



Diane Roy
Director, Regulatory Services

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

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

FortisBC
16705 Fraser Highway
Surrey, B.C. V4N 0E8
Tel: (604) 576-7349
Cell: (604) 908-2790
Fax: (604) 576-7074
Email: diane.roy@fortisbc.com
www.fortisbc.com

February 9, 2016

British Columbia Utilities Commission
Sixth Floor
900 Howe Street
Vancouver, B.C.
V6Z 2N3

Attention: Ms. Erica M. Hamilton, Commission Secretary and Director

Dear Ms. Hamilton:

Re: Project No. 3698852

FortisBC Energy Inc. (FEI or the Company)

Application for its Common Equity Component and Return on Equity (ROE) for 2016 (the Application)

FEI Information Request (IR) No. 1 to the Association of Major Power Customers of BC (AMPC) on the Evidence of Dr. Laurence D. Booth

On October 2, 2015, FEI filed the Application referenced above. In accordance with Exhibit A-6 setting out the Regulatory Timetable for the review of the Application, FEI respectfully submits the attached IR No. 1 to AMPC on the Evidence of Dr. Booth.

If further information is required, please contact the undersigned.

Sincerely,

FORTISBC ENERGY INC.

Original signed:

Diane Roy

Attachments

cc (email only): Registered Parties



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1 **1.0 Reference: Revised Booth Evidence, Pages 50, Line 24; Page 58, Line 25; and**
2 **Appendix D, Schedule 12 p. 29**

3 On p.50, line 24 Dr. Booth states: “*For the S&P gas and electric index the historic utility*
4 *risk premium is about 3.4%, ...*”

5 On p.48 Dr. Booth provides the following DCF estimates: “*US SP500 Electric Utility risk*
6 *premiums: 3.40%*”

7 1.1 Please provide the basis for, and derivation of, the 3.4%.

8 1.2 Please provide Schedule 12 in Excel executable format as well as the relevant
9 data series from the “Standard & Poor’s Analyst’s Handbook 2015”.

10 1.3 Please provide a listing of companies that make up both the electric and gas
11 utility holding companies, summarized on Schedule 12.

12 1.4 Please confirm that the most recent data for gas utilities in Schedule 12,
13 Appendix D (2014) indicates an estimate of the cost of equity of 11.58%, an ROE
14 of 13.3%, and a sustainable growth rate of 7.38%. If not confirmed, please
15 explain your response.

16 1.5 Please explain whether the dividend yield on Schedule 12 of Dr. Booth’s
17 evidence has been adjusted for the payment of dividends during the first year.

18 1.5.1 If so, please describe the adjustment and provide the calculation used to
19 make the adjustment.

20 1.5.2 If not, please explain why no adjustment was made.
21

22 **2.0 Reference: Revised Booth Evidence, Page 58, Line 26; and Appendix D, p. 13,**
23 **lines 11-23, and p. 16, 19-21.**

24 Dr. Booth provides the following DCF estimates in his testimony: “*Low Risk US Sample*
25 *Median DCF: 7.02%*”

26 In Appendix D, Dr. Booth makes the following statement:

27 “*The DCF estimates for the market as a whole and the S&P utility indexes are*
28 *more reliable than for individual companies due to the significant measurement*
29 *error attached to forecasting future growth rates. For example, the forecast*



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1 *growth rate for the economy is more accurate since the growth rate in profits for*
2 *the market as a whole is constrained in the long run by the growth rate in the*
3 *economy. However, the growth rates are mechanically estimated and do not*
4 *reflect market estimates. Consequently some use analyst forecast of earnings*
5 *growth as a proxy for the sustainable growth rates in the former estimates.”*
6 *[Emphasis added]*

7 *and*

8 *“A standard way of alleviating the effects of analyst growth optimism is to use the*
9 *sustainable growth rate, which indicates that growth in earnings and dividends*
10 *generally comes from reinvestment of earnings and their earning a positive rate*
11 *of return.”*

12 2.1 Please explain how Dr. Booth assesses the “reliability” of DCF estimates as
13 referenced in the above passage.

14 2.2 Please confirm that utilities are availed of other sources of capital to fuel growth
15 beyond those reflected in the sustainable growth formula, i.e. sources of growth
16 other than that which can be generated through retained earnings. If not, why
17 not. Please explain.

