ERICA HAMILTON
COMMISSION SECRETARY
Commission.Secretary@bcuc.com
web site: http://www.bcuc.com

SIXTH FLOOR, 900 HOWE STREET, BOX 250
VANCOUVER, BC CANADA V6Z 2N3
TELEPHONE: (604) 660-4700
BC TOLL FREE: 1-800-663-1385
FACSIMILE: (604) 660-1102

Log. No. 39204

VIA EMAIL
gas.regulatory.affairs@fortisbc.com
electricity.regulatory.affairs@fortisbc.com

August 31, 2012

BRITISH COLUMBIA UTILITIES COMMISSION
GENERIC COST OF CAPITAL PROCEEDING EXHIBIT A-12

Ms. Diane Roy
Director, Regulatory Affairs – Gas
FortisBC Energy Inc.
16705 Fraser Highway
Surrey, BC V4N 0E8

Mr. Dennis Swanson
Director, Regulatory Affairs
FortisBC Inc.
Suite 100 – 1975 Springfield Road
Kelowna, BC V1Y 7V7

Dear Ms. Roy and Mr. Swanson:

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

Commission Information Request No. 1

Further to Commission Order G-84-12, which established an Amended Preliminary Regulatory Timetable with respect to the above noted proceeding, enclosed please find Commission Information Request No. 1. In accordance with the Amended Preliminary Regulatory Timetable, please file your responses electronically with the Commission by Monday, September 24, 2012.

Yours truly,

Erica Hamilton

/dg
cc: Registered Parties
(BCUC-GCOC)

TABLE OF CONTENTS

Page No.

A. THE APPROPRIATE COST OF CAPITAL FOR A BENCHMARK LOW-RISK UTILITY

1.0 Reference: Context for the GCOC Proceeding
Exhibit B1-9, p. 3; Exhibit B1-9-1, Appendix A-2 DBRS Report February 29, 2012, p. 5
Actual and Allowed ROE

The FBCU are proposing, for the benchmark FEI, a 10.5 percent ROE and maintenance of the current 40 percent equity component in its capital structure.

The DBRS report dated February 29, 2012 shows, annually for the period 2006 to 2011, the actual return on average common equity and the allowed ROE.

1.1 The Earnings and Outlook table in the DBRS report shows that for each year from 2008 to 2011, the actual return on average common equity exceeds the allowed ROE. Please comment whether for those years 2008 to 2011, the FEI was under Performance Based Regulation.

1.2 What are the FBCU's views with respect to FEI returning to regulatory review under PBR? If FEI is returned to PBR, would the FBCU change their proposed benchmark ROE for 2013 and beyond? Why or why not?

2.0 Reference: FBCU Evidence Introductory Chapter
Exhibit B1-9, p. 3
Throughput and Risk

The FBCU state that, "[t]hroughput is the vehicle, from variable rates charged to customers, by which almost all of FEI's investments are recovered. All else equal, if throughput levels decline for whatever reason, FEI's business risk in effect increases."

2.1 Would FEI agree that its risks related to throughput have declined since 2009 due to its rate competitiveness with electricity? For example, FEI is substantially at less risk for a "death spiral" because natural gas is now so much less expensive than BC Hydro's tier 2 residential and commercial rates. Please discuss.

2.1.1 At 2009 and at today's natural gas and electricity Tier 2 rates please provide calculations of how much average natural gas throughput would need to be lost to drive FEI's distribution margin up so that its natural gas rates would become equal to BC Hydro's tier 2 electric rates?

3.0 Reference: Development since the 2009 Decision
Exhibit B1-9, p. 7
Tone of Equity Market

FEI states that, "In Mr. Engen's opinion, the current tone of the equity markets support an increase in the allowed ROE for the benchmark, FEI."

3.1 The current market seems to have bid up the price/earnings multiples of utilities compared to the overall market. Wouldn't that suggest that a reduction in ROE would be appropriate to bring these multiples back in line with the market? Please discuss.

3.2 Please provide the overall TSX market P/E multiples and average utility multiples in 2009 and currently.

4.0 Reference: Developments since the 2009 Decision
Exhibit B1-9, Section 1.2, pp. 6-8; Exhibit A2-11 Excerpts from FEI 2005 and 2009 Applications
Cost of Capital for Benchmark FEI

The FBCU discuss the changes in the financial markets since 2009 and the impact that it has on the cost of capital. The evidence states that against the backdrop of ongoing market volatility, the risk factors that have influenced the BC utility business in years past remain relevant today.

The FBCU proceed to discuss that Ms. McShane's and Mr. Engen's evidence describes how the capital markets remain in a period of turmoil. In the summary paragraph of Section 1.2, the FBCU states that "the evidence in this Filing demonstrates that the cost of capital for the benchmark FEI is higher than what the Commission allowed in 2009."

4.1 In previous ROE/CAP applications from Terasen Gas Inc. (as FEI was formerly known), the utility presented its weighted equity return component against other utilities. In the 2005 application, it described the "British Columbia penalty" experienced by FEI and in the 2009 ROE application, it described the "basis points disadvantage" of FEI. Please update the two tables in Exhibit A2-11 using the most recent data.

4.1.1 Please discuss the "British Columbia penalty" and the "basis points disadvantage" and whether these concepts still exist today.

5.0 Reference: FEI as Benchmark Utility
Exhibit B1-9, pp. 9, 17; Exhibit B1-9-6 Appendix F Testimony of Ms. McShane p. 6
Cost of Capital for FEI

The FBCU submit that the appropriate benchmark utility at this time is FEI, with its current characteristics and before any amalgamation takes place. If amalgamation takes place, FEI *in its present state* can remain as the benchmark utility until the next comprehensive cost of capital review.

The FBCU also submit that FEI is not a "low risk benchmark." FBCU submit that a benchmark need not be "low risk" to be an effective point of comparison for establishing the cost of capital for other BC utilities.

5.1 If FEI is again designated the "benchmark utility" to establish the cost of capital for other BC utilities, does it matter to FEI, the utility itself, whether it is low-risk or not since, in principle, a benchmark is just used to set a baseline ROE?

5.1.1 On page 6 of Ms. Mcshane's testimony in Tab F, it states that the fair return on equity for FEI as the benchmark BC utility was estimated at 10.5 percent based on a 40 percent common equity ratio, and reflects, among others, the application of the comparable earnings test to a sample of <u>relatively</u> low risk unregulated Canadian firms (underline added for emphasis). Please explain what is meant by relatively low risk.

5.1.2 If a sample of "low risk" instead of "relatively low risk" unregulated Canadian firms had been used instead, would the return on equity in Table 1 under Comparable Earnings Test of 11.5 percent be lower?

5.2 DBRS describes FEI's business as low-risk business. Moody's describes FEI as a "low-risk, cost-of-service regulated gas transmission and distribution utility" (Exhibit B1-9-1, Appendix A-2, DBRS February 29, 2012 Rating Report, Moody's Global Credit Research 21 July, 2011). Do the FBCU agree? If not, why not?

5.3 In the view of the FBCU, are there any other utilities in B.C. besides FEI that could also be selected as a benchmark utility and capture the regulatory efficiencies without compromising the Commission's obligation to meet the Fair Return Standard? For example, PNG or FortisBC electric?

6.0 Reference: FEI as the Benchmark Utility
Exhibit B1-9, pp. 17, 18; Exhibit A2-12 FEU 2012-2013 RR and Rates Decision pp. 11, 12, April 12, 2012
Utilization and Characteristics of a Benchmark Utility

The FBCU summarize the reasons articulated by Ms. McShane and Dr. Vander Weide as to why an actual utility should be designated as the benchmark utility, rather than relying on a purely hypothetical construct. One of the reasons summarized at a high level is that "designating an actual utility as the benchmark eliminates ambiguity and reduces subjectivity in determining the characteristics of the benchmark, such as its size, scale, geographic scope, competitive position and business risks."

In the April 2012 Decision, the Commission describes FEU as a group of companies in transition; that they have made significant progress in moving away from their traditional roots; that in recent years, the Companies have explored and developed what they believe to be an expanded range of service offerings to satisfy growing needs of the customer base, etc.

6.1 Do the FBCU agree with the description of FEU in the April 2012 RR and Rates Decision? If not, why not?

Page 12 of the April 2012 Decision in Exhibit A2-12 says: The Commission Panel in the 2009 ROE Decision agreed with the Terasen Companies with respect to climate change and energy policies noting "that the introduction of climate change legislation by the Provincial Government has created a level of uncertainty that did not exist in 2005 and that the change in government policy will quite probably cause potential customers not to opt for natural gas and persuade potential retrofitters to opt for electricity."

6.2 Please confirm that the following has taken place in B.C. since the 2009 ROE Decision:

a) the provincial government has issued a new natural gas policy with respect to encouraging LNG for export and the use of natural gas for transportation purposes;

b) the gas commodity prices have decreased further and natural gas is competitive with the two-tier residential electricity rate which is forecast to increase significantly?

c) FEU have embarked on new business initiatives such as natural gas for transportation, biomethane services, and alternative energy solutions.

If the FBCU are unable to confirm, please describe in the FBCU's own words the above events.

7.0 Reference: FEI as Benchmark Utility
Exhibit B1-9, p. 22
FEI Business Risk

FEI states "For instance, FEI is now seeing local governments mandating certain non-natural gas energy solutions as a condition of obtaining municipal approvals for building permits."

Exhibit A2-18 (City of Vancouver's *District Energy connectivity Standards* – Information for Developers, dated November 2011) states the following:

> **"1. Introduction & Intent**
>
> This document summarizes building design strategies required of developers in anticipation of future building connection to a District Energy System (DES). Developers are required to adopt these standards and make appropriate provisions in building mechanical design to enable them to take full advantage of the benefits offered through future DES connection.
>
> Through adoption of these standards the need for future disruptive retrofits to buildings to make them DES-connectible is avoided, thereby reducing future costs of connection and inconvenience to occupants. Compliance with these standards will also act to improve overall building mechanical system efficiency.
>
> **2. What Buildings must be Connectable to a DES?**
>
> <u>The City has identified high priority areas targeted for future District Energy service based on current density and/or anticipated growth potential. In these cases, the form of development must incorporate a DES-connectable interim approach to space heating and domestic hot water which will require minimal retrofits to connect to a DES in the future.</u> (Emphasis added)
>
> …
>
> **4. Requirements for DES-Connectable Hydronic Systems in Buildings**
>
> <u>4.1 Overview</u>
>
> <u>For future DES-connectivity, hydronic (hot water) heating systems are required</u> with heating equipment centralized in a common mechanical room located such that connection to the future DES piping system is feasible. The preferred location for the building mechanical room is in the basement, parkade, or ground level. Once a DES is developed, the building mechanical room will become home to the ETS (i.e. the building interface with the DES piping). (Emphasis added)
>
> …
>
> <u>4.3 Hydronic Heating and Domestic Hot Water Systems (Minimum) Requirements</u>
>
> <u>The hot water hydronic heating system shall be designed to provide all of the space heating and ventilation air heating requirements for the individual suites, hallways/stairwells and other common areas in the building, supplied from a central mechanical room within the building</u>." (Emphasis added)

Exhibit A2-19 (City of Surrey, District Energy System By-law, 2012, No. 17667) requires new high-density developments in the City Centre area to incorporate hydronic space heating and hot water systems and connect to the City's DE system once it is available. There are some concessions for

developments that have already been issued development permits and for developments where DE service won't be available in the short-term. Some of these developments will be allowed to incorporate electric resistance heaters but will be required to utilize DE-compatible hydronic system for all domestic hot water and ventilation make-up air.

Section 2.1 of the By-law mandates compulsory use of district energy system and Section 2.2 mandates compulsory hydronic systems. They are reproduced below for ease of reference.

Compulsory use of district energy system

2.1 Each owner in Service Area A of:

(a) a new building with a floor area ratio equal to or greater than 1.0 proposed for construction or under construction for which the Building By-law requires submission of a building permit application and issuance of an occupancy permit to which the owner, as at the date of enactment of this By-law, is not yet entitled; or

(b) an existing building with a floor area ratio equal to or greater than 1.0 where the estimated value of proposed alterations or alterations under construction which require submission under the Building By-law of a building permit application is more than $400,000 and 50% of the building's latest assessed value according to the records of the British Columbia Assessment Authority,

must make use of the district energy system in accordance with the terms and conditions of this By-law.

Compulsory hydronic systems

2.2 Each owner in Service Area B of:

(a) a new building with a floor area ratio equal to or greater than 1.0 proposed for construction or under construction for which the Building By-law requires submission of a building permit application and issuance of an occupancy permit to which the owner, as at the date of enactment of this By-law, is not yet entitled; or

(b) an existing building with a floor area ratio equal to or greater than 1.0 where the estimated value of proposed alterations or alterations under construction which require submission under the Building By-law of a building permit application is more than $400,000 and 50% of the building's latest assessed value according to the records of the British Columbia Assessment Authority,

must utilize hydronic systems that are compatible with the district energy system for all space heating and hot water heating, as described in the City's Design Criteria Manual / Energy Services Design Requirements, and in accordance with those terms and conditions of this By-law stated to be applicable to future designated buildings.

Compulsory hydronic systems where floor area ratio is less than 2.5

2.3 Where a building described in section 2.2(a) or (b) has a floor area ratio of less than 2.5, the owner will not be required to utilize hydronic systems for space heating within individual units, but hydronic systems will be required for all other space heating and hot water heating in the building.

Exhibit A2-20 provides an excerpt of Information Requests and responses between the Commission and River District Energy Limited Partnership regarding the ban on electric baseboard heaters in the Design Guidelines for the River District development located in the City of Vancouver.

7.1 Do the FBCU are aware that the same local governments who are mandating certain non-natural gas energy solutions as a condition of obtaining municipal approvals for building permits are also requiring these new developments/high-rise residential buildings to be District Energy ready, i.e., to utilize hydronic systems that are compatible with DE system?

7.2 Do the FBCU agree that, in instances where DE system are not yet available, the requirement that developers install hydronic systems to provide all of the space heating and ventilation air heating requirements for the individual suites, hallways/stairwells and other common areas in the building in effect discourages the installation of electric baseboard heaters? If not, please explain why not.

7.3 Please discuss the energy source options facing developers who must incorporate hydronic systems for space heating and domestic hot water in new residential high-rise developments in anticipation of a DE system which will not be available in the short-term. Do the FBCU agree that natural gas is the preferred fuel source in those circumstances?

8.0 Reference: FEI as Benchmark Utility
Exhibit B1-9, p. 23
FEI Business Risk

FEI states "Alternative energy sources continue to pose competitive challenge to FEI."

8.1 Are alternative energy sources still competitive with current FEI natural gas rates? Please discuss and show cost calculations for various types of alternative energy sources.

In FEI's 2012-2013 Revenue Requirement Application, it states that "[i]n the long-run, the more successful the Thermal Energy Services business becomes, the greater the potential benefit to natural gas customers in terms of a recovery of overheads." (Exhibit B-1, p.12, FEI 2012-2013 RRA)

Similarly in that Application, FEI also states that "The growing prevalence of thermal solutions such as solar, DES and geo exchange, regardless of the provider of those services, will have an increasingly significant impact on the natural gas requirements over time. Thus, from the perspective of natural gas customers it is important to understand the growth of these energy alternatives over time and how they may impact the natural gas throughput and utilization." (Exhibit B-1, p.16, FEI 2012-2013 RRA)

8.2 Please discuss how FEI's expanded service offerings into Biomethane, CNG and LNG Fueling Stations, and Alternative Energy Services are affecting its current and future business risk? Please provide any evidence which supports your findings.

9.0 Reference: FEI as Benchmark Utility
Exhibit B1-9, p. 23; Exhibit A2-11, TGI 2009 ROE Application p. 14
Use of US Utilities as Comparator

Page 23 of the FBCU's evidence says: "The use of US utilities as a comparator group for the determination of ROE and equity thickness is appropriate in this Proceeding, just as it has been appropriate in other proceedings and other jurisdictions."

9.1 Please update the chart on page 14 of the 2009 FEU ROE application to include 2011 data. Please include a description of the samples of both the Canadian utilities and the US utilities.

10.0 Reference: Capital Structure for FEI
Exhibit B1-9, pp. 7, 25; Exhibit A2-13 Bloomberg News
Equity Ratio and ROE Support Credit Ratings and Maintain Financial Flexibility

Page 25 of the FBCU's Evidence states:

"The Commission, in the 2009 Decision, also endorsed the maintenance of a minimum A rating. FEI has ongoing capital requirements to ensure system deliverability, reliability and safety, and support customer growth. FEI needs to access capital markets on a regular basis, in both strong and weak economic conditions and when financial markets are both stable and volatile.", and

"Further weakening in FEI's credit metrics or a change in Moody's views of the regulatory environment and business risk may lead to a downgrade."

Page 7 of the FBCU Evidence describes the capital markets remaining in a period of turmoil since the 2009 Decision. The recent downward trend of long-term Canada bond yields is primarily a function of an increase in investor risk aversion, monetary policy, weak economic conditions, and a smaller supply of safe haven assets, etc.

The Bloomberg News reported on August 6, 2011 that Standard & Poor's downgraded the US's AAA credit rating for the first time to AA+ while keeping the outlook at "negative" (Appendix A2-13). The news article describes that even with the specter of a downgrade, demand for Treasuries surged as investors saw few alternatives amid concern global growth is slowing and Europe's sovereign debt crisis is spreading.

10.1 Notwithstanding the globalized financial market, as long as Canada is a safe haven, is it not true that for many investors, there are few alternatives outside North America, no matter what FEI's credit rating is?

10.2 Based on FBCU's knowledge, how many major gas and electric utilities in Canada have had their 'A' ratings downgraded since 2009? Please list those utilities.

10.2.1 Please describe the average increase in yields (e.g., in the following quarter) for the utility borrowers that have lost their 'A' ratings since 2009.

11.0 Reference: FEI Business Risks and Credit Metrics
Exhibit B1-9, pp. 22, 26; Exhibit B1-9-1, Appendix A2 DBRS Report
Business Risks, Earnings and Outlook

The FBCU state that since the 2005 ROE Application proceeding, business risks have been increasing. While no new types of business risks have been identified, the key risks are still prevalent and have not declined. In certain instances, the FBCU suggest the trends of business risk are increasing over time. FBCU further submit that a reduction in the equity ratio and ROE could negatively impact credit ratios that are currently viewed at the low end of the acceptable range for an A rating, and potentially lead to rating agencies reconsidering the current ratings.

The Earnings and Outlook Table on page 5 of the DBRS Report dated February 29, 2012 indicates that FEI's rate base has increased by 5 percent since 2006, its reported net income has increased by 50 percent, and its annual return on average common equity exceeded the allowed ROE in each of the last four years 2008 to 2011.

11.1 Is it true that the perceived business risks have not made any negative impact on FEI's earnings since 2005?

11.2 Do the FBCU agree with DBRS's rating report assessment that FEI has solid debt-to-capital and interest coverage metrics? Does high dividend payout affect the cash flow-to-debt metric?

12.0 Reference: Debt Related Matters
Exhibit B1-9, p. 31 and Appendix H, p.1
Business Risk

In Appendix H relating to business risk, the FBCU says that Ms. McShane "…articulates how business risk for FEI is the Company's ability to recover (i) the capital investments it has made to serve customers over the long-term, and (ii) an appropriate return on those investments."

The FBCU say on page 31 that "The appropriate portion of short-term and long-term debt will depend on the underlying nature of the assets and timing."

12.1 To what extent can the FEI reduce its business risk related to the risk attributed to falling throughput through actions such as, for instance, matching the term of the debt to the expected economic life of new assets, as opposed to physical life, and making operational changes such as tightening system extension tests to ensure that only extensions that promise long-term throughput growth will be undertaken?

13.0 Reference: Preference Share Offering by Parent Company
Exhibit B1-9-5, Appendix A: Section 6, Short Form Prospectus, January 18, 2010, Fortis Inc., $250 million, 10,000,000 Cumulative Redeemable Five-Year Fixed Rate Reset First Preference Shares, Series H; $25.00 per share to yield initially 4.25% per annum, p. 24
Implied Double Leverage

Page 24 in the section titled "Use of Proceeds" states:

> "The net proceeds of the Offering will be approximately $241.85 million, determined after deducting the Underwriters' Fee (as defined below) and the expenses of the Offering, which are estimated to be $650,000. The net proceeds of the Offering will be used to repay $129 million outstanding under the Corporation's $600 million committed credit facility, which indebtedness was incurred: (i) <u>for funding equity injections into FortisAlberta and FortisBC</u> in support of their capital expenditure programs; (ii) to fund a portion of the acquisition purchase price of Great Lakes Power Distribution Inc.; and (iii) for general corporate purposes. A portion of the proceeds will also be used towards funding an approximate <u>$125 million equity injection into TGI</u> to repay indebtedness under the utility's credit facilities incurred to support working capital and capital expenditure requirements." [Emphasis added]

13.1 Please confirm that a portion of the proceeds from the $250 million preference share issue at an initial 4.25 percent yield was for equity injections into FortisBC Inc. and/or Terasen Gas Inc.

13.1.1 If confirmed, what were the actual (estimated, if actual is not available) equity injections for each utility on the use of the proceeds from this preference share offering.

14.0 Reference: Opinion Evidence of Aaron M. Engen
Exhibit B1-9-6, Appendix E, BMO Capital Markets, p. 5; Exhibit B2-7 PMA Direct Testimony 8-2-12, p. 18
Preferred Shares

On page 5, Mr. Engen states he played an advisory role in the recent ATCO Group $925 million preferred shares transaction.

Pacific Northern Gas Ltd. in its 2009 Capital Structure and Equity Risk Premium Application includes Schedule 2 Capital Structure Ratios of Canadian Utilities With Rated Debt with a column for Preferred Stock: http://www.bcuc.com/Documents/Proceedings/2009/DOC_24093_B-1_PNGW-PNGNE-Application.pdf

14.1 Please provide the specific details of the $925 million preferred ATCO Group offering including issuer company name, date, underwriters, type of deal, terms, and yield.

14.2 Please elaborate on the types of preferred shares being issued in Canada within the last 5 years.

14.2.1 Who are the typical buyers (retail, institutional, or other) of preferred shares? Please elaborate with further details.

14.2.2 Please explain the advantages and disadvantages of an issuer making a decision to issue preferred shares instead of common stock or bonds.

14.2.3 Please elaborate on why an issuer chooses to make a preferred share offering.

14.3 Is Mr. Engen aware of any regulated utility company (not a holding company) directly issuing preferred shares to the general public within the last 10 years? If so, please provide a listing with details of each issuance.

14.3.1 For CU Inc. please explain its history of issuing preferred shares. Also please provide details of CU Inc.'s recent preferred share offering, Cumulative Redeemable Preferred Shares Series 4.

14.3.2 In Mr. Engen's opinion, why would CU Inc. issue preferred shares instead of debt?

14.4 What would be the investor's receptiveness to a regulated utility company issuing preferred shares directly to the public? Please elaborate.

