 and 2013.<sup>84</sup> CEC submits that "although there is limited impact from variations in the Wholesale load forecast, it could be worthwhile for FBC to consider moderating its load forecast based on historical experience that customers have appeared to regularly over-estimate their needs."<sup>85</sup>

---

<sup>80</sup> Ibid., pp. 16-17.

<sup>81</sup> Exhibit B-2, p. 20.

<sup>82</sup> Ibid.

<sup>83</sup> CEC Final Argument, p. 14.

<sup>84</sup> Ibid.

<sup>85</sup> Ibid.

No other interveners raised issues with FBC's wholesale load forecast.

#### FBC reply argument

FBC disagrees with CEC's recommendation to assess possible methods of adjusting the wholesale customers' load forecasts and provides the following reasons:

- FBC considers its six-year historical forecast variance of between 2.2 percent and 3.4 percent to be reasonable.
- Wholesale customers remain in the best position to forecast their future load.
- A recent history of over forecasting cannot be used to accurately predict a reduction to future load forecasts.
- FBC's methodology is consistent with past practice and was accepted by the Load Forecast Technical Committee in 2011.<sup>86</sup>

#### **Panel discussion**

The Panel declines to take the action recommended by CEC and accepts FBC's wholesale load forecast as filed. The Panel agrees that the wholesale customers are in the best position to forecast their future load. The Panel also agrees that the historical variances between forecast and actual load, while directionally the same in each of the past six years, are not unreasonable and do not warrant the time and resources which would likely be required by FBC to investigate alternative forecast methods (or modifications to the existing method). In addition, the Panel notes all revenue variances are captured in a Flow-through deferral account; thus, customers are not impacted by any variances between forecast and actual load.

#### **3.1.3 Power loss factor**

FBC states that system losses consist of: (i) losses in the transmission and distribution system; (ii) company use; (iii) losses due to wheeling through the BC Hydro system; and (iv) unaccounted-for energy (meter inaccuracies and theft). FBC assumes a loss rate of 8 percent of gross load before the impact of the AMI project.<sup>87</sup> FBC forecasts AMI to decrease losses by 6.7 GWh in 2017, resulting in an after AMI loss reduction of 7.8 percent of gross load or 274.5 GWh in 2017.<sup>88</sup>

#### Intervener arguments

BCOAPo argues the 8 percent loss rate on gross load used by FBC appears to be too conservative for the following reasons:

- The incremental effect of AMI on losses is measured using 2015 actuals as the starting point which already includes 2.4 GWh of loss reductions due to AMI, such that using 8 percent which is assumed to be a pre-AMI loss factor is inappropriate.

---

<sup>86</sup> FBC Reply Argument, p. 18.

<sup>87</sup> Exhibit B-2, Section 3.5.7, p. 22.

<sup>88</sup> Ibid., p. 24.

- The actual losses experience in each of the years 2012–2015 were less than 8 percent, averaging 7.91 percent.<sup>89</sup>

Based on its calculations, BCOAPO submits that a “2017 loss factor of 7.67% would be more reasonable and should be adopted by the Commission.”<sup>90</sup>

No other interveners raised issues with FBC’s calculation of the power loss factor.

#### FBC reply argument

FBC responds that “BCOAPO’s calculations incorrectly assume that the incremental AMI Impact is cumulative year-over-year and therefore incorrectly adds the 2015 AMI impact of 2.4% to the 6.7 GWh forecast for 2017.”<sup>91</sup> FBC explains that the AMI impacts are not cumulative year over year, but are instead incremental to the losses before AMI in each year; therefore it is not correct to add the 2015 AMI impact of 2.4 percent to the 2017 forecast.<sup>92</sup> Furthermore, FBC submits “if one were to nonetheless substitute a four-year average in place of FBC’s 8% loss factor, the result would be a before-AMI loss percentage of 7.93.” The impact of this difference equals 2.1 GWh, which is immaterial to FBC’s load.<sup>93</sup>

#### **Panel discussion**

The Panel declines BCOAPO’s proposal to direct FBC to adjust the 2017 power loss factor from 8 percent to 7.67 percent. We accept FBC’s system loss forecast methodology using a loss rate of 8 percent of gross load before AMI impact. BCOAPO does not provide adequate evidence to support its calculation of the loss factor; thus, the Panel makes no determination on the validity of BCOAPO’s proposed percentage. Further, the Panel agrees with FBC that any adjustment made to the loss factor is not material and thus does not warrant any adjustment.

