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November 16, 2012

**BRITISH COLUMBIA UTILITIES COMMISSION
GENERIC COST OF CAPITAL PROCEEDING EXHIBIT A-26**

Mr. Matthew D. Keen and Mr. Brian Wallace
Bull Houser Tupper LLP
c/o Association of Major Power Consumers of BC
and the BC Utility Customers
3000 Royal Centre
1055 West Georgia Street
Vancouver, BC V6E 3R3

Dear Mr. Keen and Mr. Wallace:

Re: British Columbia Utilities Commission
Project No. 3698660/G-20-12
Generic Cost of Capital Proceeding

Commission Information Request No. 1 on Intervener Evidence

Further to the November 5, 2012 filing of the Evidence from Dr. Laurence D. Booth on behalf of the Association of Major Power Consumers of BC and the BC Utility Customers, enclosed please find Commission Information Request No. 1 on Intervener Evidence. In accordance with the Regulatory Timetable, please file your responses electronically with the Commission by Friday, November 30, 2012.

Yours truly,

Erica Hamilton

EC/dg
Attachment
cc: Registered Parties
(BCUC-GCOC)

to Association of Major Power Consumers of BC and the BC Utility Customers

Generic Cost of Capital Proceeding

REGULATORY TOOLS

**1.0 Reference: Fair Return Standard
Exhibit C6-12, Evidence of Dr. Laurence Booth, p. 6**

On page 6, Dr. Booth states that almost all of FEI's expenses are period costs or in economic terms fixed costs that do not vary with output. The only item that there is risk is in the operations and maintenance expense.

1.1 To what extent does the fair return standard account for the risk the utility takes on with the potential variability of operations and maintenance expenses? Is this included in the measure of a utility's "business risk?" Please comment.

**2.0 Reference: Fair Return Standard
Exhibit C6-12, Evidence of Dr. Laurence Booth, pp. 8 and 24-25; Exhibit B1-9-6,
Appendix F, Evidence of Kathleen McShane, p. 8
Elements of a Fair Return**

On page 8, Dr. Booth states that "A fair rate of return was further confirmed in the BC Electric decision when Mr. Justice Lamont's definition of a fair rate of return...was adopted. ... This definition is referred to as an opportunity cost, in that the fair return is what could be invested in similar securities elsewhere;"

On page 24, Dr. Booth states that "...the litmus test of whether a board has "got it right" is whether the regulated company can access capital on reasonable terms". He continues on page 25 "Although the Hope "financial integrity" criteria flows from considering a fair return it applies equally to the deemed common equity ratio. In my judgment an appropriate common equity ratio is one which, in conjunction with the allowed return, allows a regulated company to maintain its credit and attract capital."

On page 8, Ms. McShane states that legal precedents make it clear that there are three separate and distinct requirements to a fair return:

1. earn a return on investment commensurate with that of comparable risk enterprises;
2. maintain its financial integrity; and
3. attract capital on reasonable terms.

2.1 Is it fair to conclude that the first of Ms. McShane's list is the same as the opportunity cost definition suggested by Dr. Booth on page 8 of his evidence? If not, why not?

2.2 Is it also fair to conclude that Dr. Booth's comments about the Hope "financial integrity" criterion and his view that an appropriate common equity ratio is one which, in conjunction with the allowed return, allows a regulated company to maintain its credit and attract capital are the same criteria as items 2 and 3 of Ms. McShane's list? If not, why not?

2.3 Does Dr. Booth agree with Ms. McShane's comment that the three requirements are separate and distinct requirements? Why or why not?

2.4 In Dr. Booth's view must all three criteria be satisfied for the allowed return (in conjunction with the capital structure) to be a fair return? Please explain.

**3.0 Reference: Regulatory Tools
Exhibit C6-12, Evidence of Dr. Laurence Booth, p. 9
Risks Face by Investors**

"For rate of return regulated utilities we add another dimension to risk, which is the impact of *regulatory risk*. In terms of the DCF equation the actual earned return on equity (**ROE**) captures the business, financial and regulatory risk, and together I term these *income risk*,...*investment risk* is beyond a board's direct control" (p. 9) [underline added]

3.1 Please clarify the "board" used in the above preamble. Is this referring to the public utilities (regulatory) board or the utility's *Board* of directors?

3.2 What is Dr. Booth's definition or description of *regulatory risk*?

3.3 Would Dr. Booth consider any other variable that would affect a firm's ROE? Would firm size be considered when assessing ROE? Please comment.

**4.0 Reference: Regulatory Tools
Exhibit B6-12, Evidence of Dr. Laurence Booth, pp. 11-12
Business Risk versus Financial Risk**

On page 11, Dr. Booth states that firms in industries with very high business risk tend to finance primarily with equity, while firms with very low business risk tend to finance with more debt.

4.1 Exhibit A2-27 includes a table compiled and analyzed in January 2012 by Aswath Damodaran, based on Value Line database showing the cost of capital by sector based on companies in the U.S. Is Mr. Booth able to confirm that the columns showing the cost of equity, cost of debt and cost of capital support his statement in the preamble?

4.1.1 Does Dr. Booth have any opinion on the validity and veracity of the estimates presented by Damodaran?

4.1.2 To the best of Dr. Booth's knowledge, do regulated utilities in the U.S. normally attain the allowed ROE?

4.1.3 To the best of Dr. Booth's knowledge, do regulated utilities in the U.S. normally have Performance Based Regulation that includes earning sharing mechanism?

On page 12, Dr. Booth states that "If the regulator feels that the firm's business risk has increased (decreased) it can reduce (increase) the amount of debt financing so that the total risk to the common stockholder is the same...In each case the different equity ratio adjusted for differences in perceived business risks."

4.2 What criteria should be used for the regulator to allow an objective assessment of "perceived" business risk?

4.3 How often should the perceived risks be reviewed and assessed?

**5.0 Reference: Regulatory Tools
Exhibit C6-12, Evidence of Dr. Laurence Booth, pp. 12-13 and 28-32; Schedule 3
Exhibit B1-20, Response to IR 54.2.1
Deferral Accounts for FEI**

Dr. Booth favours the use of deferral accounts for forecasting risks beyond the control of FEI and to manage the regulated firm's income risk.

5.1 How does the deferral account protection for Enbridge Gas, Union and Gaz Metro compare to the deferral account protection afforded FEI by the BCUC?

In Exhibit B1-20, the FBCU state that "FEI's RSAM is a decoupling mechanism, not a rate stabilization mechanism, despite its name..." (Response to question 54.2.1)

5.2 Does Dr. Booth agree with FBCU's assessment?

5.3 What is Dr. Booth's definition of rate stabilization mechanism versus decoupling mechanism? Do both mitigate (reduce) overall risk for the utility? Are there any methodologies available to measure *how much* risk can be reduced by these mechanisms?

"The value of the deferral account is then charged to the ratepayers over some future time period. In this way "ratepayers" always pay the full cost of service and stockholder risk is lowered." (p. 12)

5.4 In Dr. Booth's opinion, does the number of and dollar value of a utility's cumulative deferral accounts affect (lower) stockholder's risk?

5.4.1 Is there any recommended approach or tools the Commission may use to measure how much each deferral account reduces the stockholder risk?

