



uniongas

A Spectra Energy Company

October 30, 2009

Ontario Energy Board
2300 Yonge Street
Suite 2700
Toronto, Ontario
M4P 1E4

Attention: Ms. Kirsten Walli, Board Secretary

**Re: EB-2009-0084 – Consultation on Cost of Capital – Written Submissions of
Union Gas Limited**

Dear Ms. Walli:

Please find attached Union's Written Submissions on Cost of Capital.

Yours truly,

[Original signed by]

Chris Ripley
Manager, Regulatory Applications

cc: Michael Penny (Torys)

ONTARIO ENERGY BOARD

**CONSULTATION ON COST OF CAPITAL:
WRITTEN SUBMISSIONS OF
UNION GAS LIMITED**

Dated: October 30, 2009

1. Overview

In Union's submission, there is overwhelming evidence that the OEB's ROE formula is not working and that it is not producing a fair return on equity. The problems with the formula, although highlighted by the financial crisis, were not caused by the financial crisis. Chief among these problems is the adjustment factor, which all the evidence suggests has been mis-specified from the outset and has materially overstated the impact of declining long Canada bond rates on the cost of equity since the formula's inception. The problems with the formula-based approach to return on equity have now been recognized in two landmark decisions of the National Energy Board in 2009. In the most recent of these decisions, the NEB has suspended the use of the formula-based approach to ROE altogether.

In Union's submission immediate action is required in order for the OEB to fulfill its legal obligation to apply the fair return standard and thereby provide utilities with the opportunity to earn a fair return. By whatever additional process, if any, the OEB deems necessary, ROEs should be increased by 200 basis points, to the level of returns available to similar U.S. utilities of comparable risk. The annual adjustment factor should be changed to 50% of the year over year change in investment grade utility bonds. Equity ratios should be increased to the level of equity embedded in the deemed capital structures of U.S. utilities of comparable risk on a case by case basis, as Ontario utilities apply for new rates in the ordinary course.

2. Fair Return Standard

The Ontario Energy Board ("OEB"), under sections 36, 78 and 78.1 of the *Ontario Energy Board Act, 1998* ("Act"), is required to determine rates which are "just and reasonable." It is well established that an essential component of just and reasonable rates is the requirement to set rates at a level that permits a utility to earn a fair return on invested capital. Mr. Justice Lamont of the Supreme Court of Canada defined a fair return as follows:

"By a fair return is meant that the company will be allowed as large a return on the capital invested in its enterprise (which will be net to the company) as it would receive if it were investing the same amount in other securities possessing an attractiveness, stability and certainty equal to that of the company's enterprise."¹

The Supreme Court of Canada reaffirmed this definition in 1960.² Mr. Justice Locke concluded that "the [return] must be sufficient to enable it to pay reasonable dividends and attract capital...". He also concluded that "the obligation to approve rates which will give a fair and reasonable return is absolute".³

The absolute nature of the obligation to apply the fair return standard was also endorsed by the Federal Court of Appeal. In *TransCanada Pipelines Ltd. v. National Energy Board*, the Court agreed that the "absolute" nature of the obligation to approve rates that will enable the company

¹ *Northwestern Utilities Ltd. v. Edmonton (City)*, [1929] S.C.R. 186 at 193.

² *British Columbia Electric Railway Co. Ltd. v. British Columbia (Utilities Commission)*, [1960] S.C.R. 837 at 854.

³ *Ibid*; see also *Union Gas Ltd. v. Ontario (Energy Board)* (1983), 1 D.L.R. (4th) 698 at 711 and *Hemlock Valley Electrical Services Ltd. v. British Columbia (Utilities Commission)* (1992), 66 B.C.L.R. (2d) 1 (B.C.C.A.).

to earn a fair return means that the required return must be determined solely on the basis of the company's cost of equity and is not influenced by any resulting rate impact on customers.⁴

The legal requirement to apply the fair return standard has also been recognized by the OEB and the Ontario Courts. For example in EB-2005-0421 (Toronto Hydro), the OEB noted that "as a matter of law, utilities are entitled to earn a rate-of-return that not only enables them to attract capital on reasonable terms but is comparable to the return granted other utilities with a similar risk profile" (April 12, 2006, pages 32 to 33).

The Supreme Court of the United States has also adopted the fair return standard. Rates that are not sufficient to yield a reasonable return on the value of a utility's property used to provide service are unjust, unreasonable, and confiscatory. The return must correspond to the return to other businesses of similar risk, be sufficient to assure confidence in the financial integrity of the utility and be adequate to support its credit and enable it to raise money for the conduct of its business.

The fair return standard, therefore, must meet three requirements:

1. comparable returns;
2. financial integrity; and,
3. capital attraction.

3. 1997 Draft Guidelines

In the Compendium to Draft Guidelines on Formula Based Return on Common Equity for Regulated Utilities, March, 1997, the OEB noted that there were a number of potential disadvantages to using a formula based ROE mechanism. The OEB said:

"Establishing the initial parameters of the generic formula (as implied in the initial ROE and the subsequent adjustment mechanism) will have a profound influence on the potential success or failure of the process. Over time these parameters and adjustment factors will have a cumulative or compounding effect on the results of the formulaic ROE mechanism. The use of an inappropriate initial ROE will either inflate or understate subsequent rate determinations. A second consideration which must be dealt with is that a formula ROE generally relies predominately on the equity risk premium method to the exclusion of other methods and, hence, sacrifices the unique contributions of these other approaches."⁵

As noted by Concentric Energy Advisors, at page 15 of their June, 2007 report⁶, the OEB's initial reservations about an ROE formula were well founded. There is now overwhelming

⁴ 2004 FCA at para. 36; see also *Hemlock Valley, supra*.

⁵ Draft Guidelines on a Formula-Based Return on Common Equity for Regulated Utilities, March, 1997, p. 7.

⁶ A Comparative Analysis of Return on Equity of Natural Gas Utilities, Concentric Energy Advisory, June 14, 2007.

evidence that the formula based ROE mechanism does not produce returns which meet the fair return standard.

4. Growing Concerns Over the Formula

Doubts about the results of the OEB's ROE formula have been raised for a number of years. Union and Enbridge raised serious concerns about the returns being generated by the formula as early as 2003. At the time, the draft formula was generating a 9.71% ROE for Enbridge and a 9.86% ROE for Union. Particular emphasis was placed by the two utilities on a growing disparity between formula returns and returns allowed to U.S. utilities. The Board, however, was not prepared to change or suspend the formula at that time. The Board noted that "there are many reasons why ROE *may* differ from one jurisdiction to another in North America" [emphasis added]. The Board concluded that:

"There was no evidence that would allow the Board to make a meaningful comparison of these factors, including the relative riskiness of Canadian and American utilities, in order to understand the difference in ROE between American and Canadian utilities."⁷

The Board in this Decision also confirmed that:

"The ROE Guidelines are not binding and that it is always open to a party to propose a new approach."⁸

TransCanada and other regulated natural gas utilities across Canada also raised similar concerns from time to time, without success.

The issue did not and could not disappear however. An April 2005 report by A. J. Goulding of London Economics, prepared for the independent Power Producers Society of Alberta entitled "Paying the Full Cost of Power," assumed an equity level of 45% and an 11.5% ROE in its pricing analysis because these were the "norm" for *North American utilities*.

Dramatic evidence of concern around the growing disparity between U.S. and Canadian utility returns was evident in the December 7, 2006 BMO Capital Markets report on Pipelines/Gas & Electric Utilities.⁹ In this pointed report, it was noted that allowed ROEs had "reached unprecedented lows" as a result of a "precipitous drop" in the implied forecast 30-year bond yields. The BMO report opined that:

"We believe on a collective basis, that the allowed returns as established by the formulas highlighted above are confiscatory and likely violate the Fair Return Standard."¹⁰

⁷ RP-2002-0158/EB-2002-0484, Decision and Order, January 16, 2004, para. 122.

⁸ Ibid, p. 114.

⁹ BMO Capital Markets, Pipelines/Gas & Electric Utilities, December 7, 2008.

¹⁰ Ibid, p. 5.

The BMO report went on to state:

“We believe that regulators have consistently refused to give weight to a number of arguments that would result in higher allowed returns, solely on the basis that to do so would result in higher customer rates.”¹¹

These “arguments” included:

- North American capital markets are increasingly integrated and investors have the ability to invest in utility assets both north and south of the border;
- there is merit in incorporating U.S. market metrics into the analysis for Canadian returns;
- the returns on comparable investments with similar risks in Canada and the U.S. should be considered;
- the allowed return on equity and deemed equity must satisfy all aspects of the fair returned standard and no part of the standard has priority; and,
- continued reliance on a derived 30-year Government of Canada bond yield may not be a relevant proxy for the risk-free rate.