#### **3.1.4 Theft deterrence and FBC’s Revenue Protection Program**

FBC forecasts theft deterrence savings are increasing from 2013 to 2017 as a result of a “relatively rapid increase” in the impact of FBC’s AMI-enabled Revenue Protection program.<sup>94</sup> FBC forecasts its theft deterrence rate will increase from 77 percent to 88 percent during this period, before gradually plateauing to a theft deterrence rate of 95 percent from 2018 onwards. FBC forecasts annual savings (increases in billable load) of approximately 1 MWh per year.<sup>95</sup>

#### Intervener arguments

IRG submits that the Commission should “direct FBC to pursue its Revenue Protection program more aggressively, to accelerate the annual savings for the benefit of all customers.”<sup>96</sup>

---

<sup>89</sup> BCOAPO Final Argument, p. 7.

<sup>90</sup> Ibid.

<sup>91</sup> FBC Reply Argument, p. 19.

<sup>92</sup> Ibid.

<sup>93</sup> Ibid.

<sup>94</sup> Exhibit B-3, BCUC IR 6.1.1.

<sup>95</sup> Ibid.

<sup>96</sup> IRG Final Argument, p. 5.

No other intervener raised issues with FBC's cost savings initiatives.

#### FBC reply argument

FBC submits that no such direction from the Commission, as proposed by IRG, is required for the following reasons:

- Reducing theft of electricity through FBC's Revenue Protection programs is proceeding as planned and FBC is meeting the forecast targets set out in its AMI CPCN application;
- There is no basis to believe that FBC can or should be able to pursue the programs "more aggressively"; and
- FBC is reporting annually the impact of AMI on theft deterrence in each annual review as previously directed by Order G-107-15.<sup>97</sup>

#### **Panel discussion**

The Panel declines IRG's proposal to direct FBC to pursue its Revenue Protection program more aggressively. Based on the evidence in this proceeding, FBC is meeting its planned theft reduction targets and there has been no evidence provided in this proceeding that the rate at which these targets are being achieved is inadequate.

### **3.2 Evaluation of the PBR Plan**

Certain issues related to the PBR Plan were explored in IRs and in interveners' final arguments. These issues are addressed in the following sections.

#### **3.2.1 SQIs**

FBC's 2015 and June 2016 year-to-date SQI results indicate FBC's performance is meeting service quality standards.<sup>98</sup> Eight SQIs have benchmarks and performance ranges set by a threshold level and three SQIs, including the Telephone Abandon Rate, are for information only and do not have benchmarks or performance ranges. For the three SQIs that are only informational, FBC states performance is generally consistent with or better than recent years' performance.<sup>99</sup>

#### Intervener arguments

BCOAPO was the only intervener to raise any issue with FBC's SQIs in its final argument. With regard to the Telephone Abandon Rate informational SQI, BCOAPO references FBC's response to CEC IR 23.1 in which FBC indicated that as of August 2016, customers now have the option of selecting a call back as opposed to waiting on hold to speak to a customer service representative. FBC expects this new option to reduce the number of calls which are abandoned due to wait times. BCOAPO submits that "While offering this option will improve customer service, it makes it questionable as to whether the reported results for the Telephone Abandon Rate

---

<sup>97</sup> FBC Reply Argument, pp. 20-21.

<sup>98</sup> Exhibit B-2, Section 13, p. 102.

<sup>99</sup> Ibid.

for the periods after August 2016 will be comparable with the historic pre-August 2016 values.”<sup>100</sup> As a result, BCOAPO submits that an issue has been raised as to whether “alternative measures such as ‘Time Until a Call Back is Received’ should be introduced”<sup>101</sup> and recommends this matter be explored in future annual reviews.<sup>102</sup>

