Cost of Capital/IRM Technical Conference
Ontario Energy Board File Nos.: EB-2006-0088/EB-2006-0089

Questions from the Coalition of Large Distributors ("CLD")

September 27, 2006

Part 1: Questions to Board Staff

A. Policy Objectives and Principles

1. Please reconcile the 6 Guiding Objectives contained in Board staff's July 25, 2006 Discussion Paper (pages 5 and 6) with the Board's legislated objectives pursuant to section 1 of the *Ontario Energy Board Act, 1998*.

2. Does Board staff consider further consolidation and rationalization of the Ontario LDC sector to be an implicit Guiding Objective in the Cost of Capital/IRM review? If so, please identify the policy origin for this objective (e.g. direction from the Board/direction from the Government of Ontario).

3. Please compare and contrast the Board staff's interest in promoting consolidation among distributors with the construction of the 2GIRM and the proposals on the rate making treatment of the cost of capital. Please provide an analysis of the consistency of these initiatives in achieving that interest.

4. During the Technical Conference counsel for Board Staff indicated his position that the Board has jurisdiction with respect to establishing distribution rates by Code. Please provide a copy of any legal opinion that the Board or Board Staff has obtained in connection with this matter. If no legal opinion has been sought at this time, will Board staff undertake to obtain a legal opinion in view of the stakeholder concerns expressed during the Technical Conference regarding OEB jurisdiction.

B. Cost of Capital

5. Please provide evidence that the floatation cost for new equity issuances (in Canada) is only 50 basis points.

6. What types of fees does Board staff's 50 basis point floatation cost adder include? For example, does it include syndication fees, legal fees, printing fees, "road show" fees, filing fees, etc.

7. Board staff's Discussion Paper dated July 25, 2006 notes that the current staff proposal has, as one of its guiding objectives, the promotion of economic efficiency by providing the appropriate pricing signals and a system of incentives for distributors to maintain an

appropriate level of reliability and service quality (p. 5). Please explain how a lower return on equity and a price cap formula provides such incentives for distributors.

8. Please indicate whether Board staff has carried out an analysis of the impact on Interest Coverage Ratios for LDCs with outstanding third-party debt from moving to a lower return on equity. If such an analysis has been carried out, please provide the results.

9. Board staff's Discussion Paper dated July 25, 2006 notes that staff has reviewed regulatory practice in several key Canadian and United Sates jurisdictions (p. 9). Please provide a summary table of all the jurisdictions examined, the findings from these regulatory jurisdictions, and clearly identify whether these jurisdictions dealt with electricity distribution companies.

10. Board staff's Discussion Paper dated July 25, 2006 notes 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 political uncertainty (p. 10). Board staff go on to say that this risk is addressed in its proposal (p.11). Please explain how Board staff has incorporated this risk into its return on equity calculation.

11. Board staff's Discussion Paper dated July 25, 2006 notes that the appropriate risk-less rate for regulated utilities is a smoothed average of zero coupon curves (p. 12). Please provide support for why Board staff feels that (effectively) a ten-year average interest rate (as used by Lazar and Prisman) is an appropriate risk-less rate for signalling the return to long-lived (30-year plus) distribution assets. Additionally, from the discussion between McShane and Lazar, it appears that the selection of 5, 10 and 15-year maturities was quite arbitrary and was not based on the term structure of the utility assets being financed. A 30-year maturity could be extrapolated from their modeling apparently. If so why has the 30-year not been used as the long-term risk free rate?

12. Board staff's July 25, 2006 Discussion Paper states that staff has derived the risk-less rate by focusing on the shortest and longest terms available (1 year and 15 years) for zero coupon bond data. Lazar and Prisman indicated at the Technical Conference that their data was sourced from the Bank of Canada. A careful examination of this data source shows that the Bank of Canada also publishes 20-year and 30-year zero coupon rates. Please explain why Board Staff has chosen <u>not</u> to use 30-year zero coupon data.

13. If Board staff recommends the implementation of a return on equity structure that provides a premium return for new infrastructure investment, please explain how Board staff envisions the mechanics of this structure. Will the higher equity return be used as the basis for a higher, blended ROE, for the LDCs overall rate base? Will the higher ROE only apply to the new capital portion of the rate base? If so, has Board staff considered the impact of such a structure on LDCs' accounting systems, financial statements, and financial ratios?