14.5 Pacific Northern Gas Ltd.'s Schedule 2 shows utilities with preferred stock. In the opinion of Mr. Engen, please comment on preferred equity in a utility's capital structure including its purpose, appropriateness, regulatory treatment, accounting treatment, credit rating agency treatment, and nature of funding source relative to debt and common equity.

In Ms. Ahern's Evidence provided in Exhibit B2-7 (PMA Direct Testimony 8-2-12, p. 18), she indicates that "[f]inancial risk is the additional risk created by the introduction of senior capital, i.e., debt and / or preferred stock, into the capital structure. The interest and / or preferred dividend payments associated with debt and / or preferred stock must be paid by the company before common share dividends as common shareholders are last in line in any claim on a company's assets and earnings."

14.6 Please comment on whether the FBCU agree with this view and discuss how the existence of an amount of preferred stock affects a utility's risk profile.

15.0 Reference: Opinion Evidence of Mr. Engen
Exhibit B1-9-6, Appendix E, p. 33
Cost of Debt

Figure 12 on page 33 shows the 30-year yield spreads of six Canadian companies over the past ten years.

15.1 Please confirm that the specified companies used in the chart are predominantly the publicly traded holding companies of the regulated entities.

15.2 Please provide the credit ratings for the specified sample of companies and the credit ratings for their related regulated operating companies.

15.3 Are the credit ratings for holding companies lower than their related regulated operating companies?

15.4 For the Canadian sample of utilities, please provide a graph of the 30-year credit spread for the holding companies and their related regulated operating companies.

15.5 If there is a lower risk premium for the cost of debt for 30 year bonds of the operating companies relative to their related publicly traded holding companies, should there also be a lower risk premium for the cost of equity at the operating company level relative to the holding company?

16.0 Reference: Opinion Evidence of Aaron M. Engen
Exhibit B1-9-6, Appendix E, p. 11; Exhibit B1-9-3, Appendix A Section 3B Company Specific Information for FEI, BMO Research Comments dated April 9, 2012
Relevance of ROE

On page 11, Mr. Engen states that "Nothing can be learned about the appropriateness of allowed return on equity from Canadian merger and acquisition activity involving regulated assets. Regulated asset buyer expected returns on equity are supported by many factors <u>other</u> than allowed ROE."

The BMO Research Comment sheet displays a number of metrics, including the ROE.

16.1 Please confirm or clarify that Mr. Engen's use of the word "other" in the comment above is not intended to exclude "allowed ROE" as one of the factors considered by asset buyers.

16.2 In Mr. Engen's view, do asset buyers consider return on capital and return on equity in their purchasing decisions?

16.3 In Mr. Engen's view, do equity analysts consider the return on equity in their analysis and buy/sell recommendations to investor clients?

16.4 The Research Comment states that the reader can refer to a full report for further details. Please provide the full report to which the research comment refers, as well as any related utility sector reports dated in April 2012.

17.0 Reference: Opinion Evidence of Aaron M. Engen
Exhibit B1-9-6, Appendix E, pp. 18-23
Market Volatility and Volumes

On pages 18-23, Mr. Engen's Opinion Evidence provides Figure 3 – VIXC Index Performance, Figure 4 – VIX Index Performance, Figure 5 – S&P/TSX Volatility, and Figure 6 – Canadian Equity Market Trading Volumes.

17.1 If available, please provide each figure above to reflect the utility sector and contrast the utility sector with the overall market.

17.2 If available, please provide historical realized volatility of the index and the utility sector.

17.3 Please explain any notable changes over time for the requested information.

18.0 Reference: Opinion Evidence of Aaron M. Engen
Exhibit B1-9-6, Appendix E, pp. 23, 24
Mutual Fund Flows

On page 23 of Mr. Engen's testimony, Mr. Engen states that "Canadian mutual fund funds flows remains in heavily negative territory (and have been for the past four years) while bond and income funds have enjoyed strongly positive fund flows."

18.1 Please provide a definition of "income funds" and elaborate on the characteristics of "income funds".

18.2 As of July 31, 2012, what companies are in the top 10 holdings of the "BMO Monthly Income Fund"?

19.0 Reference: Opinion Evidence of Aaron M. Engen
Exhibit B1-9-6, Appendix E, p. 26
P/E ratios

On p. 26 of Mr. Engen's testimony, Mr. Engen states that "The falling trend in the S&P/TSX's P/E ratio over the past two years taken together with growth in corporate earnings during the same period as demonstrated in Figure 9, is compelling evidence that the cost of equity in Canada has been rising." Mr. Engen also provides a chart of the P/E ratio for the S&P/TSX Composite in Figure 8.

19.1 Please provide a chart of the P/E ratio of the utility sector since 2002, in a similar format as Figure 8.

19.2 Please provide charts of the P/E ratios for the following companies: Fortis Inc., Gaz Metro/Valener, TransCanada, Enbridge, Emera, and CU.

19.3 Please describe the trend in P/E ratios for the companies mentioned above, and compare to the trend P/E for the TSX Composite.

19.4 If the falling trend in P/E of the TSX Composite represents compelling evidence that the cost of equity has been rising, as described in Mr. Engen's comments above, would the opposite movement of a rising trend in P/E imply a falling cost of equity?

20.0 Reference: Opinion Evidence of Aaron M. Engen
Exhibit B1-9-6, Appendix E, pp. 32-34
Debt Market Conditions

On page 32 Mr. Engen's testimony, Mr. Engen described the change in generic 'A' spreads between September 2009 and July 2012 as follows: "Spreads at the short end of the curve have improved since then,…(5-year) (10-year)… while at the long end of the curve spreads are the same". On page 34 of Mr. Engen's testimony, Mr. Engen states that "the average Canadian utilities group 30-year spreads were 163 bps on September 25. Their spreads have widened materially and stood at 177 bps as of July 6, 2012."

20.1 Please describe the spread movement of the utility group in the 5-year and 10-year area over the same time horizon.

20.2 What are the constituents and weights of the utility group?

20.3 Please provide a description and reasons for the unchanged spread of the generic 'A' 30-year area of the curve, in comparison to the utility group 30-year spreads that "widened materially."

20.4 Please provide a list of significant changes to the constituents and largest contributors to spread movements of both the 30-year generic 'A' and utility sector during this time horizon.

21.0 Reference: Opinion Evidence of Aaron Engen
Exhibit B1-9-6, Appendix E, pp. 38-39
Rating Downgrade Impact

On pages 38-39 of Mr. Engen's testimony, Mr. Engen says that "…As such, allowing or requiring a reduction in FEI's credit rating would directly and adversely affect bondholders who invested in FEI bonds with the reasonable expectation that the company's regulatory environment would protect their return on and of capital – not negatively affect the value of their investments."

21.1 With reference to the phrase "…bondholders who invested in FEI bonds with the reasonable expectation that the company's regulatory environment would protect their return on and of capital….", to what extent do bondholders hold a reasonable expectation that the regulatory environment affords them some special level of protection?

21.2 Ms. McShane states in her evidence that regulation is intended to be a surrogate for competition (Appendix F, p. 72). Is it an appropriate role for the regulator to be protecting the bondholders return on and of capital compared to setting a fair, forward looking ROE and capital structure, and if so, why?

22.0 Reference: Opinion Evidence of Aaron M. Engen
Exhibit B1-9-6, Appendix E, pp. 43-44, 50
Government of Canada Bond Yields and Cross Border Investment

On page 50, Aaron M. Engen's Opinion Evidence states "Canadian companies compete for capital with non-Canadian issuers investment opportunities."

The following table is based on 2009 to 2011 data from Figure 18 – Net Cdn. Purchases of Foreign Stocks and Figure 19 – Net Foreign Purchases of Cdn Stocks.

Year	Net Cdn Purchases of Foreign Stocks (C$ Billions)	Net Foreign Purchases of Cdn Stocks (C$ Billions)
2009	$15.9	$26.2
2010	$13.5	$18.2
2011	$26.3	$21.1
Average since 2009	***$18.6***	***$21.8***

22.1 Please confirm, or update otherwise, that the above table is accurate based on Figure 18 and Figure 19 in Mr. Engen's Opinion Evidence.

22.2 Mr. Engen's opinion is that "Canadian companies compete for capital with non-Canadian issuers investment opportunities." Given that the average Net Foreign Purchases of Canadian Stocks at $21.8 million is higher than the Net Canadian Purchases of Foreign Stocks at $18.6 million, would Mr. Engen agree that Canadian companies raising capital in recent years have benefited from foreign investor participation?

23.0 Reference: Opinion Evidence of Aaron M. Engen
Exhibit B1-9-6, Appendix E, p. 46
Cross Border Issuance

On page 46 of Mr. Engen's testimony, Mr. Engen states that "Significant offerings of Canadian securities outside Canada are expected to continue and, in the case of the energy infrastructure sector, to grow…".

23.1 Please provide an industry sector allocation of Canadian corporate equity and bond issuance / offerings outside of Canada for each of the last 10 years.

23.2 Please provide the value and percentage of respective equity offerings and bond issuances that have been made outside of Canada for each of the last 10 years, for the following companies: Fortis Inc., Gaz Metro/Valener, TransCanada, Enbridge, Emera, and CU.

24.0 Reference: Opinion Evidence of Aaron M. Engen
Exhibit B1-9-6, Appendix E, p. 48
Structural Developments / Cross Border Activity

On page 48 of Mr. Engen's testimony, Mr. Engen states that "The growth of the maple bond market evidences the globalization of the Canadian debt capital market and signals increased competition for Canadian-issued debt capital."

24.1 What has been the industry allocation of the maple bond market?

24.2 What is the size of the maple bond market issuance as a % of total Canadian bond issuance over the last 10 years?

24.3 Please describe the relative changes in the size of the maple bond market over the course of time.

25.0 Reference: Opinion Evidence of Aaron Engen
Exhibit B1-9-6, Appendix E, p. 53, and Appendix G, Evidence of Dr. Vander Weide, p. 7
Acquisition Price to Book / Rate Base to Book Value Ratios

On page 53, Mr. Engen says that "…rate base growth can be cited as a supporting reason for regulated asset purchase prices which may result in elevated purchase price-to-book ratios. When purchasers expect substantial rate base growth, they consider the purchase price in the context of aggregate rate base investment over the life of the asset including the initial purchase price and all additional capital to be invested in the asset."

On page 7 of Dr. Vander Weide's evidence, Dr. Vander Weide states that "From an economic perspective, a firm should only invest in a specific project if the expected return on the investment is greater than or equal to the company's cost of capital. Thus, the cost of capital serves as a hurdle rate for the firm's investment decisions."

Averch and Johson in their paper in the American Economic Review (Exhibit A2-10) said that:

> "In the present study the problem of rate-base inflation is not viewed as one of valuation but rather as one of *acquisition* – quite apart from the problem of placing a valuation upon the rate base, the firm has an incentive to acquire additional capital if the allowable rate of return exceeds the cost of capital."
>
> (Averch, Harvey, and Leland L. Johnson. "Behavior of the Firm under Regulatory Constraint," American Economic Review, vol. 52, no. 5 (December 1962), 1052-69)

25.1 To what extent is Dr. Vander Weide's statement that a firm should only invest in a specific project if the expected return on the investment is greater than or equal to the company's cost of capital, when viewed in conjunction with Mr. Engen's statement about rate base growth and purchasers of regulated assets, a demonstration of the Averch-Johnson effect?

26.0 Reference: Opinion Evidence of Aaron M. Engen
Exhibit B1-9-6, Appendix E, Table 2 – Cdn Energy Infrastructure Company Trading Comparables, p. 57
Price to Book Ratios

On page 57, Mr. Engen provides a Table 2 – Cdn Energy Infrastructure Company Trading Comparables includes a column for Price to Book values. Fortis has a current price to book ratio of 1.8x. The price was at 04-Jul-12.

26.1 What is the relative size of the British Columbia natural gas regulated companies (FortisBC Energy Inc., FortisBC Energy (Vancouver Island) Inc, FortisBC Energy (Whistler) Inc.) relative to the parent Fortis Inc. Please state the relevant metrics (e.g. earnings, revenue, rate base, etc.) and the calculations.

26.2 What is the relative size of the regulated cost of service rate base of Fortis companies relative to Fortis Inc.? Please state the relevant metrics (e.g. earnings, revenue, rate base, etc.) and the calculations.

26.3 Based on the above calculations, what does Mr. Engen calculate as the implied Price to Book ratio for FortisBC Energy Inc. based on the publicly traded stock price of Fortis Inc. as at July 4, 2012?

27.0 Reference: Opinion Evidence of Aaron M. Engen
Exhibit B1-9-6, Appendix E, Table 4- Example Regulated Asset Purchase, p. 60
Accretive Acquisition; Effect on P/E

On page 60, Mr. Engen provides an example of a hypothetical regulated asset purchase.

27.1 In Table 4 - Example Regulated Asset Purchase there is a line "Assumption of Debt $1,625.0." Is this assumption of debt at book value of debt or market value of debt?

27.2 The example in Table 4 shows a "New Issue Share Price" of $31.59. Does the public share price of Emera fall from $33.79 to $31.59? If not, what is the expected share price of Emera immediately post-acquisition, all other factors being equal?

27.3 In the example the acquiring company had a P/E ratio of 19.9x. Based on the example it appears the acquirer purchased the target company at a P/E of 17.4x (1443.8/83.1). Mr. Engen explains this was accretive to earnings per share for the acquirer.

27.3.1 Generally, if an acquiring company has a higher P/E than the target company, all else being equal, would this be accretive to earnings per share for the acquiring company? Please explain.

27.3.2 Generally, if an acquiring company has a lower P/E than the target company, all else being equal, would this be dilutive to earnings per share for the acquiring company? Please explain.

28.0 Reference: Opinion Evidence of Aaron M. Engen
Exhibit B1-9-6, Appendix E, pp. 65, 66
Pension Fund Foreign Investment

Mr. Engen provides a select list of Non-Canadian Infrastructure Investments on page 65, which includes Puget Energy. Mr. Engen comments that the Puget Energy acquisition in 2009 is particularly noteworthy.

28.1 Please elaborate on the investment merits, corporate structure, risk, and expected return on investment of the 2009 acquisition of Puget Energy.

28.2 Please provide information on Puget Energy's achieved ROE and allowed ROE over the period 2002 to 2011.

28.2.1 Please comment on the number of years where Puget Energy's achieved ROE was lower than the allowed ROE.

28.3 Please describe the characteristics that would make a US utility a desirable investment for a long term pension investor, and include discussion of realized and allowed ROE.

29.0 Reference: Expert Opinion of Aaron Engen
Exhibit B1-9-6, Appendix E, p. 65
Market Required Return

On page 65, Mr. Engen says that "These target returns apply to investments in Canada as well as investments abroad. Again, like private equity, as important capital market participants with interest in energy infrastructure assets, the returns on capital pension funds seek for such assets are indicative of

market required returns and should be taken into consideration as a "back-check" when setting allowed ROEs for regulated assets."

29.1 Regarding the statement that "…the returns on capital pension funds seek for such assets are indicative of market required returns….", does Mr. Engen mean to say that the target return for a pension fund is equal to the required return for a regulated utility? Please explain.

30.0 Reference: Opinion Evidence of Mr. Aaron Engen
Exhibit B1-9-6, Appendix E p. 11 of 68; Appendix F p. 109
Price to Book Ratios and Allowed ROEs

Mr. Engen says that nothing can be learned about the appropriateness of allowed returns on equity from recent Canadian merger and acquisition activity involving regulated assets.

Mr. Engen further says that using strong share valuations to make smart, accretive acquisitions has nothing to do with whether the buyer is satisfied with the asset's allowed ROEs.

30.1 If Mr. Engen's expert opinion is valid, does it not refute the conceptual underpinnings of the discounted cash flow model (Ms. McShane's Testimony, p. 109) which proceeds from the proposition that the price of a common stock is the present value of the future expected cash flows to the investor, discounted at a rate that reflects the risk of the cash flows?

31.0 Reference: Opinion Evidence of Mr. Aaron Engen
Exhibit B1-9-6, Appendix E p. 12 of 68; Exhibit A2-3 Brattle Group Report
Market Required Returns

In Mr. Engen's opinion, private equity and Canadian pension funds seek returns on equity of 10 percent or more when investing in energy infrastructure assets.

According to the Survey of Cost of Capital Practices in Canada conducted by the Brattle Group in May 2012, the most recent allowed ROEs in major Canadian jurisdictions are: Alberta (8.75 percent), Ontario (9.42 percent), Quebec (8.90 percent), Nova Scotia (9.2 percent), Newfoundland & Labrador (8.38 percent).

31.1 Does Mr. Engen's opinion apply only to a specific time or a specific energy utility or utility sector? Please explain the applicability of Mr. Engen's statement.

31.2 If Mr. Engen's statement is valid, please comment whether the funds of private equity and Canadian pension funds have divested from investment in regulated gas and electric utilities.

31.3 While private equity and Canadian pension funds may "seek" returns on equity of 10 percent, is there any indication they are currently achieving such returns? Is it not the case that Canadian pension funds have been reducing their future equity return targets?

32.0 Reference: Testimony on Cost of Capital for the FBCU by Ms. McShane
Exhibit B1-9-6, Schedules 1 through 27

Schedules are presented in a format that is not readily accessible using Adobe search functions.

32.1 If possible, please send schedules in a format that is readily searchable.

33.0 Reference: Testimony on Cost of Capital for the FBCU by Ms. McShane
Exhibit B1-9-6, Appendix F, p. 12; Exhibit A2-16 Washington Utilities and Transportation Commission (WUTC) Order 08 to Puget Sound Energy Inc. (May 2012)
Relationship between Capital Structure and Return on Equity

On page 12, Ms. McShane states that "Thus, as the debt ratio rises, the cost of equity rises. As a result, the cost of equity, and thus, the fair ROE depends on the capital structure."

On page 65, Ms. McShane states that "The recommended ROE developed in Section VIII is premised on FEI pre-amalgamation as the benchmark BC utility, maintaining a deemed common equity ratio of 40.0%."

In the WUTC Order 08 Decision regarding the Puget Sound Energy Inc. (PSE) hearing, the WUTC says on page 3: "we determine that PSE's capital structure should be revised to include a 48 percent equity ratio, balanced with a 48 percent long-term debt ratio and 4 percent short-term debt…. In terms of capital costs, we reduce PSE's authorized rate of return on equity from 10.1 percent to 9.80 percent. These determinations, coupled with PSE's lower debt costs that are uncontested, provide lower rates to customers than might otherwise be the case while, at the same time, providing support to PSE by allowing the opportunity for PSE to earn an equity return on its full equity investment."

33.1 Do the FBCU agree with the WUTC that the allowed rate of return and the equity thickness are established to achieve different objectives for a regulated utility?

33.2 Please indicate, by filling out the following table, which other combinations of capital structure and rate of return would provide a fair allowed ROE (for, say, 2011) based on the three tests used by Ms. McShane in her analysis. Please also justify the responses.

Capital Structure	ROE
35%	
36%	
37%	
38%	
39%	
40% (proposed)	10.5% (proposed)
41%	
42%	
43%	
44%	
45%	

34.0 Reference: Testimony on Cost of Capital for the FBCU by Ms. Kathleen McShane
Exhibit B1-9, Appendix F, Appendix E, p. E-1
Comparable Earnings Test

Ms. McShane selected Canadian unregulated companies for her sample in the Comparable Earnings Test. She is of the view that unregulated companies generally are exposed to higher business risk and lower financial risk than the typical utility.

34.1 Apart from the fact that a typical utility is allowed a certain equity thickness, please provide support to the assertion that unregulated companies are exposed to lower financial risk than the typical utility.

34.2 Please explain why Ms. McShane is of the opinion that the Comparable Earnings Test is entitled to significant weight given that: (a) the sample is composed of companies considered higher risk than FEI, (b) that unregulated companies' returns on equity tend to be cyclical which is unlike a typical regulated utility, and (c) the downward adjustment measure is so subjective.

34.3 Which regulators in Canada, if any, have placed equal weight on the comparable Earnings Test (compared to CAPM and DCF) in the past 20 years? Please provide extracts from Canadian regulatory decisions that support giving equal weight to the Comparable Earnings Test.

34.3.1 Hasn't this test mostly been given minimal weight or viewed only as a "check" to the other tests (e.g., CAPM, DCF) in Canada?

35.0 Reference: Testimony on Cost of Capital for the FBCU by Ms. Kathleen McShane
Exhibit B1-9-6, Appendix F, p. 17
Bond Yields and Market Cost of Equity

Ms. McShane provides in her testimony her views of the protracted nature of the recovery from the global financial crisis and economic recession and of the recurrent bouts of capital market turbulence in the two years since 2009.

In Ms. McShane's views, the trend in long-term Government of Canada bond yields is not indicative of the trend in the market cost of equity.

35.1 Given Ms. McShane's assessment of the protracted nature of the recovery from the global financial crisis and economic recession since 2009, does Ms. McShane believe that certain investments such as the cost of equity in gas and electric utilities should be immune to financial crisis and recession proof? Why or why not?

35.1.1 Are Canadian utility stocks and bonds considered 'safe-havens' in the globalized financial markets? If not, why not?

35.1.2 Do the increases in the utility earnings multiples compared to the overall TSX market indicate they are "safe havens"?

36.0 Reference: Testimony on Cost of Capital for the FBCU by Ms. McShane
Exhibit B1-9-6, Appendix F, p. 20, Charts 1 and 2
Trends in Economic and Capital Market Conditions since 2009

On p. 20 of Ms. McShane's testimony, Ms. McShane provides two charts showing the yield spreads between 10 and 30-year Government of Canada bonds, and between DEX Long Corporate A Index and 30-year Government of Canada bonds.

36.1 Is Chart 1 based on the values found in schedule 2 of her evidence? If not please provide the supporting data.

36.2 Please provide, in a single table, the data supporting Chart 2.

37.0 Reference: Testimony on Cost of Capital for the FBCU by Ms. McShane
Exhibit B1-9-6, Appendix F, p. 21 and pp. 26-27
Trends in Economic and Capital Market Conditions since 2009

On page 21 and pages 26 and 27, Ms. McShane discusses market volatility with reference to the Montreal Exchange volatility index (MVX) and the S&P/TSX 60 VIXC Index. Ms. McShane illustrates in Table 4 the performance of the VIXC index since October 1, 2009.

37.1 Please confirm that the description of the MVX provided on page 21 at footnote 19 also applies to the S&P/TSX 60 VIXC.

37.2 Please provide a description of the Chicago Board Options Exchange volatility index. Please confirm that the CBOE VIX is a barometer of expected market volatility over the next 30 days.

37.3 Please provide a table showing the performance of the CBOE Volatility Index over the past 10 years.

37.4 Does Ms. McShane agree that the S&P/TSX 60 VIXC and the CBOE VIX typically have an inverse relationship with the direction of the markets? That is, when the market is increasing the VIXC or the VIX would typically decline. If not, please explain why not?

38.0 Reference: Testimony on Cost of Capital for the FBCU by Ms. McShane
Exhibit B1-9-6, Appendix F, p. 31
Trends in Economic and Capital Market Conditions since 2009

On p. 31 of Ms. McShane's testimony, Ms. McShane says that "The recent downward trend in long-term Government of Canada bond yields has little, if any, correlation with trends in the market cost of equity. A comparison of equity market indicators points to a higher market cost of equity in mid-2012 versus at the end of the oral portion of the 2009 Application."