"As a result, deferral accounts are a "win-win" solution as they reduce the operating risk faced by the company, thereby allowing a higher debt ratio, and they lower overall cost of capital thereby benefiting customers. For this reason I have long argued that companies should have deferral accounts for the cost of short term debt, for example, since no-one can predict short term interest rates and otherwise there may be a tendency to over-estimate them in the revenue requirement." (pp. 12-13)

5.5 Given that some rate base deferral accounts may actually attract weighted average cost of capital, a carrying cost which includes both a debt and equity return, does this indicate that these kinds of deferral account do not necessarily affect a higher debt ratio? Please comment.

Given the nature of and significant amount of fixed assets apparent in utility operations, it could be assumed that the majority of a utility's debt is long term, balanced with very little short term debt. This is supported by FortisBC's (Electric) most recent revenue requirements application wherein it states that "Approximately 90 percent of FortisBC's interest expense for 2012 and 2013 is driven by embedded long-term debt," (FortisBC 2012-2013 Revenue Requirements and Review of Integrated Resource Plan proceeding, Exhibit B-1)

5.6 Please explain Dr. Booth's suggestion that "companies should have deferral accounts for the cost of short term debt." Given the relatively small amount of short term debt financing for utilities, in general, please discuss why short term debt costs should not be a shareholder risk?

5.7 To what degree does the allowed rate of return already compensate the utility for short term debt risk, if any? Please comment.

**6.0 Reference: Business Risk
Exhibit C6-12, Evidence of Dr. Laurence Booth, p. 13
Holding companies**

Dr. Booth discusses the credit rating benefit of Fortis ownership of FEI compared to the previous “dodgy” US ownership of FEI.

6.1 In Dr. Booth’s opinion, should the borrowing cost benefit of a utility’s ownership flow to ratepayers or should it be shared with shareholders? Why?

**7.0 Reference: Business Risk
Exhibit C6-12, Evidence of Dr. Laurence Booth, p. 14
Holding companies and double leverage**

Dr. Booth discusses the impacts of double leverage but concludes it is not as relevant to FEI since Fortis and FEI have the same DBRS rating.

7.1 Is Dr. Booth implying then that “double leverage” is a non issue for this hearing?

**8.0 Reference: Capital Structures of Regulated Utilities
Exhibit B6-12, Evidence of Dr. Laurence Booth, p. 14
Double Leverage**

On page 14, Dr. Booth states that the parent of a utility has an incentive to finance the utility with as much equity as possible, so that the tax advantages to debt are shifted to the parent. In this way, the holding company’s shareholders can get the tax advantages, instead of the utility ratepayers.

8.1 Please provide the comparison of the debt component of the operational unit and its holding company, in tabular format, for regulated utilities in B.C. and other Canadian jurisdictions for the following years: 2011, 2006 and 2001.

Some smaller utility projects which recently came under BCUC regulation were directed to obtain a deemed cost of debt rate based on BBB-rated entities, which takes into account the assessment of a stand-alone debt rating for the thermal energy business, as distinct from the regulated parent utility.

8.2 Does Dr. Booth believe that the parent of a thermal energy services project, itself a regulated utility, would also have an incentive to shift the debt and equity advantages with its’ subsidiary? Although the methodology doesn’t “ring-fence” the financing of the parent versus the subsidiary, does it impact the risk level for either party? Please discuss.

**9.0 Reference: Capital Structure
Exhibit C6-12, Evidence of Dr. Laurence Booth, p. 14; Exhibit B1-20, FBCU response to BCUC IR 1-13.1
Credit Agency Rating and Ownership of the FEI**

On page 14, Dr. Booth states that “As Fortis noted in their answer to BCUC IR#1- 13.1 while they match the equity in the subsidiaries with equity at the parent level, they actually finance not just the equity in the subsidiary but also the non-earning good-will, that is the excess paid over the equity in the rate base which does not earn any return.”

In response to BCUC IR 1-13.1, Fortis states: "Fortis' long-term capital is used to finance its equity investment in the regulated utilities, goodwill and non-regulated investments and includes firstly common equity, followed by preferred equity and debt. ... The common equity at December 31, 2011 of \$3.9 billion supports close to 100% of the rate base equity (excluding goodwill) of Fortis' investment in regulated utilities such as FortisBC Energy."

9.1 Is it Dr. Booth's interpretation of the FBCU response that the parent company is using equity capital to finance goodwill at the subsidiary level or at the parent level?

9.1.1 If the parent is using equity capital to finance goodwill of regulated utilities, what are the implications for the regulated utilities and its ratepayers?

**10.0 Reference: Capital Structure
Exhibit C6-12, Evidence of Dr. Laurence Booth, p. 15
Financing of Equity**

On page 15, line 19, Dr. Booth states "...purchase other Ppcos."

10.1 Should Dr. Booth's Evidence be amended to read "...purchase other Opcos"?

**11.0 Reference: Cost of Debt
Exhibit B6-12, Evidence of Dr. Laurence Booth, pp. 15-16; Exhibit B1-20, Response to
BCUC IR 21.1
Credit Spreads for FEI and a Generic 'A'**

On page 15, Dr. Booth uses the graph provided by FBCU in Exhibit B1-20, BCUC IR 21.1 to indicate that the true credit rating for FEI is much higher than the actual rating. In the FBC's response to BCUC IR 21.1, the same graph was used to indicate the expectation by bondholders for regulatory protection.

11.1 It appears from the graph that the credit spreads were fairly similar from 2005 to 2007 and from 2008 onwards, FEI's cost of debt began comparing favourably with a Generic 'A' company. Is Dr. Booth's comment valid only under certain circumstances?

**12.0 Reference: Capital Structure
Exhibit C6-12, Evidence of Dr. Laurence Booth, p. 17;
Exhibit B1-9-6, Appendix F, Evidence of Kathleen McShane, p. 10
Effects of Excess Equity**

On page 17, lines 3-5, Dr. Booth states: "In terms of the revenue requirement this means that every dollar shifted from debt into equity costs the rate payers 8.67%. This higher common equity then allows the debt to be issued at more favourable rates at the parent level."

12.1 In this and the immediately preceding discussion in the evidence, Dr. Booth appears to be discussing two effects at play. In one, the higher pre-tax cost of each dollar of equity means that every excess dollar of equity costs the rate payers more than they would pay if that dollar of equity was financed by debt. The other effect is that a higher amount of equity held by an Opco (as opposed to the higher cost of equity) means that the financial risk to the Opco and to the Holdco is reduced, which "...allows the debt to be issued at more favourable rates at the parent level."

Can Dr. Booth agree that it is not the higher cost of excess equity that allows debt to be issued at more favourable rates at the parent level, but rather the higher amount of equity? If not, please explain.

Lines 260-266 on page 10 of Ms. McShane’s Evidence state that “The cost of capital for the company should reflect neither subsidies given to, nor taken from, other activities of the firm. Respect for the stand-alone principle is intended to promote efficient allocation of capital resources among the various activities of the firm. Adherence to the stand-alone principle ensures that the focus of the determination of a fair return is on the use of capital, i.e., their opportunity cost, not the source of the capital. The opportunity cost of capital reflects the return that could be earned if that capital were invested in an alternative venture of similar risk.” (Exhibit B1-9-6, Appendix F, p. 10)

- 12.2 The section of Dr. Booth’s Evidence cited above suggests that additional costs may be imposed on rate payers if the equity component of a regulated utility is unnecessarily high, to the advantage of the parent (Holdco). Is this a restatement of his evidence, one with which he can agree? If not, how would he change it?
- 12.3 Does Dr. Booth see any contradiction between his concern that a Holdco can derive an advantage from a regulated utility that it owns by increasing the equity level of the utility beyond what is necessary for the health of the utility and the stand-alone principle cited by Ms. McShane?
- 12.4 Should the equity level of the Holdco be a factor in determining the appropriate equity level of the utility (Opco)? Or would that be a violation of the stand-alone principle cited by Ms. McShane? Please explain.

