

May 6, 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: *Reliability and Resource Adequacy Study Review – Labrador-Island Link Monthly Update – April 2021***

On November 21, 2019, the Board of Commissioners of Public Utilities (“Board”) requested that Newfoundland and Labrador Hydro (“Hydro”) provide further information as a result of the findings in The Liberty Consulting Group’s (“Liberty”) Eighth Quarterly Monitoring Report on the Integration of Power Supply Facilities to the Island Interconnected System. In its response, Hydro committed to providing Liberty and the Board with a monthly status update regarding the schedule for the Labrador-Island Link (“LIL”) software development and testing, updated information in response to the specific requests detailed in the Board’s November 21, 2019 correspondence, and other pertinent information with respect to the Muskrat Falls Project. On January 19, 2021, the Board requested Hydro continue monthly reporting and outlined specific information, at a minimum, to be included.<sup>1</sup> Enclosed please find the information provided by Nalcor Energy with respect to the Board’s request.

## **1.0 COVID-19 PANDEMIC EFFECTS ON MUSKRAT FALLS PROJECT EXECUTION**

The safety of project workers and their families, the communities in which Nalcor Energy operates, and the public is of utmost importance to Nalcor Energy and the company is taking all responsible measures to protect people’s health and safety. The Lower Churchill Project (“LCP”) and its contractors continue to follow all COVID-19 Health and Safety measures as per the established guidelines.

LCP continues to closely monitor the COVID-19 pandemic and follow advice from medical experts and Public Health guidance, and will implement mitigation measures as necessary to reasonably mitigate the COVID-19 risk to workers and the communities they live in.

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<sup>1</sup> Hydro’s report has been adjusted to reflect the Board’s request, with the exception of information related to the LIL monthly energy transfers and Maritime Link availability and exports and imports in the month. Both pieces of information are currently included in Hydro’s monthly energy supply report and are not available in a time frame that corresponds with the timing of this report.

## **2.0 LABRADOR-ISLAND LINK**

### **2.1 Commissioning Activities**

#### **2.1.1 Bipole Commissioning**

Interim Bipole Trial Operations started on March 19, 2021 and was completed on May 1, 2021. During the trial operations period, LIL was operated at various power transfer levels based on grid conditions. Maximum power transfer during the period was 225MW, as per the Interim Bipole Software testing requirements. With the Interim Bipole dynamic commissioning complete, GE Grid is focused on resolving punch list items in preparation for the Final Bipole Software currently scheduled to be delivered to site in late July 2021. While waiting for receipt of the Final Bipole Software, LIL will be used to transfer power with the Interim Bipole Software when possible.

GE Grid has confirmed that their beam supplier started manufacturing at two of their European factories in April 2021. Currently, beams for valve halls are scheduled to start shipping from Europe to Newfoundland and Labrador in May 2021. Beam replacement work is planned to start with Pole 2 in June 2021 and Pole 1 in July 2021. All beam replacement work is currently scheduled to be complete in early August 2021.

#### **2.1.2 Soldiers Pond Synchronous Condensers**

GE Power is continuing with completions and commissioning of the synchronous condensers. The elliptical bearings have been installed in SC2 and SC3. SC3 has been rotating and synced to the grid during dynamic commissioning. SC2 auxiliaries have been reconnected and the unit has been manually rotated. The SC1 4 lobe bearings are currently undergoing remanufacturing to elliptical bearings and are expected back on site in May 2021.

GE Power's schedule has not changed since the previous monthly update; SC3 complete in May 2021, SC2 complete in July 2021, and SC1 complete in September 2021. As a result, synchronous condenser availability is not in the project critical path.

### **2.2 Operations**

#### **2.2.1 Labrador-Island Link Damage**

Root Cause Investigations into the electrode line and transmission line failures are ongoing. Reports of the incidents are planned to be finalized in May 2021.

#### **2.2.2 Outages**

There were no system outages during the reporting period.

## **3.0 MUSKRAT FALLS GENERATION**

### **3.1 Commissioning Activities**

#### **3.1.1 Unit 1**

Unit 1 was released for service and transferred to operations on December 22, 2020.