38.1 Please identify specifically which equity market indicators point to a higher market cost of equity in mid-2012 than at the end of the oral portion of the 2009 application, and why these indicators suggest that conclusion.

39.0 Reference: Testimony on Cost of Capital for the FBCU by Ms. McShane
Exhibit B1-9-6, Appendix F, pp. 21 and 38
Trends in Economic and Capital Market Conditions since 2009/Business Risk

On page 21 of Ms. McShane's testimony (footnote 19), Ms. McShane discusses the MVX and the VIXC volatility indexes noting that they reflect investors' fears or expectations of stock market volatility over the next month. At p. 38, she says that "…it is the long-term business risks that are of primary concern to the investor."

39.1 If it is the case that it is long-term business risks that matter to the utility's investor, of what relevance are the MVX and the VIXC indexes if they are a reflection of investor sentiment over the next month?

40.0 Reference: Testimony on Cost of Capital for the FBCU by Ms. McShane
Exhibit B1-9-6, Appendix F, pp. 39-42
Business Risk

On pages 39-42 of Ms. McShane's testimony, Ms. McShane discusses the primary categories of utility business risk.

40.1 Would Ms. McShane agree that some proportion of those risks may be under the control of the company's management? If not, why not? If some proportion of those risks is considered to be within the control of management, then should investors be compensated for that proportion of the risk that is under management's control? If so, why?

41.0 Reference: Testimony on Cost of Capital for the FBCU by Ms. McShane
Exhibit B1-9-6, Appendix F, p. 42
Business Risk

On page 42, lines 1053-54 of Ms. McShane's testimony, Ms. McShane says "…the exercise of creating a risk by risk "scorecard" would not comport with the manner in which investors evaluate business risk. Investors appraise business risk on an overall aggregate basis, not by relying on a risk by risk checklist."

and

lines 1061-65 of Ms. McShane's testimony, Ms. McShane says that "The business risk assessment must be used in conjunction with other factors, both qualitative and quantitative, …in order to judge what constitutes a reasonable capital structure and, ultimately, how the overall risk of a utility compares to its peers."

41.1 In the circumstance of a utility with a regulated capital structure and rate of return, would a formal business risk assessment such as a scorecard not enhance the ability of the regulator to compare the utility to its peers? If not, why not?

42.0 Reference: Testimony on Cost of Capital for the FBCU by Ms. McShane
Exhibit B1-9-6, Appendix F, p. 42
Business Risk

On page 42, lines 1070-71 of Ms. McShane's testimony, Ms. McShane says "An increase in common equity ratio may be warranted, even if there has been no change in business risk if, for example, investors have become more risk averse and require more conservative financial parameters for a given level of business risk. An increase in equity ratio may also be warranted if credit metrics are weakening due to diminished cash flows."

42.1 Is a decrease in the equity ratio warranted if and when conditions improve? If not, why not?

43.0 Reference: Testimony on Cost of Capital for the FBCU by Ms. McShane
Exhibit B1-9-6, Appendix F, pp. 41 & 66
Judgment used in determining business risk & ROE

On page 41 of Ms. McShane's testimony, Ms. McShane states that "The assessment of business risk is an inherently qualitative exercise, not amenable to quantification. There is no recognized methodology for isolating individual business risk factors and quantifying the corresponding required increment of common equity or ROE."

And at page 66 of Ms. McShane's testimony, Ms. McShane states "Each of the tests is based on different premises and brings a different perspective to the fair return on equity. None of the individual tests is, on its own, a sufficient means of ensuring that all three requirements of the fair return standard are met; each of the tests has its own strengths and weaknesses. Individually, each of the tests can be characterized as a relatively inexact instrument; no single test can pinpoint the fair return. Changes to the inputs to individual tests may have different implications depending on the prevailing economic and capital market conditions. These considerations emphasize the importance of reliance on multiple tests."

Based on similar CAPM and DCF models, Ms. McShane and Dr. Booth have come up with very different "fair" ROE projections for BC utilities in the past.

43.1 To what extent do Ms. McShane's CAPM and DCF projections change as a result of her informed judgment applied to her statistical data? I.e. How much judgment does she apply to the statistical database?

43.2 If Ms. McShane adopted Dr, Booth's assumptions for her CAPM and DCF tests would her results approximate those of Dr. Booth?

44.0 Reference: Testimony on Cost of Capital for the FBCU by Ms. McShane
Exhibit B1-9-6, Appendix F, p. 51, Chart 5
Business Risk of the Benchmark Utility FEI

Chart 5 shows the BC Residential market share of natural gas versus electricity based on Natural Resources Canada data.

44.1 Please provide tables and graphs showing, for each of the FCBU, the most recent long-range demand and customer forecasts prepared for LTRP, CPCN or other planning purposes.

45.0 Reference: Testimony on Cost of Capital for the FBCU by Ms. McShane
Exhibit B1-9-6, Appendix F, pp. 55-56
Business Risk of the Benchmark Utility FEI

In discussing regulatory risk, Ms. McShane states on page 55 that "More FEI activities, focused on new initiatives, are subject to regulatory oversight, entailing more frequent, protracted, and contentious proceedings. On page 56, Ms. McShane states that "The level of business risk, in the aggregate, to which FEI is exposed is at least as high as when it was last assessed in 2009."

45.1 How much of the possibly higher risk to which FEI is exposed is related to FEI's new initiatives?

46.0 Reference: Testimony on Cost of Capital for the FBCU by Ms. McShane
Exhibit B1-9-6, Appendix F, p. 57
Business Risk of the Benchmark Utility FEI

Ms McShane states on page 57 that In August 2009, Moody's adopted a new framework for rating electric and gas utilities world-wide and that the methodology considers diversification (10% weight). In footnote 56, she says that: "For gas distribution utilities, diversification refers to market position, which reflects the diversity of markets among economic regions and regulatory regimes, the make-up of the customer base (e.g., dependence on industrial load) and growth potential. For electric utilities, the 10% weight attributed to diversification is split between market position (5%) and generation and fuel diversity (5%)."

46.1 Can an increase in diversification lead to a reduction in risk and an increase in the ratings framework? Would FEI's new initiatives referred to on p.55 constitute an increase in diversification? If so, does Ms. McShane expect that they will decrease risk, increase it, or leave it unchanged?

47.0 Reference: Testimony on Cost of Capital for the FBCU by Ms. McShane
Exhibit B1-9-6, Appendix F, p. 58, Schedule 15 pp. 1-2, Schedule 22; Apendix G
Evidence of Mr. Vander Weide, p. 86

On page 58 of Ms. McShane's testimony, Ms. McShane displays Moody's ratings for eight key factors for FortisBC Energy Inc. Schedule 15 lists her selection of 12 comparable US utilities, Schedule 22 lists her selection of 5 comparable Canadian utilities.

On page 86 of Mr. Vander Weide's evidence, Mr. Vander Weide lists the allowed ROE of US utilities, which includes Puget Sound Energy Inc.

47.1 Please provide the ratings for the eight key factors for each of the 17 comparable US and Canadian utility companies listed by Ms. McShane, and for Puget Sound Energy Inc. as listed by Mr. Vander Weide.

47.2 Please provide the Moody's and Standard & Poor's ratings report for these 18 comparable US utility companies. (Please file the electronic version only if the reports are voluminous)

47.3 Please provide any recent North American utility industry research reports by Moody's and Standard & Poor's. (Please file the electronic version only if the reports are voluminous)

47.4 The list of comparable US utilities submitted by Ms. McShane has changed from the prior proceedings. Please describe the reasons for each company's addition or removal from the lists since the 2005 proceedings.

47.5 For all these US comparables selected by Ms. McShane in the past and present, please provide the following over the last 20 years; discussion of significant corporate developments, realized and allowed ROE, actual and allowed equity thickness, credit ratings, and brief summaries of regulatory decisions with regards to ROE and capital structure.

48.0 Reference: Testimony of the Cost of Capital for the FBCU by Ms. Kathleen McShane
Exhibit B1-9-6, Appendix F, pp. 62-63
Allowed Capital Structure Ratios

Ms McShane opines that in the 2009 ROE application, the reasonableness of FEI's proposed 40% equity ratio was evaluated partly by reference to trends in the capital structures of its peers. Ms. McShane further describes that since the end of the oral portion of the 2009 ROE application, there have been a number of increases in the deemed common equity ratios adopted for other ex-BC Canadian utilities with which FEI competes for capital.

In Ms. McShane's testimony, Ms. McShane also states, on page 63, that lower ROEs and tax rates required an increase to maintain credit metrics at the same level as in 2004, the previous cost of capital proceeding.

48.1 Does continued reference to trends in the capital structures of FEI's peers introduce the element of circularity into the review of its capital structure?

48.2 Please explain why a lower tax rate would require an increase to maintain credit metrics at the same level previously determined.

49.0 Reference: Testimony on Cost of Capital for the FBCU by Ms. Kathleen McShane Exhibit B1-9-6, Appendix F, pp. 63-65; Exhibit A2-14 Allowed Capital Structure of Small Utilities; Exhibit A2-15 Credit Rating and Investment Banks Reports Summary Reasonableness of Capital Structure

Ms. McShane says that she agrees with FBCU's proposal that the equity ratio for FEI, the proposed benchmark BC utility, be established at a minimum of 40 percent. Ms. McShane supports her assessment based on current business risk of FEI as compared to 2009, Moody's credit rating, Moody's debt ratio guidelines, comparison with a number of Canadian utilities, and capital investment requirements for infrastructure in North America and globally.

Exhibit A2-14 shows the capital structure of a number of regulated projects recently awarded 60/40 debt/equity capital structure by the Commission; Exhibit A2-15 highlights the descriptions of FEI (or Fortis Holdings, if applicable) by credit rating agencies and investment banks in their reports.

49.1 Do the FBCU agree with the information in Exhibits A2-14 and A2-15? If not, please modify the tables in your response.

49.2 Do the FBCU agree that currently many developments, district energy systems, and small utilities have equity ratios at 40 percent which is equivalent to FEI, the benchmark utility?

49.3 Do the FBCU agree with Moody's assessment that gas LDCs are at the low end of the risk spectrum within the universe of regulated utilities? And regulated gas LDCs like FEI to be among the lowest risk corporate entities?

49.4 Do the FBCU agree with Moody's and DBRS that the many deferral accounts allowed by the Commission significantly benefit FEI compared to companies without such support?

49.5 Do the FBCU regard a 40 percent equity ratio for a low risk utility such as FEI reasonable compared to the smaller systems described in Exhibit A2-14? Please explain.

49.6 Holding everything else constant, please demonstrate how a 38 percent equity ratio for FEI would weaken FEI's cash flow interest coverage below 2.3x and CFO pre-WC/Debt below 8 percent?

49.7 Do the FBCU agree with BMO's assessment that FEI's spreads are reasonably valued?

49.8 On page 64 of Ms. McShane's testimony, Ms. McShane says that capital investment requirements for infrastructure in North America and globally have grown to unprecedented levels, which points to significant competition for capital going forward. Is Ms. McShane including the riskier infrastructure projects in emerging markets such as toll roads in China and the railroads in Mexico in her description of requirements for infrastructure in North America and globally? Please provide data to support her assertion.

49.8.1 Is FEI competing with high risk infrastructure projects in emerging markets for capital?

50.0 Reference: Testimony on Cost of Capital for the FBCU by Ms. McShane
Exhibit B1-9-6, Appendix F, p. 67
Fair ROE for FEI as Benchmark BC Utility

Ms McShane states on page 67 that the CAPM test is challenged by the fact that "…the model does not readily allow estimation of changes in the size of the market risk premium as economic or capital market conditions (e.g., interest rates) change. The typical application of the CAPM relies heavily on long-term average achieved equity risk premiums in conjunction with a current or forecast risk-free rate."

50.1 To what extent does it matter that changes in the short-term interest rate match changes in the market risk premium when investors are looking at investing in long-term assets?

51.0 Reference: Testimony on Cost of Capital for the FBCU by Ms. McShane
Exhibit B1-9-6, Appendix F, p. 71, and Table 1 in App F to Ms. McShane's evidence
Fair ROE for FEI as Benchmark BC Utility

On page 71, Ms. McShane states that "Market values reflect returns that investors expect to earn over the longer-term, not the returns that regulators have historically or recently allowed."

51.1 Is Ms. McShane suggesting that investors largely ignore allowed returns? If so, can she provide any independent evidence to support that claim?

51.2 When considering the rate of return from regulated activities, to what extent should the analysis include or exclude returns achieved through non-regulated operations?

52.0 Reference: Testimony on Cost of Capital for the FBCU by Ms. McShane
Exhibit B1-9-6, Appendix F, p. 72
Fair ROE for FEI as Benchmark BC Utility

On page 72, Ms. McShane says that "Regulation is intended to be a surrogate for competition. The competitive model indicates that equity market values tend to gravitate toward the replacement cost of the underlying assets. This is due to the economic proposition that, if the discounted present value of expected returns (market value) exceeds the cost of adding capacity, firms will expand until an equilibrium is reached, i.e., when the market value equals the replacement cost of the productive capacity of the assets."

52.1 How true is this proposition for a regulated energy utility where the franchise of the utility limits the utility to the product for which it has a monopoly, and limits the area where its monopoly applies? In other words does the parallel that Ms. McShane suggests with respect to behaviour of market to book ratios hold for regulated firms where, on one hand, competition is limited, and on the other where expansion outside of the utility's franchise area is also limited?

52.2 If the regulator of a utility, all of whose activities were regulated, and if the regulator historically had allowed below market returns, would Ms. McShane expect the market value of the utility to fall below the book value? If not, why not?

53.0 Reference: Testimony on Cost of Capital for the FBCU by Ms. McShane
Exhibit B1-9-6, Appendix F, p. 75
Fair ROE for FEI as Benchmark BC Utility

Ms. McShane states on p. 75, that "To ensure comparability with the benchmark BC utility, only relatively pure-play U.S. utilities were selected."

53.1 By relatively pure-play U.S. utility does Ms. McShane mean that the selected utilities earnings were primarily from regulated activities? If not, explain. How is 'relatively pure-play' defined and what were the screening criteria used to select the U.S. utility sample?

54.0 Reference: Testimony on Cost of Capital for the FBCU by Ms. McShane
Exhibit B1-9-6, Appendix F, pp. 73-74
Regulatory Model: Canada and U.S.

Ms. McShane on pages 73 and 74 states "U.S. regulated companies represent a reasonable point of departure for the selection of a sample of proxies from which to estimate the cost of equity for an average risk Canadian utility. The operating (or business) environments are similar, the regulatory model in the U.S. is similar to the Canadian model, Canadian and U.S. capital markets are significantly integrated and the cost of capital environment is similar."[77] [Emphasis added]

Ms. McShane cites in footnote 77 the Ontario Energy Board's Report of the Board on the Cost of Capital, pages 21-22.

In the 2009 Terasen Utilities Return on Equity and Capital Structure (Exhibit B-1), Ms. McShane mentioned Puget Energy on page 46 in a footnote 48, of Ms. McShane's testimony. Ms. McShane states "Pension funds are increasingly investing in infrastructure assets outside of Canada. For example, a consortium of investors including the British Columbia Investment Management Corporation, the Alberta Investment Management Corporation and the Canada Pension Plan Investment Board are in the process of acquiring Puget Energy, an electric and gas utility serving northern Washington state. The most recent allowed returns for Puget Sound Energy (both electric and gas) were 10.15% on a 46% common equity ratio, adopted in October 2008."

The Washington Utilities and Transportation Commission (WUTC) in Dockets UE-111048 and UG-111049 issued Order 08, Service Date May 7, 2012, in regard to rates for Puget Sound Energy, Inc. (Exhibit A2-16).

The WUTC in its decision determined on page 3 paragraph 7 "Among other significant findings and conclusions, we determine that PSE's capital structure should be revised to include a 48 percent equity ratio, balanced with a 48 percent long-term debt ratio and 4 percent short-term debt. This reflects most closely what we anticipate to be the Company's anticipated actual capital structure during the upcoming rate year. In terms of capital costs, we reduce PSE's authorized rate of return on equity from 10.1 percent to 9.80 percent."

The WUTC in its decision on pages 177 to 187 describes the issue of "attrition" and "regulatory lag" with possible causes with regards to Puget Sound Energy Inc. under-earning its authorized equity returns. The WUTC further discussed in detail possible regulatory changes that could address "attrition."

Bloomberg published a Business Wire, New York, news release dated August 20, 2009 titled "Fitch Affirms National Fuel Gas' IDR at 'A-'; Outlook Stable."
http://www.bloomberg.com/apps/news?pid=newsarchive&sid=ajr.xqB2KKsI

Fitch Ratings affirmed National Fuel Gas Company's (NFG) Issuer Default Ratings (IDRs) and stated "The natural gas distribution utility operations provide a stable base to the company's overall business. About two-thirds of the utility's roughly 727,000 customers are in New York, with the remaining one-third in Pennsylvania. Although the New York Public Service Commission authorizes a fairly low return on equity (ROE) at 9.1%, it allows for several constructive rate mechanisms, such as revenue decoupling, weather normalization, and rate trackers for gas costs, post-retirement medical expense, and pension expense. These mechanisms are viewed favorably by Fitch because they tend to smooth out financial performance throughout the economic cycle and periods of commodity price and weather volatility. The Pennsylvania Public Utility Commission authorizes a higher ROE of between 10 and 11%, but limits its rate mechanisms to trackers for gas costs and post-retirement medical expense." [emphasis added] (Exhibit A2-17)

54.1 In Ms. McShane's view please describe "attrition" and "regulatory lag."

54.2 In Ms. McShane's opinion please comment further on your statement "the regulatory model in the U.S. is similar to the Canadian model" while addressing the similarities and differences between the two countries with regards to preferred regulatory practices in:

- Choice of test year (historic vs future/forecast)
- Constructive rate mechanisms
  - Revenue decoupling
  - Weather normalization
  - Rate trackers for gas costs, post-retirement medical expenses, pension expense
- Frequency of revenue requirement applications
- Frequency of return on equity and capital structure applications
- Conservation savings adjustment; Demand-side management decoupling
- Plant accounts (year-end, average, beginning, other)
- Inclusion of Construction Work in Progress (CWIP) in rate base
- Expense adjustments
- Equity share (thickness) upward adjustment for attrition
- Interim rates
- Use of deferral accounts
- Other relevant regulatory methods or practices

Please provide a response that includes a table similar to the one below.

Regulatory Method	Typical Canadian Practice	Typical U.S. Practice	Impact on Attrition, Regulatory Lag, and Business Risk
Choice of Test Year			
…			
…			

54.2.1 Please elaborate on why a regulator would choose one method over another. Discuss the advantages and disadvantages of each method with regards to intended outcomes such as risk reduction or efficiency incentive.

54.3 In Ms. McShane's opinion does the Canadian regulatory framework including its regulatory practices result in lower, higher or same business risk for a Canadian utility relative to a U.S. utility, all else being equal? Please elaborate.

54.4 In Ms. McShane's opinion where does British Columbia rank among Canadian regulatory jurisdictions with regards to the use of "constructive rate mechanisms" (wording as used by Fitch Ratings) and its impact on credit metrics and business risk. Please elaborate.

55.0 Reference: Testimony on Cost of Capital for the FBCU by Ms. McShane
Exhibit B1-9-6, Appendix F, p. 39; 2009 ROE Decision, p. 77
Capital Structure for FEI as Benchmark BC Utility

On page 39 of Ms. McShane's testimony, Ms. McShane states that "This should not be interpreted to mean that business risks are only reflected in capital structure. Nor should it be interpreted to mean that the long-term aspects of business risk are captured only in capital structure with short-term variability in earnings captured solely in the ROE. Both the capital structure that is appropriate for a particular utility and the required rate of return on equity incorporate elements of short-term and long-term business risks. Investors look at the risks of a utility in the aggregate in assessing what return they require from a utility equity investment; they do not assign short-term risks to ROE and long-term risks to capital structure."

On page 77 of the 2009 ROE Decision, the Commission stated that "in determining TGI [now FEI]'s equity ratio and ROE in this proceeding it has sought to determine an equity ratio for TGI [now FEI] that reflects its long-term business risks, while adjusting its ROE to reflect its short-term business risks."

55.1 Please explain the shortcomings of assigning short-term risks to ROE and long-term risks to capital structure.

55.2 If the 2009 Decision would have been consistent with Ms. McShane's testimony, please explain what impacts this would have had on the appropriate 2009 capital structure and ROE. For example, would the appropriate capital structure be 38 percent instead of 40 percent?

56.0 Reference: Testimony on Cost of Capital for the FBCU by Ms. McShane
Exhibit B1-9-6, Appendix F, pp. 78 & 92
CAPM

On page 78 of Ms. McShane's testimony, Ms. McShane states that "The risk-adjusted equity market risk premium approach to estimating the required equity market risk premium for a utility entails (1) estimating the equity risk premium for the equity market as a whole; (2) estimating the relative risk adjustment; and (3) applying the relative risk adjustment to the equity market risk premium, to arrive at the required utility equity market risk premium. The cost of equity is thus estimated as:

Risk-Free Rate + { Relative Risk Adjustment x Market Risk Premium }

The risk-adjusted equity market risk premium test is a variant of the Capital Asset Pricing Model (CAPM). The CAPM attempts to measure, within the context of a diversified portfolio, what return an equity investor should require (in contrast to what the investor does require). Its focus is on the minimum return that will allow a company to attract equity capital."

and at page 67 Ms McShane acknowledges that:

"2. The size of the market risk premium cannot be directly observed and is subject to a wide divergence of opinion. While historic risk premiums may provide a perspective on the size of the expected forward-looking market risk premium, historic results are sensitive to the country from which the data are

drawn and the time period over which they are measured.

3. The market risk premium is not a fixed quantity; it changes with investor experience and expectations. It would be higher, for example, when investors perceive that the risk of the equity market has increased relative to that of the government bond market and vice versa. However, the model does not readily allow estimation of changes in the size of the market risk premium as economic or capital market conditions (e.g., interest rates) change."

And at page 92, Ms McShane restates the equity risk premium "In the context of the CAPM, the utility return should equal:

Risk-Free Rate + Beta X (Equity Market Return – Risk-Free Rate)

56.1 Ms. McShane chose to use a 3-year projection of the LCB risk free rate at 4 percent. What impact on her projections would occur if she used her current year projection of 2.6 percent? Since we are setting ROEs for 2013, wouldn't the 2.6 percent rate be more applicable. Please show the impact on Ms. McShane's CAPM if the risk free rate were forecast to be 2.6 percent.

56.2 With respect to Beta there she provides much discussion of fluctuations in Raw Betas of Canadian utilities over time and the efforts to manipulate the Raw Betas by assuming some trend towards 1.0 to produce Adjusted Betas which are higher. Could it be that Canadian utilities enjoy so many risk item deferral accounts and positive incentives that their risk profiles are indeed closer to the Raw Betas? Please show the impact on Ms. McShane's CAPM if Raw Betas were used.