18 2.3 Please provide the table at the bottom of page 13 of Appendix D in executable
19 Excel format with formulas intact. Please provide the underlying data, i.e. copies
20 of referenced pages, etc.

21

22 **3.0 Reference: Revised Booth Evidence, Page 58, Line 26; and Appendix D, p. 13,**
23 **lines 22-23 and p. 14, lines 1-10.**

24 Dr. Booth provides the following DCF estimates in his testimony: *“Low Risk US Sample*
25 *Median DCF: 7.02%”*

26 In Appendix D, Dr. Booth makes the following statement:

27 *“Note that the current dividend yields range from 2.29% to 4.02% due to the*
28 *particular circumstances of each utility, but the median dividend yield of 3.2% is*
29 *basically the same as the the average of 3.21%. Moreover, these are much*
30 *higher than the current (November 18, 2015) dividend yield on the S&P 500*
31 *index of 1.98% consistent with the lower growth prospects of the utility sector as*
32 *a mature industry. However, the earnings of these utilities are not stable; their*
33 *past five year growth rates range from -17.09% for WGL to +29.23% for ATMOS*



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1 *Energy. It is this growth rate instability that makes the use of the DCF model*
2 *suspect even for “low risk” “utilities.”*

3 3.1 Please provide the annual growth rates contained in the 5-year growth rates in
4 the column “Past G” in the table on the bottom of p.13 of Appendix D. Please
5 provide the information in Excel format.

6

7 **4.0 Reference: Revised Booth Evidence, Page 58, Line 26; and Appendix D, p. 16,**
8 **lines 11-24.**

9 Dr. Booth provides the following DCF estimates in his testimony: *“Low Risk US Sample*
10 *Median DCF: 7.02%”*

11 In Appendix D, Dr. Booth makes the following statement:

12 *“A final problem with the use of analyst forecasts is that they are based on*
13 *earnings not dividends, whereas the DCF model values dividends and not*
14 *earnings. As Schedule 5 showed earnings are more volatile than dividends even*
15 *after we aggregate over all firms. What this means is that the short term growth*
16 *forecast for earnings is higher than for dividends even if their long run, or*
17 *compound, growth rates are the same. This is due to the common practise of*
18 *smoothing dividend payments or said another way firms only increase their*
19 *dividend after their fundamental earnings have increased and not due to*
20 *temporary factors. For example, suppose the compound nominal (real plus*
21 *inflation) growth rate for the economy is 5% and profit uncertainty is 20%, then*
22 *the short term earnings growth rate would be $5\% + .5 * (0.2^2)$ or 7% whereas if*
23 *its dividend uncertainty were only 5%, due to this smoothing, its dividend growth*
24 *rate would be $5\% + .5 * (.05^2)$ or 5.12%. What this means is that even if analyst*
25 *growth forecasts were unbiased their earnings growth rates would be biased high*
26 *estimates of the future growth rate in dividends, which is what is needed for cost*
27 *of capital estimation.”*

28 4.1 How does smoothing of dividend payments lead to a necessarily higher short-
29 term growth rate for earnings? Could the earnings growth rate also be lower?
30 Please explain your answer.

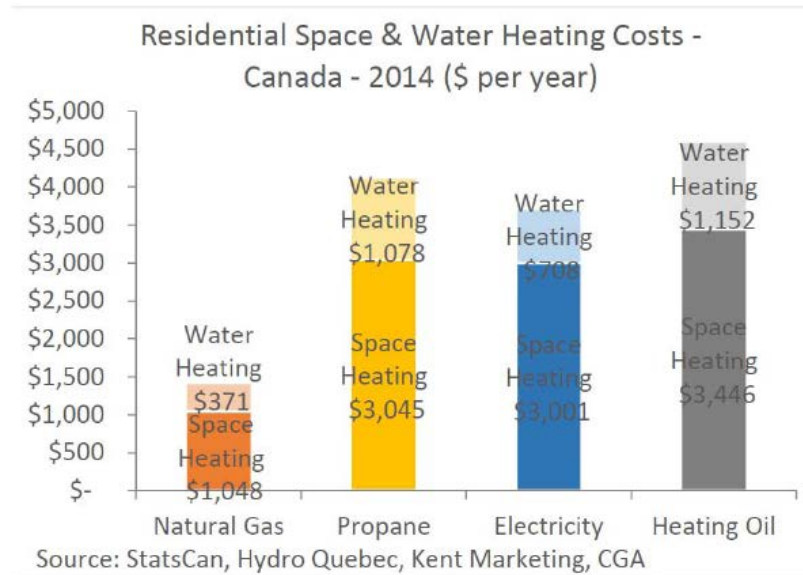
31

32

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1 **5.0 Reference: Revised Booth Evidence, Page 72, Lines 3-8.**

