



Dennis Swanson
Director, Regulatory Affairs

FortisBC Inc.
Suite 100 – 1975 Springfield Road
Kelowna, BC V1Y 7V7
Tel: (250) 717-0890
Fax: 1-866-335-6295
www.fortisbc.com

Regulatory Affairs Correspondence
Email: electricity.regulatory.affairs@fortisbc.com

November 26, 2013

Via Email
Original via Mail

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

Attention: Mr. Christopher P. Weafer

Dear Mr. Weafer:

Re: FortisBC Inc. (FBC)

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

**Response to the Commercial Energy Consumers Association of British
Columbia (CEC) Information Request (IR) No. 2**

On July 5, 2013, FBC filed the Application as referenced above. FBC respectfully submits the attached response to CEC IR No. 2.

FBC notes that the responses to the series of CEC IR No. 2 questions 1, 2, 7, 8, 9, 10, 11, 16, 28, 30, 67, 68 and 69 relate to the PBR Methodology, and will be submitted with the PBR Methodology IR responses.

If further information is required, please contact the undersigned.

Sincerely,

FORTISBC INC.

Original signed:

Dennis Swanson

Attachments

cc: Commission Secretary
Registered Parties (email only)

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1 **PART 1 - O&M**

2 **1 Reference: CEC 1.2**

29 Correct, since rebasing occurs after a specific test period. It should be noted, however, that the
30 rebasing at the end of a test period has the effect of making some incremental investments in
31 efficiencies uneconomic for the Company because payback cannot be achieved before rebasing
32 occurs. Thus, the economics of efficiencies based on the management's responsibility to

1 shareholders will be different from the efficiencies achieved under PBR. This is one of the main
2 factors for using PBR rather than the cost of service with regular RRA periods.

5 1.1 Please confirm that no incremental investments would be uneconomic because
6 payback cannot be achieved before rebasing occurs, if the company has forecast
7 the incremental investment costs into the revenue requirements approved as part
8 of an RRA application under a cost of service approach.

9
10 **Response:**

11 This series of questions appears to be directed at assessing the merits of PBR vs. Cost of
12 Service generally, which FBC considers to be out of scope given the Commission's direction to
13 FBC and FEI in its letter of April 18, 2013. Nevertheless, in the interest of being responsive,
14 FBC will respond to such questions.

15 This IR has been identified as relating to the PBR Methodology and will be submitted with the
16 PBR Methodology IR responses.

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19
20 1.2 Please confirm that this condition only occurs if the company requires additional
21 cost to be invested and they have not been included in revenue requirements as
22 part of an RRA approval.

23
24 **Response:**

25 This IR has been identified as relating to the PBR Methodology and will be submitted with the
26 PBR Methodology IR responses.

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1
2 1.3 Please confirm that this condition can be remedied by enabling the company to
3 place into a deferral account costs for unanticipated projects, which were not part
4 of revenue requirements in an RRA application, such that the deferred costs can
5 be collected in rates from customers in a future period.
6

7 **Response:**

8 This IR has been identified as relating to the PBR Methodology and will be submitted with the
9 PBR Methodology IR responses.

10
11

12
13 1.4 Please confirm that for such a deferral account to provide a neutral impact on the
14 company shareholder the account would also have to capture any unanticipated
15 benefits for the period as well as the costs.
16

17 **Response:**

18 This IR has been identified as relating to the PBR Methodology and will be submitted with the
19 PBR Methodology IR responses.

20

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Reference: CEC 1.3.2

FortisBC considers its forecast of O&M over the five year period of 2014-2018 to be a high level view that is reasonably indicative.

Past variances are not a result of inaccurate forecasts, but as a result of the Company having achieved greater cost savings as the PBR had incented it to do. The impact of savings on earnings was shared with customers pursuant to the 50/50 earnings sharing mechanism.

2.1 Please confirm that the approved O&M for the five year period will be derived from a formula, equivalent to a forecast or projection of costs.

Response:

This IR has been identified as relating to the PBR Methodology and will be submitted with the PBR Methodology IR responses.

2.2 Please confirm that to the extent that there is a past variance between such formula driven forecasts and the eventual actual results the company may not have to achieve any real efficiency gains, if the forecast is more generous than is required for the operation of the company.

Response:

This IR has been identified as relating to the PBR Methodology and will be submitted with the PBR Methodology IR responses.

2.3 Please confirm that if the forecast is very tight with respect to the required amounts for the operation of the company that FBC might have to find efficiency gains or reduce service levels, if it wanted to earn its return for its shareholder, or might have greater costs than have been allowed for in customer rates and would therefore end up with a reduced return to its shareholder, if it was not able to obtain relief from the Commission.

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Response:

This IR has been identified as relating to the PBR Methodology and will be submitted with the PBR Methodology IR responses.

- 1 The average percent variance between approved and actual O&M during the period 2007-2011
2 is within a nominal variance of -1.5% as indicated in the Table below.

O&M Parameters	2007	2008	2009	2010	2011
Approved Gross O&M	43,093	45,310	46,573	47,645	53,885
Actual Gross O&M	43,001	44,725	46,017	46,148	53,076
Variance \$	(92)	(585)	(556)	(1,497)	(809)
Variance %	-0.2%	-1.3%	-1.2%	-3.1%	-1.5%
Average Variance %	-1.5%				

- 2.4 Please confirm, given that the company was able to operate the company for all five years with O&M costs below the approved formula forecast or projection, that the company was not disadvantaged by the process and in fact was provided a benefit each year over and above its allowed return on equity for its shareholders.

Response:

This IR has been identified as relating to the PBR Methodology and will be submitted with the PBR Methodology IR responses.

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1 **3 Reference: CEC 1.12**

16	As discussed in Sections 3.2.5 and 6.0 of the Company's AMI CPCN application, potential
17	future and non-quantified benefits arising from the Company's AMI project include:
18	• Distribution loss reduction;
19	• Power grid voltage optimization;
20	• Outage management;
21	• Customer pre-pay tariff;
22	• Future conservation rate structures;
23	• In-home displays; and
24	• Customer information portal.

2

3 3.1 Please confirm that none of these benefits involves reductions in O&M costs or
4 provide an explanation of the O&M impact of the AMI project in regard to these
5 issues.

6

7 **Response:**

8 Not confirmed. Certain benefits like power grid voltage optimization and outage management
9 may result in O&M reductions; however future projects (enabled by AMI) are required to realize
10 these benefits. It should be noted that these future benefits were not included in the business
11 case for the AMI project.

12 Capital expenditures related to the implementation of an outage management system and/or a
13 power grid voltage optimization program were not included in determination of the 2013 Base
14 Capital. Were FBC to seek approval of the required incremental expenditures for these projects
15 based on the forecast benefits, the inclusion of these benefits within the determination of total
16 O&M under PBR would be appropriate, resulting in customers receiving 100 percent of the
17 associated benefits. Alternatively, were FBC to instead proceed with these projects and absorb
18 the incremental capital expenditures without seeking further approval, customers would share in
19 any capital benefits realized through the ESM. As well, customers would benefit by receiving 50
20 percent of the efficiency savings during the rolling ECM period and 100 percent of the savings
21 after that. The fact that the Company effectively shares in the savings benefit (aside from PPE
22 savings) during the ECM window provides incentive and compensation for FBC to invest in
23 incremental capital not previously reflected in the formulaic capital and therefore not included in
24 rate base or the Company's return during the PBR term.

25 Further, as FBC has proposed to flow-through variances in PPE, any savings related to a
26 reduction in distribution losses will be automatically returned to customers.

27

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1 **4 Reference: CEC 1.13.1**

7 Please refer to section C4 Department O&M and section A3 Productivity Focus of Exhibit B-1
8 for actual examples of productivity achievements in recent past. The response to BCUC IR
9 1.96.2 identifies the factors contributing to the net sustainable savings of \$0.452 million which is
10 embedded in the 2013 Base O&M Expense and will persist throughout the PBR Period.

2

3 4.1 Please explain why the net sustainable savings to be embedded in the 2013
4 base are substantially less than the average gain made between 2007 and 2011.

5

6 **Response:**

7 The approximately \$4 million in O&M savings achieved during the last PBR term includes
8 savings achieved during the 2006 base year, hence the average gain made between 2006 and
9 2011 is approximately \$0.667 million, as compared to the \$0.452 million in sustainable O&M
10 savings embedded in the 2013 Base O&M. As FBC has prior experience with PBR
11 performance incentive mechanisms, it is reasonable to expect that the opportunity for further
12 improvement in the performance of the utility becomes more challenging as sustainable savings
13 related to “low-hanging fruit” have already been captured.

14

15

16

17

11 To ensure accountability for achieving productivity improvements, departments are required to
12 identify and reflect achievable productivity opportunities in their budget requirements when
13 preparing the detailed budgets for the year. Sustainable savings are reflected in future budget
14 requirements. Proposed departmental budgets are validated by comparing to both the
15 approved level of funding and to the most recent year’s spending. As a result of this budget
16 preparation process, FBC’s departments are not expected to formally document and quantify all
17 productivity (efficiency) initiatives and related savings except in ad-hoc situations or situations
18 where a capital investment is required (i.e. IT capital investment). Please also refer to the
19 response to CEC IR 1.18.2.

18

19 4.2 Please confirm that because the company does not measure and track
20 productivity gains or efficiency improvements the proposed adjustment to 2013
21 approved base can only represent the items FBC was able to obtain from its staff
22 on an ad hoc basis and that the result cannot be verified in any FBC
23 documentation or accountability records.

24

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1 **Response:**

2 Not confirmed.

3 As indicated in Exhibit B-1, some FBC departments may use metrics to manage performance
4 while others do not. However, what is common amongst all departments in FBC is that they are
5 required to maintain or increase their outputs and activity levels while keeping cost increases to
6 a minimum. Meeting budgets is an expectation of all departments and managers in the
7 Company. FBC believes this approach to ensuring a productivity focus is sustained throughout
8 the company and will deliver the efficiencies that both the company and customers are looking
9 for under the proposed PBR Plan. The focus should not necessarily be on how the efficiencies
10 are achieved (i.e. monitored using metrics for different areas) and instead should be on
11 ensuring that they are achieved with the respective savings benefiting customers and the
12 Company.

13 FBC's view is that the inclusion of a productivity improvement factor in FBC's PBR Plan
14 provides a comprehensive productivity measurement that will require each department to
15 consider continuous improvement, which is preferred to measurement of individual activity.
16 Additionally, the need for detailed productivity metrics is lessened by the fact that FBC has put
17 forward a realistic and appropriate 2013 Base O&M budget which reflects substantial
18 productivity savings relative to previous years and yet still ensures safety standards and other
19 service requirements are met.

20 FBC expects that the proposed 2013 Base O&M budget along with its proposed approach to
21 productivity measurement, which is consistent with that successfully used in the past approved
22 PBR Plan, will work to successfully deliver efficiencies and benefits for customers and the
23 Company. The effort required to define, measure and monitor a myriad of small and
24 incremental efficiency gains would be substantial and would ultimately dilute the benefits of the
25 PBR Plan, when in FBC's view, productivity can be and is appropriately measured at the level of
26 aggregate O&M Expense.

27

28

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20 FBC's view is that productivity is best measured at an overall company level such as that being
21 proposed in the PBR Plan with the inclusion of a productivity improvement factor that will require
22 each department to consider continuous improvement, which is preferred to measurement of
23 individual activity.

31

32

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4.3 Does this productivity view extend to the FBC employees, such that no one is required to track their performance and that employees are evaluated based on the overall company performance?

Response:

No. FBC management is responsible for monitoring the productivity and effectiveness of employees. Performance plans and personal objectives are developed aligning the efforts of employees to the company's priorities.

With regards to future efficiency opportunities, FBC does not have a list of planned efficiency opportunities. As indicated Section A3 3.3 Productivity Focus – 2013 and onwards, FBC will continue to engage in efficiency review activities and to pursue productivity gains with the emphasis on managing costs. Further opportunities may emerge and will be evaluated depending on the circumstances and potential benefits to customers.

4.4 If FBC does not have any understanding of potential efficiency opportunities and plans simply to await their emergence, why would a competent party invest in an incentive to have FBC achieve a result?

Response:

FBC does not agree with the mis-characterization in the question that the Company will wait passively for efficiency opportunities to emerge. FBC is active and will continue to be active during the PBR term in seeking efficiency opportunities for the long-term benefit of its customers. However, FBC does not believe it is able to anticipate every opportunity that might arise in a five-year period since the energy and utility sectors are in an evolving environment. Furthermore, FBC expects the efficiency improvements to come as much from individual employees finding many smaller scale improvements in their own departments as it does from larger wider-scale initiatives. In addition, the overall incentive structure inherent in the final approved PBR will influence the efficiency initiatives that the Company will pursue. FBC believes that the proposed PBR (inclusive of the ESM and ECM) includes a balanced incentive structure that will enable FBC to pursue many efficiency initiatives, while providing high quality electricity service, for the long term benefit of customers.

Reflective of its ongoing productivity improvement approach, FBC does not presently have a list of planned efficiency opportunities. As indicated in Exhibit B-1, FBC will continue to engage in efficiency review activities and to pursue productivity gains with further opportunities are

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1 expected to be more complex and dependent on the Company's ability to overcome some
2 challenges. FBC has not investigated any of these opportunities in detail to be able to provide a
3 list of them.

4 Additionally, FBC does not agree with the mis-characterization of investing in an incentive.
5 Customer rates do not represent an investment in the utility or any portion of said utility. The
6 rates paid by customers are the rates that are determined to be prudent and necessary for the
7 service that is delivered by the utility to the customers.

8
9
10
11 4.5 Does FBC run its Power Sense programs with customers with no tracking and
12 provide benefits to customers based on the overall performance of the program?

13
14 **Response:**

15 Customer projects and participation in the PowerSense programs are tracked in a granular
16 manner in a DSM database and undergo regular audits to ensure they are working as designed.
17 The benefits to ratepayers (customers) come from the reduced power purchases required due
18 to the energy savings attributed to the programs.

19
20
21
22 4.6 Doesn't FBC require Power Sense projects with customers to be planned in
23 advance before they can be approved and funded with an incentive?

24
25 **Response:**

26 Confirmed.

27 The first of the DSM "Terms and Conditions" listed in Schedule 90 of the FBC Tariff reads as
28 follows:

- 29 1. In order to be eligible for financial incentives, a Customer must receive the Company's
30 approval prior to initiation of work on the approved Measure.

31

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1 5 **Reference: CEC 1.13.2**

11 FBC does not have the list requested.

12 Please refer to the response to CEC IR 1.13.1.

2

3 5.1 Please confirm that without measurement, tracking and an understanding of what
4 efficiency improvements are in process there is a distinct potential that the
5 Commission will not have a sufficient regulatory record from which to determine
6 the appropriate starting base level of O&M and potentially will be compromised in
7 terms of trying to establish an appropriate productivity expectation.

8

9 **Response:**

10 This cannot be confirmed. The base level for costs is the actual cost of service for a recent test
11 period as adjusted for known and measurable adjustments. This is the appropriate base
12 revenue requirement value as well. As B&V has noted elsewhere in responses to IRs, the PBR
13 Plan is not designed to determine the productivity adjustment on productivity expectations as
14 that would just be a modification to cost of service by adjusting each cost center for the
15 expected cost reductions or increases. PBR should break the link between cost of service and
16 revenue requirements.

17

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1 6 **Reference: CEC 1.14.1**

7 FBC does not have a list of efficiency review activities conducted in 2012 and 2013. FBC's
8 departments are not expected to formally document and quantify all productivity (efficiency)
9 initiatives.

2 10 Please refer to the response to CEC IR 1.13.1.

3 6.1 If FBC does not have a capacity for conducting efficiency reviews and the FBC
4 departments are not expected to document and quantify productivity and
5 efficiency initiatives, then the Commission cannot have any systematic data with
6 respect to productivity improvement and will only have the ad hoc information
7 FBC chooses to disclose in this application. Isn't that correct?

8
9 **Response:**

10 Please refer to the response to CEC IR 2.4.2.

11

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Reference: CEC 1.26.1

Customer growth is a proxy for both customers and capacity in this context. As customer growth adds facilities that are both customer related and capacity related the system O&M costs increase. For example, there are more miles of conductor to inspect and maintain; more trees to trim; and more opportunities for system damage. Although these costs are not directly customer related they are classified and allocated on capacity. The use of customers is a reasonable proxy in this instance for measuring the impact on additional O&M.

7.1 Please provide any quantitative study FBC has with respect to the relationship between its O&M costs, which are electrical system related, and the system metrics of kilometers of lines and substations. Please provide a comparison of the former with the relationship of the same costs to the number of customers.

Response:

This IR has been identified as relating to the PBR Methodology and will be submitted with the PBR Methodology IR responses.

7.2 Please confirm that when customers are added to the electrical system there are significant portions of the system which do not require any change to integrate the new customers and for which the O&M costs of that portion of the system will not need to change.

Response:

This IR has been identified as relating to the PBR Methodology and will be submitted with the PBR Methodology IR responses.

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Reference: CEC 1.26.2

FBC does not categorize its O&M expenditures in terms of fixed and variable costs. Most costs could be categorized as either fixed or variable, depending on the context, the assumptions made with regard to cost causation, and the timeframe under consideration.

For the purpose of a Cost of Service Allocation Study, for example, O&M Expenses are classified on a Demand/Energy basis, which could be considered to be a fixed/variable analysis. However FBC does not understand how such an analysis would be relevant to this Application.

8.1 Please confirm that O&M costs based on equipment charges for equipment owned by the company will have temporarily fixed costs, until the equipment is replaced.

Response:

This IR has been identified as relating to the PBR Methodology and will be submitted with the PBR Methodology IR responses.

8.2 Please confirm that for significant portions of the electrical system where there is no material change in the condition of the system and no change in the capacities of the system that the costs related to the O&M for this portion of the electrical system will remain relatively fixed with regard to customer growth but will experience cost inflation.

Response:

This IR has been identified as relating to the PBR Methodology and will be submitted with the PBR Methodology IR responses.

8.3 Please provide a listing of all elements of the FBC O&M costs where there is a potential for the costs to remain fixed for a period of time relative to customer growth.

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1 **Response:**

2 This IR has been identified as relating to the PBR Methodology and will be submitted with the
3 PBR Methodology IR responses.

4

5

6

7 8.4 Please provide a copy of the last cost of service study, which will include its O&M
8 costs and their allocations.

9

10 **Response:**

11 The last COSA was conducted in 2009. It consists of a very large amount of material. FBC
12 does not believe it would be appropriate or necessary to import the entire study into the record
13 of this proceeding. The Company has reproduced below the relevant schedule which shows the
14 various O&M expense categories by FERC Account, as well as the method used to classify the
15 costs for subsequent allocation to the individual customer classes. The Company reiterates that
16 the COSA fixed/variable classification is not a useful framework for the evaluation of the PBR
17 formula.

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INPUT REVENUE REQUIREMENT		
Schedule 3.1		
FERC Account	Operation & Maintenance Expense	Classification Method
535.00	Op. Supervision & Engineering	On the Basis of Generation Rate Base
536.00	Water for Power	On the Basis of Generation Rate Base
542.00	Structures	On the Basis of Generation Rate Base
543.00	Dams & Waterways	On the Basis of Generation Rate Base
544.00	Electric Plant	On the Basis of Generation Rate Base
545.00	Other Plant	On the Basis of Generation Rate Base
	Purchased Power Supply/Other	
555.00	Purchased Power - Energy Charges	On the Basis of Energy Purchases Weighted by Month
555.00	Purchased Power - Demand Charges	On the Basis of Demand Purchases Weighted by Month
556.00	System Control	2 Coincident Utility Peak (Sum 2 Winter & 2 Summer)
	Transmission	
560.10	Op. Supervision & Engineering	On the Basis of Transmission Rate Base
560.20	System Planning	On the Basis of Transmission Rate Base
561.00	Load Dispatching	On the Basis of Transmission Rate Base
562.00	Transmission Station Expense	On the Basis of Transmission Rate Base
563.10	Transmission Line Maintenance	On the Basis of Transmission Rate Base
563.20	Transmission TROW Maintenance	On the Basis of Transmission Rate Base
565.00	Wheeling	On the Basis of Transmission Rate Base
567.00	Rents	On the Basis of Transmission Rate Base
	Distribution	
583.10	Distribution Line Maintenance	On the Basis of RBD Poles, Towers & Fixtures
583.20	Distribution ROW Maintenance	On the Basis of RBD Poles, Towers & Fixtures
586.00	Meter Expenses	On the Basis of RBD Meters
592.00	Distribution Station Expense	On the Basis of RBD Station Equipment
596.00	Street Lighting	On the Basis of RBD Street Lights and Signal Systems
598.00	Other Plant	On the Basis of Distribution Rate Base
	Customer Service, Accounts, & Sales	
901.00	Supervision & Administration	As All Other Customer Service Expense
902.00	Meter Reading	Customers Weighted for Accounting/Metering
903.00	Customer Billing	Customers Weighted for Accounting/Metering
904.00	Credit & Collections	Retail Customers
910.00	Customer Assistance	Customers Weighted for Accounting/Metering
911.00	Energy Management Promotion	Classified 72% Energy, 17% Demand & 12% T&D
	Administrative & General	
920.10	Executive & Senior Management	On the Basis of Labor Ratios
920.20	Legal	On the Basis of Labor Ratios
920.30	Human Resources	On the Basis of Labor Ratios
920.40	Finance & Accounting	On the Basis of Labor Ratios
920.60	Information Services	On the Basis of Labor Ratios
920.70	Materials Management	On the Basis of Labor Ratios
	Other	On the Basis of Labor Ratios
930.20	Special Services	On the Basis of Labor Ratios
931.00	Insurance	On the Basis of Labor Ratios
932.00	Maintenance & General Plant	On the Basis of Labor Ratios
933.00	Transportation Equipment Expenses	On the Basis of Labor Ratios
	Depreciation	
403.30	Generation Plant	On the Basis of Generation Rate Base
403.50	Transmission Plant	On the Basis of Transmission Rate Base
403.60	Distribution Plant	On the Basis of Distribution Rate Base
403.70	General Plant And Deferred Charges	On the Basis of Gross Plant (w/o General Plant & Intangible)
	DSM Amortization	On the Basis of DSM-related Rate Base
	Taxes	
408.05	Property	On the Basis of Net Plant
	Return and Income Taxes	
	Incentive Adjustments	On the Basis of Total Rate Base
	Income Tax	On the Basis of Total Rate Base
	Return on Rate Base	On the Basis of Total Rate Base
	Interest on Non Rate Base Deferral Account	On the Basis of Total Rate Base
	Other Revenues	
	Electric Apparatus Rental	On the Basis of RBD Poles, Towers & Fixtures
	Lease Revenue	On the Basis of General Plant Rate Base
	Waneta Contract Revenue	On the Basis of Generation Rate Base
	Brilliant Management Fees	On the Basis of Generation Rate Base
	Fortis Pacific Holdings	On the Basis of Labor Ratios
	Connection Charges	Retail Customers
	NSF Cheque Charges	Retail Customers
	Sundry Revenue	On the Basis of Gross Plant (w/o General Plant & Intangible)
	Investment Income	On the Basis of Gross Plant (w/o General Plant & Intangible)

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1 **9 Reference: CEC 1.31.2 and ICG 1.8.1**

8 The "stretch" factor, in the context of PBR, doesn't involve a comparison of FBC's O&M forecast
9 and FBC's O&M formula as the question appears to assume. Rather, a stretch factor typically
10 refers to a comparison of the formula to the industry TFP.

11 In choosing to propose an X-Factor that includes greater productivity than the TFP, FBC is
12 undertaking to perform better than the industry, based on the adoption of the PBR model in its
13 proposed form. The stretch factor applies to both O&M and capital. It is an aggregate approach
14 to the revenue adjustment that applies to total revenue consisting of both the revenue
15 requirement for capital and for O&M. Thus the Company will be required to manage within the
16 stretch factor a combination of both O&M and capital revenue requirements.
17

2

3 9.1 Regardless of the definition of stretch factor or TFP or X factor, please explain
4 why the forecast of costs is equal to or in some cases less than the formula
5 driven projection for cost.
6

6

7 **Response:**

8 This IR has been identified as relating to the PBR Methodology and will be submitted with the
9 PBR Methodology IR responses.

10

11

12

13 9.2 Would FBC expect that this data may be interpreted as an indication that either,
14 the forecasts and projections will be inadequate or that the incentive for
15 productivity performance will be overly generous.
16

16

17 **Response:**

18 This IR has been identified as relating to the PBR Methodology and will be submitted with the
19 PBR Methodology IR responses.

20

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1 **10 Reference: CEC 1.31.3**

1

Figure B6-2: Comparison of PBR O&M vs. Forecast (\$000s)



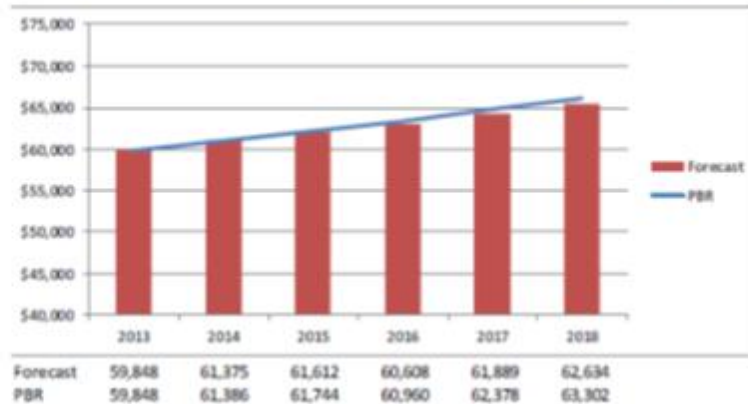
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11

Comparison of PBR O&M vs. Forecast – Excluding AMI Impact (\$000s)



12

3

4

5 10.1 Please explain why the PBR line is above \$65 million for 2018 in the Excluding
6 AMI case and below this level for the including AMI case.

7

8 **Response:**

9 This IR has been identified as relating to the PBR Methodology and will be submitted with the
10 PBR Methodology IR responses.

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10.2 How does the AML impact affect the PBR formula?

Response:

This IR has been identified as relating to the PBR Methodology and will be submitted with the PBR Methodology IR responses.

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11 Reference: CEC 1.56.1

7 The table below has been extended to include the 2013 Base and 2014-2018 Forecasts.

11.1 Please confirm that in a Cost of Service regulation the Commission would have no constraint confining it to assume that the 2013 approved budget for O&M was the necessary starting point for forecasting 2014.

Response:

This IR has been identified as relating to the PBR Methodology and will be submitted with the PBR Methodology IR responses.

11.2 Please confirm that when FBC has underspent its O&M levels of expenditure approved for collection from customers in the utility rates that FBC's shareholders will have benefited from retaining the difference between actual expenditures and those approved for rates.

Response:

This IR has been identified as relating to the PBR Methodology and will be submitted with the PBR Methodology IR responses.

11.3 Please confirm that when rebasing expenditure plans in a Cost of Service regulation the Commission could well have the view that the savings captured by FBC as under expenditures in the previous year should be carried over into the planning for the subsequent years and that the Commission would likely weigh this evidence and many other sources of evidence into setting the approved revenue requirements for the following test years.

Response:

This IR has been identified as relating to the PBR Methodology and will be submitted with the PBR Methodology IR responses.

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1 **12 Reference: CEC 1.57.1**

16 The qualitative calculation and determination of the ongoing pension/OPEB O&M expense
17 increase on a prospective basis is provided in the responses to BCUC IRs 1.212.1 and
18 1.212.1.1. The \$2,158 thousand increase in O&M to establish 2013 Base O&M is based on the
19 explanation provided in Section 4.3.3.4.2 – Benefit Inflation on page 117 of the PBR Application
20 which stated “for 2013, the actuarial estimate that was recently completed is approximately 70
21 percent higher than the actuarial estimate that was completed in 2011 to establish the 2012-
22 2013 RRA forecasts and approved amounts. This increase is primarily due to the low interest
23 rate environment and poorer than expected returns on pension plan assets.”

2

3 12.1 Given that the pension and OPEB is determined based on actuarial assumptions
4 and is rebased every few years on a regular cycle and is not driven by the
5 customer count, the system capacity or peak demand requirements of the
6 electrical system and because FBC proposes to have these expenses flowed
7 through whenever they change and not have them driven as part of a formula
8 driven revenue requirement would it not make sense to prepare a version of this
9 material information, without these costs as part of the presentation for review.

10

11 **Response:**

12 The characterization of pension and OPEB expense in the question is appropriate which is why
13 FBC has excluded pension and OPEB expense from the Formulaic O&M expense and the
14 Formulaic Capital in the 2014-2018 PBR Filing. On line 3 of Table B6-5: Forecast O&M
15 Formula Results on page 53 of the 2014-2018 PBR Filing, Pension/OPEB of \$6,222 thousand is
16 removed from 2013 Base O&M in order to calculate the Formulaic O&M which considers
17 various factors such as inflation and change in customer numbers. On line 21 of Table B6-5 the
18 \$6,222 thousand of Pension/OPEB expense is added to the Formulaic O&M to arrive at the total
19 O&M Under PBR. Similarly, on line 3 of Table B6-7: PBR Capital Formula Inputs and 5-Year
20 Forecast on page 58 of the 2014-2018 PBR Filing, Pension/OPEB of \$6,741 thousand is
21 removed from 2013 Base Capital in order to calculate the Formulaic Capital which considers
22 various factors such as inflation and change in customer numbers. On line 17 of Table B6-7 the
23 \$6,741 thousand of Pension/OPEB expense is added to the Formulaic Capital to arrive at the
24 total Capital Under PBR. As such, FBC has already prepared a version of the material
25 information excluding pension and OPEB expense as part of the PBR filing.

26

27

28

29 12.2 Please prepare the tables provided in response to CEC 1.56.1 with the pension
30 and OPEB expenses removed entirely for each of the years.

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Response:

The table in the response to CEC 1.56.1 includes a total of 15 departments and 12 different years, resulting in 180 different departmental annual costs for which pension and OPEB amounts must be extracted. The Company does not forecast or record actual pension and OPEB expense by department for each year. Rather pension and OPEB expense, along with other benefits, are aggregated to determine general benefit loading which in turn is applied to all employees' base pay, net of time away, to determine their fully loaded labour cost. As such, the pension and OPEB component cannot be readily extracted from each of the requested departments' O&M expense by year, nor is it how labour costs and O&M are managed. Rather, pension and OPEB expense are germane to overall labour expense and should not be removed or isolated as it represents a true cost of employment.

However, in the responses to BCUC IRs 1.118.1, 1.119.1, 1.125.1, 1.131.1, 1.132.1, 1.133.1, and 1.134.1, a breakdown of O&M expense for Customer Service, Communications and External Relations, Information Technology, Operations Support, Facilities, Environment, Health and Safety and Finance and Regulatory, was provided and included an estimated extraction of pension and OPEB Expense. Since the Company does not track, manage or forecast its pension and OPEB expense by department, but rather includes it as part of the general benefit loading, the original responses included incorrect componentization estimate of the pension and OPEB expense. While an errata has been provided to reflect corrected allocations of pension and OPEB expense, the componentization is still based on general allocation assumptions that do not necessarily reflect how the department labour is managed.

For further information on the forecasted amount of pension & OPEB expense expected to be allocated to O&M in 2014 to 2018, Table C4-3 on page 117 of the 2014-2018 PBR Filing provided those amounts.

Table C4-3: Pension and OPEB Capital and O&M Forecasts (\$thousands)

	2013 Base	2014 Forecast	2015 Forecast	2016 Forecast	2017 Forecast	2018 Forecast
Pension & OPEB expense	12,962	12,299	11,445	10,591	9,870	9,280
Pension & OPEB expense allocated to capital	6,740	6,395	5,951	5,507	5,132	4,825
Pension & OPEB expense allocated to O&M	6,222	5,904	5,494	5,084	4,738	4,454

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In addition, since pension and OPEB expense are driven by factors other than customer numbers or efficiency factors, the total pension and OPEB expense forecast to be allocated to O&M expense has been tracked outside the Formulaic O&M on line 21 of Table B6-5 on page 53 of the 2014-2018 PBR Filing. Since the pension and OPEB expense will be reforecast each year as part of the Annual Review process, the total expected amount allocated to O&M has been isolated.

Table B6-5: Forecast O&M Formula Results

Line No.	Particulars	2013 Base	2014 Formula	2015 Formula	2016 Formula	2017 Formula	2018 Formula
(1)		(2)	(3)	(4)	(5)	(6)	(7)
1	2013 Base O&M (\$000)	\$ 59,848					
2	Less O&M Tracked Outside of Formula						
3	Pension/OPEB (O&M portion)	(6,222)					
4	Insurance	(1,588)					
5	Advanced Metering Infrastructure Project	-					
6		52,037	-				
7							
8	Average Number of Customers	128,796	129,770	130,922	132,142	133,385	134,687
9	% Change in Customers		0.76%	0.89%	0.93%	0.94%	0.98%
10							
11	Composite I-Factor		2.31%	2.42%	2.34%	2.36%	2.30%
12							
13	Productivity X-Factor		0.50%	0.50%	0.50%	0.50%	0.50%
14							
15	I-X Mechanism (1+I-X) (Line 11 - Line 12)		101.81%	101.92%	101.84%	101.86%	101.80%
16							
17	Net Inflation Factor ((1 + Line 9) * Line 15)		102.58%	102.82%	102.79%	102.82%	102.79%
18							
19	Formulaic O&M (Line 17 * Prior Year)		53,380	54,888	56,419	58,009	59,629
20	Add: O&M Tracked Outside of Formula						
21	Pension/OPEB (O&M portion)	6,222	5,904	5,494	5,084	4,738	4,455
22	Insurance	1,588	1,734	1,801	1,868	2,000	2,012
23	Advanced Metering Infrastructure Project	-	368	(439)	(2,411)	(2,369)	(2,794)
24							
25	Total O&M Under PBR	59,848	61,386	61,744	60,960	62,378	63,302

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1 **13 Reference: CEC 1.58.3 and CEC 1.26.2**

20 FBC does not categorize its O&M expenditures in terms of fixed and variable costs. Most costs
21 could be categorized as either fixed or variable, depending on the context, the assumptions
22 made with regard to cost causation, and the timeframe under consideration.

23 For the purpose of a Cost of Service Allocation Study, for example, O&M Expenses are
24 classified on a Demand/Energy basis, which could be considered to be a fixed/variable analysis.
25 However FBC does not understand how such an analysis would be relevant to this Application.

26 Without further clarification of this question, FBC is unable to provide a meaningful response.

2

3 13.1 Please confirm that the Generation function is applicable to FBC generating
4 stations and that these are fixed in number and will not increase in number over
5 the period 2014 to 2018.

6

7 **Response:**

8 FBC confirms that generation is a component of the power supply function (as evaluated in a
9 cost of service analysis), and that the number of generating plants are not projected to increase
10 over the 2014 – 2018 PBR period.

11

12

13

14 13.2 Why should the expense for generation change with increased customer count?

15

16 **Response:**

17 Please refer to the response to CEC IR 2.16.2..

18

19

20

21 13.3 Please explain what is in the non-labour components for generation and explicitly
22 identify and quantitatively show the amounts that would be related to equipment
23 use and or would represent consulting contracts or fixed payments.

24

25 **Response:**

26 The table below provides a breakdown of non-labour costs by type.

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	2010 Actual	2011 Actual	2012 Actual	2013 Approved	2013 Projection	2013 Base	2014 Forecast	2015 Forecast	2016 Forecast	2017 Forecast	2018 Forecast
Contracting & Consulting	168	251	366	313	373	420	430	438	447	456	465
Material	110	124	123	160	149	150	153	156	159	162	166
Staff Expenses	23	225	(120)	26	23	23	23	24	24	25	25
Vehicle Expenses	27	35	43	41	33	33	33	34	35	36	36
Office Expenses	25	33	38	38	37	38	38	39	40	41	41
Other Expenses	265	29	28	27	25	25	25	26	26	27	27
Total Non-labour	617	696	477	605	640	689	703	717	732	746	761

The following table provides a breakdown between consulting and contractor costs. The consulting costs are related to costs that are not equipment specific. The contractor costs are incurred to maintain generating equipment and facilities.