Many of these issues were further developed in a discussion paper by the Canadian Gas Association issued in May 2007.¹² That report noted that natural gas utilities were finding it increasingly difficult to keep pace with the investment needs of the future. The CGA report observed that, at the same time that ROE was steadily declining, the age of the Canadian utility infrastructure was steadily increasing. “History shows,” the report said “that if the warning signs of underinvestment in basic infrastructure go unheeded, the consequences for society can be swift and very serious. . . natural gas utilities, like electricity and water utilities, must remain functionally and financially superior to ensure customers are not left without options.” The CGA report noted that in the early 1990s, when the formula was first introduced, allowed returns in Canada matched those of natural gas utilities in the U.S. Since the advent of the formula, however, Canadian gas utilities have seen their allowed returns drop 100 to 170 basis points below those of their U.S. peers. The CGA report was critical of the exclusive reliance on an adjustment mechanism that leaves significant changes in comparable returns, business and financial risks and capital markets unaccounted for. The CGA report noted, for example, that the Government of Canada bond market, which is the basis of the automatic adjustment, had been affected by a marked move from annual government deficits to annual government surpluses. This resulted in a decline in the supply of Canadian long bonds, an increase in their price and a decline in their return. This, in turn, led to an automatic decline in allowed returns for Canadian natural gas utilities that was entirely disconnected from their risk profile. The report ended with a call to Canadian policy makers and utility regulators to give early and serious consideration to:

¹¹ Ibid, p. 5.

¹² Canadian Gas Association, Return on Equity: Allowed Returns For Canadian Gas Utilities, May 2007.

1. the necessity of a long-term low-cost optimal natural gas delivery infrastructure;
2. eliminating the formula induced deficit between allowed returns for the utilities in Canada and those of comparable American utilities;
3. providing appropriate capital market signals to investors by allowing returns commensurate with comparable investments; and,
4. convening an immediate review of the generic formula approach and its failure to meet the requirements of the fair return standard.

Shortly thereafter, the OEB retained Concentric Energy Advisors to investigate the natural gas utilities' position that the ROE awards in Ontario were lower than those of surrounding jurisdictions. The OEB asked Concentric to prepare a report that provided a comparison of awarded ROEs in other jurisdictions, including an analysis of the forces contributing to any differences. The 2007 Concentric report¹³ observed a gap between allowed ROEs for Ontario gas distribution companies and U.S. gas utilities that had developed over the last ten years coincident with the implementation of the Draft Guidelines. By then, the ROE differential between Canada and the U.S. was in the range of 1.50% to 2.00%. This report observed that prior to the Draft Guidelines coming into force, ROEs between the U.S. and Canada were in approximate parity. The report found "no apparent fundamental differences between gas utilities in Ontario and those of the U.S. that would cause the sizable gap in ROEs. In other words, taken as a whole, U.S. gas utilities are not demonstrably riskier than Canadian gas utilities."

In August 2007, the Ontario Energy Association ("OEA") published a final discussion paper arising out of a seminar and dialogue on ROE which it sponsored on June 19. The OEA report¹⁴ noted the opinion of independent experts to the effect that, for several consecutive years, the average authorized rate of return on equity for natural gas utilities in Ontario had been 150 to 200 basis points lower than for regulated natural gas utilities in the U.S. The OEA noted that maintaining financial parity was important because failing to do so "could undermine Ontario's ability to attract the capital necessary to replace an aging energy infrastructure and meet the demands for expansion." In conclusion, the OEA agreed with the conclusions of the CGA and called on the OEB to:

- eliminate the deficit in allowed returns;
- convene a review of the equity risk premium or formula approach; and,
- ensure that the formula approach includes direct consideration of returns from comparable utility and low risk enterprises.

This was followed shortly thereafter by an independent study conducted by National Economic Research Associates, Inc. ("NERA"), released February 29, 2008. This report, entitled "Allowed

¹³ A Comparative Analysis of Return on Equity of Natural Gas Utilities, Concentric Energy Advisory, June 14, 2007.

¹⁴ Return on Equity (ROE) Seminar and Dialogue, Final Discussion Paper, June 19, 2007.

Return on Equity in Canada and the United States,” was commissioned to analyze, among other things, the root causes of the disparity between Canadian and U.S. ROEs.¹⁵ As stated in the report:

“Since the “appropriate” level of ROE is driven by the risk/return requirements of those utility investor-owners, the obvious question is whether Canadian utilities face sufficiently less risk than their US counterparts. Conversely, we investigate whether the difference in allowed returns for ratemaking is merely a symptom of a structurally inflexible formula rather than an indicator of underlying risk differences.”¹⁶

NERA noted that a number of Canadian regulators had observed the disparity between Canadian and U.S. ROEs but had concluded that there was a lack of evidence which would make it possible to compare the overall differences that may exist in the institutional, economic and financial contexts of the two countries and the impact of those factors on the opportunities they might provide for investors.

Following an exhaustive analysis of all possible factors that might affect the utilities in the two countries differently, NERA concluded that:

“...the regulatory institutions and customs for setting regulated prices for investor-owned Canadian and US utilities are very alike. That is, in accounting, administrative procedures, regulatory legislation, and basic constitutional protections of private property, little or nothing separates the average Canadian from the average US regulatory jurisdictions. . .we find generally that there is no persistent difference in regulatory legislation or rule making between Canada and the US. As such, the cost of equity capital is comparable between the two countries as long as the risk of gas distributors is the same or similar on both sides of the border.”¹⁷

With respect to this issue of risk, NERA also looked at how risks might be different in Canada and the United States. NERA found:

“...that the basic sources of risk - regulatory, business and financial - are comparable with respect to both jurisdictions. Objective and disinterested analyses of the relative risks between Canadian and US utilities are rare, but what we have found points to no smaller risks in Canada. As such, we conclude that there is no objective evidence showing that business or regulatory risks are sufficiently lower in Canada to account for the divergences [between the utilities in the two countries].”¹⁸

¹⁵ Allowed Returns on Equity in Canada and the United States, National Economic Research Associates, Inc. February 29, 2008.

¹⁶ Ibid, p. 4.

¹⁷ Ibid, pp. 7-8.

¹⁸ Ibid, p. 8.

NERA concluded with a recommendation either to return to case-by-case ROE determinations using a range of cost of equity approaches or the recalibration of the generic formula by re-examining the current relationship between the cost of risk-free debt and utility equity. “Without a new calibration,” the NERA said, “it is likely that as long as the interest rates in Canada and the US remain low, the generic ROE formula will continue to fly off course - essentially treating Canadian utility investors unfairly and slowly taxing their financial health in this era of low interest rates.”¹⁹

A report by John C. Major and Roland Priddle entitled “The Fair Return Standard for Return on Investment by Canadian Gas Utilities” was released in March 2008. The Major/Priddle report highlighted the universal convergence of Canadian regulators onto the generic formula approach by setting ROE. The authors concluded that “unfortunately its mechanistic character suspends for lengthy periods the previously-valued application of judgment to the results of alternate methods of achieving the [fair return standard] required by Canadian jurisprudence in ROE awards.”²⁰ The authors found that the wide and unprecedented gap that had developed between Canadian gas utility ROEs and those of U.S. utilities was support for the conclusion that the fair return standard, essentially the opportunity cost of capital needed to ensure comparable returns, financial integrity and capital attraction, is no longer being achieved by the generic ROE approach. “Canadian regulatory convergence on the generic ROE may however, ” they said, “inhibit its necessary reappraisal because particular regulators may be reluctant to break ranks with the group and because the consensus around an approved generic ROE is widely supported by stake holders, for reasons of regulatory efficiency and short-term economic self interest.”²¹ Major and Priddle ended their report with a call for case by case proceedings, using all available tools, to determine the ROE required to meet the fair return standard and for further studies of general application examining the fundamentals of the formula approach, namely, the choice of the risk-free rate, the appropriate measurement of the risk premium and the adjustment mechanism. They said:

“Absent such a reconsideration and consequent adjustment, in an environment of continuing very low interest rates and bond yields, the present generic ROE formula alone may not be protecting the public interest in the provision by incumbent utilities of a robust, flexible natural gas delivery structure financially strong to support future sustainability of our energy economy.”²²

The global economic crisis put even more pressure on the flawed ROE formula. By January 2009, more capital markets analysts were wading in on the issue. In a January 16, 2009 industry comment, RBC Capital Markets issued an energy infrastructure paper entitled “Allowed ROEs: The Formula Is Broken, But Will Regulators Fix It?” In that report, RBC argued that with higher equity risk premiums and higher long bond yields for energy infrastructure companies that are trading at levels close to the allowed ROEs “it appears that the formula is broken.

¹⁹ Ibid, p. 8.

²⁰ The Fair Return Standard for Return on Investment by Canadian Gas Utilities: Meaning, Application, Results, Implications, March 2008, p. 5.

²¹ Ibid, p. 5.

²² Ibid, p. 25.

