

January 31, 2020

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 Corporate Services & Board Secretary

Dear Ms. Blundon:

**Re: 2019–2020 Winter Readiness Planning Report – Further Update**

On December 10, 2019, Newfoundland and Labrador Hydro (“Hydro”) filed its “2019–2020 Winter Readiness Planning Report” (“Report”) with the Board of Commissioners of Public Utilities (“Board”). While the majority of the winter readiness work was completed at that time, several items were outstanding. In the Report, Hydro committed to provide an update regarding the Bay d’Espoir Terminal Station Circuit Breaker Failure issue by January 31, 2020.

On January 16, 2020, in an update regarding the outstanding items from the Report,<sup>1</sup> Hydro provided information regarding the Stephenville Gas Turbine and committed to provide a further update following the return of the Stephenville Gas Turbine to full capacity and upon confirmation of the shipping schedule for return of the spare gas turbine engine. A summary of the current status of those matters is included herein.

**Bay d’Espoir Terminal Station Circuit Breaker Failures**

Since October 2018, Hydro has experienced four failures of 230 kV General Electric (“GE”) dead tank circuit breakers at the Bay d’Espoir Terminal Station 1 (“BDETS1”). Hydro identified this series of failures as a potential risk and, since August 2019, has been working with the manufacturer to investigate the failures and identify mitigation opportunities.

Analysis of the operation of the unit disconnect switches associated with the circuit breakers at Bay d’Espoir has identified high voltage and high frequency transients that may impact the breaker. To mitigate the risk of additional failures Hydro implemented open breaker flash over protection on the unit breakers for Units 1 to 6 at BDETS1 and changed its operating philosophy when bringing units on and off line to keep the unit disconnect switch closed. This action will help minimize the risk of a potential breaker failure due to a transient voltage.

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<sup>1</sup> “The Board’s Investigation and Hearing into Supply Issues and Power Outages on the Island Interconnection System – Winter Readiness Planning Report – Update,” Newfoundland and Labrador Hydro, January 16, 2020.

Since filing the Report, Hydro has taken further steps to minimize outage duration should another circuit breaker failure occur. Hydro has two spare circuit breakers on site at BDETS1 and a third spare is in storage at Bishop's Falls.

Hydro continues to work with GE representatives to investigate the four circuit breaker failures and engaged Hatch to conduct a breaker failure study. Hydro has reached out to other utilities to gather additional experience with 230 kV dead tank circuit breakers and is reviewing its procurement strategy for 230 kV circuit breakers and their use in various applications across the system.

A technical report is in the final stages of preparation and will be provided to the Board by February 14, 2020.

#### **Generation Capacity – Stephenville Gas Turbine**

The recently overhauled engine has been successfully installed and tested but has not yet been released for service as work on auxiliary systems continues. Return to full generation capacity is expected during the week of February 2, 2020. Hydro will provide a further update once the Stephenville Gas Turbine is restored to full capacity.

#### **Spare Gas Turbine Engine Availability – Stephenville and Hardwoods Gas Turbines**

The spare gas turbine engine is ready for shipment; a shipping schedule is being finalized with an expected time frame of early February 2020. The spare engine will be stored in Bishop's Falls upon arrival.

#### **Summary**

Hydro is confident in its ability to reliably serve customers during the 2019–2020 winter season. Hydro will continue to provide the Board with information regarding these outstanding items as noted above.

Should you have any questions, please contact the undersigned.

Yours truly,

#### **NEWFOUNDLAND AND LABRADOR HYDRO**



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

cc: **Newfoundland Power**  
Mr. Gerard M. Hayes

**Consumer Advocate**  
Mr. Dennis M. Browne, Q.C, Browne Fitzgerald Morgan & Avis

**Industrial Customer Group**  
Mr. Paul L. Coxworthy, Stewart McKelvey  
Mr. Denis J. Fleming, Cox & Palmer

Mr. Danny Dumaresque



ecc: **Board of Commissioners of Public Utilities**  
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