September 8, 2009

BY EMAIL & BY COURIER

Ms. Kirsten Walli
Board Secretary
Ontario Energy Board
2300 Yonge St, Suite 2701
Toronto ON M4P 1E4

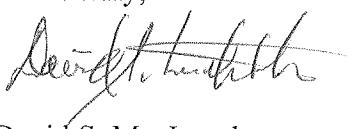
Dear Ms. Walli:

Board File No. EB-2009-0084
Consultation on Cost of Capital – Issues List
Comments of Energy Probe

Pursuant to the letter from the Board, issued July 30, 2009, which provided the Issues for Discussion at the Stakeholder Conference, attached please find three hard copies of the Comments of Energy Probe Research Foundation (Energy Probe) for the Board's consideration. An electronic copy of this communication in PDF format is being forwarded to your attention.

Should you require additional information, please contact me.

Yours truly,



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EB-2009-0084

Ontario Energy Board

IN THE MATTER OF a consultation by the Ontario Energy Board on the Cost of Capital for Electricity Distribution Companies.

COMMENTS OF
ENERGY PROBE RESEARCH FOUNDATION
("ENERGY PROBE")

September 8, 2009

IN THE MATTER OF a consultation by the Ontario Energy Board on the Cost of Capital for Electricity Distribution Companies.

Issues for Discussion at Stakeholder Conference

Responses to the Board's Issues

Issue: FAIR RETURN STANDARD

1. **What method(s)/test(s) might the Board formally consider to determine whether the return on capital meets: (i) the comparable investment standard; (ii) the financial integrity standard; and (iii) the capital attraction standard?**

EP Comment:

A variety of tests are available, including the Comparable Earnings Test, the Equity Risk Premium test, Weighted Average Cost of Capital etc. Note, however, that the standards to which these tests are applied are essentially legal standards drawn initially from the U.S. statutory framework as modified by the Courts, and apply to the return to the equity investor.

Since the standards follow from statute or statutory interpretation, the regulator's decision to accept or reject a test appears to be a matter of law. However, as in other fields such as competition law, the meanings of the standards cannot be determined solely with reference to the statutory wording. Accordingly, the decision to accept or reject a proposed test may turn on various factors such as ease of implementation as well as consistency with the statutory objective.

The legal standard for setting the return to equity in the U.S. framework is found in the *Hope* decision:

> **"The return to the equity owner should be commensurate with returns on investments in other enterprises having corresponding risks. That return, moreover, should be sufficient to assure confidence in the financial integrity of the enterprise as to maintain its credit and to attract capital."[1]**

Advocates of the traditional interpretation read *Hope* in an historical fashion, i.e. that utility shareholders should receive returns commensurate with recent book returns on past investments made by other enterprises of similar risk. Thus, if industrials and utilities with the same risk characteristics as the regulated utility had book returns on equity of, say, 12%, then the allowed ratio of reported net income to net worth in the regulated utility should be 12%. Stated alternately, the regulated utility should be allowed to earn what it would have earned had its equity capital been invested in those firms. This approach identifies a particular approach to opportunity cost for the utility

In line with the traditional approach to comparable earnings, it is common in regulatory proceedings to analyze book returns on equity from a sample of similar companies.

The alternate approach suggested by finance theory is to define "commensurate return" as the rate of return investors anticipate when they invest in equity shares of companies with risks comparable to the regulated utility. This is a market rate of return, defined in terms of stock prices, anticipated dividends and capital gains.

So defined, the finance theory emphasizes the utility investor's "opportunity cost", what that investor expected to receive upon acquiring shares of comparable risk. This expected, market-based return is conceptually quite different from observed book returns on past investments.

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[1] Federal Power Commission et al. v. Hope Natural Gas Company, 320 U.S. 591 (1949) at 603

Second, the traditional approach as encapsulated by the Comparable Earnings Test ignores prevailing conditions in capital markets. In principle at least, merely allowing the regulated utility a book return on equity similar to other comparable companies does not address whether those returns are attainable in the prevailing circumstances. Regulators are well-aware of this and, even when regulating under the traditional approach, they do take capital market conditions into consideration.

A third objection to the traditional approach to establishing the equity return is the problem of finding a suitable class of firms with corresponding risks. Including unregulated industrial firms in the sample introduces firms that are presumably more risky than utilities. However, if the sample consists only of regulated utilities, then the current decision will reflect past regulatory decisions. Professor Myers has describes this approach as leading to a "dangerously arbitrary standard".[2]

Related to the sampling issue is the lack of any theory on the relationship between risk and book rates of return on equity. Finally, thus use of such book rates of return is subject to the measurement errors and biases of generally accepted accounting principles. These principles diverge even further from the market-based opportunity cost that drives the investment decisions of equity investors.

