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March 17, 2025

The Board of Commissioners of Public Utilities
Prince Charles Building
120 Torbay Road, P.O. Box 21040
St. John's, NL A1A 5B2

Attention: Jo-Anne Galarneau
Executive Director and Board Secretary

Re: Monthly Energy Supply Report for the Island Interconnected System for February 2025

Enclosed please find Newfoundland and Labrador Hydro's Monthly Energy Supply Report for the Island Interconnected System as directed by the Board of Commissioners of Public Utilities.

Should you have any questions, please contact the undersigned.

Yours truly,

NEWFOUNDLAND AND LABRADOR HYDRO

Shirley A. Walsh
Senior Legal Counsel, Regulatory
SAW/mc

Encl.

ecc:

Board of Commissioners of Public Utilities
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Monthly Energy Supply Report for the Island Interconnected System for February 2025

March 17, 2025

A report to the Board of Commissioners of Public Utilities

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1.0 Introduction

On February 8, 2016, the Board of Commissioners of Public Utilities ("Board") requested Newfoundland and Labrador Hydro ("Hydro") file a biweekly report containing, but not limited to, the following:

1) System Hydrology Report;

2) The thermal plant operated in support of hydrology;

3) Production by plant/unit; and

4) Details of any current or anticipated long-term derating.

In July 2016, the Board indicated that a monthly report would thereafter be sufficient. This report provides data for February 2025.

Ownership of the Water Management function resides within Hydro in the Resource and Production Planning department, and is at all times guided by Hydro's operating instructions and environmental standards. This group works in consultation with Energy Marketing to optimize the use of Hydro's hydrologic resources through import/exports and to ensure that the security of supply for domestic load for Hydro's customers remains paramount in all decisions, ensuring the delivery of least-cost, reliable service in an environmentally responsible manner.

2.0 System Hydrology

Reservoir inflows in February 2025 were 36% below the month's historical average.[1] Table 1 summarizes the aggregate storage position of Hydro's reservoirs at the end of the reporting period.

Table 1: System Hydrology Storage Levels

Date	2025 (GWh)	2024 (GWh)	20-Year Average (GWh)	Minimum Storage Limit (GWh)	Maximum Operating Level (GWh)	Maximum Operating Level (%)
28-February-2025	1,614	1,763	1,643	499	2,452	66

[1] Calculated in terms of energy (gigawatt hour ["GWh"]).

The aggregate reservoir storage level on February 28, 2025, was 1,614 GWh, which is 34% below the seasonal maximum operating level and 223% above the minimum storage limit.[2] Total system energy decreased by 259 GWh overall, resulting in a total system energy storage 29 GWh below the 20-year average. Inflows to the reservoirs of the Bay d'Espoir System were 40% below average in February 2025. Inflows to the Hinds Lake Reservoir were 29% below average and inflows to the Cat Arm Reservoir were 4% below average.

Table 2 summarizes the unit outages experienced during February 2025.

Table 2: **February 2025 Unit Outage Summary**

Unit Name	Date offline	Return to Service	Outage Reason	Notes
Bay d'Espoir Unit 1	February 4	February 4	Planned outage	n/a
Bay d'Espoir Unit 2	February 4	February 4	Planned outage	n/a

Figure 1 plots the 2024 and 2025 storage levels, minimum storage limits, maximum operating level storage, and 20-year average aggregate storage for comparison. In addition to the 2024–2025 limits, Hydro has established the minimum storage limits to April 30, 2025. The 2024–2025 limits were developed considering maximized delivery of power from Muskrat Falls, supplemented by available Recapture Energy from the Churchill Falls Hydroelectric Generating Station over the LIL, utilizing the transmission limits associated with the >58.0 Hz under frequency load shedding scheme.[3]

[2] Minimum storage limits are developed annually to provide guidance in the reliable operation of Hydro's major reservoirs—Victoria, Meelpaeg, Long Pond, Cat Arm, and Hinds Lake. The minimum storage limit is designed to indicate the minimum level of aggregate storage required such that if there was a repeat of Hydro's critical dry sequence, or other less severe sequence, Hydro's load can still be met through the use of the available hydraulic storage supplemented with maximized deliveries of power from the Muskrat Falls Hydroelectric Generating Facility ("Muskrat Falls") over the Labrador-Island Link ("LIL"). Hydro's long-term critical dry sequence is defined as January 1959 to March 1962 (39 months). Other dry periods are also considered during this analysis to ensure that no other shorter-term historic dry sequence could result in insufficient storage.

[3] The 2024–2025 analysis assumed that only two units at the Holyrood Thermal Generating Station ("Holyrood TGS") would be online and operating at minimum load during the winter 2024–2025 period. Hydro plans to have all three units at the Holyrood TGS available at full capability, if needed. The minimum storage methodology was updated to ensure Hydro's reservoirs could continue to provide reliable service to customers at the lowest possible cost, in an environmentally responsible manner. In this context, Hydro expects Island reservoirs to be supported with Muskrat Falls energy instead of thermal energy from the Holyrood TGS.

