



NEWFOUNDLAND AND LABRADOR
BOARD OF COMMISSIONERS OF PUBLIC UTILITIES
120 Torbay Road, P.O. Box 21040, St. John's, Newfoundland and Labrador, Canada, A1A 5B2

E-mail: shirleywalsh@nlh.nl.ca

2022-01-20

Ms. Shirley Walsh
Senior Legal Counsel, Regulatory
Newfoundland and Labrador Hydro
P.O. Box 12400
Hydro Place, Columbus Drive
St. John's, NL A1B 4K7

Dear Ms. Walsh:

Re: Newfoundland and Labrador Hydro (“Hydro”) – Reliability and Resource Adequacy Study Review - December 22, 2021 Report

This is further to your letter of December 22, 2021 and the report *Reliability and Resource Adequacy Study - Additional Considerations of the Labrador-Island Link Reliability Assessment and Outcomes of the Failure Investigation Findings* (the “Hydro Report”) enclosed with your letter.

Attachment 1 to the Hydro Report, which is a report by Asim Haldar, Ph. D, P. Eng. titled *Assessment of Labrador- Island Transmission Link (LIL) Reliability in Consideration of Climatological Loads-Phase II (the “Haldar Report #2”)*, presents the results of analyses of various scenarios of increased load combinations on the as-built reliability of the LIL. This additional work was recommended in Dr. Haldar’s March 2021 report to address matters that were not, in his opinion, appropriately considered in the LIL’s design, such as unbalanced ice loading, the influence of local topographic exposures, higher wind and ice loadings than the baseline criteria used in the design, and the overall length of the LIL. This most recent report by Dr. Haldar concludes that there is a material decrease in the reliability of the LIL when these higher load combinations are considered with the probability of failure increasing to 10% from just over 1% and the return period decreasing to 1:10 from 1:73. In addition, reliability further decreases if regional independence due to line length is considered with the probability of failure increasing to 16% and the return period decreasing to 1:6 years. These recent analyses by Dr. Haldar exacerbate the concerns regarding the reliability of the as-built design of the LIL expressed by the Board in its letter of March 25, 2021 on the first Haldar Report.

The Hydro Report sets out Hydro’s position on the Haldar Report #2:

As stated previously, the extreme combined wind and ice load scenarios are not supported by historical data. Further, concepts relating to line length and regional correlation have not been widely validated or utilized within the utility industry. On

this basis, Hydro does not have a basis to definitively accept such considerations. Rather, Hydro will consider the sensitivity of this wide range of reliability considerations as part of the detailed reliability analysis of the system, which will be performed as part of the next stage of the Reliability and Resource Adequacy Study.

The Board finds this response is inadequate. Dr. Haldar made several recommendations for follow-up work including completing additional weather monitoring and analysis and assessing mitigation options to strengthen towers in vulnerable areas. Hydro did not comment or advise whether it will be undertaking any of the additional recommended work. The Board notes that, according to Attachment 2 to the Hydro Report, *Emergency Response & Restoration Planning*, Hydro is undertaking more specific monitoring of weather conditions in certain areas in Labrador, including where there was a LIL failure in January 2021 due to higher ice loads than used in the LIL design. However, it is unclear whether this additional weather monitoring addresses the recommendation by Dr. Haldar for weather monitoring and analysis, particularly in areas where weather data reflecting specific local conditions is unavailable and Hydro's operating experience is limited.

It is also not clear what actions Hydro plans to take to address the issues concerning the reliability of the LIL. Hydro stated that it will consider the sensitivity impact of a wide range of reliability considerations as part of the completion of the next stage in the Reliability and Resource Adequacy Review. However, it is uncertain at this time whether there will be adequate information available to allow a realistic assessment of this sensitivity analysis. Hydro also stated it will propose a range of solutions to address LIL reliability concerns, including the addition of generation to the Island Interconnected system, structural enhancements to the LIL and the future potential of the Holyrood generating plant. No additional information is provided on the scope of the analysis to be completed to support the solutions to be proposed by Hydro, the schedule for the work or whether experts will be retained to undertake any specific portion of the work.

To assist the Board and the parties in gaining a fuller understanding of the issues surrounding the reliability of the LIL, the implications for the reliability of supply for customers and the actions Hydro plans to take, the Board requests that Hydro provide the following information:


- 1) A detailed description of the actions Hydro is taking in response to each recommendation made in Haldar Report #2, including the scope of work to be done, whether any third party is being retained to complete any portion of work and the schedule for the work with identified milestones. If Hydro does not plan to accept a recommendation and complete the recommended additional work, explain why not.
- 2) A detailed description of all studies/reports being completed to provide the information on potential generation additions on the Island Interconnected system and potential structural LIL enhancements, including the scope of each report/study, whether an expert has been retained and the schedule to complete the work with identified milestones.
- 3) The date Hydro plans to stop utilizing the Holyrood plant as a generating facility. In correspondence dated September 28, 2020 Hydro advised that it had always intended to maintain a two-year period of standby generation operation of the Holyrood plant following the in-service of the LIL and at that time extended the date for operation to March 31, 2023 based on the then schedule for the LIL. Has this date now been extended to March 31, 2024 given the current LIL schedule?

- 4) An explanation as to why the report *Network Additions Policy Incremental Load Requirements and System Impact Studies*, initially scheduled for completion in Q4/2021, then rescheduled to Q1/2022, has been delayed again until Q3/2022.
- 5) The date in the summer of 2022 that updates to Volume I and III of the Reliability and Resource Adequacy Study will be filed with the Board.

Given the continuing significant concerns on the reliability of the LIL and the current schedule of May 31, 2022 for the in-service of the LIL, the Board believes that Hydro must proceed expeditiously to complete all necessary studies and analyses required to support an effective review of the issues. The information requested should be provided as soon as possible and no later than February 4, 2022.

If you have any questions, please do not hesitate to contact the Board's Hearing Counsel for this matter, Maureen Greene by email, mgreene@pub.nl.ca or telephone (709) 726-3175.

Sincerely,



Cheryl Blundon
Board Secretary

CB/cj

ecc **Newfoundland and Labrador Hydro**
NLH Regulatory, E-mail: NLHRegulatory@nlh.nl.ca
Newfoundland Power Inc.
Dominic Foley, E-mail: dfoley@newfoundlandpower.com
NP Regulatory, E-mail: regulatory@newfoundlandpower.com
Consumer Advocate
Dennis Browne, Q.C., E-mail: dbrowne@bfma-law.com
Stephen Fitzgerald, E-mail: sfitzgerald@bfma-law.com
Sarah Fitzgerald, E-mail: sarahfitzgerald@bfma-law.com
Bernice Bailey, E-mail: bbailey@bfma-law.com
Industrial Customer Group
Paul Coxworthy, E-mail: pcoxworthy@stewartmckelvey.com
Dean Porter, E-mail: dporter@poolealthouse.ca
Denis Fleming, E-mail: dfleming@coxandpalmer.com
Labrador Interconnected Group
Senwung Luk, E-mail: sluk@oktlaw.com
Julia Brown, E-mail: jbrown@oktlaw.com