

April 24, 2018

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

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

Dear Ms. Blundon:

**Re: Newfoundland and Labrador Hydro – 2018 Capital Budget Application –
Hydro's Proposed Plan in Relation to the Provision of Reliable Service in Labrador East 2018-
2019 filed in Compliance with Order No. P.U. 9(2018), item 1.**

In response to the letter received from The Board of Commissioners of Public Utilities (Board) dated April 19, 2018, requesting greater detail on Newfoundland and Labrador Hydro's (Hydro) plan for the provision of reliable service in Labrador East during the 2018/2019 winter season, Hydro submits the following plan.

Beginning June 15, 2018, Hydro will provide the Board with a monthly plan update, including any updates to the load forecast, unless otherwise specified by the Board.

1. Ensure Reliability of the North Plant for Peak Loading Conditions

Timeframe: Commencing April 26, 2018
Regulatory Approval Required: To be determined

Presently, only the North Plant Diesel Units 7 and 8 are functional. To ensure reliable operation of the units' combined 5 MW capacity, Hydro and a diesel generation service provider will conduct on-site assessments of Units 7 and 8 commencing April 26, 2018. The scope of work consists of the review and enhancement, if required, of the corrective and preventive maintenance plan to ensure Winter Readiness. This review will be completed by May 31, 2018. As part of this review, Critical Spare equipment levels will be assessed and replenished as required. Hydro will include the results of the assessment in its monthly update to the Board.

2. Ensure Reliability of the Gas Turbine for Peak Loading Conditions

Timeframe: Commencing May 2018
Regulatory Approval Required: None

In 2017, all major corrective and overhaul activities were completed for the gas turbine, with reliable operation experienced during the 2017/2018 winter season. Hydro has established the 2018

gas turbine work plan for preventive and corrective maintenance to achieve Winter Readiness and reliable operation for the 2018/2019 winter season. As part of Hydro's Winter Readiness preparation, Critical Spare levels will be reviewed and replenished as required.

The gas turbine normally operates in synchronous condense mode for voltage support in Labrador East. Under past loading levels experienced in the Labrador East region, the unit has not been required to switch to generate mode during peak loading conditions, when reactive power output requirements are higher. The unit has transitioned successfully at lower levels of reactive power output. Depending on system loading, Hydro plans to conduct operational testing by late spring 2018, to confirm the reliable transition between synchronous condenser and generation operations at higher levels of reactive power output. Hydro will include the results of the testing in its monthly update to the Board.

3. Inspections L1301/L1302

Timeframe: May 2018
Regulatory Approval Required: To be determined

Historically, Hydro completes two inspections of L1301/L1302 per year, one in the spring and one in the fall, with the next inspection scheduled for May 22, 2018. Subsequent to the inspection in September 2018, Hydro will increase the frequency of inspections to every six weeks thereafter. This will allow for the timely identification of and response to line failure issues, and assist in the proactive management of the integrity of L1301/L1302. Hydro will include the results of the inspections and any resulting work in its monthly update to the Board.

4. Curtailable Service Option

Timeframe: Commencing April 2018
Regulatory Approval Required: Yes

Hydro has approached several general service customers, with the highest 2017 load history in Labrador East, to investigate participation in a curtailable rate program as these customers provide the greatest opportunity for load curtailment. At this time, the magnitude of assistance available through these customers cannot be confirmed as participation in this program is voluntary and discussions are ongoing. Hydro will provide progress updates on customer participation in its monthly update to the Board.

If adequate customer interest is achieved, Hydro will submit a Curtailable Service Option, similar to that used by Newfoundland Power, for Board approval by July 31, 2018.

5. New Customer Connections

Timeframe: May 31, 2018
Regulatory Approval Required: Expected

Hydro will develop an approach to limit the amount of load growth during 2018 related to requests for new service connections. This approach will be required to remain in effect until additional capacity is available in Labrador East.

6. Operations Protocol

Timeframe: September 2018
Regulatory Approval Required: None

Currently, there is a dispatch protocol in place which focuses on voltage regulation for the 25 kV system in Happy Valley-Goose Bay. This operations protocol provides guidelines for appropriate actions in real time by the Newfoundland and Labrador System Operator (NLSO) Energy Control Centre (ECC) to maintain reliability of the Labrador East system. This protocol includes steps such as dispatch of real and reactive resources, and load management. Hydro will modify the protocol to incorporate any changes to generation dispatch and load management resulting from the other actions outlined in this proposed plan. Hydro will complete this review by September 1, 2018, and is also in the process of developing real time and forecast monitoring tools for the region, which will incorporate the existing seven day regional load forecast. Hydro will provide progress updates in its monthly update to the Board.

7. Labrador East Customer Communication Initiatives

Timeframe: September 2018
Regulatory Approval Required: None

In an effort to ensure that customers in Labrador East have timely notification of any anticipated supply risks, Hydro is developing an Advance Notification Protocol (ANP), which will be implemented in advance of the 2018/2019 winter season. The ANP is a customer notification system, originally developed in 2014 for the Island Interconnected System.

A customer and stakeholder communication plan is also being developed and will be communicated starting in September 2018 to ensure customers are sufficiently educated about the ANP and its associated actions.

Hydro will increase its promotion and awareness of conservation and demand management on the Labrador East System, commencing May 2018. Initial efforts will concentrate on raising awareness of Hydro's rebate program and offering information on energy savings for both home and commercial customers. By September 30, 2018 Hydro will implement a promotion of its thermostat and insulation rebate programs by partnering with local retailers to supply these products to residential customers. Hydro will provide updates on its progress in its monthly report.

8. Minimizing Customer Impacts in Case of Loss of Supply

Timeframe: April 2018 to June 15, 2018

Regulatory Approval Required: To be determined

Hydro is reviewing its contingency plan for the Happy Valley - Goose Bay (HVY) system to understand the impact and identify the options Hydro can take in the event of supply losses, such as:

- loss of terminal station equipment in Churchill Falls or HVY;
- loss of transmission line L1301/1302;
- loss of HVY Gas Turbine functionality ; and/or
- loss of the HVY North Plant Diesel units.

The review will identify options on the distribution system to minimize the impact of losses, such as:

- transferring load between feeders;
- prioritizing supply to customers;
- creating new tie points between feeders;
- rotating outages; and/or
- installing additional equipment to improve operational flexibility.

The review is scheduled to be completed by June 15, 2018. Hydro will provide results of the review in addition to its progress on any resulting actions in its monthly report to the Board.

Hydro's Actions to Date

To date, the following actions have been completed by Hydro to ensure continued reliable service in Labrador East for the 2018/2019 winter season:

- Additional preventive maintenance work orders have been created for inspections of L1301/L1302;
- Appointed a Project Manager to manage proposed initiatives as outlined in this plan;
- Scheduled a site visit for the assessment of the North Plant Units 7 and 8 with Hydro and diesel generation service provider personnel on site April 26, 2018;
- Initiated the documentation of Winter Readiness maintenance and capital tasks, including a review of Churchill Falls activities that have a direct impact on the radial supply infrastructure;
- Inclusion of Labrador East in Hydro's Winter Readiness Board reporting;
- Review of direct load control measures completed with determination that direct load control is not a viable option for the 2018/2019 winter season;
- Completed review of utilization of temporary diesel generation with determination that it is not a reasonable cost solution;
- Review of voltage reduction applicability completed and determined to be a non-viable solution due to system configuration limitations;
- Identified potential curtailable customers, including customers with standby generation and began discussions with the largest General Service customers in Labrador East;
- Commenced the increase of its promotion and awareness of conservation and demand management for the Labrador East system;