



Diane Roy
Director, Regulatory Affairs

FortisBC Energy
16705 Fraser Highway
Surrey, B.C. V4N 0E8
Tel: (604) 576-7349
Fax: (604) 576-7074
www.fortisbc.com

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

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

December 6, 2013

Via Email
Original via Mail

B.C. Sustainable Energy Association
c/o William J. Andrews, Barrister & Solicitor
1958 Parkside Lane
North Vancouver, B.C.
V7G 1X5

Attention: Mr. William J. Andrews

Dear Mr. Andrews:

**Re: FortisBC Energy Inc. (FEI) and FortisBC Inc. (FBC) (collectively the Companies)
Applications for Approval of a Multi-Year Performance Based Ratemaking Plan
for 2014 through 2018 (the Applications)
Response to the B.C. Sustainable Energy Association and the Sierra Club
British Columbia (BCSEA) Information Request (IR) No. 2 on PBR Methodology
Filed as Response to FEI-FBC BCSEA IR No. 3**

On June 10 and July 5, 2013, FEI and FBC, respectively, filed the Applications as referenced above.

In an effort to differentiate the IR responses relating to the PBR Methodology which are the subject of the oral portion of the hearing jointly for the Companies from those IR responses which relate to other matters for the written portion of the hearing individually for each of FEI and FBC, the Companies will mark these IR responses as FEI-FBC BCSEA IR No. 3.

The Companies respectfully submit the attached response to FEI-FBC BCSEA IR No. 3 responses related to the PBR Methodology.

If further information is required, please contact the undersigned.

Sincerely,

**FORTISBC ENERGY INC. and
FORTISBC INC.**

Original signed:

Diane Roy and Dennis Swanson

Attachments

cc: Commission Secretary
Registered Parties (email only)

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1 **1.0 Topic: Service line additions**

2 **Reference: FEI Exhibit B-1, section 6.2.5 Capital Expenditures under PBR**

3 “Growth Capital is driven by service line additions (which are calculated as a percentage
4 of gross customer additions) that arise from providing service for new customers.”
5 [Exhibit B-1, p.62]

6 1.1 When FEI says that “service line additions” are calculated as a “percentage of
7 gross customer additions” does that mean gross customer additions in the sense
8 that ‘gross customer additions’ minus ‘gross customer losses’ equals ‘net
9 customer additions’?
10

11 **Response:**

12 Yes, gross customer additions minus gross customer losses equals net customer additions,
13 where gross customer additions are the number of new customers (meters or new customer
14 accounts) generated in a given year.

15 Net customer additions for a given year is the change from one year to the next of the total
16 customer count, and gross customer losses represents the difference between gross additions
17 and net additions in a given year and includes customer losses (retired or removed gas services
18 and meters), as well as changes to the number of customer accounts attributable to existing
19 customers moving in and out of premises, and other changes resulting in removal of a customer
20 meter or account.

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23
24 1.1.1 Is so, please explain how the proposed PBR formula takes into account
25 the reduction in cost requirements associated with ‘gross customer
26 losses.’
27

28 **Response:**

29 Gross customer losses, the difference between gross customer additions and net customer
30 additions, does not typically impact Growth Capital. Removing customers does not result in less
31 Growth Capital but rather increases Removal/Retirement costs in the year of removal. These
32 costs are captured in a deferral account which is outside the formula.



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1 For the items that are more impacted by net customer additions (Sustainment Capital and
2 O&M), FEI is using the Average Number of Customers (a “net” number) in the PBR formula
3 rather than a gross additions number.

4
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7 1.1.2 If not, does FEI mean that “service line additions” are calculated as a
8 percentage of customer additions, meaning the net increase in the total
9 customer number from one year to the next?

10

11 **Response:**

12 No. Service line additions are calculated as a percentage of gross customer additions (number
13 of new meters or accounts generated in a given year), not the net customer additions for the
14 year which is the net increase in the total customer count from one year to the next.

15 Please also refer to the response to FEI-FBC BCSEA PBR IR 3.1.1.

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19 1.2 If “service line additions” is calculated as a percentage of year-on-year customer
20 additions, what is the percentage? Is it fixed or variable? Please provide the
21 formula and indicate if “service line additions” is based on any other parameter in
22 addition to customer additions.

23

24 **Response:**

25 The percentage is fixed at .90 for the purposes of the growth capital formula. Service line
26 additions activity levels are not based on any other parameters.

27 .

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31 1.3 Is the term “service line additions” used simply to distinguish the number of
32 annual customer additions from the concept of “customer growth” defined as a

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1 year-on-year percentage increase in the total number of customers? If not,
2 please explain.