	2010 Actual	2011 Actual	2012 Actual	2013 Approved	2013 Projection	2013 Base	2014 Forecast	2015 Forecast	2016 Forecast	2017 Forecast	2018 Forecast
Consulting	64	169	135	166	196	220	225	229	233	238	243
Contracting	104	82	231	147	177	200	205	209	213	218	222
Total	168	251	366	313	373	420	430	438	447	456	465

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1 **14 Reference: CEC 1.59.1**

15
16 With respect to the Pine Beetle Hazard Tree Removal program, the Commission disagreed with
17 FBC's justification for capitalization of the program (extraordinary event, long term benefit), and
18 directed instead that expenditures under this program should addressed as routine operating
19 and maintenance expense.

2
3

4 14.1 Please provide amounts for any expenditures associated with the Pine Beetle
5 tree removal program for each of the years 2010 to 2013 and for 2014 to 2018.

6

7 **Response:**

8 In 2011 the Commission directed FBC, under Order G-195-10, to move certain capital
9 expenditures into operating expenses. The Right of Way Reclamation program and the
10 Mountain Pine Beetle Hazard Abatement program are examples of capital expenditures
11 included under Order G-195-10. As a result, these programs are no longer specifically tracked
12 and are included within FBC's On and Off Right of Way Vegetation Maintenance operating
13 expenses.

14 On Right of Way Vegetation Maintenance operating expenses include:

- 15 • Identification and control of undesirable vegetation within rights of ways ensuring
16 adequate vegetation to conductor clearances are maintained. Control methods include
17 slashing, mowing/mulching, pruning/trimming and herbicide treatment.

18

19 Off Right of Way Vegetation Maintenance operating expenses include:

- 20 • Identification, removal and/or pruning/trimming of healthy trees located off R/W which
21 encroach on conductors and pose a significant threat;
- 22 • Identification and removal of dead trees including those damaged by insects and
23 disease including mountain pine beetle, spruce bud worm, tussock moth and root rot
24 located off R/W which pose a significant threat to power lines; and
- 25 • Identification and removal of leaning and up rooted trees damaged by storm winds and
26 snow loading located off R/W which pose a significant threat to power lines.

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Year	Pine Beetle Tree Removal Program Expenditure (\$)
2010	1,235,000 <i>*Total Vegetation Maintenance expenditures for 2010 = \$4,670,170</i>
2011	1,658,000 <i>*Total Vegetation Maintenance expenditures for 2011 = \$4,754,367</i>
2012	1,734,000 <i>*Total Vegetation Maintenance expenditures for 2012 = \$5,364,387</i>
Year	On & Off Right of Way Vegetation Maintenance Expenses (\$)
2013	5,510,000
2014	5,607,000
2015	5,663,000
2016	5,776,000
2017	5,891,000
2018	6,009,000

14.2 Please advise when the company anticipates completing the program.

Response:

Please refer to the response to CEC IR2 2.14.1

With respect to the Right-of-Way Reclamation program, the Commission expressed concern with the capitalization of the clearing of an existing right-of-way more than once, particularly if cyclical brushing was not routinely completed which could lead to an increase in the expenditures under this program. As such, the Commission directed that expenditures under this program should be addressed as routine operating and maintenance expense.

14.3 Please provide amounts for any expenditures associated with the Right of Way Reclamation program for each of the years 2010 to 2013 and for 2014 to 2018.

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Response:

In 2011 the Commission directed FBC, under Order G-195-10, to move certain capital expenditures into operating expenses. The Right of Way Reclamation program and the Mountain Pine Beetle Hazard Abatement program are examples of capital expenditures included under Order G-195-10. As a result these programs are no longer specifically tracked and are included within FBC's On and Off Right of Way Vegetation Maintenance operating expenses.

On Right of Way Vegetation Maintenance operating expenses include:

- Identification and control of undesirable vegetation within rights of ways ensuring adequate vegetation to conductor clearances are maintained. Control methods include slashing, mowing/mulching, pruning/trimming and herbicide treatment.

Off Right of Way Vegetation Maintenance operating expenses include:

- Identification, removal and/or pruning/trimming of healthy trees located off R/W which encroach on conductors and pose a significant threat;
- Identification and removal of dead trees including those damaged by insects and disease including mountain pine beetle, spruce bud worm, tussock moth and root rot located off R/W which pose a significant threat to power lines; and
- Identification and removal of leaning and up rooted trees damaged by storm winds and snow loading located off R/W which pose a significant threat to power lines.

Year	Right of Way Reclamation Program Expenditure (\$)
2010	1,018,000 <i>*Total Vegetation Maintenance expenditures for 2010 = \$4,670,170</i>
2011	858,000 <i>*Total Vegetation Maintenance expenditures for 2011 = \$4,754,367</i>
2012	1,010,000 <i>*Total Vegetation Maintenance expenditures for 2012 = \$5,364,387</i>
Year	On & Off Right of Way Vegetation Maintenance Expenses (\$)
2013 YEF	5,510,000
2014	5,607,000
2015	5,663,000
2016	5,776,000
2017	5,891,000
2018	6,009,000

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14.4 Please advise when the company anticipates completing the program.

Response:

Please refer to the response to CEC IR2 2.14.3

With respect to the Hot Tap Connector Replacement Program, the Commission determined that the program related to an on-going issue with respect to FBC's legacy system, and directed the Company to instead address the required expenditures as a part of routine operating and maintenance expense.

14.5 Please provide amounts for any expenditures associated with the Hot Tap Connector Replacement program for each of the years 2010 to 2013 and for 2014 to 2018.

Response:

Year	\$ amount (thousands)
2010	1,024
2011	417.4
2012	427.2
2013	411.2*
2014	444
2015	456
2016	468
2017	481
2018	494

**This amount includes \$221.8 thousand which is for work carried over to 2014 (Please see BCUC IR2 90.13)*

Note: 2010 amount was part of the capital plan and represents work for 2009 that was carried over into 2010, hence the work done in 2010 represents two years of replacements.

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3
4 14.6 Please advise when the company anticipates completing the program.
5

6 **Response:**

7 FBC does not anticipate completing this program prior to 2018.
8
9
10

8 In its decision regarding the 2011 Capital Plan, the Commission determined that certain items
9 which had been approved as capital expenditures in previous years' revenue requirements
10 should, going forward, be more appropriately classed as routine operating and maintenance
11 expense. The programs affected included:

12 14.7 Is this a type of expenditure which is lumpy, not continuous over the years, and
13 therefore has benefits in future periods, regardless of whether it is capitalized or
14 expensed?
15

16 **Response:**

17 This is a type of expenditure that is continuous over the years. As filed in the 2014-2018 RRA,
18 these costs are embedded in existing O&M.

19 There is a future benefit resulting from these expenditures, regardless of whether they are
20 capitalized or expensed. In other words, in the absence of these programs (Pine Beetle Hazard
21 Tree Removal and the Hot Tap Connector Replacement), system reliability would be negatively
22 impacted and the costs (whether classified as O&M or capital) would be expected to rise over
23 the long term to mitigate the resulting impact. It is more cost effective to proactively address
24 these issues through a program as opposed to addressing the issues once they impact the
25 system (i.e. removing pine beetle trees only when they've already damaged infrastructure,
26 replacing hot taps and affected conductor only after failure).

27

Table C4-9: Customer Service O&M Review (\$ thousands)

	2010 Actual	2011 Actual	2012 Actual	2013 Approved	2013 Projection	2013 Base
Labour	\$ 4,329	\$ 4,725	\$ 4,716	\$ 4,830	\$ 4,669	\$ 5,002
Non-Labour	1,646	1,673	2,050	2,711	2,841	2,856
Total O&M	\$ 5,975	\$ 6,398	\$ 6,766	\$ 7,541	\$ 7,510	\$ 7,858

Normalizing the total 2013 forecast expenditures to \$8,475 thousand by excluding revenue protection and City of Kelowna costs of \$1,035 thousand results in a compound annual increase of 2.7 percent since 2010.

	2014	2015	2016	2017	2018
	Forecast	Forecast	Forecast	Forecast	Forecast
Labour	\$ 5,399	\$ 5,561	\$ 5,727	\$ 5,898	\$ 6,075
Non-Labour	2,177	2,227	2,276	2,322	2,369
Total O&M	\$ 7,576	\$ 7,788	\$ 8,003	\$ 8,220	\$ 8,444

4 15.1 Please provide an explanation with respect to what is contained in the non-labour
5 components of the Customer Service O&M.

	2010 Actual	2011 Actual	2012 Actual	2013 Approved	2013 Projection	2013 Base	2014 Forecast	2015 Forecast	2016 Forecast	2017 Forecast	2018 Forecast
	(\$000's)										
Contracting & Consulting	45	14	88	828	868	873	64	65	66	68	69
Material	3	3	4	2	2	2	2	2	2	2	2
Staff Expenses	29	64	109	74	77	78	79	81	83	84	86
Vehicle Expenses	1	7	2	-	-	-	-	-	-	-	-
Office Expenses	880	876	1,101	1,043	1,093	1,098	1,158	1,181	1,205	1,229	1,254
Other Expenses	688	709	746	764	801	805	874	898	920	939	958
Total Non-labour	1,646	1,673	2,050	2,711	2,841	2,856	2,177	2,227	2,276	2,322	2,369

15.2 Please identify any fixed contract payments included in the Customer Service process.

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1 **Response:**

2 Fixed contract payments included in Customer Service O&M include:

- 3 • Customer satisfaction research \$27 thousand; and
- 4 • 21st Century telephone overflow lines \$35 thousand.

5
6

7

8 15.3 Please confirm that when the company plans to incorporate the City of Kelowna
9 customers it is expecting that the incremental costs for doing so will be
10 considerably less than the cost per customer for the service.

11

12 **Response:**

13 FBC assumes this question is asking whether the average Customer Service O&M cost per
14 customer is less than the incremental Customer Service O&M cost per customer. In that case,
15 FBC confirms that the incremental O&M cost per customer is less than the average O&M cost
16 per customer.

17
18

19

20 15.4 Please provide all of the information provided in the company's acquisition of
21 Kelowna hearing with respect to the efficiency of adding customers because the
22 incremental costs to add customers do not expand the all of the cost
23 requirements for Customer Service.

24

25 **Response:**

26 The information that the Company provided in the acquisition of Kelowna hearing with respect to
27 the efficiency of adding customers and the customer service function are provided in
28 Attachment 15.4, as indicated below:

- 29 • CPCN Application for the purchase of the utility assets of the City of Kelowna:
- 30 ○ Section 5.1 Discussion of Incremental Revenue Requirements; and
- 31 ○ Section 6.0 Provincial Government Energy Objectives and Policy Considerations.

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• Responses to IRs:

- BCUC IR 1.14.9;
- BCPSO IR 1.1.1 and 1.2.3;
- ICG IR 1.5.0 and 1.5.1; and
- BCPSO IR 2.3.3.

15.5 Please confirm that what is true for addition of Kelowna customers is also true for adding other customers, though there will be some differences.

Response:

Confirmed with respect to Customer Service O&M costs.

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1 **16 Reference: CEC 1.59.9**

1 **Table C4-11: Communications and External Relations O&M Review (\$ thousands)**

	2010 Actual	2011 Actual	2012 Actual	2013 Approved	2013 Projection	2013 Base
Labour	\$ 556	\$ 543	\$ 493	\$ 544	\$ 496	\$ 531
Non-Labour	1,083	926	751	925	944	959
Total O&M	\$ 1,639	\$ 1,469	\$ 1,244	\$ 1,469	\$ 1,440	\$ 1,490

14 **Table C4-12: Communications and External Relations O&M Forecast (\$ thousands)**

	2014 Forecast	2015 Forecast	2016 Forecast	2017 Forecast	2018 Forecast
Labour	\$ 547	\$ 564	\$ 581	\$ 598	\$ 616
Non-Labour	978	997	1,017	1,038	1,058
Total O&M	\$ 1,525	\$ 1,561	\$ 1,598	\$ 1,636	\$ 1,674

17 The forecast expenditures over the 2014-2018 period is expected to remain steady from the
18 2013 base level with only annual inflationary increases over this period.

4 16.1 Please explain what is in the non-labour component of the customer service
5 costs and quantify each major element of the non-labour items.

7 **Response:**

8 FBC considers that the question relates to costs for the Communications and External Relations
9 department, although customer service costs are referenced in the question. The table below
10 provides a breakdown of non-labour costs by type.

CEC IR2 2.16.1

	2010 Actual	2011 Actual	2012 Actual	2013 Approved	2013 Projection	2013 Base	2014 Forecast	2015 Forecast	2016 Forecast	2017 Forecast	2018 Forecast
	(\$000's)										
Contracting & Consulting	339	170	327	264	270	273	279	284	290	296	302
Material	4	-	-	-	-	-	-	-	-	-	-
Staff Expenses	237	171	166	192	196	199	203	207	211	215	220
Vehicle Expenses	-	-	-	14	14	15	15	15	16	16	16
Office Expenses	270	399	210	340	347	353	360	367	374	382	389
Other Expenses	233	186	48	115	117	119	121	124	126	129	131
Total Non-labour	1,083	926	751	925	944	959	978	997	1,017	1,038	1,058

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16.2 Please explain whether or not any of the components have a fixed nature to them and are not necessarily increasing incrementally with each customer added to the system.

Response:

This response contains information relevant to PBR and non-PBR issues, and will therefore be also submitted with the PBR Methodology IR responses.

This IR together with FBC CEC IR 2.16.3 are the first of a series that ask a similar question (or questions) of various FBC departments with respect to the fixed/variable cost structure of the department and whether the department's costs are directly and linearly related to the customer count. FBC is providing a detailed response in this IR covering points common to all of the questions as well as using examples from different departments to illustrate.

The following comments apply generally to these questions as they pertain to the various departments they are asked of:

- The O&M formula (other than costs that are identified as being outside the formula) is applied to FBC as a whole and not to the individual departments. The cost pressures faced by individual departments vary over time, at times being greater than the increases allowed by inflation and customer growth and at other times less. The FBC-wide O&M formula allows the Company to deal with cost increases on a portfolio basis, with individual department level cost pressures able to be managed across the greater diversity of the whole utility.
- The utility-wide O&M formula based on customer count as the key indicator of costs has a long history of successful application in BC. The initial use of an O&M formula based on customer counts was for FEI (then BC Gas Utility Ltd.) for its 1994-95 RRA. Since then a very similar O&M formula has been used a number of times in multi-year RRAs and PBRs for FEI and FBC. Under PBR this approach to an O&M formula has proven to be successful in motivating the pursuit of efficiencies by the utility and in providing benefits for ratepayers.
- As B&V have noted at numerous points in this regulatory proceeding, the costs of the utility are driven mainly by customers and system capacity (for which customer counts can be used as a proxy). The utility-wide O&M formula is fully consistent with this. Customer-based PBR formulas are also commonly used in other PBR plans. The use of customer-based PBR formulas also serves PBR principles such as being easy to understand, implement and administer.
- The productivity improvement requirement (including the TFP and the implicit stretch factor) applies to the entire customer base. With customer growth averaging less than 1

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percent each year the implicit stretch factor of 4.5 percent per year or more (the X-factor of 0.5 percent less the TFP of -4 percent to -6.2 percent (Appendix D-2, page 11)) applies to about 99 percent of the customer base initially (or between 97 percent and 98 percent of the customer base on average over the five-year term). The productivity requirement in the PBR O&M formula therefore greatly exceeds the yearly O&M increase allowed due to customer growth.

- Many of the questions ask about a direct or linear link between customers and departmental budgets. The Company considers that while over time departmental budgets are impacted by total customers, there are other factors such as management's desire to operate efficiently and the addition of discrete amounts of resources required to respond efficiently to workload requirements. The result is often a stepwise change in budgets in response to a gradual increase in customers.
- While it is true that some individual departments may experience little or no impact from customer growth or capacity expansion (using customer growth as a proxy), it is also true that for some departments additional customers may increase costs incrementally more than the percentage of customer growth. Costs may increase in the short term as higher overtime costs to provide service to meet the customer expansion. Over time the Company will minimize the OPEX by making discrete additions to the department by adding more resources rather than using existing resources more intensely. In any case, the overall costs for OPEX and CAPEX increase with additional customers regardless of the individual departments own impact.

FBC provides the following examples by department of costs being related to the number of customers:

- Operations:** Many functions of the Operations department are customer-driven, being a function of the size of the transmission and distribution networks required to serve customers. These include the monitoring and control of the networks systems, patrol and maintenance of lines, vegetation management along rights of way and connecting/reconnecting customers (not requiring capital construction). As the number of customers and size of the networks system increases, so does the Operations workload.
- Customer service:** Costs related to the production of bills and processing of payments are generally linked to the number of customers. Call volumes into the contact center is somewhat linked, but can also be heavily influenced by other factors such as weather, outages or new programs or services being offered.
- Communications and External Relations:** In addition to communications with customers, FBC also has communications requirements for stakeholders, government officials,

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media, employees and all British Columbians in the service territory. It may be reasonable in the short term to characterize the costs for this group to have a somewhat non-linear relationship with customer count, while in the longer term an increasing customer base will impact the level of department costs.

- **Engineering/Project Management:** While each individual cost component may not be directly and linearly related to the addition of each customer, it is reasonable that additional system utilization (either through new customer connections or upgrades to support additional system load) results in increased costs. For example, as the need to construct additional infrastructure increases there is a direct need to procure more equipment. This will lead to the need to review material and design standards and potentially develop additional engineering and equipment standards. It may also result in the need to bring in additional contracted labour resources to review and develop new standards. Finally, increased deployment of new devices and infrastructure will likely result in more equipment failures (assuming a constant failure rate, more infrastructure must result in more equipment failures on average). While on its own each of these aspects may not vary linearly with customer growth, FBC considers it reasonable that in the aggregate the various puts and takes result in an overall linear cost relationship.
- **Operations support:** Operations Support's costs exhibit an indirect link to the number of customers through the activity levels of Operations and the Company's field contractors. For instance, as the customer base grows, the activity levels increase for both Operations and the field contractors, which has a direct impact on the demand for materials and services from the Supply Chain Services group. In addition, increased activity levels by Operations related to customer growth will also impact the demand for vehicle services from the Fleet Services group. Finally, as the service territory continues to expand with greater customer growth, there is an increased demand for gaining and managing land rights placed upon the Property Services group. It should be noted, however, that Operations Support's activity levels are also dependent upon the system reliability requirements within FBC and therefore the department's costs are also influenced by any change in industry codes, standards and regulations.
- **Environment Health and Safety:** EH&S costs are driven primarily by external legislative and regulatory requirements. Section C4.13.2 describes the increasing demands on EH&S in recent years, with respect to increasing safety and environment legislation, public expectations and awareness. While the increasing requirements are not directly customer-driven, this provides an example of cost pressures unrelated to inflation that must be recognized in a PBR formula, and for which customer growth serves as an indirect proxy.
- **Finance and Regulatory:** In the short to medium term, a significant portion of the labour and non-labour costs for Finance and Regulatory will have a non-linear relationship with

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customer count as the compliance and business deliverables related to financial reporting, tax, treasury, internal control, and regulatory activities, are necessary to be adhered to regardless of changes in customer count. However, for example, customer count will affect the level of capital expenditures which in turn may affect financing requirements performed by Finance. This, in turn may result in incremental costs that may correspondingly increase at levels that are independent of inflation or efficiencies. Customer growth also affects the number and scope of regulatory applications for capital projects and the number of customer interactions with regard to tariff matters and regulatory proceedings. As such, there is an indirect relationship, over time, with certain Finance and Regulatory O&M expense to customer count.

16.3 Please explain which components have costs that are directly and linearly related to each customer addition.

Response:

Please refer to the response to CEC IR 2.16.2.

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1 17 **Reference: CEC 1.59.10**

22 The Communications and External Relations groups do not expect to increase costs
23 significantly over the 2014 to 2018 period. Rather, only annual inflationary increases, with
24 annual increases of just over 2 percent from 2013 base, are forecasted over this period, as
25 noted in the footnotes to the above tables.

2

3 17.1 Please confirm that Communications and external relations is one of the O&M
4 expenditures that is not directly or linearly connected to increases in customer
5 count and that that is why the group only expects to be subject to inflation
6 increases.

7

8 **Response:**

9 Please refer to the response to CEC IR 2.16.2.

10

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1 **18 Reference: CEC 1.60.3**

23

Table C4-13: Energy Supply O&M Review (\$ thousands)

	2010 Actual	2011 Actual	2012 Actual	2013 Approved	2013 Projection	2013 Base
Labour	\$ 629	\$ 631	\$ 709	\$ 772	\$ 732	\$ 784
Non-Labour	198	262	277	352	392	394
Total O&M	\$ 827	\$ 893	\$ 986	\$ 1,124	\$ 1,124	\$ 1,178

24

2

19

Table C4-14: Energy Supply O&M Forecast (\$thousands)

	2014 Forecast	2015 Forecast	2016 Forecast	2017 Forecast	2018 Forecast
Labour	\$ 881	\$ 983	\$ 1,012	\$ 1,042	\$ 1,074
Non-Labour	402	410	418	427	435
Total O&M	\$ 1,283	\$ 1,393	\$ 1,430	\$ 1,469	\$ 1,509

20

3

2

3 18.1 Please provide a quantitative breakdown of the non-labour components for each

4 year by the types of expenditure and provide a description and to whether or not

5 any of those costs are directly and linearly connected to each increase in

6 customer count.

7 **Response:**

8

9 The table below provides a breakdown of non-labour costs by type.

	2010 Actual	2011 Actual	2012 Actual	2013 Approved	2013 Projection	2013 Base	2014 Forecast	2015 Forecast	2016 Forecast	2017 Forecast	2018 Forecast
	(\$000's)										
Contracting & Consulting	-	114	100	143	159	159	162	166	169	172	176
Material	-	-	-	-	-	-	-	-	-	-	-
Staff Expenses	153	82	110	149	166	167	170	174	178	181	185
Vehicle Expenses	-	-	1	-	-	-	-	-	-	-	-
Office Expenses	13	19	19	19	21	22	23	22	23	24	24
Other Expenses	32	47	47	41	46	46	47	48	48	50	50
Total Non-labour	198	262	277	352	392	394	402	410	418	427	435

10

11

12 Please also refer to the response to CEC IR 2.16.2.

13

14

15

16 18.2 Please confirm that Energy Supply as a function is one of the functions that is

17 relatively fixed in relation to changes in the customer base and that its costs

18 should be more closely just linked to inflation and not specifically to growth.



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1

2 **Response:**

3 Please refer to the response to CEC IR 2.16.2.

4

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19 Reference: CEC 1.61.3

Table C4-15: IS O&M Review (\$ thousands)

	2010 Actual	2011 Actual	2012 Actual	2013 Approved	2013 Projection	2013 Base
Labour	\$ 1,801	\$ 1,731	\$ 1,689	\$ 1,755	\$ 1,746	\$ 1,871
Non-Labour	1,128	1,172	1,236	1,219	1,242	1,278
Total O&M	\$ 2,929	\$ 2,903	\$ 2,925	\$ 2,974	\$ 2,988	\$ 3,149

Table C4-16: IS O&M Forecast (\$ thousands)

	2014 Forecast	2015 Forecast	2016 Forecast	2017 Forecast	2018 Forecast
Labour	\$ 1,927	\$ 1,984	\$ 2,044	\$ 2,105	\$ 2,168
Non-Labour	1,304	1,331	1,356	1,384	1,412
Total O&M	\$ 3,231	\$ 3,315	\$ 3,400	\$ 3,489	\$ 3,580

19.1 Please provide a description of the components of the non-labour costs and a quantitative breakdown of the costs by type.

Response:

The table below provides a breakdown of non-labour costs by type.

	2010 Actual	2011 Actual	2012 Actual	2013 Approved	2013 Projection	2013 Base	2014 Forecast	2015 Forecast	2016 Forecast	2017 Forecast	2018 Forecast
Contracting & Consulting	3	3	21	-	23	24	24	25	25	26	26
Material	1	-	-	-	-	-	-	-	-	-	-
Staff Expenses	69	67	51	65	65	67	68	70	71	72	74
Vehicle Expenses	-	1	1	7	7	7	7	7	8	8	8
Office Expenses	584	576	598	555	555	571	583	593	604	617	629
Other Expenses	471	525	565	592	592	609	622	636	648	661	675
Total Non-labour	1,128	1,172	1,236	1,219	1,242	1,278	1,304	1,331	1,356	1,384	1,412

19.2 Please describe which of the IS costs is directly and linearly connected to customer growth.

Response:

Please refer to the response to CEC IR 2.16.2.

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1
2
3
4 19.3 Please confirm that there are many decisions with respect to the IS initiatives of
5 the company that are discretionary at least with regard to the timing of the activity
6 and in terms of what projects are undertaken.
7

8 **Response:**

9 All costs identified as operating expense for IS are considered non-discretionary. The annual
10 expense is required to maintain the reliability of the IS systems and infrastructure.
11
12

13
14 19.4 Please provide a list of the IS projects which are in progress as of 2013 but will
15 be completed in the future and where there are expected savings related to the
16 project please provide an estimate of the savings.
17

18 **Response:**

19 Please refer to the response to BCUC IR 2.44.1.1.

20 The only project currently underway that is expected to be completed after 2013 is the
21 implementation of a Demand Side Management Customer Relations Management System.
22 This program is expected to realize approximately \$95 thousand starting in 2015 in annual
23 savings for the DSM program.
24
25

26
27 19.5 Please provide a list of the IS projects which are anticipated to provide
28 opportunities for improvement in the future and provide their expected in service
29 dates as well as an estimate of their expected benefits contributions.
30

31 **Response:**

32 As detailed in BCUC IR 2.31.3, it is challenging to forecast at this time the Capital and O&M
33 savings to be achieved over the PBR period as the detailed list of Transformation and
34 Enhancement projects within each of the Business programs have not yet been identified for



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- 1 2014 to 2018. Likewise, the expected in service date is unknown until detailed business case
- 2 analysis and investment approval has been given.
- 3

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1 20 **Reference: CEC 1.62.3**

1

Table C4-17: Engineering Services and Project Management O&M Review (\$ thousands)

	2010 Actual	2011 Actual	2012 Actual	2013 Approved	2013 Projection	2013 Base
Labour	\$ 928	\$ 1,789	\$ 1,951	\$ 2,127	\$ 1,974	\$ 2,964
Non-Labour	314	574	664	664	848	903
Total O&M	\$ 1,242	\$ 2,363	\$ 2,615	\$ 2,791	\$ 2,822	\$ 3,867

2

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Table C4-18: Mandatory Reliability Standards O&M Review (\$ thousands)

12

(including Deferred O&M Expense)

	2010 Actual	2011 Actual	2012 Actual	2013 Approved	2013 Projection	2013 Base
Labour	\$ -	\$ 856	\$ 1,328	\$ 914	\$ 1,709	\$ 1,770
Non-Labour	-	160	171	273	379	380
Total O&M	\$ -	\$ 1,016	\$ 1,499	\$ 1,187	\$ 2,088	\$ 2,150

3

13

25

Table C4-19: Engineering Services and Project Management O&M Forecast (\$ thousands)

	2014 Forecast	2015 Forecast	2016 Forecast	2017 Forecast	2018 Forecast
Labour	\$ 3,053	\$ 3,145	\$ 3,239	\$ 3,336	\$ 3,437
Non-Labour	920	939	958	977	996
Total O&M	\$ 3,973	\$ 4,084	\$ 4,197	\$ 4,313	\$ 4,433

26

27

28

Table C4-20: Mandatory Reliability Standards O&M Forecast (\$ thousands)

	2014 Forecast	2015 Forecast	2016 Forecast	2017 Forecast	2018 Forecast
Labour	\$ 1,823	\$ 1,878	\$ 1,934	\$ 1,992	\$ 2,052
Non-Labour	387	395	403	411	419
Total O&M	\$ 2,210	\$ 2,273	\$ 2,337	\$ 2,403	\$ 2,471

29

2

3 20.1 Please provide a quantitative breakdown of the non-labour component costs for
4 Engineering Services and Project Management and MRS.

5

6 **Response:**

7 The table below provides a breakdown of non-labour expenditures.

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Engineering and Project Management

	2010 Actual	2011 Actual	2012 Actual	2013 Approved	2013 Projection	2013 Base	2014 Forecast	2015 Forecast	2016 Forecast	2017 Forecast	2018 Forecast
	(\$000's)										
Contracting & Consulting	99	248	277	266	340	362	369	376	384	391	399
Material	14	9	18	-	-	-	-	-	-	-	-
Staff Expenses	172	265	306	328	419	446	454	463	472	482	491
Vehicle Expenses	1	1	2	-	-	-	-	-	-	-	-
Office Expenses	10	19	24	32	41	43	44	44	45	46	47
Other Expenses	18	32	37	38	48	52	53	56	57	58	59
Total Non-labour	314	574	664	664	848	903	920	939	958	977	996

MRS

	2010 Actual	2011 Actual	2012 Actual	2013 Approved	2013 Projection	2013 Base	2014 Forecast	2015 Forecast	2016 Forecast	2017 Forecast	2018 Forecast
	(\$000's)										
Contracting & Consulting	-	82	77	116	161	161	165	168	172	175	178
Material	-	9	4	-	-	-	-	-	-	-	-
Staff Expenses	-	45	68	134	186	187	190	194	198	202	206
Vehicle Expenses	-	-	2	-	-	-	-	-	-	-	-
Office Expenses	-	13	9	16	22	22	22	23	23	24	24
Other Expenses	-	11	11	7	10	10	10	10	10	10	11
Total Non-labour	-	160	171	273	379	380	387	395	403	411	419

20.2 Please provide a description with respect to how each type of non-labour expenditure is directly and linearly related to addition of each customer and or describe how some of the costs may be or may be made more fixed in nature.

Response:

Please refer to the response to CEC IR 2.16.2.

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1 **21 Reference: CEC 1.63.3**

24

Table C4-21: Operations Support O&M Review (\$ thousands)

	2010 Actual	2011 Actual	2012 Actual	2013 Approved	2013 Projection	2013 Base
Labour	\$ 3,475	\$ 3,510	\$ 3,354	\$ 3,510	\$ 3,425	\$ 3,669
Non-Labour	3,152	2,992	2,754	3,829	3,027	3,042
Recoveries	(5,633)	(5,186)	(4,868)	(6,087)	(5,247)	(5,453)
Total O&M	\$ 993	\$ 1,315	\$ 1,240	\$ 1,252	\$ 1,205	\$ 1,258

25

11

Table C4-22: Operations Support O&M Forecast (\$ thousands)

	2014 Forecast	2015 Forecast	2016 Forecast	2017 Forecast	2018 Forecast
Labour	\$ 3,779	\$ 3,892	\$ 4,009	\$ 4,130	\$ 4,253
Non-Labour	3,103	3,166	3,229	3,294	3,359
Recoveries	(5,591)	(5,733)	(5,878)	(6,028)	(6,181)
Total O&M	\$ 1,291	\$ 1,325	\$ 1,360	\$ 1,396	\$ 1,431

12

2 3 21.1 Please provide a quantitative breakdown of the type of expenditures in the non-labour component.

6 **Response:**

7 The table below provides a breakdown of non-labour costs by type.

	2010 Actual	2011 Actual	2012 Actual	2013 Approved	2013 Projection	2013 Base	2014 Forecast	2015 Forecast	2016 Forecast	2017 Forecast	2018 Forecast
	(\$000's)										
Contracting & Consulting	44	54	128	7	107	107	110	112	114	116	119
Material	16	(20)	22	57	54	54	55	56	58	59	60
Staff Expenses	129	103	186	150	147	148	151	154	157	160	163
Vehicle Expenses	2,694	2,605	2,121	3,049	2,217	2,228	2,273	2,318	2,364	2,412	2,460
Office Expenses	101	111	185	209	191	192	196	200	204	208	212
Other Expenses	168	139	111	357	311	312	319	326	332	339	345
Total Non-labour	3,152	2,992	2,754	3,829	3,027	3,042	3,103	3,166	3,229	3,294	3,359

9 10 11 12 21.2 Please discuss how each type of expenditure is directly and linearly related to customer growth and or describe how some of the costs may be more fixed in nature.

16 **Response:**

17 Please refer to the response to CEC IR 2.16.2.

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4 Operations Support's efforts toward enhancing productivity allows the department to forecast
5 stable cost increases between 2014 to 2018 with no additional labour required above 2013
6 projected levels. However, there are pressures to the O&M budget that are expected including
7 labour inflationary increases, fuel cost increases and increases to property leases that require
8 renewal within the PBR Period. The forecast O&M requirement for Operations Support is
9 shown in Table C4-22 below.

Exhibit B-1, Page 150

21.3 Please confirm that the ability of the Operations Support department to forecast
no additional labour requirements represents a situation where there is a fixed
element to the nature of the Operations Support work in regard to the electric
system, therefore the costs will be more driven by inflationary pressures.

Response:

Please refer to the response to CEC IR 2.16.2.

21.4 Please explain the recoveries portion of the cost forecast for Operations and
Support and the nature of the components of the recoveries as well as how they
are driven in the future.

Response:

The recoveries included in the derivation of the Operations Support costs include:

- Transportation Services recoveries

Transportation Services recoveries include credits to the Fleet department for the use of
fleet vehicles on capital projects and the provision of services to 3rd parties. FBC charges
an hourly rate by vehicle classification to capital or 3rd parties in order to properly
capitalize the cost of the asset or to recover the cost of using the from 3rd parties to the
benefit of customers.

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1 • Material Services recoveries

2 Material Services recoveries include credits to the Materials Services department to
3 recover the cost of receiving, warehousing and issuing material out of inventory. The
4 Company calculates a Material Handling Charge as a ratio of the annual Material
5 Services department budget to the total forecast materials issued from inventory in the
6 year. As material is issued out of inventory, the Material Handling Charge is added to
7 the cost of the material and is charged to the receiving cost centre or project.

8

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1 **22 Reference: CEC 1.64.1**

8 The trend for O&M costs incurred by Facilities between the years 2010 to 2013 is a reflection of
9 several factors including the fixed lease costs observed throughout the period and the
10 downward fluctuation of long period work that is scheduled as part of the normal maintenance
11 cycle. In addition, the Facilities Department combined two FTE positions within FBC and FEI
12 into a single FTE position residing within FEI and cross charging to FBC.

2

3 22.1 Please confirm that Facilities is an example of where the costs of the utility can
4 be and are fixed for periods of time and are not related directly or linearly to
5 increases in the customer growth.

6

7 **Response:**

8 Please refer to the response to CEC IR 2.16.2.

9

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1 **23 Reference: CEC 1.65.3**

26

Table C4-25: EH&S O&M Review (\$ thousands)

	2010 Actual	2011 Actual	2012 Actual	2013 Approved	2013 Projection	2013 Base
Labour	\$ 586	\$ 689	\$ 714	\$ 760	\$ 830	\$ 889
Non-Labour	141	178	180	193	123	124
Total O&M	\$ 727	\$ 867	\$ 894	\$ 953	\$ 953	\$ 1,013

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5

Table C4-26: EH&S O&M Forecast (\$ thousands)

	2014 Forecast	2015 Forecast	2016 Forecast	2017 Forecast	2018 Forecast
Labour	\$ 916	\$ 943	\$ 972	\$ 1,001	\$ 1,031
Non-Labour	127	129	132	134	137
Total O&M	\$ 1,043	\$ 1,072	\$ 1,104	\$ 1,135	\$ 1,168

3

6

2

3

4 23.1 Please provide a comparison of the number of employees in the company for
5 each year historically and into the future, with the total number of customers the
6 company serves or expects to be serving for each year.

