IN THE MATTER OF the Electrical Power Control Act, 1994 and the Public Utilities Act

AND IN THE MATTER OF an Application by Newfoundland and Labrador Hydro for approvals of: (1) Under Section 70 of the Act, changes in the rates to be charged for the supply of power and energy to its Retail Customer, Newfoundland Power, its Rural Customers and its Industrial Customers; (2) Under Section 71 of the Act, its Rules and Regulations applicable to the supply of electricity to its Rural Customers; and (3) Under Section 71 of the Act, the contracts setting out the terms and conditions applicable to the supply of electricity to its Industrial Customers.

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January 12, 2003

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Cost of Capital

Methodology

Newfoundland and Labrador Hydro ("Hydro") is seeking a rate of return on its rate base commensurate with that of an investor owned utility.

Initially, Hydro applied for a 10.75% return on equity (ROE) factored rate of return on rate base ("RORB"). However, the rate of return sought by Hydro was subsequently lowered to the same rate of return awarded to Newfoundland Power following its 2003 GRA. President and CEO of Hydro, Mr. William Wells, commented on this change in his pre-filed evidence as follows:

> Having considered relevant factors, including the recommendation of Hydro's financial expert, Ms. McShane, who concluded that Hydro faces no less business risk than the typical investor-owned electric utility in Canada, including Newfoundland Power, the other regulated utility in this jurisdiction for which the Board recently approved a 9.75% return on equity, and to expedite this issue, Hydro is prepared to accept the same rate of return on equity of 9.75% for this Application. (Revised Application, Vol. I, Corporate Overview, p. 22, lines 16 to 22)

The issue of whether Hydro should be treated as an investor owned utility was addressed by this Board in Hydro's 2001 GRA. After reviewing the evidence tendered during the 2001 hearing, and the relevant legislation, the Board noted at p.42 of P.U. 7 (2002-2003) as follows:

> **The Board finds no statutory basis for treating NLH as an investor owned utility. The Board concludes approval in principal of NLH's request to be treated as an investor owned utility is not justified based on current operating characteristics. The Board believes NLH's request is premature in the absence of a sound plan by NLH of how it will achieve financial targets similar to an investor owned utility and what impact this will have on its customers. The Board notes that NLH's debt is guaranteed by the Government and this ensures NLH's continued access to the capital markets of the world.**

The Board noted that during the 2001 hearing, "a consensus existed among the cost of capital witnesses that NLH should be treated as an investor owned utility." (P.U. 7 (2002-2003), p.39)

In this hearing, Hydro's cost of capital witness, Ms. Kathleen McShane, and the Consumer Advocate's (CA) expert, Dr. Basil Kalymon, both confirmed that their respective opinion was predicated on the principle that Hydro should be treated as an investor owned utility. Cost of capital expert witness, Dr. Leonard Waverman, provided

an alternative view. In Dr. Waverman's opinion Hydro should not be treated like an investor owned utility.

All three experts agreed that the setting of a fair return was a question of determining Hydro's cost of capital.

Ms. McShane submitted that Hydro's cost of capital included the interest obligations on its embedded debt and the opportunity costs of the shareholder's equity portion of Hydro's capital structure. Ms. McShane further submitted that the opportunity cost of Hydro's shareholder's equity was equal to what an investor could earn on an investment of similar risk. This is based on the principal that a company must compensate a shareholder for the lost opportunity of the alternative investment, as the cost to the company for replacing the retained earnings would be equal to the cost associated with compensating a new shareholder. (Transcript, December 3, 2003, p. 160, line 21 to p. 162, line 23)

Dr. Waverman agreed that Hydro should be compensated for its debt obligations and the opportunity cost of its shareholder equity. However, Dr. Waverman was of the opinion that the opportunity cost of the shareholder equity was equal to the marginal cost of Provincially-guaranteed debt. This was based on the principal that the **cost to Hydro** for the retained earnings was the cost of acquiring new debt, as it was only new debt that Hydro could use to replace the retained earnings. Since Hydro does not issue common stock, the cost to Hydro for raising new capital is equal to the cost of issuing new debt.

Evidence was led during the hearing that the cost of newly issued Provincially guaranteed debt would be 5.83%.

Dr. Kalymon confirmed that his analysis and opinion was based on his understanding that "the current mandate for the regulation of Hydro requires that it be treated similarly to a privately-owned utility." (Transcript, December 4, p. 29, line 23 to p.; 30, line 4) In keeping with this position, Dr. Kalymon used market related data and standard financial tests to determine what a similar risk common stock equity investment would yield for the investor.