56.3 The overall market equity return projections rely on a great deal of historical data. However, one reads articles that pension funds and large investors have reduced their long term expectations of market returns due to continuing financial crises, prolonged recessions and reliance on low interest rates to support any growth. Could it be that the extent of financial turmoil since 2008 has reduced investors' expectations for future returns? What would be the impact on Ms. McShane's CAPM if the forward equity market risk premium were estimated to be 5-6 percent over a current risk free rate of 2.6 percent (i.e., an equity market return of about 7.5 percent to 8.5 percent)?

56.4 With all these assumptions to construct a CAPM, what confidence level does Ms.McShane have in her results?

57.0 Reference: Testimony on Cost of Capital for the FBCU by Ms. McShane
Exhibit B1-9-6, Appendix F, pp. 109-113
DCF Model

Ms. McShane states that "The discounted cash flow approach proceeds from the proposition that the price of a common stock is the present value of the future expected cash flows to the investor, discounted at a rate that reflects the risk of those cash flows."

and: "The DCF test allows the analyst to directly estimate the utility cost of equity, in contrast to the Capital Asset Pricing Model (CAPM), which estimates the cost of equity indirectly."

57.1 Since FEI is not traded publicly, the DCF test cannot "directly" estimate its cost of equity, can it?

57.2 The FBCU's business risk evidence generally argues that the future throughput of FEI is either stagnant or challenged. As a result one might speculate that rate base growth may be minimal

as capital maintenance additions are offset by depreciation. With little or no growth, the growth in dividends might be minimal. What is the impact on Ms. McShane's forecast cost of equity (k) if dividend growth (g) is set to zero?

57.3 How sensitive are Ms. McShane's results to variations in discount rate? If the real discount rate were increased or decreased by 2 percent, what impact would result?

57.4 Are the DCF results vulnerable to fluctuation as markets increase or decrease the P/E ratios of utilities vs the TSX? For example, if utilities have unusually high P/E ratios at a point in time would it be appropriate to speculate that utility stock prices will fall compared to the TSX as market conditions stabilize? How would this be accounted for in the DCF model?

57.5 With all these judgment factors what range of FEI's cost of equity would Ms. McShane view as reasonable?

58.0 Reference: Testimony on Cost of Capital for the FBCU by Ms. McShane
Exhibit B1-9-6, Appendix F, p. 113
DCF Model

Ms. McShane states that "For the Canadian utilities, the higher long-term earnings growth forecasts in conjunction with lower dividend yields lead to a wider range of DCF test results than for the U.S. utilities. Based on the mid-point of the range of the constant growth and three-stage models, the cost of equity for the Canadian utility sample is approximately 9.8%."

58.1 Please provide the range of results for the Canadian utilities?

59.0 Reference: Testimony on Cost of Capital for the FBCU by Ms. McShane
Exhibit B1-9-6, Appendix F, pp. 115-117
Fair ROE for FEI as Benchmark BC Utility

On page 115, Ms. McShane states that among the principal issues in the application of the comparable earnings test are: (1) the selection of a sample of unregulated companies of reasonably comparable total risk to a Canadian utility and (3) the need for any adjustment to the "raw" comparable earnings results if the selected unregulated companies are not of precisely equivalent risk to a utility. She adds that the selection should conform to investor perceptions of the risk characteristics of utilities, which are generally characterized by relative stability of earnings, dividends and market prices.

Then, Ms. McShane lists the criteria she used to select comparable unregulated low risk companies and later indicates that the experienced returns on equity of the sample of 21 Canadian low-risk unregulated companies over this period were in the range of 12.25%-13.5%. Further, she states that the comparative risk data indicate that the unregulated Canadian companies are of higher risk than the benchmark BC utility, FEI, which warrants a downward adjustment of 125 to 150 basis points to their returns on equity. As a result, a fair return on equity based on the comparable earnings test is approximately 11.0% to 12.0%.

In Appendix E to her testimony (page E-1), Ms. McShane states "The selection process starts with the recognition that unregulated companies generally are exposed to higher business risk, but lower financial risk, than the typical utility. The selection of unregulated companies focuses on total investment risk, i.e., the combined business and financial risks. The unregulated companies' higher business risks are offset by a more conservative capital structure, i.e., higher equity ratios, thus permitting the selection of samples of reasonable comparable investment risk to utilities."

59.1 If, under the comparable earnings test, the most representative sample of unregulated companies of comparable total risk consisted of 21 low-risk unregulated companies, which were then considered of higher risk than the benchmark BC utility, does it not automatically follow that the benchmark BC utility is also low-risk, at the minimum? If not, please explain why not.

59.2 Why would criteria to define a 'low-risk' company differ between the consumer-oriented industries from which the sample of 21 companies was drawn from and the utility industry?

60.0 Reference: Testimony on Cost of Capital for the FBCU by Ms. McShane
Exhibit B1-9-6, Appendix F, pp. 78 and 89
Risk Adjusted Equity Market Risk Premium

On page 89, Ms. McShane states that "Utilities are not investing in a portfolio of securities. They are committing capital to long-term assets. Once the capital is committed, it cannot be withdrawn and redeployed elsewhere. The CAPM does not capture that reality."

On page 78, Ms. Mcshane's evidence says that: "The CAPM attempts to measure, within the context of a diversified portfolio, what return an equity investor should require…."

60.1 As Ms. McShane's evidence states it is not utilities investing in a portfolio of securities, but equity investors who are looking at a diversified portfolio. Then does it matter from an investor's perspective if the utility is committing capital to long-term assets? If so, why?

61.0 Reference: Testimony on Cost of Capital for the FBCU by Ms. McShane
Exhibit B1-9-6, Appendix F, pp. 79 and 83
Risk Adjusted Equity Market Risk Premium

On page 83, Ms. McShane states that "The 2013-2015 forecast long-term Government of Canada bond yield of 4.0% suggests an equity risk premium, based on historical risk premiums at similar levels of interest rates, of approximately 7.25% to 7.5%."

On page 79, Ms. McShane states that "Basing calculations of achieved risk premiums on the longest periods available reflects the notion that it is necessary to reflect as broad a range of event types as possible to avoid overweighting periods that represent "unusual" circumstances."

61.1 Doesn't Ms. McShane's estimate of the equity risk premium based on historical risk premiums at similar levels of interest, as opposed to all interest levels over a long period of time, violate the principle Ms. McShane articulates at page 79? If not, why not?

62.0 Reference: Testimony on Cost of Capital for the FBCU by Ms. McShane
Exhibit B1-9-6, Appendix F, p. 80; Appendix I Concentric Report p. 28
Arithmetic and Geometric Averages

On page 80, Ms. McShane displays the historical risk premiums for Canada and the U.S. using arithmetic averages (Footnote 89), and the standard deviation of returns on page 85 Table 14.

On page 28 of the Concentric report (Exhibit B1-9-6, Appendix I), the standard deviation of U.S. ROE decisions between 1994-2010 is reported as 0.53%

62.1 Please provide a table showing risk premiums over Bond Total Returns and over Bond Income Returns, using geometric averages.

62.2 Please comment on the difference between the standard deviation of returns of the equity markets in the US and Canada (as shown in Table 14) and the standard deviation of U.S. ROE decisions.

63.0 Reference: Testimony on Cost of Capital for the FBCU by Ms. McShane
Exhibit B1-9-6, Appendix F, p. 84

On page 84 of Ms. McShane's testimony, Ms. McShane displays inflation ranges and their associated returns on table 13.

63.1 Please provide the specific calendar years, inflation rates, nominal equity returns and real equity returns for each year in which inflation was less than 1 percent.

63.2 Please provide a graph of inflation rates and nominal equity returns on a calendar year basis over the historical period of 1924-2011.

64.0 Reference: Testimony on Cost of Capital for the FBCU by Ms. McShane
Exhibit B1-9-6, Appendix F, pp. 83-87
Risk Adjusted Equity Market Risk Premium

Ms. McShane's evidence on page 87 states "Given the absence of any material upward or downward trend in the nominal historic equity market returns over the longer-term, the P/E ratio analysis, and the observed negative relationship between real equity returns and inflation, a reasonable estimate of the expected value of the nominal equity market return is approximately 11.5%, based on Canadian equity market returns and supported by U.S. equity market returns."

In footnote 94 on page 83, Ms. McShane states "I analyzed the trends in P/E ratios and equity market returns and determined that there is no indication that rising P/E ratios during the bull market of the 1990s resulted in average equity market returns that are unsustainable going forward." The analysis is summarized in Appendix A.

64.1 Based on the comment in footnote 94 is it correct to conclude that no adjustment was made based on the P/E analysis? If there was an adjustment made please identify it.

65.0 Reference: Testimony on Cost of Capital for the FBCU by Ms. McShane
Exhibit B1-9-6, Appendix F, p. 92
Risk Adjusted Equity Market Risk Premium

65.1 With respect to footnote 104 on page 92 please confirm that the earliest data available are for January 1970. If equivalent data exists prior to that date please redo the analysis using all available data.

66.0 Reference: Testimony on Cost of Capital for the FBCU by Ms. McShane
Exhibit B1-9-6, Appendix F, pp. 92-93
Risk Adjusted Equity Market Risk Premium

On pages 92-95, Ms. McShane discusses her one and two factor regression models.

66.1 Please indicate whether or not Ms. McShane tested for possible errors resulting from autocorrelation. If so, what was the resulting value of the Durbin –Watson statistic and what, in Ms. McShane's view does it indicate?

66.2 Please confirm that multicollinearity exists whenever a high degree of intercorrelation exists among some or all of the explanatory variables in a regression equation. At page 103 she states that since utility shares are interest sensitive the regression was expanded to capture the impact of movements in long-term Canada bond prices on utility returns. Did Ms. McShane consider that the monthly TSE composite excess return over T-bills and the monthly excess Long Canada bond return over T-Bills might be intercorrelated. Did she test for that and if so what were the results.

66.3 Please confirm that specification and measurement errors can result when one or more significant explanatory variables are not included in the regression equation.

66.4 On page 93, Ms. McShane's evidence says that "The intercept in the equation should, in principle, represent the risk-free rate." To what extent will any or all of the potential errors identified above affect the value of the intercept? Moreover, would Ms. McShane agree that if the R^2 is worse (i.e., explains less) the intercept arguably explains more, but the confidence in the value suggested by the intercept is less? If not, why not?

67.0 Reference: Testimony on Cost of Capital for the FBCU by Ms. McShane
Exhibit B1-9-6, Appendix F, p. 103
Risk Adjusted Equity Market Risk Premium

On pages 103-104, Ms. McShane's evidence analyses the relationship between the government bond yield and the utility equity risk premium, based on data from 1998 to 2012Q1.

67.1 Why was the time period 1998 – 2012Q1 chosen?

67.2 Did Ms. McShane consider basing her analysis using other time periods? If so, please provide the results and discuss why she thinks the results from the 1998-2012Q1 time period are superior.

68.0 Reference: Testimony on Cost of Capital for the FBCU by Ms. McShane
Exhibit B1-9-6, Appendix F, pp. 102-104
Risk Adjusted Equity Market Risk Premium

On pages 102-104, Ms. McShane discusses her one and two factor regression models used to test the relationship between equity risk premiums and interest rates. On page 102, Ms. McShane states that "…there is an inverse relationship between long-term government bond yields and the utility equity risk premium."

68.1 On page 103, Ms. McShane's evidence states that she regressed the quarterly allowed ROEs against lagged long-term Treasury bond yields. Did Ms. McShane test for possible errors resulting from autocorrelation? If so, what was the resulting value of the Durbin –Watson statistic and what, in Ms. McShane's view does it indicate?

68.2 To what extent is it possible or likely that multicollinearity exists when adding long-term A-rated utility/government bond yields as a second explanatory variable (in addition to long-term Treasury bond yields)? Did Ms. McShane test for multicollinearity and if so what were the results?

69.0 Reference: Testimony on Cost of Capital for the FBCU by Ms. McShane
Exhibit B1-9-6, Appendix F, p. 104, footnote 126
Risk Adjusted Equity Market Risk Premium

On page 104 of Ms. McShane's evidence, Ms. McShane states that "The regressions were solved using the forecast 4.0% 30-year Canada bond yield. For the 30-year A-rated utility/Government of Canada bond yield spread, a spread of 135 basis points was used."

Footnote 126 on page 104 explains Ms. McShane's choice of a 135 basis point yield spread. "Represents expectation that the spread between the yield on long-term A rated Canadian utility bonds and Government of Canada bonds will contract from recent levels (approximately 160 basis points at the end of June 2012) as measured by the spread between the yield on the Bloomberg A-rated Canadian Utility 30 Year Index and the benchmark long-term Government of Canada bond) as yields on long-term Government of Canada bonds rise."

69.1 What is the historical average spread between the yield on long-term A-rated Canadian utility bonds and Government of Canada bonds?

70.0 Reference: Testimony on Cost of Capital for the FBCU by Ms. McShane
Exhibit B1-9-6, Appendix F, p. 107
Risk Adjusted Equity Market Risk Premium

On page 107, Ms. McShane states that "A 50% sensitivity factor comports with the lower end of the range of the sensitivities of utility equity risk premiums to government bond yield changes estimated in Section VIII.D.3.c above."

70.1 Can Ms. McShane clarify that the analysis she is referring to is at pages 101-104, in section VIII.D.4.d? If not please clarify or refine the reference.

71.0 Reference: Testimony on Cost of Capital for the FBCU by Ms. McShane
Exhibit B1-9-6, Appendix F, p. 111
Risk Adjusted Equity Market Risk Premium

On page 111, Ms. McShane says that "…as long as investors have believed the forecasts, and have priced the securities accordingly, the resulting DCF costs of equity are an unbiased estimate of investors' expected returns."

71.1 To what extent is there evidence that investors do believe the forecasts or, conversely, that investors adjust for overly optimistic forecasts?

72.0 Reference: Testimony on Cost of Capital for the FBCU by Ms. McShane
Exhibit B1-9-6, Appendix F, p. 112 and Appendix C, p. C-10
Risk Adjusted Equity Market Risk Premium

On page 112, Ms. McShane states that "The constant growth model applied to the U.S. utility sample using the consensus of analysts' long-term earnings growth forecasts indicates a cost of equity of approximately 9.3% (Schedule 19). The utility cost of equity based on the sustainable growth model is approximately 8.7% (Schedule 20).

The three-stage model is based on the premise that investors expect the growth rate for the utilities to be equal to the analysts' forecasts (which are five year projections) for the first five years, but, in the

longer-term to migrate to the expected long-run rate of nominal growth in the economy."

On page C-10, Ms. McShane states that in the three-stage DCF test, she used the long-run nominal rate of growth in GDP of 4.9% based on the consensus of economists forecasts for the period 2013-2023.

72.1 By using a long-run DCF model at the bottom of an economic cycle, doesn't Ms McShane potentially overstate the near term cost of capital because of higher expected growth in later years? If not, why not?

73.0 Reference: Testimony on Cost of Capital for the FBCU by Ms. McShane
Exhibit B1-9-6, Appendix F, pp. 110-113 and Schedules 19-23
DCF Cost of Equity

On pages 110-113, Ms. McShane estimates the DCF cost of equity using a specified sample of US and Canadian utilities which are listed in Schedules 19-23. On page 33, Mr. Engen provides a graph of 30-year credit spreads for a number of publicly traded Canadian utility companies.

73.1 Please confirm that the specified companies used in the DCF cost of equity estimate are predominantly the publicly traded holding companies of the regulated entities.

73.2 Please provide, in tabular format, the credit ratings for the specified sample of companies and the credit ratings for their related regulated operating companies.

73.3 Based on the response to the above question, please comment if the credit ratings for holding companies are lower than their related regulated operating companies?

73.4 For the Canadian sample of utilities, please provide a graph of the 30-year credit spread for the holding companies and their related regulated operating companies.

73.5 If there is a lower risk premium for the cost of debt for 30 year bonds of the operating companies relative to their related publicly traded holding companies, should there also be a lower risk premium for the cost of equity at the operating company level relative to the holding company?

74.0 Reference: Testimony on Cost of Capital for the FBCU by Ms. McShane
Exhibit B1-9-6, Appendix F, p. 115
Risk Adjusted Equity Market Risk Premium

On page 115, Ms. McShane states "The selection should conform to investor perceptions of the risk characteristics of utilities, which are generally characterized by relative stability of earnings, dividends and market prices. These were the principal criteria for the selection of a sample of unregulated companies (from consumer-oriented industries). The criteria for selecting comparable unregulated low risk companies include industry, size, dividend history, capital structures, bond ratings and betas…."

74.1 To what extent should the comparable earning standard adjust for the fact that regulated gas and electric distribution utilities typically have a franchise area that excludes competitors in their core market.

75.0 Reference: Testimony on Cost of Capital for the FBCU by Ms. McShane
Exhibit B1-9-6, Appendix F, pp. 117-118
Fair ROE for FEI as Benchmark BC Utility

On page 118, Ms. McShane states that "At a minimum, the financing flexibility allowance should be adequate to allow a regulated company to maintain its market value, notionally, at a slight premium to book value, i.e., in the range of 1.05-1.10 times. At this level, a utility would be able to recover actual financing costs, as well as be in a position to raise new equity (under most market conditions) without impairing its financial integrity. A financing flexibility allowance adequate to maintain a market/book in the range of 1.05-1.10 times is approximately 50 basis points. As this financing flexibility adjustment is minimal, it does not fully address the comparable returns standard."

On page 71 of McShane's testimony, Ms. McShane states that "The proxy companies used for the purpose of estimating the cost of equity for the benchmark BC utility have market-to-book ratios of approximately 1.7X (U.S. sample) to 2.6X (Canadian sample), well above the market-to-book ratio of 1.0 that conceptually would equate the return on book value (in dollar terms) to the return estimated by reference to the market-based DCF or equity risk premium tests."

75.1 Please explain the rationale for choosing a financing flexibility allowance adequate to maintain a market/book in the range of 1.05-1.10 times when the proxy companies used for estimating the cost of equity for the benchmark BC utility have market/book ratios of 1.7X to 2.6X?

75.2 Please calculate the financing flexibility allowance that would be adequate to maintain a market/book in the range of 1.7X to 2.6X?

75.2.1 Would the resulting financing flexibility allowance be consistent with the comparable returns standard?

76.0 Reference: Testimony on Cost of Capital for the FBCU by Ms. McShane
Exhibit B1-9-6, Appendix F, p. 116 and Schedule 25; Exhibit B1-9-6, Appendix E, p. 32
Comparable Earnings Test

On page 116 and Schedule 25, Ms. McShane provides ROE information for 21 Canadian low risk unregulated companies for the period 1995 to 2011, which is used in the comparable earnings test. Ms. McShane adjusts the ROE downwards by 125 to 150 basis points to recognize the unregulated companies' higher risk using the typical spread between Moody's BBB-rated long-term industrial bond yields and long-term A-rated utility bond yields and the relative betas.

On page 32, Mr. Engen provides bond spread information of the generic 'A' bonds as of July 6, 2012:

5-year =150 bps, 10-yr = 202 bps, long end = 241 bps.

76.1 Please elaborate on the method and data used to estimate the risk adjustment.

76.2 Please provide historical data for the Moody's BBB-rated long-term industry bond yields and the long-term A-rated utility bond yields.

76.3 The risk premium for corporate bonds versus a similar maturity risk free government bond appears to grow larger as the bond maturity rises based on the information provided by Mr. Engen. Please confirm that risk premiums typically rise as the maturity of the instrument lengthens.

76.4 Should the relative equity risk premium between a BBB rated industrial and an A rated utility be higher than the associated bond risk premium?

77.0 Reference: Testimony on Cost of Capital for the FBCU by Ms. McShane
Exhibit B1-9-6, Appendix F, p. A-7

On page A-7, Ms. McShane quotes from the *Triumph of the Optimists,* which discusses an example of returns that can vary between +25% and -20% to demonstrate the difference between the arithmetic mean return of 2.5% and the geometric mean return of 0%. The authors conclude that "The 2 ½ percent forward-looking arithmetic mean is required to compensate for the year-to-year volatility of returns."

77.1 What is the approximate volatility and standard deviation of the returns in the example provided?

77.2 How does this compare to the standard deviation of U.S. ROE decisions as shown in the concentric Energy Advisors report in Exhibit B1-9-6, appendix I, page 28.

77.3 How does this compare to the standard deviation of Canadian ROE decisions**?**

78.0 Reference: Testimony on Cost of Capital for the FBCU by Ms. McShane
Exhibit B1-9-6, Appendix F, p. 117

On page 117, the topic of flotation costs is discussed.

78.1 It is recognized that flotation costs are widely accepted across Canadian regulatory decisions. Please elaborate on the process and data used to estimate the flotation costs.

78.2 Please discuss the circumstances that cause the flotation costs to change.

78.3 Please discuss any trends or changes in flotation costs over the last 10 years.

78.3.1 What level of flotation costs have been accepted by the various energy utility regulatory tribunals in Canada over the past 10 years?

79.0 Reference: Testimony on Cost of Capital for the FBCU by Ms. McShane
Exhibit B1-9-6, Appendix F, Schedule 3 p. 1 of 2; Schedule 5, pp. 1 to 2
Preferred Shares

Ms. McShane in Schedule 3 page 1 of 2 – Equity Return Awards and Capital Structures Adopted by Regulatory Boards for Canadian Utilities includes columns for Debt, Preferred Stock, and Common Stock Equity. Schedule 5 also includes a column for Preferred Stock.

79.1 Please confirm that many utility holding companies have issued preferred shares in the last 5 years. Please provide a general overview.

79.2 With regards to Schedule 3 page 1 of 2, please elaborate on the historical presence of preferred equity in utility companies.

79.3 With regards to Schedule 3 page 1 of 2, please elaborate on the recent activity of preferred equity in utility operating companies (not holding companies). If there has been little recent activity, please comment on why utility operating companies have not issued preferred equity relative to the extent of utility holding companies?

79.4 Please confirm that BC Gas Utility Ltd. (now FortisBC Energy Inc.) and PNG previously had preferred equity in their capital structure.

79.5 In the opinion of Ms. McShane, please comment on preferred equity in a utility's capital structure including its purpose, appropriateness, regulatory treatment, accounting treatment, credit rating agency treatment, and nature of funding source relative to debt and common equity.

80.0 Reference: Testimony on Cost of Capital for the FBCU by Ms. McShane
Exhibit B1-9-6, Appendix F, Schedule 3 p. 1 of 2; Schedule 5, pp. 1 to 2
CU Inc. - Preferred Shares

In Schedule 3, page 1 of 2 of Ms. McShane's evidence illustrates ATCO Gas with a 7.91 percent portion for Preferred Stock. Also it shows ATCO Electric Transmission at 10.19 percent and ATCO Electric Distribution at 10.05 percent.

