Comments on
Board Staff's Proposals
Dated July 25, 2006
Regarding Cost of Capital

EB-2006-0088

Prepared by:
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August 14, 2006

1.1 Introduction:

I have been retained by Toronto Hydro Electric System Limited, on behalf of Enersource Hydro Mississauga Inc., Horizon Utilities Corporation, Hydro Ottawa Limited, PowerStream Inc. and Veridian Connections Inc. (the "Utilities") to consider the proposals submitted by the staff ("Board Staff") of the Ontario Energy Board (the "OEB") regarding Board Staff's review of local electrical distribution companies' ("LDCs") cost of capital for rate making purposes. I have also been asked to comment on the likely reaction to these proposals by the capital markets in Canada and whether these proposals would limit the LDCs' ability to attract capital on reasonable terms and conditions.

As to my qualifications to opine on such matters, I have recently concluded a thirty-year investment banking career in which I specialized in arranging debt and equity financing for regulated utilities in Ontario and other jurisdictions in Canada (see Appendix A). I have been involved in numerous M&A assignments in which regulated utilities or their holding companies were purchased or sold.

For the last ten years of my career, I have focused on the electricity sector and, more specifically, the restructuring of the Ontario electricity system. During this period, I advised Ontario Hydro on the restructuring of the industry and the unbundling of Ontario Power Generation Inc., Hydro One Inc. and the Independent Market Operator (now the Independent Electricity System Operator) into separate entities. The advice provided covered a wide range of topics including; (i) an appropriate capital structure for the new entities; (ii) appropriate discount rates to be used in the valuation of the assets of the entities (that is, the expected costs of capital of these entities); (iii) expected rates of return for regulated and non-regulated electricity assets; (iv) sources of short, medium and long-term financing for the entities; (v) achieving the best possible debt credit ratings from the credit rating agencies; and (vi) strategies to maximize value of the initial public offerings of debt and equity securities by Hydro One and OPG.

As a result of these and other activities, the firm, with which I was employed, led the initial public offering of debentures by Hydro One Inc., a transaction which totaled $1 billion and laid the platform for a program that has now grown to approximately $5 billion. A team which I led was also selected as co-lead underwriter of the proposed initial public offering of debentures by Ontario Power Generation Inc.

In the field of municipally-owned or other LDCs, I have acted as a co-lead underwriter for the initial public offering of debentures by Toronto Hydro Corporation, have advised Veridian on its initial credit rating presentation, have led a $105 million U.S. debt financing for Great Lakes Power; advised the City of Cornwall on the sale of Cornwall Electric and advised the City of Edmonton on the risks associated with its investment in Epcor Inc.

During 2004 and 2005, I led a team which assisted Fortis Inc. acquire the Canadian regulated assets of Acquila, Inc. in a competitive auction. These assets consisted of the electricity distribution assets formerly owned by TransAlta in Alberta and the electricity generation, transmission and distribution assets of West Kootenay Power Limited in British Columbia. Scotia Capital provided a $1.4 billion bridge loan for the transaction and subsequently led two equity transactions in the Canadian market totaling $550 million and two debenture issues for the operating utilities Fortis Alberta and FortisBC totaling $560 million in the Canadian public bond market. Fortis Inc. also raised $150 million U.S. which Scotia Capital co led. This financing was completed in the space of approximately 14 months.

In sum, I have extensive experience in dealing with lenders, investors and credit rating agencies and in-depth market experience with regard to regulated utilities accessing debt and equity capital in Canada.

1.2 The Process:

On April 27, 2006, the OEB informed interested parties of its intention to review the cost of capital for LDCs and develop a 2nd generation incentive regulation mechanism, these were to be key inputs to the design of a multi-year electricity rate setting plan for the years 2007 to 2010. As part of the cost of capital review, the OEB intended to use Dr. William T. Cannon's report dated December 1998 and entitled "Discussion Paper on the Determination of Return on Equity and Return on Rate Base for Electricity Distribution Utilities" as the point of departure and consider the evolution of economic and financial issues since the date of the report (see page 2 of the April 27, 2006 describing the process) as well as a broad examination of the business and financial risks currently faced by LDCs.

On June 19, 2006, Board Staff released a draft report detailing its initial proposals with respect to the cost of capital and the 2nd generation IRM as well as expert reports relating to both topics. The report on incentive regulation was authored by Dr. Mark Newton Lowry of Pacific Economics Group while the report on cost of capital was prepared by Dr. Fred Lazar and Dr. Eli Prisman of the Schulich School of Business.

