Submission to the UARB Concerning the Proposed Arrangements for Electricity from Muskrat Falls

The Act to which the Utilities and Review Board is required to respond says that:

"1. The Review Board must approve the Maritime Link Project if, on the evidence and submissions provided, the Review Board is satisfied that the project meets all of the following criteria:

(a) the project represents the lowest long-term cost alternative for electricity for ratepayers in the Province;

(b) the project is consistent with obligations under the Electricity Act, and any obligations governing the release of greenhouse gases and air pollutants under the Environment Act, the Canadian Environmental Protection Act (Canada) and any associated agreements."

The author is by no means an expert on electricity, but he has long experience in the practicalities of business dealings. He has successfully negotiated many large commercial transactions, including almost $1 billion of corporate acquisitions as CEO of The Maritime Life Assurance Company.

The submission will argue that both the process leading to the proposed business arrangement and the outcome are fundamentally flawed; that competent negotiation would lead to a more favourable outcome for ratepayers; and that there is no pressing need for a decision at this time. Furthermore, the flaws are so intrinsic that only a new and much simpler process can remedy them.

It is highly likely that the proposed business arrangement is not the lowest cost alternative available for ratepayers.

Therefore the Review Board should decline the application and invite the proponents to participate in a new process.

1. **The Board's decision is not about whether Muskrat Falls will be built nor whether it is a good project.**

The Manitoba Hydro submission in Newfoundland and Labrador on behalf of Nalcor argued that the project was sound whether or not the Maritime Link is built. The proponents have already committed themselves to building the generating facility and transmission from there to the Island of Newfoundland.

Labour costs in Newfoundland and Labrador are very high. The nearly complete nickel smelter at Long Harbour will cost close to double the original estimate. The developers of the Hebron offshore oil project have already built massive increases into their forecasts—currently $14 billion compared to a 2008 estimate of $5-$7 billion.

There is a material likelihood that capital costs for Muskrat Falls will escalate beyond Newfoundland and Labrador's fiscal capacity to manage.

Furthermore, there is no guarantee about the level of Maritime Link operating costs to be charged to Nova Scotian ratepayers. These could easily be subject to similar escalations – continuing for the entire life of the proposed business arrangement.

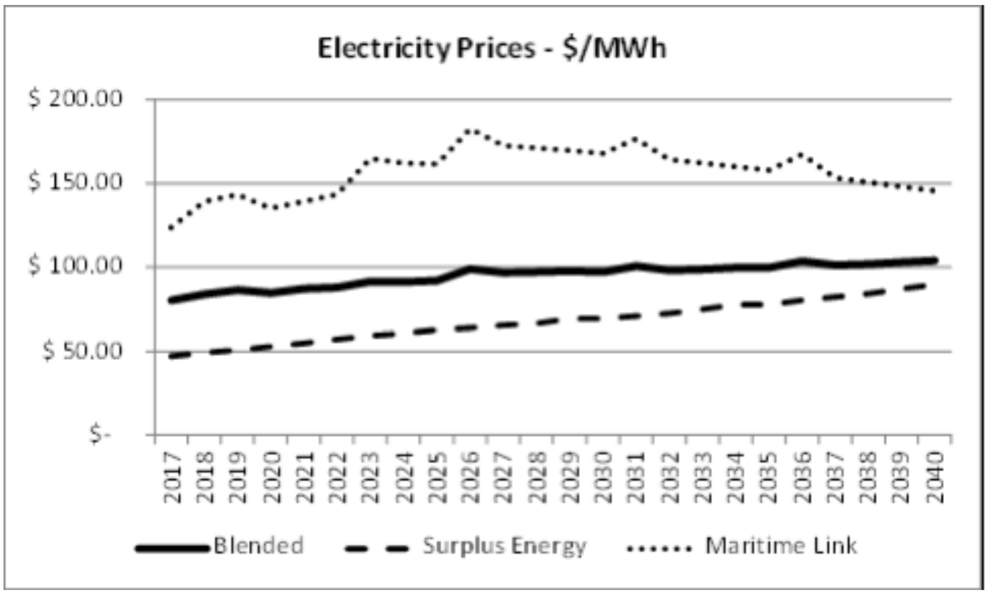
When the Review Board considers a proposal to build a facility in Nova Scotia, ratepayers receive the right to the benefit of that asset for as long as that lasts.

Instead what is proposed is a 35-year right to a fixed block of electricity with a small increment in the first five years.