14. Board staff has indicated a preference for setting the deemed cost of new affiliated debt at the risk-less rate plus a bond market spread based on difference between the average rate of a suitable sample of corporate A/BBB bonds and the average rate for Canada bonds of

the same term structure (Board staff Discussion Paper dated July 25, 2006, p. 17). Please provide a table showing a suitable sample of corporate debt issuers with debt issued on 10-year and 30-year term structures.

15. Please calculate the return on equity by properly applying Dr. Cannon's methodology based on all relevant data inputs required by that methodology as at August 31st, 2006.

16. Please confirm that the representative equity market return data is the total return (i.e., the return including the reinvestment of dividends) of that index. Please also indicate the dividend re-investment rate and the amount of appreciation in the market index attributable to the dividend re-investment.

17. Please indicate whether an analysis of the CAPM using data without dividend re-investment within the market equity index was carried out, and if so, please report the results.

18. Please provide the ROEs that would have been generated by the Lazar and Prisman methodology over the past five years and compare these results to the returns granted by the Board and explain any differences.

19. Please identify all Canadian jurisdictions that rely solely on the Capital Asset Pricing Model when determining the allowed returns on equity.

20. Please identify the independent techniques or methodologies that Board staff relied upon to test and confirm the appropriateness of the staff's recommended return on equity approach.

21. Please provide the working papers, including all stated assumptions and data sets relied on, that confirm the proposed rate of return. Please provide the analysis supporting:

    - the need to revise the methodology and data supporting the determination of the return on equity; and

    - the advantages of the Board staff proposal versus the Cannon methodology.

22. Please provide Board staff's updated risk assessment of the Ontario electricity distribution industry. In particular, please provide detailed analysis of the risks to distributors associated with:

    - the Ontario Power Authority's Standard Offer Program;

    - the Ontario Power Authority's plan to contract with LDCs for CDM; and

    - Smart Meters.

C. Capital Structure

23. Please indicate why the Board staff proposal includes a deemed short term debt component and reconcile this proposal with the Board's plan to examine the working capital allowance as part of its 3 year work plan.

24. Please reconcile the Board's findings on NRG's capital structure (OEB File No.: EB-2005-0544) for the purposes of setting rates, and in particular the Board's reliance on NRG's actual capital structure, with the deemed capital structure proposed in the staff's Discussion Paper dated July 25, 2006. Please be detailed.

25. Please provide the capital structures of each company in the Board staff's proxy sample group. Please provide the weighted average cost of capital for each firm for the years 2001 – 2005, state all assumptions, state all supporting facts and state clearly whether the computed average is on a before or after tax basis.

26. Please describe the method for adjusting base distribution rates for any costs incurred as a result of a need to achieve compliance with a regulatory instrument. Please describe whether such costs could be treated through the proposed Z factor mechanism.

27. Some LDCs may incur increased costs that will not be directly recoverable from generation proponents as a result of anticipated amendments to the Distribution System Code and may incur additional costs to adhere to the anticipated Service Quality Code. Please describe the process for adjusting rates to permit the recovery of prudently incurred costs.

28. Please provide the date on which the Board's deemed cost of short term debt and carrying costs on variance and deferral account balances will be released.

D. Code Implementation/Process

29. Please clarify whether the Board staff intends to recommend to the Board that it create a Cost of Capital Code based on a new methodology for determining the allowed rate of return without the benefit of a public hearing designed and administered to thoroughly test the evidence. Please provide examples of previous Code development processes that dealt with similarly complex and key policies. Does Board staff believe that a Cost of Capital and IRM Code will impact LDC interests in a way that is comparable to the interests affected by other Codes that the OEB has promulgated in the past (like the Distribution System Code or the Affiliate Relationships Code)?

30. For the Enbridge Gas Distribution Inc. and Union Gas Ltd. proceedings on establishing return on equity (OEB File Nos.: RP-2002-0158/EB-2002-0484) please provide a table that identifies and chronologizes all the events, their respective dates and categorized as:

- Administrative/Process milestones;
- "Evidentiary" filings;

- Decision Making milestones (e.g. filing of Board staff's original discussion paper, revised discussion paper, etc.)

