ASSOCIATION OF MAJOR POWER CONSUMERS IN ONTARIO/INDUSTRIAL GAS USERS ASSOCIATION (Dr. Sean Cleary)

Answer to Interrogatory from Ontario Energy Board Staff (OEB Staff)

Reference:

Dr. Cleary Report, pp. 21, 22, 55

Preamble:

Dr. Cleary noted that his recommendation is similar to that of LEI, with two minor qualifications, and agreed that the CORRA should be used to replace the BA rate in the DSTDR methodology.

- LEI recommended extending the current practice of sampling 6 big banks to estimate the spread to a larger sample of 6-10 banks. He is fine with this suggestion, assuming that it does not lead to including less reliable estimates (i.e., from the smaller banks), nor adds unnecessary complexity to the survey process.
- LEI recommended estimating the base CORRA based on the average of 3-month CORRA futures rates over the next 12 months. Since the CORRA is linked directly to the Bank of Canada's rate decisions, he is fine with this suggestion; although, he would also be fine with using the existing CORRA rate as of September 30th of each year as the base CORRA rate.

Dr. Cleary stated that the current annual review process can be supplemented by adding annual reporting requirements for utilities regarding new short-term and long-term debt and equity issued/borrowed during the year.

OEB staff notes that Bloomberg publishes the following ticker each business day, related to Canadian utilities:

BVCAUA3M BVLI	CAD Canada Utilities A+ A A- BVAL
Index	Yield Curve 3 Month

Questions:

a) Instead of using the average of 3-month CORRA futures rates for the next 12-month period, plus conducting a confidential bank survey, what are Dr. Cleary's views on instead using the Bloomberg BVCAUA3M BVLI Index (3-month) for the DSTDR and the prescribed interest rates for DVAs, which has a spread already built in?

b) Does Dr. Cleary have any alternative views on how to derive an appropriate DSTDR and prescribed interest rate for DVAs (including an appropriate spread), without conducting bank surveys or collecting actual short-term loan data from utilities? If so, please elaborate.

c) What are Dr. Cleary's views as to whether the short-term loan data underlying the calculations should reflect three-month loans or one-year loans?

d) LEI stated on page 80 of its report that "since CORRA is an overnight risk-free rate, it has historically been slightly lower than the 3-month CDOR. Based on a Bloomberg analysis, the official recommendations from CARR suggest adding 32.138 bps to CORRA to be comparable with the 3-month CDOR. Consequently, the spreads associated with CORRA will be different from the spreads over the 3-month BA rate/CDOR."

Does Dr. Cleary agree that if bank survey spreads over the 3-month CORRA futures rates are obtained, then the 32.138 bps would not need to be added to the rate applied to the DSTDR or prescribed interest rates? If not, please explain what spread would need to be added.

e) To obtain the average of 3-month CORRA futures rates for the next 12-month period, does Dr. Cleary agree that the data would be obtained from the following website, using settlement price data as of September 30, 2024, and derived by selecting "Futures", then "CRA"? If this is not the case, please explain.

https://www.m-x.ca/en/trading/data/historical

Responses:

(a) Either approach would be acceptable. Given that the Bloomberg BVCAUA3M BVLI Index (3-month) already has a spread built into it that does not require surveys or estimates, it would be administratively easier to implement, so this approach makes the most sense. As discussed in the evidence, Dr. Cleary would recommend the use of the Index "point" estimate as of the end of September, rather than using averages over the previous month or longer periods, in order to provide the most accurate estimate of future rates beyond the end of September.

(b) Dr. Cleary has not considered alternative approaches, and as discussed in response to (a), he supports the use of the Bloomberg 3-month index.

(c) Three-month loans would be more appropriate, as typically the financing arranged by firms has rates that are tied to a shorter-term rate (i.e., such as banks' prime lending rate, in the case of operating lines of credit).

(d) If the survey is based on "3-month" CORRA futures rates, then there would be no need to add a spread.

(e) Agreed.

ASSOCIATION OF MAJOR POWER CONSUMERS IN ONTARIO/INDUSTRIAL GAS USERS ASSOCIATION (Dr. Sean Cleary)

Answer to Interrogatory from Ontario Energy Board Staff (OEB Staff)

Reference:

EB-2024-0063, OEB Letter and Accounting Order, July 26, 2024

Preamble:

On July 26, 2024, the OEB issued a letter regarding prescribed DVA interest rates and the DSTDR.

The purpose of this letter was to provide an update regarding the calculations of the above-noted prescribed interest rates for DVAs and the DSTDR, given that the three-month bankers' acceptances that underpin these calculations have been phased-out.

The OEB stated that it will set the prescribed DVA interest rates for 2024 Q4 and 2025 Q1 on a final basis, using the Canada three-month T-bill rates at the time plus a 25 basis point spread. The DVA interest rates are expected to be issued by the OEB in mid-September 2024 and mid-December 2024, respectively. The final rate will be the three- month Canada T-bill rate as at August 30, 2024 (for the 2024 Q4 DVA rate) and November 29, 2024 (for the 2025 Q1 DVA rate), plus a fixed spread of 25 basis points.

The OEB also stated that in October 2024, the DSTDR will be set by the OEB, on an interim basis for those utilities rebasing for 2025 rates, using the average of the three-month Canada T-bill rate for each business day in September 2024.[1] The bank survey from September 2023 (the prior year) will be used as the average annual spread. No bank survey will be conducted in September 2024.

The OEB also approved the establishment of a generic variance account to capture certain revenue requirement impacts related to the DSTDR.

Questions:

a) Please provide Dr. Cleary's views on the OEB's approach outlined in the OEB's July 26, 2024 OEB Letter and Accounting Order, but only related to what could be used going forward, specifically using the three-month Canada T-bill rate to calculate:

[1] The DSTDR will apply to those utilities rebasing for 2025 rates, but with a decision expected in advance of the OEB's decision in the cost of capital generic proceeding.

i. Prescribed DVA interest rates for 2025 Q2 and forward, plus a 25 basis point spread
ii. The DSTDR for 2026 and forward, plus a spread using a bank survey

b) Given the elimination of the bankers' acceptance rates, does Dr. Cleary's viewpoint still remain that the CORRA rate should be used, or alternatively, please elaborate on a different methodology that should be used.

Responses:

(a) Dr. Cleary supports the approach as described above, but as discussed in his evidence, Dr. Cleary would recommend the use of the T-bill rate and "spread" point estimates as of the end of September, rather than using averages over the previous month or longer periods, in order to provide the most accurate estimate of future T-bill rates and spreads beyond the end of September.

(b) As discussed in response to Staff 58, part (a), Dr. Cleary feels that using the CORRA rate (as recommended by LEI), or using the Bloomberg BVCAUA3M BVLI Index (3-month) would be acceptable. But since the Index approach already has a spread built into it that does not require surveys or estimates, it would be administratively easier to implement, the Bloomberg Index approach makes the most sense.

ASSOCIATION OF MAJOR POWER CONSUMERS IN ONTARIO/INDUSTRIAL GAS USERS ASSOCIATION (Dr. Sean Cleary)

Answer to Interrogatory from Ontario Energy Board Staff (OEB Staff)

References:

EB-2009-0084, Report of the Board on the Cost of Capital for Ontario's Regulated Utilities, December 11, 2009, p. ii
LEI Report, p. 16
Concentric Report, p. 98 & 105
Nexus Report, p. 79
Dr. Cleary Report, pp. 45 and 46

Preamble:

OEB staff has prepared the following table showing the proposed adjustment factors.

Table 1 – Adjustment Factors Used to Compute ROE

	LCBF Adjustment Factor	Utility Bond Spread Factor
Current OEB methodology EB-2009-0084	0.50	0.50
LEI Proposed	0.26	0.13
Concentric Proposed	0.40	0.40
Nexus Proposed	No independent formula proposed	
Dr. Cleary Proposed	0.75	0.75

While Concentric agreed with LEI that coefficients have come down since 2009, Concentric stated that its estimates indicate LEI's recommended adjustment factors are too low. Instead, Concentric recommended the OEB set adjustment factors at 0.40 for the LCBF and 0.33 for the utility credit spread, which recognizes the lower empirical relationship between ROEs and bond yields compared to previous years, while still maintaining the formula's sensitivity to changes in interest rates and utility credit spreads.

Dr. Cleary stated that "increasing the adjustment factors makes allowed ROEs more responsive to changing market conditions than using 50% adjustment factors, but not significantly more volatile."

Dr. Cleary disagreed with LEI's recommended adjustment factors. Dr. Cleary stated that the existing adjustment factors of 0.5 would be preferable.

Questions:

a) Dr. Cleary - please comment on Dr. Cleary's statement that "increasing the adjustment factors makes allowed ROEs more responsive to changing market conditions than using 50% adjustment factors, but not significantly more volatile", whereas Concentric stated that there is a "lower empirical relationship between ROEs and bond yields compared to previous years, while [Concentric's proposed adjustment factors are] still maintaining the formula's sensitivity to changes in interest rates and utility credit spreads."

b) Dr. Cleary - please explain why Dr. Cleary's proposed adjustment factors are reasonable, when compared to the other adjustment factors presented in Table 1.

c) Dr. Cleary - please confirm that Dr. Cleary would accept the status quo of 0.5, even though in one section of his evidence Dr. Cleary is proposing adjustment factors of 0.75, but in an additional section proposing the status quo of 0.5. If this is not the case, please explain.

Responses:

(a) As is discussed in Dr. Cleary's evidence, LEI bases its adjustment factors for LCBF and UtilSpread on the results of a multivariate regression that regresses U.S. allowed ROEs on U.S. government bond yields and U.S. corporate bond yield spreads. This is also true of the basis for the adjustment factors recommended by Concentric and Nexus, which are both based on similarly specified and estimated regressions. The results of these regressions are simply not relevant with respect to current capital market conditions in Canada that are intended to be reflected in the OEB's ROE formula, as captured by changes in LCBF and UtilBondSpread, and therefore should not be considered.

The regression specifications used by these three expert groups are all flawed by design since allowed ROEs in U.S. jurisdictions do not have a direct relationship with changes in capital market conditions in Canada. These allowed ROEs do not change frequently (only during ROE reviews or annually at best if the jurisdiction uses a formula), **unlike the LCBF and UtilBondSpread factors which change daily**. Further, allowed ROEs for U.S. utilities have no direct relationship to Canada government yields (which often differ from U.S. yields as they do today) or with Canadian yield spreads. U.S. allowed ROEs are more likely to be affected by changes in U.S. yields and U.S. yield spreads – although even this relationship is difficult to estimate (since they do not necessarily accurately reflect the actual required return on U.S. utilities' cost of equity (Ke) as discussed in Section 5.1 of Dr. Cleary's evidence). As the AUC stated in Alberta 2018 GCOC Decision 22570-D01-2018, para. 393 (emphases added): "In the Commission's

view, although observable, the ROEs approved for the U.S. utilities are not strictly market data."

It is further noted that by definition, the risk-free rate or RF (which is proxied by LCBF in the OEB ROE formula) should have a correlation of zero with market returns (and thereby provide zero explanatory power as an independent variable in a regression where market returns are the dependent variable) according to the CAPM, since it is defined as a risk-free investment. The data included in Attachment A filed with Dr. Cleary's evidence was used to produce Table 6 of the evidence, which table reports summary statistics for Canadian capital markets over the 1938 to 2023 period. Based on these 85 years of Canadian capital market observations the correlation coefficient between Canadian stock returns and long Canada bond yields (i.e., RF) was +0.01 – very close to the CAPM predicted correlation of 0. Hence, it seems that any regression designed to predict the exact adjustment factors to be used for LCBF, and for UtilBond Spread, will not provide meaningful results. Therefore, I disagree with the decisions by LEI, Concentric and Nexus to base their recommended adjustment factors on the results of these uninformative regressions.

(b) As discussed in response to part (a), I consider the adjustment factor estimates provided by LEI, Concentric and Nexus as inappropriate, since they are based on regressions that are uninformative. As discussed in Section 5.1 of my evidence, allowed ROEs in Ontario (and other jurisdictions) have simply not declined adequately in response to the reduction in the cost of capital that utilities' have experienced, as long-term government bond yields (or RF) and A-rated utility bond yields have declined significantly over the last two decades. As a result, the spreads between allowed ROEs and these two measures, both of which directly affect the utilities' cost of capital, have *increased* dramatically though the years. In particular, Section 5.1 of Dr. Cleary's evidence shows that in January 2004, the spreads between the allowed ROE and RF was **4.57%**, and between ROE and A yields was **3.78%**. But as of June 5, 2024, the allowed ROE-RF spread was 1.34% higher than in 2004 at **5.91%** (a 29% increase), while the ROE-A yield spread was 0.75% higher at **4.53%** (a 20% increase). The average ROE-RF spread during the January 2004-June 2024 period was 6.03% and the average ROE-A-yield spread was 4.61%.

For illustrative purposes, as the OEB reconsiders its existing ROE formula, Figure 9 in Section 5.1 of Dr. Cleary's evidence also includes the OEB allowed ROEs that would have resulted if the OEB had used an adjustment factor of 0.75 instead of 0.5 for both terms in its ROE formula since the formula's implementation being reflected in 2010 and subsequent allowed ROEs. The graph shows that increasing the adjustment factor to 0.75 makes allowed ROEs more responsive to changing market conditions than using a 50% adjustment factor, but not significantly more volatile. This is reflected in lower resulting June 5, 2024 Allowed ROE to RF and A-yield spreads of 5.64% and 4.26% respectively for this approach, which are about 30bp lower than the actual spreads. Similarly, the averages for the RF and A-yield to allowed ROE spreads over the period were 5.80% and 4.39% respectively, about 20bp below the actual average spreads over this period. Based on this evidence, I recommend an adjustment factor of 0.75 for both factors, which maintains the relationship and is more responsive to changing market

conditions, but reduces year-to-year fluctuations in allowed ROEs relative to a weighting of 1.0.

(c) Dr. Cleary recommends adjustment factors of 0.75 for both LCBF and Util. Spread variables. While not recommending 0.5 adjustment factors, Dr. Clearly notes that 0.5 adjustment factors would be preferred over the adjustment factors recommended by LEI (for the reasons discussed in response to part (a)).

ASSOCIATION OF MAJOR POWER CONSUMERS IN ONTARIO/INDUSTRIAL GAS USERS ASSOCIATION (Dr. Sean Cleary)

Answer to Interrogatory from Ontario Energy Board Staff (OEB Staff)

Reference:

Dr. Cleary Report, pp. 28 & 29

Preamble:

Dr. Cleary stated that he disagreed with the use of forecast yields versus using actual prevailing yields. Dr. Cleary noted that this applies to any approach taken to estimating Ke, as well as to estimating LCBF for the OEB ROE formula.

Dr. Cleary stated that LEI's MRP estimates do not consider current market conditions or investor expectations regarding future market returns (or MRPs) in the U.S. (or Canada), but simply focuses on U.S. historical evidence during relatively short time periods that reflect above average historical MRPs, and which triple weights the most recent period, thus providing a totally inflated and unrealistic MRP estimate that implies expected future long-term stock returns of 11.5%.

Question:

a) To calculate the inputs to the base ROE, please explain why in one instance Dr. Cleary states that actual data should be used (and not forecasted data), however in another instance that future expectations should be used.

Response:

Using "actual yields" instead of forecasts of government yields for the following year reflects several factors that are discussed below. Firstly, it is important to recognize that this an estimate of yields for one year, and not over the long-term (i.e., 10-30 years and beyond), which is the case with using MRP estimates in the CAPM. Secondly, this decision is based on the empirical evidence provided in Appendix A to Dr. Cleary's evidence, which shows that (over the 2011-2023 period) using existing 30-year Canada yields produces statistically significantly more accurate forecasts of actual 30-year yields in the subsequent period than using forecasts. For example, while the average actual 30-year government yield over the period was 2.57%, the average September Consensus forecast was 0.37% higher at 2.94%. These figures indicate an **upward bias** over this 13-year period of **about 0.4%**, which is substantial. In contrast, the average forecast yields using the previous actual September 30th yields was 2.58% – virtually the same as the average for the actual prevailing yields of 2.57%. In other words, using forecasts would have added an average excess amount of 0.4% to LCBF (and the

allowed ROE of 0.2% - that is borne by the consumer when used in the OEB formula), whereas using actual prevailing 30-year Canada yields at the start of the period would have been unbiased on average. Appendix A of Dr. Cleary's evidence also discusses supporting research (Hafer and Hein (1989), Mitchel and Pearce (2007), and Spiwoks, Bedke and Hein (2008)), which confirms that using existing rates would have produced better estimates of future rates than using economist forecasts based on empirical research that considered other jurisdictions and data from different time periods.

In addition, using the CAPM to estimate Ke that RF represents the actual existing risk-free asset that an investor "can invest in today" and earn the risk-free rate of return. A Canadian investor today could not buy a 30-year Government of Canada bond promising a "forecast" risk-free rate of return (of for example, Concentric's estimate of 3.46% that differs from the actual rate existing today e.g., 3.30% as of June 5, 2024).

With respect MRP estimates, it is important to note (as mentioned above) that the MRP is used in the CAPM as a long-term estimate of MRP (not just for one year (as is the case for the LCBF estimate). Long-term forecasts of capital market conditions should be more representative of future long-term conditions, since short-term fluctuations and unexpected deviations tend to "wash out" over long estimation periods. Further, as discussed in Section 5.2.3 of Dr. Cleary's evidence, Dr. Cleary's MRP estimates rely on both long-term historical evidence, as well as forecasts of future expected market returns and MRPs**.** This is based on a belief that both historical returns and current expectations of market professionals represent the best sources of information regarding future long-term market returns.

ASSOCIATION OF MAJOR POWER CONSUMERS IN ONTARIO/INDUSTRIAL GAS USERS ASSOCIATION (Dr. Sean Cleary)

Answer to Interrogatory from Ontario Energy Board Staff (OEB Staff)

Reference:

Dr. Cleary Report, pp. 39, 40, 41, 112

Preamble:

Dr. Cleary stated that he weighted all three of his proposed allowed cost of equity (Ke) estimates equally, because all three methods are used in practice and provide different perspectives on Ke.

Dr. Cleary also stated that CAPM is more heavily relied upon in practice due to its conceptual advantages. Dr. Cleary further stated that CAPM is also very intuitive from the point of view of a utility cost of capital hearing.

Dr. Cleary suggested that the three methods he used to calculate his proposed allowed cost of equity (Ke) were CAPM, DCF, and BYPRP.

Ke = (1/3)(6.05 CAPM) + (1/3)(7.4 DCF) + (1/3)(7.7 BYPRP) = 7.05%

Dr. Cleary stated that he did not assign any weight to his proposed allowed cost of equity (Ke) estimate reflecting Price-to-Book (P/B) Ratios. However, Dr. Cleary discussed several proposed allowed cost of equity (Ke) estimates reflecting P/B Ratios.

Questions:

a) Please explain why Dr. Cleary has weighted all three of his proposed allowed cost of equity (Ke) estimates equally, but stated that CAPM is more heavily relied upon in practice and very intuitive from the point of view of a utility cost of capital hearing.

b) Please confirm that if the CAPM method was assigned a higher weight in Dr. Cleary's proposed allowed cost of equity (Ke), Dr. Cleary's suggested allowed cost of equity (Ke) would be lower than 7.05%. If this is not the case, please explain.

c) Please explain why Dr. Cleary did not assign any weight to his proposed allowed cost of equity (Ke) estimate reflecting P/B Ratios.

d) On page 112 of Dr. Cleary's evidence, Dr. Cleary discussed several proposed allowed cost of equity (Ke) estimates reflecting P/B Ratios. If Dr. Cleary was to assign a weight to his proposed allowed cost of equity (Ke) estimate reflecting P/B Ratios, what would

be the weight and what would be the resulting allowed cost of equity (Ke)? Please explain.

Responses:

(a) All three approaches were weighted equally to reflect the fact that most analysts use more than one approach to estimating Ke, and as mentioned in Section 5.6 of Dr. Cleary's evidence "all three methods are used in practice and provide different perspectives on Ke." In fact, one of the surveys referenced by Dr. Cleary shows that the BYPRP approach used by Dr. Cleary is more widely used by Canadian CFOs (over 50%) than is the CAPM. While the DCF model is not as widely used in practice by analysts or CFOs, this model should work well for mature utilities, with stable earnings and high payout ratios – whereas it will not work well for fast growing companies, companies with volatile earnings, and/or those with low payout ratios.

Dr. Cleary confirms his view that CAPM is intuitive from a utility hearing perspective, since it is a risk-based, market-based approach that includes a risk-free rate (proxied by 30-year government yields, which is included in the OEB formula), as well as forecasts of MRP, which is also an item of interest during such proceedings. Note also that Dr. Cleary's BYPRP approach is also a risk-based, market-based approach, and that the utility bond yield used in this model includes RF plus a yield spread, which corresponds to the second term included in the OEB formula, reflecting its importance during such proceedings.

(b) Confirmed.

(c) Weight was not assigned to Dr. Cleary's P/B Ke estimates for two reasons. First, while this method is commonly referenced in the CFA curriculum for example, it is not a commonly used approach in the utility proceedings, in Dr. Cleary's experience and observation. As such, the approach is rather used as a useful method to conduct a "reasonableness" check on his Ke estimates, which is based on observable market data. Secondly, there is duplication in the data used in terms of the estimated long-term growth rate estimates, and dividend yields used to apply this approach, both of which are included in Dr. Cleary's DCF estimates. Therefore, simply using the P/B results as a "reasonableness check," allows him to incorporate market data (i.e., market-determined P/B ratios), but without putting additional weight on growth and dividend yield estimates.

(d) A Ke estimate using the P/B ratios would be 6.88% (i.e., the average of the three Canadian Ke estimates after including flotation costs of 7.31%, 6.41% and 6.93% determined in this section). If this KE estimate were equally weighted with the other

three estimates included in Dr. Cleary's final estimate, the Ke estimate would decline very slightly to 7.01% from 7.05% (i.e., ¼ × (6.05% + 7.4% + 7.7% + 6.88%)).

ASSOCIATION OF MAJOR POWER CONSUMERS IN ONTARIO/INDUSTRIAL GAS USERS ASSOCIATION (Dr. Sean Cleary)

Answer to Interrogatory from Ontario Energy Board Staff (OEB Staff)

Reference:

Dr. Cleary Report, pp. 28, 43, 46

Preamble:

Dr. Cleary is proposing the following allowed return on equity.

ROEt = 7.05% + 0.75 x (LCBFt – 3.30%) + 0.75 x (UtilBondSpreadt – 1.38%)

For the base LCBFt, Dr. Cleary stated that the actual 30-year Government of Canada yield was 3.30% as of June 5, 2024. However, OEB staff notes that based on Bank of Canada data, it was 3.28% (V39056 for 30-year government).

For the base UtilBondSpreadt, Dr. Cleary stated that the 30-yr Utility over 30-yr Government spread was 1.38% as of June 5, 2024. However, OEB staff notes that based on Bank of Canada data (V39056 for 30-year government) and Bloomberg data (BVCAUA30 BVLI Index for 30-year utility), it was 1.40%.

Question:

a) Please confirm what is the correct base LCBFt and UtilBondSpreadt and provide supporting calculations, if Dr. Cleary is proposing different numbers than that noted in the preamble by OEB staff. Please explain.

Response:

This difference is most likely attributed to the fact that Dr. Cleary used Bloomberg data to estimate both the 30-year Government of Canada bond yields, and the A-rated utility yield spreads. While Bloomberg is clearly a reliable data source that is also relied upon by the OEB as referenced above, it is possible that Bloomberg reported 3.30% (as highlighted below), while at the same time (or perhaps retroactively) the Bank of Canada data source reported a slightly different number of 3.28%. The data used to support Dr. Cleary's estimates was included in Exhibit M4, Attachment C – Figure 2 Data and Calculations. The respective entry in that spreadsheet is copied below for ease of reference.

6/5/2024	4.6837	3.3031	1.381

The data above shows that the spread of 1.38% is correct according to the Bloomberg data used by Dr. Cleary, but if the 3.30% Canada yield was replaced by the 3.28% yield

referenced above in Bank of Canada data, then the appropriate spread would be 1.40% (i.e., 4.68% - 3.28%), as referenced above by OEB Saff.

ASSOCIATION OF MAJOR POWER CONSUMERS IN ONTARIO/INDUSTRIAL GAS USERS ASSOCIATION (Dr. Sean Cleary)

Answer to Interrogatory from Ontario Energy Board Staff (OEB Staff)

Note this interrogatory has been asked by LEI

Reference:

Dr. Sean Cleary Report, p. 32 & 42

Preamble:

Dr. Cleary stated the following:

This effectively "triple weights" the most recent 2014-23 period, which is included in all three intervals and has an extremely high MRP estimate of 10.16% (which implies an unrealistic estimate of ERm of 13.35%, based on LEI's RF estimate of 3.19%)… It is important to recognize that overall stock market conditions have changed over the last three decades and double digit "nominal" returns are no longer the norm for stocks, given existing 2% long-run inflation expectations. In other words, long-term nominal stock returns in the 4-9% range are consistent with current long-term forecasts by market professionals (which averaged 6.1%) and with historical long-term real stock returns.

Questions:

a) Please confirm that LEI has considered the MRP estimate of 10.16% to determine the high end of the ROE estimate. LEI has also provided average and low estimates for MRP.

b) Please confirm that total annual market returns (including dividends) for the S&P 500 have exceeded 13% in 44 years (out of 96 years) since 1928, i.e., annual market returns have exceeded 13% in 46% of the time since 1928. If Dr. Cleary disagrees, please explain.

c) Please confirm that total annual market returns (including dividends) for the S&P 500 have exceeded 13% in 9 years (out of 15 years) since 2009, i.e., annual market returns have exceeded 13% in 60% of the time since 2009. If Dr. Cleary disagrees, please explain.

d) Please confirm that any event that occurs 60% of the time in the last 15 years (and 46% over the last 96 years) will at least have some bearing on future expectations. If Dr. Cleary disagrees, please explain.

Responses:

(a) This is Dr. Cleary's understanding.

(b) Dr. Cleary has not undertaken to identify which 44 years LEI refers to in this question, nor to do the calculations to confirm the assertions by LEI in this question, but has no reason to doubt those assertions. The salient point is that sampling data from different time periods can skew the results in such calculations. For example, note that the period covered by the data also included numerous years of negative returns (i.e., over 26% of the U.S. observations over the 1938-2023 period according to data included in Attachment A of his evidence used to prepare Table 6 of his evidence; albeit these are U.S. stock market returns in Canadian dollars). Note also the fact that the Dimson et al (2016) study provided in Attachment AW of Dr. Cleary's evidence shows a long-term geometric mean "real" return for U.S. stocks of 6.2% over the 1900-2015 period, which translates into about a 8.2% nominal return in today's terms (assuming 2% inflation going forward).

(c) Confirmed.

(d) Dr. Cleary agrees that historical observations are relevant; however, it is inappropriate to estimate "expected future long-term average" returns based on such observations, since they are well above long-term averages (as mentioned in response to part (b) above), relative to long-term averages in Canadian and global markets, and contrary to current expectations of finance professionals regarding expected future stock market returns. Dr. Cleary notes, as he did in his evidence, that it is well-known that the U.S. stock market has experienced exceptional returns over the past few decades, producing abnormally high real returns relative to its longer term history, and relative to global equity returns in other markets, which is discussed in greater detail in Attachment AD of Dr. Cleary's evidence.

ASSOCIATION OF MAJOR POWER CONSUMERS IN ONTARIO/INDUSTRIAL GAS USERS ASSOCIATION (Dr. Sean Cleary)

Answer to Interrogatory from Ontario Energy Board Staff (OEB Staff)

Note this interrogatory has been asked by LEI

Reference:

Dr. Sean Cleary Report, p. 33

Preamble:

Dr. Cleary stated the following:

First, the use of a beta estimate (0.69) that is based solely on current beta estimates (without due consideration of historical beta estimates), is unreliable as beta estimates vary through time.

Questions:

a) Please confirm that LEI has used historical data (2019-2023) to determine the beta of 0.69.

b) While historical data is a valuable input for forecasting, market conditions can change over longer periods. As such, there is a risk of overweighting the importance of historical events that happened a long time ago (say more than 30 or 50 years ago), which may result in an unrepresentative picture of the future. Does Dr. Cleary agree? If not, please explain.

Responses:

(a) LEI used historical data over the most recent five-year period to obtain its beta estimates. What LEI has not done is consider historical beta estimates that were obtained using the same approach for much longer periods of time to reflect their reasonableness. As such, it is entirely weighted on the most recent five years of data, which at any point in time may have included periods of abnormal market behavior. For example, Appendix C of Dr. Cleary's evidence reports three charts that show the average beta estimates (using five years of previous monthly or weekly data) for Canadian utilities (including the S&P Utility sub-index) were negative at various points in time over the 2002-2004 period. By definition, the market-cap weighted average of all industries included in the market must equal one, so these abnormally low (unrealistic) beta "estimates" were driven by the high beta estimates of high-tech stocks that caused a market bubble, followed by a market

crash, and in the process led to beta estimates for almost all other sectors to be lower than they would normally be.

(b) Dr. Cleary does not agree in entirety, and specifically does not agree with regards to beta estimates for low-risk utilities, since utility stocks have always been, and continue to be among the lowest risk sectors included in stock market indexes. Therefore, referencing long-term averages of beta estimates is important (as discussed in Appendix C of his evidence), as beta estimates are just that – "estimates." At any particular point in time, the most recent historical data may imply lower estimates (as discussed in response to part (a)), or higher beta estimates, depending on the previous period of market activity. But the averages over longer periods of time tend to smooth out these discrepancies in the beta estimates, which of course are meant to be estimates of the beta that will be most representative of changes in stock returns relative to "future" changes in overall market returns.

