Newfoundland Labrador

Government of Newfoundland and Labrador
Department of Natural Resources

February 21, 2020

[redacted]

Re: Your request for access to information under Part II of the *Access to Information and Protection of Privacy Act* (File # NR-51-2020)

On February 10, 2020, the Department of Natural Resources received your request for access to the following records/information:

> **From September 5, 2018 to present any reports, studies, briefings, etc in the possession of the Department of Natural Resources relating to Liberty Consulting Group specifically as it pertains to the PUB review of Rate Mitigation Options and Impacts of Muskrat Falls Project.**

I am pleased to inform you that a decision has been made by the Department of Natural Resources, confirmed by the Deputy Minister, to provide access to the requested records. The responsive records are attached.

We note that many of the responsive information is available online (see links below). Therefore, in accordance with S.22(1)(a) of *ATIPPA, 2015*:

22. (1)(a) The head of a public body may refuse to disclose a record or part of a record that is published and is available to the public whether without cost or for purchase.

The Liberty Consulting Report can be found on the PUB's website:
http://www.pub.nl.ca/applications/IslandInterconnectedSystem/phasetwo/index.php

As set out in section 42 of the Act you may ask the Information and Privacy Commissioner to review the department's decision to provide access to the requested information. A request to the Commissioner must be made in writing within 15 business days of the date of this letter or within a longer period that may be allowed by the Commissioner. Your request should identify your concerns with the department's response and why you are requesting a review.

The request for review may be addressed to the Information and Privacy Commissioner is as follows:

Office of the Information and Privacy Commissioner
2 Canada Drive
P.O. Box 13004, Stn. A
St. John's, NL. A1B 3V8

Telephone: (709) 729-6309
Toll-Free: 1-877-729-6309
Facsimile: (709) 729-6500

Pursuant to section 52 of the Act, you may also appeal directly to the Supreme Court Trial Division within 15 business days after receiving the department's decision.

Please be advised that responsive records will be published following a 72 hour period after the response is sent electronically to you or five business days in the case where records are mailed to you. It is the goal to have the responsive records posted to the Completed Access to Information Requests website within one business day following the applicable period of time. Please note that requests for personal information will not be posted online.

For further details about how an access to information request is processed, please refer to the Access to Information Policy and Procedures Manual at http://www.atipp.gov.nl.ca/info/index.html.

If you have any questions, please feel free to contact me at 709-729-0463 or rhynes@gov.nl.ca.

Sincerely,

Rod Hynes

Rod Hynes
ATIPP Coordinator

Information Note
Department of Natural Resources

Title: Liberty Phase Two Report to the PUB Reference

Issue: To provide an overview of Liberty Consulting Group's Phase Two final report to the Board of Commissioners of Public Utilities (PUB) Reference released September 3, 2019.

Background and Current Status:

- On September 5, 2018, Government provided a reference question to the PUB to examine options to mitigate the impact of the Muskrat Falls Project. The PUB engaged two expert consultants to assist with the question: Liberty Consulting Group and Synapse Energy Economics. Both consultants' interim reports were released on January 2, 2019. Final reports (phase two) were released on September 3, 2019.

- In Phase One, Liberty identified a number of financial opportunities to reduce revenue requirements. Studying these further in Phase Two, Liberty has quantified these opportunities as beginning at $165 million in 2021, growing to over $500 million by 2030 and reaching more than $700 million by 2039.

- Contributions to these amounts include:
    - <u>MFP Equity Returns</u> – Applying the Province's share of equity-based returns to reduce rates would generate a reduction in revenue requirements of $90 million per year in 2021, rising to $569 million in 2039.
    - <u>MFP Surplus Energy Sales</u> – Applying the Province's share of MFP export revenues to offset customer rates can provide another $35-$45 million annually to customers. This was estimated at $49.1 million in the Province's rate management plan released in April 2019.
    - <u>NLH Equity Returns</u> – Maintaining a 25% level of equity in (Newfoundland and Labrador Hydro (NLH) would provide dividends of approximately $35 million beginning in 2026. Taking a more aggressive financial approach of a 20% equity level would make an additional $110 million available between 2021 and 2025 with later decreases.
    - <u>Water Rental Payments</u> – Annual payments to the Province for water use for generation at Churchill Falls and Muskrat Falls amount to $20 million.
    - <u>Preferred Dividends (Churchill Falls)</u> – $6 million is available annually in preferred dividends from Churchill Falls.
    - <u>HST</u> – Liberty notes that it did not study tax policy as part of its engagement but that domestic customers of NLH and Newfoundland Power (NP) will make more than $50 million annually in HST payments on bills.