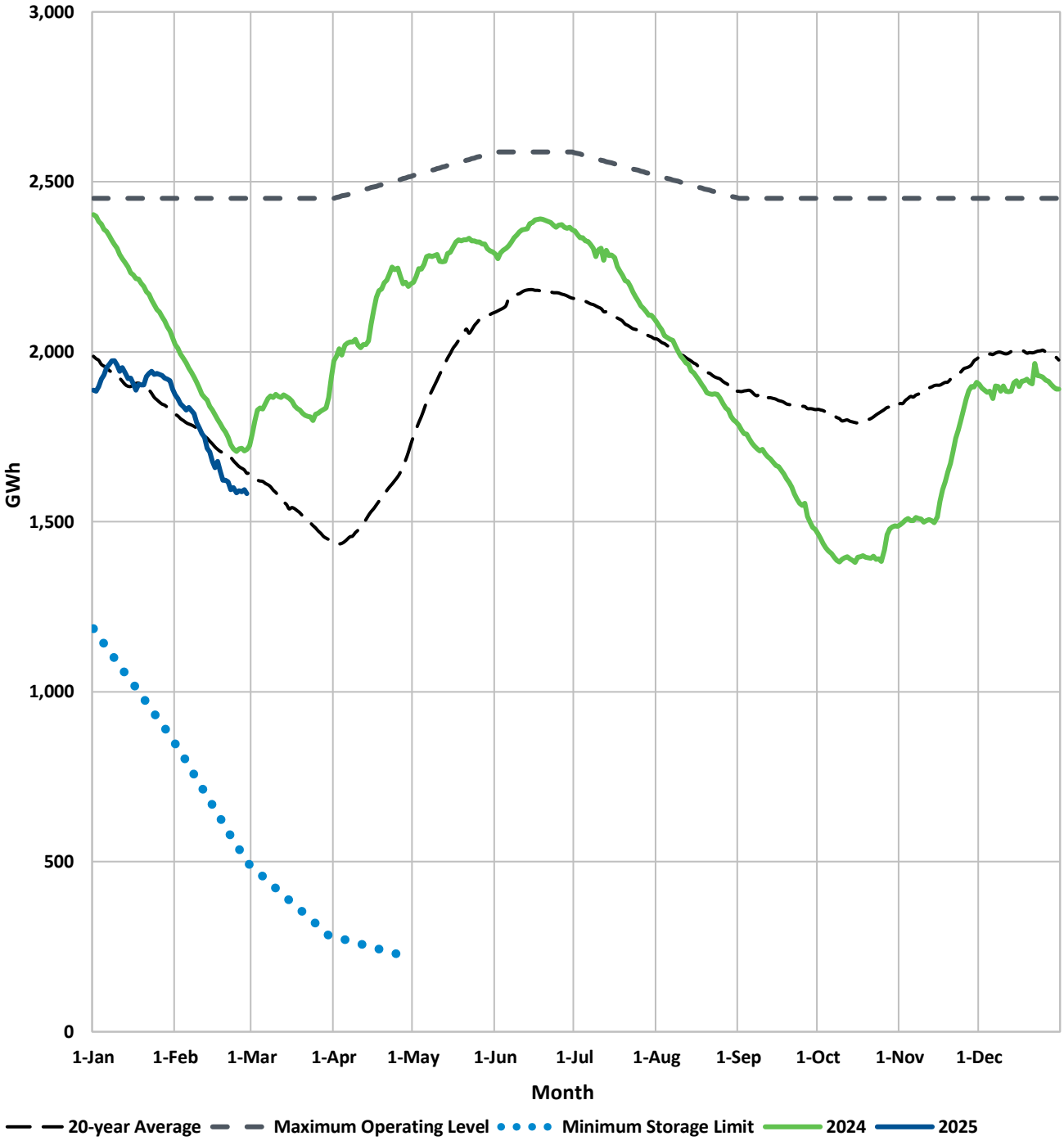

Figure 1: Total System Energy Storage[4]

[4] Data points in Figure 1 represent storage at the beginning of each day. Table 1 reports the end-of-day storage values, which results in a small difference between the storage data presented in Table 1 and Figure 1.

2.1 Ponding

In Order No. P.U. 49(2018), the Board approved Hydro's application for approval of a Pilot Agreement for the Optimization of Hydraulic Resources ("Pilot Agreement").[5] The intent of the Pilot Agreement is to optimize Hydro's hydraulic resources through the strategic use of its storage capabilities, taking advantage of the variability of energy pricing in external markets over time.