Forgetting the magnitude of change, it appears that the formula is producing a result that is directionally incorrect (i.e., ROEs declining yet corporate bond yields and equity risk premiums are rising).²³ The RBC Capital Markets report urged investors to reduce exposure to energy companies heavily reliant on formula-based returns.

Similarly, in February 2009, Macquarie Research issued a report on Canadian energy infrastructure entitled, “ROE Formula May Finally Bite The Dust.” In that report, Macquarie observed that government bond yields bear little resemblance to any private company’s actual cost of capital. The report also observed that the required coupon on new debt on a BBB+ or A- infrastructure company was now in line with the after-tax, regulated ROE generated by the formula. The report concluded:

“This convergence of the market cost of debt and the regulated ROE is completely inconsistent with the long-held principal that regulated ROEs should be comparable to returns on investments of similar risk.”²⁴

The Macquarie report went on to express concern that lack of comparability between allowed utilities ROEs and returns on similar investments “is driving the emerging capital access problem.” The report concluded:

“It is nonsensical, in our view, that a regulator could argue that the cost of equity (which would be only 8.0% based on the formula and where government bonds are trading today) and cost of debt before tax should be equal. This outcome would clearly violate the comparability criterion unless the effective corporate income tax rate was very high or the equity risk premium was much lower than ever in memorable history.”²⁵

5. The NEB Ends Reliance on the ROE Formula

TransQuebec & Maritimes Pipelines Inc. challenged the ROE formula before the National Energy Board in RH-1-2008. In a decision released in March 2009, the NEB concluded that:

“There have been significant changes since 1994 in the financial markets as well as in general economic conditions. More specifically, Canadian financial markets have experienced greater globalization, the decline in the ratio of government debt to GDP has put downward pressure on Government of Canada bond yields, and the Canada/US exchange rate has appreciated and subsequently fallen. In the Board’s view, one of the most significant changes since 1994 is the increased globalization of financial markets which translates into a higher level of competition for capital. When taken together, the Board is of the view that these changes cast doubt on some of the fundamentals underlying the RH-2-94 Formula as it relates to TQM. . . The RH-2-94 Formula relies on a single variable which is

²³ RBC Capital Markets, Energy Infrastructure, “Allowed ROEs: the Formula is Broken but will Regulators Fix It?” January 16, 2009, p. 1.

²⁴ Macquarie Research Equities, “ROE Formula May Finally Bite the Dust,” February 23, 2009, p. 1.

²⁵ Ibid, p. 7.

the long Canada bond yield. In the Board's view, changes that could potentially affect TQM's cost of capital may not be captured by the long Canada bond yields and hence, may not be accounted for by the results of the RH-2-94 Formula. Further, the changes discussed above regarding the new business environment are examples of changes that, since 1994, may not have been captured by the RH-2-94 Formula. Over time, these omissions have the potential to grow and raise further doubt as to the applicability of the RH-2-94 Formula result for TQM for 2007 and 2008."²⁶

Accordingly, the NEB decided to grant a variance from the RH-2-94 decision to TQM for 2007 and 2008. In arriving at an appropriate cost of capital for TQM, the NEB took into account that global financial markets had evolved significantly since 1994 and that Canadian firms are increasingly competing for capital on a global basis. The NEB held that a fair return on capital should, among other things, be comparable to the return available from the application of the invested capital to other enterprises of like risk and permit incremental capital to be attracted to the regulated company on reasonable terms and conditions. The NEB held:

“As a result, the Board is of the view that pipeline companies operating in the U.S. have the potential to act as a useful proxy for the investment opportunities available in the global market place.”²⁷

The Board went on to observe that the risks faced by TQM and those faced by U.S. pipelines are not so different as to make them inappropriate comparators:

“The Board accepts that there are many similarities between the risks faced by pipelines in the two countries. This is due to the two regulatory models sharing, to a large extent, the same fundamental principles. Moreover, Canadian and U.S. pipelines operate in what the Board views as an integrated North American natural gas market, which informs the choices made by regulators in the different jurisdictions.”²⁸

The Board concluded that the evidence had established the TQM and U.S. LDCs were sufficiently similar in risk so as to make comparisons not only meaningful, but very informative for determining a fair return for TQM.

Thus, the NEB found in the TQM Decision, that:

- The U.S. and Canadian economies are inter-dependent;
- U.S. and Canadian companies compete for capital in the same markets;
- North American energy markets are highly integrated;

²⁶ National Energy Board, Reasons for Decision, Trans Québec & Maritimes Pipelines Inc., RH-1-2008, pp. 16-17.

²⁷ Ibid, p. 67.

²⁸ Ibid, p. 68.

- The regulatory models in Canada and the U.S. are based on the same principles, and,
- The risks utilities face in the two countries, while not identical, are sufficiently alike to make meaningful comparisons.

Following the TQM Decision, the NEB initiated a review of the RH-2-94 decision and solicited comments from interested persons. Following this written submission process, the NEB issued a decision on October 8, 2009. The NEB observed that 15 years is a significant passage of time in the context of financial regulation and that, since 1994, there had been considerable changes in financial and economic circumstances. Based on these considerations, the Board concluded that there was sufficient doubt as to the ongoing correctness of the RH-2-94 decision that it should no longer continue to be in effect. The NEB also concluded that it was neither necessary nor appropriate to replace the RH-2-94 decision with another multi-pipeline cost of capital decision, while reserving its right to do so at a future date.

Accordingly, except in certain narrow and time limited circumstances, the NEB is no longer using a formula-based mechanism to determine ROE.

6. The Submissions in EB-2009-0084

In this proceeding, the OEB has received expert cost of capital submissions from:

- An independent panel of capital market experts consisting of Matthew Akman, Harold Holloway, Stephen Defoe and Alexandra Zvarich
- James VanderWeide
- James Coyne/Concentric Energy Advisors
- Don Carmichael
- Kathleen McShane/Foster Associates
- John Dalton/Power Advisory LLP
- Laurence Booth

The OEB's Capital Markets Panel

The OEB asked a panel of capital market experts to open the stakeholder consultation on cost of capital.

Matt Akman of Macquarie Equity Research gave evidence that the current formula return on equity is getting very negative feedback from equity markets today. The equity markets are saying that the formula is not working and that a formula that pegs allowed ROE off government bond yields is inappropriate. Among other indicators, Mr. Akman pointed to the fact that there is no apparent correlation between the government bond yield and the dividend yield on utility

stocks and that, during the financial crisis, the formula returns and the cost of debt were almost the same. This violates the fundamental principle that equity investors require a higher return than debt holders for the increased risk they bear. The problem with utility ROEs, he also said, is not merely the result of the recent financial crisis. For some period of time there has been a “credit bubble.” Credit was easy to get and this “masked” underlying problems with risk premiums and the formula-based return. While Mr. Akman conceded there has been recent access to capital for utility enterprises, it was done arguably on unreasonable terms. What Mr. Akman sees in the market place is that there is no significant international interest in investing in the regulated Canadian utility group. There will be a challenge, over time, in getting even Canadian investors interested in Canadian utilities. Canadian investors are saying, don’t invest your capital at these formula-based returns, “just pay it all out instead.” Mr. Akman recommended a “guaranteed minimum” allowed return on equity of 10%.

Mr. Dafoe is the Director of Corporate Bond Research at Scotia Capital. Mr. Dafoe emphasized that the bond market is concerned about allowed ROEs for regulated utilities because ROE, along with deemed capital structure, dictates the utilities’ credit metrics which are used to gauge financial performance and draw inferences about future financial risk. Earlier in the decade, Mr. Dafoe thought that utilities offered attractive risk rewards for bond investors. In retrospect, however, the tight corporate bond spreads of 2004 to 2007 were too low and are not likely to recur. Bond and equity markets have changed dramatically. As a result, Mr. Dafoe is quite concerned about the effect low ROEs are having on the utilities’ credit quality. The ROE’s continue to fall with long Canada bond yields while the real world cost of equity keeps rising. Lower ROEs and greater complexity in the industry, at a time when most utilities are entering a cycle of increased capital spending, puts pressure on business risks and credit ratios. Time and time again, rating agencies’ published reports on utilities contain the phrase “credit metrics are weak for the ratings.” Mr. Dafoe believes that in the absence of some relief on the cost of capital, the risk of downgrades is real. Lower ratings equals materially higher cost of new debt, which is borne by future ratepayers. In hindsight, opined Mr. Dafoe, utilities were able to take the Canadian bond market for granted earlier this decade. However, conditions have changed. Risk is being repriced. Higher ROEs are needed to keep the cost of debt at reasonable levels. In Mr. Dafoe’s view, there is an expectation in the financial market that the formula is due for a re-evaluation that would lead to some increase in allowed ROEs. A posture of ‘no change to the status quo’ would be viewed adversely.