Thus, while all three experts agreed that Hydro should be compensated for its interest obligations on embedded debt and the opportunity cost of its retained earnings, there was a difference in opinion how to measure the opportunity cost of those retained earnings. Ms. McShane and Dr. Kalymon both submitted that the cost to Hydro of the retained earnings portion of its capital structure was equal to what a common stock investor would earn in a similar risk enterprise. Dr. Waverman suggested that the cost to Hydro for its retained earnings was equal to the cost to Hydro of issuing new debt.

Ultimately, the methodology used to determine Hydro's cost of capital must have a rational basis and to this end, the Board must ask itself whether it is satisfied that the approach as suggested by an expert is based on accepted and conceptually correct principles of financial theory and utility rate making.

If the Board finds that it is not appropriate to treat Hydro as an investor owned utility, it may wish to consider employing Dr. Waverman's approach as a suitable interim measure for determining the cost of capital. This methodology can be revisited if and when Hydro demonstrates, to the satisfaction of the Board, that it is behaving as an investor owned utility, and should be treated as such.

Range of Return and Excess Earnings

Whichever methodology is used to calculate Hydro's cost of capital, the Board may wish to consider implementing an approved range of rate of return similar in nature to what is used to regulate Newfoundland Power. This will provide Hydro with some financial flexibility.

The Board's financial advisors have suggested that the selection of a suitable range can only be made in the context of the Board's decisions on other financial matters such as the methodology to be used to calculate a fair rate of return, although "The range of rate of return prescribed for Newfoundland Power Inc. may be an appropriate starting point which could be adjusted, if necessary, to take into account the Board's decision on these other matters." (Grant Thornton, Supplementary Report, December 5, 2003, p.5, line 26)

Upon setting a range of rate of return, the Board may also wish to consider directing Hydro to establish an 'excess earnings" account. The establishment of an excess earnings

account would provide a mechanism, and regulatory certainty, for treating earnings in excess of what has been determined to be a fair rate of return.

The operation of the excess earnings account could be similar to what is used by NP.

AAF

Using an Automatic Adjustment Formula (AAF) to determine a rate of return between General Rate Applications is part of the regulatory framework used in this jurisdiction.

NP has been subject to an automatic adjustment formula (AAF) since 1998. A significant portion of NP's 2003 GRA was spent examining various issues that arose from the application of the AAF during the intervening period, resulting in the Board making changes to Newfoundland Power's AAF to improve its operation.

While certain lessons can be learned from the operation of NP's AAF, there was little direct evidence led during the hearing on how an AAF would be implemented in the context of Hydro's financial parameters. Accordingly, Grant Thornton have recommended that the Board call upon Hydro to submit a proposal for an AAF that could be implemented in time for its application to 2005 rates.

If the Board wishes to pursue this initiative, it should consider directing Hydro to submit a proposal by mid-2004 in order to allow ample time for its review by the Board's financial advisor and its implementation in the Fall of 2004.

Rate Design Issues

Wholesale Rate Design

After canvassing the historical record and the positions of the parties as stated during Hydro's 2001 GRA, the Board concluded that "**further evidence will be required from both NP and NLH before making a final decision**" on the appropriateness of implementing a demand/energy wholesale rate (P.U. 7 (2002-2003), pp 150).

With the exception of NP's COS expert, there was general agreement among the COS experts that an energy only wholesale rate did not reflect accepted cost causation principles. However, NP argued that the current energy only rate does reflect both demand and energy related cost factors. NP further argues that the introduction of a demand/energy wholesale rate will introduce unnecessary volatility in its earnings with little or no discernable benefit to customers. The other COS experts were of the opinion that the projected earnings volatility was in keeping with industry norms.

There are a number of issues that may arise on implementation of a new demand/energy wholesale rate. They include:

1. The degree of risk to be assumed by each utility.
2. The appropriate weather normalization methodology.
3. The treatment of NP's generation credit.
4. The appropriate costing and billing determinants.

Given that some of these issues may be better dealt with by the utilities themselves, the Board may wish to consider three options.

Option 1

This would involve implementing a new wholesale demand rate effective on introduction of final rates for 2004.

This option would require the Board, after evaluating the adequacy of the evidence, to provide clear directions as part of its order arising from this hearing on the nature and operation of the wholesale rate to be implemented. These directions would provide details on the following:

1. The value of the demand charge, or a range acceptable to the Board.
2. Whether there should be one or two energy blocks, and if more then one, the value of the ratchet expressed as kWh per month.
3. The value of the minimum billing demand.
4. Whether the wholesale rate is to be weather normalized.
5. An acceptable treatment for NP's generation credit.