31. Please identify all other Canadian regulators that rely on a Code or other mandatory licence conditions or rules, for the purposes of establishing just and reasonable rates. Agencies should include those involved in regulating electricity distribution, transmission, natural gas and water/waste water services.

    For each example please provide:

    - a concise description of the process relied on to establish the Code/licence condition/rule;

    - the schedule of events that culminated in the making of the subject code/licence condition/rule;

    - a comparison of the enabling legislation of that jurisdiction to that contained in the *Ontario Energy Board Act, 1998*, as amended.

32. Please discuss the techniques available to the Board and to LDCs if the distribution rates established by adhering to the proposed Codes for any given rate year do not permit the adequate recovery of prudent costs incurred to provide distribution service.

33. Please identify and describe each step of a Code based rate setting process. Please confirm that the Board must issue orders setting just and reasonable rates.

34. Please describe whether Board staff intends to recommend that the Board establish a <u>formula</u> in the new Codes to establish Cost of Capital and IRM components or whether the Codes will simply establish <u>numerical values</u> for the key variables (e.g. the Codes would simply prescribe 9% ROE, 6% Debt Rate, 60/40 D/E Ratio, etc.):

    - if providing a formula in the Code is chosen, identify and describe:

        - where the Board/Board staff intends to source data to populate the formula;

        - how the Board/Board staff intends to select the point in time when the data is taken.

    - if establishing fixed numerical values for key Cost of Capital and IRM variables is the recommended Code approach, please explain:

        - how the numbers will be determined, from what source the data will be derived, and the process contemplated to adjust those numbers in future years.

35. Please provide the LDC filing guidelines that Board staff will rely upon for purposes of establishing just and reasonable distribution rates effective May 1, 2007. In particular, please provide direction on the criteria for seeking approval of variance or deferral

accounts and the criteria for disposing of any balances recorded in such accounts, both favourable and unfavourable, through rates.

36. Does Board staff believe that the views and assessments of the financial community are irrelevant in determining appropriate rates of return, deemed capital structures and more generally, regulatory rules for the companies that the Board regulates?

37. In developing its positions on issues related to capital structure and the cost of capital, did Board staff or the Board consult members of the financial community to assess their views on the appropriateness of the proposed approach, or have Board staff relied largely on the analyses provided by members of the academic community? If the financial community was consulted, please provide documentation of the discussions, copies of correspondence that was exchanged and details of the views or opinions that were expressed.

38. Reference: OEB Staff July 25, 2006 Discussion Paper, pages 17 and 20:

(a) Do staff anticipate any adjustment to ROE for

(i) the existing rate base; or

(ii) new infrastructure added in 2007 or beyond,

during the 2007-2010 2nd Generation IRM period once ROE has been established for 2007? If so, what will be the basis for adjustment, and more particularly, what will be the sources of the data used in the calculation of the adjustment?

(b) Will the 50-150 basis point premium discussed in Section 2.3.3 be adjusted annually? If so, what will be the basis for adjustment, and more particularly, what will be the sources of the data used in the calculation of the adjustment?

(c) What will be the sources of the data used in establishing the debt rate for the 2007 rate year (both the risk-less rate and the bond market spread)?

(d) Will the Code confirming the cost of capital to be used in adjusting annual revenue requirements for 2007 and beyond provide for any adjustments to the debt rate during the 2008-2010 period? If not, explain why not. If so, please describe the adjustment methodology, and the source of the data to be used in the revised debt rate calculation.

(e) If not, when do staff anticipate the next setting of the debt rate?

(f) Please indicate those changes in market returns that are tracked in the inflation proxy and those that are not.

Part 2: Incentive Regulation Mechanism Questions for Board Staff

39. Has Board staff performed any analyses to determine whether Ontario distribution utilities are more or less efficient than publicly or privately owned distribution utilities in the U.S., the U.K. or elsewhere? If so, please provide the analyses.

