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Board of Commissioners of Public Utilities
Prince Charles Building
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Attention: Jo-Anne Galarneau
Executive Director and Board Secretary

Re: *Reliability and Resource Adequacy Study Review* – 2024–2025 Winter Readiness Planning Report – Update – January 2025

On December 10, 2024, Newfoundland and Labrador Hydro ("Hydro") filed its final 2024–2025 Winter Readiness Planning Report ("Report"). At the time of the Report filing, all of Hydro's generating sources were fully available, with the exception of Unit 1 at the Holyrood Thermal Generating Station ("Holyrood TGS"), and Unit 2 at the Muskrat Falls Hydroelectric Generating Station ("Muskrat Falls"). Hydro committed to filing an update, contained herein, regarding these and other outstanding winter readiness ("WR") items with the Board of Commissioners of Public Utilities ("Board") in January 2025.

Although Hydro has identified risks as outlined in the Report, mitigations are in place to help ensure adequacy of supply for the 2024–2025 winter season. Peak Island demands to date for 2025 were recorded on January 23. The peak was measured to be 1,723 MW and Hydro maintained sufficient reserves for the duration of this cold weather event. Hydro expects continued reliable service for customers for the remainder of the winter with supply provided by regulated generation sources and by Muskrat Falls generation via the Labrador-Island Link ("LIL").

Holyrood TGS

Units 2 and 3 at the Holyrood TGS are online and supporting the system as required. Unit 1 was expected to return to service in January 2025 upon completion of the additional work required to refurbish the turbine rotor during the Overhaul Unit 1 Turbine Valves and Generator Program. While all outstanding capital work related to this project is now complete, issues arose during start-up activities related to the main turbine stop valve. The original equipment manufacturer ("OEM") is currently onsite to complete data analysis and identify a solution to enable the unit to return to service. In advance of Unit 1's return to service, Hydro has sufficient generation reserves and appropriate plans in place to mitigate any risk to the system. All remaining WR activities and equipment testing are scheduled to be completed prior to the unit being returned to service.

Additionally, the nine outstanding WR activities related to Balance of Plant are now complete. At the time of the Report filing, two critical spare stock items remained outstanding; both of which have since been delivered.

Since the filing of the Report, Fuel Tank 4 was commissioned and returned to service on December 13, 2024. As intended, Hydro has begun plans to retire Tank 2, which was kept available for service as a contingency until Tank 4 was returned to service. Hydro expects to have utilized the remaining fuel in Tank 2 by end of January, 2025, at which time the tank will be pumped out and decommissioned.

As noted in the Report, during a tanker delivery on November 21, 2024, a small fuel oil leak was discovered on the Tank 1 suction heaters. The leak was contained and cleaned up, and further investigation of the issue indicated that both suction heaters on Tank 1 appeared to be leaking. Since the Report filing, leaking tubes were removed from service and plugs installed.[1] These repairs are now complete; the tank is available for service and will be able to accommodate the next fuel delivery.

On January 23, 2025, plant output at Holyrood was limited to 300 MW due to a steam trace leak with Tank 4. The steam leak reduced the heating of fuel from Tank 4, subsequently reducing the flow rate of combustion fuel to the plant. This issue was resolved by January 27, 2025, when additional fuel was delivered into Tanks 1 and 3, and the plant remains available for full load. With fuel delivery complete, Tank 4 systems can be isolated for repair.

Combustion Turbine Generation

WR work for all combustion turbines ("CT") were completed at the time of the Report filing, with the exception of one item for the Stephenville Gas Turbine, which has since been completed. At the time of the Report filing, two critical spare stock items remained outstanding; both of which have since been delivered.

Hydraulic Generation

All WR work, as well as inspection and testing of hydraulic generating facilities, was completed at the time of the Report filing, with the exception of testing related to the heating system for Surge Tank 3 and the spillway for Powerhouse 1 at the Bay d'Espoir Hydroelectric Generating Facility ("Bay d'Espoir"). All remaining testing has since been completed.

At the time of the Report filing, 12 critical spare stock items remained outstanding. One of these items, ordered for the failed 600 V water heater for Bay d'Espoir Surge Tank 3, was received in late December, 2024. Hydro replaced the failed heater upon arrival, restoring the functionality of the de-icing system for this surge tank.

The Upper Salmon Transformer 2 ("T2") spare transformer remains outstanding but does not present a risk to WR.[2] This spare transformer was delivered to Upper Salmon Hydro Electric Generating Station ("Upper Salmon)" in late November 2024; but failed on-site acceptance testing. Hydro continues to work with the contractor to resolve the identified issues on-site prior to accepting the spare, and does not expect acceptance to take place until late in the first quarter of 2025.

[1] Some risk remains as the plugged tubes will reduce the heating capacity of the heaters; however, they are still expected to be sufficient.

[2] The existing transformer is in good condition. A failure of T2 would not impact available generation from Upper Salmon, rather it is a source of supply for upcountry structures. Mitigation plans are in place for supply of these structures in the event of a transformer failure.

