

May 26, 2020

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: The Liberty Consulting Group Eighth Quarterly Monitoring Report on the Integration of Power Supply Facilities to the Island Interconnected System – Monthly Update

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 (“Project”). Nalcor Energy (“Nalcor”) has provided Hydro with the following information on various aspects of the Muskrat Falls Project.

COVID-19 Pandemic Effects on Muskrat Falls Project Execution

Earlier today, Nalcor announced that it is preparing the Muskrat Falls and Soldiers Pond worksites for the safe and gradual resumption of construction and commissioning at the end of May 2020. As noted in the April 27, 2020 update to the Board, Nalcor has developed guidelines detailing the precautions necessary to protect the health and safety of all personnel performing work on project sites during the COVID-19 pandemic (“Pandemic”). Contractors are in the process of restarting work at each location. The number of workers on site will slowly increase to ensure that all new protocols and guidelines for the protection of workers from COVID-19 in the construction industry are observed. The Project Delivery Team continues to work from their home offices as the Project office in St. John’s is closed to all employees and the public. Additional information on the resumption of construction and commissioning activities is available on the Project website.¹

As a result of time lost since the suspension of work in March 2020 and the gradual resumption of activities, Project completion is delayed at least four months. Depending upon the size of the workforce and the level of productivity achieved in the coming months under the new health guidelines, final completion could be delayed an additional two-to-six months.

¹ “Nalcor Energy announces it is preparing to resume construction and commissioning of the Muskrat Falls Project on May 30th,” Nalcor Energy, <https://muskratfalls.nalcorenergy.com/wp-content/uploads/2020/05/Nalcor-Energy-News-Release-MF-Restart-May-2020_final.pdf>

Nalcor is currently evaluating the consequences of the Pandemic on Project schedule and cost; however, the full impact on the key schedule milestones remains unknown at this time. Until construction is resumed in the new era of COVID-19, the impact on final cost and schedule is not yet known. Rough estimates for a six month delay are up to \$200 million dollars, before financing and interest payments. As a result of the delay in finishing the project, there are also bond and interest payments that would now need to be funded through the Province. For a delay of six months beyond the end of this year, this would equate to approximately \$400 million.

The Integrated Project Schedule will not be updated until there is greater certainty on the path forward.

Nalcor has advised contractors that the declaration of force majeure will be lifted on June 1, 2020 for the Muskrat Falls generation component of the overall Project. The declaration of force majeure remains in effect for the GE Grid and GE Power contracts.

Considering the expected four month delay and potential for additional delay as noted above, Hydro will provide further correspondence in the coming days to the Board regarding plans to ensure reliable supply.

Labrador-Island Link Software Development and Testing Schedule (Board Request #2)

The Board requested the schedule for LIL software development and testing and for Hydro to advise the Board on any future changes to this schedule, the reason for the change, and the implications of any delay for delivery of power and energy to the Island Interconnected System over the LIL.

GE Grid's facility in Stafford, UK continues to operate under its work from home policy for non-essential personnel; however, software development and testing is continuing. As previously reported on April 19, 2020, Nalcor and the Independent Third Parties ("ITP") provided approval to GE Grid to proceed with Factory Acceptance Testing ("FAT"). Technology to allow remote participation was successfully used to enable witnessing of the FAT by Nalcor and ITP personnel.

GE Grid completed all FAT test cases on May 1, 2020; however, bugs were identified during FAT that will require fixing. GE Grid is in the process of investigating and resolving bugs and will provide a revised schedule for bug fixing and software delivery upon completion of the investigation. Nalcor has received a preliminary schedule for review and will provide an update to the Board at the June 4, 2020 *Reliability and Resource Adequacy Study Review* Technical Conference.

Synchronous Condenser Binding/Vibration (Board Request #4)

The Board referenced Liberty's discussion of binding/vibration issues with the Soldiers Pond Synchronous Condensers ("SC"). The Board required Hydro to report on these two issues, including details of the problems and the investigation into their root causes, as well as a plan and schedule to address them.

GE Power submitted a restart plan to Nalcor in April 2020 for recommencement of work at the Soldiers Pond SC Site; Nalcor approved the plan on April 29, 2020. GE Power started a phased remobilization of personnel to site on May 12, 2020.

At the time of the Pandemic-related work suspension on March 28, 2020, commissioning activities related to the three synchronous condensers were at various stages:

- SC Unit 3 bearings and housing were removed and shipped to a refurbishment facility for the circumferential slot modification; the same modification as SC Unit 2. When the SC Unit 3

bearings and housings were removed, corrosion and damage was observed on both. Root cause analysis is underway.

- SC Unit 2 balancing was ongoing in March 2020 but was not complete before the site ramp down; no vibration measurements were collected.
- SC Unit 1 refurbished bearing housing and the modified single oil pocket bearing are on site ready for installation. Installation was planned to start the last week of March 2020, but was put on hold during the Pandemic related work suspension

GE Power's workforce started to return to site on May 12, 2020 and is doing so in a gradual manner. GE Power re-commenced commissioning activities on SC Unit 2 on May 25, 2020. Recommencement of SC Unit 2 balancing activities is the priority.

Muskrat Falls Unit 1 Update

In mid-March 2020, in response to the Pandemic, the Muskrat Falls generation project was placed in care and maintenance mode to help protect the health and safety of workers and the general public. The workforce of over 500 on site was reduced to fewer than 100 per rotation at Muskrat Falls to maintain essential systems and operations at the site. As noted earlier, the safe and gradual resumption of construction and commissioning is underway and the number of workers on site will slowly increase. By the end of June 2020, it is expected that there will be about 150 construction workers at Muskrat Falls increasing to approximately 250–300 workers over the summer.

Up until the ramp down of operations on March 17, 2020, Andritz Hydro, the contractor responsible for the turbines and generator contract, was progressing work on Units 1, 2, 3, and 4. A site restart plan is being finalized with contractors which includes the completion of Unit 1 commissioning activities toward the achievement of first power, followed by other priority work at site, including the continuation of work on Units 2, 3, and 4.

Should you have any questions or comments about any of the enclosed, please contact the undersigned.

Yours truly,

NEWFOUNDLAND AND LABRADOR HYDRO



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SAW/sk

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