Harold Holloway, an investment banker, is the Managing Director of the Global Energy and Power Group for TD Securities. Mr. Holloway observed fewer lenders participating in the credit market with deal volumes down significantly and trending to shorter maturities. Similarly, he has observed a significant reduction in Canadian M&A activity. In the bond market, there are tighter covenants and, again, total issuance is down. The equity markets have been characterized by de-leveraging throughout the system, which has created extreme volatility. This strain on the capital markets has resulted in the cost of equity rising dramatically. This can be seen in contracting trading multiples and increasing issuance discounts. Risk appetite, said Mr. Holloway, across the board is lower, whether in the credit, bond or equity markets. While the dollar value of utility debt and equity issues in total is significant, a lot of it was TransCanada. The last two issues were, he said, earmarked not for infrastructure investment in Canada but for power and pipeline projects in the U.S.

Ms. Zvarich is the Director of Public Fixed Income Investments for Sun Life Financial and offered the perspective of a utility bond investor. Bond investors are concerned that utilities have highly leveraged balance sheets with significant capital investment requirements going forward. This is partially offset by the fact that the utility sector is one of the sectors in which there has been rating upgrades and which is able to raise 30 year debt financing. Obviously, adequate levels of ROE are critical. This is because low ROEs will make utilities' access to capital markets less than optimal and create incentives to engage in high risk/high return activities that may jeopardize their credit ratings. On the question of long Canada bonds as the risk free rate, Ms. Zvarich pointed out that there are many drivers for government bond yields, including capital and currency flows, inflation expectations and demographics. 'How' she asked, 'can government bonds be viewed as "risk free" when an active credit default swap market exists for government paper?' And how can government bonds be regarded as "risk free" when they can offer negative returns? The formula needs to be reworked so that it works in periods of deflation as well as inflation.

James VanderWeide

Mr. VanderWeide's evidence breaks down into essentially two parts. First, he analyzed whether the formula return produces a fair return. Second, he analyzed what an appropriate cost of equity would be for an Ontario utility. Mr. VanderWeide employed six tests to determine whether the ROE formula produced a fair return. The formula failed all six tests.

First, Mr. VanderWeide examined evidence on the returns achieved by equity investors in two groups of Canadian publicly traded utility holding companies compared to interest rates on long Canada bonds. Mr. VanderWeide's analysis concluded that the average experienced equity risk premium on an investment in Canadian utility stocks is approximately 5.5%. Since the risk premium implied by the ROE formula is only 4.1%, this evidence supports the conclusion that the OEB's ROE formula is not producing a fair return.

Mr. VanderWeide also examined evidence on the allowed rates of return on equity and allowed common equity ratios for U.S. electricity and natural gas utilities. This research indicated that allowed rates of return on equity and allowed equity ratios for U.S. utilities average approximately 10.4% and 49% respectively. Since the OEB's ROE formula currently produces an 8.4% ROE on an allowed equity ratio in the range of 35 to 40%, this evidence also supports the conclusion that the Board's ROE formula fails to provide returns commensurate with returns on other investments of comparable risk, as required by the fair return standard.

Mr. VanderWeide also examined evidence on the sensitivity of the forward looking required equity risk premium on utility stocks to changes in interest rates generally. The Board's ROE adjustment formula requires that the cost of equity for Canadian utilities declines by 75 basis points for every 100 basis point decline in the yield to maturity on long Canada bonds. Mr. VanderWeide's analysis leads to the conclusion that the cost of equity declines, in fact, by less than 50 basis points for every 100 basis point decline in the yield to maturity on long Canada bonds. Thus, in a period of falling long Canada bond yields (which has characterized the entire period from 1997 to the present), the OEB's ROE formula has tended to overstate the impact of declining interest rates on the cost of equity. Additionally, the risk premium estimates obtained from the forward looking analysis conducted by Mr. VanderWeide are in the 7 to 8% range.

Since the risk premium implied by the OEB's ROE formula is currently 4.23%, this is further evidence that the ROE formula fails to provide a fair rate of return.

Mr. VanderWeide also examined the sensitivity of the equity risk premium implied by U.S. utility allowed rates of return on equity to changes in the interest rate on long-term U.S. government bonds. His studies indicate that U.S. utility allowed equity risk premiums are significantly less sensitive to changes in interest rates on long-term government bonds than the allowed equity risk premium implied by the OEB's ROE formula. Again, while the ROE adjustment formula in Ontario reduces allowed ROE by 75 basis points when the yield to maturity on long-term Canada bonds declines by 100 basis points, allowed returns by U.S. regulators have declined by less than 50 basis points for every 100 basis point decline in the yield to maturity on long-term U.S. government bonds.

Mr. VanderWeide also examined the volatility of returns on Canadian utility stocks compared to the volatility of returns on the Canadian Market Index. This analysis showed that the volatility of Canadian utility stocks have exceeded the volatility of returns on the Canadian Market Index. This shows that the risk of Canadian utility stocks compared to the risk of the Canadian stock market as a whole is greater than is implied by the Board's ROE formula. This is because the Board's ROE formula presumes that Canadian utility stocks are only half as risky as the Canadian stock market as a whole (by virtue of having used a beta of 0.5). Mr. VanderWeide's analysis indicates, however, that Canadian utility stocks have approximately the same risk as the Canadian stock market as a whole. This further corroborates the conclusion that Canadian utility stocks are more risky relative to the Canadian stock market index as a whole than is implied by the Board's ROE formula and that, as a result, the Board's ROE is not producing a fair return.

Finally, Mr. VanderWeide analyzed the ROEs generated by the OEB's formula in relation to current economic and capital market conditions. Since investors are risk averse, their required rate of return on an investment increases with the risk of the investment. That is, the greater the risk, the higher the required rate of return. During periods of greater uncertainty in economic and capital market conditions, the required rate of return on utility stock investments generally moves in the same direction as the required rate of return on utility bond investments. Interest rates on investment grade utility bonds have increased from 2008 to 2009 whereas interest rates on long Canada bonds have declined. Because the OEB's ROE formula estimates ROE depending on the yield on long Canada bonds rather than the yield on corporate bonds, and because the yield on long Canada bonds has declined, the formula-based ROE has declined at the same time that there is greater uncertainty in economic and capital market conditions. The Board's ROE formula, by virtue of being based on long Canada bonds, therefore, produces unreasonable results. While the cost of utility capital has increased in line with increased risk and uncertainty in economic and capital markets, the Board's ROE formula based on long Canada bonds has driven the return on an equity investment in a Canadian utility down.

Mr. VanderWeide then went on to use two methods to estimate the cost of equity for an Ontario utility: first, the equity risk premium method and second, the discounted cash flow (DCF) method. Using both an *ex post* risk premium method and an *ex ante* risk premium method, Mr. VanderWeide estimated the cost of equity for an Ontario utility at 9.7% and 11.3% respectively.

Mr. VanderWeide's application of DCF methodology to natural gas companies produced an 11.5% return and, to comparable electricity companies, a 12.4% return, producing an average DCF result of 11.9%. Averaging the *ex post* risk premium method, the *ex ante* risk premium method and the discounted cash flow method, Mr. VanderWeide conservatively estimated a cost of equity of 11% for an Ontario utility. Mr. VanderWeide also analyzed the disparity in equity thickness between Canadian and U.S. utilities, concluding that the business risk of Ontario utilities is approximately equal to the average business risk of U.S. utilities, whereas the average financial risk of Ontario utilities is significantly greater than the average financial risk of U.S. utilities by virtue of the fact that U.S. utilities have equity ratios in the range of 48 to 49%, whereas the allowed equity ratios for Ontario utilities are in the range of 35 to 40%.

Ultimately, Mr. VanderWeide's recommendation is that Ontario utilities should be allowed any reasonable combination of ROE and deemed equity ratio that produces an overall return of at least 8%. An allowed ROE of 11% and a deemed equity ratio of 40% produces that overall 8% return.

Concentric Energy Advisors

In this proceeding, Concentric's evidence built on and expanded the work it had done for the OEB in 2007. Concentric concluded:

1. the current formula does not satisfy the fair return standard;
2. government bond yields do not track equity costs in all market conditions;
3. U.S. utilities and Canadian utilities are comparable; and,
4. the Board's formula needs to be rebased and a new adjustment mechanism adopted.

With respect to U.S. comparability, it should be noted that Concentric did not rely on the entire universe of U.S. utilities for its comparative analysis. Rather, Concentric carefully selected comparable companies based on a series of transparent financial metrics. It should also be noted that no one else, and particularly not Mr. Booth, has performed this kind of detailed analysis of U.S. comparators.

Slide four of Concentric's presentation during the stakeholder conference provides graphic evidence that Ontario's awarded ROEs and equity levels fall well short of their U.S. counterparts. Slide five of Concentric's presentation graphically demonstrates that, while Ontario LDCs were in parity with, or indeed exceeded, U.S. LDC allowed returns before the introduction of the formula, since 1997 Ontario LDC's returns have fallen dramatically below those of their former U.S. comparators.