Board Staff's proposals borrowed heavily from the expert reports but also reflected Board Staff's objectives, specific knowledge of the Ontario LDC sector and the regulatory environment in Ontario. Interested parties were encouraged to provide written comments on the initial report by June 30, 2006 with the objective of Board Staff providing a second draft report. Eighteen submissions were made by various parties.

A second draft report was published by Board Staff on July 25, 2006 and interested parties have been invited to comment further by August 14, 2006. This procedure will be followed by technical conference in mid-September.

Analysts in the capital markets have reacted negatively to the proposed process, favoring a generic hearing on capital structure cost of capital and return on equity issues similar to proceedings conducted by the National Energy Board, the Alberta Energy and Utilities Board and British Columbia Utilities Commission. In the view of financial markets, generic hearings create a base and the necessary guidelines to determine the annual adjustment of the ROE after a review of all relevant factors including various models to estimate the appropriate ROE for a utility of a specified risk level. Once the base ROE and adjustment mechanism have been specified, equity and credit rating analysts are able to forecast earnings, cash flow and other financial metrics based on the utility's capital expenditure plans. Board Staffs' current proposal lacks this clarity.

2.1 **Summary and Conclusions:**

Board Staff's thinking has evolved positively between the release of the first and second draft of their report on cost of capital. A number of major concerns highlighted by interested parties and issues that were causing significant dismay in the capital markets have been re-thought by Board Staff and have been re-formulated to offer a more reasonable compromise between ratepayers and investors. These issues include: (i) a revised proposal contemplating a common equity base financing rate base of up to 40% with the LDC having the option of issuing up to 4% of total rate base in the form of preferred shares within the 40% total equity envelope; (ii) Board Staff has provided a much more realistic assessment of the risks faced by LDCs in Ontario and, in the view of capital markets, have improved the assessment of the relative risks between gas distribution companies operating in Ontario and LDCs; and (iii) Board Staff appears to have given significantly greater weight to the requirement to significantly expand the electricity distribution infrastructure and recognizes that the sources of long term financing available to the LDCs for this expansion are limited to internally generated equity cash flows and medium and longer term debt obligations.

Unfortunately, Board Staff's proposal to rely solely on a variant of the Capital Asset Pricing Model ("CAPM") remains extremely controversial and is not supported by participants in the capital markets for reasons of fairness to the LDCs compared to other utilities operating in Canada. A revised application of the model by Board Staff continues to have many theoretical and application problems and fails to achieve "fair and reasonable" results. The first draft proposed ROEs from 7.52% to 8.36% while the second draft proposes ROEs from 7.50% to 8.37% for rate base assets acquired prior to December 2006. The stability of the ROE proposals from one draft to the next suggests that the CAPM is a reliable method; however, the model used in the second draft is significantly different than the model used in the first draft. The list of so-called "comparable companies" has been changed from the first draft to the second draft to exclude various companies and income trusts that were obviously inappropriate; however, the comparability of those companies added to the group remains a significant issue of concern.

The sensitivity of results from the proposed CAPM is also worrisome as the exclusion of only one company included in both sample groups constructed by Board Staff could revise the appropriate range for ROEs from the proposed 7.50% to 8.37% to a new range of 8.17% to 9.23%. This volatility of potential results along with the lack of clarity and transparency in the selection of "comparable companies" makes an overwhelming argument that different methods to estimate the initial cost of common equity capital should be tested by way of a generic hearing process.

Board Staff has proposed the notion of a split rate base with distribution infrastructure acquired in 2007 and beyond receiving a return on common equity premium of 50 to 150 basis points over the ROE for pre-2007 assets. While potentially helpful, this specific proposal may result in uneconomic decisions to build new infrastructure rather than invest in efficiency improvements for the existing infrastructure which may provide a lower cost solution. Other issues which are raised include the length of time that the new assets will receive a premium ROE and whether the entire common equity base should receive the premium for expansion given that all common equity bears the risk associated with the expansion. Board Staff and interested parties should not rush to this potential "quick fix" which, in my view, only masks the fact that the ROE proposed for the existing business is clearly inadequate and insufficient to attract new capital.