3

4 **Response:**

5 The term “service line additions” in the PBR Growth Capital formula is essentially a
6 representation for customer growth. As Service Line Additions requirements are a function of
7 gross customer adds, service line additions are forecast using the 2012 actual ratio of service
8 additions to gross customer additions of 0.90 (page 233) and applying the ratio to the forecast
9 gross customer additions.

10

11

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13 1.4 For clarity, please confirm, or otherwise explain, that when FEI uses the phrase
14 “forecasted level of service line additions” (as one of the inputs used for
15 calculating the Growth Capital, p.62) FEI is not talking about physical service line
16 additions. Rather, “level” means ratio, and the ratio is the ratio of current year
17 customer additions to previous year customer additions. Or, as a fine point, is
18 “service line additions in year t” defined as the ratio of customer additions in year
19 t to total customers in year t? And therefore the “level of service line additions” is
20 the ratio of the ratio for year t to the ratio for the year t-1. Please explain.

21

22 **Response:**

23 The forecasted level of service line additions is referring to forecasted service line additions
24 calculated under the formula – that is, the forecasted gross customer additions multiplied by
25 0.90. In the growth capital formula itself, yes the amount of growth capital allowed under the
26 formula for the upcoming year (t) will be increased by the forecast service line additions and the
27 PBR (1+Inflation-Productivity) mechanism. The Formula below expresses how the Growth
28 Capital formula works under PBR.

$$GC_t = \frac{GC_{t-1}}{SLA_{t-1}} \times [1 + (I - X)] \times SLA_t$$

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Where: *GC = Growth Capital*
 SLA = Service Line Additions
 t = Upcoming year
 I = Inflation Factor
 X = Productivity Factor

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“In B&V’s view, the use of a new service line to measure the added costs for growth capital is significant because it represents adding a previously unserved premise³⁰ to the system. For a new premise, the costs include all the distribution facilities to interconnect the customer to the system. For growth capital, the formula essentially estimates the incremental capital for the new customer.” [p.63]

10 1.5 Please explain this paragraph by separating

11
12 1.5.1 the rationale for the formula from the rationale for the costs attributed to
13 the measure (“new service line”),
14

15 **Response:**

16 The rationale for the formula is to address the added growth-related capital to the determination
17 of the adjusted revenue requirement because the growth is uncontrollable for the Company
18 under its obligation to serve as defined by the Tariff.

19
20

21
22 1.5.2 the phrase “new service line” and the phrase “service line additions,” and
23

24 **Response:**

25 This response addresses FEI-FBC BCSEA PBR IRs 3.1.5.2 and 3.1.5.3.

26 The two terms express the same thought; namely a new service line represents a service line
27 addition. This concept is designed to reflect that new customers in total and new customers
28 requiring new facilities differ because some new customers may be added to the system without
29 the requirement to construct a service line because they are occupying a previously served
30 premise such as a vacant apartment or storefront. Other customers who occupy a previously



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1 un-served premise would require at a minimum a service line, meter and regulator but may also
2 require a main extension. This could occur for a new premise or for an existing premise that
3 adds gas service. The growth capital required to serve this mix of customers is embedded in the
4 2013 Base and the formula makes the assumption that the mix of capital requirements for
5 customers requiring service line additions will remain constant throughout the PBR Period. FEI
6 will manage any variations in growth capital requirements due to fluctuations in the mix of
7 customer attachments within the growth capital formula spending allowances.

8
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11 1.5.3 a new customer from a new premises served (recognizing that when one
12 customer moves out of served premises and another moves into the
13 same served premises there is a gross customer addition of 1 and a net
14 customer addition of 0).

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16 **Response:**

17 Please refer to the response to FEI-FBC BCSEA PBR IR 3.1.5.2.

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1 **2.0 Topic: Customer growth**

2 **Reference: FEI Exhibit B-1, s.6.2.4 O&M under PBR; s.6.2.5 Capital Expenditures**
3 **under PBR**

4 2.1 Please provide a table showing all of the proposed PBR formulae (e.g., O&M,
5 Growth Capital, Sustainment Capital, Other Capital), and indicate for each
6 exactly how customer numbers (or measures calculated based on customer
7 numbers) has an effect on revenue requirement.