ASSOCIATION OF MAJOR POWER CONSUMERS IN ONTARIO/INDUSTRIAL GAS USERS ASSOCIATION (Dr. Sean Cleary)

Answer to Interrogatory from Ontario Energy Board Staff (OEB Staff)

Note this interrogatory has been asked by LEI

Reference:

Dr. Sean Cleary Report, p. 36 & 41

Preamble:

Dr. Cleary stated the following:

First, the use of a beta estimate (0.69) that is based solely on current beta estimates (without due consideration of historical beta estimates), is unreliable as beta estimates vary through time.

Question:

a) Please confirm in Dr. Cleary's view that LEI has used historical data (2019-2023) to determine the beta of 0.69.

Response:

Please see response to M4-10-OEB Staff-65, part (a).

ASSOCIATION OF MAJOR POWER CONSUMERS IN ONTARIO/INDUSTRIAL GAS USERS ASSOCIATION (Dr. Sean Cleary)

Answer to Interrogatory from Ontario Energy Board Staff (OEB Staff)

Note this interrogatory has been asked by LEI

Reference:

Dr. Sean Cleary Report, p.33

Preamble:

Dr. Cleary stated the following:

Recognizing that four of the five Canadian utilities included in that sample are holding companies that operate in several jurisdictions that are riskier than Ontario (and Canada in general), and that also hold significant proportions of unregulated assets, it is interesting to note that the sole publicly-listed regulated operating Canadian utility (Hydro One) had a P/B ratio of 2.04 as of the end of 2023. It is further interesting to note that the average P/B ratio for the U.S. sample was greater than the Canadian average every year, ranging from 1.69 to 2.36 and averaging 2.05 over the 2017-2023 period. This is consistent with evidence provided in Section 5.1 of my evidence discussed above that shows that allowed ROEs in the U.S. are even more upward biased than those in Canada… In addition, there are data uncertainties associated with determining some of DCF input estimates for pure play regulated Canadian industries, since most of them are not publicly listed.

Questions:

a) If four of the five publicly traded Canadian utilities in Dr. Cleary's sample are holding companies that operate in several jurisdictions (mainly in the US and Canada), would Dr. Cleary consider it prudent to consider a larger sample size comprising similar US and Canadian utilities, allowing for a more reasonable representation of investor expectations? If Dr. Cleary disagrees, please explain.

b) Please confirm that the P/B ratio for the broader market over the last five years (such as the S&P 500 index) was 4.94 (Source: Bloomberg), and P/B ratios ranging from 1.69 to 2.36 are well within the range of normalcy. If Dr. Cleary disagrees, please explain.

Responses:

(a) It would be preferable to have a larger sample of Canadian utilities. However, it is not helpful to have a larger sample that does not include representative comparators, which is the focus of establishing proxy groups. Comparing applies to more oranges doesn't help. As demonstrated in Appendix B of Der. Cleary's evidence, U.S. utilities

possess higher business risk than their Canadian counterparts. This higher risk is further reflected in Appendix C of Dr. Cleary's evidence which shows that over a long period of time (more than 25 years), U.S. utility beta estimate historical averages are much, much higher than (almost double) the comparable Canadian beta estimates, and that this difference is even more pronounced after accounting for the higher leverage of Canadian utilities. This longer-term evidence is further supported by Table 8 of Dr. Cleary's evidence, which shows that both monthly and weekly beta estimates as of December 31, 2023, and estimates based on the 2017-2023 average estimates for U.S. utilities are **higher** than the comparable Canadian utility beta estimates. Similarly, Figure 16 of Concentric's evidence shows that beta estimates for U.S. utilities are higher than the comparable Canadian utility beta estimates.

(b) Dr. Cleary can neither confirm nor dispute the P/B ratio reported for the S&P 500 Index provided above. Note, however, that the appropriate comparator would be the P/B ratio for the Canadian market, which would likely be much lower than for the S&P500 Index. Section 5.1.2 of Dr. Cleary's evidence notes a June 5, 2024 P/E ratio for the S&P 500 Index of 23.5, versus for the S&P/TSX Index of 15.7. Such high relative valuations for the S&P 500 are consistent with the recently abnormally high U.S. stock returns as discussed in Dr. Cleary's evidence, and in response M4-10-OEB Staff-64, part (d).

P/B ratios for broad market indices (which includes all companies in all industries) have traditionally been above 2 for the Canadian market. However, this average is based upon the inclusion of predominantly non-regulated companies operating in numerous industries that do not operate regulated effective monopolies. As such, these companies operate in riskier and more competitive markets, place their invested capital at significantly greater risk than regulated monopolies, and therefore it is expected that the "survivors" in such industries would earn excessive economic rents (at least until competitive pressures kick in). In contrast, regulated operating utilities serve a vital role for society, and as such they are regulated to ensure they earn a fair and adequate (but not excessive) return for serving this function. Regulated with this in mind, a fair but not excessive return should dictate they would have P/B ratios approximately equal to one. P/B ratios well above one indicate they are earning excess economic rent (as discussed in greater detail in Section 5.5 of Dr. Cleary's evidence).

ASSOCIATION OF MAJOR POWER CONSUMERS IN ONTARIO/INDUSTRIAL GAS USERS ASSOCIATION (Dr. Sean Cleary)

Answer to Interrogatory from Ontario Energy Board Staff (OEB Staff)

Note this interrogatory has been asked by LEI

Reference:

Dr. Sean Cleary Report, p.37

Preamble:

Dr. Cleary stated the following:

If there is a desire or need for a "mechanical approach" to adjusting current beta estimates, simply adjust them toward the long-term average of 0.35, or even 0.45, rather than toward 1.0, as is done with published betas provided by services such as Bloomberg and Value Line… Based on historical evidence, establish a range of reasonable beta estimates with a lower bound of 0.30 and an upper bound of 0.60.

Question:

a) Please provide empirical evidence (in an MS Excel worksheet) for estimating the long-term average of 0.35, or even 0.45, and a range of reasonable beta estimates with a lower bound of 0.30 and an upper bound of 0.60.

Response:

Appendix C of Dr. Cleary's evidence references Figure 6 at page 45 of Dr. Villadsen's rebuttal evidence in the 2016 Alberta GCOC proceedings (Attachment 20622-X0457), which was referenced in VILLADSEN-UCA-16 2017NOV21-014, and is reproduced in Appendix C of Dr. Cleary's evidence. This document is publicly available on the Alberta Utilities Commission's website. Figure 6 of Dr. Villadsen's rebuttal evidence is reproduced in Appendix C of Dr. Cleary's evidence and depicts 5-year rolling monthly and weekly beta estimates calculated (1) over the 1988-April 2016 period for Dr. Booth's sample of Major Canadian Utility Holding Companies (Panel A); and, (2) over the 1992-April 2016 period for the Utility Sub Index for the S&P TSX (Panel B).

As discussed in Appendix C of Dr. Cleary's evidence, the average beta estimate over the 28-year 1988-2016 period in Panel A (for Dr. Booth's sample) is 0.35, while the maximum is 0.63. The average beta estimate over the 25-year period in Panel B (for the Utility Sub-Index) is 0.32 for the TSX sub-index sample, while the maximum is 0.72. Filed

separately are two supporting excel worksheets from Dr. Booth's 2016 evidence[1] that show that the average beta estimate over the 1993-2016 period for Dr. Booth's sample) is 0.295, with a maximum of 0.535, while the average beta estimate over the 1993-2016 period for the Utility Sub-Index is 0.32, with a maximum of 0.72.

As demonstrated by graphs and summary statistics provided above, and in Appendix C of Exhibit M4, at no point during this entire period do the beta estimates even come close to 1.0. This long-term evidence strongly refutes using betas that are adjusted toward one, given long-term average betas in the 0.30-0.35 range, with beta estimates never exceeding 0.54-0.72. Adjustment of beta estimates towards one makes no intuitive sense, since they have never even come close to 1.0 in practice.

[1] Denoted as 20622-X0273 2016-03-23 Booth page 52 Canadian betas – SC.xls, and 20622-X0275 2016-03-23 Booth page 52 Index betas – SC.xls.

ASSOCIATION OF MAJOR POWER CONSUMERS IN ONTARIO/INDUSTRIAL GAS USERS ASSOCIATION (Dr. Sean Cleary)

Answer to Interrogatory from Ontario Energy Board Staff (OEB Staff)

Note this interrogatory has been asked by LEI

Reference:

Dr. Sean Cleary Report, p.41

Preamble:

Dr. Cleary stated the following:

If we add 50 bp for flotation costs, we end up with a Ke estimate 7.7%. This is on the high side given my long-term expected market return estimate of 8% (if we add 0.50% to my raw market estimate of 7.5%).

Question:

a) Please provide the empirical basis (with examples of actual utility flotation costs) for recommending 50 basis points associated with floatation costs.

Response:

Dr. Cleary did not perform an empirical analysis in support of this recommendation. Rather this recommendation is based on the previous practice of the OEB, as well as other jurisdictions (e.g., Alberta, Newfoundland) where he has been involved in similar proceedings, where this is common practice. This approach has always seemed to be a reasonable “compromise” given estimates of flotation costs of approximately 2% for long-term debt issues and estimates of 5% for larger company equity issuances, and recognizing that utilities (like most companies) do not typically have many debt issues in a given year (and sometimes none) and new equity issues tend to be even less frequent.

ASSOCIATION OF MAJOR POWER CONSUMERS IN ONTARIO/INDUSTRIAL GAS USERS ASSOCIATION (Dr. Sean Cleary)

Answer to Interrogatory from Ontario Energy Board Staff (OEB Staff)

Note this interrogatory has been asked by LEI

Reference:

Dr. Sean Cleary Report, p. 41 & 42

Preamble:

Dr. Cleary stated the following:

…CAPM is more heavily relied upon in practice due to its conceptual advantages. For example, previous studies (referenced in Section 5 of my evidence) indicate with respect to the DCF approaches to estimating Ke, they were used by:

- only 15% of U.S. CFOs - versus over 70% for CAPM;
- about 12% of Canadian CFOs - versus close to 40% for CAPM.
- Not widely used, while CAPM was used by the majority of investors.

CAPM is also very intuitive from the point of view of a utility cost of capital hearing. In particular, it has a direct relationship to financing costs (i.e., RF and MRP). The CAPM also makes a direct adjustment for the risk of utilities relative to the market, unlike DCF models, since it has a direct measure of risk (i.e., beta) included in the model. In addition, there are data uncertainties associated with determining some of DCF input estimates for pure play regulated Canadian industries, since most of them are not publicly listed.
…Based on an equal weighting of the three approaches, I determine the 1 following best estimate for allowed Ontario utility ROEs:

$$Ke = (1/3)(6.05) + (1/3)(7.4) + (1/3)(7.7) = 7.05\%.$$

Questions:

a) Considering Dr. Cleary's observations regarding the clear advantages of using CAPM over the DCF methodology, please explain why the recommended ROE is not determined with only CAPM.

b) If 7.05% ROE is allowed by the OEB, please confirm that it would be the lowest allowed ROE among currently allowed ROEs for US and Canadian utilities.

Responses:

(a) Please see response to M4-10-OEB Staff-62, part (a).

(b) Confirmed, and appropriately so.

ASSOCIATION OF MAJOR POWER CONSUMERS IN ONTARIO/INDUSTRIAL GAS USERS ASSOCIATION (Dr. Sean Cleary)

Answer to Interrogatory from Ontario Energy Board Staff (OEB Staff)

Note this interrogatory has been asked by LEI

Reference:

Dr. Sean Cleary Report, p. 45

Preamble:

Dr. Cleary stated the following:

In particular, Section 5.1 shows that in January 2004, the spreads between the allowed ROE and RF was 4.57%, and between ROE and A yields was 3.78%. But as of June 5, 2024, the allowed ROE-RF spread was 1.34% higher than in 2004 at 5.91% (a 29% increase), while the ROE-A yield spread was 0.75% higher at 4.53% (a 20% increase). The average ROE-RF spread during the January 2004-June 2024 period was 6.03% and the average ROE-A-yield spread was 4.61%. For illustrative purposes, as the OEB reconsiders its existing ROE formula, Figure 9 in Section 5.1 of my evidence also includes the OEB allowed ROEs that would have resulted if the OEB had used an adjustment factor of 0.75 instead of 0.5 for both terms in their ROE formula since the formula's implementation being reflected in 2010 and subsequent allowed ROEs.

Question:

a) Please provide the empirical evidence (in an MS Excel worksheet) for recommending adjustment factors of 0.75.

Response:

Please see M4-10-OEB Staff-60. As discussed in the response to part (b), Figure 9 in Section 5.1 of Dr. Cleary's evidence includes the OEB allowed ROEs that would have resulted if the OEB had used an adjustment factor of 0.75 instead of 0.5 for both terms in their ROE formula since the formula's implementation in 2010 and subsequent allowed ROEs. The graph shows that increasing the adjustment factors makes allowed ROEs more responsive to changing market conditions than using 50% adjustment factors, but not significantly more volatile. The workpaper for Figure 9 (and 10) was filed as Attachment H to Exhibit M4.

ASSOCIATION OF MAJOR POWER CONSUMERS IN ONTARIO/INDUSTRIAL GAS USERS ASSOCIATION (Dr. Sean Cleary)

Answer to Interrogatory from Ontario Energy Board Staff (OEB Staff)

References:

Nexus Report, pp. 43 & 46 & 84
Dr. Cleary Report, p. 29
Concentric Report, pp. 136 & 137

Preamble:

Nexus stated that "capital from US exchanges is equivalent to capital from Canadian exchanges."

Nexus' proposal is that the OEB retain its existing policy regarding capital structure applicable to electricity distributors for now.

Dr. Cleary stated that U.S. utilities are not reasonable comparators for Canadian utilities. In Dr. Cleary's view, this is true because they have significantly higher business risk – partly due to their holding company structure and business holdings, partly due to operating in the U.S. and not in Canada, and partly due to the nature of their operations which entail more risk.

Concentric stated that it finds that Ontario's regulated distribution and transmission utilities generally have comparable business risk to the companies in the North American Electric and Gas comparator groups. Concentric also concluded that Ontario's utilities have similar financial risk to other electric and gas utilities in Canada and substantially greater financial risk than their U.S. peers due to the relatively low deemed equity ratios of 38 percent for Enbridge Gas, 40 percent for electric distribution and electric transmission, and 45 percent for OPG.

Concentric stated that an immediate move to parity with the U.S. would be abrupt. For that reason, Concentric recommended that the OEB set a minimum deemed equity ratio for Ontario utilities of 45 percent, which is at a point approximately halfway between the Ontario level and the U.S. average.

Questions:

a) Dr. Cleary - please provide Dr. Cleary's views on Nexus' statement that capital from US exchanges is equivalent to capital from Canadian exchanges.

b) Dr. Cleary - please provide Dr. Cleary's views on Concentric's statement that Ontario's regulated distribution and transmission utilities generally have comparable business risk to North American companies.

c) Dr. Cleary - please explain why likely, in Dr. Cleary's view, a minimum deemed equity ratio for Ontario utilities of 45 percent is not appropriate, despite Concentric's statements noted above, but also noting Nexus' recommendation to keep the status quo.

Responses:

(a) Canadian and U.S. capital markets are definitely integrated to a certain degree; however, Nexus' assertion "that capital from US exchanges is equivalent to capital from Canadian exchanges" is very overstated. It is a well-known fact that there is a "home bias" among investors, not only from Canada, but also globally. For example, on page 45 of its evidence, Nexus notes that the "Maple 8" (i.e. the eight largest Canadian pensions funds) hold approximately 25% of their investments in Canadian equities, which is more than eight times the Canadian equity market's percentage of global equity markets of just under 3% (2.9% as of September 30, 2021). A broader representation that extends beyond just the eight largest pension funds, shows that Canadian investors (including institutions) had a domestic allocation to equities of over 40% in 2020 (over 13 times the Canadian equity market's global market weight).[1] The home bias is even more dramatic in Canadian fixed income markets, which similarly comprise about 3% of global fixed income markets, but Canadian investors had a domestic allocation for fixed income of approximately 84% (approximately 28 times Canadian fixed income market's global market weight).

Nexus' assertions neglect the important and pragmatic fact that U.S. yields have been higher than Canada yields for several years, and that this is still the case. For example, as shown in Figure 7 of Dr. Cleary's evidence: the short-term U.S. rates of one year or less were 0.6-0.7% above Canadian rates, while two-year U.S. rates were about 0.8% higher, with 5- and 10-year U.S. yields being about 0.90% higher, and 30-year yields being over 1.1% higher. It is difficult to envision why Ontario utilities would choose to borrow at higher rates in the U.S. and in the process also suscept themselves to currency risk on top of paying higher interest costs.

(b) Concentric's assertion is flawed.

Concentric's evidence in fact shows Ontario ERs are in line with other Canadian utilities.

19 of 25 utilities included in Concentric's North American proxy group (which it suggests is the most representative for Ontario utilities) are U.S. utilities. As demonstrated in Appendix B of Dr. Cleary's evidence, U.S. utilities possess higher business risk than their Canadian counterparts. This higher risk is further reflected in Appendix C of Dr.

[1] Source: https://www.finiki.org/wiki/Home_country_bias#cite_note-8, September 10, 2022.

Cleary's evidence which shows that over a long period of time (more than 25 years), U.S. utility beta estimate historical averages are much, much higher than (almost double)

the comparable Canadian beta estimates, and that this difference is even more pronounced after accounting for the higher leverage of Canadian utilities. This longer-term evidence is further supported by Table 8 of Dr. Cleary's evidence, which shows that both monthly and weekly beta estimates as of December 31, 2023, and estimates based on the 2017-2023 average estimates for U.S. utilities are higher than the comparable Canadian utility beta estimates. Similarly, Figure 16 of Concentric's evidence also shows that beta estimates for U.S. utilities are higher than the comparable Canadian utility beta estimates.

(c) The assertion that a minimum deemed equity ratio for Ontario utilities of 45 percent is appropriate is unreasonable.

It is almost entirely based on Concentric's assertion that the allowed ERs for Ontario utilities need to increase in order to bring them more in line with allowed ERs in the U.S., given that Concentric's own evidence indicates that the allowed ERs in Ontario are in line with Canadian utilities. Such assertion is also inconsistent with Concentric's recommendation during the 2023 Newfoundland proceedings that Newfoundland Power (NP) should be allotted an allowed ROE of 9.85% and an allowed ER of 45%, similar to its current recommendations for Ontario utilities of 10% and 45% respectively, but on the basis of several risks to NP that do not apply to Ontario utilities. These risks include: facing a significant risk due to its small size; facing a significant risk due to weak macroeconomic and demographic conditions in Newfoundland; and, potential issues with future demand and slow potential for growth in customer demand. (In contrast Concentric argues that increased demand for Ontario utilities is a risk to them.)

Such assertion is also inconsistent with Concentric's recommendations in Alberta in 2023 when Concentric recommended an allowed ROE of 9.5% and an allowed ER of 40%, with both recommendations well below its current recommendations for Ontario utilities of 10% and 45% respectively. Concentric made these recommendations in Alberta 17 months ago based on its acknowledgement on page 92 (bold added for emphasis) of its Alberta evidence that they were based on bringing Alberta utilities **in alignment with "the deemed equity ratios of comparable-risk electric utilities in Ontario** and elsewhere across Canada." In other words, it appears that Concentric is now asserting that Ontario utilities require higher equity thickness and a higher allowed ROE than those it recommended for comparable Alberta utilities only 17 months ago during the Alberta proceedings.

ASSOCIATION OF MAJOR POWER CONSUMERS IN ONTARIO/INDUSTRIAL GAS USERS ASSOCIATION (Dr. Sean Cleary)

Answer to Interrogatory from Ontario Energy Board Staff (OEB Staff)

Reference:

Dr. Cleary Report, p. 52
Concentric Report, p. 147

Preamble:

In terms of the timing of the OEB's annual cost of capital parameters updates, Dr. Cleary supported the use of October data as opposed to September data. Dr. Cleary stated that this would provide more up-to-date capital market estimates and hence improve the accuracy of the parameters used in the ROE formula which is consistent with the approach recently introduced in Alberta.

Concentric stated that it is in agreement with LEI on the annual updates to the OEB's cost of capital parameters in October, using data as of September 30th, except where forecasts are utilized. Concentric generally recommended trailing 90-day averages where historic data are utilized to avoid the inherent volatility in a single month's data.

Question:

a) Dr. Cleary - in terms of the timing of the OEB's annual cost of capital parameters update, please provide Dr. Cleary's view on using trailing 90-day average data as of September 30, as opposed to October data.

Response:

Dr. Cleary disagrees with Concentric's recommendation of using historical 90-day averages (which includes data that could in some cases be well over 100 days old) as opposed to using more recent timely market data. The most recent available data will provide better forecasts of rates and spreads that will prevail in the subsequent test period.

For example, the prevailing 30-year Canada yield and spread between 10- and 30-year yields as of September 30th should provide better estimates of future rates (and spreads) than using an average over the previous 90 days, which includes dated yield observations. Consider for example if unexpectedly high inflation figures were reported in the middle of a given period that led to expectations of higher future inflation rates. This would generally lead to a bump in bond yields, which may continue at the new level for some time, but this bump would not have been reflected in the yields during the first half of the average "estimation period" (since it was unexpected). Therefore, using the

yields during the first half of the period in determining an average could bias the rate estimate downward (in this case).

The same is true for estimating the spread between 10- and 30-year Canada yields, which is not a trivial matter and is fraught with uncertainty. For example, while this spread averaged +0.38% over the 2004-2023 period, it has been as low as -0.23% and as high as +0.81%, and sat at -0.08% on June 5, 2024.

It is also true for estimating the Util Spread factor, where it would be preferable to use the most timely estimate of current capital market conditions as is feasible, since this spread, like most capital market factors changes through time. For example, while the average spread over the 2003-2024 period was 1.40% (as shown in Figure 3 of Dr. Cleary's evidence), it fluctuated from 0.76% to 3.05% over the period, and sat at 1.38% as of June 5, 2024. In particular, some events may have transpired during the most recent period that could either ease (or elevate) bond investors' risk assessments, which would be reflected in lower (or higher) yield spreads, and hence spreads existing before this unexpected event (or events) would not be as representative as the prevailing spreads at the end of the month, which reflect the most recent capital market conditions.

ASSOCIATION OF MAJOR POWER CONSUMERS IN ONTARIO/INDUSTRIAL GAS USERS ASSOCIATION (Dr. Sean Cleary)

Answer to Interrogatory from Ontario Energy Board Staff (OEB Staff)

Reference:

Dr. Cleary Report, p. 54

Preamble:

Dr. Cleary suggested that if the Canadian A-rated utility yield spreads exceed 2%, an immediate and thorough assessment of existing capital market conditions should be conducted by the OEB. Dr. Cleary stated that this could lead to a full regulatory review, depending on the results of this assessment. Dr. Cleary noted that a spread greater than 2% would be indicative of a period of extreme uncertainty in Canadian capital markets.

Questions:

a) Please confirm that the A-rate utility yield spread noted in the preamble would be based on any point-in-time difference between the Bloomberg data (BVCAUA30 BVLI Index for 30-year utility) and Bank of Canada data (V39056 for 30-year government). If this is not the case, please explain.

b) What would Dr. Cleary's proposed "full regulatory review" entail? Please elaborate.

Responses:

(a) Confirmed. Pragmatically, and recognizing that the OEB would not likely monitor such data on a day-to-day basis, it would be reasonable to assume this may have occurred over a recent period of time beyond one point in time (i.e., several days or a few weeks).

(b) Dr. Cleary recommends the OEB assesses the situation internally (including consulting external counsel and/or other relevant advisors) first, and then determine if a full regulatory review would be warranted. Such a review would likely involve a proceeding of similar scale and focus to the current review (with a particular emphasis on the allowed ROE and ER), subject of course to the Board's discretion.

ASSOCIATION OF MAJOR POWER CONSUMERS IN ONTARIO/INDUSTRIAL GAS USERS ASSOCIATION (Dr. Sean Cleary)

Answer to Interrogatory from Canadian Manufacturers & Exporters (CME)

Reference:

Exhibit M4, p. 33-34

Preamble:

At page 33, Dr. Cleary opines that LEI's CAPM estimate of a 8.95% ROE is upwardly biased for several reasons, including that the sample LEI used included American utilities. CME understands that Dr. Cleary's view is that utilities in the United States are riskier than their Canadian counterparts. Dr. Cleary includes Appendix B and Appendix C in support of that conclusion.

Questions:

(a) Appendix C describes the betas for a wide variety of Canadian utilities in contrast to their U.S. counterparts. However, Appendix B is more focused on the Enbridge Gas Inc. ("**EGI**") example (as the evidence was originally used in that proceeding). Please confirm that Dr. Cleary's view is that Canadian utilities are broadly less risky than U.S. utilities.

(b) Some of the evidence in Appendix B confirms that EGI is less risky than U.S. utilities by reviewing EGI's long standing track record of over-earning its ROE. The evidence from some other parties (Exhibit M3, Expert Report on the Cost of Capital and Certain Accounting Issues EB-2024-0063, Nexus Economics, p. 11) is that many Ontario distributors under-earn their allowed ROE. Does this change Dr. Cleary's view of the relative risk of Canadian utilities versus their U.S. peers? Why or why not?

Responses:

a) Confirmed. Please also refer to response N-M4-EDA-7.

b) This does not change Dr. Cleary's view of Canadian utilities as a whole relative to U.S utilities. Dr. Cleary would note, as discussed in Section 6.2.3 of his evidence, that the largest Ontario distributor, Hydro One Inc. Distribution (which accounts for approximately a third of all Ontario distribution), earned above its allowed ROE every year over the 2019-2023 period, with an average earned ROE above allowed of 1.17% from 2018 to 2023. Hydro One Inc. Transmission (which accounts for over 90% of all Ontario transmission) earned above its allowed ROE every year over the 2018-2023 period, with an average earned ROE above allowed of 1.11% over the period. In addition, as noted in Dr. Cleary's 2023 EGI rebasing evidence,

Enbridge Gas Inc. (which accounts for over 99% of Ontario gas distribution) earned ROEs in excess of its deemed ROEs that averaged 1.1% over the 1990-2022 period.

ASSOCIATION OF MAJOR POWER CONSUMERS IN ONTARIO/INDUSTRIAL GAS USERS ASSOCIATION (Dr. Sean Cleary)

Answer to Interrogatory from Canadian Manufacturers & Exporters (CME)

Reference:

Exhibit M4, p. 29

Preamble:

At page 29, Dr. Cleary stated that "U.S. utilities are NOT reasonable comparators for Canadian utilities. This is true because they have significantly higher business risk – partly due to their holding company structure and business holdings, partly due to operating in the U.S. and not in Canada, and partly due to the nature of their operations which entail more risk."

Questions:

(a) Please elaborate on why holding company structure makes a business more risky? Is it that a holding company is inherently more risky, or is it that a holding company might hold other unregulated business which may be riskier, thereby increasing risk to the holding company? If the latter, could you please point out examples of companies used in either LEI or other experts' comparator groups that own other businesses that are significantly more risky?

(b) Please elaborate on why operating in the U.S. increases risk? Does the additional risk come from being regulated by different regulatory or legal regimes or other factors?

(c) Please elaborate on the nature of U.S. utilties' operations and their effect on risk.

Responses:

(a) Holding companies might hold unregulated businesses that are riskier, as well as holding regulated and/or unregulated utilities that operate in jurisdictions that are riskier than Ontario. This could be true for any holding company; although Dr. Cleary would note that a Canadian holding company, Emera Inc. that was included in the proxy groups of most (if not all) experts during these proceedings derived 23.3% of its 2018 revenue from Canadian operations, versus 76.7% from International operations, with 89.8% of its revenue being from regulated operations and 9.41% from unregulated operations.

(b) Regulatory risk is part of the reason; although there are several reasons including economic risk related to specific jurisdictions, etc.

Appendix B of Dr. Cleary's evidence shows at a high level that U.S. utilities possess higher business risk than their Canadian counterparts. This evidence included

references to two other sources that conducted analyses of broad samples of US utilities, both of which provide strong evidence that the average U.S. utility earns well below their allowed ROE.[1,2]

This higher risk is further reflected in Appendix C of Dr. Cleary's evidence which shows that over a long period of time (i.e., more than 25 years), U.S. utility beta estimate historical averages are much, much higher than (almost double) the comparable Canadian beta estimates, and that this difference is even more pronounced after accounting for the higher leverage of Canadian utilities. This longer-term evidence is further supported by Table 8 of Exhibit M4, which shows that both monthly and weekly beta estimates as of December 31, 2023, and estimates based on the 2017-2023 average estimates for U.S. utilities are higher than the comparable Canadian utility beta estimates. Similarly, Figure 16 of Concentric's evidence also shows that beta estimates for U.S. utilities are higher than the comparable Canadian utility beta estimates.

(c) Please refer to the response to part (b).

[1] Source: Page 10 of "North America Utilities: Still a Smart Bet for the New Grid," Oliver Wyman, 2015.
[2] Source: "The Utility of Finance," S. Azgad-Tromer and E. Talley, Working Paper, Columbia University (https://www.semanticscholar.org/paper/The-Utility-of-Finance-Azgad-Tromer-Talley/c5913d92dc6600974956b13c9383bee6f61b731b).