7

8 **Response:**

9 FBC assumes the question is meant to request the number of employees in the EH&S
10 department. The number of employees for 2010-2013 Projected is shown in the table below.
11 FBC expects the number of employees to remain relatively consistent through the PBR term but
12 has not forecast employees at the departmental level.

Year	# Employees (EH&S)	# Customers (Year-End)
2010	7	112,249
2011	8	113,258
2012	8	113,915
2013P	7	129,216
2014F	-	130,323
2015F	-	131,521
2016F	-	132,763
2017F	-	134,007
2018F	-	135,366

13

14

15

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23.2 Please describe the nature of the costs in the non-labour component and provide a breakdown of the costs by type, as well as discuss whether or not they are directly and linearly related to the addition of new customers.

Response:

The table below provides a breakdown of non-labour costs by type.

	2010 Actual	2011 Actual	2012 Actual	2013 Approved	2013 Projection	2013 Base	2014 Forecast	2015 Forecast	2016 Forecast	2017 Forecast	2018 Forecast
	(\$000's)										
Contracting & Consulting	26	79	87	57	36	37	38	39	40	41	41
Material	2	3	3	1	1	1	1	1	1	1	1
Staff Expenses	53	47	47	57	36	36	37	38	39	40	41
Vehicle Expenses	1	-	1	-	-	-	-	-	-	-	-
Office Expenses	45	45	37	61	39	39	40	40	41	41	42
Other Expenses	14	4	5	17	11	11	11	11	11	11	12
Total Non-labour	141	178	180	193	123	124	127	129	132	134	137

Please also refer to the response to CEC IR 2.16.2.

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1

2 **Response:**

3 Please refer to the response to CEC IR 2.16.2.

4

5

6

7 24.3 Please provide a listing of the kinds of tasks performed by Finance and
8 Regulatory, which involve annual or periodic reporting and can therefore be fixed
9 over periods of time in regard to the company's reporting requirements and
10 decisions.

11

12 **Response:**

13 Please refer to the response to CEC IR 2.16.2.

14

1 25 Reference: CEC 1.67.3

Table C4-29: Human Resources O&M Review (\$ thousands)

	2010 Actual	2011 Actual	2012 Actual	2013 Approved	2013 Projection	2013 Base
Labour	\$ 1,309	\$ 1,217	\$ 1,047	\$ 1,370	\$ 1,128	\$ 1,208
Non-Labour	329	530	769	504	746	750
Total O&M	\$ 1,638	\$ 1,747	\$ 1,816	\$ 1,874	\$ 1,874	\$ 1,958

Table C4-30: Human Resources O&M Forecast (\$ thousands)

	2014	2015	2016	2017	2018
	Forecast	Forecast	Forecast	Forecast	Forecast
Labour	\$ 1,244	\$ 1,282	\$ 1,320	\$ 1,360	\$ 1,400
Non-Labour	765	780	796	812	828
Total O&M	\$ 2,009	\$ 2,062	\$ 2,116	\$ 2,172	\$ 2,228

25.1 Please provide a comparison of the number of employees in the company for each year historically and into the future, with the total number of customers the company serves or expects to be serving for each year.

Response:

FBC assumes the question is meant to request the number of employees in the Human Resources department. The number of employees for 2010-2013 Projected is shown in the table below. FBC expects the number of employees to remain relatively consistent through the PBR term, but has not forecast employees at the departmental level.

Year	# Employees (HR)	# Customers (Year-End)
2010	14	112,249
2011	10	113,258
2012	12	113,915
2013P	12	129,216
2014F	-	130,323
2015F	-	131,521
2016F	-	132,763
2017F	-	134,007
2018F	-	135,366

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25.2 Please provide a breakdown of the Human Resources costs with respect to those which are directly and linearly related to providing service to each specific employee, which are tied to dealing with employee groups that do not change in number and which are corporately related functions and are repetitive for periodic reporting periods.

Response:

FBC assumes that this question is meant to ask the same information as the others in this series, that is, with respect to non-labour costs. The table below provides a breakdown of non-labour costs by type.

	2010 Actual	2011 Actual	2012 Actual	2013 Approved	2013 Projection	2013 Base	2014 Forecast	2015 Forecast	2016 Forecast	2017 Forecast	2018 Forecast
	(\$000's)										
Contracting & Consulting	246	196	587	184	426	428	436	445	454	463	472
Material	-	-	-	-	-	-	-	-	-	-	-
Staff Expenses	33	82	78	56	56	56	58	58	60	61	62
Vehicle Expenses	-	-	-	-	-	-	-	-	-	-	-
Office Expenses	18	21	18	35	35	35	36	37	37	38	39
Other Expenses	32	231	86	229	229	231	235	240	245	250	255
Total Non-labour	329	530	769	504	746	750	765	780	796	812	828

Please also refer to the response to CEC IR 2.16.2.

25.3 Please confirm that HR functions can generally be viewed as fixed functions for periods of time and generally need not have expenses which would be directly related to the growth in the number of customers.

Response:

Please refer to the response to CEC IR 2.16.2.

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1 **26 Reference: CEC 1.68.3**

		Table C4-31: Governance O&M Review (\$ thousands)					
		2010	2011	2012	2013	2013	2013
		Actual	Actual	Actual	Approved	Projection	Base
	Labour	\$ 284	\$ 215	\$ 313	\$ 428	\$ 428	\$ 459
	Non-Labour	2,000	1,816	1,821	1,945	2,062	2,072
	Total O&M	\$ 2,284	\$ 2,031	\$ 2,134	\$ 2,373	\$ 2,490	\$ 2,531

		Table C4-32: Governance O&M Forecast (\$ thousands)				
		2014	2015	2016	2017	2018
		Forecast	Forecast	Forecast	Forecast	Forecast
	Labour	\$ 472	\$ 486	\$ 501	\$ 517	\$ 532
	Non-Labour	\$ 2,219	\$ 2,297	\$ 2,374	\$ 2,515	\$ 2,537
	Total O&M	\$ 2,691	\$ 2,783	\$ 2,875	\$ 3,032	\$ 3,069

26.1 Please confirm that Governance costs are generally regarded as more fixed in nature than they are regarded as necessarily incrementing with customer additions.

Response:

Please refer to the response to CEC IR 2.16.2.

26.2 Please provide a quantitative breakdown of the non-labour costs by type and discuss the degree to which they are directly and linearly related to the addition of customers.

Response:

The table below provides a breakdown of non-labour costs by type.

	2010	2011	2012	2013	2013	2013	2014	2015	2016	2017	2018
	Actual	Actual	Actual	Approved	Projection	Base	Forecast	Forecast	Forecast	Forecast	Forecast
	(\$000's)										
Contracting & Consulting	440	379	413	444	444	445	454	463	473	482	491
Material	-	-	32	-	-	-	-	-	-	-	-
Staff Expenses	11	29	4	17	17	17	17	18	18	18	19
Vehicle Expenses	-	-	2	-	-	-	-	-	-	-	-
Office Expenses	3	4	6	3	3	3	3	3	3	3	3
Other Expenses	1,546	1,404	1,364	1,481	1,598	1,607	1,745	1,813	1,880	2,012	2,024
Total Non-labour	2,000	1,816	1,821	1,945	2,062	2,072	2,219	2,297	2,374	2,515	2,537

Please also refer to the response to CEC IR 2.16.2.

1 27 Reference: CEC 1.69.3

12

Table C4-32: Corporate O&M Review (\$ thousands)

	2010 Actual	2011 Actual	2012 Actual	2013 Approved	2013 Projection	2013 Base
Labour	\$ 2,329	\$ 2,049	\$ 1,459	\$ 1,995	\$ 1,607	\$ 1,722
Non-Labour	1,181	2,435	1,985	2,230	2,193	2,204
Total O&M	\$ 3,510	\$ 4,484	\$ 3,444	\$ 4,225	\$ 3,800	\$ 3,926

2

5

Table C4-35: Board of Directors O&M Review (\$ thousands)

	2010 Actual	2011 Actual	2012 Actual	2013 Approved	2013 Projection	2013 Base
	\$ 289	\$ 268	\$ 241	\$ 275	\$ 245	246
Total O&M	\$ 289	\$ 268	\$ 241	\$ 275	\$ 245	\$ 246

3

26

Table C4-36: Executive O&M Review (\$ thousands)

	2010 Actual	2011 Actual	2012 Actual	2013 Approved	2013 Projection	2013 Base
Labour	\$ 2,329	\$ 2,049	\$ 1,459	\$ 1,995	\$ 1,607	\$ 1,722
Non-Labour	185	245	163	370	223	233
Total O&M	\$ 2,514	\$ 2,294	\$ 1,622	\$ 2,365	\$ 1,830	\$ 1,955

4

29

Table C4-37: Corporate Other O&M Review (\$ thousands)

	2010 Actual	2011 Actual	2012 Actual	2013 Approved	2013 Projection	2013 Base
	(576)	310	(287)	-	-	\$ -
Total O&M	\$ (576)	\$ 310	\$ (287)	\$ -	\$ -	\$ -

5

5

Table C4-38: Corporate O&M Forecast (\$ thousands)

	2014 Forecast	2015 Forecast	2016 Forecast	2017 Forecast	2018 Forecast
Labour	\$ 1,773	\$ 1,826	\$ 1,881	\$ 1,938	\$ 1,996
Non-Labour	2,337	2,454	2,471	2,572	2,625
Pension	(505)	(1,107)	(1,715)	(2,265)	(2,758)
Total O&M	\$ 3,605	\$ 3,173	\$ 2,637	\$ 2,245	\$ 1,863

6

11

Table C4-39: Corporate O&M Forecast by Business Driver (\$ thousands)

	2014 Forecast	2015 Forecast	2016 Forecast	2017 Forecast	2018 Forecast
Fortis Inc. Costs	\$ 1,848	\$ 1,955	\$ 1,963	\$ 2,054	\$ 2,096
Board Costs	251	256	261	266	272
Executive	2,011	2,069	2,128	2,190	2,253
Corporate Other	-	-	-	-	-
Pension	(505)	(1,107)	(1,715)	(2,265)	(2,758)
Total O&M	\$ 3,605	\$ 3,173	\$ 2,637	\$ 2,245	\$ 1,863

7

12

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1 27.1 Please confirm that Corporate O&M costs are generally regarded as more fixed
2 in nature than they are regarded as being directly and linearly driven by customer
3 additions.
4

5 **Response:**

6 Please refer to the response to CEC IR 2.16.2.

7

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1 **PART 2 – CAPITAL**

2 **28 Reference: CEC 1.2.1**

13 This fundamental relationship is true whether under cost of service regulation or under PBR.
 14 O&M and capital are rebased at the conclusion of a PBR to ensure the long term benefits of the
 15 savings go to customers. Customers achieve greater benefits in the long term under PBR than
 16 under traditional cost of service regulation because the PBR effectively delays rebasing to
 17 incent the utility to invest more to achieve new cost savings, efficiencies and/or new revenues.
 18 In the meantime, customers receive benefits through earnings sharing.

3

4 28.1 If on rebasing under a Cost of Service approach the benefits are 100% accrued
 5 to the customers, why would the company suggest that the customers might
 6 achieve greater benefits under a longer term PBR, where the customers would
 7 only get ½ of the benefits for the extended period of time?

8

9 **Response:**

10 This IR has been identified as relating to the PBR Methodology and will be submitted with the
 11 PBR Methodology IR responses.

12

13

14

15 28.2 Please provide a mathematical example of how the delayed rebasing would
 16 provide a benefit to customers in regard to an equivalent project under cost of
 17 service regulation and under PBR regulation.

18

19 **Response:**

20 This IR has been identified as relating to the PBR Methodology and will be submitted with the
 21 PBR Methodology IR responses.

22

23

24

25 28.3 Please confirm that what the company is posing as a proposition is that an
 26 extended PBR period in which the company is sharing in ½ of the savings, will
 27 provide the company an incentive to do more to generate savings and it is the
 28 customers ½ of those additional savings the company is suggesting would be
 29 greater benefits than the customers would otherwise receive.

30

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1 **Response:**

- 2 This IR has been identified as relating to the PBR Methodology and will be submitted with the
- 3 PBR Methodology IR responses.

4

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1 **29 Reference: CEC 1.3.2**

Years	Gross Loaded Expenditure (Without COR)		Variance Over / (Under)	Remarks
	Budget	Actual		
2007	133,660	143,742	10,082	Primarily due to the Kettle Valley Project escalation (\$9M)
2008	124,934	111,579	(13,355)	Primarily delayed CPCN Approvals (OTR-\$10M, Benvoulin - \$5M)
2009	129,465	112,723	(16,742)	Primarily low customer activity (\$8M) & Market driven savings in OTR Project (\$9M)
2010	167,416	142,038	(25,378)	Primarily low customer activity (\$3M) & Market driven savings in OTR (\$19M) & Benvouline (\$2M) Projects
2011	93,507	88,365	(5,142)	Primarily low customer activity (\$5M)
2012	87,368	64,680	(22,688)	Rescheduled of projects mainly due to delayed BCUC decision, scope optimization and lower customer activity

2

3 29.1 Please explain whether or not the above budget and actual costs are for gross
4 capital expenditures and not for the rate setting impact of the capital
5 expenditures differences from amounts approved to be in rates.

6

7 **Response:**

8 The expenditures are for the annual gross capital expenditures, the rate setting impact of the
9 actual capital expenditures is determined by the changes to work in progress, plant retirements,
10 and any reclassification of expenditures as directed or approved by the Commission. A
11 summary of the net additions to plant in service for the years 2007 – 2012 are provided in the
12 table below:

	Net Additions to Plant in Service
2007	118,150
2008	103,387
2009	108,019
2010	130,141
2011	128,214
2012	58,074

13

14

15

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29.2 Please provide the amount of the difference in impact on rate setting that was available to be shared in regard to each of the years above and show the rate impact.

Response:

Please note that for the simplistic analysis shown in the Table below, the Capital variance is considered to be the net Plant Variance (ignoring the timing difference of Expenditure and Additions to Plant and Asset Retirements).

The Table below calculates, on a very high level basis, the impact on Customer Rates only for the variance amount between the Approved & Actual capital expenditure levels.

The calculation in the Table, as requested above, provides the following:

- Incremental Equity Earnings;
- ROE Incentive Sharing (assumed at 50 percent);
- Overall Yearly Revenue Impact; and
- Overall Yearly customer Rate Impact.

Please note that the Rate Impacts would have been higher if Actual Net Plant Additions matched the Approved levels, considering 50 percent ROE Incentive Sharing during 2007-2011.

The assumptions used are also listed below.

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Revenue & Rate Impact Calculation:	2007	2008	2009	2010	2011	2012
Capital Expenditure per Approved	133,660	124,934	129,465	167,416	93,507	87,368
Capital Expenditure Actual	143,742	111,579	112,723	142,038	88,365	64,680
Capital Variance	(10,082)	13,355	16,742	25,378	5,142	22,688
Capital Addition Variance January-1	-	(10,082)	3,575	20,219	44,997	48,777
Net Capital Variance	(10,082)	13,355	16,742	25,378	5,142	22,688
Less Depreciation Variance	-	302	(98)	(600)	(1,362)	(1,516)
Capital Addition Variance December 31	(10,082)	3,575	20,219	44,997	48,777	69,949
Mean (Mid Year) Depreciated Capital Variance	(5,041)	(3,253)	11,897	32,608	46,887	59,363
Cost of Equity Variance	(177)	(117)	422	1,291	1,857	2,351
Incentive (Equity) Sharing Variance with Custom	88	59	(211)	(646)	(928)	-
Cost of Debt Variance	(193)	(126)	475	1,252	1,731	2,110
Depreciation Variance	-	(302)	98	600	1,362	1,516
Income Tax Variance	163	(54)	(289)	(535)	(473)	(187)
Incremental Revenue Impact	(118)	(541)	495	1,963	3,547	5,790
Approved Revenue	207,867	220,950	234,763	259,274	278,783	287,445
Yearly Rate Impact Variance	-0.1%	-0.2%	0.2%	0.8%	1.3%	2.0%

General Assumptions:	2007	2008	2009	2010	2011	2012
Equity Ratio	40.00%	40.00%	40.00%	40.00%	40.00%	40.00%
Debt Ratio	60.00%	60.00%	60.00%	60.00%	60.00%	60.00%
ROE	8.77%	9.02%	8.87%	9.90%	9.90%	9.90%
Average Debt Rate	6.38%	6.45%	6.65%	6.40%	6.15%	5.92%
Depreciation Rate	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Income Tax Rate	34.12%	31.00%	30.00%	28.50%	26.50%	25.00%
CCA Rate	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%

11 FBC's forecast of capital cost is based on the AACE International Recommended Practice No.
12 18R-97 with AACE Class 3 estimates provided for 2014 - 2015 projects and programs and
13 AACE Class 4 estimates for 2016 - 2018 projects and programs.

29.3 Please confirm that for Class 4 estimates there is considerably more variability expected than for Class 3 estimates.



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- 1
- 2 **Response:**
- 3 Confirmed.
- 4

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1 **30 Reference: CEC 1.4.2**

20 Confirmed. The Company had considered PBR as the best possibility for achieving further
21 efficiencies over and above its standard focus on productivity and past experience with PBR.
22 The Commission's April 18, 2013 '2014 Revenue Requirements Application-Performance Based
23 Rate Setting Environment' letter also placed focus on PBR. It requested FBC to:

2

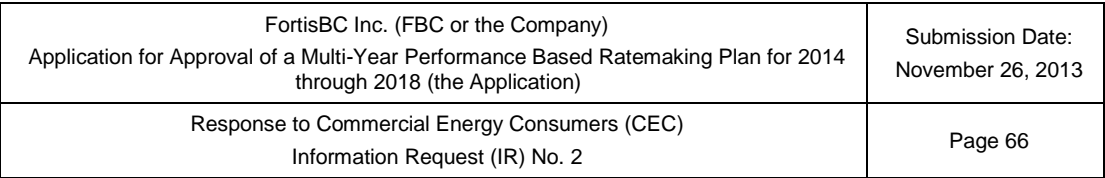
3 30.1 Please confirm that with regard to the company's incentive to invest being limited
4 as a result of the short period of time until rebasing occurs under the Cost of
5 Service regulation approach, that if the company has a deferral account in which
6 to keep costs of efficiency improvement projects for later recovery in customer
7 rates that there would be no limitation on the company earning a return on any
8 investment required at any time independent of the form of regulation.

9

10 **Response:**

11 This IR has been identified as relating to the PBR Methodology and will be submitted with the
12 PBR Methodology IR responses.

13



12.1. Please confirm that the AMI CPCN has recently been approved with a capital budget of \$50.898 million including approved development costs and contingency as a control budget.

9 Confirmed.

31.1 Please confirm that while the CPCN will not be included in the capital plans while it is in progress once the project is complete and achieving benefits the company would expect to include the AMI costs in operating budgets and any new capital requirements, non CPCN, would be included in the capital planning.

Response:

Confirmed. As illustrated in Table B6-5 from the Application (Exhibit B-1), FBC has proposed to track the O&M impact related to AMI outside of the PBR formula for the 2014 – 2018 period. The forecast O&M impact related to AMI includes the new AMI operating costs offset by O&M reductions related to the elimination of the manual meter reading process, reduced meter compliance exchange requirements, and a reduction in contact centre O&M expenditures. The IT capital sustainment requirements related to AMI are also proposed to be tracked outside of the formulaic PBR capital as illustrated in Table B6-7 (Exhibit B-1).

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1 **32 Reference: CEC 1.21.1**

7 The proposed PBR mechanism filed by FBC as part of the 2006 Revenue Requirements
8 Application included a proposal for capital expenditures to be approved as part of a separate
9 annual filing (a capital expenditure plan) or by way of a CPCN application. This proposal was
10 made in response to the following:

- 11 • Stakeholder concern around a lack of transparency regarding the nature of capital
12 expenditures during the previous PBR term;
- 13 • Concern that linking capital expenditures to a PBR mechanism could produce an
14 incentive to reduce costs, potentially resulting in suboptimal reinvestment in new plant.
15 It was recognized that capital expenditures needed to increase and that a PBR formula
16 could actually incent the opposite behavior and cause the Company to decrease capital
17 expenditures; and
- 18 • Concern that formula-driven capital expenditures under a PBR mechanism would not
19 support the required levels of capital investment for the PBR period as indicated by
20 FBC's 2005 – 2025 System Development Plan (2005 SDP). The 2005 SDP
21 demonstrated that capital expenditures needed to be dramatically increased from
22 historic levels in order to improve system capacity, reliability and safety.
- 23 FBC's proposal to exclude capital expenditures from the 2007 – 2011 PBR mechanism was
24 ultimately accepted and approved by the Commission.

2

3 32.1 Please indicate for each issue raised in the previous PBR and cited above
4 whether or not FBC can explain why the concern should not still be a concern
5 and if so please provide the explanation.

6

7 **Response:**

8 With respect to the first concern identified, FBC submits that the annual review process used
9 during the previous 2007 – 2011 PBR term, which included significant discussion and
10 examination of capital expenditures made, was successful in providing stakeholders with
11 sufficient visibility regarding the nature of the capital expenditures incurred. FBC has proposed
12 to continue with the annual review process for the 2014 – 2018 PBR period, which will include a
13 review of capital expenditures incurred under the PBR formula as well as expenditures for major
14 projects approved outside of the PBR formula.

15 With respect to the second concern identified, it is important to note the circumstances that
16 existed prior to the beginning of the previous PBR term. Specifically, system reliability, which is
17 a primary customer satisfaction issue, was decreasing as a result of underinvestment in existing
18 infrastructure. It was recognized that increased capital investment would be required to
19 increase system capacity and improve system reliability. Since the previous PBR term, and as

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1 a result of the capital investments made, overall system reliability and customer satisfaction
2 have improved. FBC believes the level of capital sustainment provided by the proposed PBR
3 formula for the 2014 – 2018 period will ensure that existing levels of system reliability continue
4 to be maintained while also allowing the Company sufficient flexibility to prioritize sustainment
5 expenditures and continue to look for efficiencies for the long term benefit of customers.

6 With respect to the third concern identified, since the commencement of the previous PBR term
7 FBC has made significant investments in infrastructure to meet load and improve reliability. As
8 noted above, FBC believes the capital sustainment expenditures as determined by the 2013
9 Base Capital and the proposed PBR formula will ensure that existing levels of system reliability
10 will continue to be maintained. Approval for incremental expenditures related to large one-time
11 projects will continue to be sought outside of the PBR formula.

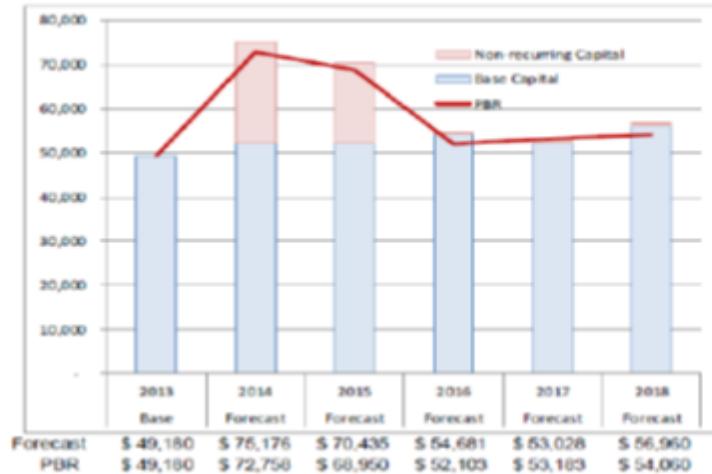
12
13
14
15 32.2 Please indicate whether or not if the concerns are still expressed in this
16 proceeding that the FBC would find it acceptable to carve out the capital portion
17 of the application and it would still want to proceed with the O&M portion.
18

19 **Response:**

20 Although FBC would comply with a Commission determination to exclude sustainment capital
21 expenditures from the PBR formula, the Company does not believe such a determination is
22 warranted, as the concerns noted in the question are not applicable given the proposed
23 structure of the PBR. As well, the Company notes that excluding capital would effectively
24 decrease the regulatory efficiencies associated with the current proposal as FBC would be
25 required to submit annual capital expenditure plans for review and approval. Further, as noted
26 in Figure B6-3 of the Application (Exhibit B-1), capital expenditures under the proposed PBR
27 mechanism are lower than the capital expenditure forecast by approximately 3.1 percent.

28 Please refer to the response to CEC IR 2.32.1 for a discussion regarding the applicability of the
29 concerns identified in the preamble to the current PBR proposal for the 2014 – 2018 period.

1



2

Confirmed. The rate setting impact is a result of the net additions to plant in service which is comprised of the gross capital expenditures as adjusted for changes to work in progress, plant retirements, and any reclassification of expenditures as directed or approved by the Commission.

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1 **34 Reference: CEC 1.32.2**

17 The PBR formula yields approximately \$9.2 million less in capital expenditures as compared to
18 the forecast, a portion of which (\$6.3 million) is related to the absorption of future capital
19 expenditures driven by the addition of the utility assets formerly owned by the City of Kelowna.

2

3 34.1 Please provide the historical 2007 to 2013 period capital approved versus capital
4 expenditures actual without the CPCN projects and any variances related to
5 those projects as indicated in the response to CEC 1.3.2.

6

7 **Response:**

8 The table below provides variance and variance explanation between approved capital budget
9 and actual expenditures excluding CPCN projects.

Years	Gross Loaded Expenditure (Without COR, CPCN)		Variance Over / (Under)	Remarks
	Budget	Actual		
2007	81,440	95,785	14,345	Primarily due to delayed 2006 spending carry-over to 2007 and higher than anticipated customer activity
2008	66,957	74,656	7,699	Primarily due to delayed 2007 spending carry-over to 2008 and higher than anticipated customer activity
2009	86,764	71,797	(14,967)	Primarily due to delayed 2009 spending carry-over to 2010 and lower than anticipated customer activity
2010	75,312	69,799	(5,513)	Primarily lower than anticipated customer activity
2011	63,068	60,298	(2,770)	Primarily lower than anticipated customer activity
2012	81,711	58,219	(23,492)	Rescheduled projects mainly due to delayed BCUC decision, scope optimization and lower customer activity
2013	83,922	64,585	(19,337)	Primarily carry-over project spending due to the labour dispute between FBC And IBEW employees

10

11

12

13

14 34.2 Please compare the average annual differences historically to the anticipated
15 differences between the FBC forecast for capital and its proposed PBR
16 estimates.

17

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1 **Response:**

2 Based on the information provided in response to CEC 2.34.1 above, average annual actual
3 expenditures (2007 – 2012) are \$4.1 million less than approved.

4 Based on the information in Figure B6-3 (Exhibit B-1-6), average annual PBR formula capital
5 expenditures (2014-2018) are \$1.84 million less than forecast capital expenditures. FBC
6 submits that a comparison between these variances is inappropriate as they are not measuring
7 the same thing. The historical variances are variances between forecasts and actuals and are
8 the result of a number of factors, including the timing of expenditures, changes in customer and
9 load growth, and successful efforts by FBC to reduce material and contractor costs. The
10 forecast variances between the capital expenditures determined under the PBR formula and the
11 forecast capital expenditures do not reflect the possible impact of these factors, but rather
12 reflect the formulaic application of the 2013 Base Capital and stretch factors in the proposed
13 PBR plan.

14

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1 **35 Reference: CEC 1.71.1**

	2013 Base	2014 Forecast	2015 Forecast	2016 Forecast	2017 Forecast	2018 Forecast
Sustainment Capital						
Generation	2,468	3,155	2,940	2,944	3,010	2,847
Transmission, Station & Telecommunications	8,359	16,171	9,821	9,480	11,073	11,520
Less PCB Project		(6,062)	-	-	-	-
Distribution	9,220	11,827	12,092	14,164	14,248	14,503
Total Sustainment Capital	20,047	25,091	24,854	26,587	28,331	28,869
Growth Capital						
Transmission, Station & Telecommunications	332	3,187	3,190	-	293	2,928
Distribution	20,306	15,102	14,732	15,589	15,764	16,916
Total Growth Capital	20,638	18,289	17,922	15,589	16,057	19,844
Other Capital						
Information Systems	4,271	5,290	6,134	5,791	5,747	5,721
Vehicles	2,360	1,948	1,783	1,749	1,907	1,945
Meters Changes	369	-	71	109	114	118
Telecommunications	166	156	159	162	166	169
Buildings	803	1,044	912	942	961	980
Furniture & Fixtures	110	260	531	87	88	90
Tools	416	494	504	514	524	535
Okanagan Long Term Solution	-	120	122	3,800	-	-
Advanced Metering Infrastructure	-	16,765	18,233	583	741	604
Less Okanagan Long Term Solution		(120)	(122)	(3,800)	-	-
Less Advanced Metering Infrastructure		(16,468)	(17,660)	-	-	-
Total Other Capital	8,495	9,490	10,666	9,938	10,247	10,162
Pension Adjustments	-	(345)	(789)	(1,233)	(1,608)	(1,915)
Total Gross Capital Expenditures	49,180	52,525	52,652	50,881	53,028	56,960

2

3 35.1 Please explain why the pension adjustment is required.

4

5 **Response:**

6 The pension adjustment is why the proposed 2014 Plan formula includes the exogenous
7 factors. Pension costs are in effect non-controllable by the Company, and are driven by
8 changes in the general market place as discussed in the Application section B-6. Further as
9 discussed on page 181 of the Application "FBC is forecasting pension expense to decrease
10 over the 2014 – 2018 test period, which will reduce the labour component of capital
11 expenditures."

12

13

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35.2 Please provide the amount for pension and OPBE included in all of the capital if it is different from the pension adjustment.

Response:

The pension adjustment provided in the table in the preamble to the question is representative of the estimated change in pension and OPEB expense amount that is allocated to capital on a year over year basis. For further information on the forecasted amount of Pension & OPEB expense expected to be allocated to capital in 2014 to 2018, Table C4-3 on page 117 of the 2014-2018 PBR Filing provided those amounts.

Table C4-3: Pension and OPEB Capital and O&M Forecasts (\$thousands)

	2013 Base	2014 Forecast	2015 Forecast	2016 Forecast	2017 Forecast	2018 Forecast
Pension & OPEB expense	12,962	12,299	11,445	10,591	9,870	9,280
Pension & OPEB expense allocated to capital	6,740	6,395	5,951	5,507	5,132	4,825
Pension & OPEB expense allocated to O&M	6,222	5,904	5,494	5,084	4,738	4,454

In addition, since pension and OPEB expense are driven by factors other than customer numbers or efficiency factors, the total pension and OPEB expense forecast to be allocated to the capital provided in the pre-amble to this question, has been tracked outside the Formulaic Capital on line 17 of Table B6-7 on page 58 of the 2014-2018 PBR Filing. Since the pension and OPEB expense will be reforecast each year as part of the Annual Review process, the total expected amount allocated to capital has been isolated.

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1

Table B6-7: PBR Capital Formula Inputs and 5-Year Forecasts

Line No.	Particulars	2013 Base (1)	2014 Formula (2)	2015 Formula (3)	2016 Formula (4)	2017 Formula (5)	2018 Formula (6)
1	2013 Base Capital (\$000)	\$ 49,180					
2	Less Capital Tracked Outside of Formula						
3	Pension/OPEB (Capital portion)	(6,741)					
4		42,439					
5							
6	Average Number of Customers	128,796	129,770	130,922	132,142	133,385	134,687
7	% Change in Customers		0.76%	0.89%	0.93%	0.94%	0.98%
8							
9	Composite I-Factor		2.31%	2.42%	2.34%	2.36%	2.30%
10							
11	Productivity X-Factor		0.50%	0.50%	0.50%	0.50%	0.50%
12							
13	I-X Mechanism (1+I-X)		101.81%	101.92%	101.84%	101.86%	101.80%
14							
15	Net Inflation Factor ((1 + Line 7) * Line 13)		102.58%	102.82%	102.79%	102.82%	102.79%
16							
15	Formulaic Capital (Line 15 * Prior Year)		43,534	44,764	46,012	47,309	48,630
16	Add: Capital Tracked Outside of Formula						
17	Pension/OPEB (Capital portion)	6,741	6,396	5,952	5,508	5,133	4,826
18	PCB Compliance - Substations		6,062				
19	Advanced Metering Infrastructure Project		16,765	18,233	583	741	604
20							
21	Total Capital Under PBR		72,758	68,950	52,103	53,183	54,060

2

3

4

5

6 35.3 Are any of the transmission, station and telecommunication expenditures for
7 growth capital related to the AMI project?

8

9 **Response:**

10 No expenditures related to AMI are included in the transmission, station and telecommunication
11 expenditures for growth capital.

12

13

14

15

16 35.4 Please explain what the transmission, station and telecommunications
17 expenditures and why they are so significantly lumpy.

18

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1 **Response:**

- 2 The table provided below details the proposed projects and programs associated with the
3 transmission, station and telecommunication expenditures.

Sustainment	2014	2015	2016	2017	2018
19/29 Line Reconfiguration	862	-	-	-	-
DGB 138kV Breaker (CB13) and VT Addition	-	-	-	744	-
Osoyoos 63Kv Breaker Addition	137	649	-	-	-
38 Line Lake Crossing Assessment and Reh	-	724	-	-	-
Minimum Oil Circuit Breaker Replacement	-	-	-	976	996
Ground Grids Upgrades	645	-	631	-	657
Bulk Oil Breaker Replacement	-	188	574	460	363
Oil Containment	-	198	377	767	354
Transmission Line Condition Assessment	684	284	363	496	378
Transmission Line Rehabilitation	4,040	3,877	2,870	2,206	2,742
Transmission Line Urgent Repairs	375	410	405	443	420
Transmission Line ROW Easements	357	393	400	402	410
PCB Compliance	6,062	-	-	-	-
Station Urgent Repairs	584	625	607	668	643
Station Assessment/Minor Planned Projects	1,131	1,154	1,177	1,200	1,224
Distribution Transformer Replacements	-	-	-	592	2,048
Station Smart Device Upgrades	264	270	275	280	286
Backbone Transport Technology Migration	-	-	842	859	-
Communications Upgrades	430	438	336	342	350
SCADA & MRS Systems Sustainment	600	612	625	637	650
Total	16,171	9,821	9,480	11,073	11,520
Growth	2,014	2,015	2,016	2,017	2,018
42L Meshed Operation Between Huth and Oliver	135	-	-	-	-
Voltage Support in South Okanagan/Boundary during contingency conditions	489	768	-	-	-
GLE LV Bus Capacity Upgrade	-	-	-	293	-
Huth 8 Kv Transformer Upgrade	1,280	1,486	-	-	-
Reconductor 52 Line & 53 Line	-	-	-	-	676
Spall Breaker House Reconfiguration	1,283	-	-	-	-
Summerland Substation Transformer Upgrade	-	-	-	-	2,252
Saucier Substation Protection and Metering Upgrade	-	936	-	-	-
Total	3,187	3,190	-	293	2,928

- 4
5 The expenditure profiles for the sustainment projects are “lumpy” primarily due to the following:

- 6 • Non-recurring expenditures related to the 19/29 Line Reconfiguration, DGB 138 kV
7 Breaker and VT Addition, Osoyoos 63 kV Breaker Addition, 38 Line Lake Crossing
8 Assessment and Rehabilitation, PCB Compliance, and the Backbone Transport
9 Technology Migration.