#### FBC reply argument

FBC does not agree that any additional measure needs to be introduced into the PBR Plan.<sup>103</sup> FBC clarifies that the call back option “maintains the customer’s position in the queue” and as such, “[t]he new call back feature does not suggest that the Telephone Abandon Rate is less useful as an informational indicator or will not be comparable with historical results... Given this new feature, FBC expects abandon rates to decrease.”<sup>104</sup> Furthermore, FBC argues that “maintaining the same SQIs and information indicators allows the Commission to compare to historical results and see that service levels are in fact increasing (or decreasing). Changing the SQIs or information measures would result in less comparability over time.”<sup>105</sup>

#### **Commission determination**

The Panel makes no determination at this time with respect to the introduction of any new SQIs or information indicators. While the Panel acknowledges BCOAPO’s concern regarding the comparability of results before and after the introduction of the new call back option related to the Telephone Abandon Rate, there is no data available at this time to assess whether alternative measures could or should be utilized. However, the Panel notes the importance of reviewing FBC’s performance in the annual review process and of relevant performance measures. **Accordingly, the Panel directs FBC to include in its annual review for 2018 rates application a discussion of the impact, if any, that the new call back option has had on the Telephone Abandon Rate Service Quality Indicator and to discuss whether there are other measures, such as “Time Until Call Back is Received,” which may provide additional value to FBC’s existing informational indicators.**

#### 3.2.2 Cross-utilization of FBC and FEI employees

MoveUP, the sole certified bargaining agent for the majority of FBC’s office workers and a registered intervener in this proceeding, makes several assertions in its final argument regarding the organization of FBC and FEI operations and the financial accounting for the cross-utilization of FEI and FBC employees in customer care services. MoveUP requests the Commission:

...order a process to determine whether the utilities’ current Per Interaction costing is appropriate, particularly whether... it adequately avoids cross-utility subsidies... and [to order] a second, more general process to determine whether the melding of the utilities’ customer care functions to one or a blended employee pool is wise, from a cost as well as a service and safety perspective.<sup>106</sup>

---

<sup>100</sup> BCOAPO Final Argument, pp. 21-22.

<sup>101</sup> Ibid.

<sup>102</sup> Ibid.

<sup>103</sup> Ibid.

<sup>104</sup> FBC Reply Argument, p. 25.

<sup>105</sup> Ibid.

<sup>106</sup> MoveUP Final Argument, p. 13.

FBC submits that “MoveUP’s argument does not reflect a fair and balanced view of the evidence” and submits that “MoveUP’s requests and recommendations be rejected.”<sup>107</sup>

FBC argues the following:

...FBC and FEI are sharing services to generate efficiencies that improve service quality and provide service at lower costs than would otherwise be required for the utilities acting separately. This activity is consistent with the direction of the two companies since coming under common ownership, and is consistent with FBC’s ongoing focus on achieving efficiencies for the benefit of its customers.<sup>108</sup>

With regard to the cost allocation in the sharing of services between FBC and FEI, FBC submits that the costs are “reasonably allocated pursuant to the shared services agreement between the companies, using a cost per interaction approach that the Commission determined to be fair and reasonable.”<sup>109</sup>

### **Panel discussion**

The Panel agrees with the positions taken by FBC in its reply argument and declines to take any action on the requests made by MoveUP.

### **3.3 Uncollectible accounts forecast**

FBC forecasts 2017 working capital to be \$2.9 million as compared to approved 2016 levels of \$2.0 million. Included in working capital is an amount for uncollectible accounts. FBC forecasts a 2017 uncollectible accounts balance of \$1.52 million, which is an increase of \$0.823 million from the 2016 Approved balance of \$0.697 million.<sup>110</sup> FBC forecasts the 2017 uncollectible accounts balance based on the 2015 Actual balance of \$1.504 million.<sup>111</sup>

BCOAPo submits “The single largest contributor (\$0.82M) to the change [in forecast 2017 working capital] is a forecast increase in uncollectible accounts. No further explanation is given for this increase other than the fact that the actual value for 2015 was \$1.504 M versus the \$1.52 M included in the current forecast.”<sup>112</sup> BCOAPo further submits “The level of uncollectible accounts warrants greater scrutiny in future Annual Reviews in terms of both the forecast used and FBC’s efforts to manage uncollectible accounts.”<sup>113</sup>

FBC does not comment on the change in uncollectible accounts balance in its reply argument.

---

<sup>107</sup> FBC Reply Argument, p. 14.

<sup>108</sup> Ibid., p. 7.

<sup>109</sup> Ibid., p. 9.

