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VIA EMAIL

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August 31, 2012

BRITISH COLUMBIA UTILITIES COMMISSION
GENERIC COST OF CAPITAL PROCEEDING EXHIBIT A-15

Mr. Ian Wigington
Director Regulatory
Corix Multi-Utility Services Inc.
Suite 1160, 1188 West Georgia Street
Vancouver, BC V6E 4A2

Dear Mr. Wigington:

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)

to Corix Multi-Utility Services Inc.

Generic Cost of Capital Proceeding

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

- 1.0 Reference: Testimony for CMUS by Ms. Ahern
Exhibit B2-7, Pauline M. Ahern Direct Testimony
Appropriate Cost of Capital for a Benchmark Low-Risk Utility**

Although the focus of Ms. Ahern's evidence is on the size of a small utility as it impacts a fair ROE and capital structure, FBCU suggests that FEI is an appropriate benchmark utility for the purpose of establishing ROE and equity adjustments for other BC utilities.

- 1.1 Does Ms. Ahern agree that FEI should be used as a benchmark utility for relative risk adjustments to other BC utilities including the Corix utilities? Why?
- 1.1.1 Is FEI a low risk utility? Why?
- 1.1.2 Does Ms. Ahern consider the proposed ROE and capital structure proposed by Ms. McShane appropriate for FEI, and therefore as a base to compare to other BC utilities? Why?

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

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

- 2.0 Reference: Testimony for CMUS by Ms. Ahern
Exhibit B2-7, Pauline M. Ahern Direct Testimony
ROE Automatic Adjustment Mechanism**

Although the focus of Ms. Ahern's evidence is on the size of a small utility as it impacts a fair ROE and capital structure, FBCU suggests that it is not appropriate to reinstate the former BCUC AAM.

- 2.1 Does Ms. Ahern have any views on the appropriateness of an updated AAM to be used to adjust each BC utility ROE in years 2014 and beyond until the BCUC convenes a future generic Cost of Capital proceeding in 3-5 years?
- 2.1.1 Are there experiences from the Florida Public Service Commission or other state regulators that could assist the BCUC in establishing a new AAM?
- 2.1.2 Is Ms. Ahern familiar with the OEB and the Régie AAMs? If yes, would these AAMs be useful for setting BC utility ROEs in future years? Ms. Ahern may wish to refer to Exhibit A2-3 for the Brattle Group review of those AAMs.

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

- 3.0 Reference: Testimony for CMUS by Ms. Ahern
Exhibit B2-7, Pauline M. Ahern Direct Testimony, pp. 6-7
Size as a Risk Factor in Rate of Return Determination**

Ms. Ahern's evidence gives examples of why she feels utility size has a bearing on risk.

- 3.1 To what extent has this risk assessment factored in the following risk mitigation features:
 - 3.1.1 District energy utilities may have a captive customer group tied to the utility by long term contract commitments?
 - 3.1.2 Most BC utilities have weather normalization features?
 - 3.1.3 Financing costs are often a flow through cost to the captive customers?

**4.0 Reference: Testimony for CMUS by Ms. Ahern
Exhibit B2-7, Pauline M. Ahern Direct Testimony, pp. 6-18
Size as a Risk Factor in Rate of Return Determination**

On pages 6-18 of Ms. Ahern’s testimony, Ms. Ahern discusses the impact of a utility’s size as a risk factor in the determination of the utility’s rate of return.

- 4.1 Please discuss and provide specific measures that the Commission should use as deciding factors to determine utility size (i.e., \$x million capital expenditure, \$x million sales, X number of employees, etc.) in the context of the testimony.
 - 4.1.1 Please explain why each size measure is useful for the Commission’s determination of a utility’s size.
 - 4.1.2 Please explain whether any size measure should be given higher weight in the Commission’s determination of utility size and why.
 - 4.1.3 Discuss whether the Commission should use an average, weighted average or some other measure to incorporate all of these size measures in its determination.
- 4.2 Please discuss whether the size of a utility should be measured independently as an operating / business unit or in relation to its parent company or on a project basis, and why?

Footnote 14 on page 13 of Ms. Ahern’s testimony references the Duff & Phelps’ (D&F) study, which identifies various measures of size to be: “Market value of equity, book value of equity, 5-year average net income, market value of invested capital, total assets, 5-year average earnings before interest, taxes, depreciation and amortization (EBITDA), sales, number of employees and the average of all of these size measures.”

Footnote 15 on page 14 of Ms. Ahern’s testimony references another study by D&F, which identifies accounting data to be: “Five-year average operating income margin, the coefficient of variation of the operating margin, and the coefficient of variation of the return on book equity.”

- 4.3 Does Ms. Ahern suggest that all of the size measures identified by the D&F studies should be used by the Commission in determining a utility’s size? Please explain why or why not.
- 4.4 How does Ms. Ahern propose the Commission determine the size of a “new” utility with a greenfield operation which lacks historical 5-year information? Please discuss.
- 4.5 How does Ms. Ahern propose the Commission determine the size of a “new” utility that isn’t publically traded and has no capital market ratings or equity information? Please discuss.

- 4.6 Please discuss how the Commission may determine utility size based on “market capitalization” when market information is not available (no publically traded shares). Provide illustrative calculations if appropriate.
- 4.7 If a small utility is owned by a larger parent company, please discuss how this will impact the determination of the small size utility ROE and capital structure.
- 4.8 Please discuss whether rate base should be used as a measure of size? Why or why not?

