

March 3, 2017

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: The Board's Investigation and Hearing into Supply Issues and Power Outages on the Island Interconnection System – Winter Readiness Planning Report – Update

In its correspondence of February 17, 2017, the Board of Commissioners of Public Utilities (the Board) requested that Newfoundland and Labrador Hydro (Hydro) provide an update in its 2016-17 Winter Readiness Planning Report – Update filed with the Board on December 7, 2016. This letter provides Hydro's update.

On December 7, 2017, Hydro filed its Winter Readiness Planning Report – November Update (the Report), providing details regarding the completion status of winter readiness items necessary to ensure that Hydro had the generation, transmission, and distribution equipment ready for the 2016/2017 winter season. While all winter readiness work for the Holyrood Thermal Generating Station, within the Bay d'Espoir Hydroelectric system, and on the transmission system were completed by the submission date, the Report noted that several items in the areas of Terminal Stations, capital projects, and gas turbines were incomplete.

Status Update – Terminal Stations

As indicated in Section 2.4 of the Report, fifteen winter readiness items in the Terminal Station were incomplete as of the report date. The status of those items is below:

- Item: Preventive maintenance on the Massey Drive B1B5 disconnect switch could not be carried out due to issues on a separate 69 kV disconnect switch.

Update: As noted in the Report, the preventive maintenance work was carried over to 2017 with low risk of operational issues during operation. This work has been added to Hydro's 2017 integrated annual work plan, for execution in 2017.

- Item: Four other preventive maintenance activities in Massey Drive Station were incomplete as of November 30, 2016 due to other higher priority work and were rescheduled for the week of December 5, 2016.

Update: This work was completed during the week of December 5, 2016.

- Item: Two maintenance activities on the spare T4 transformer in Holyrood were delayed due to the higher priority work and Sunnyside lightning incident investigation on Breaker B3L19. These work tasks were rescheduled for the week of December 12, 2016.

Update: This work was completed as during the week of December 12, 2016.

- Item: Two actions for relay preventive maintenance at the Hardwoods and Sunnyside Terminal Stations had to be delayed for the higher priority Hardwoods engine installation and the Sunnyside lightning incident investigation on Breaker B3L19 and was rescheduled for the week of December 5, 2016.

Update: The Hardwoods activity was completed during the week of December 5, 2016. The Sunnyside activity had to be rescheduled as operational conditions did not allow this work to be completed. It remains in Hydro's work plan and is scheduled to be complete by mid-March, as operational conditions allow.

- Item: Two relay preventive maintenance activities for Granite Canal, including the terminal station and generator relays, were delayed until Bay d'Espoir generating Units 1 and 2 were returned to service after the penstock refurbishment was completed.

Update: These two actions were completed on December 4, 2016.

- Item: Two preventive maintenance activities at the Hawkes Bay Terminal Station were delayed given that system conditions did not allow for the work to be completed. These tests were rescheduled for the week of December 5, 2016.

Update: This work was completed during the week of December 5, 2016.

- Item: The annual fall settings for the Bay d'Espoir Terminal Station 2, Transformer T10 and T12 could not be completed due to other higher priority work and was rescheduled to be completed by December 16, 2016.

Update: This work was completed during the week of December 12, 2016.

- Item: The final action item for Terminal Stations is testing of the Change Island's Sub Station Transformer Oil. This work was targeted for completion in December.

Update: This work was completed on January 30, 2017.

Status Update – Capital Projects

As described in the Report, some capital projects were noted as having winter readiness activities that were incomplete as of November 30, 2016, or were carried over to 2017. The status of those items is below:

- Item: Refurbishment of damage to the Bay d'Espoir roads from Hurricane Matthew.

Update: This work was completed by December 20, 2016.

- Item: The Purchase of Critical Spares project included delivery of three high voltage bushings for Holyrood.

Update: These bushings were received on December 15, 2016.

- Item: Reinstallation of the newly refurbished Stephenville End A gas turbine engine was complicated by a vibration issue during commissioning. When all attempts to complete commissioning were exhausted, the decision was made to install a leased loaner engine.