CU Inc. issued a Short Form Prospectus, New Issue, dated November 24, 2010 for $75 million, 3,000,000 shares with 25.00 par value per share to yield 3.80 percent per annum. The PDF of the prospectus is located at:

http://www.canadianutilities.com/CU-Inc/Documents/prospectus_Cumulative_Redeemable_Preferred_Shares_Series_4.pdf

Page 4 of the CU Inc. prospectus states:

> **"USE OF PROCEEDS**
>
> The estimated net proceeds (after deducting the Underwriters' Fee) to be received by the Corporation from the sale of the Series 4 Preferred Shares are $72,750,000, assuming that no Series 4 Preferred Shares are sold to institutions. The Corporation intends to use the proceeds to purchase preferred shares to be issued by its operating subsidiaries, ATCO Electric Ltd. and ATCO Gas and Pipelines Ltd. It is expected that these subsidiaries will use the proceeds to fund a portion of their 2010 capital expenditure programs."

80.1 Please explain the relationship between CU Inc. and its operating subsidiaries ATCO Electric Ltd. and ATCO Gas and Pipelines Ltd.

80.2 Please explain how the operating subsidiaries are allocated debt and preferred shares from CU Inc. Do the regulated operating subsidiaries account for the debt and preferred shares with the interest rates (for debt) and dividend rates (for preferred shares) without markup from CU Inc.

80.3 What is the reasoning why CU Inc. issued preferred shares? How do new issuances of preferred shares advantage or disadvantage existing debt holders and existing common shareholders of CU Inc.?

80.4 How does the Alberta Utilities Commission (AUC) take into account the preferred equity of CU Inc. for the capital structures of the regulated utilities by the AUC? Please elaborate and provide any relevant decisions.

81.0 Reference: Testimony on Cost of Capital for the FBCU by Dr. Vander Weide
Exhibit B1-9-6, Appendix G, pp. 8, 9
Market Values of a Firm's Debt and Equity

Dr. Vander Weide opines that economists measure a firm's capital structure in terms of the market values of its debt and equity and investors measure the expected return on their investment portfolios using market value weights rather than book value weights.

81.1 Notwithstanding the relative costs of debt and equity, is it not true that different companies search for optimal capital structure appropriate to their respective economic sector and their respective stage of maturity?

82.0 Reference: Testimony on Cost of Capital for the FBCU by Dr. Vander Weide
Exhibit B1-9-6, Appendix G, p. 8
Fair Rate of Return Standard

On page 8 of Dr. Vander Weide's testimony, Dr. Vander Weide notes that "…the cost of equity is greater than the cost of debt."

82.1 Please confirm that this is because equity investments are perceived by investors to be generally riskier than debt. If not, please explain why not?

83.0 Reference: Testimony on Cost of Capital for the FBCU by Dr. Vander Weide
Exhibit B1-9-6, Appendix G, p. 19
Comparable Risk Utilities

On page 19 of Dr. Vander Weide's testimony, Dr. Vander Weide states "…(2) reasonable estimates of expected growth rates are available for these companies, whereas the same data are not available for the Canadian utilities";

83.1 Please explain what is meant by "reasonable estimates of expected growth rates"; what sources of reasonable estimates of expected growth were considered; and why alternatives sources of 'reasonable estimates' were rejected?

83.2 What sources of reasonable estimates of expected growth rates for Canadian companies are available and why were they rejected?

84.0 Reference: Testimony on Cost of Capital for the FBCU by Dr. Vander Weide
Exhibit B1-9-6, Appendix G, p. 22
Comparable Risk Utilities

On page 22 of Dr. Vander Weide's testimony, Dr. Vander Weide states "…the risk of investing in a company's stock is best measured by the expected variability in the return on the stock investment."

84.1 Over what time period is Dr. Vander Weide referring to when discussing the expected variability in the return on the stock investment? Please explain.

84.2 In the sentence above, is Dr. Vander Weide referring to the absolute variability in the return on the stock investment or to the variability relative to other potential investments?

84.2.1 If the variability is relative to other potential investments, do investors look at the entire universe of investments available to them or to a subset, and if so, which subset.

85.0 Reference: Testimony on Cost of Capital for the FBCU by Dr. Vander Weide
Exhibit B1-9-6, Appendix G, p. 24; Exhibit A2-21 OEB Report of the Board on the Cost of Capital (December 11, 2009)
Comparable Risk Utilities

Dr. Vander Weide quotes on page 24 of his testimony, the National Energy Board, as saying "…that risk differences between Canada and the U.S. can be understood and accounted for, the Board is of the view that U.S. comparisons are very informative for determining a fair return for TQM for 2007 and 2008."

85.1 Can Dr. Vander Weide confirm that the NEB also said in RH-1-2008: "In assessing the comparability of U.S. LDC returns, the Board's view regarding the higher short-term risks of U.S. LDCs meant that, overall, the Board viewed the regulated LDC activities of this group as somewhat higher risk than TQM." (RH-1-2008, p. 68).

Dr. Vander Weide quotes on p. 24 of his testimony, from the Ontario Energy Board's "Report of the Board on the Cost of Capital for Ontario's Regulated Utilities. That quote states in part that "In other words, because of these differences, Canadian and U.S. utilities cannot be comparators. The Board disagrees and is of the view that they are indeed comparable, and that only an analytical framework in which to apply judgment and a system of weighting are needed." (Exhibit A2-21)

85.2 Can Dr. Van Dr. Weide confirm that the OEB also said in that section that "The Board notes that Concentric did not rely on the entire universe of U.S. utilities for its comparative analysis. Rather, Concentric carefully selected comparable companies based on a series of transparent financial metrics, and the Board is of the view that this approach has considerable merit. Commenting on Concentric's analysis, Union Gas noted that no one else in the consultation performed this kind of detailed analysis of U.S. comparators. The use of a principled, analytical, and transparent approach to determine a low risk comparator group from a riskier universe for the purpose of informing the Board's judgment was supported by various participants in the consultation." (OEB Report of the Board on the Cost of Capital for Ontario's Regulated Utilities, p. 22)

85.3 As Dr. Vander Weide was also a participant in the OEB proceeding, can he describe how the universe of U.S. companies he has selected for inclusion in his analysis in the current BCUC proceeding differs from the Concentric selected comparables used in the OEB proceeding?

86.0 Reference: Testimony on Cost of Capital for the FBCU by Dr. Vander Weide
Exhibit B1-9-6, Appendix G, p. 27 and Exhibits 6 and 7
Comparable Risk Utilities

On page 27 of Dr. Vander Weide's testimony, Dr. Vander Weide states that "The quarterly DCF model requires an estimate of the dividends, d1, d2, d3, and d4, investors expect to receive over the next four quarters. I estimate the next four quarterly dividends by multiplying the previous four quarterly dividends by the factor, (1 + the growth rate, g)."

86.1 How sensitive is the estimate of the return expected by investors to the growth estimates?

86.2 Please provide sensitivity analyses of Exhibits 6 and 7 showing the model result if the growth rate is increased and decreased by respectively 15 percent, 25 percent and 50 percent.

87.0 Reference: Testimony on Cost of Capital for the FBCU by Dr. Vander Weide
Exhibit B1-9-6, Appendix G, p. 28
Comparable Risk Utilities

Dr. Vander Weide states on page 28 that he uses the I/B/E/S growth estimates because they "…(1) are widely circulated in the financial community, (2) include the projections of multiple reputable financial analysts who develop estimates of future EPS growth, (3) are reported on a timely basis to investors, and (4) are widely used by institutional and other investors."

87.1 Please describe in more detail how the IBES forecasts are determined, specifically:

(a) When were the analysts' forecasts used by Dr. Vander Weide prepared?

(b) Was there any screening of the analysts whose forecasts were used for each of the companies in the samples, by either I/B/E/S or by Dr. Vander Weide?

(c) Was the growth rate used provided directly by the analysts' forecasts or did Dr. Vander Weide calculate the growth rate from other data in the forecasts, such as target price or dividend forecast? If so, how was the calculation done?

88.0 Reference: Testimony on Cost of Capital for the FBCU by Dr. Vander Weide
Exhibit B1-9-6, Appendix G, p. 42 and Exhibit 14
Comparable Risk Utilities

On page 42, Dr. Vander Weide states that "…the average Value Line utility beta at the time of my studies is 0.73, whereas the historical ratio of the average utility risk premium to the average S&P 500 risk premium is 0.92 (5.21 ÷ 5.67 = 0.92) (see Exhibit 13). "

88.1 Can Dr. Vander Weide confirm that his calculation of the historical risk premium ratio is actually shown in Exhibit 14?

88.2 Please describe in more detail how the Value Line utility beta is calculated, including what set of utilities it uses and the time period over which it is calculated? Is the historical risk premium ratio as calculated by Dr. Vander Weide the same as a beta value? If not, please explain how the two differ.

88.3 In previous testimony, how many times has Dr. Vander Weide used the Value Line utility beta to calculate the required rate of return for a utility? How many times has he discarded it in favour of a historical risk premium ratio calculated as shown in Exhibit 14?

88.4 If Dr. Vander Weide has calculated a utility risk premium ratio previously using the general method shown in Exhibit 14, has he used the time period and the same data sets? If not, how does this calculation differ from those previous calculations?

88.5 Granted that the historical ratio of the average utility risk premium to the average S&P 500 risk premium is 0.92, does Dr. Vander Weide believe that, on a common sense basis, utilities are about as risky as the average of the market? Why or why not?

88.5.1 In Dr. Vander Weide's opinion, which companies in the market would share the same risk as Canadian LDCs with monopoly service territories and deferral accounts for most cost and revenue fluctuations that are beyond the direct control of the LDCs?

89.0 Reference: Testimony on Cost of Capital for the FBCU by Dr. Vander Weide
Exhibit B1-9-6, Appendix G, p. 43 and Exhibit 15
Comparable Risk Utilities

On page 43, Dr. Vander Weide states that "…the results for Canadian utilities are similar to the results for U.S. utilities in the sense that the average historical risk premiums on Canadian utility stocks are higher than would be indicated by the betas for Canadian utility stocks."

89.1 Please calculate the historical risk premium ratio for Canadian utilities using the method in Exhibit 14 and the data in Exhibit 15 (for both the S&P/TSX Canadian Utilities Index and the BMO Capital Markets Utility Group.

90.0 Reference: Testimony on Cost of Capital for the FBCU by Dr. Vander Weide
Exhibit B1-9-6, Appendix G, p. 46, Table 4
Comparable Risk Utilities

Table 4 on page 46 provides the deemed equity ratios for Canadian Utilities.

90.1 Please provide a supplementary table showing the date applicable to the deemed equity ratio for each company and the corresponding allowed ROE at that time.

90.2 Please add a column to table 4 to indicate which of the utilities are being regulated under Performance Based Regulation (PBR) and the duration of their PBR.

91.0 Reference: Testimony on Cost of Capital for the FBCU by Dr. Vander Weide
Exhibit B1-9-6, Appendix G, p. 46
Comparable Risk Utilities

On page 46, Dr. Vander Weide states that "I present evidence on market value equity ratios as well as book value equity ratios because financial risk depends on the market value percentages of debt and equity in a company's capital structure rather than on the book value percentages of debt and equity in the company's capital structure."

91.1 With the data on market and book values for your samples of U.S. utilities, please provide the average market-to-book ratios for the samples.

92.0 Reference: Testimony on Cost of Capital for the FBCU by Dr. Vander Weide
Exhibit B1-9-6, Appendix G, p. 116, Exhibit 23
Comparable Risk Utilities

On page 116, in Exhibit 23 of Dr. Vander Weide's evidence, Dr. Vander Weide states that researchers at State Street Financial Advisors updated his study using data through year-end 2003.

92.1 Please provide a copy of the updated study.

93.0 Reference: Testimony by Dr. Vander Weide and Evidence of Concentric Energy Advisors Inc.
Exhibit B1-9-6, Appendix G, p. 24; and Appendix I
Comparable Risk Utilities

Dr. Vander Weide quotes on page 24 of his testimony, from the Ontario Energy Board's "Report of the Board on the Cost of Capital for Ontario's Regulated Utilities. That quote states in part that

"In other words, because of these differences, Canadian and U.S. utilities cannot be comparators. The Board disagrees and is of the view that they are indeed comparable, and that only an analytical framework in which to apply judgment and a system of weighting are needed."

93.1 Can Concentric confirm that it is the firm referred to in the following quote from the OEB Report?

"The Board notes that Concentric did not rely on the entire universe of U.S. utilities for its comparative analysis. Rather, Concentric carefully selected comparable companies based on a series of transparent financial metrics, and the Board is of the view that this approach has considerable merit. Commenting on Concentric's analysis, Union Gas noted that no one else in the consultation performed this kind of detailed analysis of U.S. comparators. The use of a principled, analytical, and transparent approach to determine a low risk comparator group from a riskier universe for the purpose of informing the Board's judgment was supported by various participants in the consultation." (OEB Report of the Board on the cost of Capital for Ontario's Regulated Utilities, p. 22)

93.1.1 If so, can Concentric provide a description of the "…series of transparent financial metrics" that the OEB refers to in its report?

94.0 Reference: FEI Business Risk
Exhibit B1-9-6, Appendix H, pp. 2-3
Generic Business Risk Categories and Factors

FBCU states that "Ms. McShane has described in her evidence categories of utility business risk that can be applied to utilities generally, which are repeated below for ease of reference: Market/Demand risk, Competitive risk, Supply risk, Operating Risk, Political risk, Regulatory risk."

Market/Demand Risk	*•Market demand risks relate to the size of the market for the utility's services and the ability of the utility to capture market share. Market demand risks reflect the demographics of the service area, including the diversity of the economy, economic growth potential, geography/weather, customer concentration, customer spending patterns, customer mix, and customer preferences.*
Competitive Risk	*•Competitive risk refers to the business risk arising from competition for customers and load due to the existence of alternatives to, or potential for substitutes for, the utility's services. Competitive risks would include a utility's cost structure; e.g., a high cost structure has the potential to lead to customer and load attrition and to the development of lower cost alternatives.*
Supply Risk	*•Supply risk relates to the physical availability of the commodities required to deliver service to end use customers. Supply risk includes exposure to supply interruption, and thus, for gas utilities, the degree of reliance on a single supply basin and/or pipeline and the availability of storage. For electric utilities, supply risk also reflects the diversity of supply sources, including owned generation and purchased power.*
Operating Risk	*•Operating risk encompasses the physical risks to the revenue generating capabilities of the utility system arising from technical and operational factors, including asset concentration, the technologies employed to deliver service, service area geography and weather.*
Political Risk	*•Political risk relates to the potential for government to intervene directly in the utility regulatory process or negatively impact utility operations through policy, legislation and/or regulations relating to such issues as tax, energy and environmental policies, industry structure, safety regulations and Aboriginal Rights.*
Regulatory Risk	*•Regulatory risk relates to the framework that determines how the fundamental business risks are allocated between ratepayers and shareholders. Regulatory risk can be considered either as a component of business risk or as a separate risk category. The regulatory framework is dynamic: it is subject to change as a result of shifts in regulatory philosophy, government policies, including energy policy, and underlying fundamental business risk factors, e.g., the competitive environment.*

Table 1. Business Risk Categories and Risk Factors Addressed in this Appendix

Business Risk Category	Risk Factors
Business Profile	• Type of utility • Energy product offering • Size of utility • Service area • Customer profile
Economic Conditions	• GDP • Housing starts • Unemployment
Energy Price	• Commodity price • Commodity price volatility • Upfront and installation costs
Market Shifts	• New technology and energy forms • Perception of energy • Housing types • Changes in energy use • Changes in customer additions
Energy Supply	• Availability of supply • Security of supply
Operating	• Infrastructure integrity • Third party damages • Unexpected events
Political	• Energy policies and legislation • GHG emissions reductions • Carbon tax • Aboriginal rights
Regulatory	• Regulatory approvals • Regulatory uncertainty and lag • Deferral accounts • Administrative penalties

94.1 Please discuss the applicability of each of the eight business risk categories and 29 risk factors, included in Table 1 (page 3) reproduced above, to FEI/FAES's regulated TES projects such as Delta School District No. 37 (DSD), Tsawwassen Springs Development, and PCI Marine Gateway that have had their business risks assessed on a case by case basis to determine their respective cost of capital.

Ms. McShane defines "Market/Demand risk" as: "Market demand risks relate to the size of the market for the utility's services and the ability of the utility to capture market share. Market demand risks reflect the demographics of the service area, including the diversity of the economy, economic growth potential, geography/weather, customer concentration, customer spending patterns, customer mix, and customer preferences."

94.2 Given this definition, how would the FBCU assess the market demand risk for each of the following TES projects, on an individual basis: DSD, Tsawwassen Springs Development and PCI Marine Gateway?

94.2.1 For each of these three projects, if the FBCU believe that market demand risk is present, please explain why.

Ms. McShane defines "Competitive risk" as: "Competitive risk refers to the business risk arising from competition for customers and load due to the existence of alternatives to, or potential for substitutes for, the utility's services. Competitive risks would include a utility's cost structure; e.g., a high cost structure has the potential to lead to customer and load attrition and to the development of lower cost alternatives."

94.3 Given this definition, how would the FBCU assess the competitive risk for each of the following TES projects on an individual basis: DSD, Tsawwassen Springs Development and PCI Marine Gateway?

94.3.1 For each of these three projects, if the FBCU believe that competitive risk is present, please explain why.

94.3.2 Once FEI has succeeded in negotiating long-term contracts with TES customers (e.g., DSD, Tsawwassen Springs Development, PCI Marine Gateway), would the FBCU agree that these customers are captive with no energy supply alternatives for the duration of the long-term contract, therefore eliminating competition risk altogether?

The FBCU have identified generic risk factors applicable to each category or sub-category of business risk in Table 1 (page 4). In Table 2 (page 5), the FBCU have ranked the business risk categories as they apply to FEI and provided a summary assessment of whether the risk to FEI associated with particular risk factors is higher/lower/same as in 2009.

94.4 Please explain why FBCU have not ranked the two business risk categories "Business Profile" and "Economic Conditions" that are included in Table 1, along with their risk factors. Please also provide the risk status since 2009 and the ranking of those risks.

95.0 Reference: FEI Business Risk
Exhibit B1-9-6, Appendix H
Net Income

95.1 For each of the last 10 years, please provide a table of FEI's awarded ROE (%) and net income from utility operations as approved by BCUC ($), along with the actual achieved ROE and net income from utility operations.

95.1.1 Please explain any positive or negative variances between awarded and achieved net income from utility operations greater than 5 percent in any year.

95.1.2 During this period did the BCUC award any costs to FEI for imprudence? If so, please explain the circumstances and the impact to FEI's net income.

95.1.3 Did FEI make any applications to the BCUC during this period for exceptional circumstances and costs that FEI wished to be protected from outside of the annual rate setting? If so, please explain each application and the disposition by the BCUC.

95.1.4 Based on this information, please comment on FEI's perception of its overall risk to net income from regulatory operations in BC.

96.0 Reference: FEI Business Risk
Exhibit B1-9-6, Appendix H
Revenue Requirement Risk

96.1 Please provide a one page summary table of FEI's awarded 2011 revenue requirement by major cost categories and expected revenue by customer class. At minimum, the cost of service categories should include:

a) Cost of gas
b) Operations and maintenance expenses
c) Depreciation and amortization expenses
d) Other revenue
e) Taxes
f) Financing costs
g) ROE
h) Margin revenue by customer class (residential, commercial, industrial, other)

96.1.1 For each cost and revenue category, please identify the cost or revenue and any risk mitigation features allowed by BCUC such as RSAM, cost of gas deferral and incentive, interest rate deferral, net income sharing, etc. Please identify what percentage of the cost or revenue for each category is covered by the risk mitigation feature.

96.1.2 Please provide an overall assessment of the risk to each cost and revenue category based on the risk mitigation features and FEI's historic variance between awarded and actual costs and sales.

97.0 Reference: FEI Business Risk
Exhibit B1-9-6, Appendix H, pp. 5-6
Commodity Risk

On page 5, FEI provides a snapshot of its business risks and concludes on page 6 that "Considered together, FEI business risk and regulatory risk is best characterized as being similar - no lower, and perhaps somewhat higher- than what it was in 2009."

97.1 Would FEI agree that the large drop in natural gas commodity prices and the expected low prices into the future, compared to expected large increases in tier 2 electricity rates, provides the single largest change in business risk for FEI? If not, please explain.

98.0 Reference: FEI Business Risk
Exhibit B1-9-6, Appendix H, p. 9
Total Throughput

Figure 4 provides historic normalized throughput and customer counts.

98.1 Please update the figure to add FEI's expected throughput and customer counts through 2016 including expected sales to transportation customers.

98.2 Based on existing FEI residential gas rates and BC Hydro residential tier 2 rates (excluding basic charge) what is the operating margin between these fuels for an annual use 100 GJ residential customer and an annual use 75 GJ residential customer?

98.3 In 2016, assuming BC Hydro residential tier 2 rates rise by an average 10 %/yr in 2013, 2014, 2015 and 2016 and natural gas commodity prices rise to $4.50/GJ, please estimate the operating margin of natural gas vs. tier 2 electric prices for the customers in the question above. (If FEI does not agree with the cost parameters of this question, please also provide FEI's estimate and underpinning reasons.) Does FEI agree that the current large price advantage of natural gas service to residential customers will increase over the next 5 years?

99.0 Reference: FEI Business Risk
Exhibit B1-9-6, Appendix H, p. 13
Forecast Residential Throughput Levels

Figure 7 provides a residential throughput forecast from the 2010 Conservation Potential Review.

99.1 Please provide another table of FEI's own forecast of total residential throughput levels from 2000 through2020 reflecting existing and expected future natural gas and electricity prices. On the right axis of the same figure please provide the annual average expected consumption of existing residential customers and new residential customers. Please make explicit all underlying assumptions.

100.0 Reference: FEI Business Risk
Exhibit B1-9-6, Appendix H, p. 13
Business Profile

Figure 7 on page 13, the FBCU provide an outlook for FEI's residential throughput levels in PJs and in Table 5, the FBCU provide FEI's NGT Demand in GJs.

100.1 Please complete the following table and discuss the extent to which the forecast increase in total NGT demand (a new initiative) over the 2012-2017 period is expected to offset the forecast decrease in residential throughput (a core FEI service) over the same period.

	2012	2013	2014	2015	2016	2017
A Residential throughput (GJ)						
B Total NGT Demand (GJ)						
Sum of A+B						

100.2 As the energy industry is evolving and FEI is responding to the changes by undertaking new initiatives, please explain why it remains critical for FEI to attract and retain customers in the traditional heating markets, when FEI can grow the emerging NGT business, a sector that is a priority for the BC Government, as illustrated by the 2012 B.C.'s Natural Gas Strategy.

101.0 Reference: FEI Business Risk
Exhibit B1-9-6, Appendix H, pp. 11 and 20
Market Shares in Alberta and Ontario

Table 4 on page 11 shows market shares for natural gas and electricity in these provinces and Figure 12 (page 20) shows the operating cost differences.

101.1 Recognizing that the operating cost differential between natural gas and electricity is likely to widen in BC for the next several years, would FEI agree that its market share should also improve towards that in Alberta and Ontario? If not, why?

101.2 Please update Figure 12 for estimated bills based on annual use rates of 75 GJ and 100 GJ.

102.0 Reference: FEI Business Risk
Exhibit B1-9-6, Appendix H, p. 17
Natural Gas Price Forecasts

Figure 9 provides a comparison of forward prices of natural gas.