Since the issuance of Concentric's original 2007 report, Concentric has conducted a number of additional studies which have expanded on their analysis of the business and regulatory risks of both U.S. and Canadian electricity and gas utilities. Based on its detailed business risk analysis, Concentric concluded that the U.S. gas and electricity utility proxy groups share similar business profiles to the Ontario utilities. Concentric also examined the regulatory protections afforded the

U.S. proxy group utilities, as compared to Ontario utilities, focusing on risk-mitigating regulatory mechanisms employed to stabilize sales volumes, recover fuel costs, reduce regulatory lag, support financial stability, address cost increases, expedite cost recovery of large capital projects, and provide a means for recovering unexpected variations in expenses. Although Concentric did find differences between the Ontario utility group and the North American proxy group, the differences were offsetting. Concentric found “no basis to conclude that an adjustment would be warranted to account for risk differences between the Ontario utilities and the proxy group other than for the additional debt leverage in Ontario.” As the NEB concluded in the TQM decision, if differences in the level of risk between U.S. and Canadian comparative groups were identified, it would be appropriate to account for them in the cost of capital analysis by means of an adjustment. Concentric, however, found no measurable differences between the proxy group average and the Ontario utilities that would warrant such an adjustment.

Concentric also performed statistical analysis of the sensitivity of the equity risk premium to government bond yields. Although their research was conducted entirely independently of Mr. VanderWeide’s, like Mr. VanderWeide, Concentric found, through regression analysis, that the sensitivity of the equity risk premium to government bond yields is actually closer to 0.45 than the coefficient, adopted by the OEB in 1997, of 0.75. Concentric concluded:

“The cumulative effect of an unremitting downward trend in government bond yields in combination with a risk premium that is understated relative to changes in bond yields, has led to the growing disparity between U.S. authorized returns and Ontario authorized returns... [In other words] the risk premium should have actually increased by approximately 0.55 for each percentage point drop in the government bond yield (as opposed to the 0.25 implied by the Formula). This mis-specification of the elasticity factor has resulted in the systematic understatement of utility ROEs and equity risk premiums over the past decade.”

Ultimately, Concentric’s analysis concluded that 11% ROE on 36% equity and 10.3% ROE on 40% equity are the required returns for Ontario’s gas and electricity utilities respectively. Concentric recommended a combination of utility bond yields and litigated equity returns, weighted equally, as the most reliable coefficient to track year-over-year changes to the base ROE.

Don Carmichael

In Mr. Carmichael’s view, Ontario-based gas and electricity utilities today face a much more competitive environment in which to attract debt and equity funds to finance capital expenditures than they did in 1997. To be able to attract funds on reasonable terms, Ontario based utilities must have internationally competitive credit metrics such as earnings and cash flow coverage of interest obligations and cash flow to total debt obligations, adequate equity bases and competitive rates of return on common equity. Mr. Carmichael observed that the international perception of the long Canada bond yield has changed significantly since the risk premium approach to the formula based return was established in 1997. At that time, the yield on long Canada bonds was not a pure “risk-free rate” but included additional compensation required by foreign investors for Canada’s somewhat more tenuous financial position and weaker currency at

the time. However, due to strong economic growth and prudent financial management, Canada is now viewed more positively in the international capital markets. This change in perception, however, brought 30-year Canada bond yields to 65-year lows. From a capital markets perspective, the OEB'S current formula and methodology does not meet the fair return standard and does not preserve the financial integrity of Ontario-based utilities.

Mr. Carmichael emphasized the need for a recalibration of utility returns, in which comparable earnings, discounted cash flow and equity risk premium approaches are used. Mr. Carmichael emphasized that no single model provides the answer, each has its strength and weaknesses and that more information will lead to better decisions and the exercise of more informed judgment. Market participants, he said, focus on the outcome rather than the process used.

Kathleen McShane/Foster Associates

In Ms. McShane's opinion, both the initial ROE and the automatic adjustment formula must be reset. Reliance on a formula which has been governed solely by a close tracking of changes in the long-term Canada bond yield has resulted in allowed ROEs that have fallen below the level required by the fair return standard.

Ensuring adherence to all three requirements of the fair return standard requires reliance on multiple cost of equity tests applied to comparable risk companies, as well as benchmarking the tests against other relevant indicators of a fair return.

Sole reliance on other Canadian utilities is not a sufficient basis for ensuring that the comparable investment standard is met. U.S. utilities provide a reasonable alternative for the selection of comparable utilities given the integration of the capital markets, the similarity of the operating environments and the similarity of the regulatory models. However, objective criteria should be applied to select comparable risk companies.

Ms. McShane observed that between 1995 and 2009, the forecast long-term Canada bond yield has fallen by 500 basis points, from approximately 9.25% to 4.35%. The decline in long-term Canada bond yields experienced during the past 15 years reflects, in large part, a sea change in the Canadian economy characterized by a shift from huge government deficits and indebtedness to an unbroken string of government surpluses together with a steady reduction in the relative amount of debt outstanding. This decline reflects three factors:

1. a reduction in the expected rate of inflation over the long term;
2. the waning of investors' fears that inflation would reignite to levels experienced in the 1980s; and,
3. a declining supply of long-term government debt relative to demand.

As Ms. McShane says, of these three factors, only the first, the decline in the expected rate of inflation over the long term, results in any impact on the cost of equity. With respect to the second, fears of reigniting inflation, investors in equities are not locked into particular long-term yields and thus, equity investors do not demand the same "lock-in" premium. Similarly, with respect to the third factor, scarcity of demand, Ms. McShane observes that strong demand for

long-term government debt by institutions, particularly those seeking to match the duration of their assets and liabilities, creates an imbalance in the supply and demand for long-term government securities. This, in turn, leads to abnormally low long-term government bond yields. A reduction in long-term government bond yields arising from a supply demand imbalance, however, has no bearing on the cost of equity. Based on this analysis, Ms. McShane concluded that the significant divergence of the allowed returns between Canada and the U.S. since 1997, despite similar levels of government bond yields, strongly suggests that both the setup and ongoing adjustment formula should be reset following a comprehensive review in which various tests and formulas for determining ROE are fully employed.

Like Mr. VanderWeide and Concentric, Ms. McShane observed that because the automatic adjustment formula is based solely on long-term government bond yields, it produced a reduction in ROE at a time when other capital market indicators were signaling an increase in the cost of equity. Thus, while a formula based solely on long-term Canada bond yields may capture some trends in the cost of equity (assuming the coefficient is set appropriately), it does not accurately measure changes in the cost of equity in all circumstances.

It is clear from a review of Ms. McShane's submission that it is the coefficient, the adjustment factor of .75 of the change in long-term Canada bond yields, which has driven Ontario ROEs to unreasonably low levels. This can be seen from Ms. McShane's analysis:

1. that the relationship between ROEs and long-term government bond yields has been much closer to a 50 basis point change in ROE for a every 100 basis point change in long-term government yields than to the 75 basis point change employed in the existing formula; and,
2. of what a NEB regulated pipeline would have earned using a coefficient measured by 50% of the change in utility bond yields. Under that scenario, as noted in her report at page 29:

The resulting average indicated pipeline ROE for 1996-2009 under the revised formula is 10.7%, versus 9.6% under the existing formula. To put this in perspective, the 10.7% average adjusted ROE compares to an average ROE adopted by regulators for U.S. gas distribution and electric utilities of 10.9% over the same period. The similarity in average ROE produced by the adjusted formula and the average allowed ROE's for U.S. utilities is a reasonable outcome, given the similarity in the cost of capital environments in the two countries.

Ms. McShane's analysis indicated that the cost of equity has not declined with the decline in long-term Canada bond yields to the extent assumed by the existing formula. Accordingly, the formula has cumulatively been overstating the impact of the decline in long-term Canada bond yields on the cost of equity for the past 15 years.

Power Advisory LLC

Mr. Dalton of Power Advisory LLC focused, to a considerable extent, on the same problem highlighted by Ms. McShane. That is, the formula's deficiencies are not self-correcting,

regardless of capital market circumstances, largely because the adjustment factor, the coefficient of .75, has been mis-specified since the formula ROE methodology was first introduced. As Mr. Dalton said, while current market conditions have exacerbated the formula's shortcomings, it has provided inadequate returns for a considerable period of time. Mr. Dalton also made an important point in saying that the formula is surprisingly simplistic in light of the fact that one variable, the forecast long Canada bond rate, was being used to determine the return on equity investment for over \$30 billion of infrastructure assets in Ontario. "So it is," he said, "worth rolling up our sleeves and making sure the formula is doing its job" (Vol. 2, p. 106).