Where the investors' opportunity costs can be estimated accurately, their use ensures that standards set out in statute and court decisions will be met because such costs are prospective and reflect the conditions in capital markets. An approach that combines both debt and equity investors' expectations is the Weighted Average Cost of Capital in which the market-based costs of debt and equity are weighted by their shares in the capital structure that the utility intends to maintain.

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[2] Stewart C. Myers, "Application of Finance Theory to Public Utility Rate Cases", The Bell Journal of Economics and Management Science, Vol. 3, Spring 1972, pp. 58-97, at p. 63.

While Comparable Earnings Test and similar test within the traditional approach have gained historical acceptance, the standards set out in statute and judicial interpretation are better realized when tests that accord with modern finance theory and current conditions in capital markets are used.

The finance approach is consistent with the Fair Return Standard in the sense, not of fairness between ratepayers and investors, but rather in the sense of promoting the competitive outcome in a regulatory setting. If regulation is seen as a substitute for competition, then tests based on finance theory meet the standards when the utility's allowed rate of return is equal to its market-based cost of capital.

This is not to say that book value is irrelevant. Indeed, there is a well-understood circularity involved in assessing the utility's rate of return from its current stock price. Unless regulators adopt the goal of confirming investor expectations by maintaining the stock price, it may be preferable to apply a market-based rate of return to the book value of the rate base. Alternatively, a market value of the rate base could be established from cash flow information rather than stock prices.

2. Is the current deemed capital structure appropriate? If not, what alternative(s) might the Board consider?

EP Comment:

A deemed capital structure is required when a utility is government-owned or is operated as a division of a parent holding company. Where a utility is a subsidiary of a parent holding company and is operated on a stand-alone basis, a deemed capital structure is not required.

Many distribution utilities are government-owned and their financial structure reflects government objectives that may result in a capital structure that differs substantially from that of an investor-owned utility that seeks to maximize the

market value of its shares. To the extent that a government-owned utility maintains an equity-oriented capital structure, the regulator should adopt a deemed capital structure.

As a general matter, investor-owned utilities maintain debt-oriented capital structures because the tax-deductibility of interest expense benefits the shareholders. Government-owned utilities should also have debt-oriented capital structures because the mandatory nature of debt service imposes a degree of discipline on the government owner that is reduced when the utility's capital structure is equity-oriented and dividends are accordingly discretionary.

Where it is needed, a deemed capital structure should therefore have a debt ratio of 55%-60%.

3. **Should the approach to setting cost of capital parameter values differ depending on whether a distributor finances its business through the capital markets or through government lending such as Infrastructure Ontario or through bank lending? If so, what would be the implications, if any, of doing so?**

EP Comment:

It is well-established that a company's cost of equity will be higher but the overall cost of capital will be lower when debt is raised in preference to equity. However, there are other financing considerations that affect a company's costs of equity and overall capital.

There is a well-known problem of information asymmetry.[3] Markets expect that managers have better information about the business prospects than do investors. Since managers will not issue equity when it is under-valued, markets infer that the announcement of an equity issue is a signal that managers feel that the stock-price is

[3] P. Asquith and D.W. Mullins, "Equity Issues and Stock Price Dilution", Journal of Financial Economics, v.15, 1986, pp. 61-90. Also, papers by Masulis and Korwar, and by Mikkelson and Partch in the same issue.

overvalued, i.e. that the good times that currently support the stock price are not expected to continue. On this inference, investors sell the stock following the announcement.

By contrast, a company that issues debt in preference to equity is signaling the market that its financial condition is such that new and existing debt service obligations will be met. The signal is the more credible because of the scrutiny of lenders in the decision to grant credit.

Such considerations explain why the stock price tends to rise when the company announces its intention to sell debt, and tends to decline on the announcement of a share issue. The alternate explanation, that the observed stock-price decline is due to "dilution" from the increase in the number of shares outstanding, is unconvincing because it disregards the fact that the proceeds of the share issue increase the firm's asset base.

In regulatory terms, the flotation costs (including the stock-price adjustment) that would be addressed in the revenue requirement are lower when debt is issued.

The research literature indicates that announcements of bank lending tend to lead to larger stock-price increases than announcements of bond issues. The explanation for this is that capital markets place greater confidence in banks' decisions because of their superior access to borrower information, including information from past dealings between the bank and its customer, when analyzing credit worthiness.