102.1 Please update the figure to include a September strip forecast.

102.2 What is the source of the forecasts?

103.0 Reference: FEI Business Risk
Exhibit B1-9-6, Appendix H, p. 17
Natural Gas Price Stability

In a recent decision attached to Order G-120-11, the BCUC stated the following "…However, we also note that in light of the recent exploitation of shale gas, the likelihood for more stable natural gas prices is significantly greater and the risk of dramatically higher natural gas prices, excepting short periods of price disconnects, is significantly lower than it has been in many years."

103.1 Does FEI agree with this statement? If not, why?

104.0 Reference: FEI Business Risk
Exhibit B1-9-6, Appendix H, p. 19
Natural Gas Price Forecasts

Figure 11 provides a comparison of forward prices of natural gas.

104.1 Please update the figure to include the most recent forward prices for NYMEX (Henry Hub).

105.0 Reference: FEI Business Risk
Exhibit B1-9-6, Appendix H, p. 22
Natural Gas Price Forecasts

Figure 13 provides a comparison of forward prices of natural gas.

105.1 Please update the figure for a September forward curve and confidence interval?

106.0 Reference: FEI Business Risk
Exhibit B1-9-6, Appendix H, pp. 24-25
Natural Gas vs. Electricity Price Equivalents

Figures 14 and 15 provide comparisons of natural gas and electricity costs.

106.1 Don't these figures demonstrate that natural gas now has a large price advantage over electric tier 2 prices and a growing total cost advantage over electricity?

106.2 What is FEI doing to market this advantage?

107.0 Reference: FEI Business Risk
Exhibit B1-9-6, Appendix H, pp. 30-31
Market Shifts – New Technology and Energy Forms – Higher Risk Status since 2009

On page 30, the Evidence of the FBCU regarding Business Risk facing FEI indicates that single family dwelling housing starts have been declining in BC while multi-family housing starts have experienced strong growth, specifically since the declines in 2009. In footnote 25, FBCU states The average consumption for single family detached is about 105 GJ, for duplex is 85 GJs, for row/townhouses is 70 GJs, for mobile homes is 60 GJs, and for apartments is 30 GJs, as per Residential End Use Study, November 30, 2009.

107.1 Please expand Figure 19 on page 30 to show housing starts by types (e.g. singles, row, apartments, and total) and by region in BC starting from 2006.

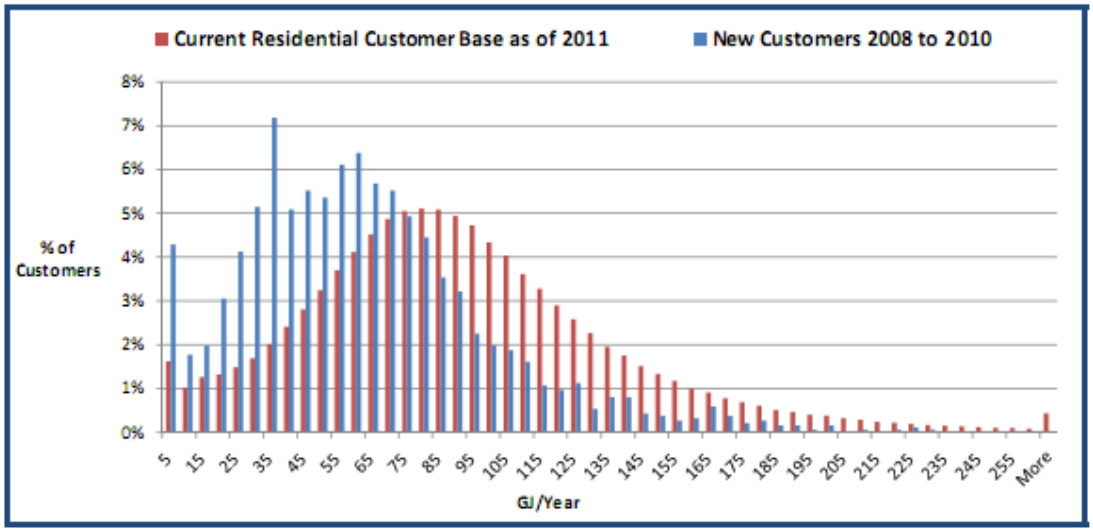
107.1.1 Does the re-stated Figure show any risk implications that may affect FEU's different service areas? Please explain.

107.2 Please clarify whether the average consumption in footnote 25 applies to FEI customers only, or represents average natural gas customers in BC.

108.0 Reference: FEI Business Risk
Exhibit B1-9-6, Appendix H, pp. 31-34
Market Shifts – Changes in Energy Use – Higher Risk Status since 2009

On page 31, the Evidence of the FBCU regarding Business Risk facing FEI states that "FEI is facing declining annual use rates from its existing customers, primarily in the residential sector. This has a direct impact on throughput levels."

Figure 23. FEI's Residential Frequency Distribution



On page 34, the FBCU further state that "natural gas consumption in the residential sector will naturally decline by an additional 2 percent from 2010 to 2030 in the absence of continued demand-side management. The CPR [Conservation Potential Review] also estimated that an additional total reduction in demand of 5 percent by 2030 is mostly likely if new demand-side measures are implemented."

108.1 Since new residential customers have a lower UPC, and in light of the CPR's forecast, do the FBCU believe that the utilities can mitigate risks by limiting new additions of low use residential customers or modifying the current Main Extension Tests to avoid subsidy of low use residential customers? Please explain.

109.0 Reference: FEI Business Risk
Exhibit B1-9-6, Appendix H, pp. 5, 56
Regulatory Risk – Administrative Penalty – Higher Risk Status since 2009

On page 5, the Evidence of the FBCU regarding Business Risk facing FEI indicates that Regulatory Risk is ranked first and that it is higher now than 2009. On page 56, the FBCU state "The amended *UCA* gives the Commission the authority to impose administrative monetary penalty against a public utility in the event that the utility is found to have contravened a provision of the *UCA*, the regulations, or a Commission order or rule. This represents a significant change to the former provisions of the *UCA*,

under which a contravention by the utility of a *UCA* provision or a Commission order or rule constituted an offence, subject to prosecution in a court system."

109.1 Are FBCU aware that these proposed penalties have been proposed for violations of the gas marketer code of conduct and for violations of the BCUC approved electric Mandatory Reliability Schedules? To what extent do the FBCU anticipate they will be used against FEI?

109.2 Please elaborate on how penalties that are subject to prosecution in a court system would potentially have lower risk than administrative penalties imposed by the Commission's authority.

109.3 Do FBCU view that the Regulatory Risk resulting in any administrative penalties is within the utility's full control, as opposed to uncontrollable risks such as economic conditions, energy prices, or regulatory lag? If not, please explain.

B. ESTABLISHMENT OF A BENCHMARK ROE BASED ON A BENCHMARK LOW-RISK UTILITY EFFECTIVE JANUARY 1, 2013 TO DECEMBER 31, 2013 FOR THE INITIAL TRANSITION YEAR

110.0 Reference: Hypothetical versus Specific Utility as Benchmark
Exhibit B1-9, p. 2; Exhibit B1-9-6 Testimony of Ms. McShane pp. 14-16
FEI as Benchmark Utility

The FBCU propose that FEI, as it exists today, remain the benchmark for the purposes of determining the allowed rate of return for all other BC utilities until the next Commission review of the benchmark.

Ms. McShane, in her testimony, states "The designation of one utility as the benchmark utility is partly a matter of efficiency, i.e., it avoids frequent reassessment of factors that are common to all utilities. In addition, it provides a means of ensuring that all the utilities subject to the jurisdiction of the Commission are awarded overall returns that appropriately reflect their business risk relative to the benchmark utility, and , in turn, relative to each other.

……

Given both objectives, it makes most sense to designate a specific utility as the benchmark utility, rather than to rely on a hypothetical construct or hypothetical utility as the benchmark.

…….

FEI is the logical choice to serve as the benchmark BC utility. FEI is the largest investor-owned utility in British Columbia, is one of the largest gas distribution utilities in the country, and has a relatively diverse geographic, customer and asset base. It has no exceptional business risk characteristics that are likely to make comparisons with other BC utilities problematic.

….

The proposed amalgamation does not invalidate designating FEI as the benchmark BC utility, as comparisons with other BC utilities can be made based on the characteristics of FEI pre-amalgamation for purposes of establishing their cost of capital by reference to the benchmark utility. In addition, FEI pre-amalgamation can be used as the benchmark utility for establishing the cost of capital for FEI Amalco, should amalgamation proceed."

110.1 Please provide a detailed description on FEI as a benchmark utility for other utilities in B.C. for the purpose of setting their allowed returns (capital structure and ROE). In your description, please include the following:

a. Size (gross and net revenue, customers, rate base, products and services, employees, etc.)

b. Ability to attain an 'A' rating on a standalone basis

c. Traditional core business and, in the short term future, the expansionary opportunities in new initiatives

d. Perception by investors in debt and equity

e. FEI's risks as a benchmark relative to the lowest risk utilities, other low risk utilities as described by the credit and equity analysts, and other non-regulated companies.

110.2 Do the FBCU consider that FEI is a utility undergoing transformation? E.g., transformation relative to its affiliated companies such as FEVI, FEW? Relative to other regulated utilities in B.C. such as PNG, BC Hydro?

110.3 In the view of the FBCU, could the FEI of 2009 – to be treated as frozen in time --- be used as the hypothetical benchmark ROE for 2012 and beyond? Why or why not?

110.4 In the view of the FBCU, can FEI, as it exists today and regardless of changes in the next few years, be used as the benchmark ROE for the next 3 to 5 years and have the future FEI and other utilities' risks and allowed returns on cost of capital evaluated against this entity? Why or why not?

111.0 Reference: Hypothetical versus Specific Utility as Benchmark
Exhibit B1-9, p. 2; Exhibit B1-9-6 Testimony of Ms. McShane pp. 14-16
FEI as Benchmark Utility

FBCU propose that FEI, as it exists today, remain the benchmark for the purposes of determining the allowed rate of return for all other BC utilities until the next Commission review of the benchmark.

Ms. McShane, in her testimony, says:

"The designation of one utility as the benchmark utility is partly a matter of efficiency, i.e., it avoids frequent reassessment of factors that are common to all utilities. In addition, it provides a means of ensuring that all the utilities subject to the jurisdiction of the Commission are awarded overall returns that appropriately reflect their business risk relative to the benchmark utility, and , in turn, relative to each other.

……

Given both objectives, it makes most sense to designate a specific utility as the benchmark utility, rather than to rely on a hypothetical construct or hypothetical utility as the benchmark.

FEI is the logical choice to serve as the benchmark BC utility. FEI is the largest investor-owned utility in British Columbia, is one of the largest gas distribution utilities in the country, and has a relatively diverse geographic, customer and asset base. It has no exceptional business risk characteristics that are likely to make comparisons with other BC utilities problematic.

….

The proposed amalgamation does not invalidate designating FEI as the benchmark BC utility, as comparisons with other BC utilities can be made based on the characteristics of FEI pre-amalgamation

for purposes of establishing their cost of capital by reference to the benchmark utility. In addition, FEI pre-amalgamation can be used as the benchmark utility for establishing the cost of capital for FEI Amalco, should amalgamation proceed."

111.1 Please provide a detailed description on FEI as a benchmark utility for other utilities in B.C. for the purpose of setting their allowed returns (capital structure and ROE). In your description, please include the following:

f. Size (gross and net revenue, customers, rate base, products and services, employees, etc.)

g. Ability to attain an 'A' rating on a standalone basis

h. Traditional core business and, in the short term future, the expansionary opportunities in new initiatives

i. Perception by investors in debt and equity

j. FEI's risks as a benchmark relative to the lowest risk utilities, other low risk utilities as described by the credit and equity analysts, and other non-regulated companies.

111.2 Do FBCU consider that FEI is a utility undergoing transformation? E.g., transformation relative to its affiliated companies such as FEVI, FEW? Relative to other regulated utilities in B.C. such as PNG, BC Hydro?

111.3 In the view of FBCU, could the FEI of 2009 – to be treated as frozen in time --- be used as the hypothetical benchmark ROE for 2012 and beyond? Why or why not?

111.4 In the view of FBCU, can the FEI, as it exists today and regardless of changes in the next few years, be used as the benchmark ROE for the next 3 to 5 years and have the future FEI and other utilities' risks and allowed returns on cost of capital evaluated against this entity? Why or why not?

111.5 Specifications of a hypothetical benchmark

FEI – BENCHMAKR UTILITY	HYPOTHETICAL BENCHMARK UTILITY
Customer Mix of FEI (% share): • Industrial • Commercial • Residential	
Customer Class Margins	
Competitiveness of Natural Gas (commodity, delivery, carbon tax, etc.) to Other Fuels (e.g., electricity)	
Size of FEI • Capital expenditure ($) • Sales ($) • Number of employees • Rate Base	
Size of debt ($, % of capital structure) and Cost of Debt	
State of plants and equipment	
List of risk mitigation deferral accounts	

FEI – BENCHMAKR UTILITY	HYPOTHETICAL BENCHMARK UTILITY
Financial Metrics • 5-year indicative spreads (bps) • 10-year indicative spreads (bps) • 30-year indicative spreads (bps) • Credit ratings • Credit ratios (EBITDA/interest, FFO/total debt • Debt issuance and long term debt maturity schedules	

111.5.1 The table above lists a number of features and characteristics (non-exhaustive) of FEI that as a benchmark, other actual utilities and B.C. are compared to in order to establish ROE and capital structure differentials. Please fill out the left hand column in the above table and add other features that FBCU consider to be defining features.

111.5.2 If the Commission chose a hypothetical benchmark utility, could FBCU explain how the Commission should compare actual utilities in B. C. to the hypothetical benchmark in the right hand column in order to establish actual risk factors and estimate ROE and capital structure differentials. In what aspects should the hypothetical utility be defined as identical to FEI and in what aspects could it be different so that the hypothetical utility could be described as a low-risk utility?

112.0 Reference: Application of the Fair Return Standard
Exhibit B1-9, pp. 2, 10, 28
Periodic Review of the Benchmark Allowed Rate of Return

The FBCU propose that FEI, as it exists today, remain the benchmark for the purposes of determining the allowed rate of return for all other BC utilities until the next Commission review of the benchmark.

The FBCU's position is that a review of the benchmark ROE and capital structure every three to five years, rather than a ROE AAM that makes annual adjustments, is the appropriate means for determining the benchmark ROE and capital structure.

112.1 Do the FBCU have in mind what should be the events that should trigger for the next review of the benchmark after this generic proceeding?

112.1.1 If the amalgamation proposal for FEVI, FEW and FEI is allowed to proceed, would this trigger a review without having to wait three to five years?

112.2 Do the FBCU agree that updating the parameters of a ROE AAM annually is not the same as reviewing the AAM formula for the purpose of adjusting or modifying the formula?

113.0 Reference: FBCU AAM evidence
Exhibit B1-9, p. 28
Regulatory Efficiency

FBCU state"…the ROE should be determined in periodic Commission processes. The appropriate period between reviews should be three to five years. However, the resulting ROE and capital structure for all affected utilities must always meet the Fair Return Standard. Any affected utility, or interested party, should remain at liberty to seek an adjustment if the cost of capital no longer meets the Fair Return Standard as a result of emerging circumstances during the period between anticipated proceedings."

113.1 If the Commission were to determine that periodic reviews should be limited to three to five years, do the FBCU see merit in some form of AAM to adjust utility ROE's in the intervening years?

113.2 If an AAM were established for the intervening years, do the FBCU consider the OEB or Regie AAM to be an appropriate mechanism? Why, and are their other features that FBCU would suggest to improve the AAM while still making it efficient to operate?

113.3 Are there other conditions which should apply for the intervening years between hearings, such as the Long Canada bond yield not fluctuating by more than 2-3 percent, etc.?

113.4 With conditions like those considered above, and recognizing the high cost and time commitment to a cost of capital proceeding along with the judgmental nature of the evidence and determinations, would the FBCU reconsider its statement "Any affected utility, or interested party, should remain at liberty to seek an adjustment if the cost of capital no longer meets the Fair Return Standard as a result of emerging circumstances during the period between anticipated proceedings."

114.0 Reference: Application of the Fair Return Standard
Exhibit B1-9, p. 34
Cost of Capital for FEI as Benchmark

The FBCU submit that the Commission should give recognition to the ongoing challenges posed by the volatility and uncertainty in financial markets, in particular equity markets. Consideration should also be given to the ongoing business risk trends faced by the benchmark utility in B.C.

The FBCU submit that the Fair Return Standard is met in this Proceeding by the benchmark utility, FEI, having a capital structure that includes a 40 percent equity ratio, and a ROE of 10.5 percent.

114.1 Are the FBCU proposing the capital structure of 40 percent equity ratio and a ROE of 10.5 percent effective January 1, 2013 or any other date? Please provide detailed reasons in your response.

115.0 Reference: Application of the Fair Return Standard
Exhibit B1-9-2 Appendix A Section 3A, RBC Capital Markets Research Report dated February 10, 2012
Cost of Capital for FEI as Benchmark

The RBC report states on page 2 that on December 8, 2011, the Alberta Utilities Commission released its GCOC decision where, among others, it reduced the allowed ROE for Alberta based utilities to 8.75% (from 9.0% previously) for 2012 and on an interim basis for 2013. Also the RBC reports states that the decision to reduce the ROE was applied retroactively to Q4/11, negatively impacting FortisAlberta's earnings by $2 million. The report further states that as part of the process to finalize the 2013 ROE, the AUC noted that it would re-examine the potential to bring back a formula-based automatic adjustment mechanism.

115.1 Please confirm FBCU's understanding of the AUC decision as described above. If FBCU cannot confirm, please state FBCU's own understanding.

116.0 Reference: Trends in Economic and Capital Market Conditions since 2009
Exhibit B1-9-6 Appendix F Testimony of Ms. McShane pp. 31, 32
Price Earnings Ratios

Ms McShane analyzed the S&P/TSX Composite and S&P/TSX 60 indexes' reported earnings and dividends and concluded that since September 2009 and at the end of June 2012, the two price indices were little changed from their September level. The resulting index price/earnings (P/E) ratios were lower (and the dividend) yields were higher) at the end of June 2012 than at the end of September 2009.

116.1 Is Ms. McShane able to confirm that in the intervening period between September 2009 and June 2012, the S&P/TSX Composite and S&P/TSX 60 indexes fluctuated widely?

116.1.1 Please provide the range of the above two indexes (i.e., highest and lowest at day's closing) for the 33 month period.

116.2 Ms. McShane concludes that the market cost of equity has moved higher in the interim period from the table presented in Table 3 of her testimony. Please explain how this logic supports Ms. McShane's basic premise that the allowed ROE will remain unchanged for at least three years (page 4, Appendix F).

117.0 Reference: Evidence of Concentric Energy Advisors Inc.
Exhibit B1-9-6, Appendix I, pp. 3, 11 (2012 Concentric Update)
AAM – Ontario Energy Board

On page 3, the Concentric Update states "In December 2009, the Ontario Energy Board rebased and modified its AAM from a simple reliance on 75% of the change in the Canada Long Bond to 50% of the change in forecast long-term Canada bond yields and 50% of the change in observed A-rated utility bond index over the 30-year Canada Bond yield. The OEB continues to rely on its modified formula."

On page 11, the 2012 Concentric Update states"… if the Ontario formula were to be considered by the BCUC, we would recommend the formula be reviewed every three to five years."

117.1 Please indicate whether FBCU view that OEB's rebased and modified AAM formula is appropriate to determine a benchmark ROE in BC. Why or why not?

117.1.1 Please confirm that the OEB rebased and modified AAM formula does not have any provisions for Deadband, Ceiling/Floors, or Trigger Mechanisms.

117.1.2 Should there be any Deadband, Ceiling/Floor, or Trigger Mechanisms if the Commission was to consider an ROE AAM in BC that is similar to OEB's rebased and modified AAM formula? If so, what should those limits/triggers be set to and why?

117.2 If the periodic rate proceedings are conducted every three to five years, do the FBCU believe that OEB's rebased and modified formula can withstand and meet the Fair Return Standard over this period of time?

117.2.1 In light of Canada bond yields and A-rated utility bond index, is there a min/max range of numerical inputs where the OEB rebased and modified AAM formula would work and meet the Fair Return Standard? Is there a range of numerical inputs where it would suggest otherwise? Please explain and specify.

117.3 Assuming that data for May to August 2012 are available, please calculate a benchmark ROE effective September 1, 2012 if the same OEB rebased and modified formula is used to determine the benchmark ROE in BC. Please show the detailed calculations and list any assumptions.

117.3.1 If applicable, for the calculated benchmark ROE, do the FBCU believe this ROE meet the Fair Return Standard and is an acceptable benchmark ROE for this Proceeding?

117.3.2 Do the FBCU expect the benchmark ROE for January 1, 2013 to be similar to the September 1, 2012 ROE?

C. EXAMINATION OF THE RE-ESTABLISHMENT OF THE ROE AUTOMATIC ADJUSTMENT MECHANISM

118.0 Reference: ROE AAM
Exhibit B1-9 p. 27; Exhibit B1-9-5 RBC Capital Markets Data on Spreads
Fair Return Standard Requirement

The FBCU state that it has two main concerns with adopting a new AAM formula. First concern is that the shortcomings in the formula can yield a return that does not meet the Fair Return Standard. Second concern is that the efficiency benefits may be illusory.

118.1 Before the formula was eliminated in the December 2009 ROE Decision, it was in use since 1994/1995. In the view of the FBCU, are there years where the benchmark ROE calculated by the formula exceeded and years where the benchmark ROE falls short of the Fair Return Standard?

118.1.1 If the AAM could not provide a 'correct' ROE, what is a range of reasonableness?

118.2 In the table showing credit spreads for the period January 31, 2006 to May 31, 2012, it can be seen that during pre-January 31, 2008, spreads (bps) were below 155 and during 2007 it was as low as 115. Please comment if it is likely that in the days pre-2008 there was a mispricing of risk due to market exuberance which resulted in returns on common equity for a benchmark utility above the fair return standard?

118.2.1 Does an AAM which produce results within a range of reasonableness, properly track the market sentiment?

119.0 Reference: Testimony of Ms. Kathleen McShane
Exhibit B1-9-6 Appendix F, pp. 31- 33
Automatic Adjustment Formula

Ms. McShane analyzed that the earnings yields, the inverse of the P/E ratios, provide a rough guide to the direction in the market cost of equity in the period 2009 to the present. She opined that while the Government of Canada bond yields have declined significantly between late 2009 and mid-2012, the corresponding implication is that the equity market risk premium is higher currently than it was in late 2009.

Ms. McShane observed that since the beginning of 2008, the ratio of utility dividend yields to long-term Canada bond yields has risen markedly.

Ms. McShane is of the opinion that in light of the persistently unsettled capital markets and the unstable relationships between the utility cost of equity and Government bond yields, it would be difficult to construct an automatic adjustment mechanism for return on equity at this time that would successfully capture prospective changes in the utility cost of equity. In particular, an automatic adjustment formula tied to changes in government bond yields has the potential to unfairly suppress the allowed ROE.

