newfoundland labrador hydro
a nalcor energy company

Hydro Place. 500 Columbus Drive.
P.O. Box 12400. St. John's. NL
Canada A1B 4K7
t. 709.737.1400 f. 709.737.1800
www.nlh.nl.ca

January 15, 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 Corporate Services & Board Secretary

Dear Ms. Blundon:

Re: **Newfoundland and Labrador Hydro – 2018 Capital Budget Application – Labrador East Reliability Plan Update – Monthly Report**

As per the Board's instruction of April 19, 2018, attached is the monthly report noted above.

Should you have any questions, please contact the undersigned.

Yours truly,

NEWFOUNDLAND AND LABRADOR HYDRO

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

Encl.

cc: Gerard Hayes – Newfoundland Power
Paul Coxworthy – Stewart McKelvey
Denis J. Fleming – Cox & Palmer
Dennis Browne, Q.C. – Browne Fitzgerald Morgan & Avis
Dean Porter – Poole Althouse

ecc: Benoît Pepin – Rio Tinto
Senwung Luk – Olthuis Kleer Townshend LLP
Van Alexopoulos – Iron Ore Company of Canada

Labrador East Reliability Plan
Monthly Status Report

January 15, 2019

A Report to the Board of Commissioners of Public Utilities

newfoundland labrador hydro
a nalcor energy company

Table of Contents

1.0 Background 1

2.0 Progress Summary 1

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

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

2.3 Inspections of L1301/L1302 2

2.4 Curtailable/Interruptible Service Option 2

2.5 New Customer Connections 3

2.6 Operations Protocol 3

2.7 Labrador East Customer Communication Initiatives 3

2.8 Minimizing Customer Impacts in Case of Loss of Supply 4

List of Appendices

Appendix A: takeCHARGE CDM Initiatives for Labrador East

1.0 Background

In response to a letter received from the Newfoundland and Labrador Board of Commissioners of Public Utilities (the "Board") on 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 submitted its plan to the Board on April 24, 2018.

Hydro's plan for the provision of reliable service for the 2018/2019 winter season is summarized into eight individual activities:

1) Ensure Reliability of the North Plant for Peak Loading Conditions;
2) Ensure Reliability of the Gas Turbine for Peak Loading Conditions;
3) Inspections of L1301/L1302;
4) Curtailable/Interruptible Service Option;
5) New Customer Connections;
6) Operations Protocol;
7) Labrador East Customer Communication Initiatives; and
8) Minimizing Customer Impacts in Case of Loss of Supply.

This report is intended to provide a monthly status update to the Board on the eight previously listed activities.

2.0 Progress Summary

A progress update for each activity is outlined below. All activities are complete, with the exception of the continuation of regular inspections of L1301/L1302. Activities with no change since the last update remain in this report for completeness.

2.1 Ensure Reliability of the North Plant for Peak Loading Conditions

Status: Closed

Progress to Date: A third-party service provider for the North Plant Diesels carried out an on-site assessment on April 26, 2018. The assessment indicated that the units were not in a

condition to guarantee reliable service for the 2018/2019 winter season. Hydro does not anticipate seeking Board approval for Capital work related to the North Plant.

2.2 Ensure Reliability of the Gas Turbine for Peak Loading Conditions

Status: Closed

Progress to Date: Hydro internal forces carried out an on-site assessment on April 26, 2018. No specific actions resulted from this assessment. Hydro has completed all required preventive and corrective maintenance on the Happy Valley Gas Turbine. Testing of the Gas Turbine including transitioning between synchronous condenser mode and generation mode was carried out successfully on September 18, 2018.

2.3 Inspections of L1301/L1302

Status: Ongoing

Progress to Date: Ongoing

Hydro has carried out infrared inspection of all line splices on L1301/L1302, with no defective splices discovered. Hydro has carried out several aerial patrols, most recently on December 19, 2018. No deficiencies were identified from the last aerial patrol. Patrols will continue at six-week intervals throughout the 2018/2019 winter season, with the next patrol scheduled for January 30, 2019.

2.4 Curtailable/Interruptible Service Option

Status: Closed

Progress to Date: Hydro received approval in Board Order P.U. 37(2018) to implement its proposed Interruptible Load Service Agreement effective December 1, 2018 to March 31, 2019. Hydro's operating protocol has been revised to incorporate the ability to interrupt specific customer load. This portion of the protocol will not be implemented until connection of the interruptible customer's electrical service.