Review of Board Staff Proposals

3.1 Risk Analysis:

Capital markets allocate scarce resources by trading off risk for return. If two investments have identical risk profiles, the investment offering the larger expected return will be selected. Therefore a discussion of the required return for LDCs without a meaningful discussion of their total risk profile (business and financial risk) is pointless. The most recent proposals by Board Staff (July 25) is accompanied by a qualitative risk assessment of the LDCs which is necessary to put the ROE discussion in context. Board Staff notes at page 9 that there is "general agreement that regulated utilities are less risky than the broader market". Board Staff then makes a strong case that LDCs are more risky than regulated utilities, in general, and Ontario gas distribution utilities, in particular, based on the consideration of the following issues:

3.2 Policy and Regulatory Issues:

The policy framework and regulatory environment has been in a constant state of change since the LDCs have come under the jurisdiction of the OEB. Shortly after the initial determination of an ROE of 9.88% based on the Cannon formula in 1999, a decision was made to phase-in the ROE over a period of three years to ease the transition for consumers. Then, shortly after the opening of the real time commodity market in 2002, a government initiated rate freeze was imposed until 2006. Clearly these risks were not contemplated in the initial assessment of the LDCs or in the resulting ROEs and credit ratings. The risk associated with the volatility of electricity prices, which introduced short term funding risks for some LDCs, was also not contemplated in 1999. Following the government initiated freeze on rates, one major U.S.-based credit rating agency essentially put the entire industry on "credit watch" citing concerns regarding the policy framework and regulatory environment.

Board Staff comments that "one set of unusual challenges faced by the Ontario electricity distribution sector is the transition from one regulatory regime to another and the associated potential uncertainty"(Page 10). This regulatory uncertainty will continue for the LDCs through the 2nd generation IRM and the introduction of the 3rd generation IRM as well. The lack of consistency and stability in the regulatory environment as well as the potential for government intervention are viewed as significant risks for the electricity distribution sector by the capital markets. Policy or regulatory changes are not perceived to be significant risks for gas distribution companies in Ontario.

3.3 Capital Expenditure Issues

Board Staff recognizes (at Page 13) that LDCs face the "need for significant expansion of investment in electricity distribution infrastructure for maintaining, enhancing and expanding the infrastructure and that this poses additional risks as compared to natural gas distributors."

3.4 Higher Electricity Costs

When the LDCs first became regulated, the outlook for electricity prices was much more benign. At this point in time, it is clear that electricity prices will continue to escalate for the foreseeable future as older lower cost generation is replaced with higher cost generation. The impact on the load of the LDCs as well as their ability to forecast the elasticity of demand under higher price scenarios is uncertain and this creates additional risk for investors.

3.5 Policy Mandated Programs

The policy decision to pursue an aggressive conservation program combined with the mandated installation of "smart meters" exposes the LDCs to higher investment costs as well as the risk of declining load over the longer term.

3.6 Summary

The above factors as well as the additional financial risks faced by the LDCs (discussed below) result in the capital markets viewing the LDCs as much riskier than the Ontario gas distribution utilities. Therefore, in order to attract capital to the LDC sector, the LDCs require a premium over the ROE granted to Enbridge Gas Distribution and Union Gas.

3.7 Capital Structure

The business risk profile of the LDCs clearly indicates that a higher common equity ratio than those awarded to Ontario gas distribution companies is required. I fully support Board Staffs' proposal of a 40% total equity base with up to a maximum preferred share component of 4%.

When comparing the equity ratios of the LDCs and the Ontario gas distribution utilities, in the view of the capital markets, two issues must be considered. The first issue is the greater business risk borne by the LDCs compared to the gas utilities discussed previously. The second issue is the greater financial risk borne by the LDCs, due to their limited financing flexibility. In practice, the LDCs have only two sources of long-term capital, earnings re-invested in the business and longer-term (10 to 30 years) debentures sold to institutional lenders in Canada. Unlike the gas distribution companies, the LDCs do not have access to the public equity markets and preferred share financing, while theoretically possible, is highly unlikely. Additional common equity advances from the

LDCs' shareholders are unlikely in the view of the capital markets as a result of expenditure downloading and the municipalities' own requirement for extensive infrastructure spending. These factors may force the payout ratios of the LDCs to increase over current levels. In order to preserve acceptable credit ratings and to maintain access to the longer-term segment of the Canadian bond market, a 40% equity ratio is required.

Board Staff's equity ratio proposal does not reduce the pressure on the ROE to provide robust interest and cash flow coverage for the LDC. From the perspective of lenders and credit rating agencies, the most important credit metrics are those which indicate the prospective borrower is well positioned to meet its operating costs and interest obligations out of operating cash flow with a reasonable margin of safety. A strong equity position accompanied by weaker cash flow and earnings performance results in higher interest costs and more onerous terms and conditions being necessary to attract new funds. If Board Staff's proposals regarding the ROE are accepted, I believe that credit rating agencies could reduce LDC credit ratings by as much as two notches reflecting the loss of credibility of the rate making process for the LDCs and their lower coverages.