**13.0 Reference: Business Risk
Exhibit C6-12, Evidence of Dr. Laurence Booth, pp. 15, 25, 63-66
Credit risk**

Dr. Booth shows from BCUC IR 1-21.1 that FEI’s “true” credit rating is much higher than its actual credit rating. He argues that a regulator need not target a particular credit rating. He suggests that when the going gets “tough” the market recognizes that utilities really are lower risk than their bond ratings suggest.

- 13.1 Would such an action violate the Hope “financial integrity” criterion discussed on page 25?
- 13.2 If investor expectations support a view that utilities are lower risk than their bond ratings suggest, to what extent should regulators reflect this in their approved capital structures? What are the risks associated with doing so?
- 13.3 If BBB rated issues are only slightly more expensive than A rated issues, should regulators be concerned if an approved capital structure resulted in a bond rating of BBB for FEI, especially if bond investors view the utility bond as less risky than the rating suggests?
- 13.4 What is the current differential between new issue A rated yields compared to BBB rated issue yields, all else being equal?

**14.0 Reference: Business Risk
Exhibit C6-12, Evidence of Dr. Laurence Booth, pp. 19, 20
Business risk**

Dr. Booth states that utilities have the lowest risk of just about any sector in the Canadian economy, and that they are prime candidates for using large amounts of debt to utilize their significant tax advantages.

- 14.1 What other sectors of the economy would Dr. Booth consider to be as low or lower than utilities?

Please identify the characteristics of those sectors that make them as low or lower than regulated utilities.

14.1.1 What are the observed betas for those lower risk sectors?

**15.0 Reference: Financial Integrity and Market Access
Exhibit B6-12, Evidence of Dr. Laurence Booth, p. 25
Credit Rating**

Dr. Booth considers that it is important for a utility to access the capital markets on reasonable terms to raise capital and provide service. However, Dr. Booth also states that credit standards constantly change as does the market's appetite for certain types of credits and this means that there is no need to target a particular credit rating.

15.1 In Dr. Booth's opinion, does a utility, under the same credit rating, have different levels of difficulty or ease in accessing the market at various phases in the business cycle? If not, why not?

15.2 Is Dr. Booth implying that there is no need for FEI to target an 'A' credit rating?

15.3 Dr. Booth mentioned that he regards the major comparators of FEI to be the two big gas distributors in Ontario and Gaz Metro, the province-wide gas distributor in Quebec (cross-reference: Exhibit C6-12 p. 42). Please provide the credit ratings of the other three gas distributors.

BUSINESS RISKS

**16.0 Reference: Business Risk
Exhibit C6-12, Evidence of Dr. Laurence Booth, p. 28
O&M Forecasts**

On page 28, lines 15 to 17, Dr. Booth states that "...the main way in which FEI over-earns is by forecasting higher O&M expenses that it actually intends to spend and a higher rate base and revenue requirement than it expects..."

16.1 What leads Dr. Booth to conclude that FEI intentionally forecasts higher O&M than it intends to spend and a higher rate base and revenue requirement than it expects? Could this be the result of simple forecasting error? If not, why not?

16.1.1 Is this statement applicable only to FEI or could it be generalized to all utilities?

**17.0 Reference: Business Risk
Exhibit C6-12, Evidence of Dr. Laurence Booth, pp. 29-32
ROE Performance Typical of a Canadian Utility**

On pages 29-32, Dr. Booth discusses and provides graphs showing the actual versus allowed ROE for Union Gas, Enbridge Gas Distribution Inc., Gaz Metro, and TransCanada Mainline.

17.1 Please provide the data and identify the source of the data underpinning each of the graphs.

**18.0 Reference: Business Risk
Exhibit C6-12, Evidence of Dr. Laurence Booth, pp. 29-32
Allowed versus Actual Return as an Indicator of Business Risk**

On page 32, Dr. Booth states that "... while for most utilities the ability to earn the allowed ROE is indicative of risk, for others it is not."

- 18.1 What factors distinguish between those utilities whose risk is reflected in their ability to earn their allowed ROE, from those others whose risk is not?
- 18.2 From the discussion, it appears the Dr. Booth regards FEI as a utility whose risk is reflected in its ability to earn its allowed ROE. What factors lead Dr. Booth to conclude that it is such a utility, as opposed to say the TransCanada Mainline, which he discusses at pages 32-34?
- 18.3 In Dr. Booth's view, are there any common competitive forces that would lead to FEI being placed in the same category as the Mainline? If so, what are they?

**19.0 Reference: Business Risk
Exhibit C6-12, Evidence of Dr. Laurence Booth, pp. 29-32
Competitive Position as an Indicator of Business Risk**

On page 37, lines 12-19, Dr. Booth discusses the "shale gas glut" and states that "[c]learly the cost advantage over electricity has completely turned around from 2009. At that time, FEI claims that natural gas had a 28% cost advantage over electricity but by 2012 this had increased to 45%."

- 19.1 Would Dr. Booth agree that the cost of gas is only one factor in the competitive position of a firm? If so, to what extent has Dr. Booth considered the directional movement of competing fuels such as electricity or the emergence of new technologies such as thermal energy systems in his evaluation of the business risk of the FBCU? If he has considered such competitive factors, what were his conclusions?

**20.0 Reference: Business Risk
Exhibit C6-12, Evidence of Dr. Laurence Booth, pp. 42-43
Competitive Position as an Indicator of Business Risk**

On page 43, lines 13-17, Dr. Booth states: "Overall I would judge FEI as warranting a common equity ratio of 37% in a range from 36% (Union and EGDI) to 38.5% (Gaz Metro) based on these comparators. However, I would recommend the same 35% I recommended in 2009. Capital market conditions are much improved from 2009 and it is difficult to see how the vast expansion in shale gas and consequent collapse in natural gas prices has done anything but reduce FEI's business risk."

- 20.1 What was the date of the decision by the Regie when it set the current common equity ratio for Gaz Metro?
- 20.2 Please explain why, if Dr. Booth judges that FEI warrants a common equity ratio of 37%, he is recommending 35%. Is Dr. Booth suggesting that the common equity ratios of the comparators are too high currently, given the improvement in capital markets since 2009 even though the Union Gas common equity ratio was confirmed in 2011 by the OEB?

**21.0 Reference: Business Risk
Exhibit C6-12, Evidence of Dr. Laurence Booth, pp. 27-29 and 38-41
Capital structure for FEI**

Dr. Booth notes that the emergence of shale gas is a game changer and FEI business risk has declined to what it was at a 35% equity level. At page 29 he concludes that FEI faces no material short term risk of a return on capital. On page 41, Dr. Booth states FEI's long run risk of capital recovery has clearly been reduced compared to 2009.

21.1 If the competitive position of FEI has improved relative to electricity in 2009 and takes FEI back to before 2000 when it operated with a 33% equity ratio (page 38, Figure 1), why does Dr. Booth recommend an equity ratio above 33% for 2013?

**22.0 Reference: Business Risk
Exhibit C6-12, Evidence of Dr. Laurence Booth, pp. 33-34
Long Term Business Risk**

Dr. Booth states that none of the longer term risks put forward by gas utility experts have been realized so far and that Canadian regulators have typically protected shareholders when external risks do arise.