Update: The leased loaner engine was installed on January 12, 2017, restoring Stephenville capacity to 38 MW, derated from its normal rating of 50 MW. The newly refurbished engine has been returned to the refurbishment contractor for analysis. Stephenville will remain in the 38 MW configuration for the remainder of the winter. This 12 MW derating will not be a concern for this winter.

- Item: The upgrade of the Programmable Logic Controller (PLC) at Cat Arm after the station service circuit breaker was replaced has been added to Hydro's 2017 integrated annual work plan, for execution in 2017.

Update: This work has been added to Hydro's 2017 integrated annual work plan, for execution in 2017. The PLC equipment is on site, and in the unlikely event of failure of the in-service equipment change-out can occur in short order.

- Item: Refurbishment program of transformer oil at 2 transformers at Hinds Lake.

Update: Partial work was completed, including some cleaning and oil refurbishment, by November 30, 2016, which was deemed sufficient to mitigate the risk of failure

until the next scheduled outage in 2017. This work has been added to Hydro's 2017 integrated annual work plan, for execution in 2017.

- Item: Three instrument transformer replacements at Howley Terminal Station were carried over to 2017.

Update: Two of three instrument transformers were thoroughly inspected in November and determined to be at a low risk of failure over the winter. All three have been, and will continue to be, infrared temperature scanned monthly throughout the winter to assess any increased risk of failure, and Hydro is construction-ready with available replacement equipment if failure occurs. Infrared scans that have been completed to date on the Howley Terminal Station equipment indicate that there is no imminent risk of outage. This work has been added to Hydro's 2017 integrated annual work plan, for execution in 2017.

- Item: Refurbishment of one circuit breaker at the Howley Terminal Station was also carried over to 2017.

Update: Infrared scans of this circuit breaker have been, and will continue to be, taken monthly, and Hydro remains construction-ready in the event of failure. As with the Howley Terminal Station Instrument Transformers, infrared scans that have been completed to date indicate that there is no imminent risk of outage. This work has been added to Hydro's 2017 integrated annual work plan, for execution in 2017.

Status Update – Gas Turbines

As noted in section 2.2 of the Report, four items were outstanding with respect to Hydro's Gas Turbines. The status of those items is below:

- Item: Black start testing - Holyrood Gas Turbine.

Update: The individual items covered in the black start procedure have been tested; however, the sequenced operation of all components together to finalize the black start test remains. It should be noted that the Holyrood Thermal Generating Station (490 MW) has had black start testing completed and verified from the diesel generation on-site in Holyrood. The black start testing has been scheduled to be completed during the 2017 annual maintenance outage.

- Item: Black start testing – Hardwoods Gas Turbine.

Update: Procedures for black start have been revised and reviewed due to modifications, and further verification prior to execution is required for each site. The black start testing has been scheduled to be completed during the 2017 annual maintenance outage.

- Item: Black start testing – Stephenville Gas Turbine.

Update: Procedures for black start have been revised and reviewed due to modifications, and further verification prior to execution is required for each site. The black start testing has been scheduled to be completed during the 2017 annual maintenance outage.

- Item: Testing of the fire suppression system for the Stephenville plant.
Update: The fire suppression test for Stephenville was delayed because of the issues with commissioning of the refurbished engine, but was completed on February 9, 2017.

Summary

As indicated above, much of the outstanding work has been completed, with some work remaining; however, in all cases the risks have been assessed and are low, with all equipment to remediate failures available in the unlikely event of an issue. Unless otherwise noted, any work that remains incomplete will become part of the 2017 integrated annual work plan, for execution in 2017. We continue to assess the condition of the assets discussed with overall reliability and customer outages in mind, and do not believe that there are any major concerns.

Should you have any questions, please contact the undersigned.
Yours truly,

NEWFOUNDLAND AND LABRADOR HYDRO



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Senior Counsel, Regulatory

TLP/bs

cc: Gerard Hayes – Newfoundland Power
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