- Liberty also studied a number of organizational opportunities for rate mitigation. These included:
    - <u>Integrating Nalcor Power Supply and NLH</u> – Liberty found no significant barrier to combining Power Supply and NLH organizations to produce a unified operating entity. This would allow for the reduction 113 full-time equivalent personnel, many at higher compensation levels. The reductions would generate $12.7 million in annual savings initially and $21 million beginning in 2023.
    - <u>Combining operations between NLH and NP</u> – Liberty studied scenarios including the transfer to NP of NLH's distribution and retail operations as well as lower voltage transmission. Analysis showed negative rate consequences for customers and thus it was ruled out. Other options, such as transfer of operating responsibilities showed some synergies but modest savings. Liberty did note that it was "striking" that NLH and NP combined had nearly $0.5 billion planned in five-year capital spending. It suggested that some savings could be found by reducing capital spending but did not quantify the level of savings possible.

- Liberty further noted that estimates of LCP Operations and Maintenance (O&M) costs have fluctuated significantly. Liberty believes that time to reach steady-state operations can be shortened from the current three to five year estimate to two to three years and that a reduction of $12.0 million from the current $97.4 million estimate is realistic.
- Overall, Liberty concludes that a significant rate increase of up to 35% is possible, even after applying all the mitigation potential identified in its report.
- Liberty acknowledges that after phase one it suspended examination of further measures under the project financing arrangements to bring forward some of the value of mitigation sources that provide greater value in the second decade. It did so pending the continued discussion on these points between federal and provincial authorities.
- Liberty notes NLH and customers will pay LCP capital and operating expenses in rates, however the PUB has no authority to examine them. Furthermore, Liberty argues that Nalcor's incentive to generate revenues from off-system sales compounds this "...departure from widely applicable regulatory norms." Liberty believes that the PUB should be empowered to exercise, with respect to the LCP, the same authority it has to review other utility activities including capital and operating costs and O&M methods and practices. This would provide a more unified basis for ensuring optimization of costs and reliability.
- Liberty does not see justification for giving the PUB authority to review LCP design and construction. It notes that LCP purchase agreement obligations will not permit avoidance of costs regardless of whether they are judged imprudent or not. Liberty further believes that doing so would unnecessarily complicate a process that can be addressed through appropriate mitigation measures as discussed in its report.
- In terms of external sales from Muskrat Falls, Liberty notes that these can form an important source of reducing rate increases and the current Nalcor model does not match the nearly universal practice in both Canada and the US in which external revenues are applied directly to offset utility revenue requirements. Liberty also suggests the PUB should regulate Nalcor's Muskrat Falls generation and transmission expenditures for ongoing capital, operating and maintenance once operations commence. Liberty suggests PUB regulation of energy marketing operations with NLH controlling water management and hydro production scheduling rather than Nalcor Energy Marketing.
- Liberty also states that contracting marketing expertise as opposed to staffing it internally should be considered an option.

Analysis:

- Note is provided for information purposes only.

Action Being Taken:

- NR officials will further analyze Liberty's findings.

Prepared by/Reviewed by: R. Bates/K. Bradbury/ C. Snook
Approved by:

September 3, 2019

Information Note
Department of Natural Resources

Title: Liberty Consulting Group December 31, 2018 Phase 1 Report on Muskrat Falls Project Potential Rate Mitigation Opportunities

Issue: Liberty Consulting Group's (Liberty) report to the Board of Commissioners of Public Utilities' (PUB) on Muskrat Falls Project Potential Rate Mitigation Opportunities

Background and Current Status:

- The PUB engaged Liberty to assist with the review required for the Reference Question issued by the Government of Newfoundland & Labrador on September 5, 2018 on options to reduce the impact of the Muskrat Falls Project (MFP) on electricity rates through to the year 2030.

