

May 13, 2019

The Board of Commissioners of Public Utilities  
Prince Charles Building  
120 Torbay Road, P.O. Box 21040  
St. John's, NL A1A 5B2

**Attention: Ms. Cheryl Blundon**  
**Director of Corporate Services & Board Secretary**

Dear Ms. Blundon:

**Re: Labrador Interconnected System Transmission Expansion Study and Network Additions Policy  
– Requests for Information on Expert Reports**

**NLH-LAB-001 to NLH-LAB-015**

Please find enclosed the original and eight copies of Newfoundland and Labrador Hydro's Requests for Information NLH-LAB-001 to NLH-LAB-015 in relation to the above-mentioned Application.

If you have any questions, please contact the undersigned.

Yours truly,

**NEWFOUNDLAND AND LABRADOR HYDRO**



Shirley A. Walsh  
Senior Counsel, Regulatory  
SAW/las

Encl.

cc: Gerard Hayes, Newfoundland Power  
Paul Coxworthy, Stewart McKelvey Stirling Scales  
ecc: Greg Moores, Stewart McKelvey  
Dean Porter, Poole Althouse

Dennis Browne, Q.C., Consumer Advocate  
Denis J. Fleming, Cox & Palmer  
Senwung Luk, Olthuis Kleer Townshend LLP



**IN THE MATTER OF** the *Electrical Power Control Act, 1994*, SNL 1994, Chapter E-5.1 (the “*EPCA*”) and the *Public Utilities Act*, RSN 1990, Chapter P-47 (the “*Act*”);

**AND IN THE MATTER OF** Board Order No. P.U. 43(2017) in relation to Newfoundland and Labrador Hydro’s 2018 Capital Budget Application and

**AND IN THE MATTER OF** the Network Additions Policy Review, dated October 1, 2018; the Labrador Interconnected System – Network Additions Policy dated December 14, 2018; the Labrador Interconnected System Transmission Expansion Study dated October 31, 2018; and Revision 1 dated November 5, 2018, filed by Newfoundland and Labrador Hydro.

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**NEWFOUNDLAND AND LABRADOR HYDRO**

**Requests for Information**

**NLH-LAB-001 to NLH-LAB-015**

**May 13, 2019**

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**NLH-LAB-001.** Re: “Newfoundland and Labrador Hydro’s Proposed Network Addition Policy and Transmission Expansion Study”, Section 2.3.2, page 13.

Please confirm Mr. Raphals is recommending the inclusion of Alternative 17 (i.e., a new \$153 million transmission line to Quebec) in the derivation of the Expansion Cost per kW to apply to load requests that do not contribute to advancement of the system expansion plan.

**NLH-LAB-002.** Re: “Newfoundland and Labrador Hydro’s Proposed Network Addition Policy and Transmission Expansion Study”, Section 2.3.2, page 13.

Is the direct investment cost per kW of \$1,532 for Alternative 17 considered to be an outlier compared to the direct investment cost per kW of the other projects provided in Table 3 (i.e., in which the largest cost per kW is \$500)? If not, why not?

**NLH-LAB-003.** Re: “Newfoundland and Labrador Hydro’s Proposed Network Addition Policy and Transmission Expansion Study”, Section 2.3.3, page 14. “It is recommended that the NAP require that the Customer Contribution be paid in full before any transmission upgrade works are initiated, and that no commitments on Newfoundland and Labrador Hydro’s part are binding until that time.

Under Newfoundland and Labrador Hydro’s proposed Network Additions Policy, Upstream Capacity Charges are required from customers for load additions even though transmission upgrades may not be immediately required. Is there a concern with customers making payments on an installment basis for Upstream Capacity Charges related to load requests that do not require immediate investment in transmission facilities, provided payment is made in full before substantial investment is made by Newfoundland and Labrador Hydro? If yes, please explain why?

**NLH-LAB-004.** Re: “Newfoundland and Labrador Hydro’s Proposed Network Addition Policy and Transmission Expansion Study”, Section 2.4.2.3, page 23. “There is of course a value to improved reliability. There is however no reason to believe that this methodology captures it appropriately.”

- a) Has research been conducted on what would be a reasonable approach to valuing reliability? If yes, please provide.
- b) Is Mr. Raphals aware of an approach that he believes would reasonably quantify the value of reliability to existing customers from transmission upgrades? If yes, please provide.

- c) Please confirm if Mr. Raphals believes that using changes in Expected Unserved Energy is not a reasonable approach in evaluating the reliability benefits to existing customers of network additions. If not confirmed, please explain why Newfoundland and Labrador Hydro's proposed approach is not reasonable.
- d) Please explain what aspects of Mr. Raphals professional and educational background provides the basis for his assessment of the appropriate approach to valuing improved reliability.