The essential flaw in the formula is that it assumes that changes in utility cost of equity are explained solely by a change in the rates for long-term Canada bonds. However, long-term Canada bonds are distinctly different instruments than equities, with the result that the OEB's formula is missing critical variables that influence the cost of equity for energy utilities. In Mr. Dalton's view, therefore, the base ROE must be reset to overcome the past shortcomings of the formula and the coefficient must also be reset to include additional explanatory variables that better reflect the determinants of the cost of equity for energy utilities in Ontario.

While offering two adjustment models that performed better than the existing formula, Mr. Dalton also encouraged further study and consideration of the most appropriate mix of factors to produce a coefficient which more accurately tracks changes in the cost of equity for Ontario utilities.

Laurence Booth

By way of overview, Union submits that the singular feature of Mr. Booth's analysis is that he does not support the OEB's ROE formula as such. Mr. Booth's support for the formula, to the extent there is any, is based on happenstance, i.e., the formula happens to produce a number relatively close to his view of an appropriate ROE for Ontario utilities. Given Mr. Booth's known propensity to "lowball" his ROE estimations, however, this fact alone is cause for concern. Mr. Booth's recommended ROE for Ontario utilities is 7.75%. In his view, the formula return of 8.4%, while generous, is "about right."

In Mr. Booth's view, the recent global financial crisis is merely part of an entirely predictable cycle of boom and bust. The economy is now in recovery – things are returning to normal so there is nothing to worry about. The financial crisis says nothing about the cost of equity or the operation of the OEB's ROE formula.

In determining the appropriate cost of equity, Mr. Booth recommends exclusive reliance on the capital asset pricing model. He agrees, however, that the comparable earnings and DCF tests can be used as a check. While admitting to a fundamental bias in the CAPM (it tends to underestimate returns for low-risk stocks), Mr. Booth maintains that use of the long Canada bond rate forecast as the "risk-free" rate corrects for this problem (although he does not explain how).

Although he has conducted no studies and has never testified in a U.S. regulatory proceeding, Mr. Booth claims that U.S. utility returns are not suitable comparators for Canadian utilities. He cites interest rate parity and foreign exchange, tax and monetary policy and regulation as possible areas of differentiation although he has conducted no analysis of these factors or

attempted to show, in any way, how they could account for the difference in allowed returns. Nor, apart from vague generalizations, has he attempted to rebut the specific and detailed analysis of those (such as Concentric and NERA) who *have* performed this analysis and concluded there are no material differences. Mr. Booth does, however, criticize Concentric's "fairness deficit" on the theory that Alberta did not employ a formula-based ROE methodology until 2003. On this basis, he says, Alberta utility ROEs prior to that date cannot be "blamed" on the formula-based approach to ROE.

Mr. Booth claims as well that U.S. utilities are riskier than Canadian utilities because of an alleged "dramatic weakening" in the credit standards of the U.S. utilities, citing an unexplained excerpt from Bank of America/Merrill Lynch presentation in February 2009.

To the question of whether the use of Canadian utilities as a comparator group creates an issue of circularity, Mr. Booth replies "No." He then, however, curiously asserts that to "ignore the impact of the ROE adjustment mechanism on Canadian utilities is to ignore a salient feature of their financial environment that serves to lower their risk." This, in Union's submission, is the very definition of circularity.

Mr. Booth decided to incorporate by reference in his oral presentation information filed by someone named Safire in the recent generic cost of capital hearing before the Alberta Utilities Commission. No one named Safire, however, has filed any information in this proceeding before the OEB.

Mr. Booth also points to certain utility holding companies that have successfully raised debt and equity in recent months, as being supportive of the fact that regulated utility returns are sufficient to raise capital.

Mr. Booth also points to the fact that Fortis paid a 1.7 market/book premium on its acquisition of Terasen in 2007 as supporting his claim that the formula returns are higher than required to attract capital.

7. Response to Mr. Booth

U.S. Utility Comparisons

At least two experts, Concentric and NERA, have performed detailed studies analyzing the comparability of Canadian and U.S. utilities. Both have come to the conclusion that there are no material differences in risk that would explain the higher ROEs and equity ratios of U.S. utilities.

Mr. VanderWeide, who has testified extensively in the U.S. and in Canada, also concluded that the business risk of Ontario utilities is approximately equal to the business risk of U.S. electricity and natural gas utilities (p.35) and that, due to their higher equity ratios, the financial risk of U.S. utilities is significantly less than the financial risk of Ontario utilities.

The NEB, in the TQM Decision, found, contrary to the position taken by Mr. Booth (and the Ontario Government) in that proceeding, that "U.S. comparisons are very informative for determining a fair return" for a Canadian utility (p.71).

Mr. Booth claims, nevertheless, that U.S. utilities are not comparable — they are allowed higher ROEs and equity ratios because they are riskier. Union submits that Mr. Booth’s position is wholly unsupported and must, as it was by the NEB, be rejected.

First and foremost, Mr. Booth has performed no studies of, and has no expertise in, comparisons of business, financial or regulatory risk between U.S. and Canadian utilities. His arguments are, therefore, speculative, impressionistic and unsupported by any data or analysis.

Second, a mainstay in Mr. Booth’s argument is the assertion of a so-called “dramatic weakening in the credit standards of U.S. utilities” (p.24). Mr. Booth relies, for this claim, entirely on a slide lifted from a presentation made in the U.S. by Bank of America/Merrill Lynch. There are several problems with Mr. Booth’s claims. First, in relying on bond ratings in the context of a discussion of ROE, Mr. Booth fails to recognize that bond ratings, at best, reflect the risk of default on the payment of that company’s bonds. Equity investors face considerably greater risks than bond holders because bond holders receive a fixed interest payment over the life of the bond and a return of their principal when the bond matures. In addition, bond holders have priority claims on both the company’s income and its assets. Thus, bond ratings are poor indicators of a company’s equity risk.

Third, the bar chart upon which Mr. Booth relies so heavily contains a relative profile of both the power and the utilities industry. It is universally acknowledged, and has in the past been acknowledged by Mr. Booth himself, that generation companies are generally riskier than distribution and transmission utilities. Accordingly, the inclusion of power generation companies in the relative analysis of bond ratings automatically skews the trend to higher risk and therefore lower ratings.

Fourth, the bar chart presented by Mr. Booth does not distinguish between electricity versus natural gas utility ratings or the gradations within those ratings. In particular, the average bond rating for U.S. natural gas utilities is A-. The average bond rating for U.S. electricity utilities is BBB+. Neither of these ratings is significantly different from the ratings for a Canadian utility.

Fifth, Ms. Zvarich (Sun Life Financial) presented evidence that Canadian utility bonds generally have more restrictive covenants than U.S. utility bonds. Canadian utility bonds, therefore, may be rated higher than U.S. utility bonds simply because of the greater use of covenants, not because the utilities themselves are inherently less risky than U.S. utilities. Mr. Dafoe, for example, noted that each bond issue, even when issued by the same company, is unique. Size, rate, maturity and covenants may vary from one issue to another and each variable has important implications for pricing and yield (Vol. 1, pp. 24-25).

Finally, Mr. Booth was asked to produce the presentation from which his U.S. credit profile chart was derived. A review of this presentation by Bank of America/Merrill Lynch at the NARUC Winter Committee Meetings reveals that Mr. Booth has been misleadingly selective in his excerpt from this presentation. On the same page, right beside the bar graph used by Mr. Booth, is a discussion under the heading “What are the Primary Issues on Minds of Utility Investors?” (p.14) In answer to this question, the presentation noted:

- Liquidity profile of Utilities

- Impact of financial crisis on utility fundamentals
 - will regulators increase allowed returns to reflect increased capital costs (particularly during a period of increasing operating costs)?
 - will Utilities be able to access capital required to support operations and investment plans?
- Impact of volatility of commodity cost on utilities?
- Potential for demand destruction given economic weakness?

On the following page, the authors of the Bank of America/Merrill Lynch presentation noted that recent financial market volatility has “created a challenging capital raising environment.” They comment on the need to “adjust cost of capital and internal hurdle rates to reflect a higher cost of capital.” They observe a need to “review capital structure in light of increased volatility in cost of capital,” that “cost of equity derived under various methodologies has increased, although CAPM is not representative of current conditions (risk-free rate, beta and equity risk premium challenges)” and that “overall cost of funding (WACC) has increased.”

Thus, the inclusion of power generation companies and the lack of differentiation between various classes of BBB ratings makes reliance on this graph to “prove” that U.S. regulated utilities are “riskier,” doubtful, to say the least. The burden of the presentation, in addition, is clearly directed at the need to reflect higher market cost of equity in allowed utility returns.²⁹

Don Carmichael was “shocked” at the suggestion that U.S. utilities are riskier than Canadian utilities, based on his experience. Given the problems with the Bank of America/Merrill Lynch graph, as noted above, in Mr. Carmichael’s view the graph was “meaningless” (Vol. 3, p.63).