ASSOCIATION OF MAJOR POWER CONSUMERS IN ONTARIO/INDUSTRIAL GAS USERS ASSOCIATION (Dr. Sean Cleary)

Answer to Interrogatory from Canadian Manufacturers & Exporters (CME)

References

Exhibit M4, p. 41

Preamble:

In addition to a CAPM and DCF calculation, Dr. Cleary also uses the Bond Yield Plus Risk Premium estimate calculation.

Question:

(a) Please compare Dr. Cleary's BYPRP methodology to the "risk premium model" used by LEI, Concentric's "risk premium analysis" and Nexus' "risk premium method". What are the benefits (if any) to using the BYPRP over those other analyses?

Response:

The BYPRP model used by Dr. Cleary adds an estimated risk premium to the yield on a firm's outstanding publicly-traded long-term bonds. This approach forms part of the CFA curriculum, is found in numerous academic textbooks and is widely used by both financial analysts and CFOs. As the Alberta Utilities Commission (AUC) has previously recognized, this model is simple to use, incorporates readily observable, market-determined credit spreads, and "conforms to the basic principle that investors require a higher return for assets with greater risk".[1]

Additional support for the use of Dr. Cleary's BYPRP approach, and the 2.5% risk premium he uses in the model for Ontario utilities, is included in the response to N-M4- EDA-5.

In contrast, the risk premium models used by LEI, Nexus and Concentric are based on the results of multivariate regressions of U.S. allowed ROEs on U.S. government bond yields and U.S. corporate bond yield spreads. The results of these regressions are simply not relevant with respect to current capital market conditions in Canada that are intended to be reflected in the cost of equity to Ontario utilities and/or the OEB's ROE formula, as captured by changes in LCBF and UtilBondSpread, and therefore should not be considered.

The regression specifications used by these three expert groups are all flawed by design since allowed ROEs in U.S. jurisdictions do not have a direct relationship with changes in capital

[1] AUC Decision 22570-D01-2018, paras. 388-389.

market conditions in Canada. These allowed ROEs do not change frequently (only during ROE reviews or annually at best if the jurisdiction uses a formula), unlike the LCBF and

UtilBondSpread factors which change daily. Further, allowed ROEs for U.S. utilities have no direct relationship to Canada government yields (which often differ from U.S. yields as they do today) or with Canadian yield spreads. U.S. allowed ROEs are more likely to be affected by changes in U.S. yields and U.S. yield spreads – although even this relationship is difficult to estimate (since they do not necessarily accurately reflect the actual required return on U.S. utilities' cost of equity (Ke) as discussed in Section 5.1 of Exhibit M4). As the AUC stated in Alberta 2018 GCOC Decision 22570-D01-2018, para. 393 (emphases added): "In the Commission's view, although observable, the **ROEs approved for the U.S. utilities are not strictly market data**." In fact, the AUC has rejected the use of such models, on the basis that: 1) these models inappropriately rely on allowed ROEs as the proxy for a market return, notwithstanding allowed ROEs do not represent market data; and, 2) relative to Dr. Cleary's BYPRP, such models "lose the advantage of incorporating the observable market data on utilities' credit spreads".[2]

[2] AUC Decision 22570-D01-2018, paras. 392-393.

ASSOCIATION OF MAJOR POWER CONSUMERS IN ONTARIO/INDUSTRIAL GAS USERS ASSOCIATION (Dr. Sean Cleary)

Answer to Interrogatory from Coalition of Concerned Manufacturers and Businesses of Canada (CCMBC)

Reference:

Exhibit M4 (Dr. Cleary evidence), page 5

Question:

Members of CCMBC are manufacturers and businesses and the rates they pay will be impacted by the outcome of this proceeding. In general, would the recommendations of Dr. Cleary result in an increase or a decrease in electricity and gas rates?

Response:

Adoption of Dr. Cleary's recommendations would result in a decrease in electricity and gas rates in Ontario.

ASSOCIATION OF MAJOR POWER CONSUMERS IN ONTARIO/INDUSTRIAL GAS USERS ASSOCIATION (Dr. Sean Cleary)

Answer to Interrogatory from Consumers Council of Canada (CCC)

References:

Ex. M4/p. 18
Ex. M2/p. 137

Questions:

a) Please provide your view on Concentric's recommended increase to equity thickness for all Ontario utilities to a minimum of 45% as part of the current generic proceeding.

b) If the OEB is inclined to make changes to the equity thickness for Ontario LDCs in the current proceeding (e.g., due to the large number of LDCs and the potential inefficiency in addressing equity thickness in each rebasing), please provide your directional view on whether the equity thickness for LDCs should increase or decrease.

Responses:

a. Dr. Cleary disagrees with Concentric's recommended increase in equity ratios to 45%. Concentric's ROE and equity ratio (ER) recommendations (both in the Executive Summary and in the respective sections of its evidence) appear to rely almost exclusively on the main argument that since allowed ROEs and ERs in the U.S. are higher than those for Ontario utilities, the allowed ROE and ERs for Ontario utilities need to be increased. There are at least 25 such references in Concentric's report to Ontario allowed ROEs and/or ERs being below those allowed in the U.S., as well as 14 additional comments that reference comparisons to both North American and Canadian ratios. Concentric's position appears to be that all the OEB needs to do in order to satisfy the Fair Return Standard (FRS) is to examine allowed ROEs and ERs in other jurisdictions (with a much higher weighting of those in the U.S.), and implies there is no need to put much weight on an examination of Ontario utilities' own business risk, or market-based evidence regarding factors that should impact earned ROEs on Ontario, such as expected future stock market returns, government bond yields, yields on Ontario utility bonds, etc.

   Further, Concentric's current recommendation is inconsistent with recent evidence (November 7, 2023) that Concentric filed before the Newfoundland and Labrador Board of Commissioners of Public Utilities, on behalf of Newfoundland Power Inc. (NP). During those proceedings, Concentric recommended an allowed ROE for NP of 9.85% and an allowed ER of 45%, similar to its current recommendations for Ontario utilities of 10% and 45% respectively, on the basis of arguments it made in its Newfoundland evidence, which shows (or concludes) that NP:

- maintains an A rating from DBRS, and a Baa1 rating from Moody's – both lower than for example Hydro One Inc.'s current ratings of A (High) and A3 respectively;
- faces a significant risk due to its small size, as discussed on pages 61-63 of Concentric's Newfoundland evidence;
- faces a significant risk due to weak macroeconomic and demographic conditions in Newfoundland (which is not the case for Ontario), as discussed on pages 63-66 of Concentric's Newfoundland evidence; and
- potential for growth in customer demand (while in contrast, Concentric argues that increased demand for Ontario utilities is a risk to them), as discussed on page 70 of Concentric's Newfoundland evidence.

Given that few, if any, of these factors apply to most, if not all, of Ontario's utilities, the necessary logic of these positions as put forward in Newfoundland in light of the ROE and ER recommended for NP is that the ROEs and ERs for Ontario utilities should be lower.

Concentric's Ontario recommendations are also inconsistent with recent evidence that Concentric filed (February 1, 2023) before the Alberta Utilities Commission (AUC). During those AUC proceedings, Concentric recommended an allowed ROE of 9.5% and an allowed ER of 40%, with both recommendations well below its current recommendations for Ontario utilities of 10% and 45% respectively. Concentric made these recommendations in Alberta 17 months ago based on its acknowledgement on page 92 (bold added for emphasis) of its Alberta evidence that its Alberta recommendations were based on bringing Alberta utilities **in alignment with "the deemed equity ratios of comparable-risk electric utilities in Ontario** and elsewhere across Canada."

b. Dr. Cleary has recommended that Hydro One Inc.'s equity ratio be reduced to 38%, and then gradually to 36%, which he recommended as appropriate for Enbridge Gas Inc. (EGI) during the 2023 EGI rebasing proceedings. While Dr. Cleary has not conducted a detailed analysis of each individual LDC, he is of the opinion that in general the Ontario equity ratios could be lowered.

ASSOCIATION OF MAJOR POWER CONSUMERS IN ONTARIO/INDUSTRIAL GAS USERS ASSOCIATION (Dr. Sean Cleary)

Answer to Interrogatory from Consumers Council of Canada (CCC)

Reference:

Ex. M4/pp. 29, 35

Questions:

a) With respect to the determination of ROE based on the DCF and CAPM methodologies, if the OEB is inclined to include US utilities in the peer group, do you have any suggestions on how that can be operationalized in a manner that recognizes the significantly lower risk of Canadian utilities? For example, can weightings towards Canadian utilities or incremental adjustments to betas be applied in the DCF and CAPM methodologies?

b) Please further describe the US estimates by Kroll. In what context are those estimates developed and do they have any usefulness for the CAPM calculation
in the context of the OEB potentially preferring to include US data as part of the determination of the ROE.

Responses:

a) As confirmed in Appendix B of Dr. Cleary's evidence, U.S. utilities possess greater business risk than Canadian operating utilities. This higher risk is further reflected in Appendix C of Dr. Cleary's evidence which shows that over a long period of time U.S. utility beta estimate historical averages are much higher than the comparable Canadian beta estimates, which is consistent with observations in both Dr. Cleary's and Concentric's evidence in the current proceeding. However, simply making an adjustment for the differences in beta estimates would still not provide valid CAPM estimates for Ontario utilities. This is because the appropriate market index is the Canadian market (due to home bias) and not the U.S. market, while Canadian risk-free rates (as proxied by government yields) are currently lower than corresponding U.S. rates, and Canadian MRPs also often differ from U.S. MRPs.
With respect to DCF estimates, both dividend yields and growth rates similarly vary across Canadian and U.S. markets, and for Canadian and U.S. utilities more specifically.

As a result, Dr. Cleary does not feel that making adjustments to the CAPM and DCF cost of equity (Ke) estimates derived from U.S. comparators would produce informative estimates. If U.S. Ke estimates obtained using these models were to be considered (which Dr. Cleary disagrees with), it would be best to simply recognize these estimates could be regarded as maximum or even higher (and not most likely) estimates, since they should be higher than those for Canadian operating utilities, as they are estimated using riskier companies (i.e., U.S. utilities).

b) Dr. Cleary does not rely on the Kroll MRP estimates for the U.S. market; however, he notes that Kroll's updated June 5, 2024 U.S. MRP recommendation is 5%. To the best of Dr. Cleary's understanding, Kroll provides these cost of capital estimates for clients, etc. based on continuous assessments of current market conditions, and reliance on several models; although Dr. Cleary does not know the details of Kroll's process.

ASSOCIATION OF MAJOR POWER CONSUMERS IN ONTARIO/INDUSTRIAL GAS USERS ASSOCIATION (Dr. Sean Cleary)

Answer to Interrogatory from Consumers Council of Canada (CCC)

Reference:

Ref: Ex. M2/p.74
Ex. M3/p. 72

Preamble:

Concentric noted that, for our Risk Premium analyses, we have relied on authorized returns from a large sample of U.S. electric utilities and U.S. gas distribution companies. In addition, we have conducted a Risk Premium analysis based on authorized returns for Canadian electric and gas utility companies since 2000. Nexus appears to apply a similar methodology that relies on authorized returns for U.S. electric and gas distribution companies.

Question:

Please comment on Concentric's and Nexus' use of approved returns (or, "authorized returns") for US regulated utilities to determine the risk premium in the calculation of an appropriate ROE for an Ontario regulated utility. As part of the response, please comment on the logic of using approved ROEs from other jurisdictions to determine risk premiums for Ontario utilities when those approved ROEs would have also, presumably, been underpinned by DCF, CAPM and/or Risk Premium based ROE determinations when they were initially calculated.

Response:

The risk premium models used by these experts are flawed by design, since they are based on the results of multivariate regressions of U.S. allowed ROEs on U.S. government bond yields and U.S. corporate bond yield spreads. The results of these regressions are simply not relevant with respect to current capital market conditions in Canada that are intended to be reflected in the cost of equity to Ontario utilities and/or the OEB's ROE formula, as captured by changes in LCBF and UtilBondSpread, and therefore should not be considered.

The regression specifications used by these three expert groups are all flawed by design since allowed ROEs in U.S. jurisdictions do not have a direct relationship with changes in capital market conditions in Canada. These allowed ROEs do not change frequently (only during ROE reviews or annually at best if the jurisdiction uses a formula), unlike the LCBF and UtilBondSpread factors which change daily. Further, allowed ROEs for U.S. utilities have no direct relationship to Canada government yields (which often differ from U.S. yields as they do today) or with Canadian yield spreads. U.S. allowed ROEs are more likely to be affected by changes in U.S. yields and U.S. yield spreads – although even this relationship is difficult to estimate (since they do not necessarily accurately reflect the actual required return on U.S.

utilities' cost of equity (Ke) as discussed in Section 5.1 of Dr. Cleary's evidence). As the AUC stated in Alberta 2018 GCOC Decision 22570-D01-2018, para. 393 (emphases added): "In the Commission's view, although observable, the **ROEs approved for the U.S. utilities are not strictly market data**."

ASSOCIATION OF MAJOR POWER CONSUMERS IN ONTARIO/INDUSTRIAL GAS USERS ASSOCIATION (Dr. Sean Cleary)

Answer to Interrogatory from Consumers Council of Canada (CCC)

Reference:

Ex. M4/pp. 35, 46, 76

Preamble:

(Page 35) Allowed ROEs in Canada have not declined in line with reductions in government and utility bond yields, and hence are providing Ontario (and other Canadian and U.S.) utilities "excess compensation" in terms of allowed ROEs relative to their actual market-determined cost of equity.

(Page 46) I recommend an adjustment factor of 0.75 for both factors, which maintains the relationship, is more responsive to changing market conditions, and will still reduce year-to-year fluctuations in allowed ROEs relative to a weighting of 1.0.

(Page 76) A large part of this can be explained by the fact that allowed ROEs "tend to exhibit considerable stickiness around focal 'odometer' points." Consistent with the evidence for Ontario and Alberta discussed above, the authors note that "awarded ROE spreads over risk free treasuries have progressively *widened* significantly since 2005, even though systematic risk in the utilities industry has *fallen continuously* during the same time period."

Questions:

a) Please further discuss why ROEs have not declined in line with government and utility bond yields. Is this related to the fact that, under the current ROE formulaic annual update, only a portion of the change in bond yields are passed through to the allowed ROE? Are there other reasons?

b) Please provide your view on applying no adjustment factor (i.e., passing through the entirety of changes to bond yields) in the ROE annual update formula. Is there a reason that you prefer to reduce the impact of annual changes in bond yields on the allowed ROE (i.e., 0.75 adjustment factor)?

c) Please further comment on the reasons for the cited "stickiness" of ROEs. As part of the response, please discuss whether regulators' general inclination to benchmark against other regulators, is part of the reason for that stickiness

Responses:

a) This is the result of several factors. As discussed in Section 5.1 of Exhibit M4, the downward "stickiness" in awarded ROEs is not unique to Ontario but can be observed in other Canadian jurisdictions, and is even more prevalent in the U.S., which is evidenced in the results of a 2017 study that examines "a dozen years' of gas and electric rate-setting decisions" in the U.S. and Canada over the 2005-2016 period.[1] This study provides evidence "demonstrating empirically that allowed returns on equity diverge significantly and systematically from the predictions of accepted asset pricing methodologies in finance." A large part of this can be explained by the fact that allowed ROEs (bold added for emphasis) "tend to **exhibit considerable stickiness around focal 'odometer' points**." Consistent with the evidence for Ontario and Alberta discussed above, the authors note that "awarded ROE spreads over risk free treasuries have progressively *widened* significantly since 2005." While Section 5.1 of Dr. Cleary's evidence shows that this "widening" of spreads over risk-free rates and utility bond yields would have not been as dramatic if the adjustment factors in the OEB formula were increased from 0.5 to 0.75, the spreads would still have occurred. One reason is the consistent references to awarded ROEs in other jurisdictions, which may not have declined in response to decreases in utility costs of capital. This in turn produces circular reasoning that they have to remain high in order to remain consistent with other jurisdictions, as well as with previous levels.

b) The recommended adjustment factor of 0.75 for both factors maintains the relationship, but is more responsive to changing market conditions than using a 0.5 adjustment. Further an adjustment factor of 0.75 will still reduce year-to-year fluctuations in allowed ROEs relative to a weighting of 1.0.

c) Please see response to part (a).

[1] Source: "The Utility of Finance," S. Azgad-Tromer and E. Talley, Working Paper, Columbia University (https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2994314).

ASSOCIATION OF MAJOR POWER CONSUMERS IN ONTARIO/INDUSTRIAL GAS USERS ASSOCIATION (Dr. Sean Cleary)

Answer to Interrogatory from Consumers Council of Canada (CCC)

References:

Ref: Ex. M4/p. 91
Ex. M2/pp. 66-67

Preamble:

(Exhibit M2, Pages 66-67) Concentric stated that there are two primary reasons to adjust raw betas. First, empirical studies have provided evidence that an individual company beta is more likely than not to move toward the market mean of 1.0 over time. Second, adjusting beta serves a statistical purpose.

Question:

Please provide your views on Concentric's rationale for using adjusted betas in its analysis. As part of this response, please comment on the studies (Blume, 1975 and 1979 (footnote 77), and Morin (footnote 78)) that Concentric relies on to support its view and the applicability of those studies to the regulated utility sector.

Response:

Concentric's statement suggests that "an individual company" beta estimate moves towards one – but this statement applies only to an average company in the market. It is not appropriate with respect to below-average risk utility stocks, whose betas do not gravitate towards one. Dr. Cleary's evidence provides strong evidence supporting this fact. For example:

- Michelfelder and Theodossiou (2013) show empirically that utility betas do not have a tendency to converge to 1.0 and concluded that the adjusted betas as reported by Value Line are not applicable for public utilities.

- As shown in Appendix B of Exhibit M4, Sikes (2022) provides a chart in Figure IV of his report that estimates betas for utilities over the 1970-2020 period (i.e. using over 50 years of observations) that leads Sikes to note (on page 48 of his report) that: "It is undeniable based on Figure IV that the Value Line Adjustment is inappropriate. Clearly, utility betas have been consistently below 1.0 and as shown in Exhibit H of the Appendix, the historical sample suggests an average of 0.55." In fact, the line depicting adjusted betas in Sikes' Figure IV is ALWAYS above the line depicting actual betas – which clearly shows that adjusted beta estimates are **upwardly biased.**

- Appendix B of Exhibit M4 shows that the historical raw Beta estimates for Canadian Utilities over the 1995-2019 period averaged 0.40 (weekly data) and 0.34 (monthly data), with maximums of 0.71 and 0.62 respectively and nowhere during this 25-year period did the Canadian Utility beta estimates even come close to 1.0.

- Appendix B of Exhibit M4 shows that the historical raw Beta estimates for U.S. Utilities over the 1995-2019 period averaged 0.49 (weekly data) and 0.42 (monthly data), with maximums of 0.84 and 0.85 respectively and that nowhere during this 25-year period did the U.S. Utility beta estimates even come close to 1.0.

The Blume study referenced by Concentric is a 1970 article – 54 years old. More importantly, this study examines beta estimates for the entire universe of stocks across all industries, and does not focus on one particular industry (including utility stocks). Dr. Cleary has not read the document prepared by Dr. Morin, but notes that Dr. Morin has testified on the behalf of utilities in well over 50 regulatory proceedings.

ASSOCIATION OF MAJOR POWER CONSUMERS IN ONTARIO/INDUSTRIAL GAS USERS ASSOCIATION (Dr. Sean Cleary)

Answer to Interrogatory from Consumers Council of Canada (CCC)

Reference:

Ex. M4/p. 94

Question:

Beyond US utility beta estimates being higher than Canadian utility beta estimates, please provide a discussion of the reasons for the difference in risk between Canadian and US utilities.

Response:

Please refer to Appendix B of Dr. Cleary's evidence, which provides detailed and extensive support for the fact that U.S. utilities possess greater business risk than Canadian operating utilities.

ASSOCIATION OF MAJOR POWER CONSUMERS IN ONTARIO/INDUSTRIAL GAS USERS ASSOCIATION (Dr. Sean Cleary)

Answer to Interrogatory from Consumers Council of Canada (CCC)

Reference:

Ex. M4/pp. 93, 101, 107

Questions:

a) With respect to the use of peer groups in your study (as set out in Tables 8, 10 (which shows an average based on the peer companies set out in Appendix J), and the unlabeled table on p. 107), please confirm or correct the following understanding:

i. For the CAPM calculation, the Canadian and US peer groups are not directly used but inform the potential accuracy of the beta of 0.45 that is applied.

ii. For the DCF calculation, Panel A (Canadian Sample) is used to determine the DCF-derived ROE.

iii. For the BYPRP calculation, Fortis Alberta, Fortis BC, Canadian Utilities, Enbridge Gas and Hydro One, are used to determine the appropriate average bond yield.

b) Please advise whether the peer groups are used in any other calculation beyond what is discussed in part (a) of this question.

c) Please explain the reason for the difference in the companies included in Panel A (Canadian Sample) and the group of companies used in the BYPRP calculation.

d) For Panel A (Canadian Sample), please provide a table that includes the following information (if available):

i. Company name
ii. Credit rating
iii. S&P business risk rating
iv. S&P financial risk rating
v. Percentage of operating income from, as applicable, electricity distribution, electricity transmission, electricity generation, natural gas operations
vi. Percentage of operating income, as applicable, by operating area (i.e., electricity distribution, transmission, generation or natural gas operations) that is regulated
vii. Percentage of overall operating income that is regulated
viii. The regulatory agency that regulates the company (i.e., OEB, AUC, etc.) and the applicable rating as set out in the “Utility Regulatory Jurisdiction Assessment performed by S&P Global” (see p. 129 of Exhibit M1 – LEI

Expert Report)
ix. Description of ratemaking approach applied to the company. As part of this response, please include information regarding:

i. Most prevalent form of ratemaking (e.g., cost of service, cost of service plus IRM, etc.)
ii. Application of a forward test year approach in cost of service ratemaking
iii. Availability of Custom IR option (which, as applied in Ontario, allows for multi-year (typically 5 years) recovery of approved capital budgets as proposed by the utility)
iv. Availability of mechanisms that allow the recovery of incremental capital between rebasing proceedings (and a description of how those mechanisms operate)
v. Reliance on fixed vs. variable rates (by rate class)
vi. Availability of deferral and variance accounts for non pass-through costs and revenues (and the types of accounts that are available)
vii. Availability of Z-factor relief (and the types of relief available through this mechanism)
viii. Availability of off-ramp provisions when actual ROE falls below a certain threshold

Responses:

a. i. Confirmed.

ii. Confirmed.

iii. Not confirmed. As discussed in Section 5.4 of Exhibit M4, Dr. Cleary rounded up the June 5, 2024 A-rated utility yield of 4.68% to 4.7%, but he referenced the average yield for the Canadian operating utilities noted in the question.

iv. The five Canadian utilities Dr. Cleary uses in his DCF analysis are the same five that are reported in Table 8 of his evidence: Algonquin; CU Ltd.; Emera; Fortis; and, Hydro One Ltd.

Dr. Cleary notes that his sample of Canadian utilities reported in Table 8 includes the five utilities that were determined to be "reasonable comparable Canadian utilities" during the 2024 Alberta GCOC Proceedings based on the results of a lengthy process involving party submissions, a technical conference, and ensuing follow up on remaining issues.[1]

b. The samples are not used directly in any other calculations in Exhibit M4.

[1] As noted in the November 10, 2022 Alberta Utilities Commission (AUC) memorandum to all parties, titled "Proceeding 27084, Determination of the Cost-of Capital Parameters in 2024 and Beyond: Appendix A – Finalized screening criteria," (27084-X0256 2022-11-10 Appendix A - Finalized screening criteria).

c. Dr. Cleary did not use the yields for these utilities directly in his BYPRP calculations as discussed in response to question (a) part (iii) above. The sample differs from his Canadian sample provided in Table 8 because they are Canadian "operating" utilities that issue debt directly, so he felt the debt yields were most comparable to Ontario operating utilities. However, these utilities are not publicly traded, as are the Canadian holding companies included in Dr. Cleary's Canadian sample. As a result, the market data needed to apply the CAPM and DCF approaches would not be available for these operating utilities.

d. Parts i and ii[1]

Utility Name	DBRS Rating	S&P Rating	Moody's Rating
Algonquin Power & Utilities Corp.	BBB(Stable)	BBB	NA
Canadian Utilities Ltd.	A	BBB+	NA
Emera Inc.	N/A	BBB	Baa3
Fortis Inc.	A(Low)	A-	Baa3
Hydro One Ltd.	A(High)	A	A3

Parts iii, iv and v:
Dr. Cleary does not have the available data to respond to these requests.

Parts vi and vii:
Dr. Cleary does not have the most recent data available to respond to these requests. However, lease see response to M4-2-OEA-11, part c) for the data that Dr. Cleary can report.

Parts vii and ix:
Dr. Cleary does not have the data available to respond to these requests.

[1] The S&P and Moody's ratings provided for Algonquin, CU Ltd., Emera and Fortis were obtained from Concentric's response to IGUA interrogatory #54 during the 2023 EGI rebasing proceedings, so some may have changed since then.

ASSOCIATION OF MAJOR POWER CONSUMERS IN ONTARIO/INDUSTRIAL GAS USERS ASSOCIATION (Dr. Sean Cleary)

Answer to Interrogatory from Consumers Council of Canada (CCC)

Reference:

Ex. M4/p. 113

Question:

Please provide your views on the appropriateness of lowering the weighting applied to the DCF approach in your calculation of the recommended average ROE (which is based on a simple average of three separate approaches).

Response:

Please see response to M4-10-OEB Staff-62(a).

ASSOCIATION OF MAJOR POWER CONSUMERS IN ONTARIO/INDUSTRIAL GAS USERS ASSOCIATION (Dr. Sean Cleary)

Answer to Interrogatory from Consumers Council of Canada (CCC)

Reference:

Ex. M4/pp. 117-118

Question:

In the context that regulated electric utilities are allowed to recover prudently incurred costs, please provide your views on whether increased spending in response to climate change/electrification increases or decreases risk. As part of this response, please discuss whether long-term significant growth in approved rate base, which provides for larger returns on an absolute basis, increases or decreases risk for electricity utilities.

Response:

An expected increase in demand represents a growth opportunity for utilities and is a situation that most companies would happily embrace – far preferable to a forecast decrease in demand for their product. This is particularly true when the companies have the opportunity to adequately plan for such increases in demand, and can pass through legitimate costs to consumers (as is the case for regulated operating utilities).

Aside from operational considerations, such an expected growth opportunity (i.e., to earn higher revenues and income), would only be considered a significant risk if Ontario utilities faced issues in attracting capital on reasonable terms to finance this growth. This seems inconsistent with evidence that shows that for example the largest Ontario T&D utility (Hydro One Inc.), which clearly faces such a well-known expected future increase in demand, maintains credit ratings of A (Stable) by S&P, A(High) by DBRS Morningstar and A3 by Moody's, issues bonds at yields that are at the lower end of those for similar Canadian operating utilities, and while Hydro One Ltd's stock traded at a price-to-book ratio of 2.04 at the end of 2023 (well above the Canadian utility average of 1.45 at that time).

ASSOCIATION OF MAJOR POWER CONSUMERS IN ONTARIO/INDUSTRIAL GAS USERS ASSOCIATION (Dr. Sean Cleary)

Answer to Interrogatory from Electricity Distributors Association (EDA)

Question:

Provide all studies or analyses that support the proffered conclusion that Canadian utilities are lower risk than their counterparts in the U.S.

Response:

Appendix B of Dr. Cleary's evidence provides detailed analyses and external references in support of Dr. Cleary's expert opinion that U.S. utilities possess higher business risk than their Canadian counterparts.

This higher risk is further reflected in Appendix C of Dr. Cleary's evidence which shows that over a long period of time (i.e., more than 25 years), U.S. utility beta estimate historical averages are much, much higher than (almost double) the comparable Canadian beta estimates, and that this difference is even more pronounced after accounting for the higher leverage of Canadian utilities.

This longer-term evidence is further supported by Table 8 of Dr. Cleary's evidence, which shows that both monthly and weekly beta estimates as of December 31, 2023, and estimates based on the 2017-2023 average estimates for U.S. utilities are higher than the comparable Canadian utility beta estimates. Similarly, Figure 16 of Concentric's evidence shows that beta estimates for U.S. utilities are higher than the comparable Canadian utility beta estimates.

ASSOCIATION OF MAJOR POWER CONSUMERS IN ONTARIO/INDUSTRIAL GAS USERS ASSOCIATION (Dr. Sean Cleary)

Answer to Interrogatory from Electricity Distributors Association (EDA)

Question:

Please provide a list of all jurisdictions in the U.S. and Canada that have authorized a return on equity within +/- 50 basis points of Dr. Cleary's recommended ROE of 7.05%. For comparison purposes, please adjust the ROE to reflect an equity thickness of 60% debt and 40% equity.

Response:

Dr. Cleary is not aware of any jurisdictions where this is the case; although, he has not conducted a comprehensive search into the matter (which work would be beyond his reasonable scope of work in this matter).

This is not surprising, however, since it is consistent with Dr. Cleary's assertions that allowed ROEs in Canada and the U.S. are simply too high across the board, leading to utilities' earning excessive economic rent on the backs of consumers. For example, Dr. Cleary's analysis in Section 5.1 of his evidence in this case shows that the allowed ROEs in Canada have not declined in line with reductions in government and utility bond yields, and hence are providing Ontario (and Canadian and U.S.) utilities "excess compensation" in terms of allowed ROEs relative to their actual market-determined cost of equity.