40. At p. 19 of the Staff Discussion Paper of July 25, 2006, Board staff indicates that its proposed approach for Ontario was informed by a report prepared by Dr. Mark Lowry. Evidently, less than 3 pages of Dr. Lowry's 88 page report (Second-Generation Incentive Regulation for Ontario Power Distributors, June 13, 2006, pages 86-88), are devoted specifically to a discussion of a 2^{nd} generation incentive regulation plan for Ontario distributors. Please provide copies of any additional analyses, reports or correspondence, prepared by Dr. Lowry or others, that Board staff has relied upon in arriving at its proposed 2^{nd} generation approach.

41. In calibrating the proposed price-cap rule, what analyses has Board staff relied upon to ensure that rates are sufficient so that utilities can meet their OM&A costs, their needed capital program costs and at the same time achieve regulated rates of return? Please provide copies of any such analyses.

42. At p. 19 of the Staff Discussion Paper, it is stated that "The objectives of the 2nd Generation IRM are to: provide regulatory certainty to distributors during the Rate Plan as several rate-related studies are carried out; drive efficiency improvements in the distribution sector; and lay a foundation for the 3^{rd} Generation IRM." Please explain how the proposed price-cap rule will drive efficiency improvements in electricity distribution. What new incentives are likely to be generated that were not already present? Please explain in what sense the proposal will lay a foundation for 3^{rd} Generation IRM, keeping in mind that at page 19 it is stated that "The approach suggested below is independent of the development of 3^{rd} Generation IRM."

43. At p. 21 of the Staff Discussion Paper, Board staff report that preliminary calculations of the "K-factor" indicate that for 2007, the value could be between -2% and +2% and for 2008 it could be between -1% and -3%. Please provide copies of the preliminary calculations that were performed. Could some utilities experience a two-year cumulative impact of -5%?

44. At p. 39 of the Staff Discussion Paper, Board staff proposes that the forthcoming 2008-2010 reviews be based on a forward test-year cost of service filing. Please provide any analyses or reasoning upon which this proposal is based. Would such an approach be consistent with a "British-style" approach to incentive regulation? Is Board staff recommending against an approach which would be based upon a multi-year filing?

45. Has Board Staff given any consideration to improving the incentive properties of the price-cap rule that has been proposed for the interim period? If so, please provide specific details. Have any mechanisms for ensuring that realized savings are retained for a reasonable period of time been considered? If such mechanisms were considered, please provide specific details.

46. Please provide Board staff's analysis of the appropriateness of proposing a higher productivity factor after a period of imposed distribution rate freeze and a period of protracted rate stability. Please analyze the advantages and disadvantages of permitting LDCs to file individual productivity factors.

47. Please analyze the correlation between:

- GDP-IPI and LDC costs; and
- CPI and LDC costs.

48. Please provide the staff's position and supporting rationale with respect to the Capital Investment Factor proposed by Hydro One's expert. Please describe any alternatives to such a factor.

49. Staff contemplate reviewing and refining the IPI methodology employed in 1st generation PBR for consideration in 3rd Generation IRM.

    (a) With 2nd Generation IRM to be in place for up to 3 years, are there any refinements to the GDP-IPI approach recommended for 2nd Generation IRM that staff would consider appropriate?

    (b) How has Ontario GDP-IPI differed historically from Canada GDP-IPI for Final Domestic Demand?

    (c) What adjustments could be made to Canada GDP-IPI for Final Domestic Demand in order to more closely approximate Ontario GDP-IPI data?

<u>D. Data</u>

50. Please identify and discuss the appropriateness of linking the term of the risk free rate to expected life of distribution assets. Please discuss the risk free rate used by bond and credit rating analysts. Please discuss whether the use of the zero coupon bond rate biases the allowed rate of return.

51. Please provide Board staff's working papers concerning the diagnostic statistics of the computed beta for the sample firms. Please provide the rolling 5 year beta and the rolling business cycle beta for each firm. Please provide the 90% and 95% confidence bands for the calculated beta. Please describe all normalizing calculations and supporting assumptions.

Part 3: Questions for Dr. Booth

52. Dr. Booth indicated that it is his perception that there is minimal risk attached to investing in regulated utilities in Canada. Have you performed empirical tests of this hypothesis, particularly with respect to electricity distribution utilities in Ontario? If so, please provide details of these analyses.