Immediately following the Board's decision, Hydro and NP would have to negotiate and settle any outstanding prerequisite issues. Hydro would then report back to the Board on the result of these negotiations at the same time it submits its revised COS arising from the Board's decision on the GRA. A new wholesale rate would then be ordered and implemented as part of the final rates approved by the Board.

Option 2

This would involve targeting a January 1, 2005 implementation date for a new demand wholesale rate.

The Board could order Hydro and NP to attend a rate design hearing, technical conference or Board monitored mediation to take place midway through 2004. The forum would be used to allow the parties to resolve all outstanding issues involving the implementation of a new wholesale rate.

In order to improve the efficiency of the process, the Board may wish to provide prior directions on the nature of the wholesale rate that it wishes implemented. These directions would touch on the same issues as canvassed in Option 1, but may allow more latitude for the parties to negotiate terms. Nonetheless, the directions should include details on what the Board considers to be the fair cost allocation for the demand component, and whether the energy component should be one block or split in to two. The Board may also need to provide confirmation on whether the wholesale demand rate is to be weather normalized and what it considers an appropriate billing demand.

Option 3

This would involve postponing implementation of a new wholesale rate until a full long run marginal cost study is completed, and the results analyzed to see whether a demand wholesale rate is warranted, and if so, what it should be.

To avoid undue delay, the Board may wish to consider providing specific instructions on who is responsible for conducting and submitting the study on long run marginal costs, who is required to participate in the study, what their roles would be and the due date for the report.

The study would likely need to be reviewed by the Board's own advisors before deciding on what next step should be taken.

Lifeline Block

The Consumer Advocate recommended that Hydro introduce a new two tiered lifeline block for its rural isolated diesel customers. This request was made to address a perceived shortcoming in the current lifeline rate.

This issue was addressed as part of the negotiated mediation conducted by Dr. Wilson. The Mediation report stated as follows:

y. Hydro's current three block Domestic Diesel rate structure should be replaced with a two block structure with the first block equal to the Alternative Lifeline and the second block set so as to maintain revenue neutrality. Parties further suggest that, before its formal acceptance of this proposal, the Board seek comment on this matter from affected customers during the public participation days in this proceeding.

The Board should now seek the position of the parties on whether the proposed two tier, Lifeline rate is still supported.

In the event the Board feels that there has been insufficient evidence on the issue, it may wish to defer the setting of a new lifeline rate until further comment is obtained from effected customers.

Interruptible B Program

The Industrial Customers have submitted that Hydro should be directed to re-introduce, what is now, a lapsed Interruptible B contract for the Stephenville pulp and paper mill.

This interruptible program provided the Stephenville mill with approximately 1.3 million dollars in revenue each year as compensation for being subject to the possibility of having its service interrupted.

The Industrial Customers argue that the Interruptible contract was in fact a rate, and that therefore the Board has the jurisdiction to direct Hydro to re-introduce the program as part of the rates approved by the Board for Hydro's customers.

Hydro argues that the interruptible program is no longer needed in light of Granite Canal coming online in 2003. Hydro submits that Granite Canal ameliorates any shortfall in system capacity that was otherwise addressed, in part, through their ability to interrupt service to the Stephenville Mill. Hydro submits that the interruptible program was not a rate, but a contract between it and one of its customers.

Assuming that the Board concludes that the Interruptible program should still be offered to the Stephenville customer, the Board will need to determine whether it has the jurisdiction to order the re-introduction of the program as part of Hydro's approved rates.

During the 2001 hearing, the industrial customer, North Atlantic Refining Limited ("North Atlantic") sought an amendment to an industrial contract as proposed by Hydro.

In deciding the issue, the Board confirmed that under section 71 of the *Public Utilities Act*, and section 3 of the *Electrical Power Control Act*, the Board has the authority to approve the form of a contract as part of a rate as it is equivalent to setting rules and regulations (P.U. 7 (2002-2003), p.143).

Additionally, it should be noted that Section 70 of the Public Utilities Act states that a utility cannot charge a rate until it is approved by the Board and that Section 76 requires that the Board approve the rules and regulations of a utility.

Accordingly, the Board has the jurisdiction to order the introduction of an interruptible program for a customer as part of the utility's approved rates.

Energy Tax

The Intervenor, City of Labrador-Wabush, has submitted that the Board should make a specific recommendation to Government to adopt a new energy tax.

While novel in scope, it is submitted that this issue is in the exclusive domain of the Government of the Province of Newfoundland and Labrador. The Board is not a taxing authority.

