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May 20, 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 April 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:

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Monthly Energy Supply Report for the Island Interconnected System for April 2025

May 20, 2025

A report to the Board of Commissioners of Public Utilities

newfoundland labrador hydro

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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 April 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 April 2025 were 4% 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 (%)
30-April-2025	2,034	2,207	1,728	220	2,516	81

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

The aggregate reservoir storage level on April 30, 2025 was 2,034 GWh, which is 19% below the seasonal maximum operating level and 825% above the minimum storage limit.[2] Total system energy for the month increased by 160 GWh overall, resulting in a total system energy storage 306 GWh above the 20-year average. Inflows to the reservoirs of the Bay d'Espoir system were 92% of average in April 2025. Inflows to the Hinds Lake Reservoir were 120% of average and inflows to the Cat Arm Reservoir were 96% of average during the month.

Four significant precipitation events occurred along Hydro's reservoirs in April 2025. On April 1 and 2, 2025, 24 mm of precipitation was recorded at Burnt Dam, while 42 mm was recorded at Long Pond. On April 14 and 15, 2025, 49 mm of precipitation was recorded at Burnt Dam, along with 32 mm at Long Pond. On April 20 and 21, 2025, 36 mm of precipitation was measured at Burnt Dam. Lastly, an additional 43 mm of precipitation was measured at both Burnt Dam and Long Pond on April 27 and 28, 2025.

A survey of remaining snowpack in the Hinds Lake and Cat Arm watersheds took place on April 3, 2025. This survey found that the snowpack in the Hinds Lake watershed was 15% of the historical average with multiple sites that were unable to be surveyed due to a lack of snow remaining in the area. Snowpack in the Cat Arm watershed was found to be above average at 118% of the historical average for April. Spring freshet had concluded in the Bay d'Espoir system and therefore the watershed was not surveyed.

Table 2 summarizes the unit outages experienced during April 2025.

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

Unit Name	Date offline	Return to Service	Outage Reason	Notes
Bay d'Espoir Unit 1	March 31	Ongoing	Planned outage	n/a
Bay d'Espoir Unit 2	March 31	Ongoing	Planned outage	n/a
Granite Canal	April 23	April 23	Planned outage	n/a
Granite Canal	March 11	April 23	Forced derating	Unit de-rated to 32 MW due to vibration issue. Unit returned to full capability on April 23

[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.

Figure 1 plots the 2024 and 2025 storage levels, minimum storage limits, maximum operating level storage, and 20-year average aggregate storage for comparison. 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]

[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.