53. Dr. Booth suggested in his questions to E3 (the expert witnesses supporting Newmarket Hydro) that preferred share issuances have been done at effective yields below that of Canadian Government bonds. To corroborate this assertion, please provide examples of preferred share issuances in Canada compared with effective Government of Canada bond yields of similar terms to maturity on the date of said preferred share issuances. Please also elaborate on any special characteristics of the preferred share issuances that would cause their effective yields to be lower than Government of Canada bond yields with similar terms to maturity.

54. During the Technical Conference Dr. Booth stated that natural gas prices have exhibited higher volatility than electricity prices. Please provide empirical evidence (using volatility as measured by standard deviation or any other generally acceptable measure of volatility) that supports this assertion using natural gas prices at "Dawn" compared with the Hourly Ontario Energy Price from May 1, 2002 to August 31, 2006. Please note that this period encompasses Hurricane Katrina as well as the Terasen sale, both of which were referenced in the Transcript.

55. Dr. Booth states in his pre-filed paper that he supports deferral accounts as a methodology for regulators to lower a utility's risks. Please comment on whether you are familiar with LDCs' experience in Ontario with the OEB's use of deferral/variance accounts following electricity spot market opening, and provincial government dictates that stalled the clearance of deferral/variance accounts with significant balances.

56. Please comment on Board Staff's reliance on using only the CAPM as the method by which to set LDC ROEs, and in particular, on the particular formulation of the CAPM. Please comment on the appropriateness of the estimation period(s) used by Lazar and Prisman for this purpose and compare them with those that you have typically used in your testimony at other proceedings.

57. Please comment on whether the practical impediments currently preventing the majority of electric LDCs from accessing equity market financing (and their municipal shareholders from injecting any further equity) continues to support your view that common equity ratios for said LDCs should remain in the 35% - 36% range.

58. Has Dr. Booth ever advised a bidder in a competitive M&A transaction, if so, was the bidder successful? Does Dr. Booth agree that a significant M&A transaction can accomplish a number of positive effects on the buying corporation including the diversification of business risk, broadening and creating a more liquid market for the buyers common shares and providing greater opportunities for rate base growth with a corresponding increase in dividends to shareholders?

59. Is it Dr. Booth's view that the regulatory and policy environment uncertainty has stabilized for Ontario electricity distributors? Are you aware that the proposed regime is transitory as well, with a relatively short expected lifetime of one to three years? Are you aware that the proposed interim regime is not linked to the more permanent one to follow? Given that you support the ROEs being proposed by the Board, is it your prediction that – going forward -- rates of return realized by Ontario distributors will closely track the approved rates of return, as has been the case for regulated pipeline and gas utilities documented in Schedules 1 and 2 of your evidence?

Part 4: IRM - Questions for Board Witness Dr. Mark Lowry

60. What is Dr. Lowry's view on the efficiency of Ontario distribution utilities relative to those found in other jurisdictions? Has Dr. Lowry performed any analyses to determine whether Ontario distribution utilities are more or less efficient than privately owned utilities in the U.S., the U.K. or elsewhere? If so, please provide the analyses.

61. At Slide 62, of the presentation on June 21, 2006, Dr. Lowry suggests that the incentive power of performance based regulation is not always stronger than cost-of-service regulation, for example if the plan is of short duration. Has Dr. Lowry assessed the incentive power of cost-of-service regulation as an alternative to the proposed price-cap rule or was the proposal based largely on considerations of regulatory expediency? What additional incentives are created by the proposed price-cap-rule that are not already in place?

62. At Tr. p.4, September 21, 2006, Dr. Lowry states "We are doing a lot of incentive power research for the Board right now, using some really state-of-the-art techniques,…". Please provide details of the state-of-the art techniques being employed. Are they principally simulation based, or are they based upon empirical data from Ontario and/or elsewhere? Please provide details on the specific incentive mechanisms that are under consideration.

63. At Tr. p.4, September 21, 2006, Dr. Lowry states "another study was done by another consultant to the Ontario Energy Board for a similar sample period, and found that over a similar type of 10-year period that the productivity trend was 0.86 percent." Please identify the study to which Dr. Lowry is referring. Please provide an estimate of the precision with which the productivity value of .86 was calculated, (such as a standard error or a confidence interval).