**5.0 Reference: Testimony for CMUS by Ms. Ahern
Exhibit B2-7, Pauline M. Ahern Direct Testimony, p. 7
Size as a Risk Factor in Rate of Return Determination**

On page 7 of Ms. Ahern’s testimony, Ms. Ahern states that “[t]here is ample academic evidence that investors demand greater returns to compensate for the lack of marketability and liquidity of the securities of smaller firms.

- 5.1 Please explain the “lack of marketability and liquidity” for smaller firms in the context of the above statement.
- 5.2 Please provide other examples of why a small sized utility would affect its level of risk.
- 5.3 If a “small” utility was owned by a larger parent (either regulated or non-regulated), how should the Commission determine this utility’s size?

On page 14 of Ms. Ahern’s testimony, Ms. Ahern references Exhibit PMA-9 and states that “[s]mall companies are believed to have higher required rates of return than larger companies because small companies are inherently riskier.”

- 5.4 Please explain and describe what attributes are inherent in small utilities which make them more risky than larger companies?
- 5.5 Would the above statement only be true in rising markets and the opposite in declining market trends? Please explain.

**6.0 Reference: Testimony for CMUS by Ms. Ahern
Exhibit B2-7, Pauline M. Ahern Direct Testimony, p. 7
Size as a Risk Factor in Rate of Return Determination**

On page 7 of Ms. Ahern’s testimony, Ms. Ahern states that “[c]onsistent with the basic financial principal [sic] of risk and return discussed above, it is the use of funds invested and not the source of those funds which gives rise to the risk of any investment...”

- 6.1 Please explain why the source of funds should not be used to measure risk?

In Exhibit PMA-3, page 4 of 4, it is stated that “[w]hen external equity is raised, flotation costs increase the cost of equity capital beyond what it would be for internal funds. These external flotation costs are especially significant for smaller firms, and they can substantially affect capital budgeting decisions involving external equity funds.”

- 6.2 Does the above statement not suggest that the source of financing (whether external third party or access to parent-company financing) affects capital budgeting decisions, which in turn, affects project risks? Please discuss.

**7.0 Reference: Testimony for CMUS by Ms. Ahern
Exhibit B2-7, Pauline M. Ahern Direct Testimony, p. 7
Size as a Risk Factor in Rate of Return Determination**

On page 7 of Ms. Ahern’s testimony, Ms. Ahern states that “[c]onsistent with the basic financial principal [sic] of risk and return discussed above, it is the use of funds invested and not the source of those funds which gives rise to the risk of any investment...”

- 7.1 Does Ms. Ahern suggest that each project (each “use of funds”) gives rise to project specific risks?
- 7.1.1 If yes, please discuss the efficiencies of establishing a cost of capital and risk premium for each small utility project.
- 7.1.2 If no, please clarify the “use of funds invested” in the statement above. Wouldn’t the fuel source, technology type, number of customers, project dollars, operating costs, commercial terms, etc, be different for each “use of funds”? How does Ms. Ahern suggest reconciling these project differences by using a single mechanism for the small utility?

Exhibit PMA-1 (Brealey and Myers, p. 6) suggests that “[e]ach project should be evaluated at its own opportunity costs of capital”;

- 7.2 If the Commission accepts that each project within the same utility should be evaluated at its own opportunity costs of capital, please explain how this concept would apply to Ms. Ahern’s proposed mechanism to calculate a size premium for “the specific utility” discussed on page 16 of her testimony. Please discuss and provide sample calculations for illustration.

**8.0 Reference: Testimony for CMUS by Ms. Ahern
Exhibit B2-7, Pauline M. Ahern Direct Testimony; Exhibit A2-17 Fitch Rating Report
Use of Deferral Accounts as a Risk Factor in Rate of Return Determination**

In various parts of her testimony, Ms. Ahern focuses on utility size as a risk factor and discusses various measures of market capitalization.

- 8.1 Please discuss whether the measures of risk and market capitalization for a regulated utility are the same or not the same as for a non-regulated company.
- 8.2 Please explain how the use of deferral accounts (allowed in regulated utilities) affects the measure of a utility’s risk?
- 8.3 Fitch Rating Agency says that it views favourable rate mechanisms that tend to smooth out financial performance throughout the economic cycle and periods of commodity price and weather volatility (Exhibit A2-17). Should the number of deferral accounts approved for any given utility be a factor in determining utility risk (i.e. reduction in risk)? Please explain why or why not.

**9.0 Reference: Testimony for CMUS by Ms. Ahern
Exhibit B2-7, Pauline M. Ahern Direct Testimony, p. 10; Exhibit PMA-7, p. 582
Size Premium in Rate of Return for Utilities that are Small Relative to the Benchmark**

On p. 10 of Ms. Ahern's testimony, Ms. Ahern states quotes from a paper by Thomas M. Zepp (Exhibit PMA-7, p. 582):

"Wong's concluding remarks should be re-examined and placed in perspective. She noted that industrial betas tend to decrease with increases in firm size but the same relationship is not found in every period for utilities. Had longer time intervals been used to estimated betas (sic), as was done in Table 1, she may have found the same inverse relationship between size and beta risk for utilities in other periods. She also concludes "there is some weak evidence that firm size is a missing factor from the CAPM for the industrial but not the utility stocks" (Wong, 1993, p. 98), but the weak evidence provides little support for a small firm effect existing or not existing in either the industrial or utility sector. Two other studies discussed here support a conclusion that smaller water utility stocks are more risky than larger ones. To the extent that water utilities are representative of all utilities, there is support for smaller utilities being more risky than larger ones."