It is extremely likely that the Maritime Link will be built whether or not this application is approved. The Premier of Nova Scotia has said as much. Completion of the Maritime Link is necessary for the Federal Loan Guarantee to be available for the entire project.

2. **As part of their advocacy, the proponents have used the possibility of buying less expensive power from whatever is left over after Newfoundland and Labrador's needs are met. There are no guarantees that any Surplus Energy will be available.**

The electricity to be generated is divided into three parts. The cost of the "Maritime Link" block is shown in the chart below, taken from the application.



That block represents 20% of the total production at Muskrat Falls. It is expensive, starting around $125 per MWh in 2017 and averaging more than $150 per MWh over the 35 year term of the agreement.

The $1.52 - $1.58 billion that Nova Scotia ratepayers are charged for the Maritime Link pays for the fixed block, and the possibility of purchasing the Surplus Energy at market rates.

The line called "Surplus Energy" represents the price that will be paid for power potentially available for transmission to Nova Scotia from Newfoundland. The chart shows it to be attractively priced at about $50 in 2017 growing to $90 over the 35 years. The average price of the Maritime Link block is between two and three times the price of the Surplus Energy.

Those projections assume that the Surplus Energy will represent 40% of Muskrat Falls generation.

In fact, we may receive much less than that. Consider the situation of ratepayers in Newfoundland and Labrador. They own 80% of the power. The projections of the “Blended” price of electricity assume that we get half of that 80%.

This is unlikely to happen. Under the proposed arrangement, Nalcor will only transmit electricity over the Link if it suits them to do so. Rather than accept $50 per MWh from Nova Scotia, Nalcor will want to keep the power for itself because the price is lower than its cost to run its thermal plants.

In fact, this is exactly the scenario imagined in the report from Manitoba Hydro that was commissioned by Nalcor to support its proposal in Newfoundland and Labrador. That report argued that Muskrat Falls was viable without the Maritime Link.

The report anticipates decommissioning the oil-burning Holyrood plant early in the 2020’s. That plant alone has capacity of 3 TWh or 60% of the Muskrat Falls capacity. All three of its units are used during the peak period from December to March.

Emera has pointed out that electricity through the Maritime Link need not come from Muskrat Falls. It could instead come from Newfoundland-based wind, or the large hydro project envisioned for Gull Island.

These are theoretically possible but it is not economical to build either at $50 per MWh. Nalcor is not going to build those projects to meet Nova Scotia’s needs if it means losing money on them.

This is a far different situation than existed two years ago when the Muskrat Falls project was taking shape. Market prices were twice as high in 2010 as 2012. At those prices new wind and hydro projects might have been viable.

But at those prices the wind and gas based alternative to Muskrat Falls would be much more competitive.

The economical argument for the Link depends on the assumption that the full amount of Surplus Energy will be continuously available to Nova Scotia. The deal's advantages disappear quickly as the amount available reduces. It is clearly a very bad deal for Nova Scotia if much or most of what we receive is the expensive Maritime Link energy.

3. Other factors could reduce the availability of the Surplus Energy.

As years pass, any remaining Surplus Power may be absorbed by Newfoundland and Labrador's growing mining and smelting sector.

According to Manitoba Hydro's report, ice storms could cause transmission in Labrador to be lost for a month or more, in which case any supply to Nova Scotia beyond contractual commitments will have last priority. Nova Scotia's coal plants will have to be maintained in usable condition against this possibility.

More importantly, access to the Surplus Energy (if there is any) does not represent a distinctive advantage to Nova Scotia compared to other jurisdictions. The same electricity is available to New Brunswick or Prince Edward Island or New England markets with a relatively small cost of transmission being the only difference in price. Both the CEO of NB Power and the Premier of PEI have been recently quoted as evaluating a substantial purchase. Such a purchase would greatly reduce the benefits of the Surplus Energy.

Perhaps in a few years' time, New Brunswick will make a long term arrangement with Nalcor power at a rate much lower than the NS Block. It could be at a price close to what is available from a Hydro Quebec (HQ) alternative. This would both eliminate the putative advantage of the access to Surplus Energy and further prove how excessive the proposed cost of the NS Block is.

The proponent's forecast of market is perhaps the best indicator of the price that would result (in addition to transmission costs) from a true competitive auction. It is manifestly what the proponent believes will be paid for power not subject to the high prices for the “Maritime Link” power.

