



NEWFOUNDLAND AND LABRADOR
BOARD OF COMMISSIONERS OF PUBLIC UTILITIES
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2021-03-09

Ms. Shirley Walsh
Senior Regulatory Counsel
Newfoundland and Labrador Hydro
P.O. Box 12400
Hydro Place, Columbus Drive
St. John's, NL A1B 4K7

Dear Ms. Walsh:

Re: Newfoundland and Labrador Hydro - Reliability and Resource Adequacy Study Review - Labrador-Island Link Monthly Update, dated March 4, 2021

We have reviewed the Labrador-Island Link Monthly Update, dated March 4, 2021 (the "Monthly Update") and have the following questions:

1. With regard to the February, 2021 events causing pole, electrode line, and berm damage, please:
 - a. Confirm whether or not Nalcor/Hydro plan to determine the return period of these events that caused damage in these three areas. If yes, provide an estimated date when such return period determinations will be available.
 - b. Provide a detailed comparison of actual conditions during the events with the as-designed worst-case assumptions.
 - c. Identify the return periods to which Nalcor believed it designed the facilities affected by each of the three events and their locations at the time of design.
 - d. Section 2.1.1, second paragraph, line 6/7, states that "while repairs to the Pole 2 conductor and Electrode Line 1 were ongoing", however there was no mention of any damage to Electrode Line 1 in the preceding text. State when this damage occurred and what repairs were necessary.
 - e. Summarize investigative activities completed and the nature and expected completion dates for remaining activities and provide management's best estimate of the date for completing investigations into the causes of each occurrence.
 - f. Identify outside firms/resources engaged in such investigations and their roles.
 - g. List and describe remedial actions already undertaken or committed to be undertaken.
 - h. Describe how Hydro/Nalcor initially identified the abnormal conditions that followed the events.
 - i. Describe the methods and time to complete them to determine the locations affected by each event.

- j. Provide maps indicating location of facilities affected by each event.
 - k. Describe use of helicopters in event diagnosis, response, and repair, and describe any barriers that limited such use.
 - l. Identify for each affected location the number of days required to remove snow to gain access with required ground equipment to commence repairs.
 - m. Provide the number of days from identification of abnormal conditions to gain access, initiate, and complete repairs (estimates of completion for any repairs remaining).
 - n. Describe how, assuming the LIL was in full-rated load bipole operation, each event would have affected full-load LIL operation.
 - o. EFLA's April 30, 2020 Reliability and Resource Adequacy Review (pages 52 and 55), indicated the LIL has no anti-galloping devices. Did galloping contribute materially to the bolt breakage that led to the conductor fall?
 - p. State whether Hydro/Nalcor are aware of any previous conductor galloping conditions.
 - q. Describe plans for identifying where anti-galloping devices should be placed, and schedules for installing them.
2. With respect to the replacement beams, please:
- a. Describe the acceptance testing of the beams to be performed before the shipment to site.
 - b. Assuming that the first batch of beams will be sent to site after completion of tests, provide the expected dates/durations of shipping for the beams required for each pole.
 - c. Describe tests to be performed on the beams: (i) after arrival at site, and (ii) after installation of the beams.
 - d. Provide the dates/durations for beam replacement for each pole.
 - e. Describe plans for dispatch of the beams in the event of failures of trial operations (*e.g.*, will dispatch be delayed; where/how will they be stored pending commencement of replacement, do any material storage conditions apply?).
 - f. Detail the preliminary plan for the final valve hall remediation work, including human resources, lifts, and cranes to be used, and expected time to completion of erection.
 - g. Describe all tests to be performed before the valves will be energized and after completion.
3. With respect to the synchronous condensers, please:
- a. State whether the decision for GE to proceed with the elliptical bearing approach forecloses the option of making modifications to the foundations. If not, explain how/what conditions will be monitored to revisit any foundation modification need.
 - b. Identify measures that will be implemented to monitor the effectiveness of the elliptical bearing solution.
 - c. Describe GE's responsibility should unacceptable vibrations appear within 5, 10 or 20 years, or expected equipment lifetime.
 - d. State when Nalcor expects full operation of SC 3.
 - e. Describe and quantify the risks, if any, of the impact to August 2021 completion from the decision to modify all bearings to the elliptical design.
4. With respect to generating Unit 1, please:
- a. Provide a range of modification completion durations reflecting management's views of the risks/uncertainties involved.
 - b. State whether the modifications to the bolts between the inner and intermediate head covers have been implemented on Unit 1.

- c. Noting that head cover joint modification and weld inspection/rectification will be undertaken on Units 1, 3 and 4 and that Unit 1 is already in commercial service and may be at risk of damage, describe plans and likely outage durations for Unit 1 inspection and correction.
5. With respect to the Muskrat Falls overall schedule, please:
- Explain the particulars (nature, extent, and resulting schedule risk) behind the observation in Section 4.0, first paragraph, lines 4-5 that “schedule slippage for the Final Bipole Software remains high.”
 - Given LCP management concerns about ongoing GE schedule slippage and GE’s historical performance, describe in detail the basis for the LCP management’s scheduling of final software delivery to the site on the date forecast by GE.
 - Describe and quantify (likelihood and length of extension) LCP management’s assessment of the risk of delay in such delivery.
 - With LCP management scheduling completion of commissioning for later than GE forecasts, describe LCP management’s view of the realism of this date and its assessment of the risk (likelihood and length of extension) of delay.


The Monthly Update, Section 2.2.1 states that root causal investigations into the electrode line and transmission line failures are underway. Please advise the anticipated completion dates for these investigations and provide copies of these reports as soon as they are available.

The Monthly Update also states in Table 1 that trial operations are scheduled to start by March 11, 2021. Please confirm if these trial operations commenced as scheduled and if not, explain why not and state the revised commencement date.

The responses to the questions above should be provided as soon as possible and no later than March 30, 2021.

If you have any questions, please do not hesitate to contact the Board’s Legal Counsel, Ms. Jacquie Glynn, by email, jglynn@pub.nl.ca or telephone (709) 726-6781.

Sincerely,


Cheryl Blundon
Board Secretary

CB/cj

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