Section 5.1 of Exhibit M4 also shows that the downward "stickiness" in awarded ROEs noted above is not unique to Ontario but can be observed in other Canadian jurisdictions, and is even more prevalent in the U.S., which is evidenced in the results of a 2017 study that examines "a dozen years' of gas and electric rate-setting decisions" in the U.S. and Canada over the 2005-2016 period. (See The Utility of Finance," S. Azgad-Tromer and E. Talley, Working Paper, Columbia University (https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2994314), Exhibit M4, Attachment AE.) A recent study by Sikes (2022) entitled "Regulatory Inequity" similarly shows that the average awarded ROE is much greater than the average utility's cost of equity, which means that any investment undertaken by the utilities creates value (i.e., generates economic rent).

During testimony at the EB-2022-0200 OEB proceedings, Dr. Cleary noted that allowed ROEs have not declined adequately in response to the reduction in the cost of capital that utilities' have experienced, as long-term government bond yields (or RF) and A-rated utility bond yields have declined significantly over the last two decades. Section 5.1 of Dr. Cleary's evidence in this case shows that since 2004, both RF and A-rated utility yields have declined markedly, while the allowed ROEs have declined much less so over this period. As a result, the spreads between allowed ROEs and these yields, both of which directly affect the utilities' cost of capital, have increased dramatically though the years. For example, in January 2004, the allowed ROE by the OEB was 9.88%, at a time when 30-year government yields (RF) were 5.3% and A-rated utility yields were 6.1%. So, the spread between the allowed ROE and RF was 4.57%, and between ROE and A yields was 3.78%. However, as of June 5, 2024, the allowed ROE was

0.67% lower than in 2004 at 9.21%, while RF was 2.0% lower at 3.30%, while and A yields were 1.42% lower at 4.68%. As a result the ROE-RF spread was 1.34% higher than in 2004 at 5.91**%** (a 29% increase), while the ROE-A yield spread was 0.75% higher at 4.53**%** (a 20% increase). The average ROE-RF spread during the January 2004-June 2024 period was 6.03% and the average ROE-A-yield spread was 4.61%. Unfortunately, the fact that allowed ROEs have not decreased in North American jurisdictions (including Ontario) proportionately to changing capital market conditions and the associated reduction in the costs of capital to utilities has resulted in awarded ROEs that have been well in excess of their cost of equity, with the costs being borne by consumers, as noted in the two studies cited above.

The existence of currently inflated ROEs in Canada and the U.S. is also reflected in the evidence in Section 5.5 of Exhibit M4, which shows that the average "market-determined" P/B ratio for Canadian publicly traded utilities averaged 1.65 over the 2017-2023 period, with the 2023 average sitting at 1.45. Generally speaking, higher P/B ratios indicate greater future growth opportunities, and firms that have P/B ratios greater than one are earning (and expected to earn) rates of return that are at least "fair," if not above fair (i.e., ROE > Ke, since technically P/B should equal 1 if ROE = Ke, and if they exceed one it indicates they are earning excess economic rent). Recognizing that four of the five Canadian utilities included in that sample are holding companies that operate in several jurisdictions that are riskier than Ontario (and Canada in general), and that also hold significant proportions of unregulated assets, it is interesting to note that the sole publicly-listed regulated operating Canadian utility (Hydro One) had a P/B ratio of 2.04 as of the end of 2023. It is further interesting to note that the average P/B ratio for the U.S. sample was greater than the Canadian average every year, ranging from 1.69 to 2.36 and averaging 2.05 over the 2017-2023 period. This is consistent with evidence provided in Section 5.1 of Exhibit M4 that shows that allowed ROEs in the U.S. are even more upward biased than those in Canada.

Dr. Cleary's ROE estimates were based on the existing allowed equity ratios for Ontario utilities, so no adjustments are necessary.

ASSOCIATION OF MAJOR POWER CONSUMERS IN ONTARIO/INDUSTRIAL GAS USERS ASSOCIATION (Dr. Sean Cleary)

Answer to Interrogatory from Energy Probe Interrogatories (EP)

Reference:

Exhibit M4 (Dr. Cleary), pages 49, 90, 94, and 107

Preamble:

“Based on the application of this approach, I do not consider U.S. beta estimates, since I believe U.S. utilities are too risky to be legitimate comparators”.

Question:

Why are US utilities riskier than Ontario utilities? Does government ownership of many Ontario utilities have anything to do with it?

Response:

Government ownership did not factor into Dr. Cleary’s assertion.

Please see response N-M4-10-CME-2, part b).

ASSOCIATION OF MAJOR POWER CONSUMERS IN ONTARIO/INDUSTRIAL GAS USERS ASSOCIATION (Dr. Sean Cleary)

Answer to Interrogatory from Ontario Energy Association (OEA)

Reference:

Exhibit M4
Pages 1-4

Preamble:

I provided expert evidence sponsored by the Industrial Gas Users Association (IGUA) in the 2023 EGI rebasing proceedings (EB-2022-0200). I have served as an expert witness on behalf of the Office of the Utilities Consumer Advocate of Alberta on several occasions including generic cost of capital proceedings in 2013-2014 (Proceeding ID 2191), 2015-2016 (Proceeding ID 20622), 2018 (Proceeding ID 22570), 2019-20 (Proceeding ID 24110), 2022-23 (Proceeding ID 27084), as well as the generic regulated rate option proceeding (Proceeding ID 2941) in 2014 and the EPCOR Energy Alberta 2018-2021 Energy Price Setting Plan4 proceeding (Proceeding ID 2357) in 2017. I also prepared evidence on behalf of the Newfoundland Consumer Advocate in cost of capital hearings in 2015-2016, and in 2018.

Question:

a. For each proceeding where Dr. Cleary developed recommendations for ROE and /or capital structure referenced above, please provide a table with Dr. Cleary's recommendations and the ultimate decision by the regulator.

Response:

Dr. Cleary has provided a table below that shows these Decisions, his recommendations, the recommendations of other experts involved in those proceedings, and the mid-point and average of those recommendations. This table shows that the recommendations have generally displayed very large ranges, with the final decisions usually being very close to the mid-points and/or averages of these ranges. The utilities' experts' recommendations have consistently been at the high end of the total range, and Dr. Cleary's have been at the low end (consistent with his assertion as supported in Section 5.1 of his evidence that the allowed ROEs in Canada (and the U.S.) have simply been too high for several years).

Summary of Previous Decisions

	OEB 2023 (EGI Rebasing) (%)	**AUC 2015 (2013 GCOC Decision) (%)**	**AUC 2016 (%)**	**AUC 2018 (%)**	**AUC 2021 (%)[1]**	**AUC 2023 (%)**	**Newf. 2016 (%)**
Awarded ROE	**N/A**	**8.30 (2013-2015)**	**8.30 for 2016 / 8.50 for 2017**	**8.50**	**Extended 2018 Decision 8.50**	**Base ROE 9.0**	**8.5**
Mid-Point (Average) of Recom. Range of Recom.		8.68 (8.16) 6.8-10.5	8.75 (8.62) 7.0-10.5	8.53 (8.92) 6.3-10.75		8.53 (8.85) 6.75-10.3	8.5 (8.5) 7.5-9.5
Concentric (Coyne)				9.50		9.5	9.5
McShane		10.50					
Hevert			9.0-10.5	9.0-10.75			
D'Ascendis						10.3	
Villadsen			10.25	10.0		10.0	
Booth		7.50	7.50				7.5

[1] These proceedings were delayed and ultimately suspended due to COVID, etc.

Cleary		**6.78 (2013) / 7.27 (2014) / 7.42 (2015)** **(Avg. of 7.16)**	**7.0**	**6.3**		**6.75**	
CCA		7.50[1]					
Madsen						7.70	
Awarded Equity Ratio	**38.0**	**Various - utility specific (36.0-42.0)**	**Various - utility specific (36.0-42.0)**	**Various - utility specific** **(36.0-42.0) (37.0 for ENMAX)[2]**	**Various - utility specific** **Extended 2018 Decision** **(37.0 for most - 39.0 for Apex)**	**Various - utility specific** **(37.0 for most - 39.0 for Apex)**	**45%**

[1] Accepted Booth's ROE recommendations.

[2] Note in paragraph 813. The Commission stated: "In Section 9.9, the Commission reviewed the recommendation of Mr. Coyne that the income-tax-exempt utilities should receive a 200 bps adder to their deemed equity ratio. Based on its findings in that section, the Commission determined that no adder was warranted."

Mid-Point of Recom. Range Range of Recom.	39 (36.0-42.0)	36.0-43.0 39.0-45.0 to 33.0-41.0 37.5-50.0 to 30.0-40.0	36.5-42.5 38.0-44.0 to 35.0-41.0	37.5-42.5 40.0-44.0 to 35.0-41.0		39.5 (35.0-44.0)	42.5 (40.0 to 45.0)
Concentric / Coyne	42.0			42.0 (ENMAX – T&D)		40.0 (ENMAX-T&D)	45.0
McShane		39.0-45.0					
Hevert			38.0-42.0	40.0			
D'Ascendis						40.0	
Villadsen			38.0-44.0	40.0-44.0		40.0-44.0	
Booth		35.0 (ATCO Gas & ATCO Pipelines)	35.0 (ATCO Gas & ATCO Pipelines)				
Cleary	**36.0**	**33.0-40.0**	**35.0-41.0**	**36.0-41.0 (36.0 ENMAX T&D)**		**37.0 (39.0 for Apex)**	**40.0**

CCA		35.0-41.0		35.0-41.0[1]			
Madsen						35.0	
Johnson				35.0 (ATCO GAs)			

[1] Recommending expert Madsen.

ASSOCIATION OF MAJOR POWER CONSUMERS IN ONTARIO/INDUSTRIAL GAS USERS ASSOCIATION (Dr. Sean Cleary)

Answer to Interrogatory from Ontario Energy Association (OEA)

Reference:

Exhibit M4
Page 18, lines 1-5

Preamble:

With respect to 1a), OEB's current practice of using actual debt rates in most cases considers the impacts of different funding sources, as noted by LEI. However, the deemed long-term debt rate (DLTDR) can be used as an estimate or a ceiling (if the actual rate is higher than DLTDR). This approach satisfies the FRS, is intuitive, and is easy to apply, and I agree with LEI that there is **no need to make changes** to this practice.

Question:

a. Assuming the OEB were to adopt Dr. Cleary's recommended DLTDR as an estimate or ceiling, and this DLTDR is a current debt rate (as recommended by Dr. Cleary in response to Issue #7), how would utility debt costs from historical issues (e.g., over the past 30 years) be considered in relation to a current debt rate as a cap?

Response:

Dr. Cleary's recommendation supports the OEB's current practice, which allows for the DLTDR to be used as an estimate or a ceiling. It provides a valid estimate of current debt costs, which are more relevant than historical borrowing rates.

ASSOCIATION OF MAJOR POWER CONSUMERS IN ONTARIO/INDUSTRIAL GAS USERS ASSOCIATION (Dr. Sean Cleary)

Answer to Interrogatory from Ontario Energy Association (OEA)

Reference:

Exhibit M4
Page 18, lines 23-24

Preamble:

Allowing some utilities to earn a higher return despite engaging in business activities of similar risk **would violate the comparable return standard**.

Question:

a. Does Dr. Cleary believe the opposite also holds true, i.e., allowing some utilities to earn a lower return despite engaging in business activities of similar risk would violate the comparable return standard? Please explain.

Response:

Dr. Cleary would agree that the converse of LEI's statement as quoted above would also apply to utilities of similar risk. For context, reproduced below is the complete passage from page 52 of the LEI report (with bold added for emphasis) that was included in Dr. Cleary's evidence immediately preceding the sentence referenced in this question, and which elucidates on he "similar risk" concept as referenced by both LEI and Dr. Cleary:

> *As such, regulated utilities within a particular sector face very similar risks, given:*
>
> > *• the composition of their rate bases is similar, i.e., the type of physical assets owned does not vary significantly. As such, electric distributors are commonly grouped as peer utilities when determining the appropriate rate of return; and*
> >
> > *• **they operate in the same regulatory environment. For instance, all Ontario electric distributors' rates are governed by the same OEB regulations and principles, allowing them equal opportunities to recoup their operating costs**.*
>
> *Allowing some utilities to earn a higher return despite engaging in business activities of similar risk **would violate the comparable return standard**.*

ASSOCIATION OF MAJOR POWER CONSUMERS IN ONTARIO/INDUSTRIAL GAS USERS ASSOCIATION (Dr. Sean Cleary)

Answer to Interrogatory from Ontario Energy Association (OEA)

Reference:

Exhibit M4
Page 20, lines 14-17

Preamble:

[In response to Issue #2] My recommendations (which align with LEI) are: Maintain the OEB's current policy of reviewing business and financial risk factors if there is a perceived significant change from the status quo and adjusting the allowed equity ratio as appropriate to address material changes in the utility risk profile.

Question:

a. Does Dr. Cleary believe it is possible to determine an appropriate equity ratio for Ontario's utilities that satisfies the fair return standard without comparing the business and financial risks of Ontario's utilities to those elsewhere in North America? Please explain.

Response:

Dr. Cleary believes that caution, reason and context are required when comparing the business and financial risks of Ontario's utilities to those elsewhere in North America. Properly exercised, such consideration can provide useful information for a regulatory examining the financial risks of the utility under consideration by it.

For example, for the OEB a comparison to similar risk "comparable" **Canadian** operating utilities would be an important part of that process. Conversely, simply comparing the allowed equity ratios (ERs) for Ontario utilities to average awarded equity ratios at various times in the past in other jurisdictions is a flawed approach. Such an approach ignores the more relevant current market conditions facing Ontario utilities at a given point in time. Simply referencing existing awarded ratios in other jurisdictions that were determined at various times in the past, and without providing knowledge of the evidence of record at the time, including both existing market conditions, as well as the risk profile of the utilities in question, does not provide meaningful information without consideration of additional and detailed information to provide context.

Such an approach is even less informative when such a comparison is based upon comparator groups that are not of "similar risk" to Ontario utilities. Such is the case when U.S. utilities comprise the entire (or a large majority) of chosen comparator groups. This is because U.S. utilities possess greater business risk than Canadian operating utilities. Appendix B of Dr. Cleary's evidence (Exhibit M4) provides detailed analyses and external references

supporting this fact. This higher risk is further reflected in Appendix C of Exhibit M4 which shows that over a long period of time (more than 25 years), U.S. utility beta estimate historical averages are much, much higher than (i.e., almost double) the comparable Canadian beta estimates, and that this difference is even more pronounced after accounting for the higher leverage of Canadian utilities. This longer-term evidence is further supported by Table 8 of Exhibit M4, which shows that both monthly and weekly beta estimates as of December 31, 2023, and estimates based on the 2017-2023 average estimates for U.S. utilities are higher than the comparable Canadian utility beta estimates. Similarly, Figure 16 of Concentric's evidence shows that beta estimates for U.S. utilities are higher than the comparable Canadian utility beta estimates.

An important component of the appropriate approach to estimating appropriate ERs for Ontario utilities would be to do so on an absolute basis, with respect to an examination of their business and financial risk profiles. Such analyses would include an examination of business and regulatory risk factors, an examination of their current credit ratings and trends in these ratings, their ability to consistently earn ROEs equal to or above their allowed ROEs, and an assessment of their credit metrics.

ASSOCIATION OF MAJOR POWER CONSUMERS IN ONTARIO/INDUSTRIAL GAS USERS ASSOCIATION (Dr. Sean Cleary)

Answer to Interrogatory from Ontario Energy Association (OEA)

Reference:

Exhibit M4
Page 21, lines 4-13

Preamble:

I concur with LEI that regulatory mechanisms can play a valuable role in stabilizing utilities' cash flows and thereby affecting their business and financial risks. In fact, these regulatory mechanisms are one of several factors that are considered by debt rating agencies in their business risk assessment of utilities. As noted by LEI on page 74 of its evidence: "With respect to the major OEB regulatory mechanisms introduced since 2006, LEI believes that they have generally reduced the risks for electricity distributors." This conclusion is supported by the ranking of regulatory support provided by S&P as of November 2023 (as included in Figure 47 on page 129 of LEI's evidence), which shows the OEB ranked as one of just 10 jurisdictions (out of 60) that was ranked in the top category of "Most credit supportive (strong)," recognizing that of course other considerations play an important role in such a ranking.

Questions:

a. Is Dr. Cleary aware of the authorized ROEs and capital structures for the utilities in the other nine jurisdictions in S&P Global's "Most Credit Supportive" category? Please provide a table that lists the authorized ROEs and capital structures for the large electric and gas utilities in each of these other nine jurisdictions.
b. Is it Dr. Cleary's view that the ROEs and capital structures for Ontario's utilities should be comparable to the other nine jurisdictions in this category?
c. Please provide a detailed explanation for why or why not.

Responses:

a. Figure 27 (page 80) of Concentric's evidence reports the following deemed ROEs and ERs for utilities in three of the Canadian jurisdictions also included among the top 9: Alberta electric utilities – 9.28% and 37%; Energir (in Quebec) – 8.90% and 38.5%; and, Fortis BC Inc. – 9.65% and 41%.

   Dr. Cleary is not aware of the awarded ROEs and ERs for the U.S. jurisdictions included in the top "nine" referenced by S&P in terms of regulatory support, and he does not, nor would he ever rely upon such information in any of his analyses, given the strong support provided in his evidence that shows that U.S. utilities are riskier than Canadian operating utilities and are therefore inappropriate comparators

The cited comment by Dr. Cleary was in emphasis of the view provided by S&P that in Ontario strong regulatory support is provided by the OEB. This view is also supported by the recent debt rating reports of S&P as well as DBRS, as discussed in Section 6 of Exhibit M4. These views provide useful insight into the business risk of Ontario utilities on an absolute basis, since regulatory risk is an important component of such an analyses.

b. and c. Please see response to part a, and response N-M4-2-OEA-4.

ASSOCIATION OF MAJOR POWER CONSUMERS IN ONTARIO/INDUSTRIAL GAS USERS ASSOCIATION (Dr. Sean Cleary)

Answer to Interrogatory from Ontario Energy Association (OEA)

Reference:

Exhibit M4
Page 23, lines 26-30

Preamble:

LEI recommends estimating the base CORRA based on the average of 3-month CORRA futures rates over the next 12 months. Since the CORRA is linked directly to the Bank of Canada's rate decisions, I am fine with this suggestion; although, I would also be fine with using the existing CORRA rate as of September 30th of each year as the base CORRA rate.

Question:

a. Please explain Dr. Cleary's rationale for recommending a spot bond yield rather than a monthly average, as the OEB currently uses in the ROE formula?
b. Has Dr. Cleary examined the intra-month volatility of the CORRA rate in order to recommend a rate for a single day (September 30)?
c. If so, please provide that analysis.

Responses:

a. Please see response N-M4-16-OEB Staff-73.

b. and C. Dr. Cleary has not conducted such an analysis.

ASSOCIATION OF MAJOR POWER CONSUMERS IN ONTARIO/INDUSTRIAL GAS USERS ASSOCIATION (Dr. Sean Cleary)

Answer to Interrogatory from Ontario Energy Association (OEA)

Reference:

Exhibit M4
Page 24, lines 25-29

Preamble:

LEI recommends that the DLTDR be set as a cap for all utilities (including gas distributors and OPG) and not just electric T&Ds as is current practice. I agree with this suggestion. As LEI states on page 93 of its evidence: "All OEB-regulated entities reviewed have a similar senior debt credit rating, and there is no reason to only subject electricity distributors and transmitters to a cap."

Question:

a. Has Dr. Cleary examined the senior debt ratings of all OEB-regulated utilities to corroborate this statement by LEI?
b. If so, please provide a table listing the senior debt ratings for each OEB-regulated utility.
c. Is Dr. Cleary aware of any other North American regulator that "caps" the cost of long-term debt?

If so, please provide the decisions implementing these caps.

Response:

a. & b. No, Dr. Cleary did not collect data to corroborate the statement made by LEI in its evidence.

c. & d. No (though Dr. Cleary has not conducted such an investigation).

ASSOCIATION OF MAJOR POWER CONSUMERS IN ONTARIO/INDUSTRIAL GAS USERS ASSOCIATION (Dr. Sean Cleary)

Answer to Interrogatory from Ontario Energy Association (OEA)

Reference:

Exhibit M4
Page 29, lines 25-27

Preamble:

While LEI relies entirely on its CAPM estimates, I believe it is informative to discuss some of the other approaches they use in estimating Ke, even though LEI correctly disregards these estimates.

Question:

a. If Dr. Cleary's recommended base ROE for Ontario's utilities is based on an equal weighting of the results of his CAPM, DCF, and Risk Premium models, as stated on page 43 of his report, please explain why Dr. Cleary believes it is appropriate for LEI to base its ROE recommendation solely on the results of LEI's CAPM analysis.

Response:

Nowhere in his evidence does Dr. Cleary suggest that he "believes it is appropriate for LEI to base its ROE recommendation solely on the results of LEI's CAPM analysis." He does note that LEI's cost of equity (Ke) estimates based on its DCF analysis and Equity Risk Premium (ERP) analysis were both flawed, and hence should not be considered.

Please refer to Dr. Cleary's response to M4-17-OEB Staff-62(a), where he discusses why he chose to equally weight his CAPM, DCF and BYPRP Ke estimates.

ASSOCIATION OF MAJOR POWER CONSUMERS IN ONTARIO/INDUSTRIAL GAS USERS ASSOCIATION (Dr. Sean Cleary)

Answer to Interrogatory from Ontario Energy Association (OEA)

Reference:

Exhibit M4
Page 30, lines 2-10

Preamble:

On page 113 of its evidence, LEI estimates Ke = 8.65% using what it refers to as an equity risk premium (ERP) approach, which adds an estimate of ERP to the base LCBF. LEI's estimate is determined using 3.15% as the LCBF, which is based on March 2024 forecast long-term Canada yields. As discussed in detail in Section 3.7 above, and in Appendix A, I disagree with the use of forecast yields versus using actual prevailing yields. This applies to any approach taken to estimating Ke, as well as to estimating LCBF for the OEB ROE formula. I do note that 3.15% is very close to the actual 30-year government yield of 3.30% as of June 5, 2024 (which I use in my CAPM estimates), so the difference in this particular situation is very minimal (although this will not always be the case).

Questions:

a. Does Dr. Cleary believe that a long-term utility investor would use a spot bond yield for a single day to estimate the required rate of return on assets with lives of 30 years or longer?
b. Is Dr. Cleary aware of any North American regulator that relies on the spot bond yield for a single day to estimate the required cost of equity? If so, please provide the specific decision reference.

Responses:

a. Assuming the purpose of such analyses was to estimate the required return (Ke) for such an equity investment using the CAPM or the BYPRP or other approaches, then the answer is; yes.

   As discussed in response to M4-2-OEA-6, such a point estimate would provide a better reflection of existing market conditions and a better estimate of future yields than a historical average. Secondly, when estimating Ke using the CAPM for example, the risk-free rate (RF) represents the actual existing risk-free asset that an investor can invest in today (without any risk) and earn the risk-free rate of return. Hence, risk-free investments that provide the 30-day average yield over the most recent period would not be available to provide that yield. This would also be true if the investor used the BYPRP approach (i.e., Ke = existing company bond yield + company risk premium), since the only yield the investor could obtain by investing the company's bonds today would be the current market-determined yield on the bonds. Hence, investments that provide the 30-day

average company bond yield (or yield spread) over the most recent period would not be available to provide that yield (or yield spread).

b. No, he has not investigated the point. Dr. Cleary's reference, however, was to investors, and not regulators.

ASSOCIATION OF MAJOR POWER CONSUMERS IN ONTARIO/INDUSTRIAL GAS USERS ASSOCIATION (Dr. Sean Cleary)

Answer to Interrogatory from Ontario Energy Association (OEA)

Reference:

Exhibit M4
Page 30, lines 11-13 and 26-27

Preamble:

LEI estimates an ERP of 5.5%, which is the mid-point of the average of the 2001-24 actual returns on the S&P/TSX Index (of 6.77%), and the average returns on the BMO equal weight utilities index (of 10.98%).

As such, I agree with LEI's decision to not consider this Ke estimate in their final ROE estimate.

Question:

a. What is the basis for Dr. Cleary's conclusion that LEI has not used this Ke estimate? (please refer to LEI's Figure 41 in responding).

Response:

LEI reported the Ke estimate of 8.65%, based on the application of its ERP approach, and based on the ERP estimates included in the figure below:

Figure 36. Determination of updated ERP

Comparable group	Period of analysis	Average stock return	Average bond yield	ERP
S&P/TSX composite (total return) index	2001-2024	6.77%	3.37%	3.40%
BMO equal weight utilities index ETF	2010-2024	10.98%	3.37%	7.60%
Average				**5.50%**

Sources: S&P Capital IQ, Bloomberg, BMO.

The base LCBF using March 2024 data is 3.15%. As such, the base ROE is 8.65% (3.15% + 5.50%) using the existing methodology.

Dr. Clearly understands LEI's evidence to be that its overall ROE recommendation is based exclusively on its CAPM Ke estimate. Figure 41 of LEI's evidence includes several estimates of MRP that LEI uses in its CAPM analysis, but none of these estimates is based on either of the two comparable group ERP averages referenced in Figure 36 above.

ASSOCIATION OF MAJOR POWER CONSUMERS IN ONTARIO/INDUSTRIAL GAS USERS ASSOCIATION (Dr. Sean Cleary)

Answer to Interrogatory from Ontario Energy Association (OEA)

Reference:

Exhibit M4
Page 31, lines 17-18

Preamble:

LEI's DCF analysis is flawed by its heavy reliance on data for U.S. utilities rather than Canadian utilities.

Questions:

a. Please indicate which Canadian utilities Dr. Cleary recommends as proxies for Ontario's utilities for purposes of estimating the cost of capital and why.
b. Please indicate which Canadian gas utilities Dr. Cleary recommends as proxies for Ontario's gas utilities for purposes of estimating the cost of capital and why.
c. Please provide a table showing the percentage of revenues and income for the most recent year the companies recommended by Dr. Cleary (in response to (a)) derive from Canadian regulated utility operations, U.S. regulated utility operations, and other.

Responses:

a. The five Canadian utilities Dr. Cleary uses in his DCF analysis are the five reported in Table 8 of his evidence: Algonquin; CU Ltd.; Emera; Fortis; and, Hydro One Ltd.

   Dr. Cleary relied upon this sample of Canadian utilities as being more representative of Ontario utilities than samples including U.S. utilities for the reasons discussed in his evidence. Dr. Cleary further notes that he also conducted a DCF analysis on 28 U.S. utilities that provided very similar final Ke estimates; although, he did not consider the U.S. sample results due to his concerns about the comparability of U.S. utilities.

   The Canadian sample that Dr. Cleary uses in his analysis are the five utilities that were determined by the Alberta Utilities Commission to be "reasonable comparable Canadian utilities" during the 2024 Alberta GCOC Proceedings. The AUC's determination was based on the results of a lengthy process involving party submissions, a technical conference, and ensuing follow up on remaining issues, as noted in the November 10, 2022 Alberta Utilities Commission (AUC) memorandum to all parties, titled "Proceeding 27084, Determination of the Cost-of Capital Parameters in 2024 and Beyond: Appendix A – Finalized screening criteria," (27084-X0256 2022-11-10 Appendix A - Finalized screening criteria).

b. Dr. Cleary did not break up his analysis into gas versus electric utilities. This is consistent with the approach taken by Concentric in basing its main recommendations on its North American combined group, which it deemed as the most representative results for Ontario utilities.

c. The most recent data that Dr. Cleary has available comes from Exhibit "24110-X0344 2020-03-10 Hevert-D'Ascendis IR Responses to UCA (1-22)" that was filed during the 2021 Alberta GCOC Proceedings, PDF pages 6-14 (attached to this response). That source provides data from 2018 company reports, as follows:

Utility	Canadian Operations Revenue	International Operations Revenue
Algonquin	4.27%	95.73%
CU Ltd.	95.34%	4.66%
Emera	23.30%	76.70%
Fortis	36.85%	57.52%
Hydro One Ltd.	100.0%	0.00%

Utility	Regulated Revenue	Unregulated	Combination
Algonquin	84.99%	15.01%	0.00%
CU Ltd.	N/A	2.76%	97.24%
Emera	89.82%	9.41%	1.59%
Fortis	97.93%	2.19%	N/A
Hydro One Ltd.	99.32%	0.68%	N/A

Net income information was not provided.

March 10, 2020

Hevert/D'Ascendis-UCA-2020FEB18-004
2021 Generic Cost of Capital
Application No. 24110-A001
Proceeding ID. 24110

Reference: **Exhibit 24110-X0053, Hevert/D'Ascendis GCOC Written Evidence, Table 2 - page 56**

Issue/Sub-Issue: **Canadian Utility Proxy Group**

Preamble: Mr. Hevert and Mr. D'Ascendis identify the six Canadian utilities included in their Canadian proxy group. The UCA requires further information regarding the Canadian utilities included.

Request:

(a) For each of the utilities listed in Table 2, please provide the following information:

i. All available debt ratings;
ii. The size of the company in terms of revenue and total assets;
iii. A list of all operating companies that are subsidiaries of each utility, as well as a list of the jurisdiction(s) in which these companies operate;
iv. The percentage breakdown of revenue, operating earnings and net income from each of the operating companies identified in part (iii);
v. The percentage breakdown of regulated versus unregulated portion of revenue, operating earnings and net income for the six utilities listed in Table 2;
vi. A similar breakdown to that requested in part (iv) for operations that are based in Canada, versus in other countries; and,
vii. A similar breakdown to that requested in part (iv) for operations related to transmission, distribution, generation, and other activities.