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- 1 • New sustainment programs related to the Minimum Oil Circuit Breaker Replacement and
2 the Distribution Transformer Replacement.
- 3 Growth expenditures tend to be “lumpy” as they are driven by larger, one-time projects, the
4 timing of which is based on the results of transmission or distribution studies.
- 5

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1 **PART 3 – OTHER ISSUES**

2 **36 Reference: Exhibit B-10, CEC 1.1.4 Question and Response**

3 1.4. Please provide a quantitative baseline analysis of efficiency for the regulatory
4 process, with all appropriate metrics defined, and provide the FBC expectation
5 for a more efficient regulatory process in quantitative terms consistent with the
6 baseline analysis.
7

27 1. Savings of incremental costs associated with avoided annual or bi-annual rate hearings.
28 These could save customers approximately \$0.5 million to \$2.0 million annually. In total
29 over the proposed five year term of the PBR, this would equate to approximately \$2.5
30 million to \$10.0 million. These incremental costs associated with lawyers, consultants,
31 experts, Commission, intervener and hearing venue costs are deferred and amortized
32 into customer rates as hearing costs; and

5 36.1 Please provide the appropriate baseline figure for which regulatory efficiencies
6 can be measured as occurring as a result of measures the company undertakes
7 to enhance productivity under PBR.
8

9 **Response:**

10 FBC's response to CEC IR 1.1.4 referred to the potential cost savings under PBR compared to
11 future costs if under cost of service. FBC is not claiming that costs will be lower than they have
12 been in the past; therefore it is not possible to identify a "baseline" cost for comparison. FBC
13 captures incremental costs related to regulatory proceedings in a deferral account precisely
14 because it has limited or no control over regulatory timetables or many other factors that drive
15 regulatory costs. Regulatory processes are becoming lengthier, more detailed, and more costly
16 as a general rule, compared to historical experience. For example, comparing the Company's
17 2005 Revenue Requirements, Resource Plan and System Development Plan application with
18 the 2012-2013 Revenue Requirements and 2012 Integrated System Plan (applications of
19 relatively similar scope), the number of Information Requests in 2012 was nearly double that in
20 2005 and as an example of costs, Intervener PACA awards increased from \$98 thousand in
21 2005 to \$243 thousand in 2012. Total time from filing to decision was 187 days in 2005
22 compared to 417 in 2011/12. FBC does not observe any moderation in the trend towards
23 longer, more involved and more costly regulatory proceedings. The current proceeding, which
24 FBC considers to have a more limited scope than the 2012-2013 RRA, has 1,258 IRs more than
25 the 2012-2013 proceeding in addition to 715 IRs on the PBR Methodology, an estimated \$400
26 thousand in PACA costs, and a decision in this Application will likely not be completed in under
27 one year following filing.

28 In addition, while there are expected to be (non-quantifiable) efficiencies compared to cost of
29 service regulation for revenue requirements and capital plan applications under PBR, for all

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other types of applications there will be no difference between cost of service and PBR. These applications include CPCNs, cost of capital, financing, energy supply, resource planning and other types.

Furthermore, FBC and other utilities are also required to participate in regulatory proceedings initiated by the Commission or other parties. The Company has no control over the nature, timing, or scope of these proceedings, recent examples of which are:

- 2011 Residential Conservation Rate (RIB) – directed by the Commission;
- 2012 Generic Cost of Capital Stage 1 – Commission proceeding;
- 2012 Inquiry into Mandatory Reliability Standards – Commission proceeding;
- 2012 Kettle Valley Expenditure Review – Commission proceeding;
- 2013 Generic Cost of Capital Stage 2 – Commission proceeding;
- 2013 City of Kelowna Phase 2 – Intervener-driven proceeding ;
- 2013 Transmission Customer Stepped Rates – directed by the Commission; and
- 2013 AMI Radio-Off Meter Option – directed by the Commission.

Because FBC captures the incremental costs of regulatory proceedings in deferral accounts, rather than attempting to forecast these non-controllable costs in O&M expense, only actual and necessary costs are recovered through rates. There is no need, therefore, to attempt to establish a baseline amount for regulatory proceedings.

36.1.1 If not provided, please confirm that FortisBC does not have a baseline measure for establishing the base cost of its regulatory burden from which regulatory efficiency savings should be measured.

Response:

Confirmed. Please refer to the response to CEC IR 2.36.1.

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36.2 Please confirm that the reduction in incremental costs of \$2.5 to \$10 million is directly due to the transition to PBR over the 5 year term and do not represent a productivity improvement.

Response:

FBC confirms that these costs represent a reduction in the number and scope of regulatory proceedings under PBR as compared to a cost of service regime, rather than resulting from the use of fewer resources for the same scope of work. The efficiency of regulatory processes is largely out of the control of FBC, as the scope of the regulatory review and the number of IRs are determined by the Commission and customer groups. Even in a PBR regime, there is potential for costs to be significant, depending on the scope of Annual Reviews and associated reporting requirements.

The regulatory efficiency benefit of a PBR Plan helps utility staff shift their focus from regulatory proceedings to finding productivity opportunities. The finding of productivity improvements is within FBC's control.

36.2.1 If not, please explain why not.

Response:

Please refer to the response to CEC IR2.36.2.

36.3 Please identify the means by which FBC determined that there could be annual savings of \$0.5 million to \$2.0 million in incremental savings due to PBR.

Response:

FBC estimated that the costs of annual or biannual applications for revenue requirements and capital expenditure plans may lie within that range, depending on the nature and scope of the proceedings and the type of review process ordered, given the factors discussed in the

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1 response to CEC IR 2.36.1.

2

3

4

5 36.4 Please elaborate on why the annual costs of the rate hearings ranges by a factor
6 of 4, from \$0.5 million to \$2.0 million

7

8 **Response:**

9 Please refer to the response to CEC IR 2.36.3.

10

11

12

13 36.5 Please provide the incremental regulatory costs for each of the rate hearings for
14 the last 10 years, including those years under PBR.

15

16 **Response:**

17 The information requested is provided below.

Proceeding	Cost (\$000s)	PBR
2014-2018 PBR Plan	(est) 1,200	N
2012-2013 Revenue Requirements and Integrated System Plan	2,405	N
2011 Revenue Requirements	71	Y
2010 Revenue Requirements	75	Y
2009 Revenue Requirements and PBR Review	43	Y
2008 Revenue Requirements	39	Y
2007 Revenue Requirements	37	Y
2006 Revenue Requirements and PBR Application	161	N
2005 Revenue Requirements, System Development Plan and Resource Plan	705	N

18

19

20

21

22 36.6 Based on the process and schedule as established by the Commission, what
23 does FBC predict the total approval process for the PBR application will cost?

24

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1 **Response:**

2 FBC estimates the total cost for the 2014-218 PBR application to be \$1.2 million (before tax
3 effect).

4

5

6

7

8 36.7 How many rate or other hearings does FBC predict will be avoided by adopting
9 the proposed PBR process, assuming a 5 year term.

10

11 **Response:**

12 FBC expects that, absent a PBR Plan, the Company would file either annual or biannual
13 applications for revenue requirements and capital expenditures during the 2014-2018 period.
14 Under the proposed PBR Plan, these applications will be replaced by the Annual Reviews and
15 Mid-Term PBR Review. Other types of applications will be the same in terms of filing
16 requirements and review processes whether under cost of service or PBR.

17

18

19

20

21 36.7.1 Please specify when FBC predicts that the avoided rate hearings would
22 otherwise be required.

23

24 **Response:**

25 Please refer to the response to CEC IR 2.36.7. Under cost-of-service, FBC would determine
26 the timing of applications closer to the time of filing, as those decisions would necessarily be
27 made in consideration of the circumstances facing the Company at the time.

28

29

30

31 36.8 Please provide an estimate of the number and types of hearings related to
32 regulatory oversight that will be required under PBR that would not be required
33 under a cost of service approach and identify when they will occur.

34

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1 **Response:**

2 Please refer to the responses to CEC IRs 2.36.6 and 2.36.7.

3

4

5

6 36.9 Please fill in or revise as appropriate the following tables with information
7 comparing the types of hearings and predicted costs under PBR and cost of
8 service:

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1

YEAR	2013	2014	2015	2016	2017	2018	2019
Regulatory Process for PBR	Application for PBR	Application for PBR	Annual Review	Midterm Review	Annual Review	Annual Review	Rev Req't
Topic/ Purpose	Establish mechanism, establish baseline, establish 5 year forecast		Flow through items including interest expense; return on equity and capital structure; SQIs, power purchase expense; off ramps				
Format	Written and oral hearing	Written and oral hearing	Written hearing & w'kshop		Written hearing & w'kshop	Written hearing & w'shop	Written hearing & workshop
No of Days							
Estimated Cost							
CPCNs (est cost based on historical avg)	Estimated cost	Estimate	Estimate	Est.	Est.	Est.	Est.
Other (specify) Est. cost based on historical avg.	Estimated cost	Estimate	Estimate	Est.	Est.	Est.	Est.
Total Cumulative Regulatory Cost under PBR							

2

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YEAR	2013	2014	2015	2016	2017	2018	2019
Regulatory Process for Cost of Service		Revenue Req't		Revenue Req't		Rev. Req't	
Topic/Purpose		Establish 2 year forecast		Establish 2 year forecast			
Format							
No. of Days							
Estimated Cost							
CPCNs(est cost based on historical avg)	Estimated cost	Estimate	Estimate	Estimate	Est.	Est.	Est.
Other (specify) Est. cost based on historical avg.	Estimated cost	Estimate	Estimate	Estimate	Est.	Est.	Est.
Total Cumulative Regulatory Cost under Cost of Service							

1

2 **Response:**

3 FBC anticipates the following applications during the PBR Period (amounts in thousands).

Year	Proceeding	Type	Cost Estimate
2013-2014	2014-2018 PBR Plan	Written/Oral Hearing	\$1,200
2014	2014 Annual Review	Workshop/Written Hearing	\$150 (prelim)
2015	2015 MidTerm Review	Workshop/Written Hearing	n/a
2016	2016 Annual Review	Workshop/Written Hearing	n/a
2017	2017 Annual Review	Workshop/Written Hearing	n/a
2018	2019 Revenue Requirements	To be determined	n/a

4

5 FBC expects the costs of the Annual Reviews to be higher than its Annual Reviews under the
6 previous PBR Plan for the reasons discussed in the response to CEC IR 2.36.1. FBC has not
7 developed estimates of regulatory proceedings beyond 2014. Please refer to the response to

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1 CEC IR 2.36.1 for a discussion of revenue requirements application costs under PBR versus
2 cost of service.

3 The following applications are unaffected by the presence of a PBR Plan versus cost of service.

Year	Proceeding	Type	Cost Estimate
2013	Kootenay Long Term Facilities Strategy CPCN	Written Hearing	\$100
2015	Ruckles Substation Upgrade CPCN	Written Hearing	n/a
2015	Upper Bonnington Unit 1,2,4 Refurbishment CPCN	Written Hearing	n/a
2016	Grand Forks Transformer Addition CPCN	Written Hearing	n/a
2016	Corra Linn Spillway Concrete and Spill Gate Rehabilitation CPCN	Written Hearing	n/a
2017	New Central Okanagan Station CPCN	Written Hearing	n/a
2017	Kelowna Bulk Transformer Capacity Addition CPCN	Written Hearing	n/a
Tbd	Grand Forks to Warfield Fibre Installations CPCN	Written Hearing	n/a
2017	Cost of Service Analysis	Written/Oral Hearing	n/a

4

5 FBC has not developed estimates of regulatory proceedings beyond 2014.

6

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1 **37 Reference: Exhibit B-10, CEC 1.1.4**

33 2. There are indirect costs associated with the amount of effort within the Company
34 directed to managing the regulatory process, rather than being able to focus on
35 managing the Company. Many dozens of people within the Company are affected by
36 the regulatory process, performing that work in addition to their main work. Allowing

1 these employees to focus more attention on operating the business will assist the
2 Company with identifying efficiencies and with achieving other improvements in
3 operations without incurring additional costs for additional resources.

4 37.1 Please confirm that the primary savings as a result of the reduced regulatory
5 burden will accrue to the Finance and Regulatory department or explain
6 otherwise.

7
8 **Response:**

9 Not confirmed. There is virtually no functional area of the Company that is not engaged in
10 regulatory processes related to revenue requirements and capital plans, and certain
11 departments are also instrumental in preparing and supporting other types of applications (such
12 as energy supply, rate design and CPCN, for example).

13 The time requirements for FBC employees involved in regulatory processes are in addition to
14 their core responsibilities, such that employees from virtually every department are required to
15 work significant amounts of unpaid overtime, since the majority are M&E employees are not
16 entitled to pay for overtime. Because the regulatory process typically requires very intensive
17 efforts over condensed time periods, it is not cost-effective to increase staffing levels to avoid
18 this necessary overtime. FBC refers to these incremental efforts of employees as indirect costs,
19 and for that reason FBC does not track the time of employees supporting regulatory application
20 processes. A reduced regulatory burden reduces the amount of unpaid overtime for those
21 employees and does not impact O&M Expense.

22
23
24
25 37.2 Please confirm, or otherwise explain that it is FortisBC's position that managing
26 the regulatory process under cost of service results in significant wasted time and
27 effort.

28
29 **Response:**

30 Not confirmed, this is not FBC's position. Cost of service reviews are necessary from time to
31 time in order to facilitate a thorough review of the utility's operations and cost structure, and to
32 allow for rebasing of costs prior to embarking on a PBR Plan. FBC believes (as indeed does

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the Commission in light of its letter of April 18, 2013 directing the Company to file a PBR proposal) that PBR plans generate significant benefits to the utility's customers in addition to shareholders, as compared to frequent cost of service-based applications. FBC does not believe that cost of service regulation is the more efficient process in every circumstance and has proposed a PBR Plan for a limited period, 2014 through 2018. The Company expects that at the termination of this PBR Plan, a cost of service revenue requirements application would follow.

37.2.1 If so, please explain with examples what effort is wasted, and particularly address if, in addressing most information requests from interveners and the Commission, FortisBC already has and uses the information in managing the company, or if FortisBC finds the information requested to be of limited value to them in managing the company efficiently.

Response:

Please refer to the response to CEC IR 2.37.2.

37.3 Please identify the key departments which are affected by 'managing the regulatory process rather than being able to focus on managing the company'.

Response:

Please refer to the response to CEC IR 2.37.1.

37.3.1 Please detail the differences in the regulatory burden afforded to workers under the PBR approach and under a cost of service approach.

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1 **Response:**

2 The main differences in the regulatory activities under the PBR approach and under cost of
3 service relates to the amount of effort required to document and explain the utility's operational
4 and financial details in a manner that is appropriate to the regulatory process and can be
5 understood by non-professionals and others who are unfamiliar with the industry and the
6 company. Although the underlying planning and management of the utility is no different under
7 the two approaches, the application format, the IR response requirements, and in particular the
8 requirements of an oral hearing are all incremental to the internal management needs.

9 A PBR Plan reduces the amount of detail that is required to be included in an application,
10 compared to cost of service. For example, the O&M and capital components in the Annual
11 Review process will be determined by formula and therefore will not attract detailed scrutiny
12 (except for a review of the forecast amounts for the approved formula drivers). Only the
13 remaining items, which are primarily non-controllable and subject to deferral mechanisms, will
14 be reviewed. This is in contrast with a cost of service application, where detailed analysis of the
15 O&M and capital is required.

16 One obvious indicator of the different intensities of an Annual Review process versus a full cost
17 of service revenue requirements application is the amount of time elapsed for approval of the
18 application. Under its previous PBR Plan, FBC typically filed is revenue requirements materials
19 in October for the upcoming year, and received approval prior to year end. In contrast, the
20 elapsed time from filing to approval in the Application is certain to be close to one year, and the
21 2012-2013 application, although somewhat broader in scope, required more than 13 months
22 from filing to approval.

23

24

25

26 37.3.2 Please provide an estimate of the annual number of hours that are
27 directed to managing the regulatory process rather than to managing
28 the Company for each department affected.

29

30 **Response:**

31 FBC explains in response to CEC IR 2.37.1 that it does not track the labour hours required to
32 manage regulatory processes.

33

34

35

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1 37.3.3 Please provide a quantitative estimate of the costs associated with
2 managing the regulatory process that will be avoided under PBR in
3 each department.
4

5 **Response:**

6 FBC does not have such an estimate. Because the Company has been under a PBR regime for
7 almost the entirety of the time beginning in 1996, staffing reflects a level of resources reflective
8 of PBR, and the regulatory efficiencies are already embedded in the organization. As FBC did
9 not increase its staffing levels after the end of the 2007 PBR Plan in response to regulatory
10 requirements, there are no quantifiable savings to be realized. Furthermore, because these
11 regulatory efficiencies are already embedded, the opportunity to achieve further regulatory-
12 related savings are limited, and there may in fact be additional regulatory pressures (with no
13 expected increase in labour resources) because of the increased number, complexity and scope
14 of both PBR and non-PBR related processes, as explained in the response to CEC IR 36.1.

15
16

17
18 37.4 Does FortisBC expect that those workers who will have a reduced regulatory
19 burden can accomplish more in the same time frames or that fewer people will be
20 required to undertake the same amount of work? Please explain.
21

22 **Response:**

23 FBC explains in the response to CEC IR 2.37.1 that internal labour support for regulatory
24 processes is in addition to the core responsibilities of employees (with the exception of
25 Regulatory Department employees) and therefore there is no incremental staffing associated
26 with regulatory proceedings that could lead to staff reductions. However, the reduction in
27 regulatory burden will relieve a portion of the short term intensive effort that is required to
28 support regulatory processes.

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32 37.5 Will FortisBC have a reduced need to generate detail in its record-keeping and
33 financial and performance analysis under PBR as it would be required to collect
34 and manage under a cost of service approach? Please explain why or why not.
35

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1 **Response:**

2 No. Please refer to the response to CEC IR 2.37.3.1.

3

4

5

6 37.5.1 If yes, please provide a list of the types of information that FortisBC
7 would be required to develop/provide under a cost of service approach
8 that it will not be required to develop/provide under PBR.

9

10 **Response:**

11 Please refer to the response to CEC IR 2.37.5.

12

13

14

15 37.5.2 Does FortisBC have processes in place to track the information that
16 would normally be required under a cost of service approach and will
17 not be tracked under PBR?

18

19 **Response:**

20 As explained in the response to CEC IR 2.37.5, the underlying operational and financial
21 information is the same under PBR as under a cost of service approach, so there is no
22 information used for internal purposes under cost of service that is not used for PBR. The
23 differences are in the amount and type of information that is required to develop and support the
24 respective types of application.

25

26

27

28 37.5.2.1. If so, will FortisBC continue to track this information?

29

30 **Response:**

31 As stated in the response to CEC IR 2.37.5.2, there is no loss of information tracked under PBR
32 compared to cost of service.

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37.6 If the PBR proposal was not approved, would FortisBC consider the regulatory process and information collected and placed on the record to have been wasted?

Response:

Given the Commission’s direction in its letter of April 18, 2013 that FBC include a PBR proposal in its 2014 revenue requirements application, and considering the cost, time and effort that is associated with reviewing the FBC PBR proposal, should the PBR proposal not be accepted, FBC would consider the exercise to have been of limited value.

37.6.1 If yes, please assign a cost value to that portion of the PBR application process that FortisBC considers would be wasted in the event the PBR process was not approved.

Response:

The quantifiable costs would include external consulting and legal fees related to the PBR portion of the application and the costs of the oral public hearing, which is limited to the PBR methodology. FBC does not have a cost estimate of the internal time and effort associated with the PBR portion of the application. FBC does not have a detailed breakdown of PBR versus non-PBR related costs but given the Commission direction to file a PBR plan, all of the costs would be recoverable in rates whether or not the PBR Plan is approved.

37.6.2 If no, would FortisBC agree that the information collected under the PBR application process is useful in a Cost of service analysis? Please explain why or why not.

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Response:

The information pertaining to the PBR formula is of little value to a Cost of Service analysis. However, the application still has information that is relevant in a Cost of service analysis, such that if the PBR proposal was denied, the Commission still has information to determine 2014 rates, capital and deferral accounts.

37.7 Please provide a ballpark estimate of the number of person hours that would be considered indirect costs that the Company directs to managing those portions of the regulatory process that would be avoided under PBR.

Response:

FBC does not have such an estimate. Please refer to the response to CEC IR 2.37.1.

37.7.1 Would FortisBC agree that these estimates are appropriately attributable to Operations and Management? If not, please explain where these costs are appropriately attributed.

Response:

No. Please refer to the response to CEC IR 2.37.1.

37.7.2 Please confirm that FortisBC has either deducted the time reductions from the Operations and Management forecasts or otherwise accounted for the efficiencies that are attributable to the reduced regulatory burden.

Response:

FBC has been regulated under various PBR Plans since 1996, with the exception of 2005-2006 and 2012-2013. Thus, FBC considers that PBR is its “steady state” with regard to regulatory

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activity. The Company did not seek an increase in O&M expense following the termination of its last PBR Plan in 2011, therefore the 2013 Approved O&M Expense, from which the 2013 Base O&M for determining costs under the PBR Plan, does not include any increased costs to recognized the increased regulatory burden of cost of service regulation, relative to PBR.

In addition, FBC explains in its response to CEC IR 2.37.1 that a large portion of internal labour related to regulatory activity is uncompensated, and its elimination would not create additional room in normal operating budgets.

Therefore it is not necessary or appropriate to adjust the O&M forecasts or the 2013 Base O&M Expense.

37.7.3 Please provide the amounts of any adjustments made in regard to reduction of the regulatory burden.

Response:

There are no such adjustments. Please refer to the response to CEC IR 2.37.7.2.

37.8 Please provide a ballpark estimate of the number of person hours that the Company directs to managing the regulatory process that would continue under PBR.

Response:

FBC does not have such an estimate. Please refer to the response to CEC IR 2.37.1.

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1 **38 Reference: Exhibit B-1, page 160 and Exhibit B-7, BCUC 1.134.1**

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12

Table C4-28: Finance and Regulatory O&M Forecast (\$thousands)

	2014 Forecast	2015 Forecast	2016 Forecast	2017 Forecast	2018 Forecast
Labour	\$ 3,106	\$ 3,200	\$ 3,296	\$ 3,394	\$ 3,496
Non-Labour	1,297	1,322	1,350	1,377	1,403
Total O&M	\$ 4,403	\$ 4,522	\$ 4,646	\$ 4,771	\$ 4,899

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14

10 The table below provides the data requested.

3
4

Finance Services	2010 Actual	2011 Actual	2012 Approved	2012 Actual	2013 Approved	2013 Projection	2013 Base	2014 Forecast
Labour (Excluding Pension and OPEB)	\$ 1,622	\$ 1,733	\$ 1,991	\$ 1,556	\$ 1,940	\$ 1,662	\$ 1,804	\$ 1,905
Non-Labour	654	779	1,029	891	1,059	1,003	1,008	1,028
Pension and OPEB	234	299	254	224	233	387	391	356
Insurance	-	-	-	-	-	-	-	-
City of Kelowna	-	-	-	-	-	-	-	-
Total O&M	\$ 2,510	\$ 2,811	\$ 3,274	\$ 2,671	\$ 3,232	\$ 3,052	\$ 3,203	\$ 3,289

Regulatory Services	2010 Actual	2011 Actual	2012 Approved	2012 Actual	2013 Approved	2013 Projection	2013 Base	2014 Forecast
Labour (Excluding Pension and OPEB)	\$ 702	\$ 729	\$ 779	\$ 759	\$ 798	\$ 622	\$ 675	\$ 712
Non-Labour	263	216	240	284	145	262	264	269
Pension and OPEB	101	126	99	110	96	144	146	133
Insurance	-	-	-	-	-	-	-	-
City of Kelowna	-	-	-	-	-	-	-	-
Total O&M	\$ 1,066	\$ 1,071	\$ 1,118	\$ 1,153	\$ 1,039	\$ 1,028	\$ 1,085	\$ 1,114

Note - FBC's 2007 PBR Plan, like the proposed 2014 PBR Plan, did not approve O&M Expense allocated by department.

12 Note - Assumption made that reference Table C4-25 should have referenced Table C4-27

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38.1 Please provide a breakdown of the cost components of the Labour portion by number of staff, position title and wage for each of the years shown.

Response:

10 The Company has already provided the overall labour and non-labour components for each of
11 the Regulatory and Finance departments and FBC believes that those are the amounts that are
12 relevant in determining the appropriateness of the requested Formulaic O&M, not the wages of
13 each individual staff. FBC does not see the relevance or value in providing individual wages
14 from specific departments, particularly when National Instrument 51-102 and Form 51-904 only
15 require the compensation details of the top five executive to be disclosed in the Annual
16 Information Form public filing. As such FBC respectfully declines to provide the individual
17 wages, but has provided the following number of staff and position titles.

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1 Since 2010, the Regulatory department has been staffed as follows:

Position	2010	2011	2012	2013
Director, Regulatory Affairs	1	1	1	1
Manager, Regulatory Affairs	2	2	2	2
Senior Regulatory Analyst	1	1	1	1
Regulatory Analyst	1	1	1	1

2

3 The staffing level in the regulatory department is expected to remain the same through the PBR
4 Period.

5 Since 2010 the Finance department has been staffed as follows:

Position	2010	2011	2012	2013
Director, Finance & Accounting	-	-	1	1
Director, Financial Operations	-	-	1	1
Controller	1	1	-	-
Manager, Budgets & Forecasts	1	1	1	1
Manager, Financial Reporting	1	1	1	1
Project Manager, IFRS & Special Projects	1	-	-	-
Supervisor, Budgets & Forecasts	1	1	1	1
Supervisor, Corporate Reporting	-	1	-	1
Supervisor, Accounting	1	-	-	-
Supervisor, Finance & Accounting	-	-	-	1
Supervisor, Accounting & Treasury	-	1	1	-
Supervisor, Financial Systems	1	-	-	-
Treasury Analyst	1	1	-	-
Budgets & Forecasts Analyst	1	1	1	2
Corporate Reporting Analyst	1	1	1	1
Financial Analyst	2	2	2	2
Accounts Payable Clerk	3	3	3	3
Cash & Banking Coordinator	1	1	1	1
Accounting Services Representative	1	1	1	-
Total	17	16	15	16

6

7

8 The staffing level in the finance department is expected to remain consistent with 2013 through
9 the PBR Period.

10

11

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38.2 Would FortisBC expect to need fewer people in the regulatory department under PBR than under Cost of Service given the reduced regulatory burden?

Response:

No. FBC has been regulated under various PBR Plans since 1996, with the exception of 2005-2006 and 2012-2013. Thus, FBC considers that PBR is its “steady state” with regard to regulatory activity. The small staff contingent in regulatory has been relatively constant during both a PBR and non-PBR structure. The Company did not seek an increase in O&M expense following the termination of its last PBR Plan in 2011, therefore the 2013 Approved O&M Expense, from which the 2013 Base O&M for determining costs under the PBR Plan, does not include any increased costs that may be associated with moving from PBR to non-PBR period. As well, the PBR plan, if adopted as proposed, will eliminate more frequent and in-depth Cost of Service based revenue requirement applications, however, it should be recognized that the PBR plan will have annual reviews, as well as the ongoing regulatory work related to CPCNs, cost of capital, rate design and other regulatory work. Therefore, the staffing requirements are not expected to change under PBR.

38.2.1 If so, please identify how many fewer people FortisBC would expect to need under PBR than under a cost of service approach.

Response:

Please refer to the response to CEC IR 2.38.2.

38.2.2 If not, please explain why not.

Response:

Please refer to the response to CEC IR 2.38.2.

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1 **39 Reference: Exhibit B-1, page 160 and Exhibit B-10, CEC 1.1.4**

15 Other than labour and general inflation as discussed in Section C4.3.3 of the Application, the
16 Finance and Regulatory department is not forecasting any major pressures but will be
17 challenged to continue to meet upcoming requirements with existing resources. Regulatory
18 requirements are expected to remain high and Finance service requirements are expected to
19 continue to change and increase. The department will try to address this challenge by
20 reviewing and streamlining existing work processes and capitalizing on integration and resource
21 sharing opportunities, if any, between the Electric and Gas Finance departments.

22 **1.1.1.1 Finance and Regulatory Summary**

23 For the Forecast period, the Finance and Regulatory department is not projecting incremental
24 funding required beyond that for labour and general inflation. As in the past, the department will
25 maintain its focus on productivity while continuing to deliver on its service requirements.

27 1. Savings of incremental costs associated with avoided annual or bi-annual rate hearings.
28 These could save customers approximately \$0.5 million to \$2.0 million annually. In total
29 over the proposed five year term of the PBR, this would equate to approximately \$2.5
30 million to \$10.0 million. These incremental costs associated with lawyers, consultants,
31 experts, Commission, intervener and hearing venue costs are deferred and amortized
32 into customer rates as hearing costs; and

33 2. There are indirect costs associated with the amount of effort within the Company
34 directed to managing the regulatory process, rather than being able to focus on
35 managing the Company. Many dozens of people within the Company are affected by
36 the regulatory process, performing that work in addition to their main work. Allowing

3
4 39.1 The CEC would expect that a significant reduction in incremental regulatory costs
5 such as lawyers, consultants, experts etc. would be directly related to a reduction
6 in regulatory requirements within FortisBC. Please rationalize the statement in
7 response to CEC Information Request 1.1.4 that FortisBC anticipates savings of
8 '\$2.5 million to \$10 million' in incremental costs with the expectation that
9 'Regulatory requirements are expected to remain high' over the PBR period.

10
11 **Response:**

12 As FBC explained in its response to CEC IR 2.36.1, regulatory processes in general are
13 becoming more lengthy, more onerous in terms of detail and more costly. This is true for all
14 types of regulatory processes, and although it would prefer otherwise, FBC expects this will also
15 be true of the Annual Review processes during the proposed PBR term, compared to those
16 during the previous PBR Plans. Regulatory requirements are fully expected to remain high
17 given the factors described in the response to CEC IR 2.36.1. FBC does expect to see
18 efficiencies compared to cost of service regulation, under which the expected regulatory burden
19 would be higher yet.

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1
2 39.2 Please rationalize the statement in response to CEC Information Request 1.1.4
3 that FortisBC will develop efficiencies that will accrue to customers under PBR
4 from the indirect costs that are 'associated with the amount of effort within the
5 Company directed to managing the regulatory process' with the expectation that
6 'Regulatory requirements are expected to remain high'.
7

8 **Response:**

9 Please refer to the response to CEC IR 2.39.1.
10

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1 **40 Reference: Exhibit B-10, CEC 1.3.1**

8 FBC believes that its 2007 - 2011 Plan was a success which resulted in further benefits for
9 customers and the Company over what would have been the case under normal COS
10 regulation. By building on its experience and success with PBR within this jurisdiction, FBC has
11 proposed 5 year term that will reduce regulatory burden and make it economical for the
12 Company to seek out incremental efficiencies before rebasing occurs. Shorter terms do not
13 provide the same incentives and do not mirror the type of incentives from competitive markets to
14 the same degree as longer term PBR Plans do. For example, in this regard a two year PBR
15 Plan would be no different than cost of service based RRA on a biennial cycle.

2

3 40.1 Please provide, with explanation as to how it is determined, a financial
4 quantification of the total expected reduction in regulatory burden including
5 incremental costs, savings in the Finance and Regulatory department, savings in
6 workload that FortisBC believes were achieved in the 2007-2011 PBR period
7 than would have been the case under normal COS.

8

9 **Response:**

10 FBC does not have an estimate of the differences in regular O&M expense for the Finance and
11 Regulatory department, or for any other department, for the reasons stated in the response to
12 CEC IR 2.37.1.

13 With regard to incremental expenses, the response to CEC IR 2.36.5 shows that the total cost
14 of annual reviews from 2007-2011 to set rates under the previous PBR Plan was approximately
15 \$265 thousand. Assuming a conservative average cost of even \$150 thousand for annual cost
16 of service applications (which is lower than the 2006 application costs), total costs to set rates
17 the same period would have been in the order of \$750 thousand, a nearly threefold increase.

18

19

20

21 40.2 Please provide, with explanation as to how it is determined, a financial
22 quantification of the total expected reduction in regulatory burden that FortisBC
23 expects will be achieved over the proposed 5 year PBR term than will have been
24 the case under normal COS.

25

26 **Response:**

27 Please refer to the responses to CEC IRs 2.36.1 and 2.36.2.

28

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1 **41 Reference: Exhibit B-10, CEC 1.4.1**

6 4.1. Please confirm that FBC has only examined PBR plans as an approach to
7 improving efficiency.

8
9 Response:

10 Not confirmed. There are other reasons that FBC proposes PBR unrelated to improving
11 efficiency such as reducing regulatory processes and promoting an entrepreneurial culture for
12 its employees that recognizes innovation.

2

3 41.1 Please confirm that FortisBC would not consider savings in the regulatory
4 process as improving efficiency.

5

6 Response:

7 Not confirmed. The cost savings arising from a reduction in the number and scope of regulatory
8 proceedings under PBR as compared to a cost of service regime result in a more efficient use of
9 existing resources and a reduction in incremental resources. In this context PBR is clearly a
10 more efficient regulatory environment than cost of service.

11

12

13

14 41.2 Please provide examples of the entrepreneurial culture that were developed
15 under the previous PBR, and whether or not this culture has continued since the
16 previous PBR period ended.

17

18 Response:

19 FBC believes that the focus on productivity and efficiency promoted through the previous PBR
20 has continued since the previous PBR ended, and will be reinforced to continue through this
21 PBR period and beyond. However, the Company notes that as productivity improvements and
22 efficiencies are realized, there become fewer and fewer future opportunities for additional
23 efficiencies. In essence maintaining that embedded rate of productivity and efficiency
24 improvement becomes increasingly more difficult.

25

26

27

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41.2.1 Would FortisBC expect the entrepreneurial culture developed as a result of this PBR term to continue beyond the PBR period, or end at its expiry? Please explain.

Response:

Yes, FBC expects the culture promoted and reinforced in the PBR to continue beyond the PBR period. The culture of FBC refers to the shared organization values of its employees and these values do not end at a certain date. The culture being promoted is one where there is a focus on productivity and efficiency as well as a focus on the customer, in which there is recognition of the value of innovation and service quality. However, as noted in the response to CEC 2.41.2, while the culture of the organization is expected to be maintained, the opportunities for further productivity and efficiency gains are more limited and more difficult to achieve going forward given the success of the past PBR in promoting such savings.

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1 **42 Reference: Exhibit B-10, CEC 1.2.1**

13 This fundamental relationship is true whether under cost of service regulation or under PBR.
14 O&M and capital are rebased at the conclusion of a PBR to ensure the long term benefits of the
15 savings go to customers. Customers achieve greater benefits in the long term under PBR than
16 under traditional cost of service regulation because the PBR effectively delays rebasing to
17 incent the utility to invest more to achieve new cost savings, efficiencies and/or new revenues.
18 In the meantime, customers receive benefits through earnings sharing.

2

3 42.1 Please identify what department(s), if any, are oriented towards, or have
4 responsibility for identifying opportunities or generating incremental revenue.

5

6 **Response:**

7 The area of the Company that is oriented towards generating incremental revenue is the
8 revenue protection activities undertaken by the Customer Service department. These activities
9 include investigating and correcting power theft situations, and ensuring the contracted
10 revenues from third parties fairly compensates the utility (such as pole contact revenues). To
11 date, this program has been successful and recovers significantly more revenue than it costs to
12 implement the program. These recoveries are embedded in the Company's load forecast and
13 forecast of Other Income.

14

15

16

17 42.1.1 Please identify the Total budgets for these department(s) including the
18 Labour and Non-labour components and provide forecasts for the PBR
19 period.

20

21 **Response:**

22 The Company has applied a PBR formula to be applied to total O&M. The Company has not
23 developed detailed O&M budgets for 2014 and beyond. However, the 2013 budget for revenue
24 protection activities was approximately \$350 thousand.

25

26

27

28 42.1.2 Please explain if FortisBC tracks incremental revenue to these
29 departments and matches that to the investments.

30

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1 **Response:**

2 FBC tracked and reported the costs and the incremental revenue associated with this
3 department and presented this information at its past revenue requirement workshops.

4

5

6

7 42.1.3 Please provide a list of the projects that have been undertaken in the
8 past, and the years in which they were undertaken.