The remaining ten critical spares were ordered in the third quarter of 2024 for newly installed assets, and do not present a risk to WR. These spares remain on order, and are expected to be delivered late in the first quarter of 2025.

Network Services

All planned WR activities for Network Services were completed at the time of the Report filing, with the exception of some Meteorological ("MET") Station preventative maintenance's. These activities were related to MET stations located in remote areas only accessible by helicopter, and have since been completed.

Muskrat Falls Generating Assets

The four remaining WR activities for Units 1, 3, and 4 are now complete. Unit 2 was taken offline on a planned outage for major turbine repairs on October 16, 2024, and will be out of service until mid-May 2025. All outstanding Annual Work Plan ("AWP"), WR items and inspection and testing on Unit 2 are scheduled to be completed upon the return to service in mid-May 2025.

Hydro notes that the planned outage of Muskrat Falls Unit 2 does not impact WR as energy from Muskrat Falls Units 1, 3, and 4 are readily available to serve customers on the Island Interconnected System via the LIL.

As noted in the Report, a significant fire in spring 2024 resulted in the total loss of the storage facility housing Hydro's Muskrat Falls generation critical spares. A significant effort has been undertaken to replenish the critical spares inventory, and Hydro has in stock nearly half of its critical spares. The remaining parts are at various steps within the procurement process.[3]

Table 1 provides an overview of the critical spares program for Muskrat Falls generation. Hydro has prioritized ordering of items based on WR and has developed a plan to action the remaining items not yet on order, expecting to complete all outstanding orders by the target date of the first quarter of 2025.

Table 1: Critical Spares for Muskrat Falls Generation[4]

Status	Quantity
In Stock	801
On Order[5]	546
Not Yet On Order	140
Total	**1,487**

[3] Should any outstanding parts become critical to winter operation, it may be possible for Hydro to utilize parts from Unit 2, if necessary.
[4] Stock status listed in Table 1 is as of January 20, 2025.
[5] Items listed as On Order are all on order through Hydro's Supply Chain Department in varying stages of procurement; including the requisition, quote or purchase order stage.

Muskrat Falls Transmission Assets

During a significant icing event on January 13, 2025, damage was experienced on the electrode line in Labrador. Planned intermittent bipole outages were required to facilitate repairs, during which time damage was experienced to two tower peaks related to ice removal.[6] Repairs are now complete to allow return to reliable operation in bipole, and the LIL remains available for up to 700 MW.[7] The damage did not result in customer impact and investigation into the incident remains ongoing.

On January 22, 2025, LIL Pole 2 tripped due to a faulty low pressure reading for a submarine cable at the Shoal Cove transition compound. This initiated a cable switching sequence; however, a disconnect did not switch properly and the sequence could not be completed. At the time, the LIL bipole was carrying 530 MW and, to avoid cable overload resulting from failed cable switching sequence, the LIL initiated a runback to 450 MW. The runback caused an under frequency load shedding event. Investigation into the incident remains ongoing.

At the time of the Report filing, 37 WR activities remained outstanding for the LIL and Labrador Transmission Assets, 23 of which are now complete. The remaining 14 activities[8] consist of lower priority items and are expected to be completed by early February, 2025. For Soldiers Pond Terminal Station, 47 of the 65 outstanding WR activities are now complete. The remaining 18 activities consist of lower priority items and are expected to be completed through the coming months.[9] WR activity listing remains subject to change as Hydro gains operational experience with these assets.

By the end of 2024, all turnbuckles were replaced with extension links on the dead end structures, and reinforcement was complete for all top plates that secure the OPGW to A3 type towers, as planned. As noted in the Report, the OEM discovered additional DCCTs[10] that require replacement due to cold temperature issues.[11] Three DCCTs were identified to be replaced as a precaution based on site measurements; with two replaced during December 2024. The remaining DCCT identified to be replaced is targeted for replacement as soon as possible, depending on outage availability. Four additional DCCTs were identified as low risk for this issue, and are being targeted for replacement during maintenance outages in 2025, with dates to be confirmed.

Hydro is confident in its ability to serve its customers during the 2024–2025 winter season. The results of Hydro's review of the year-to-date planned completion status of its AWP and WR for both the Labrador Interconnected System and the Island Interconnected System indicate that Hydro is sufficiently positioned for winter. Hydro continues to track the remaining work activities and will provide an update to the Board in February 2025.

[6] Ice removal is required to create a safe work zone and prevent uncontrolled structure damage.
[7] Some additional repair work remains to be completed as system conditions allow, with outage dates to be determined.
[8] The completion of all of these items was delayed due to work prioritization by operations to ensure higher priority work was completed for WR.
[9] The completion of six of these items was delayed due to work prioritization by operations to ensure higher priority work was completed for WR. The remaining twelve items remain outstanding due to procurement delays.
[10] DC current transformer.
[11] While no additional DCCTs have experienced issues associated with cold temperatures, there are indicators such an issue is possible; therefore, as a precaution, they have been identified for replacement.

Should you have any questions, please contact the undersigned.

Yours truly,

NEWFOUNDLAND AND LABRADOR HYDRO

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