Correspondingly, research indicates that when a firm retires an outstanding debt and becomes less debt-oriented, its stock price tends to fall. The reason is that the announcement leads markets to believe that the firm will be subject to less scrutiny by lenders.[4]

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[4] R. Hull and R. Moellenbrandt, "Bank Debt Reduction Announcements and Negative Signalling", Financial Management, Vol 23, Summer, 1994, pp. 21-30.

The implications of a utility borrowing from a government agency should be studied. At first blush, however, it may well be that a utility that borrows from government in preference, first to bank borrowing and second to the bond market, is sending a signal to the markets that those lenders are unwilling to provide loans based on their assessment of the credit. If the theory of informational asymmetry is correct, then the utility's stock price should fall on the announcement, with the attendant flotation costs. Hence, even if the utility is government-owned, it should not be encouraged to borrow from government agencies.

ISSUE: COMPARATOR GROUP

4. **Does the analysis in the Concentric Report provide a reasonable foundation for satisfying the comparable investment standard?**

EP Comment:

The Concentric Report might have attempted to document the extent of investment in Canadian utilities by US investors and vice versa. This evidence would be a better basis for forming a conclusion on comparable investment returns. In particular, if Canadian and US utilities are truly comparable, then Canadian and US institutional investment portfolios should be similarly weighted between Canadian and US utilities.

To make this comparison, it would be necessary to examine institutional holdings during the period when allowed returns were similar. The Concentric Report indicates that this was true until 1997, but not since.

In a period where allowed returns were similar, it is expected that US institutional portfolios were more heavily invested in US utilities than Canadian utilities, and that Canadian institutional portfolios are more heavily invested in Canadian utilities than US utilities. However, this expectation requires confirmation by research.

More generally, the Concentric Report's discussion of the OEB adjustment formula does not give adequate treatment to the policy decision of the Bank of Canada to allow Canadian interest rates to fall below US yields. Since the OEB formula adjusts based on changes in bond yields, this policy change may be why the allowed utility returns per the OEB formula fell below US allowed returns.

As a final consideration, the Concentric Report may not have given adequate treatment to the different regulatory regimes. While there are undoubtedly many similarities between the Canadian and U.S. regulatory regimes, there may well be differences that affect the cost of capital. Regulatory risks such as the treatment of approved utility investments subsequently deemed not "used and useful" should be considered.

Therefore, while the Concentric Report may be correct that Canadian and U.S. utilities have similar operating and business risks, the policy environments and the extent of "home bias" in capital markets suggest that U.S. utilities are not comparable to Canadian utilities for the purpose of the comparable investment standard.

5. **If not, what might the Board use as a comparator group?**

6. **Were the Board to only consider the use of Canadian utilities as a comparator group, is there an issue with circularity, given that the ROEs of these utilities are, and have been established by a mechanism similar to that currently used by the Board?**

<u>EP Comment</u>:

Energy Probe submits that these two questions cannot be answered separately.

In principle at least, a comparator group should not be required. All of the information that is necessary to estimate a company's expected return on (i.e. the cost of) equity is available from the market, in particular its stock price. This follows because, as described in conventional finance theory, equity markets price

individual stocks such that companies of the same risk provide the same expected return. On this basis, one could estimate the cost of equity for a company simply from its own stock price and (a) its dividend yield and growth rate (DCF method) or (b) its beta, together with market indicators of the risk-free rate and the equity-market risk premium (CAPM method) or (c) the current risk-free rate plus its historic return over that rate (ERP method).

If the capital market actually works this way, then the relevant standards of capital attraction, comparable investment return, and financial integrity would be met for the company in question, i.e. a sample of one.

However, if the company is a regulated utility, an unusual problem arises when the market-based allowed return is applied to the book-value rate base. If the regulator infers the allowed ROE from the particular utility's cost of equity, then applying that expected return to the book-value rate base reduces the utility's earnings. If investors believe that this process will be repeated in the future, the stock price will also fall in anticipation of reduced earnings into the indefinite future. The price will decline to book value per share if the utility actually earns the allowed rate of return.

This approach, whereby the regulator lowers the stock price by adopting the market-based rate of return on equity, has been criticized as illogical. The alternative is to allow the utility to earn that level of profit that sustains the current stock price. Once investors understand that the regulator will always award the required rate of return on equity, they will bid up the stock price to that level.

However, confirming investor expectations is not the goal of regulation any more than the "goal" of equity markets is to confirm the earnings and stock-price expectations of investors in unregulated firms. The regulated utility is allowed to earn a particular return in a certain period of time, but the regulatory process does not guarantee that return (one reason being regulatory lag).

