Supplementary Submission to the Public Utilities Board in the Matter of the Muskrat Falls Reference

The purpose of this submission is to supplement our submission of February 20, 2012 and to comment on new material which has been tabled into evidence since.

Capital Cost Estimates

We believe the Board should have more definitive capital cost estimates and not the Class 4 estimates that have been provided. The Board cannot provide a recommendation on which is the least cost option based on Class 4 estimates but should have access to the Class 3estimates which will be reviewed by Government in Decision Gate 3.

Load Growth

We question whether the load growth projected really justifies a project of this magnitude when only 40% of the energy will be used on the Island in the early years, while 100% of the costs must be recovered. When we examine the pattern of the load we find that the capacity deficit projected for 2015 occurs only during a short period of the year and policy action can be taken to modulate the peak. Incentives to introduce more efficient technology can contribute significantly to delaying both the capacity deficit and the energy deficit projected for 2021, under current projections, which allow for only modest conservation and energy efficiency.

The evidence from Philip Raphals and Winston Adams supports the impact of more aggressive measures to manage load growth. Furthermore we believe that relatively small projects can assure our near term energy future without a large scale investment in new capacity. Such a hiatus will allow the Province to weigh other options and to open up other avenues to meet our energy needs.

Departure from Traditional Cost of Service Ratemaking

In our presentation we expressed concern with the use of an unorthodox approach to financing and rate-setting. This approach calls for Nalcor Energy, the parent company of the regulated public utility, Newfoundland and Labrador Hydro, to enter into a take-or-pay power purchase agreement (PPA) with Hydro, the subsidiary company. Nalcor will develop Muskrat Falls. For the purpose of Decision Gate 2, the capital structure used was 100% equity. The plan is to depart from traditional cost of service regulation and to set rates below the cost of service in the early years. The wholesale blended rate will be an escalating supply price which rises in accordance with the projected rate of inflation. The cost of Muskrat Falls power will be blended with the cost of other on Island energy sources. The cost of Muskrat Falls power at Soldier's Pond will be high but the high cost will be "blended down" with the low cost hydro energy from existing Island sources, principally in the Bay D'Espoir power system. The shortfall in revenues during the early years will be recovered by government, the shareholder, in later years. In effect this is a subsidy from the general taxpayer to cushion the rate shock which full cost of service ratemaking would create. We have four major concerns with this approach:

1. There may be problems with financing, as indicated by the reply to CA-KPL-Nalcor 26. The question posed to Nalcor was as follows:

   Instead of using the 8.4% IRR, can Nalcor provide the COS Muskrat

Falls power price in year 1 (for the Muskrat Falls site plus TL) using the same assumptions as used for TL COS pricing regarding debt/ equity ratios, same interest rate for debt and the same return on equity?

The response given by Nalcor was as follows:

> *In an escalating supply price analysis framework, leverage of 75% debt is not financeable because the initial low sales volumes and associated revenues would result in inadequate debt service coverage as required in capital markets (underlining added). During the first 6 years of commercial operations there was insufficient cash flow for debt servicing as the debt service coverage ratio was below 1.0. For years 7 through 12, the debt service coverage ratio was below the minimum threshold of 1.4 times recommended by Nalcor's financial advisors.*

This means that with a normal capital structure this project is not financeable, thereby creating additional risk for the Province, leading to the decision to adopt a capital structure with a very high proportion of equity. Philip Raphals, in his presentation of February 23, 2012, pointed out (in Exhibit GRK-3) that cost of service rate-making would require that ratepayers pay substantially higher rates in the early years while the PPA pricing model preferred by Nalcor leads to a different profile of rates where future generations pay much higher rates. His calculations show a subsidy in 2017 of almost $400 million (Column 8(a) of GRK-3 less Column 7(b)). For each year until 2028 the cost of service exceeds the escalating supply price.

Nalcor has presented this shifting of the rate-making paradigm as being a pragmatic way to resolve a timing problem in the matching of costs with revenues. Others may argue that this constitutes a shift of the cost burden from present to future generations. In light of the long time horizon and the wide scope of the intergenerational impacts we see this as nothing less than a subsidy from the taxpayer to kick start the project.

2. It places all of the risk on the Province, the shareholder who owns 100% of the equity. This unorthodox capital structure may deprive the Province of the benefit of a potential federal loan guarantee because 100% equity means there will be no loan to guarantee.

3. The imputed cost of capital will be higher than it would be under a more "balanced" capital structure.

4. The legislation which governs ratemaking in the Province prescribes cost of service regulation. Section 9 of the Electrical Power Control Act provides that

> ***9.*** *(1) The rates to be paid by a producer or a retailer supplied with power under an order made under subsection 8(2) for that power shall be set by the public utilities board and shall be the total of (a) the amount of the cost of producing the power as determined by the public utilities board;*

The response to request for information PUB-Nalcor 46 discloses that the cost of Muskrat Falls power in the first year will be 21.4 cents per kWh at an internal rate of return of 8.4%.

The rates emerging from the interconnected option, based on PPA pricing, should not be compared with the rates estimated for the isolated Island option, which are based on traditional cost of service pricing. Particular care should be taken to inform the public that the projected rates, upon interconnection, are heavily influenced by a switching away from cost of service regulation in favour of PPA pricing, which brings lower rates in the early years which are intended to be offset in later years. The rates which ratepayers are required to pay in the early years do not cover the full costs. Another way of saying this is that ratepayers are subsidized in the early years or else that they pay only part of the actual cost and incur a liability for the shortfall. The Board needs to prepare a financial analysis which allows the rates to be compared with the same financial structure and the same cost of service pricing.

This indicates that there are challenges in financing this project arising from the fact that the Island load will use so little of the capacity of Muskrat Falls for some years. These concerns heighten the need for the Board to review the proposed capital structure, the departure from cost of service and the power purchase agreement to ensure that the options are being compared consistently and that costs are appropriately allocated. Furthermore, this information should lead the Board to examine carefully the costs and the projected prices for power in each year and for each option, as we had recommended in our February 20th submission.

Transmission Costs

The request for information CA-KPL 126 poses a number of questions. One of them is "does the cited cost include the transmission line". The response given is as follows:

> *The cost of the Labrador Island Transmission Link is not included in $214 /MWh provided in response to PUB-Nalcor-46.*

It has been extremely difficult to get a clear sense of the cost of Muskrat Falls power and we still do not know what will be the full cost of Muskrat Falls power, including generation and transmission costs. This information is of vital importance.

In the same response to CA-KPL 126, we learn that the $2.9 billion cost of the generation project, without allowance for cost of capital during construction, rises to $3.6 billion, when this cost is added. The response is as follows:

> *The in-service capital cost for Muskrat Falls assuming an AFUDC rate of 8.4% is $3.6 billion.*

When this$3.6 billion is added to the transmission line cost of $2.6 billion (Exhibit 5E, including AFUDC) the total project cost (not including the Maritime Link) is $6.2 billion and not $5.0 billion. Again, we emphasize that these are cost estimates are "commensurate with an Association for the Advancement of Cost Engineering (AACE) Class 4 Estimate (Exhibit 31)" (MHI Report, Volume II, page (92) and are subject to cost overruns of up to 50%.

Conclusion

We continue to believe that the PUB should be given the time to do its job properly and that the terms of reference should be expanded to allow consideration of other options.

Sincerely,

Ron Penney and David Vardy, Ratepayers

February 29, 2012