119.1 Is the unstable relationship between Canadian utility dividend yields and long-term Government of Canada bond yields as observed by Ms. McShane a temporary phenomenon?

119.1.1 If the unstable relationship persists, would a new AAM that incorporate utility bond yields and Canada bond yields as variables produce more reasonable benchmark ROEs?

120.0 Reference: Evidence of Concentric Energy Advisors and FBCU
Exhibit B1-9-6 Appendix I, p. 13 (2012 Concentric Update); Exhibit B1-9, p. 28
Periodic Rate Hearings and Regulatory Efficiency

On page 13, the Concentric Update concludes that periodic rate case determinations remain the method most likely to produce fair returns over time under varied market circumstances.

Section 60(1)(b) of the *Utilities Commission Act* states that:

> (b) the commission must have due regard to the setting of a rate that
>
> (i) is not unjust or unreasonable within the meaning of section 59,
>
> (ii) provides to the public utility for which the rate is set a fair and reasonable return on any expenditure made by it to reduce energy demands, and
>
> (iii) encourages public utilities to increase efficiency, reduce costs and enhance performance,

120.1 Please comment on whether the analysis and conclusion from Concentric considers the requirements of the Commission's mandate set out in subsection b (i) and b(iii) above. If so, please outline the considerations in each subsection. If not, why not?

120.2 Please discuss whether Concentric's conclusion for periodic rate case determinations for ROE considers the incremental regulatory costs required and ultimately burdened on ratepayers. Please explain whether this incremental regulatory cost is consistent with section 60(1)(b)(iii)?

The FBCU state "While regulatory efficiency is an appropriate consideration, achieving a return that meets the Fair Return Standard is always the paramount obligation.

Second, the efficiency benefits may be illusory. The AAM in use previously was adopted in 1994, and over the 15 year period, there were regular reviews and adjustments with the AAM in part due to concerns that the ROEs produced were not meeting the Fair Return Standard. So while efficiency was intended, it is not clear that the ultimate goal was achieved."

120.3 Would the FBCU please substantiate the above statements by providing the following:

a) An estimate of the costs expended by the FBCU on this proceeding to date, including FBCU staff time, legal counsel and expert witnesses

b) An estimate of the total future costs to the FBCU for the IR process, hearing process and follow-up

c) An estimate of Registered Interveners costs including their experts.

d) An estimate of Commission-related costs including staff time, Commissioners time, Commission Counsel and consultants' time.

121.0 Reference: Evidence of Concentric Energy Advisors Inc.
Exhibit B1-9-6, Appendix I, p. 7 (2012 Concentric Update)
Formulaic Adjustment Mechanism Design Considerations

On page 7 of the Concentric Update, Concentric states that "A formulaic ROE that can be readily estimated by stakeholders promotes regulatory transparency, enabling investors to make forward projections based on widely understood data inputs."

121.1 Is an ROE that is set by frequent cost of capital or rate hearings more or less able to enable investors to make forward projections? Why?

122.0 Reference: Evidence of Concentric Energy Advisors Inc.
Exhibit B1-9-6, Appendix I, p. 8 (2012 Concentric Update)
Formulaic Adjustment Mechanism Design Considerations

On page 8 of the Concentric Update, Concentric elaborates on its seventh design criterion "Insulated from the Effects of Anomalous and Transitory Market Conditions."

122.1 Is an "off ramp" from the formula when economic or market conditions become too unstable a suitable way to meet this criterion?

122.2 To what extent does, or can, the eighth criterion – "Specified Timetable for Periodic Review and/or Rebasing of the Formula"--create such off ramp and therefore satisfy the preceding criterion ("Insulated from the Effects of Anomalous and Transitory Market Conditions")?

123.0 Reference: Evidence of Concentric Energy Advisors Inc.
Exhibit B1-9-6, Appendix I, p. 10 (2012 Concentric Update)
Formulaic Adjustment Mechanism Design Considerations

On page 10 of the Concentric Update, it states that "An AAM should be sufficiently robust to function in varied and extreme market conditions".

123.1 Is there an optimal time period over which an AAM should demonstrate such robustness? If an ROE is rebasing or re-set every 3-5 years, then can the formula be adjusted at that time if required so that robustness only needs to be sufficient for one business cycle (or perhaps less)?

124.0 Reference: Evidence of Concentric Energy Advisors Inc.
Exhibit B1-9-6, Appendix I, p. 12 (2012 Concentric Update)
Potential Approaches

On page 12 of the Concentric Update, Concentric submits that foremost among the challenges associated with the design and implementation of an ROE formula, is the dynamic nature of financial markets and the potential change in equity costs for the benchmark utility in relation to the broader industry.

124.1 If an ROE based on a formula was rebased every 3-5 years, would these challenges be more or less significant for an ROE that was set after a hearing for a period of 3 years without adjustment?

125.0 Reference: Evidence of Concentric Energy Advisors Inc.
Exhibit B1-9 p. 4; Exhibit B1-9-6, Appendix I, p. 10 (2012 Concentric Update)
AAM Methodology – Relevance to Current Economic Conditions

On page 4 of Exhibit B1-9, the FBCU state "The primary basis for the 2009 Application was that the allowed ROE of 8.47% and equity thickness of 35.01% failed to meet the Fair Return Standard, and that the AAM was broken… There was a reasonable prospect that the AAM, which was tied to Government of Canada long bond yields, would soon yield an ROE below 8%. The financial crisis of 2008 thus influenced the timing of the Application but it was not the sole basis for the 2009 Application."

Page 10 of the Concentric Update states "… during the 2008-2009 financial crisis, a formula that is heavily weighted on a single factor may be unduly influenced by market events. During the financial crisis and economic recession, credit spreads widened significantly and equity market volatility rose to unprecedented levels, ultimately causing government bond yields and corporate capital costs to move opposite to one another despite a historical positive relationship… Common equity holders are exposed to higher risk than bond holders, and both classes of investment are subject to market circumstances (e.g., the flight to safety lowering government bond yields) that may impact that security but not the other."

125.1 Concentric Update attributes the broken formula to, in parts, the government bond yields and corporate capital costs moving in opposite direction despite a historical positive relationship. Do the FBCU believe that regulated utilities in BC should be unaffected by the volatility of fluctuating Canadian bond yields over time? Please explain.

125.1.1 Do the FBCU believe that the benchmark ROE for regulated utilities in BC should reflect economic cycles (e.g. lower ROEs during economic recessions and higher ROE during expansions)? Please explain.

125.1.2 In a recession, the overall market may experience relatively low returns. Should investors in regulated utilities be immune from a lower rate of return that is reflective of the recessionary market? Why or why not?

126.0 Reference: Evidence of Concentric Energy Advisors Inc.
Exhibit B1-9-6, Appendix I, p. 11 (2012 Concentric Update), p. 26 (2010 Concentric Report)
Backcast Analysis

On page 11 of the Concentric Update, Concentric discusses the use of a backcast analysis on nine alternative formulas. Page 26 of the 2010 Concentric Report shows the results of the backcast analysis.

126.1 Please update Figure 4: Backcast Analysis to reflect the latest data and provide the accompanying dataset for the Figure.

126.2 Do the backcasted alternatives with a poor fit to the Terasen Gas Inc. (as FEI was formerly known) Actual Authorized ROE necessarily reduce the desirability of those alternatives in the future? Why or why not?

127.0 Reference: Evidence of Concentric Energy Advisors Inc.
Exhibit B1-9-6, Appendix I, p. 47 (2010 Concentric Report)
Examination of the ROE AAM

On page 47of the 2010 Concentric Report discusses the use of stress tests for a formulaic approach.

127.1 Please provide an update of the stress tests given current 2012 market conditions.

128.0 Reference: Evidence of Concentric Energy Advisors Inc.
Exhibit B1-9-6, Appendix I, p. 1 (2010 Concentric Report)
Comparative Canadian and U.S. Utility Equity Returns

On page 1 of the 2010 Concentric Report states that "Over the period since implementation of the AAM, Canadian utilities that were receiving ROEs in parity with the U.S., were receiving ROE awards 200 basis points lower than their U.S. counterparts."

128.1 Please provide the date showing the relative ROEs between Canadian and U.S. utilities, and the period(s) when the ROEs were at parity.

129.0 Reference: Evidence of Concentric Energy Advisors Inc.
Exhibit B1-9-6, Appendix I, p. 6 (2010 Concentric Report)
Comparative Canadian and U.S. Utility Equity Returns

On page 6 of the 2010 Concentric Report states that "…there are a handful of U.S. jurisdictions that fix ROE at a specified rate and do not make adjustments, but rather share overages and shortfalls with ratepayers."

129.1 Even in those instances is it still not necessary to determine a fair return in order to calculate the overage or shortfall? If not what is the base from which it is calculated?

130.0 Reference: Evidence of Concentric Energy Advisors Inc.
Exhibit B1-9-6, Appendix I, p. 12 (2010 Concentric Report)
Alternative Formulaic Approaches

On page 12of the 2010 Concentric Report reproduces Figure 2 from its 2007 Report for the OEB and states that the figure shows a "…strong positive relationship between average annual 30-year U.S. Treasury yields and the average annual dividend yields for a representative group of U.S. gas distribution utilities."

130.1 Since the 30-year bond yield is consistently above the dividend yield by approximately 0.5 to 1.5 yield percentage, would Concentric consider the 30-year treasury yield to be a suitable upper limit for the growth estimates in the DCF test? If not, why not?

131.0 Reference: Evidence of Concentric Energy Advisors Inc.
Exhibit B1-9-6, Appendix I, p. 28 (2010 Concentric Report)
Alternative Formulaic Approaches

Referring to the Table 3 titled Descriptive Statistics (January 1, 1994 - June 30, 2010) on page 28 of the Concentric Report dated November 29, 2010 (2010 Concentric Report), Concentric states that: "The variability in U.S. ROE decisions is the lowest within the sample of formula inputs…"

131.1 Can Concentric say if the direction of interest rates and bond yields over the same period was consistently rising or falling, and if so, in which direction were they moving?

131.2 To what extent does the low variability in U.S. ROE decisions reflect that litigated ROE cases are relatively insensitive to market changes?

131.3 To what extent is using this as an input circular?

132.0 Reference: Evidence of Concentric Energy Advisors Inc.
Exhibit B1-9 pp. 28-29; Exhibit B1-9-6, Appendix I, pp. 39-45 (2010 Concentric Report)
ROE AAM as Alternative – Concentric Recommendation

On pages 28 and 29 of Exhibit B1-9, the FBCU state "… if the Commission requires a ROE AAM as an outcome of this Proceeding, the Commission should at a minimum seek to rectify some of the most problematic elements of the old formula. Any new formula would need to introduce new factors that would address changes in utility equity risk premium, not solely changes in Government of Canada bond yields, and any adjustment factor would need to reflect the sensitivity to change in bond yields to ROE."

Starting on page 40 of the 2010 Concentric Report, Concentric provides the following formulaic methodologies:

(1) Utility Bond Yield Index
(2) Utility Bond Yield Index with a Deadband and Trigger
(3) Combined Utility Bond Yield and Average Awarded ROE Index
(4) Multiple Method Model

132.1 If the Commission considers an ROE AAM, do the FBCU prefer a particular methodology as provided by Concentric?

132.2 With respect to the Utility Bond Yield Index method, Concentric submits that the Bloomberg Fair Value Canada 30-Year A-rated Utility Bond yield and the DEX alternative move in close proximity, and either should be a reliable indicator of long-term Canadian utility bond yields.

Please compare and contrast the features of the Bloomberg Fair Value Canada 30-Year A-rated Utility Bond Index and the DEX Long-Term Energy Index (as mentioned in Figure 13, p. 39 of the 2010 Concentric Report).

132.2.1 Please confirm that the "DEX alternative" that can be used in the Utility Bond Yield Index method refers to the DEX Long-Term Energy Index. If not confirmed, please clarify.

132.2.1.1 Please provide similar analysis as shown in *Appendix A – Formulaic Inputs* for the DEX alternative (or DEX Long-Term Energy Index).

132.2.2 Please demonstrate (include R^2 statistics) that the Bloomberg Fair Value Canada 30-Year A-rated Utility Bond yield and the DEX alternative move in close proximity. Please show from 1990 to present.

132.2.3 Are there any reasons to choose Bloomberg over DEX for a utility bond index for the purposes of an ROE AAM formula?

132.2.4 Please clarify the difference, if any, between the Bloomberg Fair Value Canada 30-Year A-rated Utility Bond yield and the Bloomberg historical 30-Year A-rated Utility Bond Yield (as shown in *Appendix A – Formulaic Inputs*). Which one should be used in the Utility Bond Yield Index method?

132.2.5 Should the ROE AAM consider both U.S. and Canadian Utility Bond Yields, or only Canadian Utility Bond Yields? Please explain.

132.2.6 How would the Utility Bond Yield Index method differ if 30-Year Canada long bond is included? Please show numerical example(s) and list the assumptions.

132.3 With respect to the Utility Bond Yield Index with a Deadband and Trigger method, Concentric recommends a Deadband: 50 basis points and Trigger Mechanism: 100 basis points. Please confirm these two thresholds are appropriate to be applied across all regulated utilities in BC. If not confirmed, please explain otherwise.

132.3.1 Please explain the merits to set a (i) 50bps Deadband and (ii) 100bps Trigger Mechanism.

132.3.2 By implementing Deadband (50bps) and Trigger Mechanism (100 bps) at the same time, please confirm that any ROE AAM adjustments must fall within 50bps to 100bps. If not confirmed, please state the minimum/maximum range in case of an ROE change.

133.0 Reference: Evidence of Concentric Energy Advisors Inc.
Exhibit B1-9-6, Appendix I, p. 9 (2012 Concentric Update)
Formulaic Adjustment Mechanism Design Considerations

On page 9 of the Concentric Update, Concentric discusses "…trigger mechanisms that prompt a review if a predetermined threshold is met, and predetermined periods for rebasing ROE."

133.1 To what extent do such mechanisms, including ceilings and floors and deadbands, as discussed on page 9, satisfy the "Insulated from the Effects of Anomalous and Transitory Market Conditions" criterion on page 8 of the 2012 Concentric Update?

134.0 Reference: Evidence of Concentric Energy Advisors Inc.
Exhibit B1-9-6, Appendix I, p. 15 (2010 Concentric Report)
Alternative Formulaic Approaches

On page 15, the 2010 Concentric Report states "Other means of factoring equity returns into AAMs might include incorporating the ROEs authorized by other jurisdictions into the formulaic mechanism. Concentric proposed such a formula in Alberta and Ontario, where an equal weighting of the formulaic adjustment mechanism (specified with a coefficient of 0.50 and use of the Bloomberg 30-year A-rated utility bond yield) was combined with an index of North American allowed utility returns applied to the initial ROE."

134.1 Specifically, what index did Concentric propose?

134.2 Can Concentric confirm that the OEB did not adopt Concentric's proposal to include in the AAM formula an index of North American allowed utility returns?

134.2.1 If confirmed, can Concentric provide the reasons provided by the OEB for not adopting that part of Concentric's proposal in its AAM formula?

135.0 Reference: Evidence of Concentric Energy Advisors Inc.
Exhibit B1-9-6, Appendix I, pp. 38-39 (2010 Concentric Report)
Transparency and Data Availability

On page 39 of the 2010 Concentric Report, Figure 13 and Figure 14 show a comparison of A-Rated Utility Bond Indices and A-rated Corporate Bond Indices, respectively, for Bloomberg, DEX, and Moody's.

On page 38, the 2010 Concentric Report states "… the Bloomberg Fair Value Curve and the DEX PC Bond Analytics Universe curve, both representing Canadian bond yield indices for the utility and energy sectors, respectively, are nearly identical, and accordingly, we conclude that these series are reasonable substitutes for Canadian utility bond yields. The Moody's utility data suggests that the U.S. bond indices and Canadian utility bond indices have diverged in the past, though today all three indices provide similar yields for utility bonds."

135.1 Please update Figure 13 and Figure 14 to the latest quarter available. Please include the accompanying dataset.

135.2 Please compute the R^2 statistics to demonstrate the correlation between Bloomberg and DEX for the updated Figure 13 and 14.

135.3 Please compute the R^2 statistics to show the divergence between Moody's U.S. bond indices and Canadian utility bond indices for the updated Figure 13 and Figure 14.

135.3.1 Please provide more detail on the divergence between U.S. and Canadian utility bond yields. During what periods did they diverge? By how much? What were the reasons for the divergence(s)?

135.3.2 To what extend does Concentric consider it likely or possible that U.S. and Canadian utility bond yields will diverge again in the future?

136.0 Reference: Evidence of Concentric Energy Advisors Inc.
Exhibit B1-9-6, Appendix I, p. 1 (2010 Concentric Report); Return On Equity and Capital Structure BCUC Decision dated December 16, 2009
Low Government Bond Yields

On page 1 of the 2010 Concentric Report states "… the Commission determined that "a single variable is unlikely to capture the many causes of changes in ROE" and as such, discontinued the AAM."

On page 72 of the 2009 ROE and Capital Structure Decision, the Commission Panel found "The Commission's calculation of the ROE for 2010, as derived from the adjustment mechanism, is 8.43 percent, compared to the Commission Panel's determination that the appropriate ROE for TGI in 2010 is 9.50 percent. The Commission Panel determines that, in its present configuration, the AAM will not provide an ROE for TGI for 2010 that meets the fair return standard."

136.1 One of the reasons to discontinue the AAM is due to government bond yields declining to low levels. Would establishing an adder to the low government bond yield increase adjustment to the pre-2009 AAM formula to boost the allowed ROE work as an alternative?

136.1.1 What should be the yield threshold to justify that Canada Government Bond yields are at low levels? Please specify a threshold for 5, 10, and 30-year Canada bond yields.

136.1.2 Hypothetically speaking, in a low Canada Government Bond yield environment, if the low government bond yield increase adjustment is to top up the allowed ROE to 9.5 percent (which was found to meet the Fair Return Standard in 2009), please estimate the range between what the pre-2009 AAM formula would have calculated now for the allowed ROE and the allowed ROE of 9.5 percent.

136.1.2.1 Is the calculated range an acceptable adjustment to the AAM formula to adjust for low Canada Government Bond yields?

D. A GENERIC METHODOLOGY OR PROCESS FOR EACH UTILITY TO DETERMINE ITS UNIQUE COST OF CAPITAL IN REFERENCE TO THE BENCHMARK LOW-RISK UTILITY

137.0 Reference: FortisBC Utilities Evidence
Exhibit B1-9, p. 32
Business Risk

On p. 11 of the FBCU's evidence, the FBCU state that "Ms. McShane has noted in her evidence that the determination of a public utility's risk profile is not a simple matter of tallying-up, grouping or ranking risk factors; all of the factors must be considered holistically. There is no formulaic way to assign a value or weighting to specific risk factors or utility/utility sector characteristics that would apply across multiple utilities and generate the appropriate cost of capital for each one."

3.3 To what extent are the FBCU aware of benchmarking exercises in other jurisdictions that use performance characteristics to benchmark the performance of a utility against its peers? Please describe any examples of which the FBCU are aware and why they may or may not be applicable in BC.

138.0 Reference: FortisBC Utilities Evidence
Exhibit B1-9, p. 34
Business Risk

On page 34 of the FBCU's evidence, the FBCU state that "The FBCU submit that it may be efficient, given the small size of thermal energy systems, to have a single process to address cost of capital issues for thermal energy systems, irrespective of the provider. This would include FEI and FAES' Thermal Energy Services, and similar systems to be operated by developers or providers like Corix Multi Utility Services.

138.1 How would such a process consider, if at all, potential differences in business risk between FEI affiliates and other providers such as Corix?

139.0 Reference: Testimony on Cost of Capital for the FBCU by Ms. McShane
Exhibit B1-9-6, Appendix F, Section X, pp. 134-136
Generic Company-Specific Matters: Size

On page 134, Ms. McShane submits that "In the assessment of investment risk, size has two dimensions which should be considered in the determination of specific utilities' ROEs and common equity ratios: (1) A small utility does not have the opportunity to diversify its risks to the same extent as a larger utility. … (2) Smaller utilities have fewer financing options…"

139.1 Please indicate which criteria and measurement unit are used to define 'a small utility'. What range of values do these criteria have to be within to be defined a 'small utility'?

139.2 Please clarify whether 'smaller utilities' in (2) are meant to be smaller than 'a small utility' in (1). If so, how much smaller are they?

Ms. McShane also states that "Regulators have recognized small size as a factor in establishing capital structures and ROEs for utilities" and gives the example of the AUC.

In contrast, the OEB states "The Board concludes that utility size no longer represents an accurate proxy for risk. As a result, there is no basis upon which ratepayers should be required to bear different costs, associated with different capital structures, on the basis of distributor size. The question the Board must ask is whether ratepayers of smaller distributors should pay higher rates than those of larger distributors because of a thicker equity component. For these reasons it is the Board's view, that for ratemaking purposes, a single capital structure for all distributors is appropriate." (OEB's *Report of the Board on Cost of Capital and 2nd Generation Incentive Regulation for Ontario's Electricity Distributors*, December 20, 2006, p. 7)

139.3 Please comment on the OEB's decision to stop considering utility size as a proxy for risk in setting capital structures.

On page 135, Ms. McShane refers to the Ibbotson Associates Inc. study on small size and returns, which finds that "In the context of the CAPM, an incremental beta of 0.32, when applied to a market risk premium of 7.25%, indicates an incremental equity risk premium of over 200 basis points (7.25% x 0.32) for a Micro-Cap company relative to a Mid-Cap stock."

139.4 Do the FBCU know of any other studies on size and returns that would be based on the other tests, such as the DCF model or the comparable earnings model?

139.4.1 If so, please summarize their findings and provide supporting references.

On page 136, Ms. McShane concludes that small size should be taken into account when evaluating ROEs and capital structures of individual BC utilities.

139.5 Please indicate how and to what extent 'small size' should be taken into account when evaluating ROEs and capital structures of standalone thermal energy service projects of FAES. Please justify the response.

E. A METHODOLOGY TO ESTABLISH A DEEMED CAPITAL STRUCTURE AND DEEMED COST OF CAPITAL, PARTICULARLY FOR THOSE UTILITIES WITHOUT THIRD-PARTY DEBT

140.0 Reference: Debt Related Matters
Exhibit B1-9, Evidence, Section 2.7, p. 29
Appropriate Circumstances for Deemed Debt

On page 29, the FBCU state "Deemed debt makes the most sense for small utilities, such as a separate division or class of service within a larger regulated utility, or for a regulated utility subsidiary within a larger corporate organization, where it would not be as efficient or economic to raise its own debt on a third-party basis. The small size of the utility, be it a division or stand-alone entity, could make debt

issuance inefficient due to the high costs of issue relative to the size of the issue that may make the effective debt cost higher than it would otherwise be, or where the size of the utility precludes it from accessing appropriate debt terms. In these instances, a deemed debt would be more efficient.

140.1 In the case of the FBCU, please provide an exhaustive list of all the cases that would fall in each of the stated categories: (1) separate division within a larger regulated utility; (2) separate class of service within a larger regulated utility; and (3) regulated subsidiary within a larger corporate organization.