At page 18, Board Staff address certain issues relating to the LDCs ability to attract debt capital. They note that few LDCs have attempted to issue debt in the financial markets and those that have encountered little difficulty. While Board Staff's observation is generally correct, I do not believe that this leads to any conclusions regarding future availability of debt funds. In the future, I anticipate that there will be substantial competition for funds between various sectors of the Ontario electricity industry. There will be substantial demand for funding of new generation projects, either financed by the private sector but backed by long-term power purchase contracts with the Ontario Power Authority (a quasi provincial credit) or financed directly by Ontario Power Generation (a provincially-owned generator that currently supplies about 70% of the power consumed in the province). The transmission sector, financed and operated by Hydro One, will also require substantial funding for the maintenance of the existing system and for expansion for new load.

The LDCs, as a group, could very well be the least creditworthy sector seeking financing and the most likely to be spurned if the financial performance and cash flow and interest coverage is inadequate. Given the current estimates of investments required to rejuvenate the Ontario electricity system, the availability of long-term capital is a major uncertainty for the LDCs and a strong justification for higher rather than lower ROEs.

3.8 Cost of Capital

Capital markets have become accustomed to the "fair and reasonable" treatment of utilities by regulators in Canada and, in the past, have been willing to accept lower common equity ratios, ROEs and coverage ratios than those awarded to utilities in other jurisdictions with comparable risks. The Board Staff proposals relating to the estimation of an appropriate ROE for LDCs fail to achieve the "fair and reasonable" standard of regulation.

The cost of common equity is not directly observable in the marketplace and must be estimated based on available and relevant information. Some would support the notion that the cost of common equity capital can be estimated with great precision based on mathematical models such as the Capital Asset Pricing Model; however, the results of such a model are subject to its underlying assumptions, many of which are rarely met, as well as the generally accepted view that the quality of the input data often determines the quality of the output.

It is for these reasons as well as various decisions by courts in the United States and Canada that regulatory tribunals generally review at least three methodologies in order to estimate an appropriate ROE for a utility. Each of the methodologies has its own well identified strengths and weaknesses; however, after reviewing and reconciling the often contradictory results of the different methodologies, regulators in Canada have been able to award returns which balance the financial integrity of the utility and its ability to attract capital with the interests of ratepayers to keep rates as low as possible.

Board Staff has failed to make a credible argument as to why this time tested system, which has been consistently used by the OEB and virtually all other boards in Canada, should be abandoned for only the LDCs. Based on Board Staffs' first proposal regarding the use of only the CAPM and the resulting ROEs, the reaction of capital market analysts was very negative, questioning the proposed process to estimate the ROE and characterizing the proposed ROEs as being confiscatory and not meeting the fairness standard (see BMO Capital Markets Pipelines and Utilities report dated June 27, 2006 entitled 2007 ROE Preview-The Ugly Get Uglier and Is There Trouble Brewing In Ontario?). In my view, the acceptance of Board Staffs' proposals with regard to the determination of an appropriate ROE would cause lenders and investors to reduce the amount of investment in the LDC sector.

3.9 Return on Equity Scenarios

The following comments are based on the analysis carried out by Board Staff:

- There is no justification provided by either Board Staff or Lazar and Prisman as to the use of 5-year and 10-year market returns from the TSE. Given the long-term nature of utility investment as well as the lack of stability of market returns over time, much longer periods including bear and bull markets should be used to estimate an investor's expected market return. Historical data for market returns in Canada exists for at least 50 years and relying solely on a 5-year or 10-year market returns increases the risk that the market return is incorrectly estimated;
- The market returns of the TSE are heavily biased to reflect the rise and fall of the tech sector in Canada in the period 1996 to 2001 and commodity price movements in the last five years and there is some question as to whether the TSE is a well diversified portfolio;
- The selection of "comparable companies" is highly questionable. For example, Board Staff has included Coast Mountain Power Corporation in both samples of companies. The capital markets would take the view that a development company, having reported no revenue in 2005 or 2006 and traded on the TSE Venture Exchange is definitely not comparable to regulated LDCs in Ontario. If Coast Mountain Power is excluded from the samples the long-term average levered Betas increase from .39 and .57 to .63 and .74 resulting in the proposed ROEs rising

from 7.50% and 8.37% to 8.17% and 9.23%. Other companies included in the samples could also be questioned. For example, both Fortis and Enbridge have substantially reduced their risk by diversifying their regulated operations between various domestic and international jurisdictions and this risk reduction is reflected in their extremely low Betas. LDCs, on the other hand, are dependent on only one regulatory body.