9

10 **Response:**

11 There were no discreet projects, but rather a continual effort at ensuring the Company bills and
12 collects the appropriate amounts for services rendered. The Revenue Protection activities have
13 been ongoing since late 2005 and have resulted in significant revenue increases/recoveries for
14 customers.

15

16

17

18 42.2 Please give examples of the types of investments that FBC might undertake to
19 generate new revenues under PBR and provide a list of any projects for which a
20 Business Case has been developed.

21

22 **Response:**

23 FBC is not aware of any such investments at this time. However, the Company submits that the
24 proposed PBR is designed to accommodate such activities for the mutual benefit of customers
25 and the Company.

26

27

28

29 42.2.1 Has FortisBC developed a budget for investment related to generating
30 new revenues?

31

32 **Response:**

33 No.

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42.2.1.1 If so, please provide the expected investment FortisBC will make to generate new revenues.

Response:

There are no incremental projects, and thus no related budgets have been identified.

42.2.2. Will FortisBC track the investment to the new revenues that are generated?

Response:

Yes. If FBC makes such an incremental investment, that investment and the associated incremental new revenues will be tracked.

42.2.2.1 If so, please explain where these revenues and investments will be matched.

Response:

The question cannot be answered without knowing the nature of the investment and nature of the revenue. The Company will track and be able to report on such incremental investments and incremental revenues, but those costs will need to be recorded in accordance with accounting rules.

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1 **43 Reference: Exhibit B-10, page 95**

1 **1.5 REVENUE FORECAST**

2 Revenues are a function of load and the rate applicable at the time the energy is consumed.
3 FBC has developed a reasonable forecast of revenues by applying the total load forecast to the
4 currently approved rates (as at January 1, 2013) for each customer class.

5
6 Table C1-4 below summarizes the revenues projected for 2013 and forecast for 2014 through
7 2018, at 2013 rates.

8
9

Table C1-4: Forecast Sales Revenue at Existing Rates (\$ millions)

	Projected 2013	Forecast 2014	Forecast 2015	Forecast 2016	Forecast 2017	Forecast 2018
Residential	160.2	165.4	165.9	166.4	167.5	168.3
Commercial	69.2	75.7	76.7	77.7	78.4	79.6
Industrial	25.0	29.9	29.9	29.8	29.6	29.6
Wholesale	50.5	41.9	42.2	42.4	42.7	42.9
Total	304.9	312.9	314.6	316.3	318.2	320.4

10

11 Note: Commercial includes Lighting and Irrigation classes.

2

3 43.1 Please identify what activities FortisBC undertakes to increase load and improve
4 revenues in all the customer classes.

5

6 **Response:**

7 While the Company generally views increased load on a per customer basis as a positive factor
8 for its potential to mitigate upward pressure on rates, it does not have a program that actively
9 undertakes to increase load and increase revenues. Increases in load and related revenues
10 primarily relate to increases in customer count.

11

12

13

14 43.2 Please explain why Commercial sales revenue are expected to increase at an
15 average rate of 3% due to the addition of the City of Kelowna

16

17 **Response:**

18 The 3 percent annual average rate over the 5 year planning horizon is skewed due to the one-
19 time 2014 CoK addition.

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Commercial sales revenue is projected to increase by 9 percent in 2014 due to City of Kelowna (CoK) Commercial customers moving from the Wholesale class to the Commercial class. The 9 percent increase is a one-time increase and not reflective of the typical average growth in the commercial revenue. From the year 2015 to 2018 the Commercial class annual average revenue increases by about 1 percent annually as shown below.

Commercial Revenue Annual Increases

Year	2013	2014	2015	2016	2017	2018
Commercial Revenue (\$)	69.2	75.7	76.7	77.7	78.4	79.6
Annual increase (%)		9.4%	1.3%	1.3%	0.9%	1.5%

43.3 Please confirm that Industrial sales revenues are expected to increase by almost 20% from 2013 to 2014 and then remain steady or decline due to the addition of the City of Kelowna.

Response:

The increase in the Industrial revenues in 2013 and 2014 is due to the addition of 9 industrial customers from the acquisition of City of Kelowna (CoK). After 2014 the industrial class has forecast a slight decline which is based on customer surveys and industrial Provincial GDP projections.

43.4 Please explain why the Wholesale sales are expected to decline by approximately 17% in 2014 and then remain steady for the remaining period.

Response:

The Wholesale revenue is expected to decline in 2014 due to the acquisition of the City of Kelowna (CoK), which reallocated the CoK customers from the Wholesale class to the Residential, Commercial and Industrial classes. Even though the CoK was acquired on March 31, 2013, the full effect of the reallocation is not seen until 2014.

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1 **44 Reference: Exhibit B-11, BCPSO 1.15.1**

7 The achieved Earnings post sharing has also been provided for clarity.

Year	Allowed ROE	Achieved ROE Before Sharing	Achieved ROE After Sharing
2007	8.77%	9.83%	9.23%
2008	9.02%	9.65%	9.28%
2009	8.87%	10.00%	9.41%
2010	9.90%	9.57%	9.65%
2011	9.90%	11.32%	10.67%

2

3 44.1 Please explain why FortisBC did not achieve its allowed ROE in 2010.

5 **Response:**

6 The primary reason for FBC not achieving its allowed ROE for 2010 was described on page 2 of
7 Tab 2 of FBC's 2011 RRA which stated, "Expected Net Income was reduced primarily due to
8 lower electricity sales volume than approved in accordance with the 2010 NSA which included
9 increases to the Company's residential and industrial load forecasts". The lower 2011 electricity
10 sales which caused FBC to not achieve its allowed ROE in 2010 was further corroborated on
11 page 4 of Tab 6 – Power Purchase and Wheeling of the 2011 RRA which stated that "loads are
12 currently expected to be about 120 GWh below approved 2010 levels over the years.
13 Approximately half of the lower load is due to weather."

14

15

16

17 44.1.1 Please explain factors the Company considered to be within its control
18 and what factors it considered to be outside its control.

19

20 **Response:**

21 Throughout the 2014-2018 PBR Filing, particularly in Sections C and D, FBC has identified a
22 multitude of efficiencies and savings obtained which would be indicative of certain factors that
23 the Company considers to be within its control. For examples of certain factors that are beyond
24 FBC's control, refer to the non-controllable variance deferral accounts which have previously
25 been approved by the BCUC or for which the Company is requesting approval of as part of the
26 2014-2018 PBR, including Power Purchase Expense Variances, Revenue Variances, HST
27 Removal or Reform Variances, Property Tax Variances, Pension and OPEB Variances,
28 Insurance Variances, Interest Variances and Tax Variances.

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44.2 Please explain what activities FortisBC undertook that resulted in an Achieved ROE before sharing of 11.32% in 2011.

Response:

FBC's 2011 Achieved ROE before sharing in excess of its 2011 Allowed ROE was primarily due to lower actual power purchases as compared to forecast. The variance in 2011 Achieved ROE is not expected to occur from power purchase variances as beginning in 2012 and carrying forward for the term of the PBR, all power purchase variances between forecast and actual are captured in a Power Purchase variance deferral account which was approved by the BCUC pursuant to Commission Order G-110-12. The drivers for the lower power purchase costs compared to forecast for rate-setting purposes in 2011 was described in more detail under Section 4.1.1 Review of 2011 on page 2 of Tab 4 Cost of Service of FBC's 2012-2013 RRA as follows:

"The winter of 2010-11 saw above-average snow packs and stronger than normal run-off in the first quarter. This early run-off combined with ongoing moderate natural gas prices and growing base of variable and unpredictable wind generation in the Pacific Northwest provided significant opportunities to obtain market energy at rates below those of the BC Hydro PPA. FortisBC annual gross load is forecast to be 29 GWh above approved 2011 (net of Demand Side Management (DSM) savings). Power purchase expense is expected to be \$5.3 million below approved 2011 for the year, as shown in Table 4.1.1-1 below as a net result of:

- a) Lower BC Hydro costs, net of accounting adjustments, of \$9.9 million, due primarily to a reduced BC Hydro purchase volume as a result of increased market purchases at rates below the 3808 rate;*
- b) A combined increase of \$3.8 million in market purchases and balancing pool usage; and*
- c) A \$0.75 million reduction to Power Purchase Expense negotiated in the 2011 NSA."*

44.3 Please explain the differences in the 2010 results and the 2011 results.

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1 **Response:**

2 The primary reason for FBC's 2010 Achieved ROE before sharing being lower than the 2010
3 Allowed ROE was described in the response to CEC IR 2.44.1, while the primary reason for
4 FBC's 2011 Achieved ROE before sharing being higher than the 2011 Achieved ROE was
5 described in the response to CEC IR 2.44.2. When the responses to these two questions are
6 compared, the primary differences between FBC's 2010 and 2011 results are explained.

7

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1 **45 Reference: Exhibit B-11, BCPSO 1.15.2**

14 **Response:**

15 A schedule is provided below that derives on a high level basis the "avoided rate increase". High-
16 level analysis indicates that the avoided rate increase is approximately 3.3%, higher than 2.7%
17 indicated in Exhibit B-1, Tab B, Section 4.2.7, page 33.

2

Years	Approved Base Revenue	Customer Share (Returned the following Year)	% Rate Reduction	Cumulative % Rate Reduction
2007		1,931		
2008	220,950	1,313	0.9%	0.9%
2009	234,763	2,284	0.6%	1.4%
2010	259,274	(322)	0.9%	2.3%
2011	278,783	2,976	-0.1%	2.2%
2012	287,445		1.0%	3.3%
Total Customer Share		8,182	Total Rate Reduction	3.3%

3

4 45.1 Please confirm that the Approved Base Revenue is in \$ thousands.

5

6 **Response:**

7 Confirmed.

8

9

10

11 45.2 Please clarify what the 'Approved Base Revenue' includes, and identify what
12 costs are carried forward from year to year as a base, and what costs are added

13

14 **Response:**

15 This column should be labeled "Approved Revenue Requirements". It should not be interpreted
16 to mean that a base year value is subject to a formula for future years, as is the case for Base
17 O&M Expense, for example.

18

19

20

21 45.3 Please confirm, or otherwise explain, that the Average % rate reduction over the
22 PBR term was 0.65% per annum on the Approved base.

23

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1 **Response:**

2 Confirmed. The average percent rate reduction over the PBR term was approximately 0.65
3 percent per annum.

4
5
6
7 45.4 Please confirm that the Approved Base Revenue in the chart was adjusted
8 annually to incorporate the customer savings from the year previously, so that
9 the savings continued from one year to the next, and are thereby cumulative.

10
11 **Response:**

12 Not confirmed. The column heading should read “Approved Revenue Requirements”. Please
13 refer to the response to CEC IR 2.45.2.

14
15
16
17 45.4.1 If not, please explain the relevance of a calculated Cumulative % Rate
18 Reduction.

19
20 **Response:**

21 The cumulative rate reduction is meant to be an approximation of the rate impact over the
22 period of the aggregate customer share of the incentive. It is approximately equivalent to the
23 sum of the customer share of incentive compared to the average revenue requirement value
24 over the period.

25
26
27
28 45.5 If the Approved Base Revenue in the chart does reflect savings carried forward
29 on an annual basis (i.e. rebased annually) so that the savings are cumulative,
30 please confirm that this would accurately reflect the savings that would have
31 accrued under the PBR formula in existence from 2007 to 2011.

32
33 **Response:**

34 Not confirmed. This is not the meaning of the revenue values in that table. Please refer to the
35 response to CEC IR 2.45.2.

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45.5.1 Please confirm, or otherwise explain that 3.3% does not represent total cumulative savings that could be calculated as \$29,619 (6 years times the 2007 figure; + 5 years times the 2008 figure; +4 years times the 2009 figure; +3 years times the 2010 figure; +2 years times the 2011 figure plus one year times the 2012 figure) divided by the total Approved Base (\$1,281,215) which would be approximately 2.3%.

Response:

Confirmed.

45.5.2 Please confirm that 3.3% also does not represent a valid estimation of the total customer share (8,182) on an average of the Approved Base Revenue (256,243) which would be closer to 3.2%;

Response:

Not confirmed. As stated in the response to CEC IR 2.45.4.1, the cumulative rate reduction can be viewed in that way.

45.5.2.1 If not confirmed, please provide additional mathematical examples to illustrate the validity of the approximation.

Response:

Please refer to the response to CEC IR 2.45.5.2.

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1 45.5.3 If not confirmed, please discuss the appropriate interpretation that
2 should be assigned to a total customer saving proportion to an average
3 Approved Base Revenue.
4

5 **Response:**

6 Please refer to the response to CEC IR 2.45.2.

7

8

9

10 45.6 Please explain the value, significance and mathematical accuracy of adding
11 together % rate reductions on a changing base figure.

12

13 **Response:**

14 Please refer to the response to CEC IR 2.45.4.1.

15

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Reference: Exhibit B-1, FEI Application page 76 and Exhibit B-1, FBC Application page 69

Performance measure	Indicator	Benchmark
Emergency response time	Percent of calls responded to within one hour	95%
Meter exchange appointment	Percent of appointments met for meter exchanges	95%
Telephone service factor (Emergency)	Percent of emergency calls answered within 30 seconds or less	95%
Telephone service factor (Non Emergency)	Percent of non-emergency calls answered within 30 seconds or less	70%
First contact resolution	Percent of customers who achieved call resolution in one call	78%
Billing index	Measure of customer bills produced meeting performance criteria	5
Meter reading accuracy	Number of scheduled meters that were read	95%
All injury frequency rate	Informational indicator - 3 year rolling average of lost time injuries plus medical treatment injuries per 200,000 hours worked	---
Public contact with pipelines	Informational indicator - 3 year rolling average of number of line damages per 1,000 BC One Calls received	---
Customer satisfaction index	Informational indicator	---

Performance measure	Indicator	Benchmark
Emergency response time	Percent of calls responded to within two hours	85%
Telephone service factor	Percent of calls answered within 30 seconds or less	70%
First contact resolution	Percent of customers who achieved call resolution in one call	78%
Billing index	Measure of customer bills produced meeting performance criteria	5
Meter reading accuracy	Number of scheduled meters that were read	97%
System Average Interruption Duration Index	Informational indicator- 3 year rolling average of SAIDI (average cumulative customer outage time)	---
System Average Interruption Frequency Index	Informational indicator- 3 year rolling average of SAIFI (average customer outages)	---
All injury frequency rate	Informational indicator - 3 year rolling average of lost time injuries plus medical treatment injuries per 200,000 hours worked	---
Customer satisfaction index	Informational indicator	---

46.1 Does FBC believe it is important to have similar indicators to those of FEI for comparison purposes? Please explain why or why not.

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Response:

The Company continues to make efforts to align and integrate the Gas and Electric operations, enabling efficiencies to be realized and increasing its organizational capacity. Similar to the efforts aligning the different Gas and Electric scorecards starting 2012, a common set of SQIs, with some differences recognizing the nature of the Gas and Electric operations, has been developed aligning the SQI focus of the Gas and Electric operations. This in turn will create consistency in processes and priorities and contribute to more consistent delivery of service quality for the benefit of customers.

46.2 Please explain why FBC is proposing two hours as the indicator for the Emergency Response time measure when FEI is proposing a 1 hour indicator.

Response:

FBC is proposing to maintain the Emergency Response Time measure at two hours for the 2014-2018 PBR period. FBC believes that the two hour measure for the Emergency Response Time SQI is an appropriate level of service for its customers and reflective of current approved funding. With respect to the difference between a 2 hour response time for FBC versus a 1 hour response time for FEI, gas disruptions fail into an “on” state whereas electricity disruptions fail into an “off” state; a ruptured pipe carries on venting gas as there are no safety mechanisms to shut off the leak, whereas an upstream protective device normally turns off electric power. It is appropriate for FBC to then triage the system by outage priority and not by response time.

As described in Appendix D6 of the Application (Exhibit B-1-1), the objective of the SQIs is to provide an “acceptable level” of service at an “acceptable level” of cost to its customers.

46.2.1 Please indicate if FBC would consider a one hour indicator as appropriate, and if not explain why the circumstances are different from FEI and why this justifies a different indicator level.

Response:

Please refer to the response to CEC IR 2.46.2.

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46.3 Please explain why FBC is proposing an 85% Benchmark for the Emergency Response time measure when FEI is proposing a 95% benchmark.

Response:

FBC believes an 85 percent benchmark the Emergency Response Time SQI is an appropriate level of service for its customers and reflective of current approved funding. As described in Appendix D6 of the Application (Exhibit B-1-1), the objective of the SQIs is to provide an “acceptable level” of service at an “acceptable level” of cost to its customers. With respect to the difference between FBC’s 85 percent Benchmark and FEI’s 95 percent Benchmark, gas disruptions typically fail into an “on” state whereas electricity disruptions typically fail into an “off” state; a ruptured pipe carries on venting gas as there are typically no mechanisms to shut off the leak, whereas an upstream protective device normally turns off electric power. The gas transmission and distribution system is underground versus the electrical transmission, distribution and stations systems which are primarily above ground. This leaves the electrical system more exposed to inclement weather, vegetation and third party contacts. It is appropriate for FBC to then triage the system by outage priority and not by response time.

During a significant weather event, such as a windstorm leading to multiple outages on the electrical system, restoration is done on a prioritized basis. In this situation, response time to some customers would be negatively impacted in relation to the restoration matrix.

Please also refer to the responses to CEC IRs 2.46.2 and 2.47.1.3.

46.3.1 Would FBC consider a 95% benchmark as appropriate?

Response:

Please refer to the responses to CEC IRs 2.46.2 and 2.46.3.

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1 46.3.1.1 If not, please explain why not and explain why the
2 circumstances are different from FEI and why this justifies a
3 different benchmark.
4

5 **Response:**

6 Please refer to the responses to CEC IRs 2.46.2 and 2.46.3.
7
8

9
10 46.4 Please explain why FBC is proposing a 95% Benchmark for the Meter Reading
11 Accuracy measure when FEI is proposing a 97% benchmark?
12

13 **Response:**

14 As a point of clarification, FEI is proposing a 95 percent benchmark and FBC is proposing a 97
15 percent benchmark. The difference is related to the number of reads required due to the
16 frequency of the reads. FEI is read on a monthly basis whereas FBC is read on a bi-monthly
17 basis. There is a higher risk of reads not read due to the large number and frequency.
18
19

20
21 46.5 Would FBC consider a 97% benchmark as appropriate?
22

23 **Response:**

24 FBC's benchmark for Meter Reading is 97 percent.
25
26

27
28 46.5.1 If not, please explain why not and explain why the circumstances are
29 different from FEI and why this justifies a different benchmark.
30

31 **Response:**

32 The difference lies in that FEI has outsourced its Meter Reading services to a third party.
33 Performance Standards set out in the agreement states a 95 percent completion rate for Meters
34 Reads. Please also refer to the response to CEC IR 2.45.5.

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46.6 Why did FortisBC not distinguish between non-emergency telephone service factor and emergency telephone service factor as undertaken by FEI?

Response:

FBC did not distinguish between emergency and non-emergency TSF due to differences in the types of calls being answered. FEI's emergency line and FBC's trouble line are not the same due to differences in the nature of the commodities themselves.

FBC's trouble line is primarily used by customers experiencing a power outage. The nature of these outages means that most times, multiple customers are impacted and the focus is therefore on collating information from multiple calls in a relatively short amount of time.

In contrast, FEI's emergency line is dedicated primarily to individual customers experiencing a natural gas smell in their home or business. Due to the safety concerns related to this, it is important that the calls from these individual customers be answered immediately. Therefore, the focus is on answering a low volume of calls as quickly as possible.

It is for these reasons that the FBC trouble queue has retained the same target that has been in place for several years.

46.6.1 Does FortisBC have information regarding its historical response times to emergency telephone calls? If so, please provide.

Response:

FBC does not track emergency telephone calls as a separate queue. Instead, trouble calls are tracked which include outage inquiries and less frequently, potential emergencies. For the outage call queue, the 2013 TSF to October 31 is 77 percent. The average speed of answer is 23.5 seconds.

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1 **47 Reference: Exhibit B-7, BCUC 1.70.1 and 1.70.2**

8 Please refer to the below table which sets out the calendar year results of each historical
9 performance standard back to 2007. Note that the results provided for 2013 are year to date as
10 of July 31, 2013.

	System Average Interruption Duration Index	System Average Interruption Frequency Index	Generator Forced Outage Rate	All Injury Frequency Rate	Injury Severity Rate	Vehicle Incident Rate	Billing Accuracy – percentage of bills rejected by system	Meters Read as Scheduled	Contact Center – percentage of calls answered within 30 seconds	Emergency Response Time – percentage of calls responded to within 2 hours	Residential Service Connections – percentage connected within 6 working days	Residential Extensions – percentage quoted within 35 working days	Residential Extensions – percentage connected within 30 working days	Directional Metric – Customer Satisfaction Survey
Year	Reliability			Safety & Health			Customer Service							
2007	2.51	2.00	0.08%	1.71	11.83	1.73	0.044%	98%	70%	92%	87%	92%	89%	8.6
2008	2.42	2.14	0.11%	2.87	23.37	0.94	0.047%	98%	70%	94%	91%	94%	96%	8.6
2009	2.28	1.48	0.90%	1.41	23.43	2.20	0.044%	98%	70%	92%	90%	96%	94%	8.6
2010	2.84	2.27	0.10%	1.72	5.82	0.20	0.050%	98%	70%	93%	96%	99%	98%	8.8
2011	1.86	1.38	0.09%	1.48	17.77	1.21	0.040%	98%	70%	92%	93%	97%	94%	8.7
2012	1.95	1.26	0.52%	1.72	13.57	0.44	0.032%	98%	70%	91%	92%	97%	96%	8.4
2013	2.09	1.66	0.85%	3.80	21.76	0.44	0.032%	65%	70%	94%	91%	96%	94%	8.1

8 **Response:**

9 FBC has proposed the following benchmarks for the proposed SQIs for the 2014-2018 PBR
10 Term.

Proposed Performance Measures for 2014-2018 PBR Term	Proposed Benchmark for 2014-2018 PBR Term
Emergency Response Time	85%
Telephone Service Factor	70%
First Contact Resolution	78%
Billing Index	5
Meter Reading Accuracy	97%
System Average Interruption Duration Index (SAIDI)	Informational Indicator
System Average Interruption Frequency Index (SAIFI)	Informational Indicator

47.1 Would FortisBC agree that achieving 85% represents a significant degradation in the percentage of emergency calls responded to within 2 hours from the 91% to 94% that has been achieved for the last 6 years?

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1

2 **Response:**

3 FBC does not consider that setting a target of 85 percent is a significant degradation in service.
4 The Company believes that this is an achievable and acceptable measure for Emergency
5 Response Time, because of the unpredictability and variable scope and severity of the events.

6 The nature of events that are addressed in the Emergency Response Time is described in
7 FBC's response to CEC IR 2.46.3, and include weather, vegetation and third party contacts, and
8 the likelihood of multiple outages on the system at the same time. In order to ensure a
9 response time greater than 85 percent, FBC would require additional workers to be available on
10 standby, which has a direct impact on operating expenses and cannot be accommodated at the
11 proposed level of Base O&M Expense.

12

13

14

15 47.1.1 If not, please explain why not.

16

17 **Response:**

18 Please refer to the response to CEC IR2 2.47.1.

19

20

21

22 47.1.2 If not, please identify what benchmark level FortisBC would consider a
23 significant degradation from the 91% - 94% that has been achieved.

24

25 **Response:**

26 Please refer to the response to CEC IR2 2.47.1.

27

28

29

30 47.1.3 Does FortisBC either not intend, or is for some reason unable, to
31 maintain the 91% to 94% level it has been able to for the last 6 years?

32

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1 **Response:**

2 FBC endeavours to maintain its existing level of performance, however, factors such as the
3 unpredictable nature of the weather and other factors causing outages (explained in the
4 response to CEC IR 2.46.3) and the ongoing challenges in maintaining a workforce with the
5 knowledge of FBC's electrical system (which has been described in FBC's 5-Year Retirement
6 and Workforce Plan found in Exhibit A2-1) may impact this. FBC is expecting that the current
7 labour disruption will affect its level of performance, as there will be a period of time required to
8 re-stabilize operations.

9

10

11

12 47.1.3.1 If so, please explain what circumstances are expected to affect
13 FBC's ability to maintain its present service level of 91% or
14 above

15

16 **Response:**

17 Please refer to the response to CEC IR2 2.47.1.3

18

19

20 47.1.3.2 Are there additional costs associated with maintaining a 91%
21 or higher Benchmark?

22

23 **Response:**

24 Yes. In order to ensure a response time greater than 85 percent, FBC would require additional
25 workers to be available on standby which may also require an increase in staffing level in the
26 regions with smaller staffing levels. This would have an incremental impact on operational
27 expenses and cannot be accommodated at the proposed level of Base O&M Expense.

28

29

30 47.1.3.2.1 If so, please provide quantification of the costs that
31 would accrue from maintaining a benchmark of
32 90% and 95%.

33

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Response:

It is difficult to quantify these costs; however, in order to improve the benchmark, FBC would require additional workers available on standby which has a direct impact on its operating expenses.

47.2 What is the average emergency response time for those customers not responded to within 2 hours?

Response:

Please refer to the below table.

Year	Average Emergency Response Time not responded to within 2 hours
2010	3h 49m
2011	3h 47m
2012	4h 21m

47.3 What is the average non-emergency telephone response time for FortisBC?

Response:

FBC believes that by asking about “response time”, the question is intending to ask ‘what is the average speed of answer for non-emergency calls at FBC?’. Non-emergency calls are not tracked separately from emergency calls. Emergency calls and outage calls are tracked together. However, the overall average speed of answer for all call types YTD 2013 to October 31st is 42.8 seconds.

47.4 What is the average non-emergency telephone response time for the 30% of calls not answered within 30 seconds?

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Response:

FBC does not store the data required to complete this calculation. However, the average speed of answer for all non-emergency calls during the period of January 2013 to June 2013 was 40.6 seconds. This shows that even for those customers whose call was not answered within 30 seconds, that they were not experiencing lengthy wait times.

47.5 Please confirm that the telephone service factor refers to the time it takes for a customer to speak directly with a customer service representative who is likely able to assist them with their issue, rather than redirecting them.

Response:

Not confirmed. The telephone service factor is the percent of time the call is answered in thirty seconds or less and is not related to transfers or resolution of the concerns. First contact resolution is a better measure to identify how often the customer's issue is resolved on the first call.

47.6 Please confirm that the Telephone Service Factor is measured the same way as the 'Contact Centre – percentage of calls answered within 30 seconds is measured'.

Response:

Confirmed.

47.6.1. If not confirmed, please clarify the differences.

Response:

Please refer to CEC IR response 2.47.6

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1 **48 Reference: Exhibit B-1-1 Appendix D-6 page 6 and Exhibit B-7, BCUC 1.63.2**

20 FBC believes that the simplest and most effective way to evaluate FCR is to ask the customer
 21 their opinion as to whether or not their issue was resolved on the first contact. In order to gain
 22 customer feedback on this topic, FBC intends to use the same methodology as is currently in
 23 place at the gas contact centers. This will involve using SQM to contact customers who have
 24 recently had an interaction with the Company. On average, 90 customers per month will be
 25 contacted by SQM, who will ask the customer a number of questions including whether or not
 26 their question or issue was resolved. This data, first collected in April 2013, will be compiled
 27 into a monthly report providing a score for FCR.

28 Evidence supports that FCR is an important measure of service quality and as such, FBC
 29 believes it should be reported as a service quality metric. The target for the term is proposed at
 30 78 percent which is the current target for the gas utility's operations.

2

14 63.2 Does any other electrical utility employ SQM Group to provide this service?

15
 16 Response:

17 SQM provides contact centre evaluations for over 450 clients across North America, including
 18 many energy utilities.

Electric/Combined Utilities	Other Energy Providers
American Electric Power	FortisBC Energy Inc.
Arizona Public Service	Direct Energy
BC Hydro	Enbridge Gas Distribution
Brantford Hydro	Suncorp
Enmax	

3

Electric/Combined Utilities	Other Energy Providers
PacifiCorp	
Exelon	
Florida Power	
Idaho Power	
London Hydro	
Manitoba Hydro	
Northeast Utilities	
Pacific Power	
Sierra Pacific Power	
Toronto Hydro	
TransAlta	

4

1
 2

5 48.1 What scores has FortisBC received for FCR since April 2013?

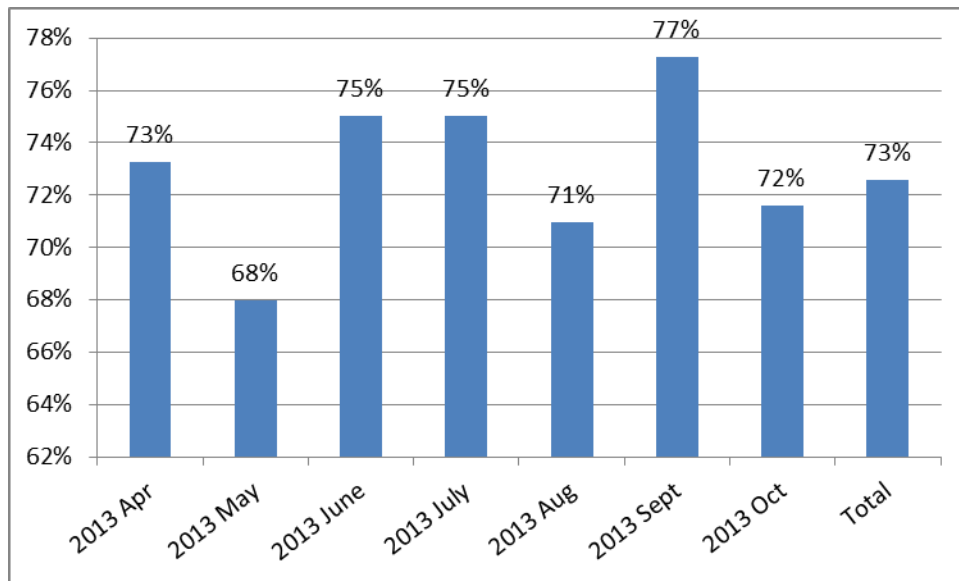
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1 **Response:**

2 FCR results for April through October 2013 are presented below:

3 **Trail Contact Centre – FCR April-October 2013**



4

5

6 The average FCR for the Trail Contact Centre for the period is 73 percent. Note that margin of

7 error for monthly scores is approximately $\pm 10\%$ due to the limited sample sizes.

8

9

10

11 48.2 What is the gas utility's average FCR measures for the last 5 years?

12

13 **Response:**

14 Historically, Accenture Business Services employed SQM to conduct FCR research on behalf of

15 the Company's gas utility. Since January 2012, the FortisBC Energy Utilities have used SQM to

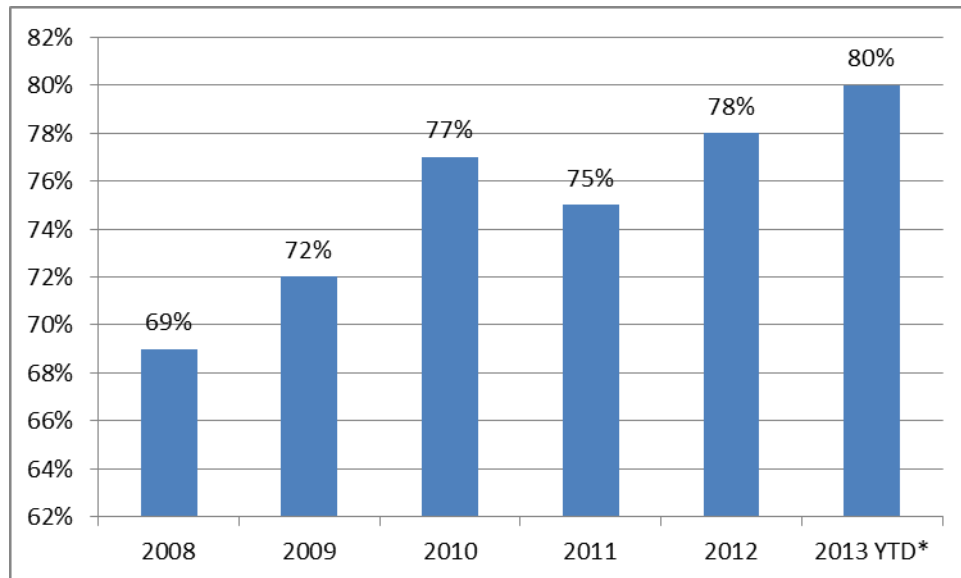
16 gather FCR results using the same methodology. The average annual FCR results for the gas

17 utility are shown below:

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1

Average Annual FCR – Gas Utility – 2008-2013 YTD



2

3

*2013 YTD figure covers the period from January through September.

4

5

6

7

48.3 Please provide FBC's understanding, if known, of the typical FCR results for each of those other utilities tracking it.

8

9

Response:

10

11 SQM compares FBC FCR results with the average for all energy utilities. The table below shows
12 the FBC results for the April through September 30, 2013 period, while comparator information
13 covers Q1 through Q3, 2013.

14

2013 FCR Results for Q1 through Q3 2013

Metric	FBC	Utility Average
FCR	73%	72%

15

16

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1 **49 Reference: Exhibit B-1-1 Appendix D page 4 and page 5**

15 **Table D6-3: Summary of FBC Emergency Activity Levels and Average Response Time**

			Number of calls over two hours	Percent of responses in two hours or less
2010 to 2012	Number of calls	8,730	663	93%
	Average response time	1h 10m		
2012	Number of calls	3,135	287	91%
	Average response time	1h 47m		
2011	Number of calls	2,803	222	92%
	Average response time	59m		
2010	Number of calls	2,792	154	95%
	Average response time	45m		

16

2

3 The 2012 results also reflected an increase in significant weather events between June and
4 August which primarily affected the South Okanagan, Boundary and Kootenay
5 regions. Frequent storms and associated damage to the distribution system led to further
6 increases in response and restoration times for 2012.

7 On average over the three-year period, the percentage of responses within two hours or less
8 has been 93 percent, very favourable performance compared to FBC's existing benchmark of
9 85 percent. FBC believes that the current benchmark represents the level of service expected
10 by its customers and proposes to retain its existing benchmark of 85 percent for the term of the
11 PBR.

3

4 49.1 Does FortisBC consider the response time of 1h 47 minutes in 2012 to be an
5 outlier due to weather events? Please explain why or why not.

6

7 **Response:**

8 2012 would be considered an outlier year due to weather. Frequent and persistent storms
9 between June and August did contribute to increased response times over this period which
10 affected the yearly average.

11

12

13

14 49.2 Please confirm that excluding the year 2012, the average response time has
15 been under one hour.

16

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1 **Response:**

2 Confirmed.

3

4

5

6 49.3 What are the average emergency response times for the years 2005 through to
7 2009?

8

9 **Response:**

Year	Average Emergency Response Time
2005	1h 15m
2006	1h 14m
2007	51m
2008	55m
2009	57m

10

11

12

13 49.4 Please provide evidence that a two hour response time represents the level of
14 service expected by its customers, in that the response time has typically been
15 under 1 hour, with the exception of 2012.

16

17 **Response:**

18 Please see the response to BCPSO IR 2.23.1.

19

20

21

22 49.5 Please provide quantification of costs, if any, that FBC deems would be
23 associated with maintaining an 85% SQI for a 1 hour response time rather than a
24 2 hour response time.

25

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1 **Response:**

2 The Company expects that to reduce the response time in half, the Company would need to
3 double the number of trades on the standby roster. The current annual standby costs are
4 estimated at \$320 thousand. In addition to this, in the smaller regions in order to manage the
5 call rotations, additional trades staff would be required to complement the existing crew. The
6 Company estimates that 4 of its regions (Princeton, Grand Forks, Creston and Kaslo) would
7 need to have additional trades staff of one person per region at a potential O&M cost of \$120
8 thousand (based on an estimated O&M cost of \$30 thousand per person). Therefore the
9 Company estimates that the annual cost to reduce the emergency response time from 2 hours
10 to 1 hour would range from \$320 thousand to \$440 thousand. The Company is of the opinion
11 that this incremental cost does not warrant the incremental benefits.