A different approach is for regulators to infer the applicable return on equity from a sample that is larger than the utility under review. The "comparable investment standard" requires that the return be inferred from "other enterprises of like risk". The problem is that for a regulated utility, there will be few companies of similar risk. This is especially the case where the utility is a natural monopoly and therefore regulation is required to maintain continuous service and service quality. The only enterprises that have their risks underwritten by the state in this way are other regulated utilities, certain other business enterprises with natural monopoly characteristics (such as cable television), and certain industrial firms such as large banks deemed "too big to fail".

In essence, the commitment of the state to the continued operation of the utility is a form of unmeasured additional equity that is not considered when the regulator determines the appropriate capital structure but is understood by the market and is reflected in the utility's stock price. As this unmeasured equity support is not available to unregulated industrial companies, they cannot be part of the comparator group.

If regulators infer the return on equity for a Canadian utility based only on a sample of similar regulated Canadian utilities, then the decision process becomes circular because the utilities in the sample are regulated in broadly similar ways and regulators use similar samples.

The problem of determining the appropriate sample can be mitigated to some extent by broadening the sample to include (i) other regulated entities such as cable television companies, and (ii) other heavily-regulated entities, such as chartered banks, where the state effectively underwrites their continued existence even though they are not natural monopolies. The expected return on equity of these companies may provide a better indication of the allowed return for the utility, especially if they are not subject to price regulation.

ISSUE: EQUITY RISK PREMIUM METHOD

7. **Should the ERP approach be reset given that when the formula was first established the reference bond rate was 8.75%?**

EP Comment:

The ERP approach consists of an initial ROE for a utility plus an automatic adjustment based solely on changes in the long-term government bond yield that is used as the risk-free rate. In the 1997 compendium, the Board identified the advantages and disadvantages of this approach and, apparently, no new concerns have arisen since the Board adopted the ERP approach in preference to other approaches. The fact that the reference bond rate has declined does not invalidate the approach.

However, if there is reason to believe that the equity risk premium for a particular utility has changed in a permanent way, then the formula for that utility should be reset in this regard. In the current economic and financial circumstances, it will likely take some time to determine whether the equity risk premium has changed permanently and if so, by what amount.

8. **Should the ERP approach be reset on a regular basis (e.g., every 4 or 5 years) to mitigate the issues described in the 1997 Compendium?**

EP Comment:

The Board might well review evidence on changes in the respective equity risk premiums of regulated utilities on a regular basis but 4-5 years is probably too short a time period for such review. This is particularly true in light of the statistical approach the Board has adopted to determine the ERP. Measuring the ERP every 4-5 years would likely result in revised ERP if only because of cyclical business conditions. Presumably the true ERP for a regulated utility should be measured over several business cycles.

Indeed, there is a growing view that basing the overall equity market premium for U.S. equities on equity returns beginning in 1926 has overstated that premium. Including returns from previous years reduces the market premium substantially.

In addition, the ERP approach itself should not be "reset" on a regular basis such as every 4 or 5 years as this initiates complex hearings on a regular basis. As the 1997 Compendium noted, one of the benefits of the formula approach is the reduced need for such hearings.

9. How might the Board address the potential issues arising from the application of the current methodology as a single, point-in-time calculation?

EP Comment:

It would appear that "single, point-in-time" calculations are required whatever approach is used. As long as the potential problems do not result in biased estimates, the Board can assume that any errors in particular points in time will be offsetting. This further supports the view that adjustments in the formula or the overall approach not be reviewed too frequently.

10. How should the Board establish the initial ROE for the purposes of resetting the methodology?

EP Comment:

If the utility is a stand-alone utility with traded shares, all that is needed is to re-estimate the ERP having regard to the most recent information. The first consideration is whether the equity risk premium has changed in a permanent way. If the Board determines that it has not, then the only remaining issue is whether the interest-rate adjustment formula results in good (i.e. unbiased) estimates of the relevant expected return on equity.

If the utility is not a stand-alone entity and/or does not have traded shares, then the Board has no alternative but to look at total rates of return earned by investors in a relevant sample of companies.

If the Board feels that resetting the ROE is required, it may wish to consider the CAPM approach if it has greater confidence in the measured overall equity market premium than in the ERP. It will be necessary to establish the value of beta from estimated betas of companies in the relevant sample. DCF estimates could be used in this analysis but only as a supporting calculation.

ISSUE: ERP AND DEBT RATE

11. **Is the government (of Canada) bond yield the appropriate base upon which to begin the return on equity calculation?**

EP Comment:

Yes, although there are several government bonds and it is not entirely clear that only one bond maturity, i.e. the 30-year bond, is relevant.

It is generally agreed that the treasury bill yield is not a good base because monetary policy usually works through influencing short-term rates including treasury bill yields. On the other hand, treasury bills, being short-term instruments, are the least likely to be affected by unanticipated changes in the rate of inflation.