The preceding paragraph to the one quoted above says:

"The results in Table 2 show that the smaller water utilities had a cost of equity that, on average, was 99 basis points higher than the average cost of equity for the larger water utilities. This result is statistically significant at the 90% level. In terms of the issues being addressed by Wong, the 99 basis points could be the result of differences in beta risk, the small firm effect or some combination of the two." (PMA-7, p. 580)

- 9.1 In the first of the two quotes above, Wong concludes that "...the weak evidence provides little support for a small firm effect existing or not existing in either the industrial or utility sector". In the second quote above, Zepp comments that the difference found in one of the two studies he uses to support his conclusion of a size effect "could be the result of differences in beta risk, the small firm effect or some combination of the two". Given the above findings, does Ms. Ahern agree that the existence of a size effect for regulated energy utilities is weak, if not speculative? If not, why not?
- 9.2 If the size effect exists, is it a corollary that a utility which grows through a merger or amalgamation will, all else equal, be less risky than any of the involved utilities prior to the merger or amalgamation? If not, why not?

**10.0 Reference: Testimony for CMUS by Ms. Ahern
Exhibit B2-7, Pauline M. Ahern Direct Testimony, pp. 14; Exhibit PMA-9, p. 65
Size Premium in Rate of Return for Utilities that are Small Relative to the Benchmark**

On p. 14 of Ms. Ahern's evidence, Ms. Ahern cites the Risk Study (Exhibit PMA-9), which states:

"The *Risk Study* is an extension of the *Size Study*. The main difference between the *Risk Study* and the *Size Study* is that while the *Size Study* analyzes the relationship between size and return, the *Risk Study* analyzes the relationship between fundamental risk measures (based on accounting data) and return. These are called "fundamental" measures of company risk to distinguish these risk measures from a stock market-based measure of equity risk such as beta. A variety of academic studies have examined the relationship between financial statement data and various aspects of business risk. Research has shown that measures of earnings volatility can be useful in explaining credit ratings, predicting bankruptcy, and explaining the CAPM beta." (Exhibit PMA-9, p. 65 of 111; italics in original, footnote omitted)

- 10.1 Can Ms. Ahern describe in more detail how earnings volatility as used in the Risk Study is measured?
- 10.2 To what extent is it likely or possible that deferral accounts would lower business risk by reducing earnings volatility, as used in the Risk Study?

**11.0 Reference: Testimony for CMUS by Ms. Ahern
Exhibit B2-7, Pauline M. Ahern Direct Testimony
Risk Premium and Contract Terms**

- 11.1 To what extent does the rate design for any particular small utility project affect its level of risk? Please discuss.
- 11.2 Would Ms. Ahern agree that a rate design which contains both a fixed and variable component would be less risky than an all variable rate?

**12.0 Reference: Testimony of Pauline M. Ahern
Exhibit B2-7, Pauline M. Ahern Direct Testimony, p. 6
Generic Methodology to Determine a Utility's Unique Cost of Capital**

Ms. Ahern states that "Taking into account utility specific unique risk factors, such as size, will ensure a sufficient rate of return, which will enable the attraction of needed new capital to projects which have been deemed in the public interest, e.g., green energy projects."

- 12.1 What generic methodology or process would Ms. Ahern recommend for each utility to determine its unique cost of capital in reference to the benchmark utility?
 - 12.1.1 How would this generic methodology or process apply to Corix and to individual utility projects such as the UniverCity NUS?
 - 12.1.2 If a small utility is a subsidiary owned by a larger parent, how would this generic methodology or process apply to the subsidiary?
- 12.2 Please describe the "green energy projects" referred to by Ms. Ahern. How and where have they been deemed to be in the public interest?
- 12.3 Please indicate whether the "green energy projects" referred to above have had difficulty attracting needed new capital. If so, which ones and why?

**13.0 Reference: Testimony of Pauline M. Ahern
Exhibit B2-7, Pauline M. Ahern Direct Testimony, p. 12 & 16; Corix CPCN UniverCity,
Exhibit B-1, p. 25
Morningstar Study**

On pages 15-16 of Ms. Ahern's prepared testimony, Ms. Ahern states that "The Morningstar size premium study can be used to determine the approximate magnitude of any necessary risk premium due to size for a specific utility within the BCUC's jurisdiction relative to the benchmark utility return by comparing the size premium appropriate for the decile in which the benchmark utility would fall based upon estimated market capitalization with the size premium appropriate for the decile in which the specific utility would fall based upon estimated market capitalization."

- 13.1 Can Ms. Ahern confirm that a necessary assumption for this statement to be true is that any size premium for utilities under the BCUC's jurisdiction is the same as for all firms in the study used to estimate a size premium?

On page, Ms. Ahern continues "For example, using Table 7-5 on page 7 of Exhibit PMA-8, assuming the benchmark utility would fall in the 5th decile based upon estimated market capitalization, the applicable size premium relative to the NYSE/AMEX/NASDAQ is 1.74%. Assuming the specific utility for which an allowed rate of return is being determined using the benchmark ROE would fall in the 10th decile based upon estimated market capitalization, its applicable size premium relative to the NYSE/AMEX/NASDAQ is 6.10%. Since the allowed rate of return to be determined for the specific utility is based upon the benchmark utility's ROE, it is necessary to subtract the 1.74% size premium applicable to the benchmark utility from the 6.10% size premium applicable to the specific utility. Hence, the appropriate size premium for the specific utility in this example would be 4.36% (4.36%= 6.10% - 1.74%)."