- The PUB asked Liberty to perform the following tasks:
  - o Determine the total revenue requirements to recover the costs of the MFP with no rate mitigation options included (Base Revenue Requirement)
  - o Examine the structure of Nalcor Energy Corporation and its subsidiaries and affiliated companies (Nalcor) and identify cost savings opportunities associated with Nalcor activities
  - o Identify cost savings and opportunities related to the operations and maintenance of the MFP
  - o Identify the impacts on the Base Revenue Requirement of various alternative cost savings initiatives and rate mitigation approaches.

- Liberty submitted its Phase 1 final report (Report) to the PUB on December 31, 2018. The report describes the work undertaken and results obtained, particularly; identifying those areas that Liberty believed would provide rate mitigation opportunities and warrant more detailed evaluation in phase 2.

- Liberty has identified a number of cost savings and revenue enhancement opportunities, which can contribute to reducing the electricity rate impacts for customers from the MFP. The report notes that the identified opportunities will require detailed analysis in phase 2 to determine their effectiveness. These opportunities include; (1) export sales, (2) Nalcor's equity return on MFP financing, (3) MFP debt financing, (4) combining Nalcor functions and organizations, (5) improving hydro efficiency, and (6) operation & maintenance (O&M) costs at generation facilities.

- Liberty finds that Nalcor's does what any vertically integrated utility would do – generate, transmit and distribute electricity. However, it assigns the costs of utility facilities to NLH (and in turn, customers through rates without also providing NLH any offsetting export sales revenue from those facilities.

- Liberty also finds that Nalcor return on MFP financing is largely equivalent to what an investor owned utility might expect even though costs are much lower due to the loans being at much lower rates than what an investor-owned utility can secure and the fact that no outside equity providers have to be compensated in the form of equity returns. Applying payments NLH makes under agreements for purchases from MFP assets include a substantial return and Nalcor receives any profits from out-of-province sales with no rate offset to NLH customers.

- Liberty finds that a source of potential rate mitigation arises from changes in the MFP financing agreements. Reducing or removing sinking fund payments related to the Federal loan Guarantee could lower NLH revenue requirements and in turn reduce rates. This option, however, requires agreement from the Federal Government.

- The report also contemplates that changing the capital structure (debt equity ratio) by issuing new debt could also facilitate rate reduction. It would do this by reducing financing payments in the earlier years when sources of mitigation are lower in magnitude and reducing the equity level should the province elect not to forego a portion of returns on equity.

- Liberty does not see a need to maintain separate Nalcor and NLH functions once the MFP is complete. Nalcor identifies a total complement of approximately 1,700 full-time equivalent positions including temporary personnel. Liberty illustrates that a five percent cut in these resources would reduce revenue requirements in the range of $15 million per year.

- Liberty suggests that NLH could improve efficiency through examining the transfer of some or all of its retail operations to Newfoundland Power (NP). Other areas of efficiency gains could be found by economically optimizing the balance between employee and contractor use and through identifying opportunities for common NLH/NP field work.

- Liberty has made a preliminary finding that there is limited opportunity to reduce O&M costs at Churchill Falls however O&M costs at Muskrat Falls appear to be above those of a peer group of similarly sized hydroelectric projects. In addition, significant growth is expected in MFP O&M costs and Liberty indicates that it will study this further in Phase Two. Other smaller hydro facilities show competitive costs.

Analysis
- Although Liberty has provided a number of potential opportunities for mitigation, it has not quantified much of this. Liberty indicates that this more detailed analysis is to follow in Phase Two of its work.

Action to be taken
- The PUB will provide its interim report on February 15, 2019 and public hearings will commence in fall of 2019. The PUB will provide its final report to government on January 31, 2020.
- NR will monitor the progress and provide further update on the issue.