22.1 To what extent are Canadian regulators more prone to protect their utilities in times of external risk pressure than U.S. regulators? What about the BCUC compared to other Canadian regulators?

22.2 FEI discussed in its evidence that while no new types of business risks have been identified, the key risks are still prevalent and have not declined. Given the margins that FEI has against electricity and the impact of shale gas, please discuss the likelihood of FEI facing the "death spiral" that Dr. Booth speaks of on page 33?

**23.0 Reference: Business Risk
Exhibit C6-12, Evidence of Dr. Laurence Booth, pp. 42
Canadian Comparator Utilities**

Dr. Booth rates FEI's risk as "perhaps" slightly riskier than EGDI and ATCO Gas and less risk than Union or Gas Metro.

23.1 Although FEI has a significant industrial load it achieves very small margins from industrial sales. How do these margin revenues compare to EDGI or ATCO Gas?

23.2 On what basis is FEI "perhaps" slightly more risky than EGDI or ATCO Gas?

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

FINANCIAL AND ECONOMIC OUTLOOK

**24.0 Reference: Long Term Canada Bond Yields
Exhibit C6-12, Evidence of Dr. Laurence Booth, p. 60
Canadian Bond Yield forecasts**

Dr. Booth judges a LTC bond yield "of 3% as well below the equilibrium" yield, since they are only 1.0%

above the forecast inflation rate and mean locking in a negative real yield for a typical taxable investor. This is an interest rate that is not made in Canada but reflects US and Eurozone problems.

- 24.1 If investors expect an LTC bond yield of 2.8%, isn't it appropriate to use that level in CAPM rather than inflating it? Why or why not?
- 24.2 What are Dr. Booth's views on the appropriateness of using a multi year LTC bond yield forecast of 4% as proposed by FEI? Are there cases where Canadian regulators have accepted multi-year LTC bond yield forecasts to set ROEs for Canadian utilities?

**25.0 Reference: Financial and Economic Outlook
Exhibit C6-12, Evidence of Dr. Laurence Booth, p. 61
U.S. and Canada Long-Term Yield Spreads**

On page 61, Dr. Booth states: "Of importance is that currently long term US government interest rates (Treasuries) are yielding 0.50% more than equivalent long Canada bonds, despite the impact of Operation Twist. Further RBC is forecasting that this gap will not narrow appreciably over the next two years, so that at the end of 2014 the gap will still be 0.85%."

- 25.1 From the statement above, it appears that the difference in yields will not only narrow appreciably, but will widen by 0.35%. Is Dr. Booth's choice of term that the gap "will not narrow appreciably" intended to signify that a change in the gap of 0.35% is not significant, or that a widening of that magnitude is less significant than a narrowing of the gap, or both? Please explain.
- 25.2 In Dr. Booth's opinion, what are the implications of the persistent interest rate gap between Canada and the US and why are they important?

**26.0 Reference: Financial and Economic Outlook
Exhibit C6-12, Evidence of Dr. Laurence Booth, p. 62
U.S. and Canada Long-Term Yield Spreads**

On page 62 of Dr. Booth's Evidence shows a graph comparing yields from the Scotia Capital "A" bond index and the Bloomberg utility series.

- 26.1 Please provide a table containing underlying data for the graph.
- 26.2 Please also provide a description of the Scotia Capital "A" bond index and the Bloomberg utility series. Are there alternative indices that Dr. Booth could have used to examine the spread between utility and generic A yields? If so, what alternatives exist and why did he choose the particular indices that he used?
- 26.3 What is the average difference in credit spreads for the period 2006 to 2011?

RISK PREMIUM ESTIMATES OF THE FAIR ROE

**27.0 Reference: Risk Premium Estimates of the Fair ROE
Exhibit C6-12, Evidence of Dr. Laurence Booth, pp. 70-71
CAPM and ECAPM**

Page 70 of Dr. Booth's Evidence shows an illustrative graph of the expected return versus the beta as estimated by the CAPM and the ECAPM. The graph illustrates Dr. Booth's comments on page 70-71 that early tests showed the CAPM as tending to over-estimate returns for high-risk stocks and under estimate

returns for low-risk stocks, and for that reason, some expert witnesses have used an ECAPM. Dr. Booth states that the practice is not appropriate for estimating utility rates of return.

Dr. Booth also states that the ECAPM, which is based on tests that use the 30 day return on the 90 day Treasury bill yield as the risk free rate, is only appropriate for very short horizon (30 day) investments.

Dr. Booth states that “In regulatory hearings it is customary to use the CAPM with the LTC bond yield, since equities have longer time horizons than even the longest maturity bond. To the extent that LTC yields have averaged a maturity premium of about 1.25% over the Treasury bill yield, this use of the CAPM automatically increases the risk free rate and lowers the slope in the same way as the ECAPM. In this way, it adjusts for the bias noted in these early tests of the CAPM.”

27.1 In the graph on page 70, can one conclude from Dr. Booth’s comments on that page that the cross-over point for the CAPM and the ECAPM occurs when the beta equals one?

27.2 Dr. Booth’s statement on page 70, that early tests showed the CAPM as tending to over-estimate returns for high-risk stocks and under estimate returns for low-risk stocks, seems unqualified as to the term of the investment. Please clarify if the early tests were limited to short horizon (30 day) investments as his comments on the ECAPM on page 71 seem to suggest, or if there were tests of the ECAPM using longer term investments. If there were tests of the ECAPM using long term investments, what were the results?

**28.0 Reference: Risk Premium Estimates of the Fair ROE
Exhibit C6-12, Evidence of Dr. Laurence Booth, p. 72
CAPM**

On page 72, Dr. Booth quotes from a 2010 paper by Levy and Roll, which states: “This article shows that a small variation of the sample parameters, well within their estimation errors bound, can make a typical market proxy efficient. Thus the empirically measured return parameters and the market portfolio weights are perfectly consistent with the CAPM using a typical proxy.... Hence, minor changes in estimation error reverse previous negative and disappointing findings for the CAPM.”

28.1 Please provide copy of the complete article.

28.2 Does it not follow from the conclusion of Levy and Roll, i.e. that minor changes in estimation error reverse previous negative and disappointing findings for the CAPM, that minor estimation errors can easily occur in applying the CAPM and that minor estimation errors can lead to disappointing results? Please explain.

**29.0 Reference: Risk Premium Estimates of the Fair ROE
Exhibit C6-12, Evidence of Dr. Laurence Booth, pp. 78-81; Exhibit A2-32
Credit Spread Adjustments**

On page 78, Dr. Booth cites a paper by A Garcia and J. Yang “Understanding Corporate Bond Spreads using Credit Default Swaps”, published in the Autumn 2009, Bank of Canada Review (Exhibit A2-32).

On page 80, Dr. Booth states that “Garcia and Yang show that 63% of the change in spreads between corporate and Government of Canada yields is caused by changes in liquidity. These changes can be ignored as far as changing the allowed ROE, since they do not affect equity holders as liquidity in the equity market generally increases during a flight to quality. ... In my judgment this supports the use of a 37% adjustment of the allowed ROE to changes in spreads between utility and corporate bond yields. Given the imprecision of “37%” since 2010 I have been recommending a 50% adjustment to changes in corporate (utility) yield spreads to pick up this credit market effect.”