### **3.1.2 Unit 2**

As previously reported, modifications to the turbine inner and intermediate head covers and welding rework were required before commissioning activities could continue on Unit 2. This work is finished, and overspeed testing has been completed on Unit 2.

The planned inspection of Unit 2 after the overspeed test is almost completed, and Andritz is expected to water up Unit 2 to start offline generator commissioning in mid May. This activity will be followed by online commissioning in the latter half of May.

Release for service is expected at the end of May.

### **3.1.3 Unit 3**

Installation of Unit 3 is complete and dry commissioning activities are ongoing.

Welding rework has been completed and the inner and intermediate head cover modification is nearing completion.

First turn of Unit 3 is expected later in May.

### **3.1.4 Unit 4**

Installation activities on Unit 4 are ongoing. Welding rework is ongoing and inner and intermediate head cover modifications are planned for May.

## **3.2 Operations**

As noted in the section above, Andritz has identified a design issue with the bolts between the inner and intermediate head covers for the generating units. Monthly head cover and weld inspections continue to be performed on Unit 1. A planned outage will be required to address the Unit 1 inner/intermediate head cover bolts and stator bar replacement. Timing of inspections and required modifications will be scheduled with operations. This work is scheduled for later this year.

## **4.0 MUSKRAT FALLS PROJECT OVERALL SCHEDULE**

The current schedule for the bipole software is outlined in Table 1. There is no change to Final Bipole Software schedule since the previous report. LCP continues to monitor GE Grid's performance as schedule slippage for the Final Bipole Software remains a risk.

Trial Operations is complete after 30 consecutive days of power transfer without a trip attributed to the HVdc system. LCP has an allowance of 60 days to complete Final Bipole Trial Operations. GE Grid has included 90 days in their schedule to complete Final Bipole Trial Operations, as per their contractual requirements.

**Table 1: LIL Bipole Software Commissioning Schedule**

| <b>Interim Bipole Software</b>                               |                         |                     |
|--|-------------------------|---------------------|
| <b>GE Grid Milestones</b>                                    | <b>GE Grid Schedule</b> | <b>LCP Schedule</b> |
| Interim Software to Site                                     | October 29, 2020        | October 29, 2020    |
| Dynamic Commissioning: Complete                              | March 10, 2021          | March 10, 2021      |
| Trial Operations at Low Load: Start <sup>2</sup>             | March 19, 2021          | March 19, 2021      |
| <b>Final Bipole Software</b>                                 |                         |                     |
| Final Software to Site                                       | July 29, 2021           | July 29, 2021       |
| Dynamic Commissioning: Complete                              | September 7, 2021       | September 14, 2021  |
| Trial Operations: Start (at available power)                 | September 7, 2021       | September 15, 2021  |
| Trial Operations: Complete (at available power) <sup>3</sup> | December 9, 2021        | November 14, 2021   |

The forecast completion schedule for the Muskrat Falls Generating Units outlined in Table 2 has been provided to LCP by Andritz.

**Table 2: Muskrat Falls Generation Commissioning Schedule**

| <b>Generating Unit</b> | <b>Completion of Commissioning and Ready for Operation</b> | <b>Status</b>        |
|------------------------|--|----------------------|
| Unit 1                 | December 22, 2020  | Released for service |
| Unit 2                 | May 31, 2021   |                      |
| Unit 3                 | July 31, 2021  |                      |
| Unit 4                 | September 30, 2021   |                      |

Based on the schedules presented above, the overall Muskrat Falls Project completion date is currently November 14, 2021.

If you have any questions or comments, please contact the undersigned.

Yours truly,

**NEWFOUNDLAND AND LABRADOR HYDRO**



Michael S. Ladha  
Vice President, General Counsel, Corporate Secretary & Commercial  
MSL/kd

ecc: **Board of Commissioners of Public Utilities**  
Jacqui Glynn  
Maureen P. Greene, Q.C.  
PUB Official Email

<sup>2</sup> Interim Bipole Trial Operations was complete on May 1, 2021.

<sup>3</sup> LCP's schedule for completion of trial operations is one month in advance of GE Grid's schedule as GE Grid has included 90 days to complete Final Bipole Trial Operations, in accordance with their contractual agreements, compared to LCP's 60 days.

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