- 13.2 Please confirm that, in the hypothetical scenario described above, where the benchmark BC utility would fall in the 5th decile and the specific utility in the 10th decile, Corix would propose to add an equity risk premium of 4.36 percent above the allowed benchmark ROE due to the 'small size' of the specific utility. If not, please clarify Corix's proposal regarding the size premium of 4.36 percent.

13.2.1 If the benchmark ROE is 9.50 percent, please confirm that Corix believes a rate of return on equity of 13.86 percent for that specific utility is fair and reasonable. If not, what would be the fair ROE for that specific utility?

13.2.2 In which decile would Corix fall? How can the market capitalization of Corix be estimated? How can the market capitalization of DES projects like the UniverCity NUS be estimated? Please show calculations.

13.2.3 Assuming that FEI pre-amalgamation continues to be the benchmark utility in BC, what level of equity risk premium would Corix propose be added above the benchmark ROE for DES projects like the UniverCity NUS?

13.2.4 How fair and reasonable is that proposed level of equity risk premium above the benchmark ROE in light of the 50 basis points equity risk premium recently approved for small utilities or standalone projects like River District Energy and the Delta School District?

On page 12, Ms. Ahern states that "The Morningstar study constructs decile (10) portfolios of the companies contained in the New York Stock Exchange (NYSE), the NYSE Amex (AMEX) and the Nasdaq National Market (NASDAQ), including publicly traded utilities."

In its CPCN Application for UniverCity, Corix states on page 25 that "The question arises as to whether findings from cost of capital studies within the U.S. equity markets can be applied in Canada given that the Canadian equity market has a smaller population of entities and Canadian companies also tend to be smaller than the U.S. companies. For instance, some of the small-cap equities in the U.S. could be classified as mid-cap or even large-cap equities in Canada."

- 13.3 Please discuss the applicability of the Morningstar study results to Canadian companies when the size premium is calculated based on the NYSE/AMEX/NASDAQ.

13.3.1 In particular, would the size premium need to be adjusted to take into account the differences between the Canadian and U.S. equity markets?

13.3.2 Does Ms. Ahern have market data for the Canadian market similar to the Morningstar study for the U.S.?

13.4 Does Corix know of any studies that address the question of the size premium for Canadian companies or Canadian utilities (i.e., an equivalent Canadian study to Exhibit PMA-8)? If so, please summarize the results of such studies and provide the supporting material.

**14.0 Reference: Testimony of Pauline M. Ahern
Exhibit B2-7, Pauline M. Ahern Direct Testimony, pp. 11-12; Exhibit PMA-8, pp. 5-7
Size Premium in Rate of Return for Utilities that are Small Relative to the Benchmark**

On page 11 of Ms. Ahern's evidence, Ms. Ahern cites a study by Morningstar to support the proposition that investors require a risk premium to invest in the common stocks of small companies relative to large companies. Ms. Ahern states on p. 12 that "The Morningstar study constructs decile (10) portfolios of the companies contained in the New York Stock Exchange (NYSE), the NYSE Amex (AMEX) and the Nasdaq National Market (NASDAQ), including publicly traded utilities."

Tables 7-3 and 7-5 of Exhibit PMA-8 provide market capitalization and beta information for USA small firms.

14.1 What percentage of these firms are utilities?

14.2 How likely or possible is it that the influence of regulated utilities in the results is outweighed by unregulated firms?

14.3 The category 10-smallest firms have a capitalization of between \$1 million and \$423 million, betas averaging 1.41 and size premiums of 6.1%. Is this representative of the Corix utilities?

**15.0 Reference: Testimony of Pauline M. Ahern
Exhibit B2-7, Pauline M. Ahern Direct Testimony, pp. 15-16; Exhibit PMA-9, p. 65
Size Premium in Rate of Return for Utilities that are small relative to the Benchmark**

On page 15 of Ms. Ahern's testimony, Ms. Ahern states that "The Morningstar size premium study can be used to determine the approximate magnitude of any necessary risk premium due to size for a specific utility within the BCUC's jurisdiction relative to the benchmark utility return.... "

On page 16 of Ms. Ahern's testimony, Ms. Ahern states that both the *D&P Size Study* and *Risk Study* can be used for the same purpose as well.

The Risk Study (Exhibit PMA-9) on page 65 states "It has been pointed out in the financial literature that researchers may be mixing a "size" effect with a "risk" effect when measuring company size by market value.... Does the evidence support the claim that smaller companies inherently have greater risk? The Risk Study analyzes this question, and demonstrates that as company size decreases, measures of risk calculated from financial statement data do, as a matter of fact, tend to increase."

15.1 Does a size premium potentially double count the risk premium, if the risk of a utility is derived first from its fundamental risk factors to determine its risk relative to a benchmark utility, and then a size factor is added to account for that component of risk attributable to a specific utility's small size relative to a benchmark utility? If the potential for double counting exists, can it be avoided and if so, how?

**16.0 Reference: Testimony of Pauline M. Ahern
Exhibit B2-7, Pauline M. Ahern Direct Testimony, p. 12; Exhibit B1-9-6, Appendix F,
Testimony on Cost of Capital for the FBCU by Ms. McShane, p. 65
Morningstar Study**

On page 6 of Ms. Ahern’s testimony, Ms. Ahern quotes the Morningstar Study as follows: “The firm size phenomenon is remarkable in several ways. First, the greater risk of small stocks does not, in the context of the capital asset pricing model (CAPM), fully account for their higher returns over the long term. In the CAPM only systematic, or beta risk, is rewarded; small company stocks have had returns in excess of those implied by their betas.”