8
9 **Response:**

10 This response addresses FEI-FBC BCSEA PBR IRs 3.2.1 and 3.4.1.

Item	Formulae	Customer Growth Impact on Revenues
FEI O&M	$OM_t = OM_{t-1} \times [1 + (I - X)] \times \left(\frac{AC_t}{AC_{t-1}} \right)$	Increase in AC_t = Increase in formulaic revenue under PBR Decrease in AC_t = Decrease in formulaic revenue under PBR
FEI Growth Capital	$GC_t = \frac{GC_{t-1}}{SLA_{t-1}} \times [1 + (I - X)] \times SLA_t$	Increase in SLA_t = Increase in formulaic revenue under PBR Decrease in SLA_t = Decrease in formulaic revenue under PBR
FEI Sustainment & Other Capital	$RC_t = RC_{t-1} \times [1 + (I - X)] \times \left(\frac{AC_t}{AC_{t-1}} \right)$	Increase in AC_t = Increase in formulaic revenue under PBR Decrease in AC_t = Decrease in formulaic revenue under PBR
FBC O&M	$OM_t = OM_{t-1} \times [1 + (I - X)] \times \left(\frac{AC_t}{AC_{t-1}} \right)$	Increase in AC_t = Increase in formulaic revenue under PBR Decrease in AC_t = Decrease in formulaic revenue under PBR
FBC Growth, Sustainment and Other Capital	$C_t = C_{t-1} \times [1 + (I - X)] \times \left(\frac{AC_t}{AC_{t-1}} \right)$	Increase in AC_t = Increase in formulaic revenue under PBR Decrease in AC_t = Decrease in formulaic revenue under PBR

11

Where: OM=Operating and Maintenance Expense Subject to formula
GC = FEI Growth Capital
SLA = FEI Service Line Additions
RC=FEI Remaining Capital: Total of Sustainment & Other Capital
C=FBC Capital Expenditures subject to formula

AC=Average Customers
t = Upcoming year
I = Inflation Factor
X = Productivity Factor



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2.2 Please provide, or refer to in the filed materials, a comparison of the incremental revenue and the incremental utility costs associated with customer growth.

Response:

8 The following table provides references in FEI's filed materials regarding customer growth
9 related to incremental revenues and incremental utility costs. BCSEA may find the material in
10 FEI's Application Volume 1 (Exhibit B-1), the evidentiary updates (Ex. B-1-2 and Ex. B-15) and
11 Appendix E5 in Volume 2 of the Application (Ex. B-1-1) useful for understanding how customer
12 growth may impact capital and operating costs and revenues.

Ex. #	Source Description	Reference			
		Section / IR #	Subsection	Page(s)	Figure # / Table #
	Customer Growth / Incremental Revenue				
B-1	Volume 1 Application for a Multi-Year PBR Plan	A	1	2	Table A1-1
		A	4.2	14, 15	
B-1		A	4.4.2	17, 18	
		B	6.2	44	Table B6-1
		B	6.8	80	Table B6-10
		C	1.0	85-116	
		E	Sched 1	312	Line 3
B-1-1	Volume 2 Application for a Multi-Year PBR Plan	E1		1 st Sched	Line 24
		E5			
		G1	Sched 1		Line 3
		G2	Sched 1		Line 2
		G2	Sched 62		Line 2
B-1-2	Evidentiary Update dated July 16, 2013	E	Sched 1		Line 3
		Appendix G1	Sched 1		Line 3
		Appendix G2	Sched 1		Line 2
		Appendix G2	Sched 62		Line 2
B-6	Responses to BCPSO IR #1	21.2/ .3			
B-11	Responses to BCUC IR #1	19.1, 65.1.1.1			
B-15	Evidentiary Update dated Sept. 6, 2013	E	Sched 1		Line 3
		Appendix G1	Sched 1		Line 3
		Appendix G2	Sched 1		Line 2
		Appendix G2	Sched 62		Line 2



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Ex. #	Source Description	Reference			Figure # / Table #
		Section / IR #	Subsection	Page(s)	
	Growth Capital / Incremental Costs				
B-1	Volume 1 Application for a Multi-Year PBR Plan	A	1	2	Table A1-1
		B	6.2	44	Table B6-1
		B	6.2.5.1	61	Table B6-6
		B	6.2.5.2	62, 63	Table B6-7
		B	6.8	80-81	B6-10
		C	4.3.1	204	
		C	4.3.2	205-207	Tables C4-1, -2, -3
		C	4.5	227 - 240	
		C	4.6.5	249	Tables C4-23, -24
		C	3.5.2	146-150	
		E	Sched 14	325	Line 11
		E	Sched 31	342	Lines 14, 16, 19
B-1-1	Volume 2 Application for a Multi-Year PBR Plan	D2		5	
B-1-2	Evidentiary Update dated July 16, 2013	C	4	205	Table C4-1
		E	Sched 14		Line 11
		E	Sched 31		Lines 14, 16, 19
B-6	Responses to BCPSO IR #1	20.1/.2, 21.2/.3, 56.1			
B-8	Responses to CEC IR #1	45.1/.2/.3			
B-11	Responses to BCUC IR #1	10.1, 11.1, 18.1, 19.1/.1.1, 20.1, 143.1			
B-15	Evidentiary Update dated Sept. 6, 2013	E	Sched 14		Line 11
		E	Sched 31		Lines 14, 16, 19

1

2 In addition to the above for FEI-FBC PBR IRs, BCUC, BCPSO, and BCSEA have asked
3 questions related to customer growth and growth capital.