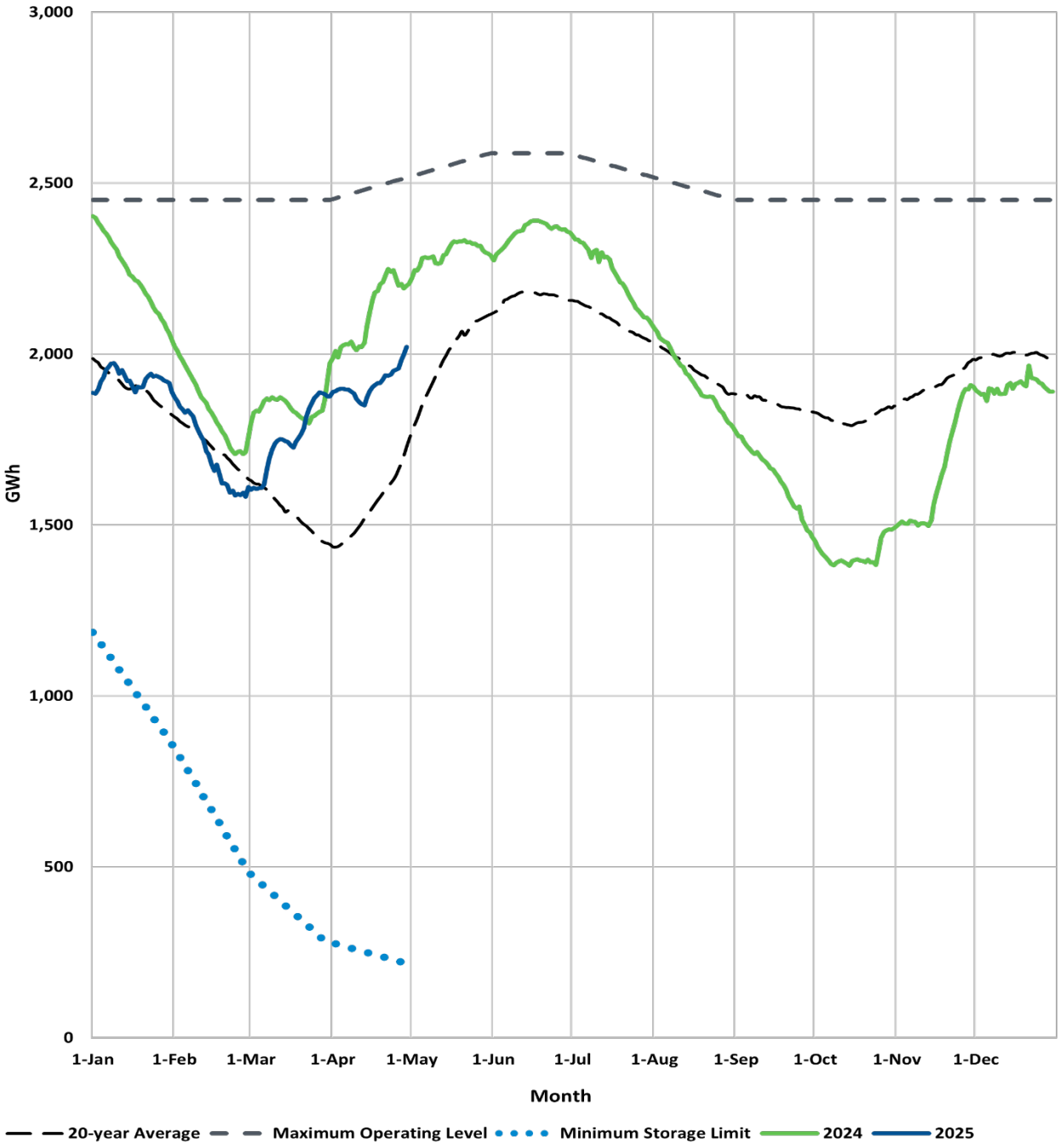

Figure 1: Total System Energy Storage[4]

[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 Board 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. Both ponding exports and imports occurred over the Maritime Link during April 2025 and are summarized in Appendix A.

2.2 Spill Activity

Appendix A provides information regarding spill-avoidance export transactions undertaken.[6] No releases of water were required at any locations on the Island Interconnected System in April 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**
30-April-2025	-	-	-	-	-	-
YTD Total	**22.8**	**2.2**	**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 April 2025. There was no energy repaid from CBPP[8] to Energy Marketing under the Temporary Energy Exchange Agreement in April 2025. There was 0.5 GWh of emergency energy, including losses, supplied to Nova Scotia over the Maritime Link during April 2025.

4.0 Thermal Production

Units 1 and 2 at the Holyrood TGS were online for system requirements during April 2025 except for the unit outages as described in Section 5.0. Total energy production from the Holyrood TGS was 67.7 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	630.50	0	660.53
Unit 2	623.30	0	623.30
Unit 3	0	0	0
Combustion Turbines			
Hardwoods GT	3.72	716.28	720.00
Stephenville GT	1.13	26.13	720.00
Holyrood CT	19.28	0	538.53

5.0 Unit Deratings

Holyrood TGS Unit 1 was online with full capability[9] until April 17, 2025 when an issue with the turbine control valves was discovered, that limited the output to 105 MW. The unit was taken offline from April 25 to 27, 2025 to correct the control valve issue. The unit was returned to service on April 27, 2025 with full capability but had to be taken offline again on April 28, 2025 to replace a hydraulic filter on the

[8] Corner Brook Pulp and Paper Limited ("CBPP").
[9] Holyrood TGS was derated from 08:00 on April 15 due to fuel quality issues, which were resolved at 08:00 on April 17. Consistent with EC unit performance reporting standards, this derate is not reflected in individual unit performance.

control valves, which had fouled causing erratic operation. The unit was returned to service with full capability that same day. On April 29, 2025 the unit was placed in standby as it was no longer required to support system generation requirements. The unit remained off-line in standby mode for the remainder of the month.