On page 81, Dr Booth states that the use of such an adjustment generates a conditional risk premium that is sensitive to where the economy is in the business cycle. He also states: " At the current point in time A spreads are at 180 bps or 80 bps more than normal or average for the business cycle, this would indicate that the fair ROE should increase by 0.40% for this credit market effect."

29.1 Please confirm that the 0.40% adjustment is an adjustment derived by taking 50 percent of the 80 bps that the spread currently exceeds the average, and that this adjustment is intended to remove the liquidity component of the spread at the current point in the business cycle. If that is not correct, please explain.

**30.0 Reference: Risk Premium Estimates of the Fair ROE
Exhibit C6-12, Evidence of Dr. Laurence Booth, pp. 83-85
Spread Adjusted CAPM**

On page 83, Dr. Booth discusses the yield spreads for various preferred shares relative to Canada bonds (of different terms depending on the type of preferred share). He says in that discussion that the correct comparison is the after tax yield difference (line 13).

On pages 83-84, Dr. Booth notes that Standard and Poor's/TSX have published a preferred share index and the spread of the yield on this index along with that on Scotia Capital "A" bonds over equivalent maturity long Canada bonds.

On pages 84-85, Dr. Booth states that the preferred share yield spread has increased from 130 bps over long Canada bonds to 260, whereas the generic A spread has increased from 172 to 180 bps. He states that "...I would place the "Operation Twist" impact on the Canadian bond market as approximately 80 bps, which is approximately the spread increase of preferred yields over A bond yields since September 2011."

30.1 Is the yield spread published by S&P/TSX a pre-tax or after-tax yield?

30.2 If it is a pre-tax yield then is it not the incorrect yield to be using, given the statement earlier in Dr. Booth's evidence that the correct comparison is the after tax yield? Please explain.

30.3 If Dr. Booth used the after-tax yield, would it change his recommendation for an adjustment to his CAPM ROE adjustment? Why or why not?

**31.0 Reference: Risk Premium Estimates of the Fair ROE
Exhibit C6-12, Evidence of Dr. Laurence Booth, p. 73
Low Risk**

Dr. Booth references Maureen Howe, a RBC security analyst's comment on the low risk nature of utilities.

31.1 Please provide the full paper.

**32.0 Reference: Risk Premium Estimates of the Fair ROE
Exhibit C6-12, Evidence of Dr. Laurence Booth, p. 74
Beta**

Dr. Booth states that it is indisputable that Canadian utility betas are 0.30-0.35 but then he increases his estimate to 0.45-0.55 to account for the historic range reflecting normal circumstances.

32.1 If the objective is to estimate beta for investors' expectations in 2013 and current market

turmoil supports a beta of 0.33, why would Dr. Booth increase his estimate?

- 32.2 Dr. Booth also raised his market risk estimate from 5% to a range of 5-6%. To what extent might these further adjustments compound themselves leading to a larger awarded ROE than investors would accept as a fair return? Please explain.

**33.0 Reference: Risk Premium Estimates of the Fair ROE
Exhibit B6-12, Evidence of Dr. Laurence Booth, pp. 74, 76-77
Relative Risk of a Canadian Utility**

On page 74, Dr. Booth states that the recent history of Canadian and low risk US utilities is of beta coefficients about 0.30-0.35. On a going forward basis, Dr. Booth believes that the relative risk of Canadian utilities will move back to their historical range reflecting normal market risk, such as 45-55% of that of the market as a whole.

- 33.1 On one hand, Dr. Booth seems to consider that the dramatic collapse in Canadian long term interest rates is unlikely to reverse soon (cross-reference p. 57), on the other hand, Dr. Booth seems to consider that the relative risk of Canadian utilities will move back to their normal range. Can Dr. Booth provide a time frame as to when that will happen?
- 33.2 Are Dr. Booth's estimated beta coefficients of .45 to .55 valid for 2013, or for a two or three-year period?
- 33.3 On pages 76-77, Dr. Booth described the beta coefficient applied by the AUC, the Regie and the Board of Commissioners of Newfoundland and Labrador in decisions made in 2009. The beta coefficients appear to range from 0.50 to 0.66. Please confirm that all the beta coefficients that were applied were higher than Dr. Booth's judgment of 45% to 55%.
- 33.4 What beta levels have other Canadian regulators adopted during the last 10 years?
- 33.5 Have more recent decisions applied lower beta coefficients in their CAPM models? Have other jurisdictions stopped adding a financial crisis risk premium to the ROE?

**34.0 Reference: Risk Premium Estimates of the Fair ROE
Exhibit C6-12, Evidence of Dr. Laurence Booth, p. 85
Relative Risk Adjustments**

Dr. Booth adjusts his CAPM upwards by 0.40% for credit spreads, 0.80% for Operation Twist and then uses a forecast LCB of 4% when current yields are below 3%.

- 34.1 Don't all these large adjustments based on judgments and adjustments to each factor of the CAPM make the CAPM estimate very subjective? Please explain the extent to which his ROE estimates are driven by judgment rather than factual data.

DCF ESTIMATES OF THE FAIR ROE

**35.0 Reference: DCF
Exhibit C6-12, Evidence of Dr. Laurence Booth, p. 87; Exhibit B1-9-1, pp. 21, 22
Forecast Dividend Yield**

The FBCU discuss FEI's ability to attract and retain customers. For example, FEI is capturing a smaller

percentage of new construction. FEI claims that it is at risk of very low growth into the future, e.g., lower growth in customer counts and lower use per account.

- 35.1.1 Wouldn't this imply that FEI's expected growth in dividends into the future would also be less? How would this be accounted for in the DCF model?

**36.0 Reference: DCF Estimates of the Fair ROE
Exhibit C6-12, Evidence of Dr. Laurence Booth, p. 90-91
DCF estimates compared to CAPM**

In Section VI of his Evidence, Dr. Booth derives a simple DCF based estimate for the market, which he reports on line 1 of page 91 as 8.88%. He suggests on line 15 that he would not use this estimate, as it is a very simple estimate using average numbers. At lines 9-13, Dr. Booth states: "Of course current DCF and risk premium estimates are not the naïve ones graphed above but instead allow for differences in the market risk premium and growth rates, but this analysis confirms the implications of the current problems in the bond market on the CAPM estimates due to Operation Twist and the impact of the business cycle. As a result it supports my adjustments to the CAPM estimates and the value of currently looking at DCF estimates."

- 36.1 If so many adjustments to the CAPM result are required to make it reasonable in the current economic and financial environment, how much weight should be given to it in determining a fair ROE for the FBCU? Please explain.
- 36.2 Dr. Booth derives a simple DCF estimate for the market as a whole. Does Dr. Booth have a DCF based estimate specifically for the FBCU, and if so, please provide it along with the assumptions.
- 36.3 Alternatively, is Dr. Booth using the DCF method simply as a method for evaluating the reasonableness of his CAPM estimates? How much weight does Dr. Booth recommend placing on DCF estimates at the present time? Please explain.

**37.0 Reference: DCF Estimates of the Fair ROE
Exhibit C6-12, Evidence of Dr. Laurence Booth, pp. 93-94
Conclusions**

On page 93, Dr. Booth states that he would judge a fair ROE for 2013 and 2014 to be in a range 6.95-8.0% for 2013 and with a recommended rounded mid-point for 2013 of 7.50%.

- 37.1 From the conclusions stated on pages 93-94, it appears that the above recommendation is based solely on the CAPM analysis, since the DCF and Comparable Earnings do not fall within the range, nor do they appear directly applicable to the FBCU. Is that a correct interpretation of Dr. Booth's conclusions? If not, please provide a more accurate interpretation.