Response:

(a) i. Messrs. Hevert and D'Ascendis used S&P senior unsecured and issuer credit ratings as a criterion for the selection of his proxy companies. Messrs. Hevert and D'Ascendis obtained those ratings from S&P Global Market Intelligence.

	S&P Senior Unsecured Rating	S&P Issuer Rating
ATCO Limited	N/A	A-
Algonquin Power & Utilities Corp.	N/A	BBB
Canadian Utilities, Ltd.	BBB+	A-
Emera Inc.	BBB	BBB+
Fortis, Inc.	BBB+	A-
Hydro One Limited	N/A	A-

ii. From their respective 2018 annual reports, in millions of dollars:

	Revenue	Total Assets
ATCO Limited	$4,888	$23,344
Algonquin Power & Utilities Corp.	$1,647	$9,389
Canadian Utilities, Ltd.	$4,377	$21,819
Emera Inc.	$6,524	$32,314
Fortis, Inc.	$8,390	$53,051
Hydro One Limited	$6,150	$25,657

iii. ATCO Limited*

Segment	Business	Jurisdictions
Structures & Logistics	ATCO Structures & Logistics	Western Australia, British Columbia, Louisiana
Electricity	ATCO Electric	Alberta, Yukon, Northwest Territories, Yellowknife, NWT
	ATCO Power	Western Canada, Ontario, Mexico
	Alberta PowerLine	Alberta, Ontario
	ATCO Power Australia	Adelaide (South Australia), Karratha (Western Australia)
Pipelines & Liquids	ATCO Gas	Alberta, Lloydminster SK
	ATCO Pipelines	Alberta, Mexico
	ATCO Gas Australia	Perth (Australia)
	ATCO Energy Solutions	Alberta, Mexico
Corporate & Other	ATCO Energy	Alberta
Neltume Ports**	Neltume Ports S.A	Chile, Uruguay, Argentina, Brazil

*ATCO Limited owns controlling 52.2% of Canadian Utilities, Ltd.

**ATCO Limited owns non-controlling 40% of Neltume Ports

Algonquin Power & Utilities Corp.

Segment	Business	Jurisdictions
Generation	Liberty Power	North America, International
Transmission and Distribution	Liberty Utilities	Arizona, Arkansas, California, Georgia, Illinois, Iowa, Kansas, Massachusetts, Montana, Missouri, New Hampshire, Oklahoma, Texas

Canadian Utilities, Ltd.

Segment	Business	Jurisdictions
Electricity	ATCO Electric	Alberta, Yukon, Northwest Territories, Yellowknife, NWT
	ATCO Power	Western Canada, Ontario, Mexico
	Alberta Powerline	Alberta, Ontario
	ATCO Power Australia	Adelaide (South Australia), Karratha (Western Australia)
Pipelines & Liquids	ATCO Gas	Alberta, Lloydminster SK
	ATCO Pipelines	Alberta
	ATCO Gas Australia	Perth (Australia)
	ATCO Energy Solutions	Alberta, Mexico
Corporate & Other	ATCO Energy	Alberta

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Emera Inc.

Segment	Business	Jurisdictions
Emera Florida and New Mexico	Tampa Electric	Florida
	Peoples Gas System	Florida
	New Mexico Gas Company	New Mexico
	SeaCoast	Florida
Nova Scotia Power Inc.		Nova Scotia
Emera Maine	Emera Maine	Maine
Emera Energy	Emera Energy Services	
	Emera Energy Generation	New England, Maritime provinces of Canada
Emera Caribbean	Barbados Light & Power Company	Barbados
	Grand Bahama Power Company Limited	Grand Bahama Island
	Dominica Electricity Services Ltd.	Dominica
Emera Corporate and Others	Emera Utility Services	Atlantic Canadian Provinces
	Emera Brunswick Pipeline	New Brunswick
	Emera Newfoundland & Labrador Holdings	Newfoundland

Fortis, Inc.

Segment	Business	Jurisdictions
Regulated Electric & Gas Utilities - US	ITC	Michigan, Iowa, Minnesota, Illinois, Missouri, Kansas, Oklahoma
	UNS Energy	Arizona
	Central Hudson	New York
Regulated Gas & Electric Utilities – Canadian	FortisBC Energy	British Columbia
	Fortis Alberta	Alberta
	FortisBC Electric	British Columbia
	Newfoundland Power	Newfoundland Island, Labrador Island
	Maritime Electric	Prince Edward Island
	Fortis Ontario	Ontario (Fort Erie, Cornwall, Gananoque, Port Colborne, District of Algoma
Regulated Electric Utilities – Caribbean	Caribbean Utilities	Grand Cayman, Cayman Islands
	Fortis Turks and Caicos	Turks and Caicos Islands
Non-Regulated	ACGS	British Columbia

Hydro One Limited

Segment	Business	Jurisdictions
Transmission	Hydro One Networks Inc	Ontario
	Hydro One Sault Ste. Marie LP	Ontario
Distribution	Hydro One Networks	Ontario
	Hydro One Remote Communities	Ontario
Other	Hydro One Telecom Inc	Ontario

iv. Some of the 2018 annual reports of the proxy companies do not break down revenue, operating earnings, or net income by subsidiary. Where no subsidiary-specific information was available,

segment-specific information was used. See Hevert-DAscendis-UCA-2020FEB18-004 Attachment.

	Revenue	Operating Earnings	Net Income
ATCO Limited			
Structures & Logistics	10.45%	0.80%	0.89%
Electricity	58.12%	73.41%	75.26%
Pipelines & Liquids	28.95%	26.45%	22.35%
Corporate and Other	2.48%	-2.39%	-2.09%
Algonquin Power & Utilities Corp.			
Generation	15.01%	12.85%	N/A
Distribution	84.99%	87.65%	N/A
Corporate and Other	0.00%	-0.50%	N/A
Canadian Utilities, Ltd.			
Electricity	64.91%	75.13%	78.78%
Pipelines & Liquids	32.33%	27.34%	23.40%
Corporate and Other	2.76%	-3.07%	-2.81%
Emera Inc.			
Emera Florida and New Mexico	56.33%	51.03%	60.28%
NSPI	22.07%	18.70%	18.45%
Emera Maine	4.26%	5.12%	6.20%
Emera Caribbean	7.16%	4.39%	5.77%
Emera Energy	9.41%	15.70%	23.24%
Corporate and Other	1.59%	5.06%	-13.94%
Fortis, Inc.			
ITC	17.93%	35.55%	34.06%
UNS Energy	26.25%	19.09%	22.78%
Central Hudson	11.01%	5.57%	5.75%
FortisBC Energy	14.15%	14.23%	12.13%
Fortis Alberta	6.90%	9.11%	9.33%
FortisBC Electric	4.86%	4.54%	4.35%
Other Electric	16.83%	8.99%	9.33%
Energy Infrastructure	2.19%	4.58%	7.70%
Corporate and Other	0.00%	-1.65%	-5.44%
Hydro One Limited			
Transmission	27.41%	64.32%	N/A
Distribution	71.90%	40.18%	N/A
Other	0.68%	-4.51%	N/A

v. Segments that contain a mix of regulated and non-regulated operations are summarized in the following table as "Combination". See Hevert-DAscendis-UCA-2020FEB18-004 Attachment.

	Revenue	Operating Earnings	Net Income
ATCO Limited			
Regulated	N/A	N/A	N/A
Unregulated	12.93%	-1.59%	-1.19%
Combination	87.07%	99.86%	97.62%
Algonquin Power & Utilities Corp.			
Regulated	84.99%	87.65%	N/A
Unregulated	15.01%	12.85%	N/A
Combination	0.00%	-0.50%	N/A
Canadian Utilities, Ltd.			
Regulated	N/A	N/A	N/A
Unregulated	2.76%	-3.07%	-2.81%
Combination	97.24%	102.47%	102.18%
Emera Inc.			
Regulated	89.82%	79.24%	90.70%
Unregulated	9.41%	15.70%	23.24%
Combination	1.59%	5.06%	-13.94%
Fortis, Inc.			
Regulated	97.93%	113.57%	97.74%
Unregulated	2.19%	2.93%	2.26%
Combination	N/A	N/A	N/A
Hydro One Limited			
Regulated	99.32%	104.51%	N/A
Unregulated	0.68%	-4.51%	N/A
Combination	N/A	N/A	N/A

vi. See Hevert-DAscendis-UCA-2020FEB18-004 Attachment.

	Revenue	Operating Earnings	Net Income
ATCO Limited			
Canadian Operations	90.30%	N/A	N/A
International Operations	9.70%	N/A	N/A
Algonquin Power & Utilities Corp.			
Canadian Operations	4.27%	N/A	N/A
International Operations	95.73%	N/A	N/A
Canadian Utilities, Ltd.			
Canadian Operations	95.34%	N/A	N/A
International Operations	4.66%	N/A	N/A
Emera Inc.			
Canadian Operations	23.30%	N/A	N/A
International Operations	76.70%	N/A	N/A
Fortis, Inc.			
Canadian Operations	36.85%	N/A	N/A
International Operations	57.52%	N/A	N/A
Hydro One Limited			
Canadian Operations	100.00%	100.00%	N/A
International Operations	0.00%	0.00%	N/A

vii. See Hevert-DAscendis-UCA-2020FEB18-004 Attachment.

	Revenue	Operating Earnings	Net Income
ATCO Limited			
Other (including utility)	87.07%	99.86%	97.62%
Other (non-utility)	12.93%	-1.59%	-1.19%
Algonquin Power & Utilities Corp.			
Distribution	84.99%	87.65%	N/A
Generation	15.01%	12.85%	N/A
Other (non-utility)	0.00%	-0.50%	N/A
Canadian Utilities, Ltd.			
Other (including utility)	97.24%	102.47%	102.18%
Other (non-utility)	2.76%	-3.07%	-2.81%
Emera Inc.			
Transmission & Distribution	4.26%	5.12%	6.20%
Vertically Integrated	85.56%	74.12%	84.51%
Generation	9.41%	15.70%	23.24%
Other (non-utility)	1.59%	5.06%	-13.94%
Fortis, Inc.			
Transmission	17.93%	35.55%	34.06%
Distribution	6.90%	9.11%	9.33%
Transmission & Distribution	14.15%	14.23%	12.13%
Vertically Integrated	58.95%	54.68%	42.22%
Generation	2.19%	4.58%	7.70%
Other (non-utility)	0.00%	-1.65%	-5.44%
Hydro One Limited			
Transmission	27.41%	64.32%	N/A
Distribution	71.90%	40.18%	N/A
Other (non-utility)	0.68%	-4.51%	N/A

ASSOCIATION OF MAJOR POWER CONSUMERS IN ONTARIO/INDUSTRIAL GAS USERS ASSOCIATION (Dr. Sean Cleary)

Answer to Interrogatory from Ontario Energy Association (OEA)

Reference:

Exhibit M4
Page 41, lines 10-13 and Page 100, Table 10

Preamble:

It is also based on sustainable growth rate estimates ranging from 1.46% to 2.17%, and averaging 1.80%, which seems reasonable for mature low risk, regulated utilities that should be expected to grow slower (but steadier) than average firms and overall GDP growth in the 3.3-4.3% range, as discussed previously.

Questions:

a. Please confirm that, as shown in Attachment J, Dr. Cleary has used dividend payout ratios of 100% for several companies in calculating his "sustainable" growth rates for the Canadian sample from 2017-2023.
b. Does Dr. Cleary believe it is reasonable that a utility company in his Canadian sample would be expected to payout 100% or more of its net income as dividends over the long-term? If so, please explain why this assumption is reasonable. If not, please explain why this assumption was used in Dr. Cleary's calculation of the "sustainable" growth rate.
c. Please confirm that in the U.S., the Federal Energy Regulatory Commission has specifically rejected the use of sustainable growth rates in the DCF model.

Responses:

a. Dr. Cleary can confirm that some of the 35 payout ratios used for his Canadian sample that were used to estimate the average sustainable growth rate for this sample were capped at 100%.

b. Dr. Cleary does not believe this is reasonable over the long-term, but from time-to-time a company's earnings will be lower than the total amount of dividends it pays and wishes to maintain. Dr. Cleary would note that the use of averages and medians across the sample minimizes the impact of such uncommon occurrences, and that the average (median) payout ratios for his Canadian sample were 78.7% (77.0%) for 2023, and 77.3% (79.3%) over the 2016-2023 period, which are reasonable estimates for high dividend-paying utility companies.

c. Dr. Cleary is not aware of FERCs policy on this point nor the rationale therefore.

ASSOCIATION OF MAJOR POWER CONSUMERS IN ONTARIO/INDUSTRIAL GAS USERS ASSOCIATION (Dr. Sean Cleary)

Answer to Interrogatory from Ontario Energy Association (OEA)

Reference:

Exhibit M4
Page 42 and 105

Preamble:

As mentioned, the usual range is 2-5%, with 3.5% being commonly used for average risk companies, and lower values for less risky companies.

The BYPRP approach adds a risk premium (generally in the 2-5% range) to the yield on a firm's outstanding publicly-traded long-term bonds.

Questions:

a. Please provide the source for the contention that an appropriate risk premium is in the range of 2-5% and that 3.5% is commonly used for average risk companies.
b. Please explain what constitutes an "average" risk company and how that assessment would be made.

Responses:

a. Please see response M4-EDA- 5.

b. As discussed in Section 5.4 of Dr. Cleary's evidence, and in response M4-EDA-5, this refers to an average risk company trading in the market – for example with a beta of 1 - versus low-risk utilities with an average beta <0.5 (0.45 according to Dr. Cleary's estimate).

ASSOCIATION OF MAJOR POWER CONSUMERS IN ONTARIO/INDUSTRIAL GAS USERS ASSOCIATION (Dr. Sean Cleary)

Answer to Interrogatory from Ontario Energy Association (OEA)

Reference:

Exhibit M4
Page 43, lines 17-19

Preamble:

Based on an equal weighting of the three approaches, I determine the following best estimate for allowed Ontario utility ROEs:

Ke = (1/3)(6.05) + (1/3)(7.4) + (1/3)(7.7) = **7.05%**

Questions:

a. How does Dr. Cleary's base ROE recommendation of 7.05% for Ontario's utilities compare to the average authorized ROE for other Canadian electric and gas utilities in 2024?
b. Please confirm that Dr. Cleary's base ROE recommendation of 7.05% for Ontario's utilities is 145 basis points lower than the lowest authorized ROE for any other investor-owned electric or gas utility in Canada (i.e., Newfoundland Power has an authorized ROE of 8.50% on a common equity ratio of 45.0% and currently has a General Rate Application pending before its regulator in which Newfoundland Power is requesting an increase in its authorized ROE to 9.85%).
c. Please explain why Dr. Cleary recommends an equal weighting of the results of the CAPM, DCF and Risk Premium models if his research indicates that the CAPM is more heavily relied upon and the DCF model is not widely used.
d. Has Dr. Cleary performed any analysis of how the credit outlooks, metrics and ratings of Ontario's utilities would be impacted if the OEB were to adopt his recommended base ROE of 7.05% and his proposed reductions in the equity ratio for Hydro One Inc. and Enbridge Gas? If so, please provide that analysis. If not, what is the basis for Dr. Cleary's conclusion that his cost of capital recommendations would satisfy the Fair Return Standard?
e. What is Dr. Cleary's understanding of the concept of gradualism?
f. Please explain how Ontario's utilities can compete for capital with other comparable-risk investments if the authorized ROE and deemed equity ratios for Ontario's utilities are well below the average for their North American peers in Canada and the U.S.

Responses:

a. Dr. Cleary has not conducted such an analysis, but according to Figure 27 (page 80) of Concentric's evidence, the Canadian utility average allowed ROE is 9.16% (electricity) and 9.23% (gas).

b. A base ROE of 7.05% as recommended by Dr. Cleary for Ontario's utilities would be 145 basis points lower than the 8.5% that the question indicates is the authorized ROE for Newfoundland Power (NP). Dr. Cleary has not investigated whether 8.5% is the lowest authorized ROE in Canada, though he is not aware of a lower one.

   The status of NP's GRA and its requests therein is not something that Dr. Cleary can confirm, nor of course what the outcome of that GRA and those requests will be. Dr. Clary does note that, according to Figure 27 (page 80) of Concentric's evidence in this case, the current allowed ROE and ER for NP are 8.5% and 45% respectively.

   Dr. Cleary also notes that Concentric's ROE recommendation in this case of 10.1% is 1.6% higher than 8.5%.

c. Please see response to M4-17-OEB Staff-62(a).

d. Dr. Cleary has not prepared such an analysis, nor is Dr. Cleary aware of any such analysis performed by Concentric or the other experts that have provided evidence in this proceeding to support their allowed ROE and ER recommendations. Credit ratings and outlooks are prepared by credit rating agencies, and Dr. Cleary would not prepare such analyses in his work. Dr. Cleary has not prepared an analysis of how his recommendations, nor those of the other experts providing their recommendations in this proceeding, would impact the credit metrics of each of Ontario's dozens of regulated utilities, though he would agree that such analysis would support, in any particular case, determination of an appropriate allowed ROE and ER that would satisfy, but not exceed, the Fair Return Standard.

e. To change things gradually, as opposed to suddenly or abruptly.

f. The argument that Ontario (and Canadian) utilities need to increase their allowed ROEs and ERs to align with U.S. utilities in order to attract capital has been argued consistently by (exclusively U.S.-based) utilities' experts during every Canadian cost of capital proceeding that Dr. Cleary has been involved in. The fact is that despite these consistent assertions, none of the experts have provided evidence that Canadian utilities have had any issues attracting capital at reasonable terms through the years or currently, and in most cases Canadian utilities have done so at lower rates than their riskier U.S. counterparts (e.g., according to bond yield spreads, etc.).

The approach of simply comparing the allowed ratios for Ontario (and Canadian) utilities to average awarded ratios at various times in the past in the U.S. is simply flawed by design. Such an approach ignores the more relevant current market conditions facing Ontario utilities at a given point in time. Lt also ignores the simple and obvious fact that Ontario (and Canadian) utilities successfully compete for capital now, and have consistently done so in the past, against companies in other industries and jurisdictions with higher ROEs and ERs.

Dr. Cleary's recommendations are based on his expert, market-based and objective analysis, upon which he determined that Ontario utilities would continue to attract capital based on these recommendations and in the circumstances and given the risk profiles relevant to them. In contrast, the utilities' experts do not provide evidence that allowed ROEs and ERs need to be increased substantially so that Ontario utilities can continue to attract capital at attractive terms, as they currently do and have for quite some time.

ASSOCIATION OF MAJOR POWER CONSUMERS IN ONTARIO/INDUSTRIAL GAS USERS ASSOCIATION (Dr. Sean Cleary)

Answer to Interrogatory from Ontario Energy Association (OEA)

Reference:

Exhibit M4
Page 46, lines 15-17

Preamble:

As the AUC stated in Alberta 2018 GCOC Decision 16 22570-D01-2018, para. 393 (emphases added): "In the Commission's view, although observable, the **ROEs approved for the U.S. utilities are not strictly market data."**

Questions:

a. Please confirm that in October 2023 the AUC set the base ROE for all electric and gas utilities in Alberta at 9.0% (Decision 27084-D02-2023).
b. Further, please confirm that the authorized ROE in 2024 for Alberta's electric and gas utilities is 9.28% through the operation of the AUC's newly adopted formula.

Responses:

a. Confirmed.

b. Confirmed.

ASSOCIATION OF MAJOR POWER CONSUMERS IN ONTARIO/INDUSTRIAL GAS USERS ASSOCIATION (Dr. Sean Cleary)

Answer to Interrogatory from Ontario Energy Association (OEA)

Reference:

Exhibit M4
Page 47, lines 23-26

Preamble:

Based on this evidence, I recommend an adjustment factor of 0.75 for both factors, which maintains the relationship, is more responsive to changing market conditions, and will still reduce year-to-year fluctuations in allowed ROEs relative to a weighting of 1.0.

Questions:

a. Please explain how Dr. Cleary determined that the adjustment factors in the OEB's ROE formula should be changed to 0.75 from 0.50. Please provide any empirical analysis performed by Dr. Cleary supporting his recommendation.
b. Dr. Cleary contends on page 46 of his report (Exhibit M4) that LEI's regression equation is flawed by design and should not be used to set the adjustment factors in the Ontario formula. Does Dr. Cleary also believe that the analysis that the OEB relied on the December 2009 Order (EB-2009-0084) as the basis for reducing the adjustment factor for the LCBF from 0.75 to 0.50 is flawed? Please explain.

Responses:

a. Please see response N-M4-17-OEB Staff-60(b).

b. Dr. Cleary cannot surmise as to the weighting the OEB gave all of the evidence considered by it in 2009 to make its decisions at that time. Dr. Cleary does suggest that any weighting assigned to the results of regressions of U.S. allowed ROEs on U.S. T-bond yields and U.S. yield spreads would be inappropriate for the reasons discussed in his response to M4-17-OEB Staff-60(a).

ASSOCIATION OF MAJOR POWER CONSUMERS IN ONTARIO/INDUSTRIAL GAS USERS ASSOCIATION (Dr. Sean Cleary)

Answer to Interrogatory from Ontario Energy Association (OEA)

Reference:

Exhibit M4
Page 60, lines 9-10

Preamble:

The 30-year Government of Canada bond yield as of June 5, 2024 was 3.30%, while the 10-year yield was 3.39%.

Questions:

a. Dr. Cleary uses the spot yield on the 30-year Government of Canada bond as of June 5, 2024, as the risk-free rate in his CAPM analysis. Please confirm that the 90-day average yield on the 30-year GOC as of June 28, 2024 was 3.44% within a range from 3.19% to 3.74%.
b. Please discuss the tradeoffs between using a spot bond yield or a longer-term average bond yield calculated over 30 or 90 days.
c. The OEB formula currently uses a bond yield forecast. In Dr. Cleary's opinion, why should the OEB deviate from its past practice and use his recommended spot bond yield?

Responses:

a. Dr. Cleary does not have the data to either confirm or deny the statistics provided in the question. Dr. Cleary relies on the 3.30% yield cited in his evidence, which is the most relevant as explained in response to M4-2-OEA-6(a).

   Existing 30-year GOC yields lie just below 3.2% as of August 1, 2024, which supports the position that using 3.3% as of June 28, 2024 as a forecast of future yields would have been better than using a 90-day average of 3.44%.

b. Please refer to response N-M4-2-OEA-6(a).

c. As discussed in Section 3.10.2 of Exhibit M4, Dr. Cleary suggests that the current OEB practice of estimating the LCBF based on Canada 10-year yield Consensus forecasts, and then estimating a spread that the OEB adds to estimate corresponding 30-year Canada yields, can be improved upon.

As empirically demonstrated in Appendix A of Exhibit M4, using existing 30-year yields produces more accurate forecasts of actual 30-year yields in the subsequent period than using forecasts. That evidence shows an upward bias in forecasts of about 0.4%, which is substantial. In contrast, the average forecast yields using the previous actual yields at the start of the period would have been unbiased on average. Based on this evidence, Dr. Cleary recommends that rather than using forecasts for LCBF, the Board should use the actual prevailing bond yields. Dr. Cleary further recommends using the actual prevailing rate as of September 30, 2024, which should be a better estimate of future rates than using an average for the month of September, as discussed in response to M4-2-OEA-6(a).

The recommended approach has the added benefit of being easier to implement, since it does not require obtaining yield forecasts, estimating the spread between 10- and 30-year Canada yields, or even obtaining bond yield data for an entire month. Estimating the spread between 10- and 30-year Canada yields is not a trivial matter and is fraught with uncertainty. For example, while this spread averaged +0.38% over the 2004-2023 period, it has been as low as -0.23% and as high as +0.81%, and sat at -0.09% on June 5, 2024.

ASSOCIATION OF MAJOR POWER CONSUMERS IN ONTARIO/INDUSTRIAL GAS USERS ASSOCIATION (Dr. Sean Cleary)

Answer to Interrogatory from Ontario Energy Association (OEA)

Reference:

Exhibit M4
Page 76, lines 12-15

Preamble:

It may also be useful for the Board to compare the allowed ROEs using its existing formula those determined in another Canadian jurisdiction that determined allowed ROEs during regular proceedings and which did not use an automatic adjustment ROE formula over this time period.

Question:

a. Dr. Cleary compares the Ontario formula return to the authorized ROE in Alberta, which until recently was among the lowest in Canada, at 8.50%. Please explain why Dr. Cleary chose Alberta and did not also compare the Ontario formula return to the authorized ROE for electric and gas utilities in other Canadian and U.S. jurisdictions.

Response:

Dr. Cleary provided the Alberta authorized ROEs for comparison purposes since Alberta utilities are of similar risk to Ontario utilities, and also as a pragmatic matter because he already had the data for Alberta utilities available for this analysis.

ASSOCIATION OF MAJOR POWER CONSUMERS IN ONTARIO/INDUSTRIAL GAS USERS ASSOCIATION (Dr. Sean Cleary)

Answer to Interrogatory from Ontario Energy Association (OEA)

Reference:

Exhibit M4
Page 91, lines 28 through Page 92, line 6 and Page 93, Table 8

Preamble:

The December 31, 2023 weekly beta estimate average is 0.668, while the average for monthly betas is 0.582, both of which are well above the long-term average beta estimate of 0.35 discussed above, and also the 0.45 beta estimate I have used during previous proceedings. The seven-year average weekly betas for the Canadian sample is 0.658, while the seven-year average monthly beta estimate is 0.513 – with both estimates lying well above the historical average of 0.35. The average of all four beta estimates provided for this sample is 0.60, well above the long-term average beta estimate of 0.35, and my usual beta estimate of 0.45, which lies slightly above the mid-point of these two figures.

Questions:

a. Please add the betas for Enbridge Inc. to Table 8 of Dr. Cleary's report (Exhibit M4) and recalculate the averages.
b. Please explain why Dr. Cleary did not use the current average beta for the Canadian sample (e.g., the weekly beta of 0.668) as of December 31, 2023, or the long-term average beta (e.g., the weekly beta of 0.658) from 2017-2023 in his CAPM analysis rather than his own personal beta estimate of 0.45.
c. If Dr. Cleary believes it is reasonable to use a spot estimate of the long Canada bond yield as the risk-free rate as of June 5, 2024 in his CAPM analysis, please explain why Dr. Cleary does not believe it is also reasonable to use the most current available calculations for beta in his CAPM analysis?
d. Does Dr. Cleary agree with LEI's use of daily betas, as shown in Figure 39 of LEI's report (Exhibit M1)? If not, why not?
e. Please explain Dr. Cleary's rationale for excluding U.S. companies from his proxy group if those U.S. companies have betas that are similar to the companies in his Canadian sample.

Responses:

a. Dr. Cleary does not have the data to conduct such analysis.

   In any event, Enbridge Inc. is not an appropriate comparator to regulated Ontario utilities, due to the nature of its operations. This view was validated during the 2024 Alberta GCOC Proceedings, as noted in the November 10, 2022 memorandum to all parties, titled

"Proceeding 27084, Determination of the Cost-of Capital Parameters in 2024 and Beyond: Generic cost of capital issues list and other matters" (27084-X0255 2022-11-10 AUC letter - GCOC issues list and other matters), where the AUC rejected Enbridge Inc. as a reasonable Canadian utility comparator, as quoted below (bold added for emphasis) from page 4 of that document:

> 15. While consensus was successfully reached on the majority of items discussed at the technical conference, certain matters remained outstanding and required further submissions from all parties, which the Commission received on November 2, 2022. The Commission has reviewed these submissions and provides a ruling on each unresolved item below:
>
> > (a) Inclusion of TC Energy Corporation and Enbridge Inc. – The Commission has determined that **the comparator group will *not* include TC Energy Corporation and Enbridge Inc.** Integration of these companies would be inconsistent with the Commission's prior approach for determining ROE.[16] Furthermore, **the associated business risk, form of regulation and comparability of the two companies is not representative of that for regulated transmission and distribution utilities** under the Commission's jurisdiction. The majority of parties took a similar position in their November 2, 2022, submissions.
> >
> > [16] Decision 22570-D01-2018: 2018 Generic Cost of Capital, Proceeding 22570, August 2, 2018, paragraph 273.

b. The use of historical data over recent periods to obtain beta estimates does not consider historical beta estimates that were obtained using the same approach for much longer periods of time to reflect their reasonableness. As such, it is entirely weighted on the most recent five (or less) years of data, which at any point in time may have included periods of abnormal market behavior. For example, Appendix C of Exhibit M4 reports three charts that show the average beta estimates (using five years of previous monthly or weekly data) for Canadian utilities (including the S&P Utility sub-index) were negative at various points in time over the 2002-2004 period. By definition, the market-cap weighted average of all industries included in the market must equal one, so these abnormally low (unrealistic) beta "estimates" were driven by the high beta estimates of high-tech stocks that caused a market bubble, followed by a market crash, and in the process led to beta estimates for almost all other sectors to be lower than they would normally be.

   For these reasons referencing long-term averages of beta estimates is important (as discussed in Appendix C of Exhibit M4), since beta estimates are just that – "estimates." At any particular point in time, the most recent historical data may imply lower estimates (as discussed in part (a)), or higher beta estimates, depending on the previous period of market

activity. But the averages over longer periods of time tend to smooth out these discrepancies in the beta estimates, which of course are meant to be estimates of the beta that will be most representative of changes in stock returns relative to “future” changes in overall market returns.

c. Please refer to the response to part (b) above, as well as to response N-M4-2-OEA-6(a).

d. Dr. Cleary disagrees with the use of beta estimates determined using daily data due to the “noisy” nature of daily returns, which makes monthly return observations more desirable.

e. Please see response N-M4-2-OEA-4 which summarizes the evidence indicating that U.S. utilities are not reasonable comparators for Ontario utilities.