Mr. Booth’s presentation also criticized Concentric’s assertion that a “fairness deficit” had arisen in Canadian ROEs as compared to U.S. ROEs which is directly correlated to the introduction of the ROE formula. Mr. Booth claims that, because the Alberta EUB did not introduce an ROE adjustment mechanism until 2003, the “fairness deficit” could not be attributable to the use of the ROE formula. Mr. Booth’s position fails to recognize the interactive nature of allowed ROEs across Canadian jurisdictions. The BCUC first adopted a formula in 1994 and the NEB adopted a formula in 1995. The OEB adopted a formula in 1997. Since the mid-1990s, therefore, many large and influential Canadian regulatory commissions have set allowed ROEs based on the formula. It is clear, and Mr. Booth has admitted as much in prior proceedings, that utility

²⁹ The Moodys August 2009 generic document on rating methodology, submitted at the eleventh hour by CME, suffers from many of the same weaknesses as the Bank of America/Merrill Lynch presentation. The comments on regulatory matters, for example, are impressionistic and not based on a specific study of regulatory comparability, unlike the work of Concentric and NERA cited above. The surveyed utilities include vertically integrated businesses with power generation assets (hence the comment on “stronger competition in wholesale power markets”). Like the U.S., no Canadian utility other than transmission has a credit rating higher than a single A: for example, Enbridge is A- and Union is BBB+. The document does confirm the view, however, that because of low ROEs in Canada, Canadian utilities have “weaker credit metrics than their international peers.”

commissions typically review the awards of other commissions across Canada when assessing what ROE to allow in their own jurisdiction. The evidence is clear that since the mid-1990s, Canadian provincial utilities utility commissions have adopted allowed ROEs that are virtually identical to the formula ROEs, even where that particular province had not formally adopted a formula ROE methodology.

Further, part of Concentric's analysis is that the formula produces "low" ROE results precisely because it is based on long-term Canada bond rates. Long Canada bond rates have steadily declined since the mid-1990s. U.S. long bond rates have also declined since the mid-1990s. U.S. allowed ROEs, however, have not declined to the same extent as Canadian ROEs. Thus, leaving aside the issue of whether the returns allowed by the Alberta EUB prior to 2003 had anything to do with a formula, Mr. Booth has simply not addressed the change from Canadian utility ROE parity with U.S. utilities in the mid-1990s to the present circumstances, in which the allowed ROEs for U.S. utilities are now approximately 200 basis points higher than those allowed to Canadian utilities under the ROE formula here.

Mr. Booth also criticizes Concentric for its alleged failure to take account of interest rate parity. Mr. Booth relies, to make this point, on the comparison between the "prime borrowing rate" in Canada and the "U.S. prime rate," which is approximately 100 basis points higher in the U.S. This however is not the right comparison. The short-term rate for corporate debt is not an appropriate "risk-free" rate for the purposes of assessing long-term (ten year plus) investments. The more appropriate measure is a comparison of the ten-year treasury bond rates between the two countries. As Mr. Coyne noted during the consultation, the long-term rates for government bonds for both U.S. and Canada are identical at 3.31% (Vol. 3, pp 79-80). Mr. Booth's claim of a lack of parity between U.S. and Canada interest rates is, therefore, incorrect. The relevant bond yields are, in fact, in very close parity.

Mr. Booth also raises a potential for differences in regulatory treatment, which he claims is "the single biggest factor in the risk of a utility." The only examples Mr. Booth raised in his original presentation were the allegation that deferral accounts were more prevalent in Canada than the U.S. and that rate cases were more frequent. In his oral presentation, however, Mr. Booth sought to bolster his position on this issue by adding new grounds for the alleged distinction and seeking to incorporate by reference information from someone named Safire, whose background and information were not filed in this proceeding. Mr. Booth has not supported his bold assertions with any data or analysis.

Just as in Canada, both regulatory commissions and utilities in most U.S. jurisdictions are free to seek rate changes as frequently as they wish. The fact that utilities *choose* not to apply for frequent rate hearings could hardly be taken as an indication of higher risk warranting higher awarded ROEs. The fact that U.S. utilities do not apply for rate adjustments as frequently as Canadian utilities may well be an indication that U.S. LDCs are more content with their ROEs and, therefore, less concerned with fluctuations in their costs or revenues from one year to the next.

There is no empirical evidence to suggest that deferral accounts are a more significant feature of regulation in Canada than the U.S. In fact, all of the information available is to the effect that the use of deferral accounts is not materially different between the U.S. and Canada.

Similarly, Mr. Booth asserts that there is a greater use of historical test year regulation in Canada. First, it is not at all clear why historical test year regulation would increase risk. More importantly, however, Mr. Booth has advanced no empirical evidence to support this assertion.

Mr. Booth also asserts that capital expenditures are not pre-approved in the U.S. the way they are in Canada. This too is unsupported by any empirical evidence and is, in fact, contrary to Union's understanding. In Union's understanding, U.S. utilities file facility resource plans just as they do in Canada. These plans, even where approved, are not guarantees of rate recovery. Rather, future recovery is entirely subject to a full prudence review in Canada, once the project is done, just as it is in the U.S. In fact, the prudence review standards adopted in Ontario (by the OEB, the Divisional Court and the Court of Appeal in *Enbridge Gas Distribution Inc. v. Ontario Energy Board* (2006), 41 Admin L.R. (4th) 69) are derived from the U.S. experience and the work of the National Regulatory Research Institute.³⁰

Mr. Booth's assertion of a "persistent inability" of U.S. LDCs to earn their allowed ROE is, again, completely unsupported and inconsistent with experience and common sense. If U.S. utilities were experiencing a persistent inability to earn their allowed ROEs, presumably U.S. utilities would apply for more frequent rate reviews.

Mr. Booth also relies for his assertion that utilities in the U.S. are riskier upon so-called greater reliance on market forces in the U.S. and so-called "Black Swan" events that he claims have been occasioned by "lighter handed regulation." His examples, however, are inapt and outdated. The Pacific Gas & Electric bankruptcy in 2000 is not an example of lighter handed regulation at all. PG&E's bankruptcy arose from too much regulation, not too little. PG&E's problems arose from the deregulation of the generation market combined with the imposition of a cap on what PG&E could charge customers for their consumption of the commodity. Wholesale prices rose significantly above the artificial cap and PG&E was not able to pass those increased costs through to its customers. Mr. Booth's other example, the Duquesne nuclear project, has nothing to do with lighter handed regulation. Rather, it is simply the application of well established principles of prudence review which, as noted above, are equally applicable in Canada. In the Duquesne case, the issue was whether the utility should have proceeded with its capital investment program in the face of mounting evidence of increasing project costs and lower demand which called into question the need for the project at all. Certain costs were ultimately disallowed on prudence grounds.

Similarly, there is no evidence to support Mr. Booth's assertion that Enron "raided" its regulated pipeline subsidiaries, taking out a billion dollars. Mr. Booth's telecom examples are inapt because these transactions occurred during a period of massive deregulation, such that the regulatory environment was quite different from the cost of service rate regulation that characterizes most North American natural gas and electricity utilities today.

Finally, in support of his attempts to differentiate U.S. returns, Mr. Booth relies on the claim that "U.S. markets are riskier" generally, resulting in greater business risks for U.S. LDCs. He points to the recent bailouts of U.S. banks as an example. In Union's submission, the assertion that

³⁰ see "The Prudent Investment Test in the 1980s", April 1985.

U.S. markets are riskier than Canadian markets *per se* is unsubstantiated and unsustainable. In fact, the long-run volatility of returns on the S&P 500 is approximately the same as (actually slightly less than) the long-run experienced volatility of returns on the S&P/TSX market index for Canada.³¹ Second, as noted above, the long-term interest rates are approximately the same in the U.S. and in Canada. Finally, to Mr. Booth's suggestion that the recent problems of U.S. banks is illustrative of greater risk in the U.S. for regulated gas and electricity utilities, Union submits that banks, both in the U.S. and Canada, are regulated in an entirely different manner than utilities. Banks, for example, do not have their fees regulated, are not rate of return regulated, are not required to submit their costs for prudence review and do not have a regulated allowed return imbedded in their fees and other charges.

Capital Attraction

Mr. Booth argues that utilities have raised significant amounts of capital over the last few years. This, he says, shows that the allowed returns meet the capital attraction test. Union submits that in making this assertion Mr. Booth has glossed over important questions. What has the capital been raised for? Was it on reasonable terms? And, perhaps most importantly, the ability to attract capital is only one of three tests which must be met under the fair return standard.

Mr. Booth, for example, emphasizes TransCanada's equity offering in the fall of 2008. But, as Mr. Holloway from TD Securities pointed out, those funds were earmarked, not for infrastructure investment in Canada, but for power and pipeline projects in the U.S. Similarly, while Mr. Akman of Macquarie conceded that there has been access to capital for utility enterprises, he questioned whether it had been done on reasonable terms. There is, he emphasized as well, no significant international interest in investing in regulated Canadian utilities.