64. At Tr. p.12, September 21, 2006, Dr. Lowry, in speaking of the price-cap rule states "And this is just essentially an attrition mechanism, anyways, to get us over a two- or three-year period." Although this terminology is used in some other jurisdictions, please explain what is being attritted in the Ontario distribution industry during this period.

65. At Tr. p.12, September 21, 2006, Dr. Lowry states "On the other hand, the way things have worked out in Ontario, utilities have been subject to incentive regulation now for a number of years and without an earnings sharing mechanism. So one would say that the incentive environment in the province has probably been pretty good over the last few years." Are the rate moratoria and similar government interventions which constrain distributor ability to achieve approved rates of return not a *de facto* earnings sharing mechanism? In which case, would not the opposite conclusion – that the incentive environment in the province has not been especially good – be more realistic?

66. At Tr. p.22, September 21, 2006, Dr. Lowry states "But we're probably not going be doing that kind of a British-style approach." Please provide the basis upon which Dr. Lowry has come to the conclusion that the British-style approach to incentive regulation

will not likely be implemented in Ontario? In the process of arriving at this view, did Dr. Lowry consult with Ontario distribution utilities?

67. Has Dr. Lowry given any consideration to improving the incentive properties of the price-cap rule that has been proposed for the interim period? If so, please provide specific details. Have any mechanisms for ensuring that realized savings are retained for a reasonable period of time been considered? If such mechanisms were considered, please provide specific details.

68. At Tr. p.16, September 21, 2006, Dr. Lowry states that “the risk of non-recovery of a power distribution investment is relatively low.” To which costs is Dr. Lowry referring? Are there any other costs that a distribution utility incurs associated with a new investment that may not be recovered if they are brought into service before they are recognized and approved by the regulator? In the absence of a mechanism for incorporating additional capital expenditures into rates on an on-going basis, is there risk of rate shock once the Board approves such costs?

69. At Tr. p.15, September 21, 2006, Dr. Lowry refers to “input price hyperinflation insurance between rate cases”. Please define what Dr. Lowry means by “hyperinflation” and the extent to which the proposed price-cap mechanism provides protection against such hyperinflation.

70. At Tr. p.12, September 21, 2006, Dr. Lowry states: “It is true that most utilities are public, and that is a point which Dr. Yatchew has mentioned, and that might speak to the idea that they will not be that responsive to the performance incentives generated by any plan.” Has Dr. Yatchew indicated anywhere in his submissions that publicly-owned distribution utilities “will not be that responsive to the performance incentives generated by any plan”? Or, has Dr. Yatchew taken the position that <u>conventional</u> price-cap may not be as effective and that additional attention needs to be devoted to incentive creation?

71. Dr. Lowry’s September 21, 2006 power point presentation indicates that a source of TFP growth is volume / customer growth. You also indicated that this volume / customer growth is typically higher in the gas industry than in the electricity industry.

    At Tr. pp. 15, 16 (September 21, 2006), Dr. Lowry states: *“Now, another dimension of productivity growth that you may not think of is volume per customer growth, because very often electric utilities have delivery volumes that are growing at a more rapid rate than their customer growth, and this creates a certain financial benefit to them that is material. And it's important for the regulators here in Ontario to know that the gas industry is a whole different kettle of fish, and they often have declining volume per customer growth. So there's a tendency for the appropriate X factors to be somewhat higher for power distributors than they are for gas distributors.”*

    This seems to be contrary to the experience of some LDC’s. As an example, the kilowatt-hour sales per customer for Hydro Ottawa are illustrated below.

Hydro Ottawa Volume Sales and Customers

	2005	2004	2003	2002	2001	1994
Total customers	278,596	274,040	269,205	264,535	258,755	230,055
kWh Sales	7,663,197,036	7,514,934,346	7,483,288,325	7,470,558,035	7,351,475,971	6,857,852,786
Average kWh per customer	27,506	27,423	27,798	28,240	28,411	29,810

Have you examined the volume / customer growth in Ontario? Can you think of reasons why this might be declining, rather than increasing, as experienced by Hydro Ottawa? If volume per growth is actually declining, would you agree that this would typically lead to a lower X factor?

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