**NLH-LAB-005.** Re: "Newfoundland and Labrador Hydro's Proposed Network Addition Policy and Transmission Expansion Study", Section 2.6, page 26. "It is recommended that the NAP apply to industrial and "data centre" load, but not to other rural loads."

Newfoundland and Labrador Hydro has had a request from a large rural customer (i.e., a customer other than a "data centre") on the Labrador Interconnected System for new service requiring 20 MW of additional load. Complying with this load request would prompt material advancement of transmission network additions. Please explain why a customer such as this should not be required to pay a contribution towards the network addition cost advancement and how the recommended approach is consistent with established regulatory principles.

**NLH-LAB-006.** Re: "Newfoundland and Labrador Hydro's Proposed Network Addition Policy and Transmission Expansion Study – Addendum". Section 3.3 pages 15-16 indicates the Régie de l'énergie du Québec concluded it was reasonable to implement the obligation to curtail for up to 300 hours for the cryptocurrency customer class.

Does this requirement apply only to the 300 MW of additional load to be made available or the 668 MW which includes both existing and new cryptocurrency customers? In providing the response, please address the statement on page 16 which states: "The creation of a dedicated block will make it possible, in limiting it to 300 MW and in requiring curtailment during 300 hours, to avoid the need to require additional capacity or energy purchases during peak hours."

**NLH-LAB-007.** Re: "Newfoundland and Labrador Hydro's Proposed Network Addition Policy and Transmission Expansion Study – Addendum."

Please provide details on what rate schedule will apply to the new cryptocurrency customer class approved to be implemented by HQD.

**NLH-LAB-008.** Re: "Newfoundland and Labrador Hydro's Proposed Network Addition Policy and Transmission Expansion Study – Addendum" Page 5 "the Régie did not in fact base its

decision on either of these two documents, but rather strictly on regulatory principles and the application of its governing legislation”.

Please confirm that the selection process for cryptocurrency customers in Quebec is based on an evaluation criterion that does not “strictly” adhere to regulatory principles (i.e., Number of direct jobs per MW, Total wages for direct employment in Quebec per MW, Investment in Quebec per MW, heat recovery criterion).

- NLH-LAB-009.** Is it recommended that a selection process be established to determine which cryptocurrency customers should be served in Labrador similar to the selection process approved for cryptocurrency customers in Quebec? If not, what process is recommended for selection of cryptocurrency customers to serve in Labrador?
- NLH-LAB-010.** Is it Mr. Raphals’ view that a dissuasive rate for cryptocurrency customers should be implemented in Newfoundland and Labrador similar to the dissuasive rate approved for cryptocurrency customers in Quebec (i.e., for those customers that are not authorized under the new cryptocurrency rate class approved by the Régie de l’énergie du Québec)? If not, what rate is proposed for cryptocurrency customers in Labrador? Please explain the basis for the proposal.
- NLH-LAB-011.** Re: “Newfoundland and Labrador Hydro’s Proposed Network Addition Policy and Transmission Expansion Study – Addendum”, page 23. “It is further recommended that the Board of Commissioners of Public Utilities order Newfoundland and Labrador Hydro to continue work, in collaboration with stakeholders, in order to explore possible modification to the “advancement” approach retained by Newfoundland and Labrador Hydro, or the possible application of the approach underlying the FERC network upgrade policy whereby a new customer covered by the policy must take full cost responsibility for the network additions required to provide service.”
- a) Please confirm the FERC network upgrade policy referred to in the report is actually a FERC policy and not an HQD policy and provide the referenced policy.
  - b) Please explain why having a new customer covered by the policy taking full cost responsibility for the network additions is superior to the advancement approach proposed by Newfoundland and Labrador Hydro to consider the benefits of the network additions to both parties. Which approach is considered to be more consistent with established regulatory principles and why?
  - c) Which approach would be more beneficial to economic development in Labrador?

- d) What impact would the full cost responsibility approach have on economic investment by Industrial customers in Labrador? Would it be more likely to dissuade economic investment? If not, why not?

**NLH-LAB-012.** Re: “Newfoundland and Labrador Hydro’s Proposed Network Addition Policy and Transmission Expansion Study”, Section 1.3, page 8. “The full costs of the MFHVI will be borne by ratepayers, with no capital contributions from the “data centre” customers that, to a large extent, made it necessary. This would not have been the case had the proposed NAP been in force at the time, and similar situations are unlikely to occur in the future if the proposed NAP (or a variant thereof) is approved by the Board of Commissioners of Public Utilities.”

In Board Order No. P.U. 9(2019) the Board of Commissioners of Public Utilities stated that “The Board of Commissioners of Public Utilities finds that the Project is reasonable and necessary to provide reliable service and meet load requirements and that it should be approved”. Please confirm that as the main justification for the Muskrat Falls Happy Valley Interconnection Project is reliability for the existing customer base, as accepted by the Board of Commissioners of Public Utilities, had the Network Additions Policy been in force at the time that the Muskrat Falls Happy Valley Interconnection Project was approved, the majority of the costs would be borne by ratepayers.