There is a relationship among bond yields that could prove helpful to regulators in assessing the equity risk premium. When, as is normal, the yield curve is upward-sloping, long-term bond yields will exceed those on shorter-term bonds and treasury bills. Since the expected return on equity is a constant and may be measured with any long-term bond yield that is risk-free, this condition indicates that the equity-risk premium must be smaller when longer-term bonds are used as the base for the calculation of the expected return on equity.

Thus, the equity risk premium based on the 30-year government bond must be less than the premium on the 20-year bond, which in turn must be less than the premium on the 10-year bond. Indeed, the largest premium will be that over the shortest-term treasury bill.

Accordingly, if the equity risk premium using the 30-year government bond yield put forward to support a given expected return on equity is greater than the premium over treasury bills, then the regulator can conclude that the proposed expected return on equity is incorrect.

This test does not indicate that the 30-year government bond should not be used, nor does it support the use of the treasury bill yield. Rather, whatever risk-free yield is used as the base to estimate the expected return on equity, the equity risk premium should follow the above pattern in normal circumstances.

12. What is the relationship between corporate bond yields and the corporate cost of equity? Is this relationship sustainable?

EP Comment:

The general relationship on which regulators should rely is that the corporate cost of equity exceeds the bond yields of the corporation's debt. This is an equilibrium condition in capital markets that reflects the fact that debt ranks senior to equity in several respects including priority of interest payments over dividends and priority in the distribution of assets in the event of insolvency.

This equilibrium relationship does not rule out temporary periods when bond yields rise above the estimated corporate cost of equity. Such circumstances may reflect a dis-equilibrium condition or a measurement problem with the equity cost.

Apart from the general relationship, there is no formula that links the cost of debt and the cost of equity. It may be possible to measure the difference, but basing allowed returns on such measures provides an incentive for the utility to rely on debt of shorter terms.

ISSUE: INTERIM ADJUSTMENTS

13. Does the current approach used by the Board to calculate the ERP remain appropriate? If not, how should the ERP be calculated?

EP Comment:

The current approach ERP calls for the measurement of a utility-specific equity risk premium. The objective is to assess current investor expectations. However, the 1997 Compendium does not discuss the estimation process itself.

The concern may be raised that the ERP should be a good measure of current investor expectations to the extent that it is estimated from many years of observations of the stock price, or the stock prices of companies in the relevant sample. As indicated above, the estimate of the overall US equity market premium based on data from 1926 onward is too high.

Accordingly, the ERP should be calculated over a long period of time. This is necessary because, as noted in the 1997 Compendium, business cycles, inflationary expectations and investor sentiment change and may affect the statistical analysis. Inferring risk premiums from say five years of historical returns for the utility will likely not be enough to capture all of the influences and therefore will not provide a good estimate of current expectations.

Second, as noted above, when the yield curve is upward-sloping, the equity risk premium should be the smallest when measured as a premium over longer-term government bonds, and larger when measured as a premium over shorter-term bond yields.

Third, expected return on a utility's equity should exceed the bond yield on its longest outstanding debt.

ISSUE: "DEAD BAND"

14. Should the Board adopt a dead band? If so, what should the range of the dead band be?

EP Comment:

The local electricity distribution companies are either under 3rd Generation Incentive Regulation or moving toward it. Under the Boards' incentive regulation initiative, there is some encouragement for LDCs to achieve sustainable cost savings through best practices, reap that reward through increased earnings during the IRM period, and be rebased at the end of each IRM period, with those savings going to ratepayers going forward. A dead band appears to defeat that outcome. Also, this becomes another area for "evidence" to be filed and disputed during rate proceedings.

15. Should the Board adopt trigger mechanism(s)? If so, how often should the Board review the methodology?

EP Comment:

A trigger mechanism makes no particular sense in Canada. Under the Ontario regulatory regime, each LDC is able to come before the Board under its own volition if it feels it needs a rate adjustment, whether it is under an IRM or not. As well, the OEB can compel any LDC to come before the Board if it feels that a review is required. Finally, the wide use of deferral and variance accounts makes LDCs less risky than in the United States.

ISSUE: OTHER TESTS

16. **What is the appropriate test(s) to ensure the FRS is met (e.g. corroborating results for reasonableness relative to other benchmarks or through other methods)?**

EP Comment:

As indicated in the 1997 Compendium, all tests have advantages and disadvantages. The test selected by the Board will properly reflect a variety of concerns including theoretical consistency, cost, data availability, and plausibility in light of statutory requirements.