2.5 New Customer Connections

Status: Closed, Regulation in Effect

Progress to Date: Hydro received approval in Board Order No. P.U. 36(2018) for a regulation temporarily restricting load additions greater than 100 kW in Labrador East. The regulation will remain in effect until May 30, 2019.

2.6 Operations Protocol

Status: Closed

Progress to Date: Hydro has revised its operations protocols to reflect the new interruptible service agreement, advanced notification protocol, and distribution system modifications.

As of December 20, 2018, the transfer capacity of L1301/L1302 has been reduced by 1 MW to 76 MW due to an issue with the tap changer on the T31 transformer at Churchill Falls. An in-depth analysis of the issue is not being pursued at this time as: i) with the current configuration of the system, this reduction in transfer capacity has minimal effect on system capacity; and ii) it would require a customer outage in Labrador East at a time of year when it is not desirable. In assessing the risk, Hydro determined the best course of action to be an investigation and repair later in 2019 when system load is lower.

2.7 Labrador East Customer Communication Initiatives

Status: Closed

Progress to Date: An Advance Notification Protocol communications plan for Labrador East has been developed and approved, stakeholders have been notified, and the protocol is now in effect.

Conservation and Demand Management ("CDM") efforts will continue as part of Hydro's ongoing takeCHARGE commitment. CDM efforts aim to educate customers on the benefits of energy conservation, and to incentivize customers to participate. An outline of targeted takeCHARGE initiatives implemented this fall in Labrador East is found in Appendix A.

2.8 Minimizing Customer Impacts in Case of Loss of Supply

Status: Closed

Progress to Date: Hydro received approval in Board Order No. P.U. 34(2018) for its supplementary Capital Budget Application for the procurement and installation of five gang-operated switches and an associated line extension on the Happy Valley-Goose Bay Distribution System. Hydro has completed this work, and the project is now closed.

Appendix A

takeCHARGE CDM Initiatives for Labrador East

Hydro's takeCHARGE program is a one-stop-shop for everything customers need to know about energy efficiency. Through its takeCHARGE programs, Hydro aims to educate its customers on energy conservation and incentivize customers to avail of energy conservation measures.

An increase in social media promotions, education and events will be used to directly target customers in Labrador East to educate and promote ways to save energy and money. Hydro aims, through an increase in promotion and education, to increase the number of homes that insulate, install programmable thermostats, and/or install energy efficient Heat Recovery Ventilators. This, in turn, will help reduce the demand on the electricity system.

Social Media Promotions

- In addition to a provincial advertising campaign of television radio, print, digital online, and social media, Happy Valley-Goose Bay received nine additional insulation and thermostat Facebook ads that were promoted between July and November 2018, totaling $500. These targeted social media posts were shown in Facebook accounts that have an IP address in the area, even if they do not follow the takeCHARGE account. This is a precise and cost-effective way to increase knowledge on the benefits of insulation and thermostats. The focus for the 2018 summer and early fall time frame was education and the latter part of the fall was focused on rebates.
- The nine ads reached a large portion of the 8,109 residents. The ads had a reach (i.e., the number of people who saw the ads at least once) on average per ad of 3,207 and a total of 25,659.
- The number of people who clicked on the ads for more information totaled 447.
- The takeCHARGE Facebook page shows that Happy Valley-Goose Bay is now in the tenth highest position for page likes from all towns in the province. Twenty of those likes occurred since the additional promotions started.
- Website analytics: When comparing July 15, 2017 to November 30, 2017 to the same date range in 2018, there was a significant increase in website usage by the residents of Happy Valley-Goose Bay. In 2017 there were 1,066 users and in 2018 it went up significantly to

1,840 users. This cannot be confirmed as solely related to the increase in promotions, but it was a factor in the increase.

In-Store Retailer Promotions

- Discussions with retailers in Labrador East took place to coordinate promotions and store sales on energy efficient products in an effort to maximize uptake.
- Through the fall of 2018, takeCHARGE worked with a local retailer to offer an at-cash double rebate for electronic and programmable thermostats at Pike's Home Hardware in Happy Valley-Goose Bay from November 19 to 30, 2018. In-store promotional signage was provided for the promotion and a Facebook ad was run promoting the event.
- Double rebate for programmable thermostat: Hydro held an in-store event at local retailers to promote the sale and installation of programmable thermostats. The regular $10 rebate was doubled to $20 per thermostat to increase sales.
- This campaign ended with five electronic and ten programmable thermostats sold to five different customers. The savings for these 15 thermostats totaled approximately 3,195 kWh.