4. **The proposed business arrangement, and in particular the timing and quantity of electricity provided, is designed for the benefit of the vendor, not for maximizing value to Nova Scotia ratepayers.**

An updated Integrated Resource Plan which would better define our needs has not been done, although there was plenty of time to do it.

The cost of electricity for the Nova Scotia Block is much more expensive than the marginal cost of producing power from most existing assets, including coal plants.

To meet federal environmental requirements and provincial requirements for renewable sources, the new power may not be needed before 2020. An arrangement designed for ratepayer benefit would use as much as possible (within federal and provincial policy constraints) of existing generating assets and use the Muskrat Falls power for the remainder.

This would require an increasing amount of power from Muskrat Falls. What is proposed instead is a level amount of power starting in 2017, perhaps three years before it is needed.

To this is added an increment of low value overnight power also starting in 2017, ostensibly in consideration for the fact the assets will last longer than 35 years.

The power is not needed in 2017. It would be much more valuable in the future.

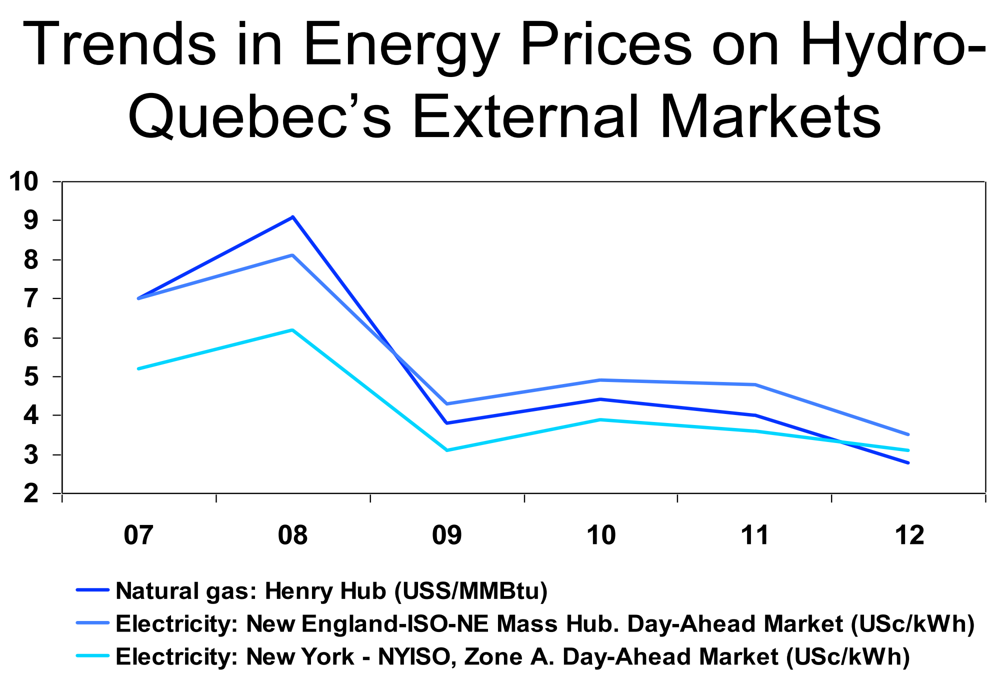
5. **The submissions by the proponents about the cost of a Hydro Quebec alternative cannot be viewed as objective or credible.**

The nature of the Nova Scotia regulatory environment is that regulated proponents make profit by having large capital projects on which they can earn a rate of return. They make little or no profit by importing power from other utilities.

This was undoubtedly why the proponents chose to present a proposal that maximizes their involvement in the capital investment.

A Hydro Quebec alternative that delivers power to the Nova Scotia border with New Brunswick would provide little profit margin for Emera or its subsidiaries. But it might be the best alternative for ratepayers, not only for price but also for suitability.

Energy prices have been declining rapidly (figures from HQ annual reports):



After reaching a historic peak in 2008, natural gas and electricity prices in northeastern North America dropped sharply in 2009, then rose slightly in 2010 only to fall again such that prices in 2012 were at their lowest in 10 years.

This has been reflected in the prices HQ has been receiving:

	2007	2008	2009	2010	2011	2012
Gross Exports (M MWh)	19.6	21.3	23.4	23.3	26.8	35.3
Price of exports per MWH	$103	$98	$68	$82	$54	$41
Gross export revenue ($M)	1,483	1,897	1,495	1,513	1,397	1,431

In the last two years alone they have gone down 50% and are likely to remain low because of competitive pressures from the abundance of shale gas in the United States. Today's prices, together with an increment for transmission, are indicative of what kind of starting price might be available from HQ.