Prepared/Reviewed by: Y. Khan/R. Bates /C. Snook/J. Cowan
Ministerial Approval:

<u>January 3, 2019</u>

Barry Canning DM for DM
Jan 4/19.
7/1/19

Information Note
Department of Natural Resources

Title: Stakeholder's response to Liberty and Synapse Reports on Muskrat Falls Project Potential Rate Mitigation Opportunities

Issue: To provide a summary of responses submitted to the to the Board of Commissioners of Public Utilities' (PUB) on Liberty Consulting Group's (Liberty) and Synapse Energy Economics' (Synapse) reports on Muskrat Falls Project Potential Rate Mitigation Opportunities.

Background and Current Status:

- The PUB engaged Liberty and Synapse (consultants) to assist with the review required for the Reference Question issued by the Government of Newfoundland & Labrador on September 5, 2018 on options to reduce the impact of the Muskrat Falls Project (MFP) on electricity rates through to the year 2030.
- Following are highlights of comments submitted to the PUB by the Consumer Advocate, Labrador Interconnected Group, Drive Electric NL, International Brotherhood of Electrical Workers Local 1615, Newfoundland Power, Canadian Federation of Independent Business, and Island Industrial Customers, in response to Liberty's and Synapse's Phase I reports.

Consumer Advocate's Comments (CA)

- The CA proposes that rates should be frozen as of Dec. 31, 2018 with only changes arising from the Rate Stabilization Plan (RSP), until publication of the PUB's report and GNL decision on a course of action.
- The CA proposes the PUB instruct the consultants to pursue a number of additional opportunities such as:
    - Exploring all mitigation options, not simply identifying choices.
    - The PUB should stop setting ROE equal to NP and set it following hearings.
    - The PUB should consider change from Rate of Return Regulation to incentive or performance based regulation or some other type of price regulation.
    - Plan should be investigated to spread rate burden over a period of time.
    - Consultants should review rate design including time of use rates.
- The IIS customers only be charged for the component of MFP they use. The CA also suggests Liberty and Synapse work together to accommodate inputs from Synapse's rate design into Liberty's model.

Labrador Interconnected Group's (LIG) Comments

- LIG notes that the consultants should consider Labrador and Island systems separately. It also identifies that Synapse refers to "Newfoundland and Labrador Interconnected System" but no such system exists. Furthermore, OC2013-343 stipulates recovery of costs from Island Ratepayers but Synapse does not acknowledge this.

Drive Electric (DENL)

- DENL recommends pushing light and medium duty electric vehicles through EV rebates, Zero Emission Vehicle mandate, charging infrastructure, and public education.

International Brotherhood of Electrical Workers (IBEW) Local 1615

- IBEW notes that cost is important but not the only factor. It further states that discussion on transferring some of retail operations from NLH to NP is unbalanced and suggests consolidating the retail operations under NLH.
- IBEW states that consolidation of distribution with NP is outside of the consultants' mandate to review the internal business structure at Nalcor. Additionally, IBEW does not accept the consequences of the reports that lead to a level of contracting out of work. It further suggests restructuring Nalcor as Hydro Group of Companies with full regulatory oversight after the divestiture of Oil and Gas and Bull Arm operations.

Newfoundland Power's Comments

- Re-finance the debt of the MFP. NP considers this a normal utility practice.
- The PUB should examine various depreciation methodologies and asset service lives. In particular, NP feels that the proposed straight line-depreciation over 50 years for MFP is short in comparison with NLH's 2016 depreciation study which depreciates dams over 110 years, powerhouses over 75 years, and generators over 65 years.
- Restructure Nalcor and improve regulatory oversight to achieve efficiencies.
- NP mentioned that eliminating the Nalcor Rate of Return on Equity (ROE) could reduce costs. It further notes that the time of use pricing, electrification, and conservation and demand management (CDM) should be examined.

Canadian Federation of Independent Business (CFIB) Comments

- CFIB suggested elimination of the demand charge from the ratepayer's bill. Additionally, it notes that electrification is useful but it should not cost taxpayers or ratepayers. They further further noted that certain rates are above cost.