   Within the context of applying the CAPM in particular, there are additional issues with the fact that the appropriate market is the Canadian market (due to home bias) and not the U.S. market. For example, Canadian risk-free rates (as proxied by government yields) are currently lower than corresponding U.S. rates, while Canadian MRPs may also differ from U.S. MRPs.

ASSOCIATION OF MAJOR POWER CONSUMERS IN ONTARIO/INDUSTRIAL GAS USERS ASSOCIATION (Dr. Sean Cleary)

Answer to Interrogatory from Ontario Energy Association (OEA)

Reference:

Exhibit M4
Page 92, lines 9-12

Preamble:

This illustrates that beta "estimates" for companies can change dramatically through time, and therefore why it is appropriate to reference long-term averages and use judgment since beta estimates at any given point in time based on historical data may not represent the best estimates of "future" betas.

Questions:

a. To what does Dr. Cleary attribute the "dramatic" change in betas for the utilities in his Canadian sample?
b. On page 30 of his report (Exhibit M4), Dr. Cleary states that utilities perform better during periods of uncertainty due to their low-risk nature. Please reconcile this statement with Table 8 of Dr. Cleary's evidence that shows that raw betas for utilities in Canada and the U.S. were higher in 2023 and during the period from 2017-2023 compared to the long-term historical levels reported by Dr. Cleary.

Responses:

a. Dr. Cleary has not analyzed this question, but notes, again, that beta estimates using short recent periods can often give inappropriate estimates of future betas; see response M4-2-OEA-19(b). This is precisely the reason that Dr. Cleary consistently considers long-term averages, as discussed in response N-M4-2-OEA-19(b) and in greater detail in Appendix C of Exhibit M4.

   Dr. Cleary would note the consistency in his application of this approach, as he did not use the 0.35 average beta estimate he determined in 2023, but rather relied upon his estimate of 0.45, just as he has during these proceedings.

   Dr. Cleary cannot say for sure why the beta estimates as of December 31, 2023 were higher than the long-term average, while beta estimates for the same utilities were much lower (and below or close to long-term averages) as of the end of 2022. He attributes such random results as being reflective of the fact that beta estimtes using short recent periods can often give inappropriate estimates of future betas, as discussed in response N-M4-2-OEA-19(b).

ASSOCIATION OF MAJOR POWER CONSUMERS IN ONTARIO/INDUSTRIAL GAS USERS ASSOCIATION (Dr. Sean Cleary)

Answer to Interrogatory from Ontario Energy Association (OEA)

Reference:

Exhibit M4
Page 114, lines 4-15

Preamble:

Recent debt rating reports identify excellent business risk and very low industry risk (S&P); as well as reasonable regulatory support (DBRS Morningstar (DBRS)) as strengths for HOI. This is consistent with HOI's regulated operations conducted in a well-defined and economically strong region with strong regulatory support, and where it can reasonably pass on legitimate costs to its customers.

Currently, HOI maintains the following long-term debt ratings: DBRS – A(high) – Stable; S&P – A(Stable)73; and, Moody's – A3. The DBRS rating has been the same for over 10 years, while the S&P rating of A- has been maintained since 2019 while the qualifier was upgraded to "positive" in August of 2023 and then the rating was upgraded to A in June 2024. Moody's rating of A3 has been maintained since 2019, and was confirmed in May of 2023. These high ratings are indicative of sound credit quality, and contribute to HOI's ability to issue debt at attractive rates (as will be discussed in Section 6.2.2).

Questions:

a. Has Dr. Cleary considered Hydro One's rating analysis from S&P, including business risk and industry risk, compared to other North American utilities? If so, how was this information considered by Dr. Cleary? If not, why not?
b. Has Dr. Cleary considered the impact of his recommendation to lower the deemed equity ratio for Hydro One to 36% on the rating agencies' assessment of the business risk and industry risk of Hydro One, as well as the relative impact of Dr. Cleary's recommendation on Hydro One's ability to attract capital compared to other North American utilities? If so, how was this considered? If not, why not?
c. Has Dr. Cleary considered comments in credit reports from other rating agencies such as Moody's, which notes that Hydro One has a low equity thickness, in arriving at his recommendation to reduce the deemed equity ratio for Hydro One to 36%?
d. How does Dr. Cleary view ratings from DBRS relative to other rating agencies such as S&P and Moody's in terms of Hydro One's ability to attract capital in North America, including the U.S., in terms of investors' reliance on them?
e. Assuming integrated North American capital markets, should more emphasis be placed on the views of other rating agencies, such as S&P and Moody's, rather than on DBRS?
f. With regard to his reliance on DBRS ratings, has Dr. Cleary considered that to be included in the Bloomberg US Corporate Index, a security must be rated by Moody's, S&P or Fitch – a DBRS rating is not acceptable as per: US-Corporate-Index.pdf. Please explain.
g. With regard to reliance on DBRS ratings, is Dr. Cleary aware of the U.S. Securities and Exchange Commission's Staff Report on Nationally Recognized Statistical Rating Organizations (NRSROs), dated February 2024, which notes that DBRS represents 2.9% of the total outstanding credit ratings of all NRSROs, while S&P represents 50.0% and Moody's 31.6%?

Responses:

a. Section 6.2.1 of Dr. Cleary's evidence considered the risk assessment and ratings of all three rating agencies (DBRS, S&P and Moody's), which would all be based on a comparison to other North American utilities. An independent analysis of risk facing other North American utilities would be a significant undertaking in respect of each suggested comparator and out of scope for Dr. Cleary's retainer in this matter.

b. As discussed in Section 6.2 of Exhibit M4, Dr. Cleary's recommendations were based on considerations which included the low business risk and strong credit metrics displayed by Hydro One based on its existing equity ratio.

c. As noted in response to part (a), Dr. Cleary considered the reports and ratings from three rating agencies, , including references to HOI's equity ratios. He would note that despite comments such as the one referenced in this question Hydro One's debt rating has not been downgraded by any credit agency (including Moody's – who has maintained their

A3 rating for Hydro One since 2019), and in fact S&P recently upgraded their rating from A- to A.

d. The DBRS rating of A(high) is in line with the ratings of S&P (of A), and of Moody's (of A3). DBRS-Morningstar is a respected Canadian-based rating organization whose ratings are reputable and are no doubt considered as such by investors, particularly Canadian investors. This is an important consideration due to the well-known fact that there is a "home bias" among investors, not only from Canada, but also globally; see response M4-12-OEB Staff-72, part a). This question appears to imply that because DBRS is a smaller Canadian-based organization that it is not a reputable rating agency. The fact that DBRS does not provide rating assessments for a large number of U.S. and global companies does not detract from the fact they are considered a reputable rating agency by investors.

e. The debt ratings from DBRS are in line with those by S&P and Moody's as discussed in response to part (d), and as discussed in response to part (a), Dr. Cleary considered the ratings and reports from all three debt agencies. See also response to part (d).

f. Hydro One does in fact have debt ratings from S&P and Moody' (as do most Canadian utilities – at least from one of them). In addition, as discussed in response to part (a), Dr. Cleary does consider the ratings and reports from all three debt agencies. Finally, DBRS is considered a reputable debt rating agency, regardless of whether a "US Corporate Index" considers its ratings, and by its Canadian-based nature does not provide rating assessments for a large number of U.S. companies. This does not detract from the fact they are considered a reputable rating agency by investors, as also discussed in response to part (d).

g. Dr. Cleary was not aware of these exact statistics, but they seem consistent with the nature of DBRS as noted in his responses to parts (d) and (f) above, and do not of themselves render DBRS ratings any less reliable than those of their large U.S. based counterparts.

ASSOCIATION OF MAJOR POWER CONSUMERS IN ONTARIO/INDUSTRIAL GAS USERS ASSOCIATION (Dr. Sean Cleary)

Answer to Interrogatory from Ontario Energy Association (OEA)

Reference:

Exhibit M4
Page 116, lines 10-12

Preamble:

We continue to assess **HOL's business risk profile as excellent**. Our assessment reflects the company's **low-risk regulated utility operations** that provide essential services in Ontario.

Question:

a. Has Dr. Cleary considered the business risk profile of Hydro One's North American peers with similar credit ratings, with whom Hydro One is competing for capital? If so, please explain how Dr. Cleary took this information into account in arriving at his recommendation to lower Hydro One's deemed equity ratio from 40% to 36%.

Response:

Please refer to response N-M4-2-OEA-21, part (b).

ASSOCIATION OF MAJOR POWER CONSUMERS IN ONTARIO/INDUSTRIAL GAS USERS ASSOCIATION (Dr. Sean Cleary)

Answer to Interrogatory from Electricity Distributors Association (EDA)

Question:

Please provide responses to all other parties' Interrogatories ("**IRs**").

Response:

We have responded to all interrogatories.

ASSOCIATION OF MAJOR POWER CONSUMERS IN ONTARIO/INDUSTRIAL GAS USERS ASSOCIATION (Dr. Sean Cleary)

Answer to Interrogatory from Electricity Distributors Association (EDA)

Question:

Please provide copies of all models used to support all analyses in the Cleary Report not previously provided. Excel spreadsheets should be supplied with formulas intact.

Response:

All data, models and calculations used to support Dr. Cleary's analyses have been filed as Attachments A through N of Exhibit M4.

ASSOCIATION OF MAJOR POWER CONSUMERS IN ONTARIO/INDUSTRIAL GAS USERS ASSOCIATION (Dr. Sean Cleary)

Answer to Interrogatory from Electricity Distributors Association (EDA)

References:

Section 1.1 of the Report of Dr. Sean Cleary dated July 19, 2024.
Attachment 1, CV of Dr. Sean Cleary

Question:

Please provide copies of all reports of Dr. Sean Cleary, alone or with another expert, concerning in whole or in part cost of capital and/or energy transition. This interrogatory is limited to reports referenced in ss. 1.1 or elsewhere in the body of the Cleary Report, or prepared in the last ten years.

Response:

Attached please find copies of Dr. Cleary's cost of capital evidence as filed over the last 10 years:

Attachment 1: The 2023 Enbridge Gas Inc. rebasing proceedings (OEB EB-2022-0200).

Attachment 2: Alberta Generic Cost of Capital (GCOC) proceedings in 2015-2016 (AUC Proceeding ID 20622).

Attachment 3: Alberta GCOC proceedings in 2018 (AUC Proceeding ID 22570).

Attachment 4: Alberta GCOC proceedings in 2019-20 (AUC Proceeding ID 24110).

Attachment 5: Alberta GCOC proceedings in 2022-23 (AUC Proceeding ID 27084).

Attachment 6: Newfoundland cost of capital proceedings in 2015-2016.

Attachment 7: Newfoundland cost of capital proceedings in 2018.

Dr. Cleary cannot locate his evidence prepared for the EPCOR Energy Alberta 2018-2021 Energy Price Setting Plan proceeding (AUC Proceeding ID 22357) in 2017 (since his previous laptop was destroyed). However, this evidence related to the price setting plan in issue in that proceeding and is **not related** to the current cost of capital proceedings.

ASSOCIATION OF MAJOR POWER CONSUMERS IN ONTARIO/INDUSTRIAL GAS USERS ASSOCIATION (Dr. Sean Cleary)

Answer to Interrogatory from Electricity Distributors Association (EDA)

Reference:

Table 8 of the Cleary Report

Question:

For the Canadian electric utilities listed in Table 8 of the Cleary Report, please provide the percent of total revenues and net income from operations located in Canada and the percent of total revenues and net income generated from operations located in the US and other non-Canadian locations, and provide the source documents for those figures.

Response:

According to Exhibit "24110-X0344 2020-03-10 Hevert—D'Ascendis IR Responses to UCA (1-22)" that was filed during the 2021 Alberta GCOC Proceedings (included as Attachment to response N.M4.10.OEA.11), the following represents the revenue breakdowns requested according to the respective 2018 company annual reports:

Utility	Canadian Operations Revenue	International Operations Revenue
Algonquin	4.27%	95.73%
CU Ltd.	95.34%	4.66%
Emera	23.30%	76.70%
Fortis	36.85%	57.52%
Hydro One Ltd.	100.0%	0.00%

The requested net income breakdowns are not provided in the referenced report, and Dr. Cleary does not have this information.

ASSOCIATION OF MAJOR POWER CONSUMERS IN ONTARIO/INDUSTRIAL GAS USERS ASSOCIATION (Dr. Sean Cleary)

Answer to Interrogatory from Electricity Distributors Association (EDA)

Reference:

Report, p. 41 and FN 16

Question:

Please provide all evidence, beyond that described in footnote 16, that was used to support the Bond Yield plus Risk Premium (BYPRP) adder of 2.5%.

Response:

In Dr. Cleary's experience with both using the approach and observing numerous estimates provided by analysts based on such approach, the approach is commonly applied by adding a spread of 2 to 5% to a company's existing bond yields, with 3.5% being applied for average risk companies, and lower (higher) spreads being applied to lower (higher) risk companies. This is basic practice for finance professionals. Dr. Cleary has seen 2% to 5% used in analyst reports that he has read and in presentations by analysts that he has observed through the years all of which are too numerous to catalogue and produce, and few, if any, of which he has saved in any event.

It may be helpful to note several formal publications which suggest the use of a similar ranges from 1% to 3%, 3% to 4%, or 3% to 5%, many suggesting the use of 3% to 3.5% figures for average risk companies. For example:

1. Page 35 of the "Refresher Reading, 2021 CFA Program, Level II, Reading 25" (included as "Attachment EDA-5") suggests that "In US markets, the typical risk premium added is 3%–4%, based on experience." On page 36 of that reading, a 3% risk premium is added to the yield on Vodafone Group's debt. Dr. Cleary would note that Vodafone had a BBB+ debt rating at the time, and given the competitive industry it operates in, it would clearly be considered more risky than regulated Ontario (and Canadian) operating utilities with overall higher debt ratings and that operate effective monopolies that can pass costs on to consumers.

2. Equity Asset Valuation, 2E, J. E. Pinto, E. Henry, T.R. Robinson and J.D. Stowe, John Wiley & Sons Inc., 2010. Chapter 2, Section 4.3.2, page 73:

   > "For companies with publicly traded debt, the bond yield plus risk premium (BYPRP) method provides a quick estimate of the cost of equity. Although simple, the method has been used in serious contexts. For example, the Board of Regents of the University of California in a retirement plan asset/liability study

(July 2000) used the 20-year T-bond rate plus 3.3 percent as the single estimate of the equity risk premium."

Notice that the 3.3 percent applied in this case is applied to overall market returns (implying it is appropriate to apply for the average risk company), and not to utility equity returns.

Further, on page 73, they state:

"In U.S. markets, the typical risk premium added is 3 to 4 percent, based on experience."

3. Corporate Finance: A Practical Approach, M. R. Clayman, M.S. Fridson and G.H. Troughton, John Wiley & Sons Inc., 2008. Chapter 3, Section 3.3.3, page 145:

   "In developed country markets, a typical risk premium added is in the range of 3 to 5 percent."

4. Corporate Finance: A Focused Approach, 3E, Michael Ehrhardt, Eugene Brigham, South-Western Cengage Learning, 2008. Chapter 9, Section 9.7, page 303:

   "Some analysts use a subjective, ad hoc procedure to estimate a firm's cost of equity: They simply add a judgmental risk premium of **1 to 3 percentage points** to the firm's own cost of long-term debt.

   …

   "Empirical work suggests the risk premium over the firm's own bond yield has generally ranged from 3 to 5 percentage points, with recent values close to 3%."

5. Fundamentals of Financial Management, 11E, Eugene F. Brigham, Joel F. Houston, Thomson South-Western, 2007. Chapter 10, Section 10.5, page 339:

   "Both surveys of portfolio managers and empirical studies suggest that the risk premium on a firm's stock over its own bonds generally ranges from 3 to 5 percentage points. Based on this evidence, the analysts simply add a judgmental risk premium of 3 to 5 percent to the interest rate on the firm's long-term debt to estimate its cost of equity.
   Some security analysts send out questionnaires to portfolio managers asking the question: "If a given firm's bonds yield 8 percent, what is the minimum rate of return you would have to earn on its equity in order to induce you to buy its stock?" The answers are generally in the 3 to 5 percent range. The reports that we have seen were proprietary, so the studies are not generally available. Also, analysts have calculated the historical returns on common stocks and on corporate bonds and then used the differential as an estimate of the equity risk premium over a firm's own bonds. The historical results vary from year to year, but again, a range of 3 to 5 percent is quite common."

7. Wiley CPA Examination Review, Problems and Solutions, 38E, O. Ray Whittington, Patrick R. Delaney, John Wiley and Sons, 2011. Module 44, Financial Management, page 1155:

> "121. (b) ... Answer (b) is correct because the bond-yield-plus approach involves adding a risk premium of **3% to 5%** to the interest rate of the firm's long-term debt."

As Dr. Cleary has stated in his evidence, the commonly used risk premiums vary in the 2-5% range, with 3.5% being the usually employed premium for an average risk company. A-rated regulated operating utilities are far below average risk, consistent with Dr. Cleary's beta estimate of 0.45 (where 1.0 is the beta for an average risk company). As such, 2.5% is the appropriate risk premium to be added to the cost of utility debt.

ASSOCIATION OF MAJOR POWER CONSUMERS IN ONTARIO/INDUSTRIAL GAS USERS ASSOCIATION (Dr. Sean Cleary)

Answer to Interrogatory from Electricity Distributors Association (OEA)

Reference:

Report, p. 90-95

Question:

Please provide all evidence that supports the long-term beta estimate of 0.35.

Response:

Please refer to the response N-M4-10-OEB Staff-68.

ASSOCIATION OF MAJOR POWER CONSUMERS IN ONTARIO/INDUSTRIAL GAS USERS ASSOCIATION (Dr. Sean Cleary)

Answer to Interrogatory from School Energy Coalition (SEC)

Question:

Please provide Dr. Cleary's views on the recommendations and analysis contained in the expert report from Concentric on behalf of the OEA.

Response:

There is general acceptance that utility companies are less risky than the market as a whole. The natural corollary is that any ROE awarded in this proceeding should be less than the return an investor could expect to achieve on the market index. Therefore, both historical and forecast returns on the Canadian stock market provide a clear upper bound, or more likely a reference point even higher than that, for the establishment of a just and reasonable ROE in this proceeding.

Table 7 of Exhibit M4 provides estimated long-term market returns from a number of important and reputable sources with various mandates, including the Financial Standards Planning Council and other large asset managers such as BlackRock (which now manages over $10 trillion U.S. The Canadian market nominal estimates range from 5.6% to 7.3%, with an average of 6.5%). Having regard to both historical and forecast market returns, Dr. Cleary concluded that 7.5% represents an appropriate point estimate for expected long-term Canadian stock market returns. As discussed above, this represents an upper bound, or higher, for the cost of equity to regulated utilities, since they are indisputably less risky than the average company in the market. This independent market evidence therefore provides clear and compelling support for the fact that a recommended ROE greater than 7.5% is inappropriate – including the 10.0% recommendation of Concentric.

Concentric's ROE and equity ratio (ER) recommendations (both in the Executive Summary and in the respective sections of its evidence) appear to rely almost exclusively on the main argument that since allowed ROEs and ERs in the U.S. are higher than those for Ontario utilities, the allowed ROE and ERs need to be increased. In fact, Dr. Cleary counted at least 25 such references in Concentric's report to Ontario allowed ROEs and/or ERs being below those allowed in the U.S., as well as 14 additional references to comparisons to both North American and Canadian ratios. Concentric's position appears to be that all the OEB needs to do in order to satisfy the Fair Return Standard (FRS) is to examine allowed ROEs and ERs in other jurisdictions (with a much higher weighting of those in the U.S.), and implies there is no need to put much weight on an examination of Ontario utilities' business risk, or market-based evidence regarding factors that should impact deemed ROEs, such as expected future stock market returns, government bond yields, yields on Ontario utility bonds, etc.

(a) Further, Concentric's current recommendation is inconsistent with recent evidence (November 7, 2023) that Concentric filed before the Newfoundland and Labrador Board of Commissioners of Public Utilities, on behalf of Newfoundland Power Inc. (NP). During those proceedings, Concentric recommended an allowed ROE for NP of 9.85% and an allowed ER of 45%, similar to its current recommendations for Ontario utilities of 10% and 45% respectively, on the basis of arguments it made in its Newfoundland evidence, which shows (or concludes) that NP:

(b) maintains an A rating from DBRS, and a Baa1 rating from Moody's – both lower than for example Hydro One Inc.'s current ratings of A (High) and A3 respectively;

(c) faces a significant risk due to its small size, as discussed on pages 61-63 of Concentric's Newfoundland evidence;

(d) faces a significant risk due to weak macroeconomic and demographic conditions in Newfoundland (which is not the case for Ontario), as discussed on pages 63-66 of Concentric's Newfoundland evidence; and

(e) potential for growth in customer demand (while in contrast, Concentric argues that increased demand for Ontario utilities is a risk to them), as discussed on page 70 of Concentric's Newfoundland evidence.

Given that few, if any, of these factors apply to most, if not all, of Ontario's utilities, the necessary logic of these positions as put forward in Newfoundland in light of the ROE and ER recommended for NP is that the ROEs and ERs for Ontario utilities should be lower.

Concentric's Ontario recommendations are also inconsistent with recent evidence that Concentric filed (February 1, 2023) before the Alberta Utilities Commission (AUC). During those AUC proceedings, Concentric recommended an allowed ROE of 9.5% and an allowed ER of 40%, with both recommendations well below its current recommendations for Ontario utilities of 10% and 45% respectively. Concentric made these recommendations in Alberta 17 months ago based on its acknowledgement on page 92 (bold added for emphasis) of its Alberta evidence that its Alberta recommendations were based on bringing Alberta utilities **in alignment with "the deemed equity ratios of comparable-risk electric utilities in Ontario** and elsewhere across Canada."

Concentric's recommendations and analyses are based on the use of its North American combined group of 25 utilities, that includes 19 U.S.-based utilities, which places 76% of the weighting of its analyses on U.S. utility holding companies. However, Appendix B of Exhibit M4 shows that U.S. utilities are not reasonable comparators since they possess higher business risk than their Canadian counterparts. This higher risk is further reflected in Appendix C of Exhibit M4 which shows that over a long period of time (i.e., more than 25 years), U.S. utility beta estimate historical averages are much, much higher than (almost double) the comparable Canadian beta estimates, and that this difference is even more pronounced after accounting for the higher leverage of Canadian utilities. This longer-term evidence is further supported by Table 8 of Exhibit M4, which shows that both monthly and weekly beta estimates as of December 31, 2023, and estimates based on the 2017-2023 average estimates for U.S. utilities are higher than the comparable Canadian utility beta estimates. Similarly, Figure 16 of Concentric's evidence also shows that beta estimates for U.S. utilities are higher than the comparable Canadian utility beta estimates.

In addition to the sampling issues noted above, Dr. Cleary notes that Concentric uses analyst growth forecasts in its DCF cost of equity (Ke) estimates. As discussed in Section 5.3 of Exhibit M4, analyst estimates are known to be overly optimistic and will lead to invalid estimates of Ke when using DCF models. For example, a study by Easton and Sommers[1] estimates that the "optimism" bias in analysts' growth forecasts inflates final DCF cost of equity estimates by an average of 2.84%. In particular, the

[1] Source: Easton, Peter D., and Gregory A. Sommers. "Effect of Analysts' Optimism on Estimates of the Expected Rate of Return Implied by Earnings Forecasts." Journal of Accounting Research 45 no. 5 (December 2007), pp. 983-1016.

use of these overly optimistic growth forecasts often leads to adopting expected future growth rates (to infinity as implied by the single-stage DCF model) for utilities' earnings and dividends that exceed expected growth in the economy (i.e., nominal GDP growth). This is simply not realistic for mature, stable operating utilities operating within a defined region. Appendix D of Exhibit M4 provides strong support for these assertions.

Concentric forecasts Canadian proxy group Constant-Growth DCF estimates that are based on an average future long-term growth rate (to infinity) of 5.27%, which exceeds Concentric's estimate for Canadian GDP growth of 3.84% **by 1.43%**. Concentric's average North American proxy group Constant-Growth DCF estimates are based on an average future long-term growth rate (to infinity) of 5.98%, which exceeds Concentric's estimate for North American GDP growth of 3.99% **by 1.99%**. The 2018 Alberta GCOC Decision (Decision 22570-D01-2018, para. 438) stated (bold added for emphasis, footnote omitted):

> 438. With respect to the single-stage DCF model estimates presented by Dr. Villadsen, Mr. Coyne and Mr. Hevert, the growth rates used by each of these three witnesses in their single-stage DCF models are in **excess of the long-term GDP growth estimates** they put forward. Consistent with its determinations in prior GCOC decisions, **the Commission will not accept, in a single-stage DCF model, the use of long-term or terminal growth rates that exceed estimates of the nominal long-term GDP growth rate for the economy**. The Commission recognizes that the utilities are, as Dr. Cleary stated in his evidence, **essentially monopolies in mature markets** and, because of this, the **use of long-term growth in excess of the long-term growth of GDP is unreasonable.**"

In its multi-stage DCF model, Concentric assumes that the higher analyst growth rates exist for a full 5 years, then gradually decline over the following 5 years to a stable long-term growth rate equal to Concentric's estimate of long-term nominal GDP growth. Therefore, this approach also assumes that utilities' earnings and dividends will grow at rates above nominal GDP growth for 10 years, then will grow at estimated nominal GDP growth from year 11 to infinity.

As a result of the sampling and growth estimation issues identified above, Concentric's DCF estimates of Ke are upward biased and should not be relied upon.

Concentric's CAPM analysis to determine Ke estimates the risk-free rate (RF), which is usually based on 30-year government bond yields. Despite the fact that pages 41-42 of Concentric's evidence shows the deemed long-term debt rates (based on forecast yields) averaged +0.40% higher than the actual yields, Concentric based its RF estimate based on "forecasts" for 10-year Canada yields and then estimates a spread it adds to this forecast to estimate 30-year Canada yields. In addition, Concentric adds the 0.33% historical spread between 10- and 30-year Canada bond yields to 10-year yield forecasts, despite the current negative spread (in Canada) that Concentric noted on page 64 of its evidence. Such an approach is flawed for two reasons. First, as discussed in detail in Section 3.7 and in Appendix A of Exhibit M4, using actual prevailing yields provides statistically significantly better forecasts, than using forecast yields (which displayed a +0.40% upward estimate bias). Secondly, in the CAPM, RF represents the actual existing risk-free asset that an investor can invest in today and earn the risk-free rate of return. In fact it would not be possible for a Canadian investor today to buy a 30-year Government of Canada bond promising a risk-free rate of return of 3.46% (i.e., Concentric's estimated Canadian RF), when available 30-year Canada bonds are trading at prices that provide a yield of 3.30%.

Concentric then proceeds to estimate the beta it uses in its CAPM analysis. Aside from Concentric's heavy reliance on higher risk U.S. utilities (which have higher beta estimates), Concentric also uses

adjusted betas (which assumes utility betas gravitate towards one – which they don't) as opposed to using raw betas. Concentric does so in spite of the fact that there is strong evidence supporting the fact that utility betas do not gravitate towards one. For example:

- Michelfelder and Theodossiou (2013) show empirically that utility betas do not have a tendency to converge to 1.0 and concluded that the adjusted betas as reported by Value Line are not applicable for public utilities.

- As shown in Appendix B of Exhibit M4, Sikes (2022) provides a chart in Figure IV of his report that estimates betas for utilities over the 1970-2020 period (i.e. using over 50 years of observations) that leads Sikes to note (on page 48 of his report) that: "It is undeniable based on Figure IV that the Value Line Adjustment is inappropriate. Clearly, utility betas have been consistently below 1.0 and as shown in Exhibit H of the Appendix, the historical sample suggests an average of 0.55." In fact, the line depicting adjusted betas in Sikes' Figure IV is ALWAYS above the line depicting actual betas – which clearly shows that adjusted beta estimates are upwardly biased.

- Appendix B of Exhibit M4 shows that the historical raw Beta estimates for Canadian Utilities over the 1995-2019 period averaged 0.40 (weekly data) and 0.34 (monthly data), with maximums of 0.71 and 0.62 respectively and nowhere during this 25-year period did the Canadian Utility beta estimates even come close to 1.0.

- Appendix B of Exhibit M4 also shows that the historical raw Beta estimates for U.S. Utilities over the 1995-2019 period averaged 0.49 (weekly data) and 0.42 (monthly data), with maximums of 0.84 and 0.85 respectively and nowhere during this 25-year period did the U.S. Utility beta estimates even come close to 1.0.

Concentric's MRP estimates that it uses in its CAPM analysis are also flawed. Concentric's historical MRP estimate for Canada of 5.68% is 35% higher than the arithmetic average estimate of 4.2% provided in the Dimson et al. (2016) study[1] (which examines MRPs over the 1900-2015 period), and is 72% above the geometric average of 3.3% determined in the same study. Similarly, Concentric's historical MRP estimate for the U.S. of 7.17% is 24% higher than the arithmetic average estimate of 5.8% provided in the Dimson et al. (2016) study (which examines MRPs over the 1900-2015 period), and is 63% above the geometric average of 4.4% determined in the same study. These comparisons indicate issues with Concentric's historical MRP estimates, given the significant overlap of a large number of annual observations included in both sources of MRP estimates. The reason for these differences is almost certainly primarily due to the fact that Concentric uses "income only returns" for bonds to determine MRPs rather than "total returns," which is the appropriate and standard practice used by finance professionals.