Appendix A provides information regarding imported and exported energy transactions under the Pilot Agreement during the month. No ponding exports or imports over the Maritime Link occurred during February 2025.

2.2 Spill Activity

Appendix A provides information regarding spill-avoidance export transactions undertaken.[6] There were no releases of water required at any locations on the Island Interconnected System in February 2025. A summary of the year-to-date ("YTD") total volumes spilled or bypassed in both MCM[7] and GWh can be found in Table 3.

Table 3: Spill Activity

	Granite Canal Bypass		Upper Salmon Bypass		Burnt Dam Spillway	
	MCM	**GWh**	**MCM**	**GWh**	**MCM**	**GWh**
28-February-2025	-	-	-	-	-	-
YTD Total	**14.4**	**1.4**	**0.0**	**0.0**	**0.0**	**0.0**

[5] The Third Amended and Restated Pilot Agreement for the Optimization of Hydraulic Resources was approved as per Board Order No. P.U. 35(2022), and was extended as per Board Order No. P.U. 30(2023), and again in Board Order No. P.U. 29(2024).
[6] Pursuant to the Pilot Agreement, exporting when system load is low allows for increased generation from Island hydraulic facilities and the utilization of water (energy) that would have otherwise been spilled, while not increasing the risk of spill elsewhere in the system.
[7] Million cubic metres ("MCM").

3.0 Production and Purchases

Appendix B provides a breakdown of power purchases, including the import and export activity over the LIL and Maritime Link and production by plant during February 2025.[8] There was no energy repaid from CBPP to Energy Marketing under the Temporary Energy Exchange Agreement in February 2025. There was 0.6 GWh of emergency energy, including losses, supplied to Nova Scotia over the Maritime Link during February 2025.

4.0 Thermal Production

Unit 2 and 3 at the Holyrood TGS were online for system requirements during February 2025. Unit 1 was online for a portion of the month for testing and investigation purposes. Additional detail regarding this unit can be found in Section 5.0. Total energy production from the Holyrood TGS was 130.3 GWh during the month. Standby generation was not used to support reservoir storage. The operating hours for the Holyrood TGS, Holyrood Combustion Turbine ("CT"), and the Hardwoods and Stephenville Gas Turbines ("GT") are summarized in Table 4.

Table 4: **Holyrood TGS and Combustion Turbines Operating Hours**

	Operating Hours	Synch Condense Hours	Available Hours
Holyrood TGS			
Unit 1	397.7	0.0	397.7
Unit 2	672.0	0.0	672.0
Unit 3	645.7	0.0	645.7
Combustion Turbines			
Hardwoods GT	27.0	645.0	672.0
Stephenville GT	14.6	657.4	672.0
Holyrood CT	17.0	0.0	606.6

5.0 Unit Deratings

Holyrood TGS Unit 1 was taken offline for a planned annual outage on April 12, 2024. It remained on planned outage until the planned return to service date of October 19, 2024. Since that date, the unit

[8] On October 1, 2024, Hydro entered into a second six-month power purchase agreement with Corner Brook Pulp and Paper Limited ("CBPP") as directed by the Government of Newfoundland and Labrador. The power purchase agreement with CBPP provides Hydro with 80 GWh of non-firm energy from October 1, 2024, through March 31, 2025, inclusive. Total deliveries of 80 GWh were met in February 2025, thus ending the PPA in advance of March 31, 2025.

was on a forced extension of the planned outage. On February 12, 2025 issues found with the turbine stop valve were corrected, and the unit was put online at 50 MW. The unit was held at 50 MW until the Over-Speed testing (OST) was completed on February 13, 2025. The unit was returned to service following the OST, but an issue prevented the unit from moving above 56% on the control valves, which equated to an output of 92 MW. Once the boiler safety valve on-line testing was complete, the steam pressure was increased to normal operating level, which increased the output of the unit from 92 MW to 105 MW, however the issue preventing movement beyond 56% on the control valves remained. The unit remained online with a derated capacity of 105 MW for the remainder of February 2025, while testing and investigation of the issue was performed by General Electric ("GE"). GE recommended the unit come offline for a more detailed investigation, which is scheduled to take place in March 2025.[9]

Holyrood TGS Unit 2 was online and available for full load until February 9, 2025, when fuel temperatures coming down from the tank farm led to the derating period noted below for Unit 2 and Unit 3. On February 12, 2025, Unit 2 was derated due to high back pressure in the Unit 2 fuel oil heater, which was limiting fuel flow to the burners. This was resolved on February 13, 2025 when the second fuel oil heater was placed in service in parallel.