4 • BCUC PBR IR No. 3, questions 5.1, 6.1, 6.2, 15.0, 15.2, 16.1, 18.1, 47.1, 47.3, 48.1,
5 48.3, 49.1, 49.3, 50.1 and 50.3.

6 • BCPSO PBR IR No. 3, questions 8.1 and 8.2.



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- 1 • BCSEA PBR IRs No. 3, questions 1.0, 1.3, 1.4, 2.1, 2.3, 2.4 and 4.1.

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5 2.3 Is the use of customer growth in the PBR formula intended to provide an
6 incentive to the utility to increase the number of customers?

7

8 **Response:**

9 No. The customer growth component in the PBR formula is designed to provide the Company
10 with a reasonable opportunity to earn its return based on a cost factor that the Company cannot
11 control because of its obligation to serve customers as defined by the Tariff (with customer
12 growth being defined as a cost driver for the formula).

13

14

15

16 2.4 Does the use of customer growth in the PBR formula have the effect of providing
17 an incentive to the utility to increase the number of customers?

18

19 **Response:**

20 No. Customer growth has a relatively small impact on the O&M and capital formulas, and any
21 additional revenues that result from customer growth serve to offset the additional costs to
22 support those customers.

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1 **3.0 Topic: PBR and gas consumption**

2 **Reference: FEI Exhibit B-1, s.4.44.4 Customer Retention And Growth Initiatives**

3 FEI says that “Steps need to be taken to mitigate these pressures,” referring to “slow
4 customer addition growth and a decline in average use per customer despite low gas
5 commodity rates in recent years” as well as “changing environmental policies, energy
6 policies and regulations.” [p.17]

7 3.1 In what specific ways, if any, does the proposed PBR methodology encourage or
8 discourage FEI from building customer addition growth and/or average use per
9 customer over the test period?

10

11 **Response:**

12 Please refer to the responses to FEI-FBC BCSEA PBR IRs 3.2.3 and 3.2.4.

13 In general terms, PBR (particularly the revenue cap approach) is neutral in terms of promoting
14 customer additions or increases in average use per customer. This is a function of plan features
15 such as the revenue and volume forecast being redone each year and the RSAM account for
16 residential and commercial customers. In addition as explained in the FEI Application (Exhibit B-
17 1-1, pages 32 &33) “similar to revenue-decoupling mechanisms used for demand-side
18 management regulation, the revenue cap model decouples the allowed revenue from demand
19 and protects the utility against possible demand variations”. Therefore, average use per
20 customer will have little impact on company’s revenues. FEI is able to support load growth in
21 natural gas for transportation markets and new industrial loads within the O&M formula
22 spending envelope, although there is not a direct incentive to do so.

23 Variations in average use per customer for residential and commercial customers are
24 predominantly determined by weather and other external trends, which are non-controllable and
25 distinct from customer growth but impact all customers. Average use per customer is affected
26 by changing demand characteristics of existing customers, which has been predominantly
27 downwards for various reasons in the residential customer class in recent years.

28



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1 **4.0 Topic: Customer growth**

2 **Reference: FBC Exhibit B-1, s.6.2.4 O&M under PBR; s.6.2.5 Capital**
3 **Expenditures under PBR**

4 4.1 Please provide a table comparing FEI and FBC in terms of exactly how customer
5 growth and measures based on customer growth are factored into the proposed
6 PBR formulae for determining revenue requirement. Please include both the
7 formulae and an explanation of any differences.

8

9 **Response:**

10 Please refer to the response to FEI-FBC BCSEA PBR IR 3.2.1 for the FEI and FBC formulae
11 comparison table that also indicates how customer growth/measures based on customer growth
12 impact allowed revenue under PBR. Each formula uses forecasted change in customer growth,
13 or a measure based on customer growth, to determine the allowed level of expenditure for each
14 item under PBR. There are no differences formulaically between FEI and FBC with respect to
15 customer growth impacts on allowed revenue under PBR. When customer growth/measures
16 based on customer growth increases or decreases, formulaic revenue increases or decreases
17 respectively.

18