**38.0 Reference: Fair ROE
Exhibit C6-12, Evidence of Dr. Laurence Booth, pp. 93-94**

Dr. Booth provides DCF estimates of the fair ROE of the Canadian equity market as 9.30%, and the fair ROE of low risk US utilities as 8.73%.

- 38.1 If possible, please describe and provide a DCF based estimate of the fair ROE of low risk Canadian utilities, in comparison to the broad Canadian market and the US utility estimates.

Dr. Booth provides a Comparable Earnings based estimate of 9.28% ROE for the broad market.

38.2 If possible, please describe and provide estimates to adjust the broad market ROE to a utility based ROE.

**39.0 Reference: Risk Premium Estimates
Exhibit C6-12, Evidence of Dr. Laurence Booth, p. 93-94
Fair ROE**

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

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

**40.0 Reference: Automatic Adjustment Mechanism
Exhibit C6-12, Evidence of Dr. Laurence Booth, p. 100
Dr. Booth's ROE Formula**

Dr. Booth's formula on page 100 sets the base LTC yield at 3.8% and the credit spread at 1.86%.

40.1 Why is it fair to inflate the base LTC yield to 3.8% without making corresponding changes to the credit spread?

40.2 FEI is opposed to a new AAM and believes that periodic hearings should occur every 3-5 years. Is there merit in applying the basis of your AAM to the Commission's upcoming ROE determination for perhaps 5 years, followed by a new Cost of Capital hearing?

AN ROE ADJUSTMENT MECHANISM

**41.0 Reference: An ROE Adjustment Mechanism
Exhibit C6-12, Evidence of Dr. Laurence Booth, pp. 97-98
Enhanced ROE Adjustment Formula**

Dr. Booth states on page 97, citing the NEB's RH-4-2001 Decision, that "...the Board noted the resulting equity risk premium for the TransCanada Mainline that results from the RH-2-94 formula of 3.88% was well within the range of estimates provided by the company's witness Dr. Vilbert."

41.1 Can Dr. Booth confirm that the NEB abandoned its formula-based approach to setting the cost of equity in its RH-1-2008 Decision?

41.2 Then to clarify, is it correct that "...the enhanced ROE formula..." which Dr. Booth refers to in line 4 on page 98 is a formula which he has created, not the NEB?

41.3 Again for clarity, is it correct that, in the Table on page 98, the column labeled NEB refers to results derived from the NEB's RH-2-94 formula, and that the column labeled Booth provides results using the 'enhanced formula' in line 5 on page 98?

**42.0 Reference: An ROE Adjustment Mechanism
Exhibit C6-12, Evidence of Dr. Laurence Booth, p. 99
Enhanced ROE Adjustment Formula**

Dr. Booth states on page 99 that "...the ROE was 55 basis points higher for 2010 with my new formula

than the old NEB formula, an increase which approximates the “bonus” added by many regulators at that time.”

- 42.1 Can Dr. Booth indicate which particular regulators provided a ‘bonus’ at that time, and the amount of the bonus awarded by each regulator?
- 42.2 Can Dr. Booth provide excerpts or summaries of the reasons why each regulator added a bonus of the magnitude that they did?
- 42.3 Also on page 99, Dr. Booth states that “Third, for 2009 the ROE at 9.39% was 35 basis points less than the 9.70% the NEB allowed TQM. However, this is probably misleading since this sort of credit spread data was not available at the time of the hearing.”

What credit spread data is available now that was not available at the time of the hearing and, if it had been available then, how might it have changed the result?

**43.0 Reference: An ROE Adjustment Mechanism
Exhibit C6-12, Evidence of Dr. Laurence Booth, p. 99
Enhanced ROE Adjustment Formula**

On page 99, Dr. Booth states that “...I developed this NEB adjusted ROE formula in 2010 for an Enbridge Line 9 hearing before the NEB and subsequently recommended it to the NEB which accepted it in 2010 in a Gazifere hearing and in 2010 for Gaz Metro.”

- 43.1 TCPL is regulated by the NEB for, among other things, its Eastern Zone tolls for transportation to Gaz Metro, which in turn is regulated by the Regie de l’énergie. Gazifere is also regulated by the Regie de l’énergie.

Does Dr. Booth mean he recommended his adjusted formula in an NEB hearing related to the tolls for delivery of gas to Gaz Metro and Gazifere, or that he recommended it in hearings before the Regie de l’énergie? Please explain.

- 43.2 Please cite the reasons for decision of the relevant Board in each case, and summarize the findings of the Board with respect to his recommendation.

**44.0 Reference: An ROE Adjustment Mechanism
Exhibit C6-12, Evidence of Dr. Laurence Booth, p. 100
Enhanced ROE Adjustment Formula**

On page 100, Dr. Booth notes that, as a result of the US Federal Reserves adoption of Operation Twist, he put a “floor” under his formula of 3.80%, which he regards as the lowest rate consistent with a normal cyclical flow.

- 44.1 Please confirm that the ROE adjustment formula on page 100 is the same as the ROE adjustment formula on page 98, except for the addition of the 3.80% floor. If not confirmed, how else are the two formulae different?
- 44.2 If, instead of the formula on page 98, the enhanced ROE formula with the floor (i.e. from page 100) was used to calculate the results in the table on page 98, how would those results in the table change, if at all?
- 44.3 Why does Dr. Booth regard 3.80% as the lowest rate consistent with a normal cyclical flow?

- 44.4 Dr. Booth also says that “...the Roe is 7.50% and will change by 50% if the change in the credit spread from 1.86%...” What is the rationale or evidence that supports choosing 1.86% as a base for that part of the formula?
- 44.5 If the BCUC accepts Dr. Booth enhanced formula, please clarify the authoritative source for the credit spread data and forecast LTC yield data to be used in the ROE adjustment model.

**45.0 Reference: Automatic Adjustment Mechanism
Exhibit C6-12, Evidence of Dr. Laurence Booth, p. 100
Dr. Booth’s ROE Formula**

Dr. Booth’s formula on page 100 sets the base LTC yield at 3.8% and the credit spread at 1.86%.

- 45.1 Why is it appropriate to inflate the base LTC yield to 3.8% without making corresponding changes to the credit spread?
- 45.2 FEI is opposed to a new AAM and believes that periodic hearings should occur every 3-5 years. Is there merit in applying the basis of your AAM to the Commission’s upcoming ROE determination for perhaps 5 years, followed by a new Cost of Capital hearing?

**46.0 Reference: An ROE Adjustment Mechanism
Exhibit C6-12, Evidence of Dr. Laurence Booth, pp. 100-101
Enhanced ROE Adjustment Formula**

On page 101, lines 1 and 2, Dr. Booth states that “...we get the strange result that if the adjustment coefficient is set at 0.5, the overall required return on the market is *independent* of the forecast LTC yield. (emphasis in the original). In lines 21 and 22 of the same page he says: “As long as the going in ROE is fair I have no objection to a 0.50 adjustment coefficient.”

- 46.1 If an 0.50 adjustment coefficient gives a strange result why would that be an appropriate adjustment coefficient to use? Is the example Dr. Booth uses on page 100 (line 26-27) which produces the ‘strange result’ so unusual that such a circumstance would be unlikely to happen? Please explain.

