

Date : 4/14/2011 6:31:15 PM

From : "Bazeley, Dave"

To : "Bown, Charles W." , "Scott, Paul G."

Subject : RE: Independent Study

Attachment : Reactions to Robert's thoughts.doc;

Here's my thoughts, attached. I copied Robert's words into a Word doc so I could use track changes. Probably won't be very readable on a BB. Let me know if you want more.

Charles, I called because I am still unsure what the perspective of the consultant is supposed to be: shareholder (assume not, FIN is doing that, yes?) taxpayer/voter, ratepayer? I have assumed for now it is ratepayer, since we are including the regulatory strategy.

Dave

-----Original Message-----

From: Bown, Charles W.

Sent: Thu 4/14/2011 3:10 PM

To: Scott, Paul G.; Bazeley, Dave

Subject: FW: Independent Study

Can we build on this today? I'd like to add more for discussion with Robert tomorrow,

From: Thompson, Robert

Sent: Thursday, April 14, 2011 3:07 PM

To: 'EMartin@nalcorenergy.com'; Bown, Charles W.; GBennett@nalcorenergy.com

Subject: Independent Study

Here are my generic thoughts:

1. Core terms of reference:

· Taking as a given certain assumptions (e.g., pollution abatement requirements at Holyrood; PIRA forecast prices; NL consumers should bear full cost of supply of power to NL consumers; industry standards for reliability as applied by Nalcor);

· The "consultant" shall review Nalcor's revenue and cost estimates of the isolated Island and Muskrat Falls options, including a review of assumptions, demand forecasts, and costing methodologies;

· The consultant will draw conclusions about the reasonableness of the revenue and cost estimates of the two options.

2. Options for Consultant:

- \* Feehan/Locke, plus.
- \* Deloitte
- \* PUB under mandate to hire experts only
- \* A Wood MacKenzie equivalent
- \* Conference Board

3. Regulatory Strategy

- \* Need to be clear why we are doing this study in the context of our regulatory strategy.

Are you folks available tomorrow to extend this discussion?

RT

Here are my generic thoughts:

1. Core terms of reference:

- Taking as a given certain assumptions (e.g., pollution abatement requirements at Holyrood; PIRA forecast prices; NL consumers should bear full cost of supply of power to NL consumers; industry standards for reliability as applied by Nalcor);
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- The consultant will draw conclusions about the reasonableness of the revenue and cost estimates of the two options.

Problem here is how far back into the work should the consultant go – e.g. accept the design of MF, or review the design given the major parameters? Second requires a lot more experienced engineering skills. Also data needs – I am not sure we have a good information abse for isolated alternatives if you want to include more small hydro etc.

Should require consulatant to identify industry benchmarks and compare Nalcor’s estimates, then review explanations of significant variances if any.

A lot of what Corey and I put in the ideas for finance would be more applicable here, judging by Robert’s ideas. You should discuss. Not clear on the differnec between what we whant to do and FIN – mostly because I am not sure what FIN is supposed to do. I didn’t think it was a good idea for FIN to lead on a project that included a lot of non-financial stuff. Have attached to this doc for your reference.

2. Options for Consultant:

- Feehan/Locke, plus...Good local profile/credibility but would need a lot of specialized help in some areas
- Deloitte Toronto/US power group has good credentials
- PUB under mandate to hire experts only Not sure what this means. Would we give funds to PUB to do the work? Would it be a formal reference? Might get pushback from Nalcor
- A Wood MacKenzie equivalent [I believe Wood Mack has a power group]

- Conference Board No experience of them as consultants
- Scott Madden group – US consultants, strong in engineering ,technical and business areas – impressed me at a workshop that they organized in Washington.

<http://www.scottmadden.com/page/10/Energy.html>

- Power advisory (Dalton/Rothman) Bit small for this job, might be good help

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### 3. Regulatory Strategy

- Need to be clear why we are doing this study in the context of our regulatory strategy. Is that the strategy to take almost all discretion away from PUB, making them essentially just calculators of rates from costs over which they have no authority? If government is going to assume the role of regulator for this, is Government prepared to be sufficiently transparent? Would we publish the consultant's report? Would we allow PUB to then review it and perhaps have a hearing about it?

BTW, the main conclusions of Power Advisory's necessarily cursory review is that under current arrangements, FERC would not be very concerned about whatever we do. The biggest threats they saw are challenges to provision of transmission service, perhaps in QC if our reciprocity is not up to standard (which it might be if we do it all on a bilateral basis) and perhaps challenges from HQ n any markets into which we try to sell that they sell into as well. Challenge could be one of unfair competition by making our captive customers pay costs that are not to their direct benefit.