The Comparable Earnings Test ("CET"), which found favour before the general acceptance in the finance community of ERP and related tests such as CAPM, is increasingly less relevant in regard to the various standards articulated in the FRS. The principal reason for this declining regard for CET is that, by focusing on book rates of return, it ignores conditions in the capital markets that are the focus of the various standards in FRS. For example, CET does not refer to the opportunity cost of investing in a particular asset which provides the anticipated rate of return on the next (incremental) investment that the shareholder makes. Investors are interested in dividends and potential capital gains in relation to the current stock price that they have to pay; they are not interested in recent book returns.

Sampling issues are particularly severe when applying CET because it provides no measure of risk and it is therefore unclear which firms' returns should be compared. The lack of reference to capital market conditions is well-recognized by analysts in rate hearings, who usually supplement their CET analysis with capital-market-related variables.

The 1997 Compendium properly notes that the Discounted Cash Flow ("DCF") test is not relied upon by experts or the Board. In addition to the concerns raised there, it is worth noting that DCF is not grounded in a theory of risk and return, and so is

not necessarily consistent with, for example, diversification and the resulting impact on expected portfolio returns. Nor does it rely on the risk-free rate of return as the base for the expected-return calculation. At best, DCF is a supplementary calculation.

The current ERP approach does not explicitly recognize the distinction between diversifiable and non-diversifiable risk. Conventional finance theory indicates that, in efficient capital markets, expected returns do not include compensation to equity investors for bearing risks that they can avoid through simple diversification. However, it may be argued that because ERP uses the historical premium determined by statistical analysis, it will capture returns that arise only from those risks that the capital market evaluates. In this sense, ERP is consistent with CAPM even if it does not formally distinguish between diversifiable and non-diversifiable risk.

The only approach that takes this distinction into account is the Capital Asset Pricing Model ("CAPM"), which the Board has rejected, in part, because of the continuing debate over the measurement and sufficiency of "beta", the volatility indicator that measures market risk. However, CAPM remains the leading theory of capital market returns and is widely used

It would be appropriate for the Board to consider both ERP and CAPM estimates of expected returns and to give only directional weight to the DCF test. CET should be abandoned.

The Board may also wish to consider the conditions under which "market to book" ratios are useful. Where the utility has traded shares, this ratio measures the fairness of the regulatory environment, in the sense that a ratio below 1.0 indicates that investors believe that allowed earnings are too low to provide a return that maintains the value of their initial investment.

An important consideration is whether a utility's statement of financial position accurately measures the initial investments of equity investors. Particularly when the utility is not a stand-alone operation, generally accepted accounting principles can result in different measures of the rate base.

17. **What information might the Board need to definitively determine that market conditions are having an effect on the variables used by the Board's cost of capital methodology?**

EP Comment:

Please refer to question 18.

ISSUE: OTHER INDICATORS

18. **Should the Board consider monitoring indicators like these on an on-going basis to test the reasonableness of the results of its cost of capital methodology?**

EP Comment:

It is very difficult to definitively determine the changes in market conditions that have particular effects on the variables used by the Board's cost of capital methodology. In light of current economic and financial conditions, it is particularly difficult to know whether the overall equity market risk premium and the equity risk premiums of the utilities regulated by the Board have changed permanently and by how much.

There is no doubt but that the equity risk premium for the market as a whole rose substantially during the recent dramatic decline in share prices.

However, it should be remembered that prior to that broad decline in equities, stock prices had been rising sharply, and the equity market risk premium was falling. Whether a regulatory formula should be changed as a result of the recent decline raises the question whether that formula should have been changed in the opposite direction during the prior period of rising share prices.

It would be unwise for a regulator to adopt a policy of changing its formula in the event of increases in the equity market risk premium, but not in the event of decreases therein.

The broader issue is whether the regulator has the expertise and information to define "asset bubbles" (whether upward or downward) and to distinguish such periods from periods of permanent increases or decreases in asset prices. There is a body of opinion that even specialists in financial economics cannot do so accurately and regularly, and that acting on certain indicators may cause more harm than good.

19. What other key metrics used by financial market participants to determine whether financial markets conditions are or are not "normal" might the Board consider?

EP Comment:

As recent experience attests, the record of economists and financial analysts is not promising when it comes to determining whether financial market conditions are or are not normal. In hindsight, they gave too little attention to the growth of debt and risky assets by financial institutions, in part, because the markets in the United States expected that house prices would continue to rise. In Canada, the failed National Energy Program of the early 1980's was premised on the assumption that world oil prices would continue to rise.

Since most commodity prices are volatile, it is difficult to single out indicators that are particularly informative. However, conditions in real estate markets are receiving greater attention by financial regulators.