Concentric estimates its forward-looking Canadian MRP of 12.09% using the Constant Growth DCF Model, using an expected dividend yield of 3.60% and an expected growth rate of 11.95%, which translates into an expected market return of 15.56%. Concentric then subtracts its RF estimate of 3.46% to arrive at a Canadian forward-looking MRP of **12.09%**. The company growth estimates used by Concentric to calculate the average market growth expectations for the Canadian market are based on **only 60** (of 230) company growth estimates, with 170 company growth estimates not being available. Further, the company growth estimates it used to calculate the average market growth expectations for the Canadian market ranged from +194.72% to -29.16%. It is difficult to understand why, given the lack of growth data for 170 (74%) of the 230 companies included in the S&P/TSX Index, as well as the wide

[1] This study is included as Exhibit AY to Exhibit M4, and is summarized in Figure 12 on page 40 of Exhibit M4.

variability in such growth estimates that were available, Concentric did not follow common finance practice and simply use its estimate of long-term nominal GDP growth of 3.84% for Canada as its growth estimate and combine it with the average expected S&P/TSX dividend yield of 3.60% to estimate the expected return on the market (which would equal 7.44%), and hence the MRP estimate would have been 3.98%, much closer to the long-term Canadian arithmetic average of 4.2%.

Concentric further estimates its forward-looking U.S. MRP of 11.30% using the Constant Growth Model, using an expected dividend yield of 1.73% and an unrealistic expected growth rate of 13.71%, which translates into a similarly unrealistic expected market return of 15.45%. Concentric then subtracts its U.S. RF estimate of 4.14% to arrive at a U.S. forward-looking MRP of **11.30%**. The company growth estimates used by Concentric to calculate the average market growth expectations for the U.S. market ranged from +189.05% to -24.00. The use of such high predicted growth rates in earnings (and dividends) for Canadian (11.95%) and U.S. (13.71%) companies that are more than triple Concentrics' own forecast of expected nominal GDP growth rates for the Canadian and U.S. economies of 3.84% and 4.04% is clearly inappropriate. Can we expect corporate profits to grow at 12-14% (to infinity), despite the respective economies only growing at an annual rates that are less than one-third of these growth figures at around 4%? Further, such high predicted expected market returns for Canadian (**15.56%**) and U.S. (**15.45%**) companies are completely inconsistent with the long-term average expectations of market professionals for expected market returns of **6.1%** for Canada and **6.8%** for the U.S., as provided in Table 7 of Exhibit M4. It is difficult to envision how finance professionals that are managing trillions of dollars could be so far off in their estimates (i.e. 15.56% is 255% above 6.1% for Canada, and 15.45% is 227% above 6.8% for the U.S.). Fortunately, Concentric disregarded these forward-looking, as well as the average MRP CAPM Ke estimates, and relied entirely upon its historical MRP estimates (although these estimates are also flawed as discussed above).

As a result of the sampling and growth estimation issues identified above, Dr. Cleary concludes that Concentric's CAPM estimates of Ke are upward biased and should not be relied upon.

The risk premium model used by Concentric is also flawed by design, since it is based on the analysis of U.S. allowed ROEs, U.S. government bond yields and U.S. corporate bond yield spreads. These variables are simply not relevant with respect to current capital market conditions in Canada that are intended to be reflected in the cost of equity to Ontario utilities and/or in the OEB's ROE formula, as captured by changes in LCBF and UtilBondSpread, and therefore should not be considered. Specifically, allowed ROEs in U.S. jurisdictions do not have a direct relationship with changes in capital market conditions in Canada. These allowed ROEs do not change frequently (only during ROE reviews or annually at best if the jurisdiction uses a formula), unlike the LCBF and UtilBondSpread factors which change daily. Further, allowed ROEs for U.S. utilities have no direct relationship to Canada government yields (which often differ from U.S. yields as they do today) or with Canadian yield spreads. As the AUC stated in Alberta 2018 GCOC Decision 22570-D01-2018, para. 393 (emphases added): "In the Commission's view, although observable, the **ROEs approved for the U.S. utilities are not strictly market data**."

ASSOCIATION OF MAJOR POWER CONSUMERS IN ONTARIO/INDUSTRIAL GAS USERS ASSOCIATION (Dr. Sean Cleary)

Answer to Interrogatory from School Energy Coalition (SEC)

N-M4-0-SEC-83

Question:

Please provide Dr. Cleary's views on the recommendations and analysis contained in the expert report from Nexus on behalf the EDA.

Response:

As discussed in response N-M4-0-SEC-82, there is general acceptance that utility companies are less risky than the market as a whole, and as a result historical and forecast returns on the Canadian stock market provide a clear upper bound, or more likely a reference point even higher , for the establishment of a just and reasonable ROE in this proceeding.

Dr. Cleary's relies upon independent market evidence to support his recommendation that an ROE greater than 7.5% for Ontario regulated utilities is inappropriate.

Nexus, on the other hand, recommends an 11.08% ROE for Ontario utilities. Nexus appears to support its ROE and equity ratio (ER) recommendations on the premise that Ontario deemed ROEs and ERs need to be increased primarily on the basis that they should be better aligned with much riskier U.S. utilities (in three U.S. jurisdictions considered), noting that Nexus' evidence also suggests that Ontario ROEs and ERs are in line with those deemed in the two Canadian jurisdictions that it examined.

Nexus recommendations and analyses are based on the use of its proxy group of 43 utilities that includes 38 U.S.-based utilities (and only 5 Canadian utilities), which places 88.4% of the weighting of its analyses on U.S. utility holding companies. Appendix B of Exhibit M4 shows that U.S. utilities are not reasonable comparators since they possess higher business risk than their Canadian counterparts. This higher risk is further reflected in Appendix C of Exhibit M4 which shows that over a long period of time (i.e. more than 25 years), U.S. utility beta estimate historical averages are much, much higher than (almost double) the comparable Canadian beta estimates, and that this difference is even more pronounced after accounting for the higher leverage of Canadian utilities. This longer-term evidence is further supported by Table 8 of Exhibit M4, which shows that both monthly and weekly beta estimates as of December 31, 2023, and estimates based on the 2017-2023 average estimates for U.S. utilities are higher than the comparable Canadian utility beta estimates. Similarly, Figure 16 of Concentric's evidence also shows that beta estimates for U.S. utilities are higher than the comparable Canadian utility beta estimates.

On page 38 of its evidence, Nexus justifies its heavy reliance on U.S. utilities on the basis that "Ontario and US electric service providers compete in the same market for capital." However, this assertion ignores the well-known fact that there is a "home bias" among investors, not only from Canada, but also globally. For example, on page 45 of its evidence, Nexus notes that the "Maple 8" (i.e., the eight largest Canadian pensions) hold approximately 25% of their investments in Canadian equities, which is more than eight times the Canadian equity market's percentage of global equity markets of just under 3% (e.g., 2.9% as of September 30, 2021). Further, a broader representation that extends beyond just the

eight largest pension plans, shows that Canadian investors (including institutions) had a domestic allocation for equities over 40% in 2020 (over 13 times the Canadian equity market's global market weight).[1] Further, the home bias is even more dramatic in Canadian fixed income markets, which similarly comprise about 3% of global fixed income markets, but Canadian investors had a domestic allocation for fixed income of approximately 84% (approximately 28 times Canadian fixed income market's global market weight.

In addition to the sampling issues noted above, Nexus uses analyst growth forecasts in its DCF cost of equity (Ke) estimates. As discussed in response N-M4-0-SEC-82, analyst estimates are known to be overly optimistic and will lead to invalid estimates of Ke when using DCF models. It is not possible for Dr. Cleary to determine exactly what long-term growth rates or dividend yields Nexus used in its DCF analysis, since it did not provide any details supporting its DCF Ke estimates (which are all based on using the Single-Stage DCF model). However, it is reasonable to assume that the long-term growth rates were over 6% annually, using Concentric's estimated dividend yield of 4.61% for its North American proxy group (which is heavily weighted in U.S. utilities, similar to Nexus's sample). In other words, for example, Nexus' Ke estimate of 10.92% = 4.61% (DY) + g, so g = 6.31%. Using an average future long-term growth rate (to infinity) of 6.31% (or even 5% for that matter), exceeds Concentric's estimate for North American GDP growth[2] of 3.99% by 2.32% (1.01%). As such these estimates (like Concentric's Constant-growth DCF estimates) should be rejected, for the reasons outlined in response N- M4-0-SEC-82.

Nexus' CAPM analysis to determine Ke estimates RF as the forecast U.S. Treasury bond yield on 30-year U.S. Government bonds promising a "2025 forecast" risk-free rate of return of 4.06%. Such an approach is flawed for three reasons. First, the appropriate risk-free rate to Canadian investors is the Canadian government bond yield. Second, as discussed in detail in Section 3.7 and in Appendix A of Exhibit M4, using actual prevailing yields provides statistically significantly better forecasts, than using forecast yields (which displayed a +0.40% upward estimate bias). Thirdly, in the CAPM, RF represents the actual existing risk-free asset that an investor can invest in today and earn the risk-free rate of return. It would not in fact be possible for a Canadian investor today to buy a 30-year Government of Canada bond promising a risk-free rate of return of 4.06% on U.S. Treasury forecast yields (i.e. Nexus' estimated RF), when available 30-year Canada bonds are trading at prices that provide a yield of 3.30%.

Nexus then proceeds to estimate the beta it uses in its CAPM analysis. Aside from Nexus' heavy reliance on higher risk U.S. utilities (which have higher beta estimates), Nexus also uses adjusted betas (which assumes utility betas gravitate towards one – which they don't) as opposed to using raw betas. Nexus does so in spite of the fact that there is strong evidence supporting the fact that utility betas do not gravitate towards one, as discussed in response N-M4-0-SEC-82.

Nexus' MRP estimates that it uses in its CAPM analysis are also flawed. Nexus totally disregards long-term historical MRPs, which it views as irrelevant. Instead, Nexus relies on its estimate of a forward-looking MRP of 8.83% using the single-stage DCF Model with an expected market dividend yield of 1.25% and an expected long-term growth rate (to infinity) of 11.49%, which translates into an expected market return of 12.89%. Nexus then subtracts its RF estimate of 4.06% to arrive at a forward-looking MRP estimate of 8.83%. This estimate relies on an unrealistic expected growth rate to infinity of 11.49%, which translates into a similarly unrealistic expected market return of 12.89%. This assumed growth rate assumes that the expected profits and dividends of North American utilities will grow (to infinity) at rates

[1] Source: https://www.finiki.org/wiki/Home_country_bias#cite_note-8, September 10, 2022.
[2] Reference is had to Concentric's GDP estimates since Nexus did not provide any.

that are almost triple forecasts of expected nominal GDP growth rates. Further, such a high predicted expected market return of 12.89% is completely inconsistent with the long-term average expectations of market professionals for expected market returns of **6.1%** for Canada and **6.8%** for the U.S., as provided in Table 7 of Exhibit M4. It is difficult to envision how finance professionals that are managing trillions of dollars could be so far off in their estimates. (i.e. 12.89 is 211% above 6.1% for Canada, and is 190% above 6.8% for the U.S.).

As a result of the sampling and growth estimation issues identified above, Dr. Cleary concludes that Nexus' CAPM estimates of Ke are upward biased and should not be relied upon.

The risk premium model used by Nexus is flawed by design, since it is based on the analysis of U.S. allowed ROEs, U.S. government bond yields and U.S. corporate bond yield spreads, as discussed in response N-M4-0-SEC-82.

ASSOCIATION OF MAJOR POWER CONSUMERS IN ONTARIO/INDUSTRIAL GAS USERS ASSOCIATION (Dr. Sean Cleary)

Answer to Interrogatory from School Energy Coalition (SEC)

Question:

Please provide a copy of the retainer agreement and any all the instructions provided to Dr. Cleary.

Response:

The retainer agreement is attached. Dr. Cleary received no other instructions, other than being asked to sign the “Acknowledgement of Expert’s Duty,” which is included as Attachment 2 to his evidence.

Contract terms

Sean Cleary

Start date : May 24th 2024
End date: March 31st, 2025
Scope of work: defined in schedule A below
Fixed Price Contract

- Total amount **$** [redacted] CAD corresponding to an hourly volume of **310 hours**

Fixed payments

- 2 milestones ([redacted]% each, CAD $ [redacted], plus HST)
- Final [redacted]% (CAD [redacted] plus HST) comes due upon completion and receipt of [redacted]
- A $ [redacted] allowance is provided to be used for research support
- Invoice format
  - The consultant's invoice should include the time and the amount of each task
  - The consultant should provide at the end of the 2nd milestone, a separate final invoice according to the OEB Cost Claim Form (schedule B)

Schedule A – Scope of work for Sean Cleary
OEB review of utilities' cost of capital

Tasks

Reviewing the evidence
Coordinate with IGUA and AMPCO
Preparing information requests
Review Interrogatory Responses
Preparing full outline of evidence
Provide full written evidence
Provide Interrogatories on evidence of other parties
Provide responses on interrogatories received
Review and comment on interrogatory responses form other parties

Milestone 1

Attendance at the Hearing
coordination with IGUA-AMPCO
completing all work required until the Hearing is concluded and the OEB has taken the matter under advisement.
Assisting with preparing the final argument

Milestone 2

Completion

upon receipt by IGUA of payment of its final cost claim. IGUA will assume all disallowances risks.

IGUA | ACIG

Schedule B – OEB Cost Claim Filing

CASE	COST CLAIM	INTERVENOR NAME	PARTICIPANT CLAIM STATUS
FILING PARTICIPANT	NEW PARTICIPANT	NON-FILING PARTICIPANT F. NAME	NON-FILING PARTICIPANT L. NAME
SERVICE PROVIDER TYPE	YEAR CALLED TO BAR	COMPLETED YEARS PRACTICING/YEARS OF RELEVANT EXPERIENCE	HOURLY RATE
CV STATUS (FOR CONSULTANT/ANALYST)	LAST CV DATE		HST RATE CHARGED 13.00
HEARINGS Yes	CONSULTATIONS No	DISBURSEMENTS No	

HEARINGS

Name	Hours	Hourly Rate	Sub Total	HST Rate	HST	Total
Review Application and Evidence						
Review Application and Evidence				13.00		
Discovery						
Preparation of Interrogatories				13.00		
Review Interrogatory Responses				13.00		
Technical Conference Preparation				13.00		
Technical Conference Attendance				13.00		
Technical Conference Follow Up				13.00		
Issues List						
Preparation				13.00		
Attendance at Issues Conference				13.00		
Intervenor Evidence						
Preparation				13.00		
Interrogatory Responses				13.00		
Preparation of Witness(es) for Attendance at Hearing				13.00		
Settlement Conference / ADR						
Preparation				13.00		
Attendance				13.00		
Preparation of Settlement Proposal				13.00		
Attendance at Presentation to Panel				13.00		
Oral Hearing						
Preparation				13.00		
Attendance at Oral Hearing				13.00		
Submissions						
Written Submissions				13.00		
Oral Submissions				13.00		
Attendance at Oral Submissions				13.00		
Other Attendance						
Other Attendance				13.00		
Communication						
With Client				13.00		
With Other Parties				13.00		
Motions						
Preparation of Motion(s) Materials				13.00		
Prepare Submissions on the Motion(s)				13.00		
Attendance at Hearing on Motion(s)				13.00		
Confidentiality						

Preparation of Application for Confidentiality	13.00
Prepare Submissions on Confidentiality	13.00
Attendance at Hearing on Confidentiality	13.00
Decision	
Review	13.00
Rate Order	
Review	13.00
Prepare Submission on Rate Order	13.00
Total Service Provider Fees	
Total Service Provider Fees:	

ASSOCIATION OF MAJOR POWER CONSUMERS IN ONTARIO/INDUSTRIAL GAS USERS ASSOCIATION (Dr. Sean Cleary)

Answer to Interrogatory from School Energy Coalition (SEC)

Reference:

[M4, p.117]

Question:

Does Dr. Clearly believe that utilities that are expected to have increased rate base growth and billing determinates growth are of lower risks then utilities with stagnant or declining rate base growth, and stagnant or even declining billing determinant growth, will have relatively lower business and financial risk.

Response:

Please refer to response N-M4-CCC-9.

ASSOCIATION OF MAJOR POWER CONSUMERS IN ONTARIO/INDUSTRIAL GAS USERS ASSOCIATION (Dr. Sean Cleary)

Answer to Interrogatory from School Energy Coalition (SEC)

Reference:

[M4, p.39,114]

Question:

Please provide Dr. Clearly's views on the impact to business and financial risk, ROE methodology peer groups, capital structure, and any other aspect of cost of capital, of electricity distribution, electricity transmitters, and OPG's regulated assets, of the following:

a. Utilities being eligible for various green and sustainable bond frameworks.

b. Utilities being considered attractive investments to meet various ESG, and/or sustainable investing goals.

Response:

a. & b. This reduces their risk, as it would make them more attractive to investors that are trying to integrate sustainable considerations into their investment decision-making processes.

ASSOCIATION OF MAJOR POWER CONSUMERS IN ONTARIO/INDUSTRIAL GAS USERS ASSOCIATION (Dr. Sean Cleary)

Answer to Interrogatory from School Energy Coalition (SEC)

Reference:

[EB-2022-0200, Settlement Proposal]

Question:

Dr. Clearly has reviewed Hydro One's proposed equity thickness. Please review Hydro One's most recent approved Custom IR settlement for its current 2023-2027 rate framework and provide its views on the impact to Hydro One's business and financial risk of the various utility specific Group 2 DVA accounts.

Response:

Dr. Cleary respectfully declines to take on the requested task, which would be very difficult within the time and budget provided to him in this matter and considering the extensive evidence filed, reviewed, and included in detailed responses to the large number of interrogatories provided, as well as the corollary need for Dr. Clearly to also ensure a full understanding of the various OEB deferral and variance accounts in issue in respect of the cited settlement agreement and their respective parameters in order to comprehensively address the question.

In general, the provision of risk protection through regulatory mechanisms such as deferral and variance accounts would lower a utility's business and financial risks.

ASSOCIATION OF MAJOR POWER CONSUMERS IN ONTARIO/INDUSTRIAL GAS USERS ASSOCIATION (Dr. Sean Cleary)

Answer to Interrogatory from School Energy Coalition (SEC)

Reference:

[M4, p.128]

Question:

Dr. Clearly recommends Hydro One's equity ratio be reduced to 38% and further reduced to 36% over the following 2 years. Please provide Dr. Clearly's view on the relative risk of Hydro One's transmission vs. distribution business. Please quantify the relative risks into specific equity ratios.

Response:

Dr. Cleary has not conducted such an analysis, but believes the risks are reasonably comparable.

ASSOCIATION OF MAJOR POWER CONSUMERS IN ONTARIO/INDUSTRIAL GAS USERS ASSOCIATION (Dr. Sean Cleary)

Answer to Interrogatory from Three Fires Group Inc. (TFG) And Minogi Corp. (Minogi)

Reference:

Evidence of Dr. Sean Cleary, "2024 Review of Cost of Capital Parameters and Deemed Capital Structure" (the "Cleary Report"), p. 17-18

Preamble:

The Cleary Report recommends maintaining existing OEB policy of not considering ownership structure in determining cost of capital parameters.

Questions:

a) Did Dr. Clearly consult with any Indigenous groups and/or First Nations in preparing the Cleary Report?

b) Given the varied ownership structures (including Indigenous partnerships), what specific considerations were made in the Cleary Report and/or Dr. Cleary's analysis for Indigenous groups and/or First Nations seeking to partner with utilities regarding the source of capital and developing recommendations for the cost of capital and capital structure methodologies?

c) Did Dr. Cleary consider the implications of different deemed equity ratios on utilities that include Indigenous groups and/or First Nations as equity partners compared to other utilities? If not, please identify and discuss possible implications and how the recommendations of the Cleary Report may mitigate or address any identified issues.

d) Are there adjustments to ownership structure and related OEB methodologies that can be made that would increase the likelihood of Indigenous groups and/or First Nations equity participation and, if so, what are they?

Responses:

a) Dr. Cleary did not do so.

b) Dr. Cleary recognizes these are important considerations, but given the broad scope of topics addressed during these proceedings, as well as the large number of induvial utilities that operate in Ontario, he focused his attention on the overall big picture for Ontario utilities in the typical sense of a "generic" cost of capital analysis.

c) Dr. Cleary did not do so, but he acknowledges such an analysis would be meaningful in many situations.

d) Dr. Cleary has not considered adjustments to current cost of capital “methodologies” that would increase the likelihood of Indigenous groups and/or First Nations equity participation. It would seem that such adjustments would best be made in consultations with the Indigenous and/or First Nations groups related to specific utilities, regions, and situations.

ASSOCIATION OF MAJOR POWER CONSUMERS IN ONTARIO/INDUSTRIAL GAS USERS ASSOCIATION (Dr. Sean Cleary)

Answer to Interrogatory from Three Fires Group Inc. (TFG) And Minogi Corp. (Minogi)

Reference:

Cleary Report, pp. 19-20, 114

Preamble:

The Cleary Report recommends maintaining the OEB's current policy of reviewing business and financial risk factors, including the following business risk categories: energy transition risk; volumetric risk; operational risk; regulatory risk; and, policy risk.

Questions:

a) What are the most likely early indicators that could occur in the near to medium term related to the energy transition that would cause you to reconsider and/or revisit your conclusions and recommendations in the Cleary Report?

b) In your opinion, should the cost of capital analysis incorporate the quality of a utility's efforts to address energy transition. If yes, how is this reflected in the Report's recommendations. If no, how would the Cleary Report's recommendation change if the quality of a utility's efforts to address energy transition was integrated into the cost of capital analysis.

c) How and to what extent should (i) effective or ineffective Indigenous engagement, (ii) Indigenous groups and/or First Nations participation and (iii) Indigenous groups and/or First Nations equity partnership in a project be considered to impact or affect risks? In your response, please discuss how this should or could be made part of a risk framework?

Responses:

a) Dr. Cleary does not have specific indicators in mind that he could list that would amount to a significant change in energy transition risk. The energy transition is moving at a relatively slow pace, and utility companies are integrating these considerations into their business planning and risk management processes. Any indications that there were significant and unexpected changes to the anticipated pace (either much faster or much slower than expected) of energy transition for Ontario and Canadian companies that the utilities could not have anticipated or planned for would represent a significant change in the transition risk faced by utilities.

b) A utility's quality of planning for the energy transition is an important consideration that should be considered in assessing the business risk of that utility. This would enable them to improve their risk profile to capital providers, while inadequate planning would lead to a decline in their risk profile. This consideration would be utility specific and Dr. Cleary has not undertaken such a review for the purposes of this generic cost of capital review proceeding.

c) Effective Indigenous engagement, participation by Indigenous groups and/or First Nations, and potential equity partnerships with Indigenous groups and/or First Nations should all serve important roles in minimizing the business and energy transition risks faced by utilities, and contributing to their future successes. A review of the opportunities for all three activities should be fully integrated into the decisions, business strategies and risk management processes of all utilities. The starting point for this process would be to develop comprehensive engagement practices to identify potential risks and opportunities, as well as to identify opportunities for partnerships and equity partnerships.

ASSOCIATION OF MAJOR POWER CONSUMERS IN ONTARIO/INDUSTRIAL GAS USERS ASSOCIATION (Dr. Sean Cleary)

Answer to Interrogatory from Three Fires Group Inc. (TFG) And Minogi Corp. (Minogi)

Reference:

Cleary Report, p. 57

Preamble:

The Cleary Report recommends maintaining the OEB's current policy with respect to the prescribed rate for CWIP.

Questions:

a) Did Dr. Cleary review the practice with respect to prescribed interest rate for CWIP in jurisdictions comparable to Ontario?

b) Do any comparable jurisdictions have prescribed rates of interest for CWIP that are based exclusively on indices of debt rates of interest, similarly to the existing OEB policy that relies on a specific debt interest rate index?

c) Which comparable jurisdictions currently rely on WACC calculations to set the prescribed rate of interest for CWIP accounts?

d) Did Dr. Cleary investigate the commercial logic, implied by the exclusive reliance on a debt rate interest index to set the prescribed rate of interest for CWIP, of assuming that all construction projects – regardless of size, complexity or longevity – will be 100% financed by debt, and will only be financed by equity investment after entering operation?

e) Did Dr. Cleary determine that it is practically feasible, in all cases regardless of the size and longevity of utility construction projects, to finance them during construction exclusively with debt capital?

f) Did Dr. Cleary consider the recent practice in Ontario among regulated utilities to invite the equity participation of Indigenous groups and/or First Nations into large capital projects, and how the prescribed interest rate for CWIP affects the viability and timing of such participation?

g) Did Dr. Cleary consult with any Indigenous groups and/or First Nations with respect to this issue?

Responses:

a), b) & c) Dr. Cleary did not conduct such a jurisdictional review.

d) Dr. Cleary's recommendation is to maintain the OEB's current policy, which he views as a reasonable compromise that recognizes that many construction projects are completed within a year (and likely primarily debt-financed), while recognizing that other projects are longer-term projects that may involve some portion of equity financing; albeit on average these projects will not be as long-lived as the long-term equity and debt costs that are estimated to be reflected in the WACC.

e) Dr. Cleary believes it is feasible to finance short- and medium-term projects entirely with debt, but acknowledges that longer-term projects would likely require equity financing.

f) Dr. Cleary did not consider this factor in his analysis.

g) Dr. Cleary did not engage in such consultations.

ASSOCIATION OF MAJOR POWER CONSUMERS IN ONTARIO/INDUSTRIAL GAS USERS ASSOCIATION (Dr. Sean Cleary)

Answer to Interrogatory from Vulnerable Energy Consumers Coalition (VECC)

Reference:

Exhibit M4, page 18

Preamble:

The Report states:

"*With respect to 1a), OEB's current practice of using actual debt rates in most cases considers the impacts of different funding sources, as noted by LEI. However, the deemed long-term debt rate (DLTDR) can be used as an estimate or a ceiling (if the actual rate is higher than DLTDR). This approach satisfies the FRS, is intuitive, and is easy to apply, and I agree with LEI that there is no need to make changes to this practice*."

Questions:

1.1 Based on Dr. Cleary's understanding, for all of the electric and natural gas utilities regulated by the OEB, is the DLTDR used as a ceiling in all instances where the actual rate is higher than the DLTRDR regardless of source of debt (e.g., affiliate vs. non-affiliate) and the nature of the debt (e.g., fixed vs. variable rate)?

1.1.1 If not, in those instances where the DLTDR is not used as a "ceiling", is it Dr. Cleary's recommendation that it should be used as a ceiling?

Responses:

That is Dr. Cleary's understanding.

If there are instances where it is not used as a ceiling Dr. Cleary advises it should be used as such.

ASSOCIATION OF MAJOR POWER CONSUMERS IN ONTARIO/INDUSTRIAL GAS USERS ASSOCIATION (Dr. Sean Cleary)

Answer to Interrogatory from Vulnerable Energy Consumers Coalition (VECC)

Reference:

Exhibit M4, page 21

Preamble:

The Report states:

"*This conclusion is supported by the ranking of regulatory support provided by S&P as of November 2023 (as included in Figure 47 on page 129 of LEI's evidence), which shows the OEB ranked as one of just jurisdictions (out of 60) that was ranked in the top category of "Most credit supportive (strong)," recognizing that of course other considerations play an important role in such a ranking*."

Questions:

2.1 Please provide S&P's ranking of Ontario in terms of regulatory support in 2009, when the OEB's decision following its last comprehensive cost of capital review (EB-2009-0084) of Ontario's regulated utilities.

2.2 Please provide S&P's ranking of Ontario in terms of regulatory support in 2016, when the OEB Staff's review of the OEB's cost of capital policy was issued.

Responses:

Dr. Cleary does not have access to the documents to confirm S&P's rankings in 2009 or in 2016.

ASSOCIATION OF MAJOR POWER CONSUMERS IN ONTARIO/INDUSTRIAL GAS USERS ASSOCIATION (Dr. Sean Cleary)

Answer to Interrogatory from Vulnerable Energy Consumers Coalition (VECC)

Reference:

Exhibit M4, pages 22 and 27

Preamble:

The Report states:

"*For electricity transmitters and distributors (T&D), the deemed short-term debt rate (DSTDR) is used to set short-term debt rates, while the short-term rates applied for natural gas distributors and OPG are based on these utilities' forecasts of short-term debt rates based on their actual debt portfolio. In addition, for electricity T&D, the DSTDR applies to 4% of their capital structure*." (page 22)

And

"*In addition, as mentioned previously, the OEB uses 4% as a proxy for the short-term debt component for electricity T&D, which it also uses for the unfunded portion of the capital structure for other utilities*." (page 27)

Questions:

3. With respect to the second reference, by other utilities, is Dr. Cleary referring to both OPG and Ontario's natural gas utilities?

3.1.1 If yes, does Dr. Cleary consider the use of the actual short-term rates for the unfunded portion of these utilities deemed debt structure to be appropriate?

3.1.2 If not, to what utilities is Dr. Clear referring and is the use of the actual short-term debt rate in such circumstances appropriate?

Responses:

The first quote referenced above is found on page numbered 20 of Reformatted and Refiled Exhibit M4, and the second quote referenced above is found on page numbered 26 of Reformatted and Refiled Exhibit M4.

Upon review, the two references do seem inconsistent.

To clarify, Dr. Cleary understands the OEB's practice to be that as reflected in the first of the two references, and believes that practice to be appropriate, including the setting of short term rates for OPG and Ontario's natural gas utilities based on these utilities' forecasts of short-term debt rates based on their actual debt portfolio.