My subsequent thought is not that we would have market power to set the price in e.g. New England, but that by offering "subsidized" power at very low cost, to quote Ed, we would reduce the market clearing price because it would be obtained by a lower bid. Price regulators would of course be happy, but those overseeing the market might not.

**Bullets for Department of Finance Decision Note**  
**Terms of Reference for Muskrat Falls Project Consultants**

Design and Engineering

- Is the proposed project design and engineering appropriate to meet the province's current and future domestic electricity needs while maximizing the value of electricity exports?
- Are there weaknesses or important risks in the proposed project design and engineering?
- Could the project design and engineering be improved? If so, how?
- Do the proposed design and engineering maximize combined benefits for the Provincial Government and Nalcor?
- Has Nalcor sufficiently investigated all alternative island supply scenarios?
- How reasonable are the engineering and design assumptions and associated costs for island supply alternatives including thermal, wind, and efficiency and conservation?

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Capital and Operating Cost Estimates

- Compared to industry benchmarks but taking into account any known factors specific to the project:
  - how reasonable and accurate are the design and engineering costs estimates, including capital and operating costs?
  - Are the construction schedules realistic?
  - Are the labour supply and demand estimates for the construction phase accurate?
- Are there any foreseen difficulties with the labour supply?
- What portion of the estimated capital and operating costs are being incurred to supply domestic and export markets, respectively?
- How appropriately are estimated capital and operating costs being allocated to Newfoundland ratepayers, Emera sales, and Nalcor export sales, respectively?

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Financing Worthiness

- What internal rates of return and returns on equity will the project generate for Nalcor and Emera, by major project component (generation, LIL, MIL)?
- Are Nalcor's assumptions regarding economics and rates reasonable?
- It is proposed that the Provincial Government direct the Regulator (i.e. the PUB) to accept costs as filed for the transmission and PPA, as well as on a minimum RoE for Nalcor and Emera. Would curtailing the independence of the regulator create any perception of additional risk for financiers?
- To what degree does current PUB oversight authority potentially infringe on the financing prospects of the project (generation and transmission)?
- The transmission access regime proposed for NL is not like that anywhere else in North America. Would financiers likely perceive this unique transmission access regime as increased risk?

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- NL has made no movement so far towards implementing mandatory enforceable reliability standards. Could financiers perceive this as an increased risk? If yes, would a Government commitment to implement such a regime mitigate that risk?
- Newfoundland and Labrador Hydro (Hydro) is not the primary retailer of electricity on the Island of Newfoundland; that role falls to Newfoundland Power, which is a subsidiary of privately-owned Fortis Inc. Nalcor has not yet detailed how it will ensure that Newfoundland Power will buy all of the blended product that Hydro will have to offer. Is this critical to financing, and at what stage will it be necessary to have signed documents to this effect?
- Are Nalcor's NL economic forecasts and electricity supply and demand forecasts reasonable?
- Are the project's North American economic assumptions and forecasts reasonable? This should include crude oil prices, electricity prices, and inflation.
- How much net profit from exports, excluding Emera's 1 TWh/year, will the project produce in its first 35 years of operation?
- Which critical project success factors will be most vulnerable to variance and how can the province minimize the potential variance?
- What impact will a loan guarantee or other assistance from the federal government have on the financing of the project? What are the estimated savings?

#### Marketability

- Nalcor has indicated that its delivered costs for power in Nova Scotia will be extremely low (because NL customers are paying the lion's share of the generation and transmission costs) and that, because it is hydroelectric with a marginal production cost of close to zero, Nalcor could bid into competitive markets at very favorable rates in order to secure dispatch. Would the arrangements that enable this be considered unfair competition by competing generators in other jurisdictions, and if yes, what recourse would they have?
- Would the electricity from the project be competitive in New England and the Maritimes if its price reflected the full proportionate share of generation and transmission costs?
- Are the predicted market revenues accurate and realistic?
- How would the project economics be affected by Quebec arguing successfully before Maritime or New England regulators that NL is not offering reciprocal transmission access to the NL market?
- It is proposed that NL have absolutely no open market in electricity. Would this create any barriers to marketing Muskrat Falls and/or Gull Island power to export markets?
- What are the significant risks to marketability of NL electricity exports and to what extent can the province mitigate those risks?
- What structures must the province create to meet US and Atlantic Canada reliability and system operator standards?
- Based on the project costs, financing, sales estimates and reasonable returns, are the resulting project and NL power prices currently contemplated for NL customers from the project reasonable?

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- In other fully electricity rate-regulated jurisdictions, have there been successful models employed to incorporate large capital supply project costs into utility-regulated costs of service in order to minimize consumer rate shock?