**47.0 Reference: An ROE Adjustment Mechanism
Exhibit C6-12, Evidence of Dr. Laurence Booth, p. 102
Need for the Enhanced Formula**

In lines 8 and 9, Dr. Booth submits that long term corporate A bond yields have dropped without a commensurate drop in the opportunity cost of investing in Canadian utilities. He states: “This dramatic increase in the PE ratios of utility stocks, relative to the market as a whole, simply confirms this statement.”

- 47.1 Please provide the supporting data showing the increase in the PE ratios of utility stocks relative to the market as a whole.

**48.0 Reference: An ROE Adjustment Mechanism
Exhibit C6-12, Evidence of Dr. Laurence Booth, p. 104
Interest Coverage Ratios**

On page 104, Dr. Booth states that “...firms with high embedded debt costs by definition have lower coverage ratios and they may have access problems. However, if this situation persists sooner or later the embedded debt cost comes down to current market levels, whereas if interest rates back up then the ROE increases and so to will the coverage ratio.”

- 48.1 For the dynamic suggested by Dr. Booth to operate properly to what extent does it depend on the firm having a reasonable coverage ratio when ROE and capital structure being initially established? Why or why not?
- 48.2 Is there an optimum coverage ratio (or range) that a firm must maintain over time to be able to have access to capital on reasonable terms? Is there a general consensus amongst financial professions as to what such a coverage ratio should be? If so what is that ratio or range and why is that considered appropriate?

**49.0 Reference: An ROE Adjustment Mechanism
Exhibit C6-12, Evidence of Dr. Laurence Booth, pp. 104
Preferred Shares**

Dr. Booth's recommends issuance of short term preferred shares to solve debt problems in the equity market.

- 49.1 Is this a live issue for this hearing or is it an option for a future proceeding?
- 49.2 If FEI were unwilling to issue the preferred shares, could the BCUC deem them in the capital structure and still meet the fair return standard?
- 49.2.1 If so, on what basis would the deemed portion be based on?

US COMPARABLES

**50.0 Reference: US Estimates
Exhibit C6-12, Evidence of Dr. Laurence Booth, p. 107
Relative Risk of U.S. Utilities**

On page 107, Dr. Booth states that "This is very similar to the attitude towards public utilities, where the US has allowed 6 public utilities to fail, a situation that is in sharp contrast to the significant regulatory protection in Canada."

- 50.1 With respect to the six public utility failures in the U.S., please provide more information such as, if possible, the name of the utility, the date of the failure, the state, and or the major cause of the failure.

**51.0 Reference: US Estimates
Exhibit C6-12, Evidence of Dr. Laurence Booth, p. 110
Relative Risk of U.S. Utilities**

On page 110, in footnote 49, Dr. Booth cites the S&P, Corporate Ratings Criteria, 2003, pages 44-45.

- 51.1 Please provide a copy of the report, or if it is too large, a copy of the relevant section. If the section has been updated since 2003, please provide a copy of the updated section.

**52.0 Reference: US Estimates
Exhibit C6-12, Evidence of Dr. Laurence Booth, p. 112
Relative Risk of U.S. Utilities**

On page 112, Dr. Booth provides a quote from page 17 of a 2009 Decision by the Board of Commissioners of Newfoundland and Labrador regarding Newfoundland Power Inc.

52.1 For the record, can Dr. Booth confirm that the specific decision he is quoting from is Reasons for Decision: Order No. P.U. 43(2009)? If not, please provide the Order number.

**53.0 Reference: US Estimates
Exhibit C6-12, Evidence of Dr. Laurence Booth,
(Additional Evidence unnumbered page)
Two Factor Model**

On the first of two unnumbered pages following the schedules attached to Section VIII - US Estimates, Dr. Booth says "The beta from this two-factor model (beta2) along with the conventional beta estimate (beta1) is graphed in Schedule 17."

53.1 Can Dr. Booth identify the location of Schedule 17 in his evidence?

APPENDIX B – ESTIMATION OF THE MARKET RISK PREMIUM

**54.0 Reference: Estimation of the Market Risk Premium
Exhibit C6-12, Evidence of Dr. Laurence Booth, Appendix B, p. 4
Calculation of the Market Risk Premium**

On page 4, Dr. Booth states: "In Schedule 1 I graph the market risk premium using Canadian data and these three estimation techniques in two ways.² In footnote 2 he cites the source of his data as a report from the Canadian Institute of Actuaries."

54.1 Specifically, what data does he use from the report to calculate the market risk premium. For example, what universe of stocks is used to calculate the market return?

**55.0 Reference: Estimation of the Market Risk Premium
Exhibit C6-12, Evidence of Dr. Laurence Booth, Appendix B, p. 6
Changes in the Market Risk Premium**

On page 6, Dr. Booth states that "As Schedule 3 shows from 1924-1956...." Schedule 3 shows interest rates and inflation beginning in 1936.

55.1 Should the statement on page 6 read: "As Schedule 3 shows from 1936-1956...."? If not, please explain.

**56.0 Reference: Estimation of the Market Risk Premium
Exhibit C6-12, Evidence of Dr. Laurence Booth, Appendix B, p. 6
Changes in the Market Risk Premium**

On page 6, Dr. Booth states that "As a result, the standard deviation of the returns from holding the long Canada bond increased substantially. Effectively bond market risk doubled, while equity market risk was much the same if not less".

56.1 Does that statement apply to the entire period 1956-2011 or a more recent period?

56.2 What was the standard deviation of the returns from holding a long Canada bond over the period in question? Does that standard deviation reflect a doubling of bond market risk?

**57.0 Reference: Estimation of the Market Risk Premium
Exhibit C6-12, Evidence of Dr. Laurence Booth, Appendix B, p. 7
Diversifiable Risk**

On page 7, Dr. Booth states that “...what is crucial for the investor is whether this risk is diversifiable, that is, is the bond market beta or risk positive?”

- 57.1 The discussion that follows doesn’t appear to explicitly answer that question. Please elaborate on why the risk is, or is not, diversifiable.
- 57.2 If a risk is diversifiable, to what extent should the investor be compensated for it? Please explain your answer.
- 57.3 If the risk is not diversifiable, because both bond and equity markets are being moved, at least in part, by a common risk factor, then should the investor be compensated for the risk? What, if any, implications for the determination of a utility allowed ROE?

**58.0 Reference: Estimation of the Market Risk Premium
Exhibit C6-12, Evidence of Dr. Laurence Booth, Appendix B, p. 13 and 14
Market Risk Premium Survey**

On page 13, Dr. Booth cites a survey by Professor Fernandez of finance professors around the world to find out what they used for the market risk premium. He includes a table (Table 2) which is reproduced from Professor Fernandez’s April 2009 survey. On page 14, Dr. Booth notes that the survey has been updated, most recently in 2012, and now surveys financial analysts and companies as well as professors of finance.

- 58.1 Can Dr. Booth provide a copy of the June 2012 survey for the record?
- 58.2 In the 2012 survey is there a table equivalent to the “Table 2” reproduced on page 13 of Appendix B? If so, can Dr. Booth provide a copy of that table or update the table in his report to reflect the more recent results?