2 Dr. Booth provides the following chart in his testimony:



3

4 *“The graphic indicates that natural gas has a significant cost advantage over*
 5 *propane, electricity and heating oil in the residential space heating and water*
 6 *heating markets. Currently the CGA estimates that the “typical” user can save*
 7 *upwards of \$2,000 by using natural gas rather than competing fuels and as a*
 8 *result natural gas residential users have increased by an average of 100,000*
 9 *users a year for the past ten years.”*

10 5.1 Please provide the source data and assumptions for the graphic.

11 5.2 Is the chart depicting operating costs only, or does the analysis include up front
 12 capital cost differentials? If not, please recalculate to include the up-front capital
 13 costs.

14 5.3 Please provide the equivalent graphic specific to British Columbia, and provide
 15 the source data and assumptions for it.

16

17 **6.0 Reference: Revised Booth Evidence, Page 79, Lines 5-11.**

18 Dr. Booth states the following in his testimony:



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1 *“Based strictly on these comparators, and not my own judgment, FEI’s common*
2 *equity ratio should be about 37% in a range from 36% (Union and EGD) to*
3 *38.5% (Gaz Metro). However, I continue to recommend the same 35% common*
4 *equity I have traditionally recommended for both gas and electricity distribution*
5 *companies. My normal ranking places distribution companies as slightly higher*
6 *risk than transmission companies for which I recommend a 30% common equity*
7 *ratio. The Régie allows Hydro Quebec Distribution 35% common equity and*
8 *Hydro Quebec Transmission 30% common equity.”*

9 6.1 Please confirm that Gaz Métro is also allowed a 7.5% deemed preferred share
10 component (i.e. there are no actual preferred shares issued), which is not
11 reflected in the 38.5% referenced by Dr. Booth in this passage. If not confirmed,
12 please explain why not.

13 6.2 Please confirm that, accounting for the deemed preferred shares, Gaz Metro can
14 be thought of as having a 46% common equity ratio. If not confirmed, please
15 explain why not.

16 6.3 Please confirm that Hydro Quebec Distribution and Transmission are owned by
17 the Government of Quebec. If not confirmed, please explain why not.

18 6.4 Please provide the following information in relation to Hydro Quebec Distribution:
19 a) rate base
20 b) number of customers
21 c) bond ratings and its most recent ratings reports
22 d) cost advantage of its delivered electricity relative to natural gas delivered
23 by Gaz Metro

24 6.5 Please confirm that there are no major investor-owned Canadian gas distribution,
25 electric distribution or electric transmission utilities with a common equity ratio of
26 35% or lower. If not confirmed, please identify the utilities and their capital
27 structure.

28 6.6 Please provide your assessment of the relative risk of electric transmission,
29 electric distribution, and natural gas distribution and explain your response.

30 6.7 Please identify the proceedings in which Dr. Booth has provided cost of capital
31 evidence since the beginning of 2010.



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1 6.8 Please identify the proceedings since 2010 where Dr. Booth filed evidence
 2 supporting a 35% common equity ratio for an electric or gas distribution utility.

3

4 **7.0 Reference: Revised Booth Evidence, p.6, lines 22-23**

5 Dr. Booth states the following in his testimony:

6 *“Further, Concentric provided the following table of currently allowed ROEs for*
 7 *Canadian gas companies.”*

8 7.1 Please confirm that the equivalent table for electric utilities produced by
 9 Concentric is as follows:

Canadian Electric Distributors ²						
ATCO Electric Ltd. ³	8.30	8.30	8.30	38.00	38.00	38.00
ENMAX Power Corporation ³	8.30	8.30	8.30	40.00	40.00	40.00
EPCOR Distribution Inc. ³	8.30	8.30	8.30	40.00	40.00	40.00
FortisAlberta Inc. ³	8.30	8.30	8.30	40.00	40.00	40.00
FortisBC Inc.	9.15	9.15	9.15	40.00	40.00	40.00
Hydro-Québec Distribution	6.19	8.20	8.20	35.00	35.00	35.00
Manitoba Hydro	* N/A	N/A	N/A	25.00	25.00	25.00
Maritime Electric Company Limited	9.75	9.75	9.75	43.50	43.10	41.90
Newfoundland and Labrador Hydro ⁸	4.47	Pending	Pending	20.00	Pending	Pending
Newfoundland Power Inc.	8.80	8.80	8.80	45.00	45.00	45.00
Nova Scotia Power Inc.	9.00	9.00	9.00	37.50	37.50	37.50
Ontario's Electric Distributors ⁴	8.98	9.36	9.30	40.00	40.00	40.00
Saskatchewan Power Corporation	8.50	8.50	8.50	40.00	40.00	40.00
Average	8.17	8.72	8.72	37.23	38.63	38.53
Median	8.40	8.50	8.50	40.00	40.00	40.00

10

11

12 **8.0 Reference: Revised Booth Evidence, Appendix C, pp. 8-9.**

13 Please refer to the below two tables that Dr. Booth provides in Appendix C to his
 14 testimony:



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		Canadian Regulated Betas				
		CAP \$B	RBC	Yahoo	Booth	Google
TransCanada	TRP	30.6	0.47	0.96	0.28	0.27
Enbridge	ENB	43.1	0.21	0.6	0.11	0.11
Canadian Utilities	CU	9.2	0.09	0.44	0.2	-0.02
Emera	EMA	6.2	0.01	0.06	0.32	0.07
Fortis	FTS	10.57	0.11	0.05	0.26	0.08
Valener	VNR	0.7	0.34	0.13	0.27	0.19
Veresen	VSN	3.2	0.76	1.67	0.34	0.58
Average		14.80	0.28	0.56	0.25	0.18
Median		9.20	0.21	0.44	0.27	0.11

1
2 and

		US Regulated Betas				
		MKT Cap	RBC	Yahoo	Booth	Google
		5.5				
Vectren	VVC	3.38	0.50	0.94	0.53	0.46
WGL	WGL	2.89	0.54	0.78	0.71	0.55
Piedmont	PNY	4.57	0.84	1.30	0.63	0.83
Northwest	NWN	1.27	0.29	0.46	0.57	0.31
New Jersey Resources	NJR	2.56	0.56	0.67	0.62	0.51
Laclede	LG	2.45	0.39	0.48	0.45	0.36
ATMOS	ATO	6.19	0.45	0.61	0.57	0.41
South West Gas	SWX	2.6	0.63	0.69	0.73	0.58
Average		3.49	0.53	0.74	0.60	0.50
Median		2.89	0.52	0.68	0.60	0.49

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“The average and median beta estimates by the Royal Bank of Canada were 0.28 and 0.21 respectively very similar to my own estimates (Booth) of 0.25 and 0.27. Google’s estimates seem to be slightly lower than mine, whereas Yahoo’s are higher. However, there is no sign of the mechanical Blume adjustment favoured by utility witnesses, if there were then no beta would be less than 0.33 which is what you would get with the Blume adjustment and an actual beta of 0. The key insight, however, is that “publicly available” betas, as distinct from my privately estimated betas, all indicate the low risk nature of Canadian utilities.”

- 12 8.1 Please update this analysis for both Canada and the U.S. through December 31,
13 2015.
- 14 8.2 Please provide the studies or screenshots from which these betas were drawn.
- 15 8.3 Please provide an explanation of the cause of the variation in these raw betas
16 between the various sources of data.

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1 8.4 Please provide the underlying calculation behind each data provider's beta
2 estimate, as well as Dr. Booth's beta estimate. Please provide the interval of
3 return (weekly, monthly,...) and the estimation window (e.g. 5 years) that Dr.
4 Booth has used for his calculations, as well as the beginning and end dates for
5 the estimation window

6 8.5 When Dr. Booth indicates that "Google's estimates seem to be slightly lower than
7 mine, whereas Yahoo's are higher. However, there is no sign of the mechanical
8 Blume adjustment favoured by utility witnesses...", does Dr. Booth agree that
9 both Google and Yahoo are data service providers and not financial analysts? If
10 not, please explain your answer.

11 8.6 Please provide evidence that financial analysts actually rely on these raw beta
12 estimates, without adjustment, to perform financial analysis.