Island Industrial Customers

- IIC opposed the ROE for Nalcor and notes that it adds additional levels of financial burden on the ratepayer. It further supports reasonable measures to promote electrification.
- At the same time, IIC also sees benefits in air source heat pumps and proposes that any proposed CDM must serve rate mitigation.
- IIC holds the view that the time of use rates would not benefit industrial customers, as their operations are typically 24/7. Industrial Customers expect that they should not be subjected to sharp increases in rates otherwise self-supply will come to the fore as an issue.

Analysis

- Note is for information purposes only.

Action to be taken

- NR will continue to monitor the PUB proceedings on the Reference Question.

Prepared/Reviewed by: Y. Khan / R. Bates / C. Snook
Ministerial Approval: NOT APPROVED

January 28, 2019.

Information Note
Department of Natural Resources

Title: PUB Rate Mitigation Interim Report

Issue: To provide background information on the Board of Public Utilities (PUB) Interim Report on Rate Mitigation Options and Impacts – Muskrat Falls Project (MFP).

Background and Current Status:

- On September 5, 2018, Government provided a reference question to the PUB to examine and report on options to mitigate the impact of the MFP (See Annex A for a Backgrounder).

- The PUB was asked to deliver an interim report by February 15, 2019 and a final report by January 31, 2020. The Minister of Natural Resources (NR) committed to releasing the reports publicly and using the information to inform the final approach to mitigating the MFP.

- As part of this process, the PUB engaged two expert consultants to assist with the question: the Liberty Consulting Group and Synapse Energy Economics. Both consultants filed their interim reports with the PUB on December 31, 2018. Nalcor filed its response to both reports on January 9, 2019. Submissions and comments were filed by January 18, 2019.

- The PUB's interim report sets out preliminary findings on the Reference Questions: 1) options to reduce the impact of the MFP costs on electricity rates up to 2030; and 2) the amount of energy and capacity from the MFP required to meet Island Interconnected System (IIS) load and the remaining surplus energy and capacity available for other uses such as export and load growth. (The Reference included Question 3 on rate impacts of the options, but requested preliminary findings on Questions 1 and 2 only.)

- The PUB notes that upon commissioning of the MFP, rates for customers are forecast to increase to 22.89 cents per kWh in 2021 if no mitigation takes place. The PUB's preliminary finding was that maintaining current rates (12.26 cents per kWh) or average Atlantic rates, would require approximately $342-744 million. The interim report provides information on a number of potential initiatives to make up the shortfall, as discussed below, but noted that no single initiative would be sufficient to meet the shortfall.

Cost Savings and Revenue Opportunities

- The PUB highlighted a number of potential options Liberty and Synapse identified to reduce the impact of the MFP, including cost savings and revenue opportunities. These include:
    - <u>MFP Financing</u>. Liberty found that MFP financing costs are a primary area to examine for potential cost savings, such as changes to the financing structure, specifically the sinking fund payments, interest payments associated with the federal loan guarantees and the project debt structure, and the returns and dividends associated with the MFP. The PUB noted "significant potential constraints for some of these initiatives... ...some of which may require the cooperation and agreement of other parties. At the same time some of these initiatives are related to policy issues..."

    - <u>Organizational and Operating Efficiencies</u>. Liberty found there are cost savings associated with organizational and operational effectiveness, including Nalcor restructuring (a five per cent cut reducing revenue requirements by $10-15 million per year) and productivity and efficiency initiatives related to NLH's operations (such as the transfer of responsibilities related to retail services to Newfoundland Power (NP)), and operating and maintenance costs for the MFP. The Board notes, "...there are number of issues and constraints associated with restructuring Nalcor, including issues related to the legislative and regulatory framework and the complex legal arrangements that are in place... Nevertheless the Board believes that there is potential for measurable annual cost savings associated with Nalcor restructuring and this will be an area of focus for the Board as this Reference proceeds."

- Electrification. Synapse found that electrification is likely to offer the single greatest opportunity to increase revenues to reduce revenue requirement associated with the MFP. Synapse identified potential for electrification in three end-use sectors: residential heating, commercial heating, and transportation. Synapse found that under a high-electrification scenario and using current rates, incremental revenue across all sectors would be $16.5 million in 2020, increasing to $115.3 million in 2030.