On page 65 of her testimony, Ms. McShane elaborates on the importance of using multiple tests to determine the fair return on equity:

“The key to determining the fair return on equity (i.e., ensuring that all three requirements of the fair return standard are met) is reliance on multiple tests. There are three different types of tests that have traditionally been used to estimate the fair return on equity:

1. Equity Risk Premium (including, but not limited to, the Capital Asset Pricing Model),
2. Discounted Cash Flow, and
3. Comparable Earnings.”

- 16.1 Does Corix agree with Ms. McShane that it is important to rely on multiple tests to determine the fair return on equity and that these tests include Equity Risk Premium tests (including but not limited to CAPM), the Discounted Cash Flow test and the Comparable Earnings test? If not, why not?
- 16.2 Given that the CAPM is only one among several estimation methods to arrive at a fair ROE, please discuss how much weight should be attributed to the Morningstar findings regarding size and returns based on CAPM?
- 16.3 Does Corix 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?
 - 16.3.1 If so, please summarize their findings and provide supporting references.

**17.0 Reference: Testimony of Pauline M. Ahern
Exhibit B2-7, Pauline M. Ahern Direct Testimony; Exhibit PMA-8, p. 8
Morningstar Study**

Graph 7-3 provides a security market line for the smallest USA small firms.

- 17.1 Don’t the data points indicate that this method doesn’t work for the smallest firms? E.g., Portfolio 10z has a lower beta than 10a but an approximately 8% higher return.

**18.0 Reference: Testimony of Pauline M. Ahern
Exhibit B2-7, Pauline M. Ahern Direct Testimony, p. 17
Small Utility Size**

On page 17, Ms. Ahern states “In my opinion, the most compelling regulatory support for reflecting the risk effects of a company’s size in the allowed rate of return is the Florida Public Service Commission’s

(FL PUC) annual re-authorization of its leverage formula to determine the appropriate authorized ROEs for the water companies within its jurisdiction.”

- 18.1 Ms. Ahern provides an example from the Florida Public Service Commission. Please elaborate further on the size of utilities regulated in Florida using metrics such as the number of customers, types of customers (residential, commercial, and industrial), total annual revenues, rate base, and any other relevant metric.
- 18.2 Please compare these Florida small utilities with the Corix UniverCity Neighbourhood Utility Service and River District Energy Limited Partnership, based on full build-out.
- 18.2.1 Would Ms. Ahern conclude that the small utilities in Florida are of similar size and comparable risk to Corix UniverCity Neighbourhood Utility Service and River District Energy Limited Partnership? Please elaborate.
- 18.3 Do these Florida utilities utilize deferral accounts and other rate mechanisms? If so, please elaborate.
- 18.3.1 How do these Florida risk and rate stabilization measures compare to the deferral accounts and other rate mechanisms used by the BCUC?
- 18.4 Is Ms. Ahern aware of any other regulatory jurisdiction in North America that has addressed the issue of a small size utility? If so, please provide further details and include any relevant decisions.

**19.0 Reference: Testimony of Pauline M. Ahern
Exhibit B2-7, Pauline M. Ahern Direct Testimony, Exhibit PMA-10, p. 6 of 13
Capital Structure: Florida Leverage Formula; Equity Ratio**

The Florida Public Service Commission Decision states:

“Return on Common Equity = 7.13% + 1.610/Equity Ratio

Where the Equity Ratio = Common Equity/(Common Equity + Preferred Equity + Long-Term and Short-Term Debt)

Range: 8.74% @ 100% equity to 11.16% @ 40% equity

Further, to discourage imprudent financial risk, the returns on common equity shall be capped at 11.16 percent for all water and wastewater utilities with equity ratios less than 40 percent. This cap is consistent with the methodology in Order No. PSC-08-0846-FOF -WS.”

- 19.1 Is the Equity Ratio in cases with a 40 percent or more equity thickness based on actual capital structure rather than a deemed capital structure? If an actual capital structure, is this for the operating utility company or the consolidated holding company?
- 19.1.1 Are the regulated water utilities in Florida typically stand-alone companies without a holding company corporate structure? Please elaborate.
- 19.2 What is the prevalence of utilities with preferred equity in this Florida jurisdiction? If a utility does have preferred equity, what portion of the total capital structure would it typically comprise?

19.3 In the opinion of Ms. Ahern, please comment on preferred equity in a small 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.

**20.0 Reference: Testimony of Pauline M. Ahern
Exhibit B2-7, Pauline M. Ahern Direct Testimony, Exhibit PMA-13, p. 5 of 5
Capital Structure**

Ms. Ahern provided an excerpt from *The Regulation of Public Utilities: Theory and Practice* by Charles F. Phillips, Jr. pages 389 to 391 for "The Rate of Return."

20.1 The excerpt on page 391 includes the beginning of another section "Consolidated Capital Structure and Double Leverage." Please file the remaining pages for this section including footnote 86.

**21.0 Reference: Testimony of Pauline M. Ahern
Exhibit B2-7, Pauline M. Ahern Direct Testimony; Exhibit PMA-10, p. 3
Capital Structure: Florida Leverage Formula; Equity Ratio**

Chart 1 provides a graph of the Florida Commission's small company leverage impact on ROE.