13

14 **9.0 Reference: Revised Booth Evidence, Appendix C, P.8, Footnote 10**

15 Dr. Booth states the following in his testimony:

16 *"It is not clear how the public services estimate their betas in terms of time*
17 *period and estimation window."*

18 9.1 Please elaborate whether the reason "it is not clear" is because the services do
19 not specify that information.

20 9.2 Please confirm that beta calculation is sensitive to time period and estimation
21 window. Please explain your answer.

22

23 **10.0 Reference: Revised Booth Evidence, Appendix B, Schedule 1.**

24 Dr. Booth provides two graphs on p. 14 of Appendix B, "*Risk Premium Estimates from*
25 *1924" and Market Risk Premium Estimates Back From 2014"*.

26 10.1 Please provide the underlying data for the graphs shown in Schedule 1.

27 10.2 Please identify the source (and data series if applicable) of the information used.

28 10.3 Please develop similar graphics using the income yield on 30-year government of
29 Canada bond yields?

30



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1 **11.0 Reference: Revised Booth Evidence, Appendix B, p. 15, Schedule 2.**

2 Dr. Booth provides a table “*Arithmetic Earned Risk Premiums for Different Holding*
3 *Periods*”.

4 11.1 Please provide the underlying data for the Table shown in Schedule 2 in
5 executable Excel format with formulas intact.

6 11.2 Please identify the source (and data series if applicable) of the data used.

7 11.3 Please develop a similar table using the income yield on 30-year government of
8 Canada bonds, also averaged arithmetically.

9

10 **12.0 Reference: Revised Booth Evidence, Appendix B, p. 21, Schedule 8.**

11 Dr. Booth provides the table below “*Annual Rate of Return Estimates 1926-2014*”.

Annual Rate of Return Estimates 1926-2014

	U.S.			CANADA		
	S&P Equities	Long US Treasury	Excess Return	TSE Equities	Long Canadas	Excess Return
AM	12.07	6.00	6.07	11.20	6.57	4.62
GM	10.62	5.85	4.77	10.04	6.52	3.52
OLS	10.96	5.37	5.59	10.30	6.07	4.24
Volatility ¹	20.07	9.70		18.56	8.98	

12

13 12.1 Please provide the underlying data for the table in Excel format.

14 12.2 Please identify the source (and data series if applicable) of the data used.

15 12.3 Please develop a similar table using the income yield on 30-year government of
16 Canada bonds.

17

18 **13.0 Reference: Revised Booth Evidence, p. 35, Lines 1-2**

19 Dr. Booth states the following in his testimony:



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1 *“Overall the stock market is valuing utilities favourably, credit is still easy and*
2 *utilities continue to have access to the 40 and 50 year debt market at very low*
3 *interest rates”.*

4 13.1 Please provide a list of Canadian natural gas distributors which have issued 40
5 or 50 year debt since 2012 along with their respective rates.

6
7 **14.0 Reference: Long-term business risk and interest rates**

8 14.1 Does Dr. Booth agree that long-run risk is more important in low interest-rate
9 environment? Please fully explain your response.

10

11 **15.0 Reference: Booth Evidence, p. 81**

12 Dr. Booth states the following in his testimony:

13 *“There are some timing differences in the numbers used in the ICR [Interest*
14 *Coverage Ratio] as there are some smoothing options, but the net result is that*
15 *FEI has considerable financing flexibility and is not currently constrained by the*
16 *ICR in issuing MTNs.”*

17 15.1 Why has Dr. Booth only analyzed the Earnings Coverage Ratio filed on SEDAR,
18 which he has also referred to as the Interest Coverage Ratio (ICR), when FEI
19 has indicated that the debt issuance coverage test under its Trust Indenture is
20 the limiting factor?

21

22 **16.0 Reference: 2012 GCOC Proceeding FBCU-AMPC (Booth) IR 3.0**

23 In the 2012 GCOC Proceeding, Dr. Booth responded to FBCU-AMPC (Booth) IR 3.0 as
24 follows:

25 *3.0 Reference: Booth Evidence, Page 6: Principles in Assessing Business Risk*

26 *Dr. Booth discusses principles in assessing business risk, and addresses FEI's*
27 *business risk later in his evidence.*

28 *3.1 Please confirm that Dr. Booth's assessment of FEI's business risk is integral*
29 *to his opinion on the fair return for FEI. If not, why not?*



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1 *3.0 Business risk affects the capital structure which is important for the fair ROE,*
2 *if that is what the question means by “integral” then the answer is yes.*

3 16.1 Please confirm that the same response would apply equally to Dr. Booth’s
4 evidence in the present proceeding, or explain why not.