**59.0 Reference: Estimation of the Market Risk Premium
Exhibit C6-12, Evidence of Dr. Laurence Booth, Appendix B, p. 16; Exhibit A2-30
Market Risk Premium Survey**

On page 16, Dr. Booth cites a March 17, 2011 TD Economics report titled “An Economics Perspective on Long Term Financial Returns”. He provides a table based on that TD report. TD has produced a new report dated October 19, 2012 providing updated information. (Exhibit A2-30) That report shows the following:

FINANCIAL PROJECTIONS OVER THE NEXT DECADE	
Financial Instrument	Average Annual % Return
Cash (3-Month T-bills)	2.00%
Bonds (DEX Universe Bond Index)	3.00%
Equities	
Canada (S&P/TSX Composite)	7.00%
U.S. (S&P 500)	7.00%
International (MSCI EAFE)	7.00%
Source: TD Economics	

The updated TD report also indicates the return to a balanced portfolio of 5% (Exhibit A2-30, p. 5)

- 59.1 How, if at all, do the updated results from TD economics change Dr. Booth’s evidence?

APPENDIX C: RELATIVE RISK ASSESSMENT FOR A BENCHMARK UTILITY

**60.0 Reference: Relative Risk Assessment for a Benchmark Utility
Exhibit C6-12, Evidence of Dr. Laurence Booth, Appendix C, p. 5
Interest Rate Risk and Beta Estimates**

On page 5 of Appendix C, Dr. Booth discusses the impact of interest rate risk on beta estimates.

At lines 5 and 6 he states that "...the beta estimates for the utilities are essentially the same whether we include or ignore the impact of interest rate risk."

At lines 12-18, he states: "Finally, utilities are clearly interest sensitive stocks as the consistent positive gamma coefficients indicate. It is also clear that this sensitivity exhibits a negative correlation (-0.43) with the beta estimates, that is, beta coefficients tend to fall as gamma coefficients increase. This is because interest rates tend to increase during good times as the stock market booms and then fall in recessions. This interest rate sensitivity reduces the exposure of utility investors to the market during recessions when interest rates tend to fall as the Bank of Canada conducts a more expansionary monetary policy."

60.1 The statement in lines 5-6 indicates little sensitivity of the beta estimate to interest rate risk. The statement at lines 12-18 appears to suggest that beta coefficients are sensitive to interest rates. Please clarify.

APPENDIX D – DISCOUNTED CASH FLOW ESTIMATES

**61.0 Reference: Discounted Cash Flow Estimates
Exhibit B6-12, Evidence of Dr. Laurence Booth, Appendix D**

"If market-to-book ratios exceed one for a regulated company, most economists immediately assume that the firm's return on equity exceeds the return required by stock holders, implying that the regulator should lower the firm's allowed rate of return." (p. 3)

61.1 If the regulator does not make the necessary adjustments to the allowed rate of return, does this imply that the firm in the above example is over-earning its allowed fair return?

61.2 The DCF method assumes that investor rate of return is equal to the dividend yield plus growth. In the example shown in Schedule 1 and 2 of Appendix D, the retained earnings are assumed to have been "reinvested" back into the operations of the firm. Although the retained earnings are reflected in the firm's valuation and hence stock price, does this always equate to "reinvestment"? For example, for a firm to be sitting on large amounts of cash reserves, it could be argued that those retained earnings are not being "reinvested" and as such, how can it be argued that this equates to growth, per se. Please discuss.

61.3 Could growth be measured by any other means? For example, could growth be measured as the specific number of customer additions year by year or provincial GDP?

**62.0 Reference: Discounted Cash Flow Estimates
Exhibit C6-12, Evidence of Dr. Laurence Booth, Appendix D, p. 16; Exhibit A2-31
Analysts' Growth Forecasts**

On page 16 of Appendix D, Dr. Booth refers to an Article by Easton and Sommers: "Effect of analyst's optimism on estimates of the expected rate of return implied by earnings forecasts".

62.1 Please provide a copy of the article.

A paper presented at the European Financial Management 2012 Symposium on Asset Management by Ashton, Gregory and Wang, reviews the findings by Easton and Sommers and conducts its own review of analysts' optimism and the equity risk premium. (The Ashton et al. paper is filed as Exhibit A2-31)

- 62.2 Can Dr. Booth confirm that the Ashton et al. paper estimates that analysts' optimism leads to an upwardly biased implied cost of capital in a range of 0.40% and 2.82% and an implied equity risk premium from value-weighted regressions, after removing the effect of bias in analysts' forecasts, is around 3.6% in real terms? Does Dr. Booth consider the Ashton et al. paper to be a sound analysis of analyst optimism and the implied equity risk premium? Why or why not?

APPENDIX E: THE FAIR ROE AND COMPARABLE EARNINGS -

- 63.0 Reference: The Fair ROE and Comparable Earnings
Exhibit C6-12, Evidence of Dr. Laurence Booth, Appendix E, p. 3
ROE for Corporate Canada**

On page 3, Dr. Booth states that in Schedule 2 is the average ROE for Corporate Canada since 1987 as reported by Statistics Canada.

- 63.1 How is Corporate Canada defined? I.e. what population of companies is included?
- 63.2 Has Dr. Booth considered whether or not there is the potential for the biasing of the ROE as calculated by Corporate Canada over time due to survivorship bias. If so what has he concluded?

- 64.0 Reference: The Fair ROE and Comparable Earnings
Exhibit C6-12, Evidence of Dr. Laurence Booth, Appendix E, p. 3
Dividend Yield in Growth Estimates**

On page 3, Dr. Booth cites the work of Jack Bogle. Dr. Booth notes that Mr. Bogle's analysis used the actual dividend yield instead of the forecast dividend yield, and this marginally (but not materially) understated the investment return.

- 64.1 Why should Mr. Bogle have used the forecast dividend yield for a retrospective analysis, and why did the use of the actual dividend yield marginally understate the results? Why is the difference immaterial?

- 65.0 Reference: The Fair ROE and Comparable Earnings
Exhibit C6-12, Evidence of Dr. Laurence Booth, Appendix E, p. 4
Long Run Equity Returns**

On page 4, Dr. Booth cites an RBC US Equity Strategy Report dated July 18, 2012.

- 65.1 Please provide a copy of the report.

- 66.0 Reference: The Fair ROE and Comparable Earnings
Exhibit C6-12, Evidence of Dr. Laurence Booth, Appendix E, p. 5
Earned ROEs for Canadian Firms**

On page 5 Dr. Booth states: "in 2009 I extracted the actual earned ROEs for all the Canadian firms with full coverage in the Financial Post's data base for the period 1999-2008. So no "screens" were used to remove firms that were not felt to be representative. This is the population of firms, not a sample, in the same way that the TSX market return reflects the losses from holding Nortel and not an imaginary portfolio of firms that only produced good results. At that time the average Statistics Canada ROE was 10.45% but the sample average for the FP population was 1.85% and the median 6.39%."

66.1 What is the reason (or the main reasons) for the large discrepancy from the Statistics Canada calculated ROE and the FP total population of firms used by Dr. Booth?

**67.0 Reference: The Fair ROE and Comparable Earnings
Exhibit C6-12, Evidence of Dr. Laurence Booth, Appendix E, p. 6; Exhibit C4-9, Evidence of Dr. Safir, p. 28
Comparable Earnings and Opportunity Cost**

On page 6, Dr. Booth states: “If “comparable earnings” is meant not as an estimate of an opportunity cost, which it is not, and instead is justified on the basis of some broader “fairness” criterion then the typical firm in Canada earned 6.39% over this ten year period, which is the average of each year’s median ROE.”

On page 28, Dr. Safir states that “...the comparable earnings test looks at the opportunity cost of capital.”

67.1 What is the difference between a comparable earnings estimate and an opportunity cost?