- Conservation and Demand Management (CDM) Potential. Synapse found that CDM can assist in peak load reduction, which could delay or eliminate the need for future supply-side capacity resources and can reduce winter energy use to allow for increased export sales during higher-valued winter periods. Synapse found that total potential energy savings under high-CDM scenario by 2030 for the IIS is 1,111 GWh (14 per cent of load) and for the Labrador Interconnected System (LIS) is 224 GWh (9 per cent of load). The PUB also noted there are costs of implementing CDM that need to be considered.

- Maximizing Export Sales Revenue. Synapse found that there is potential to increase export revenue from the sales of surplus energy, varying considerably depending on the level of CDM, load response to price effects, and electrification. Synapse estimated the range of approximate net revenues from export energy sales for a number of different scenarios from 2021 to 2030. Synapse's base case estimated revenues between $92-142 million, Synapse's low electrification/high energy efficiency case estimated revenues between $96-168 million, and Synapse's high electrification/low energy efficiency case estimated revenues between $93-135 million. Synapse also noted capacity sales to be a much smaller opportunity because aggressive, proactive peak load reduction is required through various mechanisms to ensure sufficient Provincial resource adequacy.

- Allocation of Export Sales Revenue. Liberty noted that the exclusion of export sales profits from customer rates is not in accordance with sound utility practice. In its comments, NP noted that it is consistent with sound utility practice to ensure customers receive the full benefit of export sales.

Available Energy and Capacity

- Synapse also focused on the amount of capacity and energy required to meet current and future load on the IIS and the amount available from the MFP to serve this load:
  - Forecasts: review of NLH and NP short and long-term load forecasts found them to be generally reasonable with a slight adjustment to NLH's forecast for the period past 2023. Synapse's base forecast is 9,977 GWh in 2019 declining to 9,598 GWh in 2030 after deducting losses and self-supply by NP and industrial customers. They also noted that the base forecast would be impacted by the elasticity effects of electricity price increases which will be studied further in the next phase.

- o <u>Surplus</u>: under the current base case assumptions, the available annual export sales volume is approximately 4,000 GWh which could increase to as much as 4,800 GWh by 2030 if there is significant CDM potential achieved and low electrification.
- o <u>Capacity exports</u>: found that 80 MW could be available for delivery over the Maritime Link, "assuming sufficient reserves are available in the province." Further detailed analysis will be completed in the next phase for the amount and value of potential capacity sales in all markets.
- o <u>Load requirements</u>: further analysis is necessary before any conclusions can be reached. Nalcor, NP, the Consumer Advocate and the Island Industrial Customer Group support this course of action.

Other Suggestions and Comments

- Next steps will include information gathering, the publishing of final consultant reports and a hearing. As this process remains ongoing, the interim report does suggest that the Province may wish to consider policy issues related to MFP financing, the planned treatment of returns and dividends as well as export sales revenues, NLH's return, and regulatory oversight with respect to Nalcor and the MFP.

- The PUB stated that there is no one rate mitigation initiative that will generate enough cost savings or revenue to meet the gap shortfall and that it is clear at this stage there is significant work left to do before any conclusions can be drawn.

- The PUB report states repeatedly that its findings are preliminary and the next phase of its work will focus on further quantifying and understanding the options identified and their respective impacts. The PUB also noted early consideration can be given to:
  - o discussions with the Federal government and other stakeholders on MFP financing;
  - o changes with respect to the treatment of revenues from export sales;
  - o whether returns and dividends can and should be used as an offset to rate increases;
  - o Government direction with respect to NLH's return; and
  - o whether there should be changes

Analysis:

- The preliminary information from the PUB and consultants provides Government with independent expert evidence to inform Government's multi-departmental working group ongoing development of a plan to pay for the MFP.

- The Minister of NR will publicly release the PUB's interim report on February 19, 2019. The Province will continue to review the PUB's interim report, comments from stakeholders, as well as various policies and procedures, in its ongoing work on rate mitigation.

Prepared/ Approved by: L. MacDonald/R. Montague/C. Snook
Ministerial Approval:

<u>February 19, 2019</u>