5

6 **17.0 Reference: 2012 GCOC Proceeding BCUC-AMPC (Booth) IR 23.3**

7 In the 2012 GCOC Proceeding, Dr. Booth responded to FBCU-AMPC (Booth) IR 23.3 as
8 follows:

9 *23.0 Reference: Business Risk Exhibit C6-12, Evidence of Dr. Laurence Booth,*
10 *pp. 42*

11 *Canadian Comparator Utilities*

12 *Dr. Booth rates FEI’s risk as “perhaps” slightly riskier than EGD and ATCO Gas*
13 *and less risk than Union or Gas Metro.*

14 ...

15 *23.3 Has Dr. Booth considered B.C. provincial energy and environmental policies*
16 *in coming to his conclusions? How?*

17 *23.3 Yes. Government policy across Canada both at the federal and provincial*
18 *level is concerned with greenhouse gases and sustainable energy policy.*
19 *However, the primary focus is “off coal” and throughout North America there is a*
20 *shift towards gas fired generation, particularly for peaking purposes. This is not*
21 *as strong in BC and Quebec due to large hydro generation but there are limits to*
22 *the amount of hydro. Moreover, BC has significant shale gas reserves and it is*
23 *highly unlikely these will not be exploited to the advantage of BC residents. Dr.*
24 *Booth has maintained the relative ranking in the current proceeding.*

25 17.1 Please confirm that, in the present Application, Dr. Booth’s considered BC
26 provincial energy and environmental policies in the same manner as he
27 described in the response to GCOC FBCU-AMPC IR 23.1. If not, please explain
28 your answer.

29



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1 **18.0 Reference: Booth Evidence, p. 50, Lines 5-7.**

2 Dr. Booth provides the following in his testimony:

3 *“If the 1.30% spread of the preferred share yield over the A bond yield is added*
4 *to the CCAPM estimate as a current “Operation Twist” adjustment similar to*
5 *2012 we get the following:*

Risk Premium Estimate	2014
Low end	7.25%
High end	8.30%

6
7 *This would indicate a 2016 fair ROE of 7.78% for a benchmark utility, which is*
8 *the mid-point between the high and low estimates.”*

9 18.1 Please confirm that the referenced figures are 2016 Cost of Equity Estimates and
10 not 2014 Risk Premium Estimates. If Dr. Booth can't confirm, please explain.

11

12 **19.0 Reference: Booth Evidence, p. 50, Lines 20-24.**

13 Dr. Booth provides the following in his testimony:

14 *“For the market as a whole I would estimate the fair return as being 8.50-9.00%*
15 *in Canada and slightly higher in the US. With forecast long Canada bond yields*
16 *at 2.12% for 2016, this implies a current market risk premium of over 6.38-6.88%,*
17 *which is in excess of both the historic evidence in Canada and the judgment of*
18 *the respondents to Fernandez’ survey.”*

19 19.1 Please confirm that the forecast long Canada bond yield has been corrected to
20 2.75%, per Dr. Booth's revised evidence filed on February 3, 2016. If Dr. Booth
21 can't confirm, please explain.

22

23 **20.0 Reference: Booth Evidence, p. 56, Lines 1-4.**

24 Dr. Booth provides the following in his testimony:

25 *“Similarly with the October 2015 long Canada yield of 2.12% and a 3.5% market*
26 *risk premium the simple CAPM estimate is 5.62%. As a result, there is currently a*

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1 *positive 2.56% difference when we subtract the CAPM estimate from the DCF*
2 *estimate.”*

3 20.1 Please confirm that the forecast long Canada bond yield has been corrected from
4 2.12% to 2.75%, per Dr. Booth’s revised evidence filed on February 3, 2016. If
5 Dr. Booth can’t confirm, please explain.

6 20.2 Please confirm that, adjusted for a corrected forecast long Canada bond yield at
7 2.75, the resulting cost of equity would be 8.5% with Dr. Booth’s adjustments for
8 flotation (50 bps), credit spread (45 bps), and abnormally low bond yields (130
9 bps).