The proponent's suggestion that HQ would have to build a 500 MW transmission line now in order to compete is incorrect. It again is based on what the proponent wants to sell, not what Nova Scotia needs.

To identify the best possible offer from HQ would require intensive and cooperative dialogue between Nova Scotia Power Inc. (NSPI) and Hydro Quebec – something that certainly has not occurred. That offer should provide power that meets Nova Scotia's needs, not the vendor's.

This dialogue has not occurred, nor is it possible for the Review Board's experts to reliably estimate how it might turn out when competitive pressures prevail.

6. There is more at stake in this arrangement than a terawatt-hour of power from Muskrat Falls.

Newfoundland and Labrador made a very bad deal with Quebec in the sixties – a deal that continues until 2041. Furthermore, Newfoundland and Labrador's position even then may be little improved if it does not have an alternative route for transmission to customers in Maritime

Canada and New England for this project and the proposed Gull Island project.

Quebec will be adding 1550 MW of capacity in four phases as a result of its Romaine project. Given its large and growing excess capacity, it will be very interested in an opportunity to compete on a level playing field.

In the heat of a well-managed competition, both sides will be focused on what expenses can be avoided or allocated elsewhere. Rate of return expectations will be trimmed. And all of that will happen before further amendments are made for the long term strategic implications of victory or defeat. This is the kind of auction that can provide excellent results for buyers.

Ensuring this kind of competition is not at all in the proponent's interest. It should have been the role of a government agency. Government has manifestly failed in its duty.

7. Competition is also possible on the cost of the Maritime Link itself.

The proposal locks in ratepayers for 35 years with very little residual risk to the proponents. For this they ask a rate of return on capital that is more than 500 basis point above their borrowing costs. Even though the interest rates can be largely locked in at the outset, they ask for a rate adjustment mechanism which, given today's very low rates, will almost certainly be up. It is possible that a competitive process might find investors willing to accept a lower rate of return.

Likewise, other capable project managers may be willing to bid a lower price for the actual construction of the Maritime Link. There is a reasonable argument for monopoly ownership of most in-province generating assets. That argument does not work for transmission to the province, especially since ownership will in any event revert to Nalcor. If the project fitted the natural monopoly model, the proponent would be NSPI – not a special purpose vehicle.

Competition among sellers is a wonderful thing for buyers. This is a very big buy and ratepayers deserve its advantages.

8. **The proposed arrangement involves ratepayers in an extraordinary array of complex arrangements between Emera , Nalcor, and various associated entities.**

Many of these arrangements relate to the power generation project that they have already commenced. The Board is even asked to commit itself to approving transmission arrangements that have not yet been made or submitted for review.

These are designed for the benefit of those entities and will be managed by them to maximize profits. It will be difficult and expensive for the Review Board to adequately oversee them, particularly since the proponent has asked for waiver of the usual code of conduct that normally governs affiliate transactions between it and NSPI.

Involvement of ratepayers in these arrangements should not be necessary. A more satisfactory proposal would minimize Nova Scotia's exposure to any capital or operating risk in Newfoundland and Labrador, or to future uncertainty as to how these agreements will operate. It would focus on the end price of the electricity, not the uncertain costs of the proponents.

9. **There is no urgent need for a decision**.

The power is not needed to meet provincial renewable energy requirements before 2020. Although an updated IRP has not been done, it likewise seems unlikely, given the loss of pulp and paper customers, that federal requirements will require this project to be implemented before 2020.

The cost of the Nova Scotia block is much higher than the marginal cost of generating from most existing assets, including coal plants. So if the only consequence of a slower process was to delay the project for a year or two, it would produce a lower long term cost for provincial ratepayers.

Many interveners have argued that the Board does not have enough time. The Review Board can create that time by saying no and by requiring the immediate commencement of a new Integrated Resource Plan.

10. Here are some reasons that HQ may be able to offer a more attractive arrangement.

Examination of the proponent's chart indicates that the Maritime Link power costs between two and three times as much as the market priced Surplus Power. If so, then it can be concluded that the cost of getting access to the market price is between half and two-thirds of the Maritime Link cost.