<sup>110</sup> Exhibit B-2-2, Schedule 13.

<sup>111</sup> Exhibit B-5, BCOAPo IR 15.1.

<sup>112</sup> BCOAPo Final Argument, p. 17.

<sup>113</sup> Ibid., p. 18.



## Commission determination

The Panel accepts BCOAPO's proposal and **directs FBC to provide additional information regarding the monthly average of uncollectible accounts, increases and decreases to the monthly average of uncollectible accounts and FBC's efforts to manage uncollectible accounts as part of its annual review for 2018 rates application.** The Panel considers this information necessary to better understand the changes to the uncollectible accounts balance, particularly with regard to the increase experienced in 2015, and why FBC expects this increased value to continue in 2017.

### 3.4 FBC Electric Tariff

In its final argument, ICG requests the Commission consider an issue related to metering of demand in the FBC Electric Tariff, requesting that the Commission direct FBC to revise its Electric Tariff terms and conditions to include provisions that address the basis for metering of demand and adopt a "30 minute demand window," consistent with "the BC Hydro methodology for metering of demand."<sup>114</sup> ICG submits, "[i]n the event that [FBC] does not adopt a 30 minute demand window, the Commission should establish a process to consider this issue."<sup>115</sup>

FBC responds to ICG in its reply argument stating "[t]he metering of demand under FBC's Electric Tariff is outside the scope of this proceeding."<sup>116</sup> FBC submits "this topic may be more appropriately addressed in a rate design proceeding."<sup>117</sup>

## Panel discussion

The Panel agrees with FBC that this issue is outside of the scope of this proceeding and makes no further determinations on this issue.

### 3.5 2016 AMI Radio-Off Report

On September 30, 2016, FBC submitted to the Commission an AMI Radio-Off Report (2016 AMI Radio-Off Report) in accordance with Order G-220-13. The 2016 AMI Radio-Off Report was filed by FBC as part of this proceeding in response to BCSEA IR 4.1.<sup>118</sup>

In the 2016 AMI Radio-Off Report, FBC proposed to "continue recording any variances related to the Radio-off costs and revenues in the existing Radio-off Shortfall deferral account through 2017." FBC further stated that "Given the Company's experience during June to August 2016 and its forecasts going forward, FBC expects any variances between Radio-off costs and revenues to be minimal and will make a request for the disposition of the deferral account balance in the Company's Annual Review for 2018 Rates."<sup>119</sup>

---

<sup>114</sup> Ibid., pp.3-4.

<sup>115</sup> Ibid., p. 4.

<sup>116</sup> FBC Reply Argument, p. 47.

<sup>117</sup> Ibid.

<sup>118</sup> Exhibit B-6-1, Addendum Response, BCSEA IR 4.1.

<sup>119</sup> Exhibit B-6-1, Addendum Response, BCSEA IR 4.1, FBC Advanced Metering Infrastructure Project – Report on Radio-off AMI Meter Option Participation and Costs, September 30, 2016, p. 5.

In response to BCSEA IR 4.2, FBC submitted that “it does not consider that the current [2017] Annual Review would be an appropriate forum to address either the AMI Radio-Off Report or the AMI Radio-Off Shortfall deferral account because a review of the Radio-Off Report cannot be reasonably incorporated into the established regulatory timetable for the [2017] Annual Review.”<sup>120</sup>

In its final argument, BCSEA submits “there should be an opportunity for public review of the September 2016 AMI Radio-Off Report, whether it is within the next annual review or in a separate process.”<sup>121</sup>

FBC does not comment on this issue in its reply argument.

### **Commission determination**

**The Panel directs FBC to file the September 30, 2016 AMI Radio-Off Report as part of its annual review for 2018 rates application and to address the disposition of the AMI Radio-Off Shortfall deferral account in that application.** The Panel agrees with both BCSEA and FBC that the appropriate forum for reviewing the 2016 AMI Radio-Off Report and for addressing the disposition of the AMI Radio-off Shortfall deferral account is the annual review for 2018 rates proceeding, as this provides parties with the opportunity to review the report and ask questions of FBC.

---

<sup>120</sup> Exhibit B-6, BCSEA IR 4.2.

<sup>121</sup> BCSEA Final Argument, p. 5.