Holyrood TGS Units 2 and 3 were derated to 145 MW and 130 MW respectively on February 9, 2025. The plant was experiencing problems heating its fuel oil adequately up to its desired combustion temperature, becoming a constraint at higher loads. The issue was resolved by placing an additional fuel oil storage tank in service. Unit 3 was available for full load until February 9, 2025 when fuel temperatures coming down from the tank farm led to the derating period noted above for Unit 2 and Unit 3. On February 12, 2025, Unit 3 was limited to 135 MW due to an airflow restriction caused by fouling in the air heaters. This lasted until February 17, 2025 when a load test confirmed full load capability. On February 22, 2025, the north condensate extraction pump failed, restricting the unit to 130 MW. Both pump and motor require refurbishment as a result of this failure, and expected return to service has not yet been determined. The derate to 130 MW will remain until the pump can be returned to service. From February 26 to 27, the unit was offline on a planned outage to replace generator brushes and to perform an air heater wash.

[9] The investigation has been completed with the unit being returned to service at 170 MW on March 16. Hydro will provide further details in the Monthly Energy Supply Report for the Island Interconnect System for March 2025.

The Hardwoods GT was available for the full month of February 2025 with the exception of a forced derating of the unit to 50% on February 19, 2025 to address small fuel leaks on both Ends A and B.

The Holyrood CT was available for the full month of February 2025, with the exception of a forced outage from February 12 to 15 due to a failed blade path thermocouple and a second forced outage on February 25 to 26 due to a failed jacking oil pump.

The Stephenville GT was available for the entire month of February 2025.

Appendix A

Ponding and Spill Transactions

Table A-1: Ponding Transactions

Date	Ponding Imports (MWh)	Ponding Exports (MWh)	Ponding Imports Purchased by Hydro (MWh)	Transfer of Pond Balance to Spill Avoidance (MWh)	Energy Losses to Export (MWh)	Cumulative Ponded Energy (MWh)
Opening Balance						**(4,774)**
Total[1]		-	-	-	-	

Table A-2: Avoided Spill Energy

Date	Avoided Spill Exports (MWh)	Energy Losses to Export (MWh)	Transfer of Pond Balance to Spill Avoidance (MWh)	YTD Avoided Spill Energy (MWh)
Opening Balance	-	-	-	-
Total[2]	-	-	-	-

[1] Total transactions for February 2025.
[2] Total transactions for February 2025.

Appendix B

Production and Purchases

Table B-1: Generation and Purchases (GWh)[1,2]

	Feb-25	YTD Feb 2025
Hydro Generation (Hydro)		
Bay d'Espoir		
Unit 1	37.9	80.4
Unit 2	37.7	70.2
Unit 3	32.8	72.4
Unit 4	17.4	36.0
Unit 5	12.9	29.4
Unit 6	20.1	43.1
Unit 7	77.6	168.2
Subtotal Bay d'Espoir	236.5	499.7
Upper Salmon	45.0	97.8
Granite Canal	20.2	40.8
Hinds Lake	38.7	83.8
Cat Arm		
Unit 1	38.1	76.9
Unit 2	38.3	77.1
Subtotal Cat Arm	76.3	154.0
Paradise River	1.4	5.3
Star Lake	11.0	23.2
Rattle Brook	0.1	1.4
Nalcor Exploits	46.2	105.4
Mini Hydro	0.0	0.0
Total Hydro Generation (Hydro)	**475.4**	**1,011.4**
Thermal Generation (Hydro)		
Holyrood TGS		
Unit 1	26.4	26.4
Unit 2	50.9	97.3
Unit 3	50.1	107.7
Subtotal Holyrood TGS Units	127.5	231.4
Holyrood Gas Turbine and Diesels	1.4	3.0
Hardwoods Gas Turbine	0.8	1.0
Stephenville Gas Turbine	0.5	0.9
Other Thermal	0.1	0.1
Total Thermal Generation (Hydro)	**130.3**	**236.4**
Purchases		
Requested Newfoundland Power and CBPP	0.1	0.1
Capacity Assistance	0.0	0.0
Power Purchase Agreement	15.8	34.4
Secondary	0.0	0.0
Co-Generation	2.6	2.6
Subtotal CBPP	18.4	37.0
Wind Purchases	19.6	38.0
Maritime Link Imports[2]	0.0	0.0
New World Dairy	0.2	0.2
Labrador Island Link Delivery to IIS[3,4]	161.2	295.6
Total Purchases	**199.4**	**370.9**
Total	**805.1**	**1,618.7**

[1] Gross generation.

[2] Actuals reflect rounded values to the nearest tenth of a GWh. Differences between total versus addition of individual components due to rounding.

[3]Includes energy flows as a result of purchases and inadvertent energy.

[4]LIL deliveries to the Island Interconnected System are calculated as LIL imports of 340.8 GWh less Maritime Link exports of 179.6 GWh.

[5]Net energy delivered to the Island Interconnected System is less than the total energy delivery to Hydro under the Muskrat Falls Power Purchase Agreement because of transmission losses on the LIL.