Finally, the fair return standard requires that a utility be able not only to attract capital and maintain its financial integrity but to earn returns that are commensurate with returns on invested capital from other enterprises of similar risk. Mr. VanderWeide's six tests, as well as the analysis of Concentric, Ms. McShane and Power Advisory, demonstrate that the OEB's ROE formula does not allow Ontario utilities to earn returns that are commensurate with returns on other investments of comparable risk.

Market to Book Acquisition Premiums

Mr. Booth has alleged that premiums in excess of book value paid to purchase regulated utilities in Canada are evidence that allowed returns are too high. Mr. Carmichael, who has advised on a number of utility acquisitions, explained that the value purchasers pay is not tied to presently allowed returns but is based on a number of factors, including long range NPV calculations where 60 to 65% of the value of the transaction is derived from revenue forecasts more than 10 years out. Sellers, of course, are trying to maximize the value of their assets. They may be running an auction. People are induced to pay premiums throughout the sale and negotiation process. There are very few of these assets in Canada. Purchasers consider whether the transaction is accretive with respect to earnings. How does the target fit into their overall

³¹ see, for example, the 2007 Concentric Report, p. 42.

strategic picture? Is control of these assets important to them strategically? The purchaser may use financial mechanisms to reduce their weighted after tax cost of capital (Vol. 3, pp. 105-107).

Karen Taylor pointed out that virtually no utility trades at a 1:1 market to book ratio and that this phenomenon clearly predates the advent of the OEB's ROE formula (Vol. 3, pp. 130-131).

Mr. Coyne made the point that if one were to take the formula return of about 8% and back solve for what ROE would be required to take Canada's electricity holding companies to a market/book ratio of 1:1, the ROE would be 4.97% (Vol. 3, p. 137).

Mr. Coyne also observed that a new investor paying a premium may have expectations of their earnings improving over time or achieving some strategic fit with their portfolio of investments. They may be right or they may be wrong. All of the investor's judgments about what the utility may be worth *to them* are embodied in the price and it is by no means a simple measure of whether today's allowed ROE is adequate or not (Vol. 3, pp. 139-140). Mature assets tend to sell for more than book value. Premiums are, in fact, typically lower for utilities than they are for the market overall precisely because utilities' returns are regulated and do not offer all the upside of an unregulated business (Vol. 3, p. 141).

These observations are highly consistent with findings other Canadian regulators have already made on the market/book premium issue. In rejecting the same argument Mr. Booth is making here, for example, the BCUC said:

“In considering the premium paid by KMI for the shares of TI, the Commission Panel is cognizant of the findings of the Alberta Energy Utility Board (“AEUB”) in its Generic Cost of Capital Decision, July 2, 2004 (Exhibit A3-1, p. 28)”:

“The Board also agrees that there may be strategic factors affecting the price that is paid to acquire a utility. The Board also recognizes that, in some cases, a premium might be paid for regulated assets in anticipation of significant future growth in rate base, to achieve geographic diversification or to obtain a foothold in a new market. The Board is not aware of the strategic factors that may have affected the price paid to acquire Alberta utilities in recent years.”

“The Commission Panel is aware of a number of strategic and fiscal factors that may have affected the price paid by KMI for the shares of TI. KMI can employ double leverage and can claim interest expenses in both the U.S. and Canada (“the double dip”) to make the acquisition earnings accretive. TI's oil transportation business has significant growth opportunities. To protect the financial integrity of TI's gas distribution subsidiaries the Commission has initiated “ring-fencing” conditions. The Commission notes that Moody's Investors Service has announced that it is satisfied with the “ring-fencing” conditions imposed by the Commission and that the downgrading by Moody's of TGI was unrelated to the transaction. There is no evidence before the Commission that any of the premium paid by KMI will be included in either of the Companies' rate bases and

recovered from their customers. The Commission's role is to determine a suitable capital structure for the Applicants and return on equity for a benchmark low-risk utility and the KMI/TI transaction is not relevant to the Commission's determination."³²

The Financial Crisis and Its Aftermath

Finally, Mr. Booth claims that the ROE formula has only malfunctioned during the recent period of financial instability and that, since the recession is now over, things will return to normal.

Union submits that the ROE formula was mis-specified from the outset and has, therefore, not generated a fair return for a considerable period of time. Further, Union does not share Mr. Booth's simplistic prognosis for economic recovery.

Mr. VanderWeide advanced six tests for whether the OEB's ROE formula produced a fair return. The first five of those tests are all based on data that extend well beyond the recent period of financial instability (in some cases going back to 1956). Mr. VanderWeide's analysis, therefore, suggests that the ROE formula has failed to provide a fair return for some time. In this regard, his conclusions are shared by the expert opinions of Concentric, Ms. McShane and Mr. Dalton. Even Mr. Akman, for whom the recent financial crisis was a significant catalyst for reassessment of the ROE formula and allowed ROEs, makes the point that during the credit bubble, credit was easy to get and that this "masked" underlying problems with risk premiums and the formula based return. In Union's submission, Mr. Booth stands alone in his assertion that it was only temporary, and now self-corrected, financial circumstances that created anomalies in the operation of the ROE formula in late 2008/early 2009.

Even the casual observer of the financial press would find it hard to share Mr. Booth's optimism regarding the end of the financial crisis. Unemployment remains high and consumer spending severely restrained. There is much speculation about the likelihood of a second round of defaults on debt obligations (with attendant consequences for small to medium sized banks) arising out of the commercial sector, such as shopping malls and large scale residential and commercial tenant complexes. It is, in short, by no means clear that things are "back to normal" as suggested by Mr. Booth.³³

8. Conclusions/Recommendation

In Union's submission, it has become clear, beyond any doubt, that the OEB's ROE formula embodies fundamental flaws and is not producing a fair return. These potential problems were, indeed, foreseen by the OEB in 1997, and their detrimental impact has come to pass. The recent financial crisis did not cause, but has certainly highlighted, these flaws.

In Union's submission, the long Canada bond yield, given its vulnerability to the vicissitudes of monetary policy, does not represent an appropriate starting point for the risk free rate. The market risk premium employed at the outset was too low to start with, a problem compounded by

³² BCUC, Terasen Gas Inc. and Terasen Gas (Vancouver Island) Inc., Decision March 2, 2006, p. 13.

³³ See also Ms. Zvarich's discussion of the economic outlook and potential "recovery", Vol. 1 pp. 56-69.

the adoption of a beta coefficient of .5, which further reduced the allowed return. Most importantly, the adjustment factor of a 75 basis point change in ROE for every 100 basis point change in the long Canada bond rate was demonstrably mis-specified. Empirical studies by Mr. VanderWeide, Concentric, Ms. McShane and Mr. Dalton filed in this proceeding have all shown that the relationship between long Canada bond rates and cost of equity implied by the .75 coefficient has been significantly overstated. From the outset of the formula approach, the relationship has been, in fact, closer to .50 than .75. In other words, in a period of declining Canada bond rates, the formula has consistently overstated the decline in ROE by 25 basis points in each year. This mis-specification, more than any other single factor, appears to account for the significant discrepancy of roughly 200 basis points that now exists between the ROEs of U.S. and Canadian utilities of comparable risk.

The fair return standard requires the OEB to establish rates which provide Ontario's utilities with the opportunity to earn a return on invested capital comparable to the return available for investments in other enterprises of similar risk. Further, it is in ratepayers' interests, and the public interest, for Ontario's utilities to earn returns sufficient to foster investment in new and replacement infrastructure.

What the analysts and cost of capital experts have been saying for some time has been shown in this proceeding to be true. The formula is not working. This has also been recognized in two landmark decisions of the NEB:

1. the TQM Decision; and,
2. the October 8, 2009 Decision suspending the operation of the NEB's 1994 ROE formula altogether.

In the face of overwhelming evidence and its well established legal obligation to allow a fair return on invested capital, the OEB has no alternative but to reset the Ontario utilities' ROEs and to adopt a new adjustment mechanism that better tracks changes in the real-world cost of equity. In the Ontario context, where dozens of electricity distributors are at various stages of a scheduled rebasing/incentive regulation program, the NEB approach of simply suspending the operation of the formula on a going forward basis is not workable and would lead to great confusion and unfairness. There must, therefore, be an immediate adjustment to the base ROE and the adjustment mechanism itself must also be changed.

The extent of the *process* required to implement new ROEs and a new adjustment factor in Ontario is for the OEB to determine. However, it is Union's recommendation that base ROEs for Ontario's regulated utilities needs to be increased immediately by 200 basis points. The adjustment mechanism should be changed to a .50 coefficient based on investment grade utility bond yields. Any new formula should be open for review by way of individual application at any time but should be subject to automatic review every three to five years. Capital structure/equity ratios commensurate with those employed in the U.S. by comparable risk utilities should be implemented on a utility specific basis as the opportunity presents itself in the course of ongoing rate proceedings.