10

11 **21.0 Reference: Booth Response to GCOC BCUC-AMPC IR 39**

12 In the GCOC proceeding, Dr. Booth provided the following response to BCUC-AMPC IR
13 39:

14 *39.0 Reference: Risk Premium Estimates*

15 *Exhibit C6-12, Evidence of Dr. Laurence Booth, p. 93-94*

16 *Fair ROE*

17 *39.1 In a table format, please summarize the advantages and disadvantages for*
18 *each of the following methods of calculating fair return: CAPM, DCF,*
19 *Comparable Earnings.*

20 *39.2 Does Dr. Booth recommend putting more weight on any one of these*
21 *methods versus another? Or should they all be given equal weight? Please*
22 *explain why.*

23 *39.1 and 39.2 Due to time constraints it is not possible to provide a table*
24 *summarising the advantages and disadvantages of each and this is discussed in*
25 *some detail on pages 86-91, where Dr. Booth shows that while the DCF and risk*
26 *premium models should give the same result in practise they do not. The main*
27 *reason for the discrepancy is the change in the real yield on the long Canada*
28 *bond due partly to changing inflationary expectations. The DCF model fell out of*
29 *fashion since there were too many errors attached to forecasting future growth*
30 *rates when inflation collapsed in the early 1990’s, since inflation is the major*
31 *factor driving utility growth rates. (see Dr. Booth’s paper in the JACF (Spring*
32 *1999)). Conversely CAPM estimates became popular since real yields on the*



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1 *long Canada bond were very high (See Schedule 7 in Dr. Booth's Appendix B).*
2 *For example, see the graph on page 90 of Dr. Booth's testimony which shows*
3 *that simple DCF estimates were 4% below those of risk premium models at the*
4 *time the BCUC and the NEB moved to ROE adjustment models. Conversely at*
5 *the current point in time simple DCF estimates are about 3% higher than simple*
6 *risk premium estimates.*

7 *If reliance is based solely on historic statistics without resorting to any judgment,*
8 *then (non-US) DCF estimates are currently more reliable than risk premium*
9 *estimates. However, if someone knows what is going on, the use of judgment*
10 *makes them equally reliable since they are estimating the same thing.*

11 *Comparable earnings as normally presented by utility analysts, is totally*
12 *unreliable unless a market to book adjustment is made, which is rarely the case.*
13 *On the other hand in the long run corporate earnings should equal market*
14 *earnings so this anchors the long run expected return on the market, which is*
15 *needed for any risk premium model (See Dr. Booth's appendix E) [Emphasis*
16 *added]*

17 21.1 Please confirm that Dr. Booth would consider the underlined passage above to
18 be equally true in the present circumstances. If not confirmed, please explain
19 why not.

20

21 **22.0 Reference: Revised Booth Evidence. Page 27, line 16-23**

22 Dr. Booth States the following in his testimony:

23 *"It is also interesting to compare Canadian interest rates with the US. The*
24 *following graph is the yield on the generic BBB bond in Canada and the yield on*
25 *Moody's BBB rated utility bond since January 2012 to encompass the period*
26 *since the last generic hearing. What is clear is that typically the Canadian BBB*
27 *yield has been below that in the US, particularly since the start of 2013.*
28 *Currently, there is a yield difference of 0.81%, that is, the generic BBB yield in*
29 *Canada is at 4.70% (January 1) versus the utility BBB yield in the US of 5.51%.*
30 *This is further confirmation that the financing cost (cost of capital) to Canadian*
31 *utilities is significantly lower than for US utilities."*

32 22.1 Please provide the source data including the term to maturity, for the generic
33 BBB bond yield in Canada, and the Moody's BBB utility bond yield. Please also



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1 identify what the corresponding benchmark yield and average credit spreads are
2 for each series.

3

4 **23.0 Reference: Revised Booth Evidence. Page 70, line 15-16; Page 71, line 3-4**

5 Dr. Booth States the following in his testimony:

6 *“With such a plentiful cheap resource to redistribute we should expect an*
7 *expansion in supply which is what has happened as there has been significant*
8 *expenditure on the distribution system”.*

9 *“As the CGA explains, upstream extraction invested \$19 billion, pipeline*
10 *expansion another \$1 billion and there was a further \$2.6 billion in distribution*
11 *spending”.*

12 23.1 Please confirm that the \$2.6 billion capital investment in natural gas distribution
13 sector relates to the total capital expenditure. If not confirmed, why not. If
14 confirmed, please provide a breakdown of the total capital expenditure by major
15 capital spending categories including the sustainment and integrity, growth
16 capital, IT capital, facilities and others.

17