140.1.1 Would there be other categories/types of small utilities for which deemed debt would make the most sense?

140.2 How would the FBCU define the term 'small' as used in the preamble to the question in such phrases as 'deemed debt makes the most sense for small utilities' and 'the small size of the utility could make debt issuance inefficient'?

140.2.1 Which criteria, financial, operational or otherwise, would the FBCU use to define 'small' and why?

140.2.2 Can the definition of 'small' be objective or is it subject to some degree of judgment? Why or why not?

141.0 Reference: Debt Related Matters [E]
Exhibit B1-9, Evidence, Section 2.7, pp. 29-30; Exhibit B1-9-6, p.123
Basis for Calculating Deemed Interest Rate

On pages 29-30, the FBCU states "The FBCU have identified two reasonable options for determining the deemed interest rate applicable in the scenarios noted above. The first option is to assign a credit rating on a stand-alone basis, and then obtain indicative quotes from investment dealers or banks based on the credit rating of a comparable proxy issuer. This approach is consistent with the stand-alone principle, and is how FEW has financed its debt component of capital structure. An alternative option would be to use the embedded cost of debt of the issuing entity as the deemed interest rate and allocate the deemed debt and deemed interest rate based on an approved capital structure. Currently, Fort Nelson debt is deemed and the rate is the embedded cost of debt of FEI."

141.1 Please provide all the pros and cons for each of the two options for determining the deemed interest rate.

141.2 Under the first option, please provide the generic formula that the FBCU would use to calculate the deemed interest rate.

141.3 Under the first option, is the assignment of a credit rating on a stand-alone basis an objective or subjective exercise? Please justify the response.

141.3.1 If such assignment carries a degree of subjectivity, how can it be minimized?

141.4 Under the first option, is it sufficient to obtain the indicative spread based on the credit rating of only one comparable proxy issuer? Why or why not? What would be an ideal number of comparable proxy issuers?

141.5 How do the FBCU define "comparable proxy issuer?" Which criteria would the FBCU use to conclude that another issuer is a comparable proxy and why?

141.5.1 Is the exercise of finding comparable proxy issuer an objective or subjective one? Why?

141.5.2 If such an exercise carries a degree of subjectivity, how can it be minimized?

141.6 Under the second option above, please explain the financial impact of using an embedded cost of debt as opposed to applying an incremental cost of debt in the views of the FBCU.

141.6.1 Under the current low-interest monetary policy environment, would using an embedded cost of debt overstate the actual cost of debt borrowing for that utility? Please explain why or why not.

141.6.2 Would using an embedded cost of debt be in contrast to the first option, which seeks indicative quotes from investment dealers based on the *current* credit ratings of comparable proxies?

In Exhibit B1-9-6, Appendix F, page 123, Ms. McShane states that "the utility itself can provide yields and spreads on new or outstanding debt issues of similarly rated entities to support its requested cost of debt."

141.7 The above statement appears to suggest that for small utilities which do not issue third-party debt, one option is to look at the multitude of outstanding corporate bonds (footnote 146) and the debt issues of similar risk entities. How does this statement compare to FBCU's suggestion and its current practice as it pertains to Fort Nelson, of using an embedded cost of the issuing entity?

141.8 In the opinion of Ms. McShane, what are the implications of using an embedded deemed cost versus an incremental deemed cost?

In Directive 1d) in Commission Order G-71-12, with respect to FAES's Revisions to Rates and Rate Design for Thermal Energy Services to Delta School District Number 37, the Commission directed as follows:

"d. The cost of debt rate of 5.91 percent filed by FAES is denied as it does not meet the condition and intent set out in Directive 3(c) of Order G-31-12. FAES is directed to re-calculate its deemed cost of debt rate based on BBB-rated entities operating specifically in the Thermal Energy Services (TES) class of service and file it with the Commission within 10 business days from the date of this Order. However, if FAES is not able to find such entities, the Panel would accept if FAES used BBB-rated distribution utilities, such as AltaGas Ltd. and Emera Inc., as proxy for the TES class of service. Further, going forward:

i. If the Commission approves, in the Generic Cost of Capital (GCOC) proceeding, a methodology to establish a deemed interest rate automatic adjustment mechanism (Interest AAM), FAES is directed to update its cost of debt rate annually using that Interest AAM.

ii. Alternatively, if the Commission does not approve an Interest AAM in the GCOC proceeding, FAES is directed to review its deemed cost of debt rate in its revenue requirements annual filing, using the same methodology as directed in this Order and accompanying Reasons for Decision."

141.9 Given the scarcity of BBB-rated utilities in Canada that can be used as proxy for the TES class of service, and the possibility that utilities with BBB rating be upgraded/ downgraded at some point, please comment on the pros and cons of the following methodology to calculate the deemed long-term debt rate for TES projects:

- Step 1: Obtaining the yield on an appropriate Government of Canada bond as the benchmark;

- Step 2: Obtaining the bond yield spread between the Government of Canada bond benchmark and a high grade utility (A or A low utility) and adding it to the rate in Step 1;
- Step 3: Obtaining the spread between BBB-rated bond spreads and A-rated bond spreads. This step could be looking at historical data (e.g., two most recent years) to have more data points. Then, adding this spread between BBB and A-rated bond spreads to the rate calculated in Step 2.

141.10 Under the first option, and until such time when the small utility obtains third-party debt, in which case the actual cost of debt would be used, please discuss whether the deemed debt rate calculated initially should be fixed for a period of time (e.g., 5 years, the duration of the contract or other) or whether it should vary on an annual basis, due to the variations of the benchmark yield and the credit spreads above the benchmark. What are the pros and cons of each method?

141.10.1 Under the first option, and until such time when the small utility obtains third-party debt, and in a situation where the small utility has an approved levelized or fixed rate design for the duration of its service contract, should the deemed debt rate and deemed debt component of the capital structure also be fixed for the same period. Please explain why or why not.

141.10.2 In a situation where the small utility has an approved cost of service mechanism and an annual or biennial revenue requirement filing is required, should the deemed cost of debt be evaluated on same timing as the revenue requirement test period? Please explain the pros and cons of this approach.

On page 30, the FBCU state that "the concept of a benchmark credit spread is not required. The more appropriate approach is to have debt approved by the Commission on a case specific basis."

141.11 Please explain what is meant by "a case specific basis" in the above statement. Does this imply "project-specific" basis?

OEB – Appendix C of the *Report of the Board on Cost of Capital for Ontario's Regulated Utilities*, issued December 11, 2009 (Exhibit A2-21) and OEB – Cost of Capital Parameter Updates for 2012 Cost of Service Applications for Rates Effective January 1, 2012 (Exhibit A2-22) explain the OEB's methodology to calculate the deemed long-term debt rate for Ontario's distribution utilities.

141.12 Please discuss the applicability of the OEB's methodology regarding the calculation of the deemed long-term debt rate (e.g., 30-year bond as the benchmark, A-rated utility, long Canada bond forecast) to BC utilities without third-party debt, such as FAES's TES projects (DSD, Tsawwassen Springs Development, PCI Marine Gateway) and other district energy systems (Corix UniverCity and River District Energy).

141.12.1 Specifically, what are the advantages and disadvantages of using this formula in the case of BC utilities without third-party debt?

In the *Report of the Board on Cost of Capital for Ontario's Regulated Utilities*, issued December 11, 2009, the OEB states on pages 53-54: "The deemed long-term debt rate will act as a proxy or ceiling for what would be considered to be a market-based rate by the Board in certain circumstances. These circumstances include:

- For affiliate debt (i.e., debt held by an affiliated party as defined by the Ontario *Business Corporations Act, 1990*) with a fixed rate, the deemed long-term debt rate <u>at the time of issuance</u> will be used as a ceiling on the rate allowed for that debt. [Emphasis added]

- For debt that has a variable rate, the deemed long-term debt rate will be a ceiling on the rate allowed for that debt. This applies whether the debt holder is an affiliate or a third-party.
- The deemed long-term debt rate will be used where an electricity distribution utility has no actual debt.
- For debt that is callable on demand (within the test year period), the deemed long-term debt rate will be a ceiling on the rate allowed for that debt. Debt that is callable, but not within the period to the end of the test year, will have its debt cost considered as if it is not callable; that is the debt cost will be treated in accordance with other guidelines pertaining to actual, affiliated or variable-rate debt."

141.13 Please comment on the applicability in BC of using a deemed long-term debt rate as a proxy or ceiling for what would be considered to be a market-based rate in each of the circumstance listed by the OEB.

142.0 Reference: Debt Related Matters
Exhibit B1-9, Evidence, Section 2.7, p. 30
Reference Point for Long-Term Interest Rates

The FBCU state that "It should be based on: an underlying Government of Canada bond yield reflecting the proposed term of debt, and that could be either the 10-year or 30-year bond as the benchmark, or an interpolation of the two benchmarks, and […]"

142.1 If an interpolation of the 10-year and 30-year benchmarks is used, should it be linear? Why or why not? If not linear, what should it be and why?

143.0 Reference: Debt Related Matters
Exhibit B1-9, Evidence, Section 2.7, p. 31
Portions of Short-Term and Long-Term Debt

On page 31, the FBCU state "The appropriate portion of short-term and long-term debt will depend on the underlying nature of the assets and timing. The FBCU will generally use short-term debt when assets are in development and refinance that debt following project completion when the balance is large enough to support a long-term bond issue. Typically, a utility's fixed assets in service will make-up the majority of its overall asset base and thus its debt should be mostly long-term in nature to avoid exposure to refinancing risk. Short-term debt is also important, however, as it funds working capital, which can fluctuate significantly due to seasonal variations. The FBCU submit that there is no 'appropriate portion' of short-term debt, and that on average, short-term debt will make up a very small component of a utility's overall capital structure.

143.1 Please clarify whether the statement "there is no 'appropriate portion' of short-term debt" is applicable to BC utilities without third-party debt that may require a deemed debt and deemed interest rate on that debt?

143.1.1 If so, do the FBCU mean that the appropriate portion should be zero or that it should be determined on a case by case basis? Why?

143.1.2 If not, please provide the FBCU's views on whether there is an appropriate portion of short-term debt for utilities without third-party debt.

143.2 How do the FBCU define "a very small component of a utility's overall capital structure" as a percentage of the overall capital structure?

143.3 For each of the utilities within the FBCU group, i.e., FortisBC Energy Inc., FortisBC Energy (Vancouver Island) Inc., FortisBC Energy (Whistler) Inc., and FortisBC Inc., please complete the table below.

Name of Utility: [please insert name of utility]								
Years	**Short-Term Debt**		**Long-Term Debt**		**Common Equity**		**Preferred Shares**	
	Share of Capital Structure (%)	Interest Rate (%)	Share of Capital Structure (%)	Interest Rate (%)	Share of Capital Structure (%)	Allowed Cost of Equity	Share of Capital Structure (%)	Terms of Return (%)
2012								
2011								
…								
2002								

143.4 Given the statement by the FBCU that short-term debt is used to fund working capital or when assets are in development, should there be a provision for short-term debt, even if only a 'very small component' in the deemed capital structure of FortisBC Alternative Energy Services Inc. (FAES)'s TES projects like Delta School District, Tsawwassen Springs Development and PCI Marine Gateway? Why or why not?

143.4.1 If so, what should the deemed short-term portion of the debt be? Why?

144.0 Reference: Debt Related Matters
Exhibit B1-9, Section 2.7, p. 31
Deemed Interest Rate for Short-Term Debt

On page 31, the FBCU state "The basis for determining the deemed interest rate for short-term debt would be similar to that of long-term interest rate noted above. It would be based on an indicative credit spread quotes from investment dealers or banks using comparable proxy issuers plus a short-term benchmark yield. A common benchmark yield in Canada is the Canadian Dealer Offered Rate ("CDOR"). CDOR is the quoted benchmark that is used when a company issues short-term Bankers' Acceptances, which reflects the short-term benchmark rate plus the company's applicable credit spread." (Emphasis added)

In Ms. McShane testimony on pages 127-128 (Exhibit B1-9-6, Appendix F), Ms. McShane states that "Three-month Bankers' Acceptances (BAs) are a common benchmark for establishing the cost of short-term debt for utilities, e.g., for credit facilities negotiated with banks, and would provide an appropriate basis for estimating a deemed short-term debt cost. … The average spread obtained from the banks would then be added to the three-month BA rate." [Emphasis added]

144.1 From the preamble above, please clarify whether the utility's credit spread is added twice given Ms. McShane's recommended formula given in (1) and the FBCU's description of the Bankers' Acceptance rate in (2)?

$$ST\ debt\ rate = 3monthBA\ rate + Credit\ Spread \quad (1)$$

$$3monthBA\ rate = CDOR + Credit\ Spread \quad (2)$$

144.1.1 Please clarify the generic formula that the FBCU would recommend using to calculate the deemed short-term interest rate if short-term debt is determined to be an appropriate part of the capital structure.

144.2 How many comparable proxy issuers should be used to obtain the indicative credit spread quotes?

144.3 Should the same comparable proxy issuers be used for short-term and long-term credit spread? Why or why not?

144.4 How many quotes from banks should be obtained in order to determine the indicative credit spread to be added to the benchmark rate?

OEB – Appendix D of the *Report of the Board on Cost of Capital for Ontario's Regulated Utilities*, issued December 11, 2009 (Exhibit A2-21) and OEB – Cost of Capital Parameter Updates for 2012 Cost of Service Applications for Rates Effective January 1, 2012 (Exhibit A2-22) explain the OEB's methodology to calculate the deemed short-term debt rate for Ontario's electricity distributors and transmitters.

144.5 If the Commission determines that short-term debt should be part of the deemed capital structure, please discuss the applicability of the OEB's methodology regarding the calculation of the deemed short-term debt rate for the deemed short-term debt component of the capital structure of BC utilities without third-party debt, such as FAES's TES projects (DSD, Tsawwassen Springs Development, PCI Marine Gateway) and other district energy systems (Corix UniverCity and River District Energy).

144.5.1 Specifically, what are the advantages and disadvantages of using this formula in the case of BC utilities without third-party debt?

145.0 Reference: Testimony on Cost of Capital for the FBCU by Ms. McShane
Exhibit B1-9-6, Appendix F, pp. 123
Deemed Debt Rate

On page 123, Ms. McShane states "[f]or small utilities which do not issue third-party debt, one option is to estimate the likely stand-alone credit rating for that utility. The stand-alone credit rating is based on an assessment of both the utility's business risk and financial risk as implied by the deemed common equity ratio."

145.1 Please describe "financial risk" from the above statement. Similar to the list and descriptions provided in Appendix H for business risks, list all the types of financial risks that would be applicable to a small utility in BC.

146.0 Reference: Testimony on Cost of Capital for the FBCU by Ms. McShane
Exhibit B1-9-6, Appendix F, Section IX, p. 122
Applicable Circumstances for Deemed Capital Structure with Deemed Debt

On page 122, Ms. McShane states "A deemed cost of debt may be warranted where it is inefficient or uneconomic for a small utility to issue debt on a stand-alone basis. <u>The small utility could be a separate legal entity, or a standalone division or distinct class of service. Where there has been actual debt issued by the legal entity in which the utility operation (e.g., a distinct class of service) resides, but the business risk profiles of the issuer and the specific utility operation (be it a separate legal entity, regulated</u>

division or distinct class of service) are materially different, a deemed cost of debt for that utility operation that differs from the issuer's cost of debt may be warranted. In such cases, the deeming of a utility-specific cost of debt is intended to ensure, consistent with the stand-alone principle, that there are no cross-subsidies among the operations of the firm. An appropriate deemed cost of debt for the regulated operation may be higher or lower than the cost of debt that is actually incurred by the issuer, i.e., the regulated operation may face higher or lower business risk than the issuer." [Emphasis added]

146.1 With respect to any of the FBCU, please list all existing 'separate legal entity, standalone division, distinct class of service or project' that would fit the above definition of 'small utility'. Please provide a short description of each case listed including, but not limited to, the business risk profiles of the issuer versus the specific utility operation, the credit rating of the issuer versus the deemed credit rating of the specific utility operation.

146.1.1 In particular, do the following FEI/FAES projects fit this definition of 'small utility': Delta School District No. 37, Tsawwassen Springs Development, PCI Martine Gateway? Why or why not?

Ms. McShane also states on page 122 that "While, as discussed below, there are common approaches that the Commission can rely upon for the specific utilities to which a deemed debt cost might apply, the number of potentially affected utilities is relatively small,[145] and the need to approve a deemed cost of debt relatively infrequent. The individual utilities' circumstances may be different, in terms of risk, the funding requirements and appropriate terms of debt. As a result, I recommend that the Commission continue to address the cost of debt for each utility separately.

[145] In contrast to Ontario, where the OEB, which has adopted a formula for establishing caps on the cost rates of affiliated debt, is charged with regulating close to 80 municipally-owned electric distribution utilities."

On page 55, Ms. McShane submits that "The principal change that has occurred since the 2009 Application relates to increased regulatory lag and uncertainty that stem largely from the changing energy environment, particularly for natural gas. More FEI activities, focused on new initiatives, are subject to regulatory oversight, entailing more frequent, protracted, and contentious proceedings."

146.2 Given that the Commission directed that a deemed debt cost be calculated in four applications within the last 16 months (i.e., Corix UniverCity, River District Energy, FAES Delta School District No. 37, Tsawwassen Springs Development) and is currently reviewing this issue in FAES's PCI Marine Gateway application, and in light of the many thermal energy services (TES) applications by FEI/FAES expected to be filed before the end of 2012, would the FBCU still describe the need to approve a deemed cost of debt as 'relatively infrequent'? Why or why not?

146.3 Do the FBCU agree that addressing the cost of debt for each utility separately may be one of the contributing factors to the increased regulatory lag, which may be reduced if the deeming of the cost of debt was streamlined for utilities without third-party debt through the use of a formula like in Ontario? Why or why not?

146.4 In Ms. McShane's opinion, how many small utilities without third-party debt would the Commission need to regulate before it becomes more efficient to adopt an interest automatic adjustment mechanism?

146.4.1 Given provincial and municipal government policies in BC that are favourable to the development of thermal energy services delivered through district or discreet energy systems, how long do the FBCU anticipate it could be before the Commission reaches this threshold number of small utilities without third-party debt?

147.0 Reference: Testimony on Cost of Capital for the FBCU by Ms. McShane
Exhibit B1-9-6, Appendix F, Section IX, p. 123
Appropriate Basis to Calculate a Deemed Interest Rate

Ms. McShane states that "For small utilities which do not issue third-party debt, one option is to estimate the likely standalone credit rating for that utility. The stand-alone credit rating is based on an assessment of both the utility's business risk and financial risk as implied by the deemed common equity ratio."

147.1 In practice, how would Ms. McShane proceed to estimate the likely standalone credit rating for a small utility without third party debt based on the utility's business and financial risk? Please explain the steps in detail.

147.1.1 How can this credit rating be estimated as objectively as possible?

148.0 Reference: Testimony on Cost of Capital for the FBCU by Ms. McShane
Exhibit B1-9-6, Appendix F, Section IX, pp. 123-124
Term of Bond for Deemed Interest Rate

On pages 123-124 of Ms. McShane's testimony, Ms. McShane states that three other considerations should be taken into account, besides the fact that the term should reflect the long-term nature of the assets: 1) the term of the contractual arrangements; 2) the limitations of what would reasonably be available to operations with a similar risk profile; and 3) the state of the capital markets.

148.1 In what priority order should these considerations be taken into account?

148.2 If the contract has a term of 20 years but "the specific operations has a level of risk such that the utility would not be able to obtain "real" debt on terms longer than 10 years,…..", what should the appropriate term of the deemed long-term debt be?

148.3 Similarly, if the contract has a term of 20 years but the debt market would not accommodate a long-term issue, as during a financial crisis, what should the appropriate term of the deemed long-term debt be?

149.0 Reference: Testimony on Cost of Capital for the FBCU by Ms. McShane
Exhibit B1-9-6, Appendix F, Section IX, p. 125
Deemed Capital Structure and Credit Spreads

On page 125, Ms. McShane states that "At a high level, for a utility with a given level of business risk, the higher the deemed equity ratio is, the less risk there is to bondholders, and thus, the lower the credit spread. The credit spread (market conditions and term to maturity aside) for a real issue will also be a function of the actual debt covenants (e.g., whether the debt issue is an amortizing issue or a "bullet" issue) as well as a function of other factors that determine the available cash flows (e.g., the level of ROE and non-cash expenses, particularly depreciation). There is, however, no formulaic method for determining the [sic] how the credit spread will change for a given change in common equity ratio."

149.1 When obtaining indicative credit spreads from comparable proxy issuers, is there a need to adjust the credit spreads based on differences in capital structure, ROE, depreciation, actual debt covenants or other factors? Why or why not?

149.1.1 If so, how should the adjustment be made? Why?

150.0 Reference: Testimony on Cost of Capital for the FBCU by Ms. McShane
Exhibit B1-9-6, Appendix F, Section IX, p. 125-127
Appropriate Portions of Short-Term and Long-Term Debt

On page 126, Ms. McShane states that "The OEB deemed a standard deemed short-term debt component for the electricity distributors on the grounds that (1) it was clear that distributors used some short-term debt; (2) short-term debt is generally less expensive than long-term debt and generally provides greater financing flexibility; and (3) while actual short-term debt percentages may seem to be a more accurate approach, it is administratively challenging given the number of electricity distributors regulated by the OEB. The 4% deemed short-term debt component that the OEB settled on in 2006 represented the actual Ontario electricity distribution industry average at the time."

On page 127, Ms. McShane concludes "Nevertheless, the utility industry data available indicate that the deemed percentage of short-term debt should be very small, e.g., 1% to 2% percent."

150.1 Do the FBCU agree that, in the Ontario case, the OEB chose to determine the standard deemed short-term debt component for the electricity distributors based on the actual Ontario electricity distribution industry average at the time and not based on Canadian utility industry data?

150.2 What is the rationale for looking at the broader Canadian utility industry data to determine an appropriate deemed short-term component for BC utilities without third-party debt?

150.3 Please discuss the pros and cons of looking only at the BC utilities with rated debt as a reference point to calculate an appropriate deemed short-term component for BC utilities without third-party debt.

150.3.1 Please calculate the average and median proportion of short-term debt to total capital for all BC utilities with rated debt in each of the last five years (2007 to 2011).

150.4 Does Schedule 5, page 2 of 2 contain an exhaustive list of all the Canadian utilities with rated debt? If not, which utilities were excluded and what were the criteria for inclusion in or exclusion from the list in Schedule 5? For the purposes of responding to the MFR question: "What is an appropriate portion of short-term debt and long-term debt on the debt portion of the deemed capital structure?" should all Canadian utilities with rated debt be used to calculate the average proportion of short-term debt to total capital? If not, why not?

150.5 Do the FBCU agree that short-term debt is generally less expensive than long-term debt? Generally, by how much?

150.5.1 To the extent that short-term debt is determined to be an appropriate part of the capital structure, and if it is true that short-term debt is less expensive than long-term debt, do the FBCU agree that a deemed cost of short-term debt is warranted for the short-term debt? If not, why not?

150.6 Please comment on the relationship between working capital, which is a component of rate base, and the short-term debt component of the capital structure.