

October 28, 2021

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: Muskrat Falls to Happy Valley Interconnection Update and Labrador East Reliability Plan
Winter 2021–2022**

Newfoundland and Labrador Hydro (“Hydro”) wishes to advise the Board of Commissioners of Public Utilities (“Board”) that Hydro will continue to supply Labrador East using the 138 kV interconnection to Churchill Falls via transmission line L1301/1302 for the upcoming winter season (2021–2022).

Voltage regulation provided by Muskrat Falls generation is a prerequisite for the interconnection¹ between Muskrat Falls and Happy Valley-Goose Bay. Hydro had anticipated that the interconnection could be completed prior to the upcoming winter season.² While efforts to ensure the integration and reliability of Muskrat Falls generating units are ongoing, the units have not been available to the extent required to support the interconnected system in eastern Labrador.

It is Hydro’s view that the most appropriate course of action for customers, at this time, is to postpone the interconnection until the summer of 2022.³ This decision is made in consideration of customer impact and the 12-hour outage requirement for work associated with the interconnection. Even if greater certainty were to be reached in the next few weeks with respect to Muskrat Falls generation, Hydro has determined the risk of completing such work in such close proximity to the winter period is unacceptable.

Hydro’s current forecast for the Happy Valley-Goose Bay system peak demand for winter 2020–2021 is 78.95 MW⁴ and current system capacity is 76 MW from L1301/1302 plus 5 MW from the North Side Diesel Plant and 25 MW from the Happy Valley Gas Turbine.

¹ As approved in Order No. P.U. 9(2019). The project includes the construction of a six kilometre transmission line extension (“L1303”) from L1302 to the Muskrat Falls Terminal Station 2, the expansion of the Muskrat Falls Terminal Station 2, and upgrades to the Happy Valley Terminal Station.

² As outlined in Hydro’s Winter Readiness Report filed on October 12, 2021.

³ Subject to the availability of Muskrat Falls generation.

⁴ 78.95 MW is the average (P50) demand forecast. The P90 demand forecast is 80.35 MW.

Winter 2021–2022 Reliability Plan

Similar to its approach during the winter of 2020–2021, Hydro is implementing a reliability plan for Labrador East during the upcoming winter. The primary components of the plan include:

i. Use of North Side Diesel Plant for Peak Loading Conditions

The North Side Diesel Plant operated successfully on September 19, 2021 with no issues. All winter readiness work is complete for this plant.

ii. Use of Gas Turbine for Peak Loading Conditions

As of September 29, 2021, all winter readiness work was complete for the Happy Valley Gas Turbine. The Happy Valley Gas Turbine operated successfully on September 29, 2021 with no issues.

iii. Frequent Inspections of L1301/1302

A helicopter patrol inspection of L1301/1302 was completed on October 21, 2021. No defects were found during that inspection and there have been no known issues with the lines since that time. The next inspection is scheduled for the week of November 22, 2021. Regular inspections will continue through the winter season.

iv. Curtailable/Interruptible Service Option

Hydro has confirmed the interest of an existing customer in an interruptible service option for the upcoming winter season. Hydro will make application to the Board for this precautionary measure, similar to that proposed in prior years.

v. Operations Protocol

As per normal procedure, Hydro reviewed and confirmed its procedures to ensure operations with acceptable voltage and protocols for peak conditions during the upcoming winter season.

vi. Customer Communication Initiatives

Hydro has updated its communication plan for the 2021–2022 winter season with implementation in November 2021.

Other Items

Load Restrictions

Regulation 17, approved by the Board in P.U. 34(2019),⁵ remains in effect and limits large⁶ load additions in Labrador East and West. Hydro will continue to consider any new applications for load in light of this restriction.

⁵ Originally approved in Board Order No. P.U. 32(2018).

⁶ 200 kW and greater.

Contingency Power

Testing of L1303 completed in early 2020⁷ confirmed that in the event of a catastrophic failure of L1301, Hydro is in the position to provide power on a contingency basis to Labrador East over the new system through the energization of L1303. In such an emergency situation, Hydro would make a decision based on customer outage exposure using the limited supply from the Happy Valley Gas Turbine and North Side Diesel Plant, L1301 restoration time, forecasted weather, and energization time for the interconnection.

Other Reliability Considerations

As previously communicated to the Board,⁸ a consequence of the deferral of the Muskrat Falls to Happy Valley Interconnection is that the Churchill Falls transformer T31 will not be available to replace Holyrood T7 for the coming winter. Hydro is working with Newfoundland Power Inc. to support the development of operating procedures to ensure the reliable operation of the 138 kV network on the Avalon Peninsula during this period.

Additionally, the 50 MVA transformer in the Muskrat Falls Terminal Station 3 on the North Spur is not available for relocation to the Happy Valley Terminal Station. This transformer must remain in place as capacitor banks at this terminal station are required for voltage support. For the coming winter, overloads that might arise from a power transformer failure in this station would be avoided by the operation of the Happy Valley Gas Turbine and the North Side Diesel Plant.

Conclusion

By undertaking the initiatives described above, Hydro will work to ensure the reliable operation of the Labrador East system during the 2021–2022 winter season. Hydro will provide monthly updates to the Board on the status of its winter reliability plan in Labrador East through to March 2022, with the next update in November 2021.

Should you have any questions or comments about any of the enclosed, please contact the undersigned.

Yours truly,

NEWFOUNDLAND AND LABRADOR HYDRO



Shirley A. Walsh
Senior Legal Counsel, Regulatory
SAW/kd

ecc: **Board of Commissioners of Public Utilities**
Jacqui H. Glynn
PUB Official Email

⁷ "Labrador East Reliability Plan Update," Newfoundland and Labrador Hydro, March 17, 2020.

⁸ Ibid.

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