21.1 How was the leverage graph derived and why has it changed so much in 2012 vs. the previous two years?

21.2 Is there equivalent information for Canadian utilities?

**22.0 Reference: Testimony of Pauline M. Ahern
Exhibit B2-7, Pauline M. Ahern Direct Testimony; Exhibit PMA-10, p. 8,
Attachment1 p. 1
Capital Structure: Florida Leverage Formula; Equity Ratio**

The summary of results for the Florida Commission leverage formula is provided.

22.1 Please confirm if the "currently in effect" percentages are continued instead of the "Updated results"?

22.2 Are the results in rows (A) and (B) the approved DCF and CAPM results for the equivalent of a low risk benchmark utility?

22.3 How small are the small utilities to which this formula return applies?

**23.0 Reference: CMUS Evidence, Annual Reports
Exhibit B2-7, Annual Reports**

23.1 Please explain why rate of return on equity and risk premium over the benchmark utility would be relevant to CMUS if the earnings for each of its subsidiaries have, on average, been in a loss position?

Section 60(1)(b) of the *Utilities Commission Act*, RSBC c.473, states that:

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,

- 23.2 Please discuss whether a utility's "reasonable return" should be commensurate with its efficient management of operations, the management of line losses / unaccounted for losses, customer satisfaction, and other efficiency measures or performance enhancement measures? Why or why not?

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

- 24.0 Reference: Testimony of Pauline M. Ahern
Exhibit B2-7, Pauline M. Ahern Direct Testimony, pp. 18-23
Deemed Capital Structure and Deemed Cost of Capital for Small BC Utilities**

Ms. Ahern's evidence provides general views on establishing a fair capital structure for small utilities.

- 24.1 Is Ms. Ahern sufficiently informed of the Corix utilities to offer expert evidence on the appropriate capital structures for those utilities? If yes, please provide it.
- 24.2 Some small BC utilities seem satisfied with a deemed capital structure of 40% common equity. In the absence of reliable other evidence, would this provide a suitable fallback position for the BCUC? If so, would there be an impact on the fair ROE for these small utilities?

- 25.0 Reference: Testimony of Pauline M. Ahern
Exhibit B2-7, Pauline M. Ahern Direct Testimony, p. 2
Applicable Circumstances to Utilize a Deemed Capital Structure with a Deemed Debt**

Ms. Ahern states that the purpose is to provide testimony relative to the framework for developing an appropriate and reasonable deemed ratemaking capital structure for smaller utility operations.

- 25.1 Please describe all the appropriate applicable circumstances for a utility to utilize a deemed capital structure with a deemed debt component.
- 25.1.1 For each applicable circumstance, please provide concrete examples applicable to Corix.
- 25.2 Please define 'smaller utility operations' and indicate which metrics/criteria are used to define this concept. Please also provide concrete examples of such 'smaller utility operations'.

**26.0 Reference: Debt Related Matters
Exhibit B1-9, FBCU Evidence, Section 2.7, pp. 29-30; Corix CPCN UniverCity Exhibit B-3-1, BCUC 1.17.2
Basis for Calculating Deemed Interest Rate**

On pages 29-30, the FBCU state “The FBCU have identified two reasonable options for determining the deemed interest rate. ... 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... 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.”

26.1 In Corix’s view, what are the pros and cons of these two options for determining the deemed interest rate?

26.2 Please indicate whether Corix agrees or disagrees with each of these two options. Why?

In the Corix CPCN UniverCity proceeding, Corix provided the following response to an information request about long-term debt.

“17.2 Please provide the source and detailed information on the long term-debt instruments that CMUS plans to use to fund the NUS Project (i.e., amount, loan type, amortization, rate, fees, security, reporting, and covenants).

Response:

Long-term debt will be available through an inter-company demand loan from CMUS to NUS. Under the demand loan, NUS may borrow, repay and re-borrow funds as required. The amount of the loan will be equal to rate base times the deemed debt component of the capital structure. The outstanding amount of the long-term debt will be adjusted annually to reflect capital expenditures and changes to rate base. There will be no set repayment provisions. The interest cost will be equal to the prevailing Benchmark Ten-Year Government of Canada bond yield at time of funding plus a credit spread of 300 basis points. Based on the current Benchmark Bond Yield, the debt rate would be 6.50%. The debt rate will be reset every ten years based on the then prevailing Benchmark Ten-Year Government of Canada bond yield. The credit spread is based on the creditworthiness of the counterparty and the proposed capital structure. When determining the credit spread for NUS the actual credit rating for SFU and the incremental risks of the SFU Community Trust and NUS were taken into consideration. SFU is rated AA (low) by Dominion Bond Rating Services and Aa2 by Moody. The credit spread for entities with an AA (low) credit risk is in the range of 200 basis points. NUS warrants a higher credit spread than SFU because of the different security supporting the debt and the incremental risk associated with the project including, but not limited to, development risk, utility operations risk and customer credit risk. These differences support the incremental 100 bps in credit spread.” [Italics in original] [Emphasis added]

26.3 Please discuss the similarities and differences between Corix’s proposed method to calculate the deemed debt rate for the NUS and the FBCU’s option to assign a credit rating on a stand-alone basis to the project and then obtain indicative quotes from investment dealers or banks based on the credit rating of a comparable proxy issuer.