Energy Probe Research Foundation appreciates the opportunity to comment on these most important issues. Energy Probe was assisted in the preparation of its Comments by Lawrence P. Schwartz PH.D.

ALL OF WHICH IS RESPECTFULLY SUBMITTED

September 8, 2009

Energy Probe Research Foundation

Attachment: A – Resume of Lawrence P. Schwartz

LAWRENCE P. SCHWARTZ PH.D.

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Toronto, Ontario M6C 2J8

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lschwartz5205@rogers.com

OVERVIEW

Broad-based background in competition law and policy, economics and finance, bringing in-depth knowledge of theory and research to bear on litigation and strategic public policy issues:

- 25 years of business and professional experience
- Member, Competition Tribunal, 1998-2003
- 10 years teaching in MBA and undergraduate finance and economics
- Author of reviewed articles and studies in competition policy, finance, and corporate governance
- Active participant in volunteer organizations in business and not-for-profit sectors

AREAS OF PROFESSIONAL INTEREST & EXPERTISE

- Competition Policy, Trade and Regulated Industries
- Damages Quantification in Commercial Litigation
- Finance, Financial Markets and Regulation
- Statistical and Quantitative Research

HIGHLIGHTS OF PROFESSIONAL EXPERIENCE

Expert Appearances and Support

- **Expert witness in B-Filer v. Bank of Nova Scotia, 2006:** provided research, expert opinions and testimony regarding refusal-to-supply, Competition Act, s.75; applied "hypothetical monopolist" test in Competition Bureau abuse-of-dominance guidelines to market definition and assessed anti-competitive effects in upstream and downstream markets; identified "cellophane fallacy" in opposing expert's approach (counsel: Michael Osborne, Affleck, Green Orr, Toronto)

- **Expert economic adviser, YPG acquisition of Verizon Canada, 2004:** provided research on product and geographic market determination for submission to Competition Bureau in situation of high market shares and technological change in a network-product industry (counsel: Brian Facey, Blake Cassels & Graydon, Toronto)

- **Expert economic adviser, Financial Services Commission (Ontario) v. Transamerica Life** – prepared report on structure and regulation of variable annuities industry, 1998 (counsel: Paul. Bates, Lerner & Co.)

- **Expert witness in Canadian Bankers Association v. Minister of Finance (Canada), 1997:** provided expert testimony and report regarding the attributes of extendible bond yields and their impact on the calculation of interest owed to banks on defaulted Canada Student Loans (counsel: Brian Crane, Gowlings, Ottawa)

- **Expert economic adviser to Energy Probe,** ADR hearing at Ontario Energy Board on allowed rate of return to Consumers Gas, 1996/7. (E.B.R.O. 490)

- Unilever v. Proctor & Gamble, 1997 – valuation of change in market value of patentee due to patent infringement

- Warner Music v. Director of Competition and Research-refusal to deal, 1996

- U.S. tobacco litigation – allegations of price-fixing, 1998

- Canadian International Trade Tribunal SIMA s.76 re: gypsum board, 1997 (counsel: Riyaz Dattu, McCarthy Tetrault, Toronto)

- Orange County – securities fraud allegations 1977

- **Full-Time Lay Member, Competition Tribunal, 1998-2003:** adjudicated litigated and consent cases relating to mergers, predatory pricing and related matters under the Competition Act, in energy, retailing, and manufacturing
    - Evaluated evidence on market shares, demand and supply substitution, entry barriers, and efficiencies to establish market power and substantial lessening of competition in mergers
    - Applied "avoidable cost test" in predatory pricing under s.78, 79 of the Competition Act, focusing on sunk costs
    - Analyzed economic and financial reports and questioned expert witnesses
    - Evaluated remedial orders and drafted decisions

Related Experience

- **Advised** clients including Investment Funds Institute of Canada (mutual fund regulatory fees), Canadian Bankers Association (review of bank and trust legislation), bank-owned investment dealers (changes to "connected issuer" rules), Finance Canada (regulation of inter-dealer screen brokers), Office of the Superintendent of Financial Institutions (regulation of securities activities of chartered banks), Ontario Securities Commission (statistical analysis of "bought-deal" underwritings), and Ontario Ministry of Financial Institutions

- **Counseled** and participated in World Bank missions to Uganda, Tanzania and Pakistan: *evaluated* opportunities for stock exchange operations, *advised* central bank on financial sector policy; *recommended* and *obtained* agreement for key reforms to securities law and regulation

- **Conducted** research and prepared reports re: deregulation of entry and ownership rules in Ontario securities industry and implications for regulating holding companies and affiliates; *co-authored* proposals to re-structure consumer protection, leading to establishment of Canadian Investor Protection Fund