12

13

14

15 49.6 Please provide quantification of costs, if any, that FBC deems would be
16 associated with maintaining a 90% SQI for a 1 hour response time rather than a
17 2 hour response time.

18

19 **Response:**

20 Please refer to the response to CEC IR 2.47.1.3.

21

22

23

24 49.7 Does FortisBC believe that it can generate savings by allowing its average
25 response time to increase? Please explain why or why not and provide
26 quantification of the savings available.

27

28 **Response:**

29 Please refer to the response to CEC IR 2.46.3.

30

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1 POWER PURCHASES

2 50 Reference: Exhibit B-10, CEC 1.54.4

3 54.4. Please explain why the market and contracted purchases are expected to
4 decline so dramatically and why the BC Hydro purchases are projected to
5 increase so significantly.

6 Response:

7
8 The increase in BC Hydro purchases and decline in Market and Contracted purchases is mainly
9 due to the forecast market price increase, and FBC anticipating an increased use of PPA
10 energy and capacity through 2018. It also takes into account the expiry of FBC's current short
11 term market supply contracts. The following table shows the volumes of BC Hydro energy
12 purchases and the volume of Market and Contracted Purchases from 2015 to 2018.

Energy Purchases (GWh)	2015	2016	2017	2018
BC Hydro	771	916	981	1,068
Market and Contracted Purchases	251	123	75	9

13

14 However, each year prior to the June 30th deadline for the Annual Energy Nomination under the
15 New PPA, FBC will analyze forward market prices and the BC Hydro rates, and either lock in
16 market purchases at a lower cost to BC Hydro where possible taking into account both cost and
17 operational considerations, or nominate the BC Hydro energy purchases to meet forecast load.
18 By that time each year, FBC will have more certainty with BC Hydro rates for the coming year,
19 and can make decisions to mitigate power purchase expense with market purchases over a
20 shorter time frame, when possible to do so. Any changes will be incorporated into the power
21 purchase forecast at the annual review as part of the annual rate setting process.

3

4 50.1 What factors will FBC consider in analyzing forward market prices?

5

6 Response:

7 When analyzing forward market prices the main consideration is price. FBC considers forward
8 market information published from many sources, including third party forecasting services,
9 information from trading platforms such as ICE, and forward information received from counter
10 parties. Additionally, FBC will consider the overall energy supply forecasts in the region,
11 including gas prices, and generation forecasts, weather and hydrological conditions.

12

13

14

15 50.2 Please confirm that 'lower cost to BC Hydro' means lower cost compared to that
16 available from BC Hydro, and if not please explain what it means.

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Response:

“Lower cost to BC Hydro” means lower cost compared to that available from BC Hydro under the New PPA (RS 3808).

50.3 What operational considerations would FBC consider in selecting market power purchases which are lower cost than BC Hydro?

Response:

The main operational consideration is reliability of supply. This includes availability of transmission, firmness of the energy, reliability of the counter party and the generation source and PPA contractual requirements.

50.4 What, if any, financial incentive is available to the company or individual staff members in minimizing power purchase expense for customers?

Response:

There is no financial incentive for the company linked to savings in Power Purchase Expense. Part of the short-term incentive (STI) plan for Power Supply employees includes personal goals that relate to the management of Power Purchase Expense. These goals are included in the overall evaluation of the employees' performance, but there is no direct or quantitative linkage between a reduction in Power Purchase Expense and the STI amounts. STI payments are indirectly funded through labour loadings charged to all departments, including Power Supply.

50.4.1 If financial incentives are currently available for minimizing power purchase expense, please provide the incentives that have been awarded over the last 10 years.

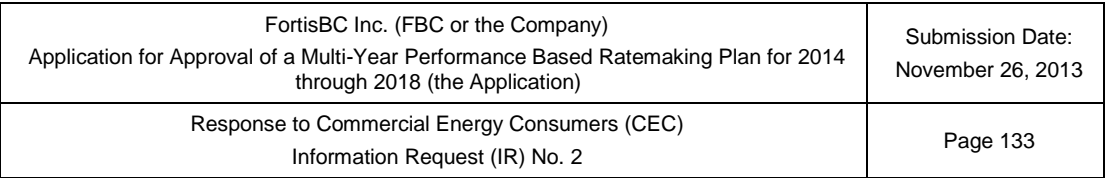


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1 **Response:**

2 Please refer to the response to CEC IR2.50.4.

3



7 54.3. Please explain whether or not the assumptions behind this table would change
8 significantly if the BC Hydro rates increase at 10% per year.

11 If BC Hydro rates increased at 10% per year, the assumptions behind this table would not
12 change significantly in the short-term because FBC cannot replace the PPA with an equivalent
13 resource without sufficient lead time. FBC's power purchase expense would increase but the
14 Company's firm available resources will not change. FBC may have more opportunity to
15 displace some PPA purchases with market purchases, if the market purchases are be more
16 cost effective compared to the PPA. However, an equivalent market purchase does not exist,
17 since no market purchase can replace the PPA with similar reliability, ability to shape deliveries
18 and ability to meet FBC's remote loads.

Response:

Section 2.5 of the Application, Exhibit B-1, on pages 102 and 103 details the assumptions behind the PPA forecast in Table C2-9 and referred to above. These assumptions are not expected to change. As explained in the Application, there can still be significant change in the actual PPA purchases from year to year. FBC expects actual purchases of PPA power between 2014 and 2018 to be between 503 GWh and 1041 GWh (the cap on Tranche 1 energy) depending on actual PPA and market prices as well as load.

Response:

Please refer to CEC IR2.51.1.

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1 **52 Reference: Exhibit B-1 page 136**

2 **4.8.1 Description of Energy Supply**

3 The Energy Supply department is responsible for three broad functional areas – Resource
4 Planning, Power Supply commercial operations, and the Company Load Forecasting. Energy
5 Supply operates as a single, integrated group with resources allocated to the various functions
6 to accomplish the required work. The purpose of each of these three functional areas and the
7 scope of their activities are described in the following sections.

2

3 52.1 What proportion of the Energy Supply group resources are allocated to Resource
4 Planning, Power Supply commercial operation, and the Company Load
5 Forecasting? Please distinguish for both labour and non-labour.

6

7 **Response:**

8 FBC's Energy Supply team is currently comprised of 6 full time positions with plans to add one
9 position in 2014. Although each team member has primary responsibilities, all contribute to the
10 various functions for which the team is responsible. The proportion of resources that are
11 contributing to the different functions will shift from period to period in response to changing
12 priorities and events (for example in response to the regulatory burden associated with various
13 applications). On average, FBC would estimate the allocation of costs for both labour and non-
14 labour between the three main functions to be as follows:

Power Supply (Commercial Operations)	50%
Resource Planning	40%
Load and Revenue Forecasting	10%

15

16

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1 **53 Reference: Exhibit B-1, page 137**

8 **4.8.2 Business Drivers for Energy Supply**

9 Significant changes are occurring in the Energy Supply group's responsibilities due to the
10 recently negotiated Power Purchase Agreement (New PPA) and related agreements. These
11 changes are extensive and will require additional resources in order to successfully implement
12 the agreements such that maximum benefits to customers are realized. A full description of the
13 operational requirements of the New PPA have been referenced in the Company's recent
14 support filing to the BC Hydro application for approval of the New PPA, in general they are:

- 16 • Annual PPA energy nomination and minimum take will require additional planning to
17 identify the optimal energy nomination point and then to ensure the required purchases
18 are implemented in the most cost effective such that the highest value displacement
19 opportunities are realized.
- 20 • Forecasting and planning changes will be required to manage the risk of having
21 insufficient energy. This may include greater use of short to medium term energy
22 purchases.
- 23 • Additional and on-going effort will be needed to continually update the short term power
24 requirements to reflect the changing expected weather to ensure that the purchase of
25 New PPA power is meeting the nomination requirements under a variety of load
26 requirement scenarios.
- 27 • System load and resource balance requirements have changed in that the Company
28 does not have access to "Excess Energy" and "Excess Capacity" under its arrangement
29 with BC Hydro. This will require more comprehensive real-time operations to ensure
30 energy imbalance is not taken from BC Hydro. Imbalance events cost more as they
31 occur more frequently; to ensure the maximum benefits are realized for customers under
32 the New PPA, imbalance events must be kept to a minimum.
- 33 • Scheduling frequency has been increased such that additional effort must be made on a
34 daily basis to determine the optimum PPA schedule for the next day taking into account
35 the requirement to avoid imbalance.
- 36 • Information transfer to BC Hydro is increased such that there are additional
37 requirements to coordinate with BC Hydro staff on a daily, weekly and monthly basis to
38 review Power Supply operations.

4

5 53.1 What percentage of the anticipated increases identified in Energy Supply O&M
6 are related to the PPA agreement negotiated with BC Hydro?

7

8 **Response:**

9 This is a difficult question to quantify since all of FBC's resources are closely integrated, and
10 need to be managed together. The majority of the new work required by the Power Supply
11 group is related to the New PPA and related agreements in some fashion-either directly as part

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of PPA management or indirectly as part of the verification that the PPA resources are being correctly used. The incremental FTE required to manage this work is approximately 40% of the increase between 2013 and 2018. However, if the New PPA was not approved, the resulting loss of one of FBC's major supply contracts would create a very difficult situation that in all likelihood would require even greater resources to manage, at least in the short-term.

The balance of the increase is related to annual inflationary pressures.

53.1.1 Are there other drivers for the anticipated increase in energy supply O&M that are not related to the New PPA?

Response:

Please refer to the response to BCPSO IR 1.76.1.

53.1.1.1 If so, please identify the drivers and provide an estimated percentage as to how they affect anticipated forecast increases

Response:

Please refer to the responses to CEC IRs 2.53.1 and BCPSO IR 1.76.1.

53.2 In the event that the PPA was not approved by the Commission, would FortisBC anticipate increases to the labour component of the Energy Supply department? Please explain.

Response:

Yes, the increases cannot be avoided. If the PPA was not approved, the resulting loss of one of FBC's major supply contracts would create a very difficult situation that in all likelihood would require even greater resources to manage.

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53.3 Does the business drivers listed affect all groups within the Energy Supply equally or are some groups more affected than others? Please explain.

Response:

As discussed in the response to CEC IR 2.52.1, the Energy Supply team is one group with overlapping functions and any changes will affect the responsibilities and work performed by all team members. The business drivers listed affect mainly the Power Supply commercial operations function, due to the operational nature of the requirements, but also impact the resource planning responsibilities.

53.4 How much variation does FortisBC expect to see in its nominations from year to year? Please express the increases/decreases as a percentage.

Response:

The Annual Energy Nomination under the New PPA cannot change (up or down) by more than 20 percent from the previous year's nomination. Once the Annual Energy Nomination is made, FBC's take or pay requirement is based on 75 percent of that amount. The assessment FBC will make from year to year prior to making its Annual Energy Nomination is discussed in detail in Section 2.5 of the Application (Exhibit B-1, pages 101-103). The forecasts in the Application are based on the Annual Energy Nomination of 670 GWh for the period of October 1, 2013 to September 30, 2014.

Over the PBR period, FBC expects that its Annual Energy Nomination will change from year to year, and perhaps as much as 20 percent, in response to changing market, customer load and pricing conditions. However, FBC does not expect that its Annual Energy Nomination will be less than the current level of 670 GWh or more than 1041 GWh (i.e. the annual cap on Tranche 1 energy).

Please also refer to the response to BCUC IR1.54.4.

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1

2

3

4 53.5 Please explain what labour is included in 'more comprehensive real-time
5 operations to ensure energy imbalance is not taken from BC Hydro'.

6

7 **Response:**

8 More comprehensive real-time operations will include better training and guidance for FBC's
9 real-time operators, which includes more complete operating orders and training documents,
10 and more comprehensive day ahead, week ahead and month ahead planning and forecasting.

11

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1 **54 Reference: Exhibit B-10, CEC 1.37.1 and Exhibit B-1, page 99**

12 The Company's resources to meet load are described in the Application as part of the
13 discussion explaining Power Purchase Expense at Section C, pages 96 to 107. The main factor
14 influencing costs to meet load is Company owned generation. If this generation remains
15 available to meet load, then actual Power Purchase Expense will most likely reflect the
16 assumptions in the forecast. If Company owned generation is not available for any reason, then
17 costs can be significantly higher depending on the amount of and the length of time generation
18 is not available. It is the Company's practice to plan to meet firm load with firm resources, either
19 Company owned or under contract.

19 a proxy for any market savings. In contrast, the 2014 forecast is based on a more detailed
20 assessment of expected purchases from BC Hydro under the New PPA that takes into account
21 FBC's expected load profile, the ability to lock in market savings in advance through contracted
22 term purchases, and a forecast of any additional market savings that may be achieved in real
23 time throughout the year through active management of the power supply portfolio.

54.1 Please confirm that the proposed New PPA contract will likely result in relatively
predictable power purchases from BC Hydro.

Response:

Unlike the New PPA, the existing PPA has no requirement for an annual energy nomination and the Company forecast to meet its firm energy needs under the firm PPA resource. For many years this worked well, but over the past few years this resulted in significant variances in actual PPA purchases from forecast. To reduce this variance the Company changed its forecast methodology as discussed in the Application on page 99, rows 13-23. This change in methodology is responsible for the expected reduction in the variance between forecast and actual PPA purchases. The New PPA is compatible with this new approach and taken together, FBC believes that PPA purchases should be relatively predictable.

54.1.1. If not, please explain why not.

Response:

Please refer to the response to CEC IR 2.54.1.

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54.2 Please explain if the annual energy nomination will be more or less predictable under the new PPA, than it was under the recently expired contract.

Response:

The annual nomination under the New PPA could vary by up to 20 percent from year to year depending on market conditions at the time. This is unlike the past practice where changes in the forecast use of PPA power from year to year generally only reflected changes in load growth and resource availability and therefore were fairly stable.

22
23

	2010 Actual	2011 Actual	2012 Actual	2013 Approved	2013 Projection	2013 Base
Labour	\$ 629	\$ 631	\$ 709	\$ 772	\$ 732	\$ 784
Non-Labour	198	262	277	352	392	394
Total O&M	\$ 827	\$ 893	\$ 986	\$ 1,124	\$ 1,124	\$ 1,178

21

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16 Table C4-14 below provides a high level view of the forecast O&M for the Energy Supply
17 department from 2013 to 2018.

18
19

Table C4-14: Energy Supply O&M Forecast (\$thousands)

	2014	2015	2016	2017	2018
	Forecast	Forecast	Forecast	Forecast	Forecast
Labour	\$ 881	\$ 983	\$ 1,012	\$ 1,042	\$ 1,074
Non-Labour	402	410	418	427	435
Total O&M	\$ 1,283	\$ 1,393	\$ 1,430	\$ 1,469	\$ 1,509

20

21

22 The Energy Supply department, in addition to general labour and non-labour inflation as
23 discussed in Section C4.3.3 of the Application, is forecasting the following incremental
24 pressures discussed below.

25

26 Costs in the PBR period reflect additional resources required beginning in 2014 and continuing
27 annually thereafter to meet the obligations of the Energy Supply function. The drivers for these
28 cost pressures are described above in Section C4.8.2. With power purchase costs expected to
29 reach \$141 million by the end of the period, these expenses are necessary and reasonable to
30 ensure all contractual obligations are met and customers receive the full benefit of the contract
31 flexibility and mitigation opportunities that are available. Non-labour expenses are expected to
32 remain steady throughout the period.

1

2 55.3 Why are the Energy Supply department high level forecast annual increases in
3 the order of \$100,000 from the period 2013 to 2015, and approximately \$30,000
4 for the period between 2015 and 2018?

5

6 **Response:**

7 The changes from 2013 to 2015 reflect the additional FTE, which, for the forecast, has been
8 budgeted to commence in mid-2014, plus the annual inflation related increases. Therefore, the
9 incremental cost of this FTE is spread out between both the 2014 and 2015 forecast periods.

10 The 2016 forward forecast cost increases reflect only the annual inflation related increases.

11

12

13

14 55.4 Of the approximately \$100,000 increase per year from 2013 base to 2015, what
15 proportion of the resources are required to meet the obligations of the new PPA
16 negotiated with BC Hydro?

17

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1 **Response:**

2 Approximately 70 percent of the increase is associated with the addition of one FTE to the
3 group that is required due to the business drivers described in section 4.8.2 of the Application
4 (Exhibit B-1, page 137). These drivers are in part due to meeting the obligations of the New
5 PPA and the associated agreements (i.e. the Imbalance Agreement, the Energy Export
6 Agreement, and Master Accounting Agreement). If these agreements were not approved, at a
7 minimum this additional resource would still be required, and there may be a requirement for
8 additional resources.

9

10

11

12 55.5 Please identify the non-labour components of the Energy Supply O&M for the
13 actual years 2010 to 2013, and the forecast years 2014 to 2018.

14

15 **Response:**

16 Please refer to response to CEC IR 2.18.1.

17

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1 **56 Reference: Exhibit B-10, CEC 1.5.3**

5 Program savings are market driven and thus customer response is dependent on a host of
6 market barriers or factors including customer awareness, measure availability, installer capacity,
7 the incentive offer and the customers' financial capacity and hurdle rate.

8 The economic achievable potential, identified by Conservation Potential Reports, is achieved
9 over the long-run, typically a 20-year timespan. To some degree this ramp-rate can be
10 accelerated, but at a higher cost to the utility and its ratepayers.

2

3 56.1 Would FortisBC agree that sustaining and driving DSM savings over the long run
4 is dependent upon a consistent and consistently strong message being delivered
5 to customers year after year?

6

7 **Response:**

8 FBC agrees that delivering a consistent message over time helps to raise awareness and
9 promote DSM programs. However, FBC must ensure that the DSM budget used to deliver this
10 message is cost effective and appropriate. Please also refer to the response to BCUC IR
11 2.100.2.

12

13

14

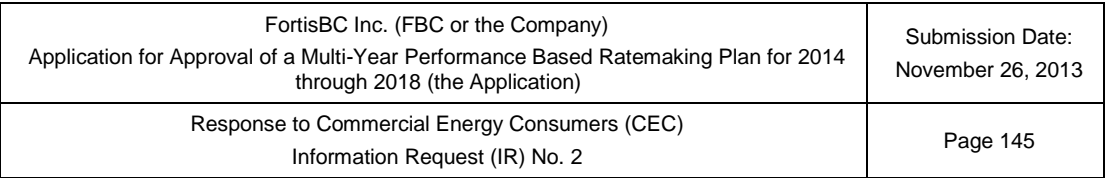
15 56.1.1. If not, please explain why not.

16

17 **Response:**

18 Please refer to the response to CEC IR 2.56.1.

19



Response:

At the time the Commission made its earlier findings, it did find the prior levels of DSM expenditure to be cost effective and in the public interest. FortisBC confirms that it plans to reduce its DSM expenditure by more than 50% from the 2012-2013 planned expenditures given the matters explained in its Application.

Response:

The first DSM guiding principle listed in Section 5.4 of Appendix H addresses the equity issue of having a broad offering available to all customers:

The most cost-effective programs for the utility are also often highly cost effective for customers, meaning that they require a lower incentive to encourage customers to participate.

9 **Response:**

0 FBC believes that the proposed DSM budget continues to offer a range of measures in
1 programs that address the key end-uses of our principal rate classes. To expand on the
2 response to CEC IR 1.5.3.1, simply re-allocating DSM expenditures from less cost effective
3 programs to more cost effective programs may not be in the best interest of our customers for
4 several reasons:

- 5 • FBC is already pursuing the most cost effective programs for each of our customer rate
6 classes;
- 7 • Re-allocating budget from one area to another may not generate new savings
8 opportunities. FBC has shown that it is able to pursue new opportunities to deliver
9 energy savings when they occur, such as direct install programs for small commercial
0 customers (FBC Lighting Install Program) and the community Energy Diets. These
1 opportunities are not generated simply by increasing DSM expenditure in a certain area;

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- Changing circumstances led FBC to believe that continuing at current DSM budget levels would not be cost effective or prudent: the introduction of the Residential Conservation Rate (RCR) that promotes energy efficiency; an updated Conservation Potential Review (CPR) that shows less potential than previous studies; and a lower Long Run Marginal Cost (LRMC) of electricity that reduces the cost effectiveness of programs. All of these factors led FBC to file a DSM plan with a reduced expenditure; and
- Finally, a number of electricity end uses that appear to have a positive benefit cost ratio are not suited to a DSM program offered by FBC. Please refer to the response to BCUC IR 1.248.8.1 for a discussion of circumstances where FBC has opted not to offer a DSM program.

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58 Reference: Exhibit B-10. CEC 1.6.1 and CEC 1.6.4 and Exhibit B-1-1 Appendix H Table H1-7

Response:

At the time the Commission made its earlier findings, it did find the prior levels of DSM expenditure to be cost effective and in the public interest. FortisBC confirms that it plans to reduce its DSM expenditure by more than 50% from the 2012-2013 planned expenditures given the matters explained in its Application.

6.4. Please provide the estimated GWhs that FortisBC predicts would have been saved had FortisBC elected to continue with the DSM as in the 2012-2013 approved plan.

Response:

The energy savings, for an annual DSM expenditure portfolio of \$7 million, are estimated to be as follows:

2014	2015	2016	2017	2018
25.6	25.8	26.0	25.7	25.9

1	Program Area	Plan Savings (MWh/year)				
2		2014	2015	2016	2017	2018
3	Programs by Sector					
4	Residential	5,800	5,783	5,615	5,511	5,407
5	General Service	6,200	6,304	6,408	6,512	6,616
6	Industrial	800	800	800	800	800
7	Sub-total Programs:	12,800	12,887	12,823	12,823	12,823
8	Supporting Initiatives					
9	Planning & Evaluation					
10	Total (incl. Portfolio)					

58.1 Is it FortisBC's position that the Commission would no longer find the levels of DSM approved for 2012-2013 as being cost effective and in the public interest, given that the energy savings would be approximately double that, or more, than are expected under the proposed plan?

Response:

FBC believes this question is out-of-scope and is beyond what is necessary to test this Application.

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1 58.1.1 If so, please provide the rationale with examples and quantification
2 based on past Commission decisions as to why the Commission would
3 no longer find it to be in the public interest.
4

5 **Response:**

6 Please refer to the response to CEC IR 2.58.1.
7
8
9

10 58.2 Does FortisBC believe that the Commission would consider a cut of more than
11 50% to result in 'shock' to customers and industry who have become
12 accustomed and committed to contributing to the conservation benefits derived
13 from the services offered under PowerSense?
14

15 **Response:**

16 FBC does not know what the Commission considers a 'shock', but will work to ensure a smooth
17 transition so impacted customers, trade allies and the like are advised of impending program
18 changes well in advance. Please also refer to the response to BCUC IR 2.100.2.
19
20

21
22 58.2.1 If not, please explain why not.
23

24 **Response:**

25 Please refer to the response to CEC IR 2.58.2.
26

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1 **59 Reference: Exhibit B-10, CEC 1.7.1 and CEC 1.7.2**

6 **Response:**

7 Below is Table H-3 with an additional column showing the percentage of plan spent.

Year	Plan	Actual	Per Cent
2008	\$ 2,355	\$ 2,683	114%
2009	\$ 3,667	\$ 3,464	94%
2010	\$ 3,952	\$ 3,712	94%
2011	\$ 7,842	\$ 5,907	75%
2012	\$ 7,731	\$ 7,300	94%
Total	25,548	23,066	90%

8
9 On average FBC has spent 90% of Plan over the period shown. Participation and take-up in the
10 DSM programs are primarily market driven in response to the PowerSense offers. The
11 Company manages the DSM budget prudently to stay within the approved plan, but does not
12 arbitrarily limit customer participation. The 2008 overspending was such an exception due to
13 robust customer participation, and the Company increased its Plan in the 2009/10 filing in
14 response. The 2011 underspending was partially due to the step change in the budget and the
15 ramp-up time necessary to build capacity and launch new programs.
16

1 **Response:**

2 Yes, rates in each year were set based on the forecast expenditures as identified in the
3 applicable Revenue Requirements application.

4

4 59.1 Please confirm that it was the 2009/2010 Plan that was increased due to the
5 2008 participation, and not the 2011 plan.

7 **Response:**

8 Both plans (2009/2010 and 2011) were increased in part due to 2008 participation.

12 59.2 If so, why was the 2011 plan almost double that of the 2010 actual?

14 **Response:**

15 The 2011 Plan was created in the context of a recently-introduced DSM Regulation and the
16 higher LRMC that existed at the time. In response, the 2011 plan included a nominal doubling
17 of the incentive rate as well as other scope changes.

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59.3 Please explain what programs failed to ramp up or build capacity as necessary to fulfill the forecast expenditures and explain why.

Response:

The primary area in which FBC was unable to ramp up capacity was in the residential sector. The residential sector was underspent by the full variance of \$1.9 million primarily because of a six month delay in the federal ecoEnergy retrofit program. That federal program was announced in January 2011, but did not come into effect until July 2011, causing the home retrofit market to effectively stall for six months.

FBC notes that in 2012 the results were at 94 percent of budget and 99 percent of the energy savings target.

59.4 Please confirm or otherwise explain that programs that are cut or diminished during the PBR period cannot be readily reinstated if circumstances change due to the time required to ramp up and build capacity.

Response:

FBC believes that individual measures and programs can be reinstated quickly if they later prove to be cost-effective and appropriate to re-introduce.

59.5 Would FortisBC agree that customers and businesses who are involved in DSM programs could reasonably expect continued DSM initiatives from the company based on their past cost-effectiveness for the last 5 years?

Response:

Continuity is provided as the proposed DSM 2014-18 Plan retains cost-effective measures and programs that address key end-uses within major customer sectors.

All DSM program literature and rebate application forms clearly indicate the program end dates, which are usually set as December 31 of the year in question.

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1 The step change in LRMC has driven the proposed DSM 2014-18 filing, which the Company
2 believes is cost-effective, appropriate and prudent.

3 Please also refer to the response to BCUC IR 2.100.2.

4

5

6

7 59.5.1 If not, please explain why not and consider the marketing messages
8 that have been delivered to the customer and businesses over the last 5
9 years.

10

11 **Response:**

12 Please refer to the responses to CEC IR 2.59.5 and BCUC IR 2.100.2.

13

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1 **60 Reference: Exhibit B-1-1, Appendix H DSM pages 9 and 10**

22 **5.2 PREVIOUSLY APPROVED PROGRAMS**

23 The programs listed in the 2014 DSM Plan are largely continuations of existing programs that
 24 were approved in the 2012-13 RRA and accepted as part of 2012 ISP filing. Table H-5 lists all of
 25 the programs in the DSM Plan categorized as "Approved for 2012-2013", even if modified in
 26 some form. Further details, descriptions and approximate timelines for each program listed in
 27 Table H-5 can be found in the DSM Plan

2

Table H-5: Programs Classified as Previously Approved or New

Program Area	DSM Plan 2014 - 2018 Programs	Approved for 2012-2013
Residential	Home Improvement (Building Envelope) Program	X
	Heat Pump Program	X
	ENERGY STAR® Water Heater Program	X
	Water Savers (Low-Flow Fixtures)	X
	ENERGY STAR® Residential Lighting	X
	New Home Program	X
	Financing Pilot	X
Commercial	Commercial Lighting Program	X
	Building & Process Improvement Program	X
	Product Rebate Program	X
	Commercial Energy Assessment Program	X
Industrial	Industrial Efficiency Program	X
Low Income	Energy Savings Kit	X
	Energy Conservation Assistance Program	X
	Direct Install Lighting	X
Conservation Education & Outreach	Public Awareness Program	X
	School Education Program	X

3

4 60.1 Please confirm that there are no 'New' programs under the 2014-2018 DSM plan,
 5 or identify any that are new.

6

7 **Response:**

8 Confirmed.

9

10

11

12 60.2 Please identify which of the programs FBC expect to modify and/or reduce
 13 budget from the 2013.

14

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1 **Response:**

2 Budgets are reduced for all programs under the filed DSM plan as compared to 2012/2013.

3

4

5

6 60.3 Please identify any programs that will not see budget reductions.

7

8 **Response:**

9 Please refer to the response to CEC IR 2.60.2.

10

11

12

13 60.4 Please provide a list of any programs that were approved for the 2012-2013 that
14 have been eliminated from the 2014-2018 DSM plan.

15

16 **Response:**

17 Please refer to the response to BCSEA IR 1. 20.2.1 for a list of specific measures and programs
18 that were eliminated from the filed DSM plan

19

20

21

22 60.5 For those programs that have been eliminated, please explain if and how they
23 are no longer cost effective based on the revised LRMC.

24

25 **Response:**

26 Several programs failed both the TRC and mTRC tests. FBC also eliminated measures with
27 lower benefit cost ratios in order to comply with the 10 percent cap on programs that qualify
28 under the mTRC.

29 Please refer to the response to BCUC IR 1.248.8.1 for a discussion of additional circumstances
30 where FBC has opted not to offer a DSM program.

31

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1 **61 Reference: Exhibit B-7, BCUC 1.180.5**

22 Response:

23 FBC does not agree that the preamble suggests a form of revenue decoupling. Revenue
24 decoupling, in the common usage of that term, does not refer to revenues being decoupled from
25 costs; rather it refers to revenues being decoupled from sales volumes. A revenue decoupling
26 mechanism is one approach that can be taken, for example, to overcome (or help to overcome)
27 the disincentive that a utility has to pursue demand-side management (DSM) programs,
28 because DSM programs will tend to cause reduced throughput and profitability. If a revenue
29 decoupling mechanism has been put in place then the utility will not experience the same
30 profitability decline from DSM-induced throughput decreases.

2

3 61.1 Does FortisBC believe that DSM spending has reduced its profitability in the
4 past? Please explain why or why not.

5

6 Response:

7 FBC believes that the level of DSM spending has an immaterial impact on its profitability.

8

9

10

11 61.2 If so, please provide a quantification of the manner in which DSM spending has
12 reduced FortisBC profitability over the last 10 years.

13

14 Response:

15 Please refer to the response to CEC IR 2.61.1.

16

17

18

19 61.3 Please explain all the ways in which reducing DSM expenditures by over 50%
20 from the 2012-2013 period could potentially improve FortisBC's profitability over
21 the PBR period, including a reduced need for program staff.

22

23 Response:

24 Please refer to the response to CEC 2.61.1.

25

26

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1
2 61.3.1 Please provide quantification of any manner in which FortisBC expects
3 to save money by reducing its DSM spending.
4

5 **Response:**

6 The monetary savings flow from reduced amortization costs, both from the reduced spending
7 plan and from the increased amortization period sought.

8 Please refer to Attachment 21.2 provided in response to BCSEA IR 1.21.2 for quantification.

9
10

11
12 61.3.1.1 If FortisBC does not expect proposed reductions in DSM
13 spending to affect its profitability one way or another, confirm
14 that increased DSM expenditures over the PBR period would
15 not reduce FortisBC profitability.
16

17 **Response:**

18 Confirmed.

19
20

21
22 61.3.1.2 If not confirmed, please explain.
23

24 **Response:**

25 Please refer to the response to CEC IR 2.61.3.1.1.

26

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1 **62 Reference: Exhibit B-1 page 129**

12 **4.6.1 Description of Customer Service Department**

13 The Customer Service department is responsible for providing accurate and timely billing for
14 FBC's customers, for ensuring that meters are read regularly and accurately, for providing
15 effective and timely resolution of customer inquiries, and for providing customers with energy
16 consumption information. Customer service manages the PowerSense demand-side
17 management programs that help customers conserve energy. Revenue protection activities,
18 which are primarily focused on reducing electricity theft and managing pole sharing agreements,
19 are also part of Customer Service.

2

3 62.1 Please confirm that the cost of labour attributable to managing the DSM
4 programs (PowerSense) would be incurred in the O&M of the Customer Service
5 department.
6

7 **Response:**

8 Not confirmed. All labour costs attributable to DSM are captured in the DSM deferral accounts.

9

10

11

12 62.2 If not confirmed, please explain in which areas of the company this labour is
13 accounted for.

14

15 **Response:**

16 The labour costs to manage the DSM programs are charged to the DSM program deferred work
17 orders.

18

19

20

21 62.3 Please quantify the total cost of Labour that is employed in managing the DSM
22 programs in every affected department.

23

24 **Response:**

25 The M&E (management & exempt) loaded labour cost in the 2014 DSM plan is \$450 thousand
26 (none of which is included in O&M costs).

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62.4 Please explain whether or not FortisBC will reduce the labour used in managing DSM given a reduction in its DSM spending from the 2013 Approved.

Response:

O&M Expense will not be reduced as a result of DSM spending reductions (but DSM management costs, which are recorded in the deferral account, will be reduced by 2.0 FTE).

62.5 Please describe and quantify the total non-Labour resources that are utilized in managing the DSM programs.

Response:

The following table shows the Planning & Evaluation non-labour expenditures used to manage the DSM programs:

	2012	2013	2014
	<u>Actual</u>	<u>Plan</u>	<u>Plan</u>
M&E Reports	164	200	100
Office Expenses & training	60	50	40
Consulting Fees	104	80	65
DSMAC	<u>9</u>	<u>10</u>	<u>5</u>
sub-Total	338	340	210

M&E (Monitoring & Evaluation) Reports includes the cost of hiring independent consultants to review the DSM programs, as per the filed M&E 2013-15 Plan. Office expenses include telephony, staff travel & training expenses, etc. Consulting fees are for general (non M&E) consultants used for program development etc. The DSMAC (Demand-side management Advisory Committee) expenses include travel expenses for members to attend the meetings.

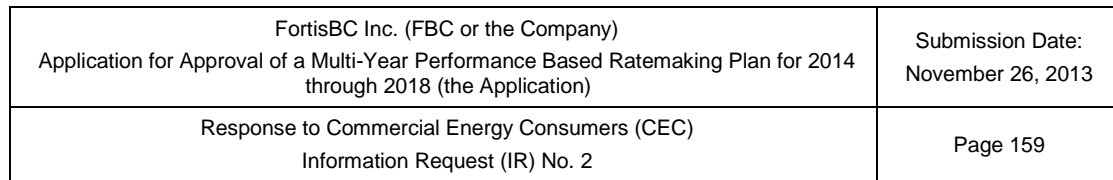
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1 62.6 Please explain whether or not FortisBC will reduce the non-labour resources
2 used in managing the DSM programs given a reduction in its DSM spending from
3 the 2013 approved.

4
5 **Response:**

6 Confirmed, please refer to the response to CEC IR 2.62.5.

7



18 3.2. How accurate does FBC consider its forecast of O&M over a five year period?
19 Please provide evidence with examples from previous years with explanations
20 as to why the forecasts were over or under.

O&M Parameters	2007	2008	2009	2010	2011
Approved Gross O&M	43,093	45,310	46,573	47,645	53,885
Actual Gross O&M	43,001	44,725	46,017	46,148	53,076
Variance \$	(92)	(585)	(556)	(1,497)	(809)
Variance %	-0.2%	-1.3%	-1.2%	-3.1%	-1.5%
Average Variance %	-1.5%				

The increase in gross O&M from 2010 to 2011 is related to the Commission determination that previously capitalized expenditures related to transmission and distribution pine beetle kill hazard tree removal and right-of-way reclamation, as well as the hot tap connector replacement program, be classified as routine operating and maintenance expense. As well, O&M requirements increased in 2011 in relation to MRS compliance requirements, as discussed in section C4.10.3 of the Application (Exhibit B-1).

63.2 Please identify what year(s) Actual information was provided in the request for and approval of the 2011 O&M.

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Response:

The question is unclear. However, please note that generally Revenue Requirements Approval (RRA) requests for any specific year (of which O&M Approval is a subset) are ahead of initiation of that year.