- No justification has been provided for moving from a 30-year Government of Canada yield based on a consensus forecast which was used in the Cannon formula to a 15-year or shorter-term yield in Board Staffs' proposal. The current derivation of the risk free rate is straight forward and reflects the term of the LDCs' assets. This or a similar approach is used in other Canadian jurisdictions thereby increasing the comparability of results. The actual derivation of forward rates as proposed by Board Staff is complex and the results would necessarily reflect a 3-month delay due to time lags in making the information available. Under their current proposal, Board Staff appears to agree that utility investment is a long-term undertaking; however, it appears to be unwilling to compensate the investor by including an appropriate term premium in estimating the cost of common equity; and
- Board Staff's proposal of ROEs ranging from 7.50% to 8.37% is lower than ROEs current available or expected to be granted to Ontario gas distribution companies (according to BMO Capital Markets 8.71% for Enbridge Gas Distribution and 8.85% for Union Gas in 2007). Board Staff has acknowledged that LDCs have greater business risk than the gas distributors. With no access to public equity markets, LDCs have greater financial risk than the gas distributors. Therefore, the result of the Board Staff's proposal is that higher risk LDCs would be awarded ROEs lower that less risky Ontario gas distribution utilities.

3.10 Premium ROE

Board Staff has invited comments as to whether a premium in the range of 50 to 150 bps should be included to provide an incentive for new infrastructure investment.

This could be a positive step in enhancing the credit of LDCs and bringing the proposed ROE to a level at which new capital could be attracted; however, the overall impact of the proposal will be different for each LDC and will depend on such factors as whether the LDC is in a high growth area of the Province or lower growth area or whether the LDC's existing infrastructure has been upgraded over time to achieve greater efficiencies and/or handle greater load. In my view, any premium awarded for expansion should be applied to the entire rate base rather than just infrastructure added in 2007 and beyond. Such an approach would encourage the upgrade of existing infrastructure with efficiency improvements at potentially lower cost than a new build. As well, the risk of expansion is borne equally by new and existing shareholders thus attempting to differentiate shareholder dollars too determine which is financing old versus new infrastructure is unfair.

Appendix A

Donald A. Carmichael

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Reputation for:
Successfully leading teams in complex acquisitions and financings in the energy sector

SCOTIA CAPITAL INC.	1996 - 2005
Managing Director, Investment Banking,	
Head of Power and Energy Industry Group	
RICHARDSON GREENSHIELDS COMPANY LIMITED	1993 - 1996
Director, Investment Banking, Head of Utility Finance Group	
MCLEOD YOUNG WEIR LIMITED, SCOTIA MCLEOD INC.	1975 - 1993
Managing Director, Investment Banking	

SELECTED ACHIEVEMENTS

Advised Ontario Hydro regarding the re-structuring of the $10 Billion Ontario electricity market as well as the formation, initial capitalization and credit ratings of Hydro One Inc., and Ontario Power Generation Inc. Lead team which raised $1 Billion in an initial public offering of debentures for Hydro One. Also advised Hydro One regarding LDC consolidation strategy.

Advised Fortis Inc. on the $1.476 Billion acquisition of Aquila's regulated distribution assets in Alberta and B.C. To fund this acquisition and other investments over the past five years, Mr. Carmichael lead a team which raised $1.87 Billion of new capital for Fortis, including the $630 Million of new common shares. Value of Fortis market cap has increased from approximately $800 million to $2.4 Billion.

Acted as Scotia Capital's primary advisor to the Province of Newfoundland and Labrador and Newfoundland and Labrador Hydro regarding the Labrador Hydro Project, a proposed $4 Billion hydro development on the Lower Churchill River in Labrador.

Advised AltaLink, L.P. regarding its initial capitalization as well as the financial metrics and structure to achieve an "A" credit rating. Lead team which raised $425 million for AltaLink.

Advised City of Edmonton regarding EPCOR Utilities Inc. with regard to valuation and business plans.

Advised Toronto Hydro Corporation regarding initial public offering of debt securities, strategy for Toronto Hydro Telecom and other corporate initiatives.

EDUCATION

Master of Business Administration, University of Toronto, Finance and Operations Research, Graduated on Dean's Honor Roll, President of Business Students' Council.

Honors Bachelor of Mathematics, University of Waterloo, Combinatorics and Optimization.