26.3.1 In Corix’s view, is any one method superior to the other? Why?

- 26.4 Please discuss Corix’s proposed method to calculate the deemed debt rate for the NUS and the FBCU’s alternate option of using the embedded cost of debt of the issuing entity. Please explain who the issuing entity would be and whether this would apply to Corix or other small utilities.
- 26.5 Please discuss the rationale for using the creditworthiness of the counterparty, which, in the NUS case, was not a utility but a university (SFU) instead of assigning a credit rating to the project and obtaining quotes on that credit rating for proxies.
- 26.6 Please comment on the following method as an alternative to calculating the deemed long-term debt rate:
- Step 1: obtain the yield on an appropriate Government of Canada bond as the benchmark;
 - Step 2: obtain the bond yield spread between the Government of Canada benchmark and a high grade utility (A or A low) and add it to the rate in Step 1;
 - Step 3: assign a credit rating to the standalone project/utility (e.g., NUS) and obtain indicative spreads from comparable proxy issuers;
 - Step 4: obtain the spread between A-rated bond spreads and the spreads obtained in Step 3 and add it to the rate calculated in Step 2.

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.

- 26.7 Please discuss the applicability of the OEB’s methodology regarding the calculation of the deemed long-term debt rate (e.g., the use of 30-year bond as the benchmark, A-rated utility, long Canada bond forecast) to BC utilities without third-party debt, such as Corix UniverCity NUS and River District Energy.

- 26.7.1 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 at the time of issuance will be used as a ceiling on the rate allowed for that debt. [Emphasis in original]
- 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.”

- 26.8 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.
- 26.9 Please comment on whether a deemed long-term debt rate should be used as a ceiling on the rate for long-term debt that is available through an inter-company demand loan (as was the case of the NUS, for which all funding was provided by an inter-company loan from CMUS). Why or why not?

**27.0 Reference: Debt Related Matters
Exhibit B1-9, FBCU Evidence, Section 2.7, p. 30; Corix CPCN UniverCity Exhibit B-3-1,
BCUC 1.17.2
Reference Point for Long -Term Interest Rates**

On page 30, the FBCU state that “In general, the deemed long-term interest rate should reflect certain factors, including the long-term nature of utility assets, contractual terms and available debt terms. 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
- the credit spread of a comparable corporate issuer at the same term to maturity as that selected as the benchmark Government of Canada bond.”

In the Corix CPCN UniverCity proceeding, Corix proposed that “The interest cost will be equal to the prevailing Benchmark Ten-Year Government of Canada bond yield at time of funding plus a credit spread of 300 basis points. Based on the current Benchmark Bond Yield, the debt rate would be 6.50%. The debt rate will be reset every ten years based on the then prevailing Benchmark Ten-Year Government of Canada bond yield.” [Emphasis added]

- 27.1 Please indicate whether Corix agrees or disagrees with the FBCU’s position on the appropriate reference point to use for calculating a deemed long-term interest rate. Why?
- 27.2 In the case of the NUS, please explain Corix’s considerations in choosing the 10-year Government of Canada bond yield when, in contrast, the rates were levelized over a 20-year period.

**28.0 Reference: Testimony for CMUS by Ms. Ahern
Exhibit B2-7, Pauline M. Ahern Direct Testimony
Determination of Deemed Capital Structure**

Pages 3-4 in Exhibit PMA-12 discuss Standard and Poors’ (S&P) Business Risk / Financial Risk Framework. Ms. Ahern suggests that “the ratemaking capital structure for the specific utility under the BCUC’s jurisdiction for which a rate of return is being determined should be consistent with these metrics...”

- 28.1 In the above statement, is Ms. Ahern suggesting that the Commission use the same criteria as the S&P Business Risk / Financial Risk Framework to evaluate capital structure?

S&P’s Framework identifies Business Risk as: Country Risk, Industry Risk, Competitive Position, and Profitability/Peer Group Comparisons. Financial Risk categories are identified as: Accounting, Financial governance, cash flow adequacy, capital structure, and liquidity.

- 28.2 How relevant are the above Business Risks in the context of “small” utilities?
- 28.3 What methodology does Ms. Ahern suggest the Commission could use to measure each of these categories **objectively**? Should the Commission use the same ratings as given in Table 2 on page 4 of Exhibit PMA-12 (Minimal, Modest, Intermediate, Significant, Aggressive, Highly leveraged) Please explain.
- 28.4 Should the Commission use a weighted-average weighting for each category? Should any one category be weighted more, why?
- 28.5 Could the Commission use the S&P Framework, as described above to measure risk and hence, determine the risk premium and rate of return on equity? Please discuss.
- 28.6 Should the Commission include any other category of Risks (i.e., Regulatory Risks) in addition to the above S&P Framework?
- 28.7 Please comment on the appropriateness of each of the Regulatory and Other Risks identified below. If applicable, please comment on what “x” should be:

Regulatory and Other Risk	Higher Risk	Lower Risk
Number of Deferral Accounts	less than x	more than x
Value of Deferral Accounts	less than \$x million	more than \$x million
Rate Structure	more than x% of the rate is variable	more than x% of rate is fixed
Rate Design	non levelized Rate	levelized Rate
Contractual Terms	No Take or Pay	Take or Pay

**29.0 Reference: Testimony for CMUS by Ms. Ahern
Exhibit B2-7, Pauline M. Ahern Direct Testimony, pp. 20-22
Determination of Deemed Capital Structure**

Ms. Ahern’s evidence discusses the S&P Indicative Risk/Financial Risk Matrix.

- 29.1 Are there any equivalent Canadian experiences in setting such a matrix for the TSX?
- 29.2 On page 22, Ms. Ahern suggests comparing a small utility proposed capital structure with industry or proxy group averages. Please provide any Canadian evidence you may have on the capital structures of Canadian industry or proxy group averages which could be applied to the Corix utilities?