Specifically for RRA 2011 the following were provided:

- O&M Forecast 2011 (Financial Schedules: Revenue Requirement Overview & Table 2E);
- O&M Approved 2010 (Financial Schedules: Revenue Requirement Overview Table 2E);
- O&M Forecast 2010 (Financial Schedules: Schedule-2); and
- O&M Actual 2009 (Financial Schedules: Schedule-2).

63.3 Please explain why 2010 experienced a 3.1% variance in O&M, which is more than double that of other years.

Response:

The variance of 3.1 percent for 2010 O&M was primarily a result of increased recoveries of executive time working on non-regulated activity, increased vehicle charge out recoveries to O&M for capital work, and increased labour charged out.

63.4 Does FortisBC consider 3.1% to be a nominal variance in this instance? Please explain why or why not.

Response:

Yes, FBC considers the 3.1 percent to be a nominal variance. The overall variance was a cumulative effect of individual variances primarily arising out of:

- Increased recoveries of executive time working on non-regulated activity,

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- Increased vehicle charge out recoveries to O&M for capital work, and

- Increased labour charged out.

Please also refer the response to CEC IR 2.63.3

63.5 What is the maximum variance that FortisBC considers as 'nominal'? Please provide a rationale.

Response:

Any specific variance analysis reviews the circumstances and volume of variance to determine whether such variance can be considered "nominal" or minor.

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1 **64 Reference: Exhibit B-10, CEC 1.3.3**

14 The table below provides variance and variance explanation between actual and budgeted
15 capital expenditure during 2007-2012 period. The variances primarily arose from factors not
16 controllable by the Company. These factors and may be generally classified as:

- 17 1. Market related variance not previously anticipated;
18 2. Lower than anticipated customer activity; and
19 3. Project re-scheduling due to the timing of BCUC Decisions.

2

3

4 64.1 Please provide specifics with respect to market related variance not previously
5 anticipated.

6

7 **Response:**

8 Domestic and worldwide market supply and demand can significantly influence equipment and
9 material costs. Contractor construction resource availability can also contribute to market
10 related variances. Please also refer to the response to CEC IR 2.64.1.1.

11

12

13

14 64.1.1 Would FortisBC agree that frequent forecasting can improve
15 understanding of market factors and reduce unexpected outcomes?

16

17 **Response:**

18 Although it is possible that more frequent forecasting may improve the understanding of market
19 factors and potentially reduce unexpected outcomes, it is uncertain whether such improvement
20 would offset the incremental cost associated with more frequent forecasting. FBC already
21 keeps abreast of market conditions through both formal (i.e. tender responses and project
22 meetings) and informal discussions with local-area contractors, vendors, and other utilities
23 across Canada including BC Hydro, and believes this to be a reasonable and cost-effective
24 approach to maintaining an understanding of market factors. FBC further notes that the market
25 variances referred to in response to CEC IR 1.3.3 were experienced during a period of
26 unprecedented volatility (Kettle Valley and OTR projects); as such it is unlikely that more
27 frequent forecasting during such volatility for multi-year projects would have resulted in a more
28 consistent and accurate prediction of markets factors.

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64.1.1.1 If not, please explain why not.

Response:

Please refer to the response to CEC IR 2.64.1.1.

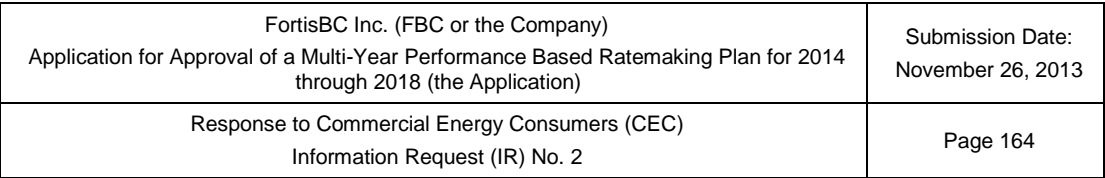
64.1.2 Please provide specifics with respect to lower than anticipated customer activity.

Response:

The New Connects System Wide project is a customer driven project. The project involves the installation of new electrical services consisting of additions to FBC overhead and underground equipment.

The forecast expenditures for the New Connects System Wide project are based on a three-year rolling average, adjusted for anomalous years, projected customer growth and inflation. The three-year rolling average method is used to derive this budget as FBC is unable to predict the variables in the future that would affect this budget. Using historical spending patterns to predict the basis of future year budgets is the most reasonable approach from FBC's perspective.

The variance due to lower than anticipated customer activity means that there were fewer customers than forecast that requested the installation of new electrical services.



1 65 **Reference: Exhibit B-10, CEC 1.17.1, 1.17.2 and 1.17.3**

3 17.1. Please provide the progression of adoption since inception of the service to the
4 current 19% and please provide a projection for the 2014 to 2018 period for
5 expected adoption.

7 Response:

8 The average sign up for e-bills for FBC is 310 per month with the average for the City of
9 Kelowna at 80 per month for a total of 390.

0 We have assumed the same uptake of e-bills for the period 2013 – 2018 with an average
1 increase in customer count of 1% per year or 100/month.

4 17.2. Please provide the estimated savings per bill as a result of being able to
5 provide ebilling.

7 Response:

8 The total saving for each e-bill is approximately \$0.85.

1 17.3. Please provide the number of ebillings as of the point of adoption being 19%.

3 Response:

4 In April 2013 FBC reached 19.16% e-bill adoption. For the month of April this represented a
5 total of 12,966 e-bills sent to customers.

5.1 Please confirm that the savings related to e-billing is approximately \$10.20 annually per customer who adopts ebilling.

se:

The balance would be billed on a bi-monthly basis therefor the annual savings would be \$1,200.00 per invoice (not customer).

5.2 Please confirm that FBC predicts an increase of 5% in e-billing over the 5 year term of the PBR.

se:

ects to exceed an increase of 5 percent in e-billing over the 5 year term of the PBR.

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65.3 Please confirm that, assuming approval of the PBR in April of 2014, the expected e-bill adoption will be in the order of 20.16%.

Response:

FBC has already exceeded 20.16 percent. The Company expects to have an e-bill adoption rate of approximately 22 percent by the end of April 2014.

65.4 Would FortisBC agree that a 60% adoption of e-billing would result in additional savings of approximately \$265,000 per year?

Response:

Correct.

65.4.1 If not, please explain why not and calculate the savings that would arise from a 60% adoption rate.

Response:

Please refer to the response to CEC IR 2.65.4.

65.5 What practices does FortisBC undertake to increase the adoption of e-billing?

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1 **Response:**

2 FEI is evaluating various alternatives to increase the adoption of e-billing, such as the use of
3 loyalty programs, promotional information booths, sign-up campaigns in public settings, friends
4 and family campaigns, contests and reminders on paper billings.

5

6

7

8 65.6 Has FortisBC investigated additional practices to increase adoption of e-billing,
9 and if so, what are they?

10

11 **Response:**

12 FBC is always looking for new ways to increase adoption of paperless billing. We are
13 evaluating alternatives such as the use of loyalty programs, promotional information booths and
14 sign-up campaigns in public settings, friends and family campaigns, contests and reminders on
15 paper billings.

16

17

18

19 65.6.1 Please identify any practices FortisBC intends to implement to increase
20 the adoption of e-billing over the PBR term, and the anticipated costs
21 arising from these practices.

22

23 **Response:**

24 FBC will continue to encourage the promotion and awareness efforts of adopting paperless
25 billing while evaluating various alternatives such as the use of loyalty programs and awareness
26 campaigns.

27 Associated costs have not been ascertained yet, however, it is anticipated that the majority of
28 any dollars required would be associated with digital and print media.

29

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1 **66 Reference: Exhibit B-1, page 16**

33 During the PBR Period, FBC intends to introduce new self-service options, which will similarly
34 reduce costs if adopted by customers. FBC intends to provide customers with the ability to
35 access their billing data and consumption information through web browsers and mobile
36 devices. Following the deployment of AML, consumption information will be available on an
37 hourly basis, allowing customers to analyse their consumption more effectively than ever before;
38 customers will be able to get the more detailed consumption information less than 24 hours after
39 the energy has been used. This type of information will allow customers to respond more
40 effectively to conservation rates such as the current Residential Conservation Rate (RCR).

2

3 66.1 What self-service options does FBC intend to introduce during the PBR period?

4

5 **Response:**

6 As stated in the reference, FBC intends to provide customers with the ability to access their
7 billing data and consumption information through web browsers and mobile devices.

8

9

10

11 66.2 What savings does FBC expect to achieve through the introduction of new self-
12 service options. Please quantify.

13

14 **Response:**

15 FBC has not quantified the savings from new self-service options, but expects that call volume
16 to the contact centre may be somewhat reduced. The Company submits that the primary
17 benefit of self-service options is typically not a reduction in costs, but rather an increase in
18 customer access to their consumption information. Customers who prefer to interact through
19 these self-service options may not have phoned the Company and will more easily have access
20 to their usage data. Therefore, the primary benefit is increased customer access.

21

22

23

24 66.3 How does FortisBC intend to track savings related to self-service options?

25

26 **Response:**

27 FBC will continue to track call volume into the contact centre by call type. This will allow the
28 Company to estimate self-service option savings (after normalizing call volume for other factors,
29 such as the increased customer count due to the integration of City of Kelowna, for example).

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4 66.4 Are the self-service options related to the AMI deployment? Please explain
5 which, if any, elements of the self-service options are dependent on AMI
6 deployment.

7

8 **Response:**

9 The self-service options are not directly related to the AMI project. However, hourly
10 consumption data from the AMI system is expected to enhance the self-service options.

11

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1 **67 Reference: CEC 1.3.1**

22 FBC has not considered other approaches to productivity such as reengineering which focuses
23 on the redesign of the organization, as it believes the focus on ongoing improvement is more
24 appropriate. Reinforcing a productivity focus in the organization's culture and encouraging
25 actions to review embedded practices and rethink work with the view to improve efficiency and
26 effectiveness is cost effective and appropriate for its business.

2

3 67.1 Please provide the internal documentation of the company's decision to deal with
4 ongoing improvement versus other approaches.

5

6 **Response:**

7 This IR has been identified as relating to the PBR Methodology and will be submitted with the
8 PBR Methodology IR responses.

9

10

11

12 67.2 Was the decision an ad hoc decision or one made with evaluation of options?

13

14 **Response:**

15 This IR has been identified as relating to the PBR Methodology and will be submitted with the
16 PBR Methodology IR responses.

17

18

19

20 67.3 Does FBC believe that the Commission may find it useful to have a prudent
21 consideration of options as part of its role in approving any future regulatory
22 regime and or future productivity improvement regime particularly one where
23 there is a proposed financial incentive to be offered to the company's
24 shareholder?

25

26 **Response:**

27 This IR has been identified as relating to the PBR Methodology and will be submitted with the
28 PBR Methodology IR responses.

29

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1 **68 Reference: CEC 1.19.1**

7 FBC believes the customer interests are essentially FBC's mandate – to provide safe, reliable
8 and cost effective service. FBC considers the Company's interests, apart from its mandate
9 above, to include earning a fair return on and of capital and providing meaningful employment
10 for its employees. Please also refer to the response to CEC IR 1.19.2.

2

3 68.1 Please comment on whether or not FBC considers that it could be in the
4 customers interest to achieve greater productivity savings without the need to
5 provide an incentive to the company's shareholder over and above the fair return
6 on its invested capital and the return of that capital as well as the recovery of
7 prudently incurred cost for operation of the utility.

8

9 **Response:**

10 This IR has been identified as relating to the PBR Methodology and will be submitted with the
11 PBR Methodology IR responses.

12

13

14

15 68.2 Please comment on whether or not there may be alternative regulatory
16 mechanisms to capture regulatory efficiency benefits and fair return opportunities
17 for investment in productivity improvement.

18

19 **Response:**

20 This IR has been identified as relating to the PBR Methodology and will be submitted with the
21 PBR Methodology IR responses.

22

23

24

25

26 68.3 Please confirm that the company has not looked at alternative regulatory models.

27

28 **Response:**

29 This IR has been identified as relating to the PBR Methodology and will be submitted with the
30 PBR Methodology IR responses.

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68.4 Please comment upon whether or not the FBC believes that it would be useful to the Commission to have available, consider and evaluate alternative options to the ones proposed by FBC.

Response:

This IR has been identified as relating to the PBR Methodology and will be submitted with the PBR Methodology IR responses.

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1 **69 Reference: CEC 1.19.2**

19 It is an overstatement to say that the interests are fundamentally different. While it is true that
20 with respect to certain interests there may be the appearance of conflicts based on different
21 perspectives of customer interests, their interests are aligned in many respects. For example,
22 both customers and shareholders benefit from a financially sound and stable Company. They
23 may have different views of what is required for the utility to be financially sound but failure to
24 provide a reasonable opportunity to earn a fair return actually raises cost for all customers in the
25 long-run. Costs increase and reliability decreases when a utility is not financially sound.

26 Further, the pendulum for interests changes over time due to circumstances and can severely
27 impact utility performance both financially and operationally. For example, some parties may
28 argue for increasing the vegetation management cycle in order to reduce revenue requirements.
29 There may be no immediate consequences from this delay until the next major storm when
30 more customers lose service and restoration costs are higher as a result. At that point, revenue
31 requirements increase because of new restoration capital and returning to the original
32 vegetation management schedule. This is the kind of impact that hurts both customers and
33 shareholders when the balance swings to reducing revenue requirements without fully
34 understanding the consequences of missing the balance.

2

3 69.1 Why would FBC assume that fundamentally conflicting interests would involve
4 the customers in wanting to provide an unfair return on capital and result in a
5 financially unsound utility?

6

7 **Response:**

8 This IR has been identified as relating to the PBR Methodology and will be submitted with the
9 PBR Methodology IR responses.

10

11

12

13 69.2 Surely the fundamental conflicts between utility shareholder interests and
14 ratepayer interests is what the Commission adjudicates all the time, is this not
15 the fundamental role of the regulator?

16

17 **Response:**

18 This IR has been identified as relating to the PBR Methodology and will be submitted with the
19 PBR Methodology IR responses.

20

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1 **70 Reference: Exhibit B-10, 1 51.3**

- 1 2012, Exhibit B-1, Section C1, 1.4.7. The after-savings growth shown in Figure C1-12 is the
2 year over year after-savings loss growth percentage, not the loss rate.
3 The after-savings growth shown in Figure C1-12 is negative from 2015 through 2018 due to
4 reduced theft as a result of the implementation of the AMI system.

2 5

3 70.1 Would FEI expect that theft could begin to diminish prior to the introduction of the
4 AMI system?

5
6 **Response:**

7 FBC does expect that the AMI deterrent impact on theft reduction could begin in advance of
8 deployment as marihuana producers who currently steal electricity might proactively modify their
9 business model in advance of AMI deployment. The Application reflects this expectation in the
10 AMI Probable scenario by estimating a 2 percent increase in the theft deterrence ratio in 2013,
11 the year prior to deployment.

12
13

14
15 70.1.1 If no, please explain why not with discussion as to the deterrence effect
16 of introducing AMI and whether or not that could occur based on the
17 expectation of implementation.

18
19 **Response:**

20 Please refer to the response to CEC IR 2.70.1.

21
22

23
24 70.1.2 If yes, please explain when FortisBC might start seeing reductions in its
25 loss growth due to reduced theft.

26
27 **Response:**

28 Please refer to the response to CEC IR 2.70.1.

29
30

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70.2 Please explain and quantify with sensitivities the cost benefits that would accrue with a larger reduction in loss growth than FortisBC predicts.

Response:

The value of loss reduction in 2014 is approximately \$37 per MWh, escalating to \$39 per MWh in 2018. This is constant, regardless of the size of the loss reduction.

The following table presents potential benefits if the AMI program is more successful in reducing losses than anticipated by percentage factors of 10, 25 and 50.

Change to Power Purchase Forecast '(000s)			
Year	AMI Loss Reduction Increased by 10%	AMI Loss Reduction Increased by 25%	AMI Loss Reduction Increased by 50%
2014	\$ 285	\$ 712	\$ 1,423
2015	\$ 433	\$ 1,084	\$ 2,167
2016	\$ 587	\$ 1,466	\$ 2,933
2017	\$ 744	\$ 1,861	\$ 3,721
2018	\$ 906	\$ 2,266	\$ 4,532

The Company notes that any reduction in power purchase expense due to a larger than predicted reduction in power purchase expense will accrue entirely to FBC customers.

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1 **71 Reference: Exhibit B-8, CEC 1.71.1 and CEC 1.56.1**

12
13 Please note that only the CPCN expenditures for the Advanced Metering Infrastructure have
14 been excluded in the table, and not the incremental sustaining expenditures (non-CPCN
15 expenditures) which are driven by the AMI project

2
3

	2010	2011	2012	2012	2013	2013	2013	2014	2015	2016	2017	2018
	Actual	Actual	Actual	Approved Projection	Approved	Base	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast
Generation	\$ 2,217	\$ 2,890	\$ 2,331	\$ 2,282	\$ 2,556	\$ 2,492	\$ 3,046	\$ 3,130	\$ 3,217	\$ 3,307	\$ 3,398	\$ 3,493
Operations	\$ 14,852	\$ 18,604	\$ 19,750	\$ 19,520	\$ 20,598	\$ 20,816	\$ 21,760	\$ 22,571	\$ 23,046	\$ 23,609	\$ 24,184	\$ 24,775
Customer Service	\$ 5,075	\$ 6,398	\$ 6,766	\$ 6,624	\$ 7,510	\$ 7,541	\$ 7,858	\$ 7,576	\$ 7,768	\$ 8,009	\$ 8,220	\$ 8,444
External Relations	\$ 1,659	\$ 1,485	\$ 1,244	\$ 1,431	\$ 1,440	\$ 1,469	\$ 1,490	\$ 1,525	\$ 1,561	\$ 1,598	\$ 1,636	\$ 1,674
Energy Supply	\$ 827	\$ 893	\$ 986	\$ 1,069	\$ 1,124	\$ 1,124	\$ 1,178	\$ 1,283	\$ 1,393	\$ 1,430	\$ 1,465	\$ 1,505
Information Technology	\$ 2,829	\$ 2,908	\$ 2,925	\$ 2,841	\$ 2,988	\$ 2,974	\$ 3,149	\$ 3,231	\$ 3,315	\$ 3,400	\$ 3,485	\$ 3,580
Engineering	\$ 1,342	\$ 2,363	\$ 2,615	\$ 2,701	\$ 2,822	\$ 2,791	\$ 3,867	\$ 3,975	\$ 4,084	\$ 4,197	\$ 4,313	\$ 4,433
Operations Support	\$ 959	\$ 1,315	\$ 1,340	\$ 1,229	\$ 1,355	\$ 1,352	\$ 1,358	\$ 1,391	\$ 1,325	\$ 1,360	\$ 1,396	\$ 1,431
Facilities	\$ 3,730	\$ 3,720	\$ 3,936	\$ 3,685	\$ 3,585	\$ 3,466	\$ 2,526	\$ 2,683	\$ 2,890	\$ 2,748	\$ 2,838	\$ 2,869
Environment, Health & Safety	\$ 727	\$ 867	\$ 894	\$ 925	\$ 953	\$ 953	\$ 1,013	\$ 1,043	\$ 1,072	\$ 1,104	\$ 1,135	\$ 1,168
Finance & Regulatory	\$ 3,576	\$ 3,882	\$ 3,823	\$ 4,352	\$ 4,080	\$ 4,271	\$ 4,288	\$ 4,408	\$ 4,522	\$ 4,646	\$ 4,771	\$ 4,899
Human Resources	\$ 1,638	\$ 1,747	\$ 1,816	\$ 1,840	\$ 1,874	\$ 1,874	\$ 1,958	\$ 2,009	\$ 2,062	\$ 2,116	\$ 2,172	\$ 2,228
Governance	\$ 2,284	\$ 2,081	\$ 2,134	\$ 1,752	\$ 2,490	\$ 2,875	\$ 2,531	\$ 2,691	\$ 2,783	\$ 2,875	\$ 2,962	\$ 3,069
Corporate	\$ 3,510	\$ 4,484	\$ 3,444	\$ 4,118	\$ 3,830	\$ 4,225	\$ 3,526	\$ 3,635	\$ 3,173	\$ 2,637	\$ 2,345	\$ 1,863
Advanced Metering Infrastructure	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 368	\$ (433)	\$ (2,411)	\$ (2,380)	\$ (2,794)	\$ -
Total O&M	\$ 46,149	\$ 53,075	\$ 53,544	\$ 54,843	\$ 57,589	\$ 57,621	\$ 59,848	\$ 61,362	\$ 61,592	\$ 62,639	\$ 63,899	\$ 64,641

3

4 *Note: Minor variations due to rounding*

4

5 71.1 Please confirm or otherwise explain that the AMI application was considered by
6 FortisBC to be conservative in its estimations and quantifications of benefits.

7

8 **Response:**

9 Confirmed.

10

11

12

13 71.1.1 If confirmed, please provide a list of all the areas in which FortisBC
14 considers and/or identified the AMI application to have been
15 conservatively estimated.

16

17 **Response:**

18 FBC considers that it has applied prudently conservative estimations in all aspects of the
19 project, including the timing of benefits realization, the types of benefits to include in the
20 financial analysis of the project (meter reading was considered; IHD/CIP were not considered),
21 and the attribution of contingency allowances during project implementation.

22 Examples noted in the AMI CPCN regulatory process are found at:

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- BCUC IR:
 - 1.5.1 failure rate of electro-mechanical meters;
 - 1.16.1 unclaimed potential CIP benefit;
 - 1.47.3 provision for meter base replacements;
 - 1.57.3 inflation rate for all aspects of the project;
 - 1.85.3.1 theft rate; and
 - 1.87.2 NPV of net benefit for theft reduction.
 - BCSEA IR:
 - 1.44.2 unclaimed potential IHD benefit.
 - CEC IR:
 - 1.67.2 inflation rate; and
 - 1.78.1 forecast of customer growth.
 - BCUC IR:
 - 2.62.4 collection success rate for theft recoveries;
 - 2.77.1 calculation of benefits;
 - 2.79.2 calculation of benefits;
 - 2.81.1.1.1 calculation of benefits; and
 - 2.86.1.1 benefit risk and uncertainty.
 - CEC IR:
 - 2.25 unclaimed IHD potential benefit; and
 - 2.25.1 growth of potential IHD benefit.

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71.2 Please provide a list of all the sustaining benefits that were non-quantified but that may result in cost savings and provide a link to the Application and Information Requests.

Response:

Sustaining benefits that were not quantified beyond the 20 year project financial analysis, but will result in continuing cost savings include:

- Improved Outage Management;
- Conservation Rate Structures;
- In-Home Display;
- Customer Information Portal; and
- Enhanced System Modeling.

Please also refer to the responses from the AMI CPCN application for CEC IR 2.2.1 and 2.3.1 (which can be found at http://www.bcuc.com/Documents/Proceedings/2012/DOC_32832_B-15_FBC-Response-Intervener-IR2.pdf) which elaborate further on non-quantified benefits.

71.3 Please provide quantifications of the conservative estimates of the AMI program as outlined in the Application and responses to Information Requests.

Response:

A copy of Table 1.1.a from the addendum to the CPCN application for the AMI Project (Exhibit B-1-2 from the AMI proceeding) is provided below, which details a summary of the forecast costs and benefits associated with the AMI project. FBC notes that the forecast costs and benefits, as detailed in the table below, were the subject of an extensive and thorough review as part of the CPCN application for the AMI project, and were ultimately determined to be reasonable. As such, the savings related to reductions in costs for manual meter reading, disconnection and reconnection, meter exchanges, and contact centre activities have been appropriately included in the determination of total O&M under PBR.

Please also refer to the above responses to CEC IRS 2.71.1.1 and 2.71.2.

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Table 1.1.a – Summary Costs and Benefits

		Status Quo	Gross AMI	Net AMI
Benefits		2012 NPV (\$000s)		
	Meter Reading	38,062	11,586	(26,476)
	Theft Reduction	(72,824)	(116,009)	(43,185)
	Remote Disconnection/Reconnect	7,990	1,835	(6,155)
	Meter Exchanges	3,271	1,661	(1,610)
	Contact Centre	6,908	6,401	(507)
Costs				
	Operating Costs	-	14,411	14,411
	Depreciation Costs	15,857	33,197	17,340
	Carrying Costs	6,799	24,986	18,187
	Income Tax	(663)	3,884	4,547
Total		7,089	(16,359)	(23,448)
Capital Benefit				
	Measurement Canada Compliance	10,808	-	(10,808)

1

2

Attachment 15.4

- Personal property which includes some of the non-affixed utility equipment, the electrical utility customer data, and the meter data files;
- Some limited intellectual property; and
- Potentially the assumption of some of the City's material contracts.

The parties have been able to complete a large portion of the due diligence with respect to the transaction. The due diligence process has been facilitated by the fact that FortisBC has planned, operated and maintained the City's utility assets since 2000. FortisBC is familiar with the assets, their condition and their operation. The type and condition of the City's assets are similar to FortisBC's distribution assets. There are final pre-closing due diligence and transaction steps being completed by the parties consistent with a commercial transaction of this type as set out in the Asset Purchase Agreement.

5.1 DISCUSSION OF INCREMENTAL REVENUE REQUIREMENT IMPACTS

The following Figure 2 provides an overview of the financial impact of FortisBC's acquisition of the City of Kelowna's electric utility assets. The analysis demonstrates that the acquisition would mitigate customer rate increases by 1.6 percent in 2014, and that savings would be reduced over the next several years. The cumulative effect of the acquisition has an approximate 1 percent mitigation effect on customer rates.

The analysis compares the revenue requirements including the impacts of the acquisition (on the left), to the revenue requirements excluding the acquisition (in the middle), to the difference or incremental revenue requirements of the City's utility assets under FortisBC's ownership. For 2013 (excluding the acquisition), the numbers reflect the approved 2013 Revenue Requirements for FortisBC and 2014 through 2017 is the preliminary forecast revenue requirements. The final revenue requirements for 2014 and beyond are subject to further refinements as the application(s) for those years are prepared.

The following discussion, which is focused on the difference, or COK stand alone columns (in red), summarizes the impacts of the acquisition on a line by line basis:

- a) Sales Volume (GWh) – There is no impact to sales volumes as FortisBC currently supplies the electricity to the City of Kelowna for resale to the end use customers. After completion of the transaction, the City of Kelowna's current customers will be supplied on a retail basis pursuant to FortisBC's Electric Tariff as opposed to the current situation where FortisBC supplies the City of Kelowna on a wholesale basis pursuant to

1 FortisBC's Electric Tariff and the City supplies the end use customers on a retail basis
2 pursuant to the City's electric rate bylaw.

3 b) Rate Base – The impact to rate base for 2013 is the addition of \$55.0 million of utility
4 assets being acquired from the City, the expected \$0.5 million of closing costs and the
5 2013 capital expenditures. These are all weighted for the portion of the year that the
6 expenditures are in rate base. For 2014 and onward, the impact to rate base is the prior
7 year rate base plus capital expenditures less depreciation.

8 c) Return on Rate Base – The return on rate base is essentially unaffected by the
9 transaction. There are some very minor impacts resulting from the timing of additions to
10 rate base.

11 d) Power Purchases and Water Fees – There is no impact to power purchases or water
12 fees due to the fact that sales volumes remain unaffected by the transaction.

13 e) O&M Expense – This is the Operation and Maintenance cost associated with the City of
14 Kelowna's electric utility assets under FortisBC ownership. The incremental increase
15 arises due to these costs, which were formerly paid by the City, now being paid by
16 FortisBC. This includes the operations and maintenance of the assets and the customer
17 service functions. In 2013, approximately 62% of the costs are associated with
18 customer service functions, composed primarily of the interim continuation of the Corix
19 contract. After 2013, once FortisBC performs these functions in-house, the customer
20 service component falls as a percentage of the total and levels off at 36% after 2015.
21 There are no incremental administrative costs associated with the addition of the City's
22 assets or customers.

23 f) Capitalized Overhead – Capitalized overhead is 20 percent of gross O&M which is the
24 capitalized overhead rate approved for FortisBC.

25 g) Other Income – no change in other income.

26 h) Property Taxes – The assets involved in the transaction will attract property taxes,
27 payable by FortisBC, once the Company assumes ownership. Property taxes will first
28 become payable in 2014 based upon the assessed 2013 values. For this reason, there
29 are no incremental costs associated with property taxes in 2013.

- 1 i) Income Taxes – This represents the income taxes levied to the Company as a result of
2 the incremental revenues and incremental costs associated with the new customers and
3 utility assets. Income taxes also reflect the benefit associated with the fact that this is a
4 purchase of assets at a fair market value of \$55.0 million, plus applicable taxes and
5 adjustments, and the full purchase price will be subject to CCA deductions.
- 6 j) Cost of Debt – This represents the 60% debt portion of rate base financed at the
7 Company's debt rates.
- 8 k) Cost of Equity – This represents the 40% equity portion of rate base financed at the
9 Company's approved Return on Equity (ROE) of 9.9 percent. Note that any change to
10 capital structure or ROE resulting from the Generic Cost of Capital process currently
11 before the Commission, would further impact this transaction and the results would flow
12 through to customers.
- 13 l) Depreciation and Amortization – There is no depreciation associated with the acquisition
14 of the electric utility assets in 2013 as FortisBC calculates depreciation on its closing
15 asset balance as at the end of the preceding year. For 2014 onward this is the
16 depreciation of the assets at the approved FortisBC depreciation rates.
- 17 m) Flow-Through Adjustments- There is no impact to the existing flow-through adjustments
18 as a result of this transaction.
- 19 n) Customer Benefit of Transaction – For 2013, this represents the benefit to customers
20 associated with the transaction. As 2013 rates are already approved, this \$1.98 million
21 benefit will be recorded in a deferral account for the benefit of customers. Disposition
22 will be sought in FortisBC's 2014 Revenue Requirements Application. For 2014, the
23 analysis assumes that this benefit will be flowed back to customers to mitigate the 2014
24 customer rate increase.
- 25 o) Total Revenue Requirement – This represents the total incremental revenue that will be
26 collected pursuant to FortisBC's Electric Tariff from those customers currently served by
27 the City of Kelowna. As a result, the Company is requesting an increase to the base
28 amount of Revenues for calculating the Revenue Variance Deferral Account by \$6.798
29 million to account for the incremental revenue. For greater clarity, the revenue subject to
30 variance deferral flow-through should be increased from \$303.732 million to \$310.529
31 million. This is necessary due to the fact that FortisBC currently has a revenue variance

1 flow-through mechanism in place. This mechanism was approved as part of the
2 Company's 2012 and 2013 Revenue Requirements Application.

3 p) Rate Increase – This represents the rate increase or (decrease) associated with the
4 transaction. For 2013 there is no impact due to the fact that 2013 rates are set, but the
5 benefit to customers is deferred and flows through to customers in 2014 as discussed in
6 item (m) above. For 2014, rates would be mitigated by 1.6 percent as a result of the
7 transaction. For 2015 and 2016 that mitigation effect is somewhat diminished. This is
8 primarily due to the fact that the 2014 rates are mitigated by both the amounts related to
9 2013 and 2014 and are therefore lower than they otherwise would have been. Note that
10 the final rate impacts of the transaction on 2014 and future rates may differ slightly if the
11 underlying Revenue Requirements for those years were to change.

12 q) Cumulative Rate Increase – This represents the cumulative effect of the benefits
13 associated with this transaction. Over time, customer rates are mitigated by
14 approximately 1 percent.

6.0 PROVINCIAL GOVERNMENT ENERGY OBJECTIVES AND POLICY CONSIDERATIONS

The purchase of Kelowna's electric utility will have a small but positive impact in advancing governmental energy objectives. FortisBC personnel currently plan, operate and maintain the City's utility and the Company provides the same energy conservation services to City customers as it does to its own customers. This will not change as a result of the transaction.

While the City and FortisBC have had a close and highly cooperative relationship with regards to the utility, the transaction will result in an efficiency gain which will be beneficial in lowering overall rates. While the City's and FortisBC's rates are similar they are not identical at this time. With the purchase, City customers will be supplied electricity under FortisBC rates. FortisBC rates are more closely linked to "conservation rates" which have been ordered by the BCUC for FortisBC and are legally mandated for BC Hydro. The transaction will provide for added consistency in ratemaking, conservation objectives, and as it relates to those factors, the adoption of technology that facilitates these objectives. As a result of the amalgamation the BCUC will have additional customers under its oversight and guidance in rate and conservation matters and this will promote additional concordance with provincial objectives.

7.0 NEW SERVICE AREAS

Customer Contact

After the interim period of the last nine months of 2013 during which the City utility customers will continue to deal with their existing service provider, all customer service and emergency interactions will transition to FortisBC. FortisBC provides a number of convenient contact methods for its customers:

Toll free:	1-866-436-7847
International:	1-250-368-0690
Fax:	1-866-540-6732
E-mail:	electricity.customerservice@fortisbc.com .
Website:	www.fortisbc.com
Electricity emergencies or power outages:	1-866-436-7847 (24 hours)

FortisBC Inc. (FortisBC or the Company) Application for a Certificate of Public Convenience and Necessity for the Purchase of the Utility Assets of the City of Kelowna	Submission Date: January 11, 2013
Response to British Columbia Utilities Commission (BCUC or the Commission) Information Request (IR) No. 1	Page 42

Additional O&M due to COK:	<u>2013</u> <u>(9 Months)</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>Remarks</u>
1 Operations	488	670	690	710	732	
2 Insurance	22	23	24	25	27	
3 Corix Contract	810	-	-	-	-	
4 Bad Debt	25	65	73	78	79	
5 Meter Reading	-	300	153	30	31	Declining cost due to AMI
6 Printing & Postage	-	75	77	78	80	
7 TCC	-	223	230	237	244	
8 Total:	1,344	1,356	1,246	1,158	1,192	

FBC states on page 19: "In 2013, approximately 62% of the costs [O&M costs] are associated with customer service functions, composed primarily of the interim continuation of the Corix contract. After 2013, once FortisBC performs these functions in-house, the customer service component falls as a percentage of the total and levels off at 36% after 2015."

14.9 If 62% of incremental O&M costs in 2013 are a result of the Corix contract and these costs drop to 36% of incremental O&M after 2015, please explain why the incremental O&M costs do not also drop by the same percentage by 2015.

Response:

Please refer to the table (also provided below) in response to BCUC IR No. 1 Q14.8. The drop in O&M costs does not occur until after 2015 primarily because of two reasons:

1. The cost for 2013 is only for 9 months of the year; and
2. The bulk of the O&M cost reduction is due to the meter reading cost which is expected to decline with the implementation of Advanced Metering Infrastructure (AMI). AMI would not be fully deployed until after 2015.

FortisBC Inc. (FortisBC or the Company) Application for a Certificate of Public Convenience and Necessity for the Purchase of the Utility Assets of the City of Kelowna	Submission Date: January 11, 2013
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Additional O&M due to COK:	<u>2013</u> <u>(9 Months)</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>Remarks</u>
1 Operations	488	670	690	710	732	
2 Insurance	22	23	24	25	27	
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6 Printing & Postage	-	75	77	78	80	
7 TCC	-	223	230	237	244	
8 Total:	1,344	1,356	1,246	1,158	1,192	

14.10 Please provide the forecasted rate impact and bill impact for each customer group for each of the forecasted years in Figure 2 (i.e. years 2013-2017).

Response:

The requested data has been provided in the table below:

Year	2013	2014	2015	2016	2017	Cumulative Total
Rate Impact Without Transaction	4.2%	7.0%	11.0%	7.0%	2.1%	35.2%
Rate Impact with Transaction	4.2%	5.4%	11.7%	7.1%	2.2%	34.3%

Using the same assumptions and customer profiles developed in the response to ICG IR No. 1 Q3.2 and assuming no load growth would yield the following result with the rate increases above:



FortisBC Inc. (FortisBC or the Company) Application for a Certificate of Public Convenience and Necessity for the Purchase of the Utility Assets of the City of Kelowna	Submission Date: January 11, 2013
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1 1 Reference: November 13, 2012 Application, pages 8 and 13

2 1.1 Given that FortisBC personnel currently plan, maintain and operate the City's
3 electric utility assets (page 13, lines 24-26), please describe more fully the basis
4 for the claimed "increased efficiency related to the continuity of service territory
5 that this transaction affords" (page 8, lines 22-23).