**NLH-LAB-013.** Re: “Newfoundland and Labrador Hydro’s Proposed Network Addition Policy and Transmission Expansion Study”, Section 3.1, page 28. “It is recommended that Newfoundland and Labrador Hydro’s load forecasts take the uncertainty of the underlying forecast of energy requirements into account, by using low, medium and high forecasts.”

Please explain how low, medium and high forecasts would be developed in consideration of speculative loads that would be incremental to the baseline forecast for Labrador East.

**NLH-LAB-014.** Re: “Newfoundland and Labrador Hydro’s Proposed Network Addition Policy and Transmission Expansion Study”, Section 3.1.1, pages 31-32. “Given that such loads represent a very substantial portion of the load forecast for future years, and that the justification for the transmission additions recently approved (MFHVI) is indeed related to cryptocurrency mining loads, it is surprising that Newfoundland and Labrador Hydro has not seen fit to report in detail to the Board of Commissioners of Public Utilities on these issues.

It is recommended that Newfoundland and Labrador Hydro report to the Board of Commissioners of Public Utilities on a quarterly basis:

- 1) The number of cryptocurrency contracts signed, and their combined load;

- 2) The maximum non-coincident peak load drawn by each of these customers in the last quarter;
- 3) The total energy consumed by these customers in the last quarter;
- 4) The total number of pending cryptocurrency applications, and their combined loads.

In Board Order No. P.U. 9(2019) the Board of Commissioners of Public Utilities stated that “The Board of Commissioners of Public Utilities finds that the Project is reasonable and necessary to provide reliable service and meet load requirements and that it should be approved”. As the main justification for the Muskrat Falls Happy Valley Interconnection Project is reliability for the existing customer base, as accepted by the Board of Commissioners of Public Utilities, please advise how this impacts the recommendation noted above.

**NLH-LAB-015.** Re: “Newfoundland and Labrador Hydro’s Proposed Network Addition Policy and Transmission Expansion Study”, Section 4.5, page 55.

“However, the TES as filed is inadequate to support the NAP because:

- 1) While the Baseline Coincident Peak forecast is clearly set out (in Table 3 on page 11 of the TES), the “various load growth scenarios” called for in the definition of the Transmission Expansion Plan are not clearly set out;
  - 2) The Transmission Upgrades required to serve various load growth scenarios are not clearly set out in the TES, nor are their costs.”
- a) Please provide a detailed description of an improved methodology for the establishment of ranges of load growth scenarios beyond the baseline forecast. Please include how Newfoundland and Labrador Hydro should define the capacity and energy requirements of speculative unknown customers.
  - b) Please provide a detailed description of an improved methodology for the completion of system impact studies for speculative loads beyond the baseline load forecast. Descriptions should define how Newfoundland and Labrador Hydro should perform system analysis, identify transmission system upgrade requirement, develop detailed cost estimates, and determine existing customer impacts for the interconnection of unknown customers at undefined locations.
  - c) Please provide commentary of the number of such studies that should be carried out for Labrador East and Labrador West to clearly set out load growth scenarios to



allow for the development of a Transmission Expansion Study that is adequate to support the Network Additions Policy.

**DATED** at St. John's, in the Province of Newfoundland and Labrador this 13 day of May, 2019.



Shirley A. Walsh  
Counsel for the Applicant  
Newfoundland and Labrador Hydro  
500 Columbus Drive P.O. Box 12400  
St. John's, NL A1B 4K7  
Telephone: (709) 737-1365  
Facsimile: (709) 737-1782

TO: The Board of Commissioners of Public Utilities  
Suite E210, Prince Charles Building  
120 Torbay Road  
P.O. Box 21040  
St. John's, NL A1A 5B2  
Attention: Board Secretary

TO: Newfoundland Power Inc.  
P.O. Box 8910  
55 Kenmount Road  
St. John's, NL A1B 3P6  
Attention: Gerard Hayes, Senior Legal Counsel

TO: Dennis Browne, Q.C., Consumer Advocate  
Browne Fitzgerald Morgan & Avis  
Terrace in the Square  
St. John's, NL A1B 4J9

TO: Paul Coxworthy, Industrial Customer Group, Island Industrial Group  
Stewart McKelvey Stirling Scales  
Suite 1100, Cabot Place  
100 New Gower Street  
P.O. Box 5038  
St. John's, NL A1C 5V3

TO: Denis J. Fleming  
Cox & Palmer  
Scotia Centre, Suite 1000  
235 Water Street  
St. John's, NL A1C 1B6