ASSOCIATION OF MAJOR POWER CONSUMERS IN ONTARIO/INDUSTRIAL GAS USERS ASSOCIATION (Dr. Sean Cleary)

Answer to Interrogatory from Vulnerable Energy Consumers Coalition (VECC)

Reference:

Exhibit M4, page 22

Exhibit M1 (LEI's Report), pages 76 and 83

Preamble:

Exhibit M4 states:

"*LEI further recommends estimating the spread for an R-1 rated borrower to this rate based on a confidential survey of banks, which they recommend should be extended from the current sample of 6 to a larger sample of 6-10 banks. I am fine with this suggestion, assuming that it does not lead to including less reliable estimates (i.e., from the smaller banks) nor adds unnecessary complexity to the survey process*."

Exhibit M1 states:

"*The spread can continue to be determined based on the confidential survey of banks. However, LEI recommends considering a larger sample size (of at least 6-10 banks) for the survey to obtain CORRA-based spreads for R1-low rated entities (similar to OEB-regulated entities*)." (emphasis added)

Question:

4.1 At page 76 the LEI Report (footnote 184) describes three different R-1 ratings. Does Dr. Cleary agree with LEI's recommendation to use the CORRA-based spreads for R1-low rated entities?

Response:

Dr. Cleary agrees with the use of the R1-low rated spreads, if the CORRA is used as the base rate.

ASSOCIATION OF MAJOR POWER CONSUMERS IN ONTARIO/INDUSTRIAL GAS USERS ASSOCIATION (Dr. Sean Cleary)

Answer to Interrogatory from Vulnerable Energy Consumers Coalition (VECC)

Reference:

Exhibit M4, page 28

Preamble:

The Report states:

"*I agree with LEI's comments on page 100 of its evidence that support "continuation of the status-quo approach (consider deemed capital structure regardless of the actual capital structure*)"."

Question:

5.1 For electricity transmitters and distributors, in those instances where the actual long-term debt is less than the deemed long-term debt portion of the capital structure, what should be the basis for the rate applied to the unfunded portion of the deemed long-term debt?

Response:

The deemed long-term debt rate.

ASSOCIATION OF MAJOR POWER CONSUMERS IN ONTARIO/INDUSTRIAL GAS USERS ASSOCIATION (Dr. Sean Cleary)

Answer to Interrogatory from Vulnerable Energy Consumers Coalition (VECC)

Reference:

Exhibit M4, page 30

Preamble:

The Report states:

"*This time period also includes a period of extremely low interest rates (from 2009 until 2022), which is positive for utility stock returns, since they are generally high dividend-paying stocks. In addition, during the 2001-24 period, there were three periods of extreme market declines and uncertainty, due to the technology crash (2001-02), the financial crisis (2008-09) and COVID (2020), and during such periods utility stocks tend to perform better than the average stock in the market due to their low-risk nature (i.e., there is a flight to safety). As such, I agree with LEI's decision to not consider this Ke estimate (based on ERP analysis) in their final ROE estimate." (added for clarification*)"

Question:

6.1 Please confirm (or otherwise explain) that Dr. Cleary's agreement with LEI's decision not to use its ERP results is based on the time-period used by LEI in its analysis and not on issues/concerns regarding the ERP methodology in general.

Response:

Dr. Cleary's response is based on both the specific time period used, as well as his concerns with this overall approach. LEI's approach is entirely based on a short time period of historical data only. In addition, Dr. Cleary is not comfortable with the use of the BMO utilities index, which by nature would be comprised of a small number of primarily Canadian holding company utilities, some of which have significant exposure to international operations and unregulated businesses.

ASSOCIATION OF MAJOR POWER CONSUMERS IN ONTARIO/INDUSTRIAL GAS USERS ASSOCIATION (Dr. Sean Cleary)

Answer to Interrogatory from Vulnerable Energy Consumers Coalition (VECC)

Reference:

Exhibit M4, page 32

Preamble:

The Report states:

"*As a result of the sampling and growth estimation issues identified above, I conclude that LEI's DCF estimates of Ke are upward biased and should not be relied upon, which is in agreement with LEI's decision not to include these estimates in their final Ke estimate*."

Question:

7.1 Please confirm (or otherwise explain) that Dr. Cleary's agreement with LEI's decision not to use its DCF results is based on concern regarding the proxy companies and growth estimates used in LEI's DCF analysis and not on issues/concerns regarding the DCF methodology in general.

Response:

Confirmed. Dr. Cleary' concerns with LEI's DCF analysis are provided in greater detail in response N-M4-0-SEC-83.

ASSOCIATION OF MAJOR POWER CONSUMERS IN ONTARIO/INDUSTRIAL GAS USERS ASSOCIATION (Dr. Sean Cleary)

Answer to Interrogatory from Vulnerable Energy Consumers Coalition (VECC)

Reference:

Exhibit M4, page 36

Preamble:

The Report states:

"*Similar to my response regarding debt financing transaction costs provided in Section 3.8, I believe the current practice of adding 0.5% to Ke estimates seems reasonable, since it embeds the actual costs of equity financing related to new equity issues into the cost of equity, as they should be. The fact that most companies (utilities and other businesses alike) do not frequently engage in new equity issues does not detract from the fact that such issuing costs have a legitimate impact on their actual long-term equity financing costs when they do occur*."

Questions:

8.1 In Dr. Cleary's view is 0.5% a reasonable estimate as to the actual cost of equity financing?

8.2 For those Ontario-regulated utilities that do not issue common equity (e.g., where the equity is held by the municipality), why is appropriate to include in the ROE an allowance designed to compensate the equity holder for the costs associated with the sale of new issues of common equity?

Responses:

8.1 and 8.2: Please refer to response to N-M4-10-OEB Staff-69.

ASSOCIATION OF MAJOR POWER CONSUMERS IN ONTARIO/INDUSTRIAL GAS USERS ASSOCIATION (Dr. Sean Cleary)

Answer to Interrogatory from Vulnerable Energy Consumers Coalition (VECC)

Reference:

Exhibit M4, page 37

Preamble:

The Report states:

"*Section 5.1 of my evidence shows that since 2004, both RF and A-rated utility yields have declined markedly, while the allowed ROEs have declined much less so over this period. As a result, the spreads between allowed ROEs and these yields, both of which directly affect the utilities' cost of capital, have increased dramatically though the years. For example, in January 2004, the allowed ROE by the OEB was 9.88%, at a time when 30-year government yields (RF) were 5.3% and A-rated utility yields were 6.1%. So, the spread between the allowed ROE and RF was 4.57%, and between ROE and A yields was 3.78%. However, as of June 5, 2024, the allowed ROE was 0.67% lower than in 2004 at 9.21%, while RF was 2.0% lower at 3.30%, and A yields were 1.42% lower at 4.68%. As a result the ROE-RF spread was 1.34% higher than in 2004 at 5.91% (a 7 29% increase), while the ROE-A yield spread was 0.75% higher at 4.53% (a 20% increase). The average ROE-RF spread during the January 2004-June 2024 period was 6.03%12 and the average ROE-A-yield spread was 4.61%."*

Question:

9.1 Please provide a similar analysis comparing December 2009 (when the OEB's decision following its last major cost of capital review was issued) and June 2024.

Response:

As reflected in Section 5.1 of Exhibit M4, that since January 2010, both RF and A-rated utility yields have declined markedly, while the allowed ROEs have declined much less so over this period. As a result, the spreads between allowed ROEs and these yields, both of which directly affect the utilities' cost of capital, have increased dramatically though the years. For example, in January 2010, the allowed ROE by the OEB was 9.85%, at a time when 30-year government yields (RF) were 4.1% and A-rated utility yields were 5.6%. So, the spread between the allowed ROE and RF was 5.75%, and between ROE and A yields was 4.25%. However, as of June 5, 2024, the allowed ROE was 0.64% lower than in 2010 at 9.21%, while RF was 1.8% lower at 3.30%, and A yields were 0.92% lower at 4.68%. As a result the ROE-RF spread was 0.16% higher than in 2010 at 5.91% (a 2.8% increase), while the ROE-A yield spread was 0.28% higher at 4.53% (a 6.6% increase). The average ROE-RF spread during the January 2010-June 2024 period was 6.58% and the average ROE-A-yield spread was 5.10%.

ASSOCIATION OF MAJOR POWER CONSUMERS IN ONTARIO/INDUSTRIAL GAS USERS ASSOCIATION (Dr. Sean Cleary)

Answer to Interrogatory from Vulnerable Energy Consumers Coalition (VECC)

Reference:

Exhibit M4, page 45

Preamble:

The Report states:

"*I agree that this variable should continue to be included in the ROE formula; however, I recommend that this spread would be best determined using the actual spread as of September 30th, rather than using an average for the month (or for the previous 12 months). It is always preferable to use the most timely estimate of current capital market conditions as is feasible since this spread, like most capital market factors, can change through time. For example, while the average spread over the 2003-2024 period was 1.40% (as shown in Figure 3 of my evidence), it fluctuated from 0.76% to 3.05% over the period, and sat at 1.38% as of June 5, 2024. In particular, something(s) could have happened during the most recent month (or months) that could either ease (or elevate) bond investors' risk assessments, which would be reflected in lower (or higher) yield spreads, and hence spreads existing before this unexpected event (or events) would not be as representative as the prevailing spreads at the end of the month, which reflect the most recent capital market conditions*."

Question:

10.1 How would Dr. Cleary respond to the concern that reliance on spreads as of a particular date (e.g., September 30) could result in the spread that's used being unduly influenced by a short-term event that will not necessarily influence capital markets over the coming year?

Response:

In most cases such a one-time event would continue to be reflected in subsequent future yields and yield spreads, and would be preferable to using data from before the event happened. For example, if there was an indication of enhanced recessionary fears based on economic data released today, then spreads could widen from what they were yesterday (say from 1.4% to 1.6%) and over the previous 90 days (say around 1.4%). In such a case spreads would be more likely to hover around their new levels around 1.6%, and not decline to 1.4% again until such fears subside, and if the recessionary fears come to fruition, then it is likely they would remain closer to 1.6% (or even higher) than revert back to 1.4% - at least over the next year or so – over the long-term is a different situation.

ASSOCIATION OF MAJOR POWER CONSUMERS IN ONTARIO/INDUSTRIAL GAS USERS ASSOCIATION (Dr. Sean Cleary)

Answer to Interrogatory from Vulnerable Energy Consumers Coalition (VECC)

Reference:

Exhibit M4, page 46

Preamble:

The Report states:

"The data included in Attachment A was used to produce Table 6 of my evidence, which reports summary statistics for Canadian capital markets over the 1938 to 2023 period. Based on these 85 years of Canadian capital market observations, the correlation coefficient between Canadian stock returns and long Canada bond yields (i.e., RF) was +0.01 – very close to the CAPM predicted correlation of 0. Hence, it seems that any regression designed to predict the exact adjustment factors to be used for LCBF, and for UtilBond Spread, will not provide meaningful results. Therefore, I disagree with LEI's recommended adjustment factors – the existing adjustment factors of 0.5 would be preferable."

Questions:

11.1 Please explain more fully why "any regression designed to predict the exact adjustment factors to be used for LCBF, and for UtilBond Spread, will not provide meaningful results".

11.2 Given the correlation results cited in the Report, why is it reasonable for the OEB to adopt a formula for annually adjusting the allowed ROE that relies on the LCBF and the UtilBond Spread?

Responses:

1. The OEB formula is designed to estimate the long-term required return on equity (Ke) for Ontario utilities. This cost of equity is not observable in practice. Using allowed ROEs in the U.S. as a proxy is uninformative. Using actual stock market returns that occur in a given year is also not informative. For example, the return on Canadian stocks during 2022 was -5.8%. It is not reasonable to assume that since returns were negative during 2022 that the long-term required rate of return on Canadian stocks for 2022 was -5.8%, which is simply not logical.

2. Both LCBF and Utility yield spreads are meaningful considerations into estimating the long-term required return (Ke) for utilities (and for any company for that matter). As discussed in Dr. Cleary's evidence, the two most commonly used approaches in practice for estimating Ke are the CAPM or the BYPRP approach (the version included in Dr. Cleary's evidence). When using the CAPM, analysts (or investors) require an estimate of the risk-free rate (RF), which represents the actual existing risk-free asset that an

investor can invest in today (without any risk) and earn the risk-free rate of return – this is equivalent to the LCBF term included in the OEB formula. If an analyst (or investor) used the BYPRP approach (i.e., Ke = existing company bond yield + company risk premium), the yield an investor could obtain by investing the company's bonds today would equal the current market-determined yield on the bonds. Since the company bond yield can be decomposed into LCBF + Utility Spread, this indicates the relevance of the second term in the OEB formula, which is intuitive anyways since a utility's cost of debt affects its cost of capital.

ASSOCIATION OF MAJOR POWER CONSUMERS IN ONTARIO/INDUSTRIAL GAS USERS ASSOCIATION (Dr. Sean Cleary)

Answer to Interrogatory from Vulnerable Energy Consumers Coalition (VECC)

Reference:

Exhibit M4, page 51

Exhibit M1 (LEI Report), page 119

Preamble:

Exhibit M4 states:

"*I concur with LEI's position that the OEB's current practice of setting a uniform ROE and adjusting the capital thickness if it determines upon application that there has been a meaningful change in business/financial risks is appropriate, which is consistent with current practice in many other jurisdictions*."

In Exhibit M1 LEI calculates its recommended ROE using the CAPM and a weighted average beta value based on the beta estimates for electricity transmission and distribution; electricity generation and natural gas distribution.

Question:

12.1 To the extent the average uniform ROE adopted by the OEB differs from that determined (using the same methodologies and approach) to be applicable to specific segments of Ontario-regulated utilities (e.g., electricity transmission & distribution, electricity generation and nature gas distribution) should the capital structure approved for each segment be adjusted to recognize these differences?

Response:

Dr. Cleary supports setting a uniform ROE and adjusting equity to thicknesses as appropriate to adjust for different risks across segments and across utilities.

ASSOCIATION OF MAJOR POWER CONSUMERS IN ONTARIO/INDUSTRIAL GAS USERS ASSOCIATION (Dr. Sean Cleary)

Answer to Interrogatory from Vulnerable Energy Consumers Coalition (VECC)

Reference:

Exhibit M4, page 52

Preamble:

The Report states:

"*My recommendation, which is consistent with that of LEI, is:*

14) The OEB's current practice of continuous monitoring through the review of quarterly reports adds value and should be retained."

Questions:

13.1 Has Dr. Cleary reviewed any of the quarterly reports prepared by the OEB?

13.1.1 If yes, are the items being monitored and reported on adequate for purpose of determining the reasonableness of existing cost of capital parameters and, if not, what else should be monitored/reported on?

13.1.2 If not, please provide Dr. Cleary's views as to what specific items/issues such a quarterly report should be monitoring and reporting on.

Response:

Dr. Cleary has not reviewed any of the quarterly reports. His understanding of the information included in these reports is based upon LEI's statements on page 145 of its evidence, which state:

- first, the quarterly reports use updated data to recalculate the cost of capital parameters, which are then compared to the values published as part of the OEB's annual cost of capital updates; and

- simultaneously, the quarterly reports incorporate a review of the current macroeconomic outlook on a global, North American, and provincial scale, including key macroeconomic developments that have unfolded in the previous quarter.

Such an approach, including the topics for review described in the in the two bullets above, seems appropriate.

ASSOCIATION OF MAJOR POWER CONSUMERS IN ONTARIO/INDUSTRIAL GAS USERS ASSOCIATION (Dr. Sean Cleary)

Answer to Interrogatory from Vulnerable Energy Consumers Coalition (VECC)

Reference:

Exhibit M4, page 53

OEB Letter, 2024 Cost of Capital Parameters. October 31, 2023

Preamble:

The Report states:

"*My recommendation, which is consistent with that of LEI, is:*

15) - The OEB retain its current annual review practice.

- The current annual review process can be supplemented by adding annual reporting requirements for utilities to provide credit ratings, as well as details regarding new short-term and long-term debt and equity issued/borrowed during the year."

14.1 The OEB's 2024 Cost of Capital Parameters letter states:

"*The OEB considers the cost of capital parameter values shown in the above table, and the relationships between them, to be reasonable and representative of market conditions at this time. For this reason, the OEB concludes that the numerical results from the formulaic methodologies meet the Fair Return Standard.*

The OEB monitors macroeconomic conditions and may issue updated parameters if economic conditions materially change."

Question:

In his recommendation, Dr. Cleary identified an additional item to be reported by utilities and to be considered by the OEB it its annual review. Apart from the additional item identified in Dr. Cleary's recommendation, in Dr. Cleary's view, what are the other factors and relationships that the OEB should be considering annually in order to determine if the ROE formula is producing results that are reasonable and representative of market conditions?

Response:

Dr. Cleary supported LEI's recommendation to include details regarding readily available debt ratings and details regarding debt issues during the year, since this information should be readily available, and is useful market-based information. The other factors that the OEB should continue to monitor are changes in its formula parameters (which are market-based factors), as well as the traditional macroeconomic factors that would be included in such a review.

ASSOCIATION OF MAJOR POWER CONSUMERS IN ONTARIO/INDUSTRIAL GAS USERS ASSOCIATION (Dr. Sean Cleary)

Answer to Interrogatory from Vulnerable Energy Consumers Coalition (VECC)

Reference:

Exhibit M4, page 55

Preamble:

The Report states:

"*In particular, if the Canadian A-rated utility yield spreads exceed 2%, I recommend an immediate and thorough assessment of existing capital market conditions. This could lead to a full regulatory review, depending on the results of this assessment. This is because, a spread greater than 2% would be indicative of a period of extreme uncertainty in Canadian capital markets. For example, over the January 2003-June 5, 2024 period, the average A-rated yield spread was 1.40%, with a minimum of 0.76% and with a maximum of 3.05% during December 2008, which was at the height of the financial crisis. However, for the most part, these spreads fluctuated but did not approach such high levels again. In fact, the 96th percentile for the spread over this period was 2.00%*."

Question:

15.1 Would there also be a need for an immediate and thorough assessment of existing capital market conditions if the Canadian A-rated utility yield spreads fell below a certain value (e.g., the 5th percentile for the spread over the cited period)? If not, why not?

Response:

Dr. Cleary does not believe it would be necessary to do so if this spread fell below the 5th percentile (0.88%), since low spreads would tend to occur during periods of low-risk perceptions in capital markets.

ASSOCIATION OF MAJOR POWER CONSUMERS IN ONTARIO/INDUSTRIAL GAS USERS ASSOCIATION (Dr. Sean Cleary)

Answer to Interrogatory from Vulnerable Energy Consumers Coalition (VECC)

Reference:

Exhibit M4, page 57

Preamble:

The Report states:

"*Currently, the OEB sets the prescribed interest rate for CWIP equal to the FTSE Canada (formerly DEX) Mid Term Bond Index All Corporate yield, which it applies to all projects under construction, regardless of duration of the construction period. I support continuing this policy, as does LEI*."

Question:

16.1 What is Dr. Cleary's rationale for supporting the OEB's current policy for setting the prescribed interest rate for CWIP?

Response:

Please refer to response N-M4-20-TFG/Minogi-8(d).

ASSOCIATION OF MAJOR POWER CONSUMERS IN ONTARIO/INDUSTRIAL GAS USERS ASSOCIATION (Dr. Sean Cleary)

Answer to Interrogatory from Vulnerable Energy Consumers Coalition (VECC)

Reference:

Exhibit M4, page 58

Preamble:

The Report states:

"*The prescribed interest rate for DVAs should be revised to align with the recommended DSTDR methodology by using CORRA as the base rate instead of the BA Rate, where the base CORRA rate is estimated as the average of 3-month CORRA futures rates over the next 12 months, and the spread added to it is determined by sampling 6-10 banks to determine the appropriate R1-low rated utility spread*."

Question:

17.1 What is Dr. Cleary's rationale for supporting the use of a short-term interest rate (i.e., using CORRA as the base rate and adjusting by the R1-low rated utility spread) for purposes of determining the prescribed interest rate for DVAs?

Response:

It is consistent with current practice and recognizes the short-term nature of DVAs.

ASSOCIATION OF MAJOR POWER CONSUMERS IN ONTARIO/INDUSTRIAL GAS USERS ASSOCIATION (Dr. Sean Cleary)

Answer to Interrogatory from Vulnerable Energy Consumers Coalition (VECC)

Reference:

Exhibit M4, page 77

Preamble:

The Report states:

"*This study provides evidence "demonstrating empirically that allowed returns on equity diverge significantly and systematically from the predictions of accepted asset pricing methodologies in finance." A large part of this can be explained by the fact that allowed ROEs "tend to exhibit considerable stickiness around focal 'odometer' points." Consistent with the evidence for Ontario and Alberta discussed above, the authors note that "awarded ROE spreads over risk free treasuries have progressively widened significantly since 2005, even though systematic risk in the utilities industry has fallen continuously during the same time period*." (emphasis added)

Question:

18.1 Does Dr. Cleary agree that "systematic risk in the utilities industry has fallen continuously during the same time period" and, if so, what evidence does Dr. Cleary have that this is the case.

Response:

Dr. Cleary can neither support or refute this statement, which is a quote that he referenced from an extensive study of U.S. utilities.

ASSOCIATION OF MAJOR POWER CONSUMERS IN ONTARIO/INDUSTRIAL GAS USERS ASSOCIATION (Dr. Sean Cleary)

Answer to Interrogatory from Vulnerable Energy Consumers Coalition (VECC)

Reference:

Exhibit M4, page 90 and Appendix C, pages 130-135

Exhibit M1 (LEI Report), page 117

Preamble:

Exhibit M4 states (page 90):

"*Canadian utility beta estimates have averaged somewhere between 0.20 and 0.40 – with 0.35 representing the best estimate*."

Exhibit M1 states:

"*LEI finds that un-levering the raw betas with the operating leverage of peer companies and re-levering the average un-levered beta with deemed operating leverage allowed by the OEB provides for a prudent estimate of beta*."

Questions:

19.1 Please identify the Canadian utilities used in: i) Figure 6 (pages 130-131) and ii) Charts 20 & 21 (pages 132-133).

19.2 In Figure 6 and Charts 20 & 21, were the betas used for each company the actual company betas or were they unlevered and then re-levered (per description on page 135) to a common capital structure?

19.2.1 If the actual company betas were used what was the range of equity thickness for the various companies used in Figure 6 and Charts 20 & 21?

19.2.2 If the betas were "unlevered" and "re-levered" to a common equity thickness, what was the equity thickness used.

19.3 In Dr. Cleary's view, is it appropriate to unlever and re-lever the actual betas for each company (as done by LEI) in order to calculate the value for beta to be used in the CAPM?

Responses:

1. Dr. Cleary cannot say with certainty which utilities were used, as it was part of evidence filed by other experts during previous Alberta GCOC proceedings, but he will note that according to the excel file (filed by Dr. Booth) that the Canadian utilities that were included in the averages presented in Panel A of Figure 6 were referenced as following in that spreadsheet: CUL, Fortis, PNG, TRP and

TAU. As noted in Panel B of Figure 6, the beta estimates depicted in this panel were for TSX utility sub-industry index, and Dr. Cleary does not know which utilities were included in this index in any given year.

According to Mr. Hevert's 2018 Alberta GCOC evidence, the Canadian utilities used to construct Chart 20 and 21, are as copied below from Figure 2 of Mr Hevert's evidence:

Table 2: Canadian Utility Proxy Group Screening Results

Company	Ticker
ATCO Limited	ACO.X
Algonquin Power & Utilities Corp.	AQN.TO
Canadian Utilities, Ltd.	CU.TO
Emera Inc.	EMA.TO
Fortis, Inc.	FTS.TO
Hydro One Limited	H.TO

2. Dr. Cleary cannot answer these questions as the charts were based on Mr. Hevert's evidence, however Dr. Cleary does not believe that Mr. Hevert unlevered and then relevered the beta estimates.

3. Dr. Cleary does not disagree with LEI's decision to do so, but Dr. Cleary does not do so himself, nor do the other experts during these (and most other) proceedings. Dr Cleary does not do so since his beta estimates rely on Canadian utilities and also long-term historical beta estimates, so he believes there is not sufficient additional value added from unlevering and relevering the beta estimates of Canadian holding company utilities.

ASSOCIATION OF MAJOR POWER CONSUMERS IN ONTARIO/INDUSTRIAL GAS USERS ASSOCIATION (Dr. Sean Cleary)

Answer to Interrogatory from Vulnerable Energy Consumers Coalition (VECC)

Reference:

Exhibit M4, pages 36 and 95

Preamble:

The Report states:

"*Similar to my response regarding debt financing transaction costs provided in Section 3.8, I believe the current practice of adding 0.5% to Ke estimates seems reasonable, since it embeds the actual costs of equity financing related to new equity issues into the cost of equity, as they should be*." (page 36)

And

"*Finally, I add 50 bp for financial flexibility (or flotation costs), consistent with previous OEB practice, and consistent with long-term estimates*." (page 95)

Questions:

20.1 Is financial flexibility the same as flotation costs?

20.1.1 If not, please explain the difference and how the 50 bp accounts for both.

Responses:

Yes. Financial flexibility is equivalent to flotation costs.

ASSOCIATION OF MAJOR POWER CONSUMERS IN ONTARIO/INDUSTRIAL GAS USERS ASSOCIATION (Dr. Sean Cleary)

Answer to Interrogatory from Vulnerable Energy Consumers Coalition (VECC)

Reference:

Exhibit M4, pages 96-97

Exhibit M2 (Concentric Report), pages 57-58

Preamble:

The Report uses the following formula to calculate the required return using the single-stage DCF Model:

$$K_e = (D_0/Price)\times(1 + g) + g$$

The Concentric Report uses a different formula:

$$K_e = (D_0/Price)\times(1 +0.5 \times g) + g$$

Question:

21.1 Please comment on the two approaches and why Dr. Cleary considers his approach to be more appropriate.

Response:

Dr. Cleary's formulation is the correct version. Ke is derived by solving for Ke from the following fundamental finance valuation equation (that is included in virtually every finance textbook and CFA curriculum, etc.) commonly known as the single-stage dividend discount model (DDM), or Gordon model.

Price = D0 (1 +g) / (Ke – g)

Dr. Cleary has seen Concentric use the version of the DDM formula referenced in the question before but has never seen Concentric provide justification for it nor has he ever seen anyone else ever use that version of the formula.

ASSOCIATION OF MAJOR POWER CONSUMERS IN ONTARIO/INDUSTRIAL GAS USERS ASSOCIATION (Dr. Sean Cleary)

Answer to Interrogatory from Vulnerable Energy Consumers Coalition (VECC)

Reference:

Exhibit M4, pages 81 and 97

Preamble:

The Report states:

"*Table 1 showed that real GDP growth has averaged 2.3% over the 1992 to 2022 period, which provides one potential estimate of long-term growth that could be used in the single-stage model, since one might expect long-term growth for the overall market to gravitate towards this figure*." (page 97)

Question:

22.1 Please explain why a 30 year period is used as opposed to a longer historical period such as those in Table 7 (page 81).

Response:

As mentioned in Dr. Cleary's evidence, the period since 1992 reflects (with a one-year lag) the period after the Bank of Canada introduced its current 2% inflation target.

ASSOCIATION OF MAJOR POWER CONSUMERS IN ONTARIO/INDUSTRIAL GAS USERS ASSOCIATION (Dr. Sean Cleary)

Answer to Interrogatory from Vulnerable Energy Consumers Coalition (VECC)

Reference:

Exhibit M4, page 97

Preamble:

The Report states:

"*The dividend yield for the S&P/TSX Composite Index as of December 31, 2023 was 3.19%. This is the "lagged" dividend yield (i.e., D_0/Price) since it is estimated using dividends over the most recent 12-month period*."

Questions:

23.1 What was the basis for the stock price used in the calculation (e.g., was it the stock price as of December 31, 2023 or the average stock price over the 12 months ending December 31. 2023)?

23.1.1 Please explain why the approach used is appropriate.

23.2 Why was December 31, 2023 selected as the reference point as opposed to a more current date?

Response:

This data was obtained from Bloomberg. To the best of Dr. Cleary's understanding, and which is consistent with standard finance practice, the "stock price" would have been represented by the value of the TSX Index as of December 31, 2023 – i.e. the most recent value (or price), which is the basis on which dividend yields are almost always reported in practice.

Dr. Cleary prepared his evidence in early June and the data for December 31, 2023 was readily available at that time. Dr. Cleary used this information to estimate the required return on the market using the DCF so that he could compare it to the required return for his Canadian utility sample. Since he used data for the utilities up to then end of 2023 (i.e., since 2024 annual data will not be available until March or April of 2025) to estimate his inputs into the DCF model (i.e., dividends, ROE, dividend yield, etc.), it was logical and consistent to use December 31, 2023 data for the market in his market DCF estimates as well.

ASSOCIATION OF MAJOR POWER CONSUMERS IN ONTARIO/INDUSTRIAL GAS USERS ASSOCIATION (Dr. Sean Cleary)

Answer to Interrogatory from Vulnerable Energy Consumers Coalition (VECC)

Reference:

Exhibit M4, pages 105-107

Exhibit M1 (LEI Report), pages 113-114

Exhibit M2 (Concentric Report), pages 74-79

Question:

24.1 LEI and Concentric both appear to use a different approach for the ERP method than Dr. Cleary and, indeed, the approaches used by LEI and Concentric are themselves different. Please comment on the differences between Dr. Cleary's ERP analysis and that of LEI and Concentric and provide Dr. Cleary's view on the appropriateness of each.

Response:

Please refer to response N-M4-10-CME-3.