A reasonable estimate of that price for access would be $900 million. The question then is simply whether HQ can give more attractive access to market priced power.

a) A logical routing might be from the massive main transmission line on the north shore of the St. Lawrence, across to Riviere-de-Loup, and on to the New Brunswick border near Edmundston. HQ might take the view that this is a long term strategic investment and therefore should not be charged to customers. In contrast, the cost of the Maritime Link includes transmission from Bottom Brook to Cape Ray in Newfoundland, to which Newfoundland customers will have free access.

b) The line can then follow an existing right-of-way from the New Brunswick border to the Nova Scotia border.

c) That line will go right past the existing Mactaquac hydro facility which may have to be decommissioned during the next decade because of concrete expansion. This would ideally position HQ as a possible supplier to New Brunswick.

d) Unlike Muskrat Falls, HQ's construction plans are not entangled with a choice about transmission. Therefore they would be willing and able to make the quantity and timing of supply meet Nova Scotia's needs.

e) Given HQ's vast and diverse generating capacity, they would – unlike Nalcor – be able to guarantee availability of the full 500 MW of market priced power.

f) HQ can offer a much simpler arrangement, basically a fixed one-time cost for access to the agreed amount of market priced power. This avoids entangling Nova Scotia ratepayers in numerous complex agreements relating to generation and transmission outside the province.

g) The proponents express confidence that HQ cannot make a better offer. If so, they should have nothing to fear from a competitive process. Appendix A explores ways that the proponents could make their proposal more attractive.

CONCLUSION

This submission has argued that the process to date has been flawed and that the outcome for ratepayers is unsatisfactory. What might a satisfactory process look like?

First and foremost, it must be designed to maximize competition. Clearly it must therefore be managed by an entity other than one of the competitors.

The government should establish an entity that would work with the proponent, Hydro Quebec, and any other interested party to provide the best possible arrangement. It could allow others to bid on the construction and/or the financing of the Maritime Link.

The process should be informed by an updated Integrated Resource Plan so that the proposals can be evaluated against Nova Scotia's needs. It should minimize ratepayer exposure to disruption and the risk of cost overruns at facilities outside the province.

The government must not exhibit bias toward any of the bidders.

Even if HQ is not interested in making a competitive offer, the proposal is deeply flawed because of the risk that some or all of the inexpensive Surplus Energy will in fact not be available to Nova Scotia.

The UARB is not in a position to give direction to the government. But it is able and in fact required to evaluate the appropriateness of the present proposal.

The Review Board *"… must approve the Maritime Link Project if, on the evidence and submissions provided, the Review Board is satisfied that the project… represents the lowest long-term cost alternative for electricity for ratepayers in the Province."*

To be satisfied, the Board must have adequate answers to the right questions. Those questions include understanding what the outcome of a competitive process might be. They include understanding why Nova Scotia should pay a hefty premium over market rates for electricity that will be available to others without paying anything for access. They include examining the risk to Nova Scotia ratepayers of not receiving some or all of the Surplus Power.

Almost fifty years ago, Premier Smallwood agreed to one of the worst commercial deals in the history of Canada. There was nothing wrong with the Churchill Falls project. But the associated business arrangement with Quebec was extremely unfavourable to Newfoundland and Labrador.

There may be nothing wrong with the Muskrat Falls project. But the proposed business arrangements for Nova Scotia appear to be expensive, needlessly risky, poorly tailored to our needs, and untested as to competitiveness.

Even a delay that ends up with later implementation of the currently proposed arrangement will save ratepayers money.

The Utilities and Review Board represents the last chance to reject an arrangement that may prove embarrassingly expensive for decades.

The Board should not be satisfied. It should reject the application.

APPENDIX A

The proposal can be made more competitive and therefore attractive to Nova Scotia customers by making as many as possible of the following adjustments:

1. Simplify. Disentangle Nova Scotian customers from what happens in Newfoundland and Labrador. Just provide a fixed one-time cost for Nova Scotia customers to have access to 500 MW of market priced electricity.

2. In fact there will be times when less than 500 MW is available, because Newfoundland and Labrador is using some or all of the surplus, or because others have purchased some of it, or because of problems with generation and transmission.

   Nova Scotia customers should be compensated if they receive less than 500 MW. This would be in the form of a payment as a share of the Maritime Link cost that was in proportion to the Maritime Link capacity that was not used for their benefit.

3. Postpone commencement of the relationship until Nova Scotia requires the power in 2020.

4. Newfoundland and Labrador customers should pay for the cost of transmission from Bottom Brook to Cape Ray.