6
7 **Response:**

8 The increased efficiency compared to status quo is a result of FortisBC personnel being able to
9 perform these services on the City's distribution assets directly as if they were working on
10 FortisBC distribution assets. These functions and the individual projects will no longer have to
11 be:

- 12 • reviewed and approved by the City of Kelowna;
13 • tracked and invoiced separately;
14 • operated pursuant to the contractual terms of the contract between FortisBC Pacific
15 Holdings Inc. (FPHI) and the City; and
16 • operated pursuant to the sub-contract between FortisBC and FPHI;

17 All of which effectively increase the cost to the City of providing these functions.

18 Finally, operating the two electric distribution systems as a single system will enable increased
19 flexibility around serving customer loads in the Kelowna area. It will no longer be necessary to
20 serve customers within the City's historic service territory from one of the existing City of
21 Kelowna service points. This will likely have the added benefit of deferring and potentially
22 eliminating certain capital upgrade projects that would have otherwise been necessary.

23
24
25 **2 Reference: November 13, 2012 Application, page 8, lines 19-26**

26 Preamble: The Application claims that "the acquisition of the City's electric utility assets
27 provides benefits to FortisBC and to utility regulation in general" and that a detailed
28 explanation of these benefits can be found in Section 4. However, Section 4 just deals
29 with First Nations and Public consultation.

30 2.1 Please provide a detailed explanation as to how FortisBC (the Company as
31 opposed to its customers) benefits from the transaction.



FortisBC Inc. (FortisBC or the Company) Application for a Certificate of Public Convenience and Necessity for the Purchase of the Utility Assets of the City of Kelowna	Submission Date: January 11, 2013
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1 **Response:**

2 FortisBC benefits from the earnings on the increased rate base of \$55 million at the approved
3 rate of return on approved common equity. The transaction will earn a return equivalent to any
4 other capital expenditure undertaken by FortisBC.

5 The Company would also like to clarify that the discussion of benefits can be found in sections
6 5.1 and 6.0.

7
8

9 2.2 Please provide a detailed explanation as to how utility regulation in general
10 benefits from the transaction.

11

12 **Response:**

13 The Company believes that utility regulation in general benefits by allowing BCUC oversight
14 over a larger portion of the province's utility customers which should ensure uniformity in the
15 adoption of public policy as it relates to utility customers. An example of this would be that if the
16 Province and the BCUC determine that they want to further conservation through conservation
17 rates, currently in the absence of new legislation they have no reasonable means to ensure that
18 customers served by wholesale municipal utilities are subject to such conservation rates. If
19 those same customers were served by a regulated utility, the Province and the BCUC have the
20 authority to make those determinations and do not require additional legislation.

21
22

23 2.3 Are there any benefits to customers (apart from the rate benefits described at
24 lines 19-22) and the increased efficiencies related to continuity of service
25 territory) that will accrue to either FortisBC's or the City's existing customers? If
26 so, please outline what they are and how they arise from the transaction.

27

28 **Response:**

29 There are additional benefits that would accrue to both FortisBC and the City's existing
30 customers as a result of this transaction. They would include the increased flexibility to serve
31 both sets of customers in the Kelowna area. Currently City of Kelowna customers have to be
32 served from the City of Kelowna's distribution infrastructure and FortisBC customers have to be
33 served from FortisBC infrastructure. In the future, no such distinction will be necessary. This

FortisBC Inc. (FortisBC or the Company) Application for a Certificate of Public Convenience and Necessity for the Purchase of the Utility Assets of the City of Kelowna	Submission Date: January 11, 2013
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will delay and may eliminate the need to perform certain capital upgrades. For instance, currently, if a feeder is nearing its capacity and the load being served by that feeder increases, the utility would determine if it could transfer some of that load to one of its nearby feeders. If it is able to transfer some of that load to one of its nearby feeders, no feeder upgrade is necessary. If it is not able to do so, then a feeder upgrade is necessary. Prior to the transaction, this type of feeder load balancing is restricted to feeders owned by that utility. In the case of Kelowna feeders, such balancing is limited to other Kelowna feeders, and in the case of FortisBC, such load balancing is limited to FortisBC feeders. After the transaction, there will be increased flexibility due to the fact that load can be balanced between those feeders now owned by the city and those feeders now owned by FortisBC. This will likely delay and in some cases avoid certain capital upgrades that would have otherwise been necessary.

In addition, more generally, when certain initiatives have a fixed cost component, the addition of more customers will mean that the fixed costs associated with those initiatives are shared amongst more customers, thus reducing the costs for all customers. Examples of this would include most back office administrative functions, computer software additions or upgrades, and many other projects or initiatives that have a fixed cost component.

Reference: November 13, 2012 Application, page 9

3.1 What is FortisBC's current estimate of the impact that "applicable taxes and adjustments" (line 5) will have on the final price paid?

Response:

Assuming that the transaction concludes prior to March 31, 2013 and therefore the transaction itself does not become subject to PST, the applicable taxes and adjustments will have minimal impact. The bulk of the taxes and adjustments will relate to the property transfer tax on the two parcels of real property. In total, these taxes and adjustments are expected to be less than \$100,000.

If the transaction were to conclude on or after April 1, 2014, then the Company estimates that there could be up to \$1.0 million of PST to be paid that would otherwise not be incurred if the transaction closed on March 31, 2013. This estimate of PST is based on a preliminary interpretation of the revised *Provincial Sales Tax Act* and the suggested transitional rules to re-implement the PST. It should also be noted that the BC Ministry of Finance has not yet released the PST regulations which will include details on PST exemptions and therefore could potentially alter the estimated dollar impact.

FortisBC Inc. (FortisBC or the Company) Application for a Certificate of Public Convenience and Necessity for the Purchase of the Utility Assets of the City of Kelowna	Submission Date: January 11, 2013
Response to Industrial Customers Group (ICG) Information Request (IR) No. 1	Page 14

5. Reference: Impact on FortisBC Inc., page 6, and Contracted Operations, page 13

“the transaction will decrease the average O&M per customer and average Revenue Requirements per customers by approximately 9 percent as a result of this efficiency.”

“... FortisBC personnel has planned, maintained and operated the City’s electrical assets for approximately 12 years.”

5.0 Please provide a list and a detailed description of each efficiency improvement together with the contribution of each efficiency improvement to the 9 percent noted above?

Response:

The 9 percent decrease in average O&M per customer is an economy of scale efficiency that would, going forward accrue to customers. It is simply the comparison of the O&M per customer post transaction compared to the O&M per customer prior to the transaction.

5.1 Given that FortisBC personnel has planned, maintained and operated the City’s electrical assets for approximately 12 years, please explain why it is necessary for the Company to purchase the assets to achieve the 9% O&M efficiency improvements?

Response:

The 9 percent O&M efficiency improvements are the result of dividing the forecast O&M costs by the number of customers including the customers currently served by the City of Kelowna. The savings that would accrue to customers are a result of several factors. These include, the fact that FortisBC Pacific Holdings Inc. (FPHI) will no longer be providing utility services to Kelowna or FortisBC, thus any profit margin incorporated into the charges from FPHI will be eliminated, and that currently the operational savings that result from the higher density nature of the City of Kelowna’s service area (more urban vs. more rural) accrues to the City of Kelowna. Once the proposed transaction is complete, and rates are set on a regulated revenue requirements basis, those benefits would accrue to all customers.

FortisBC Inc. (FortisBC or the Company) Application for a Certificate of Public Convenience and Necessity for the Purchase of the Utility Assets of the City of Kelowna	Submission Date: February 12, 2013
Response to British Columbia Pensioners' and Seniors' Organization et. al. (BCPSO) Information Request (IR) No. 2	Page 4

1 3.2 Is it FortisBC's view that the transaction (and the related transaction price) should
2 be considered fair from a stakeholder and public interest perspective provided it
3 provides benefits to existing and to its new customers?

4

5 **Response:**

6 Yes.

7

8

9 3.3 Apart from the comparative levels of future rates, what other "benefits" for
10 existing and new customers should be considered?

11

12 **Response:**

13 The benefits that should be considered include, but are not limited to:

- 14 • rates for both sets of customers that are lower than if the transaction did not take place;
15 • existing FortisBC customers will receive the benefit of rate mitigation of approximately 1
16 percent over the 5 years following the conclusion of the transaction;
17 • current City commercial and industrial customers will benefit by both the immediate
18 reduction in rates, and by the ongoing rate mitigation that the transaction provides;
19 • all customers benefit from the increased efficiency related to the continuity of service
20 territory that this transaction affords;
21 • existing City of Kelowna customers will benefit from BCUC regulation;
22 • as part of FortisBC, existing City of Kelowna customers will have rate parity with other
23 FortisBC customers and will likely enjoy more rate stability going forward;
24 • existing City of Kelowna customers will benefit from future energy conservation initiatives
25 proposed by FortisBC;
26 • existing City of Kelowna customers will benefit from a uniform application of provincial
27 policy;
28 • existing City of Kelowna customers will benefit from the ongoing expert utility
29 management of FortisBC that will ensure safe, secure and reliable utility service;
30 • existing City of Kelowna customers will benefit from the \$55 million sale price for the
31 assets; and
32 • The City of Kelowna also identified additional benefits in its consultation materials.

33

34

Attachment 68.2

Dennis L. Weisman is Professor of Economics and a member of the graduate faculty at Kansas State University in Manhattan, Kansas, where he specializes in strategic behavior and government regulation, with an emphasis on incentive regulation. He is former Director of Strategic Marketing for SBC Communications Inc. and a research fellow with the Public Utility Research Center at the University of Florida.

Johannes P. Pfeifenberger is a Principal of The Brattle Group, an economic and management consulting firm in Cambridge, Massachusetts, where he provides strategic advice, litigation support, and expert testimony on industry restructuring, network access, and incentive regulation to clients in the utility industries.

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Efficiency as a Discovery Process: Why Enhanced Incentives Outperform Regulatory Mandates

Opponents of incentive regulation claim explicit rewards are unnecessary because utilities already operate under a "statutory obligation" to be efficient. But that view ignores that incentives are generally superior to mandates for eliciting performance gains, and that a firm cannot knowingly disavow and strategically withhold efficiencies it has yet to discover.

Dennis L. Weisman and Johannes P. Pfeifenberger

I. Introduction

There has been a pervasive adoption of incentive regulation worldwide in both the electric power industry and the telecommunications industry.¹ In the U.S., at least 28 electric utility companies in 16 states operated under some form of broad-based incentive regulation in 2000–01.² Of the 28 identified electric utilities, 13 operate under some form of rate moratorium and 14 operate under price caps. Of the 28

incentive regulation plans, 21 contain earnings sharing provisions or simple dead bands.³ The adoption of incentive regulation in the telecommunications industry is even more dramatic. In the course of just over 15 years, at least 48 U.S. states have changed the method of regulating dominant local exchange telephone companies from traditional, cost-of-service regulation to some form of incentive regulation (price caps, rate moratoria, or earnings sharing). Similar changes

in regulatory regime have occurred in Australia, Europe, and South America. Moreover, the trend in the U.S. has been clearly in the direction of pure price cap regulation—price cap plans without earnings sharing. In 1995, dominant local exchange carriers in the U.S. were subject to some form of earnings-based regulation (cost-of-service regulation or earnings-sharing regulation) in 35 states and pure price cap regulation in 9 states. In 2000, the corresponding values were 8 and 39, respectively.⁴

The speed with which incentive regulation has been adopted can be explained principally by the fact that it offers the prospect of superior performance gains that can benefit all key interest groups. Consumers can benefit from lower rates or slower rate increases; the regulated firm can benefit through enhanced profitability and pricing flexibility; the regulatory process can be streamlined; and competitors can enjoy more favorable terms of entry. In other words, incentive regulation represents a “win-win” proposition.⁵

Despite the widespread adoption of incentive regulation and increasing recognition of its attendant benefits, it is not uncommon in regulatory proceedings to encounter opposition to incentive regulation on grounds that utilities already have a “statutory obligation” to be efficient and, therefore, should not require additional rewards through incentive plans. At the crux of this argument are two key

misconceptions. The first misconception is that a “mandate” to be efficient will produce the same long-term benefits as properly structured “incentives” to be efficient. The second misconception is the belief that regulated firms may knowingly and strategically disavow opportunities to increase operating efficiency under traditional regulation in order to profit from such innovation under incentive regulation.

*One misconception:
A “mandate” to
be efficient will
produce the same
long-term benefits as
properly structured
“incentives” to be
efficient.*

The purpose of this article is to examine the basis for these misconceptions. There are two primary responses. First, motivating increased performance through incentives is generally superior to mandating desired performance levels. Second, the realization that efficiency is a “discovery process” necessarily implies that a regulated firm cannot knowingly disavow and strategically withhold what it has yet to discover. These two points—largely self-evident for those predisposed to favor incentive regulation—explain the important role that enhanced incentives play in generating dynamic efficiency

gains and in enhancing the performance of regulated firms.

II. The Important Role of Incentives

The prominent role of incentives in a market economy is (i) to allocate scarce resources to their highest valued use; (ii) to elicit cost minimization and innovation; and (iii) to encourage firms to supply the products and services that consumers demand. Professor James Bonbright, a leading authority in the field of public utility regulation, explains the important role of market forces in fostering incentives to pursue such efficiency and overall performance:

Under unregulated competition, the price system is supposed to function in two ways with respect to the relationship between the price of the product and the cost of production. In the first place, the rate of output of any commodity will so adjust itself to the demand that the market price will tend to come into accord with production costs. But in the second place, competition will impel rival producers to strive to reduce their own production costs in order to maximize profits and even in order to survive in the struggle for markets. This latter, dynamic effect of competition has been regarded by modern economists as far more important and far more beneficent than any tendency of “atomistic” forms of competition to bring costs and prices into close alignment at any given point of time.⁶

These performance incentives fostered by competitive markets derive from the profit motive. The

quest for such profits ultimately benefits society as producers strive to supply the goods and services that consumers want at the lowest possible cost. In other words, the pursuit of enlightened self-interest by economic agents serves to benefit society in the aggregate as if their actions were guided by an “invisible hand.”⁷

The collapse of many centrally planned economies vividly demonstrates that market economies and their strong reliance on incentives are superior to mandates for fostering innovation, efficiency, and overall performance. For example, in recounting the fundamental flaws in the Soviet economic system, Yergin and Stanislaw observe that:

Already by the early 1970s, a fatal weakness was becoming clear in the system: It could not, for the most part, innovate. There was no reward, no reason to do anything new. In fact, there was a strong predisposition to avoid change of any kind, for change caused enormous bureaucratic headaches. The best thing was to keep doing what had been done before. In more advanced economies, innovation was essential to the promotion of economic growth. But in the Soviet system innovation was characterized mainly by its absence. And that applied to everything—whether it was small changes to make processes work better or the introduction of new products.⁸

While it is prudent to err on the side of caution in drawing wholesale comparisons between market economies and incentive regulation, there are clearly some noteworthy parallels. Prominent among these are the inability of

government or regulatory agencies to mandate efficient outcomes, even with the most detailed planning and supervision, and the importance of tangible rewards for motivating superior long-term performance through enhanced efficiency and innovation. The “five-year plans” in the former Soviet Union were notorious for both their level of detail and their inability to elicit performance. These plans were

The “five-year plans” in the former Soviet Union were notorious for both their level of detail and their inability to elicit performance.

characterized by a virtually complete absence of meaningful incentives and rewards as the government attempted, unsuccessfully, to mandate rather than motivate performance.

It is generally accepted that a primary objective of economic regulation is to emulate a competitive market outcome. Professor Alfred Kahn, for example, observes that “the single most widely accepted rule for the governance of the regulated industries is regulate them in such a way as to produce the same results as would be produced by effective competition, if it were feasible.”⁹

The relevant model of competition to inform regulatory policy is not one of atomistic or perfect competition,¹⁰ but rather one that evaluates and rewards the performance of regulated entities. While the task of evaluating the performance of the utility is inherently difficult in the absence of actual competition, the basic principle is straightforward: the utility’s performance is measured and rewarded or penalized based on predetermined, broad-based performance targets, such as the timely provision of quality service at capped prices. The roots of these ideas trace back almost a half a century and form the essence of the modern theory of incentive regulation as commonly practiced today.¹¹

A voluminous amount of theoretical and empirical research concludes that incentive regulation is generally superior to strict cost-of-service regulation in emulating such a competitive market outcome.¹² This superior performance derives from the fact that incentive regulation, given the greater emphasis on prices rather than earnings, operates more like a *fixed price contract* in the sense that the regulated firm is limited in its ability to pass cost increases on to consumers in the form of higher rates. This contrasts with strict cost-of-service regulation that operates like a *cost-plus contract*. The result is that incentive regulation (including some forms of modified cost-of-service regulation)¹³ provides stronger incentives that lead to superior performance gains in

numerous dimensions, including (i) use of least-cost technologies; (ii) efficient level of cost-reducing innovations; (iii) incentives to invest and operate efficiently; and (iv) efficient diversification into new markets.

The manner in which enhanced incentives lead to cost control and superior performance is illustrated by the following statement of a utility's chief financial officer concerning the merits of incentive regulation:

There are a couple items I think are very critical to the issue at hand. The most important has been the use of this [earnings sharing plan] in helping to change the culture of the Company [I]t's my job to beat on people about cost [But employees] said, every time we reduce costs, the Commission comes and takes it away. [T]hat's the way the cost-of-service model rate base regulation works, . . . that's a disincentive. And when we got this plan in place, I made speech after speech . . . Here's your opportunity, folks. This is as close to competition I can get you right now, but you make a dollar and we get to keep half of it. It goes to the bottom line. And again, regardless of whether I'm talking to a vice president or a pipefitter in one of our power plants, that's had an effect, and I've seen that effect . . . It's good for the shareholders and it's good for customers. I know that sounds trite, but that rings a bell when it comes to employees.¹⁴

This discussion of performance incentives should not be construed to imply that there is not an important role for mandates and obligations. To the contrary, in virtually every society and economic model it is necessary to impose certain mandates and

obligations—be it contract laws, safety regulations, and other basic legal and regulatory constraints. In fact, some of these mandates and obligations, such as patent laws and other intellectual property rights, are specifically designed to create strong incentives and rewards for innovation and superior performance.¹⁵ In general, the role of such mandates and obligations takes the form of setting minimum standards for

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what is acceptable behavior rather than as a means to solicit superior performance. While such mandates and obligations can help ensure that certain minimum standards are met, robust incentives are required to elicit superior performance. This is the case simply because there is generally a wide "gap" between superior performance and performance that is considered merely acceptable.

The important role of incentives in eliciting performance gains has been validated in numerous venues covering many aspects of human interactions not only in how firms and consumers

interact in a market economy or how firms compensate their employees, but also how government can exact performance gains from its individual agencies and employees,¹⁶ or even how sporting events motivate participating athletes.¹⁷ This broad experience confirms that it is not the mandates or obligations, but the incentives created by the prospect of meaningful rewards and recognition, that are most effective in eliciting enhanced performance.

III. Efficiency as a Discovery Process

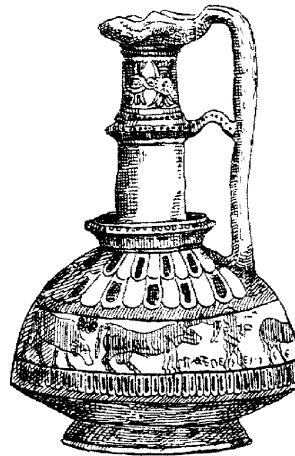
The opposition to incentive regulation is not typically based on a lack of recognition that incentives can elicit superior performance and dynamic efficiency gains. Rather, opposition to incentive regulation often focuses on whether such incentives are needed. Not surprisingly, this opposition is seemingly strongest when the earnings that the regulated firm reports under incentive regulation exceed the level of earnings that would normally be expected under cost-of-service regulation.¹⁸ The frequently voiced concern is that these higher profits necessarily come at the cost of higher prices to consumers.¹⁹ And yet, the broad appeal of incentive regulation is precisely that the realized efficiency gains can benefit regulated firms and consumers alike. In other words, because incentive regulation is not a zero-sum

game, higher profits and lower prices need not be mutually exclusive.

In spite of the fact that incentive regulation can be a “win-win” proposition, some parties view incentive regulation as little more than a “scheme” used by utilities to increase their profits and earn windfall gains. These added profits may even be viewed as “bribes” to get utilities to do what they should be doing already. A common refrain is that because utilities have a “statutory obligation” to be efficient, any additional rewards for achieving efficient behavior through incentive regulation are unnecessary—and serve only to foster an inequitable distribution of efficiency gains between regulated firms and consumers. This line of argument would seem to suggest that any efficiencies realized by the regulated firm following the adoption of incentive regulation must imply that, under cost-of-service regulation, regulated entities either deliberately engaged in inefficient behavior or were able to “conceal” more efficient operating practices from regulators through their superior knowledge of operating conditions.²⁰

While the possibility of such behavior cannot be ruled out *a priori*, this claim is incorrect as a general proposition. This is because the achievement of performance gains is first and foremost a “discovery process” in which more efficient operating practices and superior use of technology are learned over

time.²¹ It is the recognition of this discovery process that leads to the conclusion that the efficiency gains realized under incentive regulation need not imply that the firm was knowingly inefficient under cost-of-service regulation. To the contrary, it is quite plausible that the firm under cost-of-service regulation was as efficient as it knew how to be.



To understand the manner in which enhanced incentives can stimulate this discovery process, it is instructive to examine what innovation is and precisely how it comes about. Although the mechanics of innovation are complex and not well-understood, innovation is usually thought of as the creation of a better product or process. If there is a consensus of thought on the innovation process it is that innovation requires highly motivated individuals willing to go beyond doing what has been tried previously, beyond following standard operating procedures, beyond using time-tested methods and technology. Innovation and discovery of new ways of doing things, new

technologies, or new applications based on existing technologies requires companies and individuals to question the *status quo*, to be creative, and to be willing to bear the significant risks associated with exploring new methods.²² Of course, enhanced incentives in the form of meaningful rewards for successful discoveries are required to elicit such effort and risk-bearing.

In market economies, substantial rewards are provided for successful discoveries in the form of competitive advantage and the protection of intellectual property. For example, it is estimated that the overall rate of return for some 17 successful innovations in the 1970s averaged 56 percent.²³ In comparison, the average return on investment for all of American business over the last 30 years has been on the order of 16 percent. Despite these high rewards for innovators, however, there should be little doubt that innovation benefits the economy as a whole. In fact, today America enjoys more than half of its economic growth from industries that barely existed a decade ago.²⁴ This is consistent with recent findings of the White House Office of Science and Technology Policy estimating that more than half of U.S. economic growth since World War II was the result of innovation.²⁵

These facts about the economic role of innovation clearly reinforce the aforementioned observations of Professor Bonbright, that economists generally view dynamic efficiency as being “far

more important" to consumer welfare than static or allocative efficiency. Such dynamic efficiency is achieved through incentives that reward the perpetual discovery of new, innovative methods that increase efficiency and increase overall performance. Clearly, innovation does not happen because market forces "bribe" companies or individuals to "reveal" what they know already. Rather, it is strong incentives that motivate innovators to exert significant efforts, question the status quo, and assume the risks it takes to discover and implement more efficient procedures, applications, and technologies.

In traditionally rate-regulated industries, however, incentives for such innovation are truncated, if not absent altogether. In fact, the traditional regulatory model provides, at best, weak incentives to discover new efficiencies by: (1) discouraging risk-taking and the application of new technologies through the potential disallowance of costs and investments associated with unsuccessful attempts to innovate; and (2) providing only very limited rewards, if any, for even highly successful innovations. The benefits of new, cost-reducing operating practices simply decrease a utility's "cost-of-service" and, as a result, often are appropriated quickly and passed on to customers in the form of lower rates. Moreover, the traditional regulatory model commonly disallows the recovery of the

performance incentive payments that regulated firms use in an attempt to motivate their employees.

With very limited potential rewards but significant disallowance risks, the traditional regulatory model strongly encourages the prudent use of tried-and-true operating practices and technologies. It thus provides



very limited incentives, if not explicit disincentives, to look beyond the status quo to discover and employ new, innovative operating practices and technologies. This is why the provision of enhanced incentives can stimulate a discovery process that enables regulated firms to become more efficient than they previously knew how to be. In the long term, this process can lead to dynamic efficiency gains and significant benefits for firms and their customers alike.

IV. Conclusions

Incentive regulation has supplanted traditional cost-of-service

regulation in the telecommunications industry and the regulation of electric utilities appears to be following a similar trend. Despite these significant changes in the nature of regulatory regimes, a frequent claim from parties opposed to the adoption of incentive regulation is that the regulated firm should not be rewarded for efficient performance because it is already subject to the statutory obligation to operate efficiently. This view of the world implicitly rests on the premise that the regulated firm knowingly disavows superior methods by which to enhance efficiency. What this view fails to recognize, however, is that (1) the incentives requisite to the *discovery* of superior methods by which to augment efficiency are not sufficiently pronounced under cost-of-service regulation; and (2) the regulated firm cannot knowingly disavow what it has yet to discover.

It is the recognition of efficiencies as a "discovery process" that largely explains the long-term benefits that incentive regulation offers over traditional cost-of-service regulation. Indeed, the transition to restructured, more competitive markets now underway in many traditionally regulated industries will require a different mindset for all parties involved in the regulatory process—one that recognizes the importance of enhanced incentives in promoting efficiency and long-term investment in what are arguably some of the most critical of infrastructure industries. It is in

this context that incentive regulation is poised to bridge the gap between fully integrated, regulated monopolies and a restructured, more competitive marketplace.■

Endnotes:

1. Incentive regulation can be defined as the implementation of rules that provide a regulated firm with strong incentives to achieve desired goals while granting significant, but not unlimited, discretion to the firm. In some sense, all types of regulation—including some forms of cost-of-service regulation—can constitute a form of incentive regulation. The common practice has been to limit the definition of incentive regulation to alternative forms of regulation that satisfy the above definition. These include price cap regulation, rate moratoria or rate freezes (which are also a form of price cap regulation), and various combinations that include earnings sharing. See DAVID E.M. SAPPINGTON AND DENNIS L. WEISMAN, *DESIGNING INCENTIVE REGULATION FOR THE TELECOMMUNICATIONS INDUSTRY* (Cambridge, MA: MIT Press, 1996), at 2. See also note 13 below.
2. David E.M. Sappington, Johannes P. Pfeifenberger, Philip Hanser and Gregory N. Basheda, *Status and Trends of Performance-Based Regulation in the U.S. Electric Utility Industry*, *ELEC. J.*, Oct. 2001, at 71–79.
3. A dead-band is a range of earnings within which no action is taken by the regulator—either to modify rates or to appropriate earnings.
4. See David E.M. Sappington, *Price Regulation*, in Martin Cave, Sumit Majumdar, and Ingo Vogelsang (eds.), *HANDBOOK OF TELECOMMUNICATIONS ECONOMIST* (Amsterdam: North-Holland, 2002), Table 2, Chap. 7, at 225–293.
5. The empirical evidence to date appears to support this claim. See, for example, Jaison R. Abel, *The Performance of the State Telecommunications Industry under Price-Cap Regulation: An Assessment of the Empirical Evidence*, NRRRI 00-14, National Regulatory Research Institute, Sept. 2000; and Chunrong Ai and David Sappington, *The Impact of State Incentive Regulation on the U.S. Telecommunications Industry*, *J. REGUL. ECON.*, forthcoming. Note, however, that the overall benefits of incentive regulation are perhaps less controversial than the distribution of those benefits between consumers and regulated firms. The regulated firm under incentive regulation typically bears greater risk in exchange for the prospect of a higher return. The realization of this higher return depends upon the regulated firm's ability to improve efficiency. In contrast, the gains to consumers, which include rate reductions or freezes, bill credits and infrastructure upgrades, are typically guaranteed up-front and thus independent of the actual performance of the regulated firm. This is an important distinction because there may be a temptation by some parties to point to the greater profitability of the regulated firm under incentive regulation as evidence of an inequitable distribution of the gains from incentive regulation. What this perspective fails to realize is that in a different state of the world in which the regulated firm did not perform well, consumers are shielded under incentive regulation from the rate increases that may attend earnings deficiencies under the traditional regulatory model. In other words, incentive regulation provides a type of "insurance" for consumers that derives from a less direct linkage between the regulated firm's rates and its actual costs.
6. JAMES C. BONBRIGHT, *PRINCIPLES OF PUBLIC UTILITY RATES* (New York: Columbia University Press, 1961), at 107.
7. ADAM SMITH, *THE WEALTH OF NATIONS* (New York: Modern Library, 1937) (originally published in 1776), at 423.
8. DANIEL YERGJIN AND JOSEPH STANISLAW, *COMMANDING HEIGHTS* (New York: Simon & Schuster, 1998), at 273.
9. ALFRED E. KAHN, *THE ECONOMICS OF REGULATION: PRINCIPLES AND INSTITUTIONS*, vol. I (New York: John Wiley & Sons, 1970), at 17. See also, Bonbright, *supra* note 6, at 107.
10. As Professor Joseph Schumpeter observed:

In this respect, perfect competition is not only impossible, but inferior, and has no title to being set up as a model of ideal efficiency. It is hence a mistake to base the theory of government regulation of industry on the principle that big business should be made to work as the respective industry would work in perfect competition.

See JOSEPH A. SCHUMPETER, *CAPITALISM, SOCIALISM AND DEMOCRACY* (New York: Harper & Row, 1942), at 106.
11. See, for example, Sappington and Weisman, *supra* note 1, Chap. 5.
12. See, for example, Sappington, *supra* note 4.
13. Cost-of-service regulation that explicitly rewards superior performance or that specifically allows for extended regulatory lags can also provide strong performance incentives. Such modified cost-of-service regulation, for example, may also employ lengthened regulatory lags similar to rate moratoria. Also note that the traditional regulatory model is not inconsistent with providing rewards for superior performance. Regulatory agencies generally have some flexibility to consider superior company performance or management efficiency as a "non-cost factor" in determining whether a utility's rates are within a just and reasonable range. The Federal Energy Regulatory Commission, for example, stated in its Order 414-A (July 29, 1998) that "the Commission will not lower a pipeline's ROE if its lower risk is the result of the pipeline's own efficiency . . . The record in this case makes it clear that Transco's positive market position is largely the result of the pipeline's relatively low rates in its market area . . . These are characteristics of a healthy company whose efficiency has enabled it to compete successfully in the market place and satisfy its customers." (*slip op.*, at 34–35).
14. Testimony of Donald E. Brandt before the Missouri Public Service

Commission, Transcript of Proceeding, Case No. EO-96-14, June 2, 1999, at 266–267.

15. It is interesting to note that intellectual property laws may give temporary monopolies (e.g., patent rights) to firms in competitive markets in order to provide “incentives and rewards” to encourage innovation, efficiency gains, and superior performance. Yet some argue that “incentives and rewards” to encourage innovation, efficiency gains, and superior performance for regulated monopolies are unnecessary because regulated firms already have the “obligation” to be efficient.

16. The importance of performance-based compensation within government agencies is broadly recognized. For example, the U.S. General Accounting Office (GAO) notes that “[i]f federal agencies hope to maximize their performance, ensure accountability, and achieve their strategic goals and objectives, they must, among other things, make effective use of incentives—whether monetary or nonmonetary—to motivate and reward their workforce . . .” (*Human Capital: Using Incentives to Motivate and Reward High Performance*. Statement of Michael Brostek, GAO/T-GGD-00-118, May 2, 2000, at 11–12). The importance of incentives is also recognized with respect to government agencies as a whole. For example, a recent report of the Missouri Energy Policy Task Force “recognizes that state agencies may be reluctant to become more efficient if those efficiencies result in a dollar-for-dollar reduction in their budgets.” (*Final Report of the Missouri Energy Policy Task Force Presented to Governor Bob Holden*. Northwest Missouri State University, Maryville, Missouri, Oct. 16, 2001, at 19). The Task Force recommended that these agencies be given efficiency incentives in the form of a shared savings program.

17. For example, studies found that: the performance of race car drivers increases with the absolute spread of prizes (Brian E. Becker and Mark A. Huselid, *The Incentive Effects of Tournament Compensation Systems*, ADMIN. SCI. Q., 1992, 37, at 336–350); golfers’

performance increases with higher prizes (Ronald G. Ehrenberg and Michael L. Bognanno, *The Incentive Effects of Tournaments Revisited: Evidence from the European PGA Tour*, IND'L & LABOR RELATIONS REV., 1990, 43, at 74–89); and an incentive pay scheme that shares part of the prize money in horse races with jockeys elicits much improved performance over giving jockeys a flat fee for riding (Sue Femie and David Metcalf, *It's Not What You Pay, It's the Way You Pay It: Jockey's Pay and Performance*, CENTREPIECE MAGAZINE, June 1996, 2).

18. Such a perception of “excess earnings” can make it very difficult for regulators to maintain the commitment to the terms of the incentive plan. However, as Professor David Sappington observes, the credibility of a regulator’s commitment is critical to the performance of incentive plans:

Absent credible rewards for superior performance and/or credible penalties for poor performance, the regulated firm will have little incentive to incur the effort costs that increase the likelihood of good performance.

See David E.M. Sappington, *Designing Incentive Regulation*, REV. IND'L ORG., 1994, 9, at 262–263.

19. A related concern is that regulators may face adverse political pressures should the regulated firm report higher earnings under incentive regulation. In other words, how does the regulator explain to part of his constituency that he is doing a “good job” as a regulator when the regulated firm reports a significant increase in earnings? See, for example, Dennis L. Weisman, *Superior Regulatory Regimes in Theory and Practice*, J. REGUL. ECON., Dec. 1993, 5 (4), at 364–365.

20. The formal economics literature may, in part, have contributed to this perception through its modeling of principal–agent relationships in which the “agent” has superior information to that of the “principal.” The inability of the principal to observe this information directly allows the agent to earn “information rents.” In other words, the agent must be “bribed” to

reveal this information. However, it is unclear whether this structure is merely a convenient modeling technique or actually reflects institutional reality. The discussion herein emphasizes discovery rather than concealment by the agent, though they need not be mutually exclusive.

21. Incentive regulation can also facilitate implementation of known efficiency measures because implementation of such measures can be associated with significant direct and indirect costs that are difficult to recover under traditional regulation. Such cost recovery can be difficult under traditional regulation because the regulated entity often bears the full costs of the efficiency measure but may have only limited ability to benefit from the measures as efficiencies are appropriated quickly through the regulatory process. In addition, the regulatory process generally does not consider indirect costs, such as the risks of using new technologies or the significant institutional strains associated with certain measures such as staff reductions.

22. As the great inventor Charles Franklin Kettering observed, the key to successful innovation is *intelligent failure*—failing in a manner that brings the innovator one step closer to the actual solution. For Kettering, failure was an indispensable part of the innovation process. See, for example, Mark Bernstein, *Charles Kettering: Automotive Genius*, SMITHSONIAN, July 1988.

23. *Industry Gets Religion*, ECONOMIST, Feb. 20, 1999 (Special Supplement on Innovation in Industry).

24. *Id.*

25. Richard M. Russell of the White House Office of Science and Technology Policy estimates that 52 percent of the nation’s growth since World War II had come through inventions. His statement that “unless we can protect intellectual property, we will not have invention” serves to highlight the importance of incentives in achieving such performance. See Warren E. Leary, *The Inquiring Minds Behind 200 Years of Inventions*, N.Y. TIMES, Oct. 22, 2002, at D4.