RECENT POSITIONS

Director/staff economist, Law & Economics Consulting Group, 2004-06/1996-98
Member, Competition Tribunal, 1998-2003
Principal, Lawrence P. Schwartz, Ph.D. Consulting Economist, 1990-1996
Previous positions in banking and finance

TEACHING EXPERIENCE

Schulich School of Business, York University, 1995-present

- MBA and undergraduate courses in introductory and second-level finance, management of financial institutions, and international financial management
- Appointed Adjunct Professor of Business, 1998-2003

Department of Economics, University of Toronto, 1992-1994

- Undergraduate courses in economic analysis of property, contract, tort law

EDUCATION

Ph.D., Wharton School, University of Pennsylvania, 1973-77
Program in Public Policy Analysis
Areas of study: microeconomics, econometrics, public finance, urban economics

B.A., University of Toronto, 1971
Areas of study: psychology, applied mathematics, urban studies

PROFESSIONAL AND COMMUNITY ACTIVITIES AND INTERESTS

Member, Law and Economics Committee, Competition Law Section, Canadian Bar Association
Member, Consumer Advisory Council, Technical Standards and Safety Authority, Ontario, 1997-2005
Member, Education/Human Resources Working Group, Toronto Financial Services Alliance, 2003-04

Member, Financial Services Advisory Committee, Consumers' Association of Canada, 1996-98
Director and volunteer vice president, Senior Care, Toronto, 1982-96
Recipient of Volunteer of the Year Award for 1992
Recipient of the Jack and Marie Freedman Award for 1994

REVIEWED RESEARCH AND PUBLICATIONS

"The Hypothetical Monopolist Approach Reconsidered-Part II", *Canadian Competition Record*, Summer, 2007

"The Hypothetical Monopolist Approach Reconsidered-Part I", *Canadian Competition Record*, Fall, 2005

"Price Standard or Efficiency Standard: Comments on the Hillsdown Decision", *Canadian Competition Record*, 1992

"Cost-Benefit Analysis in Canadian Securities Regulation", commissioned by the *Task Force to Modernize Securities Legislation in Canada*, August 31, 2006

"Do Institutional and Controlling Shareholders Increase Corporate Value?", with J.G. MacIntosh, in *Corporate Decision-Making in Canada*, R.J. Daniels and R. Morck (eds.), Industry Canada Research Series, University of Calgary Press, 1995

"Bought Deals: The Devil that You Know", *Canadian Investment Review*, Spring 1994, pp.21-26

"Improving Federal Deposit Insurance", *School of Public Policy, Queen's University*, Discussion Paper 93-01, April 1993

Courchene,T. with J. Todd and L. Schwartz, "The Future of the Ontario Securities Industry", *C.D. Howe Research Institute*, Observation 29, 1986

INVITED SPEECHES AND PRESENTATIONS

Various lectures on securities regulation and competition law to University of Toronto Faculty of Law (Professor MacIntosh) and Osgoode Hall Law School (Professor Roberts)

"The Hypothetical Monopolist Approach: Does the Government Always Win?", presented at the annual meeting of the Canadian Law and Economics Association, September 22, 2005

Discussant, Competition in Financial Services, C.D. Howe Conference on Competition in Regulated Industries, November 6, 2006, Toronto

Presentation to the Senate Standing Committee on Banking, Trade and Commerce, April, 2004 re: Bill C-249 to amend the efficiency defence for mergers

"Fundamental Economic Concepts for Competition Law", Competition Law Section, Canadian Bar Association Annual Conference, 2001, 2002

"Cost-Benefit Analysis in Mutual Fund Regulation", presentation to Infonex conference on "Managing Mutual Funds", Toronto, April 4, 2006

"Mutual Fund Governance under Policy NI 81-107", invited panel discussant at Investment Funds Institute of Canada Annual Conference, Toronto, October, 2005

"The Touchy Nature of Market Timing", presentation to Infonex conference on "Managing Mutual Funds", Toronto, April 5, 2005

Presentation to Senate Standing Committee on Banking, Trade and Commerce re: "The Canadian Approach to Mutual Fund Governance", May, 1998

"The Governance of Canadian Mutual Funds", presentation to Insight Conference on Mutual Fund Regulation, November 25, 1997, Toronto

"Lessons from the Integration of Banking and Securities", presentation to The Canadian Institute Conference on Banking and Insurance, Toronto, September 12, 1992

"Federal Financial Institutions Reform: Its Impact on the Securities Industry", presentation to the Insight Conference on Financial Services Reform, Toronto April,1992