**30.0 Reference: Testimony of Pauline M. Ahern
Exhibit B2-7, Pauline M. Ahern Direct Testimony, pp. 23-24
Inclusion of Short-Term Debt in the Capital Structure**

On pages 23-24, Ms. Ahern states “When determining the appropriate and reasonable capital structure to use for ratemaking purposes, whether based upon the specific utility’s actual, the parent’s consolidated or a deemed capital structure, one must determine whether short-term debt should be

included. Conceptually, the maturity of the debt capital in the ratemaking capital structure should match the life of the assets being financed. But when the inclusion of short-term debt is optional, its inclusion should be based upon several criteria. First, is its use sporadic or consistent? If sporadic and hence, volatile, it should not be included in the capital structure. However, if its use is consistent and especially at a significantly high level, it is likely financing rate base and possibly should be included if it is determined to be doing so. Second, if its use is seasonal and self-liquidating, e.g., financing the short-term build-up of natural gas in anticipation of the heating season, it probably should not be included. Third, if short-term debt is financing working capital, it should be included in the ratemaking capital structure in the amount of that working capital. Fourth, will it permanently be financed with long-term debt and / or equity capital or some combination of both? In other words, is short-term debt used as “bridge financing”, until permanent financing can be put in place. If yes, in my opinion, short-term debt should be included in the capital structure in the amount expected to be permanently financed and at the expected cost rates of that permanent financing. Another issue to evaluate is whether or not all or some short-term debt is financing construction projects and whether or not construction work in progress (CWIP) is included in rate base. If CWIP is included in rate base and financed with short-term debt, short-term debt in the amount of CWIP should be included in the capital structure.” (Emphasis added)

30.1 Please confirm whether Corix believes the determination of an appropriate portion of deemed short-term debt should be made on a case by case basis and explain why.

30.1.1 If not confirmed, please indicate what Corix believes is an appropriate portion of short-term debt and long-term debt on the debt portion of the deemed capital structure. Why?

30.2 If confirmed, please confirm that Corix would apply the following five criteria to determine whether short-term debt should be included in the deemed capital structure: 1) sporadic or consistent; 2) seasonal and self-liquidating; 3) financing working capital; 4) used as bridge financing; and 5) financing construction projects.

30.2.1 Please indicate whether the use of these five criteria can produce conflicting result. If so, please indicate whether some criteria are more important than others in determining whether short-term debt should be included in the deemed capital structure. If so, explain which criteria and how they should be given more weight.

30.3 If Corix had applied each of the five criteria proposed by Ms. Ahern to the UniverCity NUS case, what would have been the determination regarding the inclusion of short-term debt in that case? Please justify the response by providing an analysis of the UniverCity NUS with respect to each of the five criteria.

30.4 The Commission has in the past accepted 1/8th of operating costs to be an acceptable method of calculating cash working capital, particularly in small projects / small utilities where a detailed lead/lag study is not feasible. This is the case in the Delta SD project and previously with Terasen Gas (Squamish) Inc. Please discuss how the proportion of working capital can be (or should be) used to determine the component of short term debt in a small utility.

**31.0 Reference: Testimony of Pauline M. Ahern
Exhibit B2-7, Pauline M. Ahern Direct Testimony, p. 24; Commission Order G-72-12,
Appendix B, p. 4
Inclusion of Short-Term Debt in the Capital Structure**

In section B: Other Filing Requirements of Appendix B of Commission Order G-72-12, the Commission

asked the following questions related to short-term debt under the heading “Deemed Capital Structure and Deemed Debt Issue Matters”:

- “7. What is an appropriate basis to calculate the deemed interest rate for short-term debt?
8. Should a deemed short-term interest rate be based on 3-month Bankers’ Acceptance rate and short-term 90-day loan?
9. What methodology should be applied to calculate the deemed short-term interest rate?”

On page 24, Ms. Ahern states that “If it is determined that short-term debt should be included in rate base, it is preferable to include it using an average monthly, e.g., 13-months, short-term debt balance rather than at a point in time as monthly balances can be volatile even if short-term debt is used by the utility on a consistent basis.”

- 31.1 Please confirm whether Ms. Ahern is referring to situations where a utility has actual short-term debt in its capital structure. If not, please clarify what Ms. Ahern is referring to, in the context of utilities without third-party debt.
- 31.2 Please provide Corix’s responses to questions 7 to 9 above (page 4 of Appendix B to Order G-72-12).

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.

- 31.3 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 Corix’s UniverCity NUS and River District Energy.
 - 31.3.1 Specifically, what are the advantages and disadvantages of using this formula in the case of BC utilities without third-party debt?

F. A METHODOLOGY TO ESTABLISH A DEEMED INTEREST RATE AAM

32.0 Reference: Testimony for CMUS by Ms. Ahern Exhibit B2-7, PMA Direct Testimony 8-2-12 Interest Rate and Deemed Interest Rate

Ms Ahern’s evidence does not appear to address the topic of interest rate and deemed interest rate.

- 32.1 Please comment on the determination on interest rates for a small utility. What information sources should be used and why? Should the small utility use a 10-year, 20-year, or 30-year Canada bond yield? Please explain fully.
 - 32.1.1 How often should the deemed interest rate be adjusted? With every Revenue Requirement Application? Automatically every year? Why?

32.2 Please comment on whether the Commission should establish some kind of automatic adjustment mechanism to determine an adjusted deemed interest rate for small utilities. Please provide sample calculations and sources for interest rates which may be appropriate and explain why the automatic adjustment mechanism is useful or not useful.