This issue would be more properly addressed directly to Government.

RSP

Monitoring

By consent of all parties, Hydro has put forward a new rate stabilization plan (RSP) for implementation in 2004. The Board has, as per Hydro's request, already confirmed its acceptance of the new RSP.

The RSP, as originally conceived, was simple to describe and simple to monitor. However, it is clear that the RSP has grown to become a separate construct within the regulatory framework. As its complexity has grown, so has the level of difficulty encountered in monitoring its operation, and in understanding the interdependence of its many elements.

The Board's financial advisors have recommended "that the Board consider the appropriate reporting requirements of the proposed RSP to permit effective monitoring of the plan, including the impact on customers" (Grant Thornton Supp Report, December 5, 2003, p. 4, lines 12-14) and specifically to instruct Hydro "to provide all monthly activity or summarized quarterly activity to the Board in its regular quarterly reports" (p. 4, lines 20-22). Further, Grant Thornton recommended that Hydro conduct a review of the new RSP after 24 months of its operation.

Given that there have now been two significant changes made to the RSP since 2001, it would seem appropriate to maintain close scrutiny of the plan to ensure that it operates as expected.

Demand Side Management

A basic tenement of the regulation of monopolies is ensuring that resources are used in an efficient manner. Efficient economic allocation of limited resources is reflected in principles of rate making.

In the context of electrical utilities, there are generally two types of price signals. As stated by Stone & Webster in their "Review of Rate Design for Newfoundland Power" (Exhibit RDG-2), the energy price signals the need to either use or conserve natural resources whereas the demand price signals the need to either use or conserve capital resources. (Exhibit RDG-2, p. 4) Both price signals are important in ensuring the efficient allocation of resources.

Demand Side Management (DSM) is a term that is sometimes used to describe programs that encourage allocative efficiency by sending price signals that encourage energy conservation. In a broader context, DSM is used to describe programs that not only encourage energy conservation, but also encourage load shifting in order to conserve capital expenditures needed to build new plant.

Used in its broader context, the principal objective of any DSM program is to ensure that resources are being used in the most efficient manner possible. This requires a knowledge of system planning and the long run marginal cost of supplying energy and capacity. This knowledge is then used to develop a DSM program that reflects actual conditions, ensuring that the proper price signals are passed on to consumers.

These three factors – system planning, long run marginal costs, and DSM programs - are best addressed as part of an Integrated Resource Plan (IRP).

An IRP would address such issues as the adequacy and reliability of service, economic efficiency, the preservation of the financial integrity of the utility, DSM programs and supply resources, the minimization of risk, the compliance with government regulations and policies and the consideration of social and environmental impacts.

Given the difficulties in designing and implementing effective DSM programs, and the short term forecast shortfall in both energy and capacity resources for the Province, the Board may wish to consider initiating an IRP. The resulting report would provide concrete data on which a proper DSM program could be designed, and multi-year views for system planning issues. The DSM program, benefiting from actual data on the long run marginal cost of running the Province's electrical system, could better address issues such as the value of the interruptible program for industrial customers as well as the design of the wholesale rate.

Rate Base

Valuation

While the estimated or forecast rate base of Hydro has been used to set rates, Hydro has yet to have its rate base fixed and determined by the Board. It is suggested that the Board should now provide directions on this issue.

Hydro has submitted that section 17(2) of the *Hydro Act* precludes the requirement to conduct a valuation of Hydro's rate base.

Section 17 (2) reads:

> For all purposes of the *Public Utilities Act,* the rate base of the corporation shall include the property and assets of the corporation at their net book value but excludes investments in subsidiaries of the corporation.

In effect, Hydro argues that the normal regulatory process of reviewing a utility's rate base to ensure that all assets are used and useful has been statutorily waived as a precondition to those assets being included in the rate base. Pursuant to the *Hydro Act*, Hydro argues, all assets are to be included in the rate base at their net book value.

It is noted that section 17(2) of the *Hydro Act* does not specifically waive the requirement that Hydro demonstrate that all assets are used and useful. An alternative interpretation of section 17(2) could lead to the conclusion that those assets which are deemed to be used and useful are to be added at their **net book value** as opposed to some other measure, such as original cost. This alternative interpretation of section 17(2) would require Hydro to demonstrate that an asset is used and useful prior to its being added to the rate base.

Regardless of the interpretation of 17(2) that is selected, it is necessary to fix and determine Hydro's rate base effective on commencement of the regulation of the utility. All subsequent additions to plant can then be reconciled to this starting point.

Submitted this 12th day of January, 2003.

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Mark Kennedy
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