Holyrood TGS Unit 2 was online with full capability until April 17, 2025 when the unit was taken offline on a planned outage to complete an air heater wash. On April 19, 2025 the wash was completed but the return to service was delayed due to a faulty level transmitter on the deaerator. This transmitter was corrected on April 20, 2025; however, a hydraulic leak on the turbine valves led to a further delay in return to service. Once the leak was corrected the unit was returned to service with full capability on April 21, 2025. On April 22, 2025 the unit was online with a de-rate to 115 MW due to high condenser back pressure believed to be caused by condenser fouling which could not be corrected while online. The unit remained online and derated to 115 MW for the remainder of the month.

Holyrood TGS Unit 3 was on planned annual outage for the entire month of April 2025.

The Hardwoods GT was available for the full month of April 2025.

The Holyrood CT was available for the full month of April 2025 except for a planned outage that began on April 23, 2025 to complete preventative and corrective maintenance activities. The unit remained on a planned outage for the remainder of the month.

The Stephenville GT was available for the entire month of April 2025. A planned outage occurred from March 31 to April 11, 2025 to complete preventative and corrective maintenance activities which de-rated the unit to 25 MW. The unit was then available at full capability for the remainder of the month.

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)**
16-Apr-2025		(315)			(30)	(5,119)
17-Apr-2025		(223)			(24)	(5,366)
20-Apr-2025	463					(4,903)
30-Apr-2025						(4,903)
Total[1]	**463**	**(538)**	**-**	**-**	**(54)**	

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 April 2025.
[2] Total transactions for April 2025.

Appendix B

Production and Purchases

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

	Apr-25	YTD Apr 2025
Hydro Generation (Hydro)		
Bay d'Espoir		
Unit 1	0.0	121.6
Unit 2	0.0	110.0
Unit 3	38.9	125.2
Unit 4	33.0	73.1
Unit 5	28.3	73.1
Unit 6	40.2	91.8
Unit 7	88.1	334.7
Subtotal Bay d'Espoir	228.4	929.4
Upper Salmon	54.5	210.5
Granite Canal	22.4	86.9
Hinds Lake	31.1	158.4
Cat Arm		
Unit 1	40.2	159.5
Unit 2	40.6	160.0
Subtotal Cat Arm	80.8	319.5
Paradise River	4.1	13.8
Star Lake	11.7	47.2
Rattle Brook	1.5	4.5
Nalcor Exploits	50.2	209.8
Mini Hydro	0.0	0.0
Total Hydro Generation (Hydro)	**484.7**	**1,980.1**
Thermal Generation (Hydro)		
Holyrood TGS		
Unit 1	34.4	107.4
Unit 2	33.3	194.9
Unit 3	0.0	138.4
Subtotal Holyrood TGS Units	67.7	440.7
Holyrood Gas Turbine and Diesels	0.9	4.1
Hardwoods Gas Turbine	0.1	1.1
Stephenville Gas Turbine	0.0	0.9
Other Thermal	0.1	0.2
Total Thermal Generation (Hydro)	**68.7**	**447.0**
Purchases		
Requested Newfoundland Power and Vale	0.0	0.1
CBPP		
Capacity Assistance	0.0	0.0
Power Purchase Agreement	0.0	34.4
Secondary	0.2	0.2
Co-Generation	4.8	19.7
Subtotal CBPP	5.0	54.4
Wind Purchases	16.4	72.1
Maritime Link Imports[3]	0.0	0.0
New World Dairy	0.2	0.6
Labrador Island Link Delivery to IIS[4,5]	63.7	416.7
Total Purchases	**85.3**	**544.0**
Total	**638.8**	**2,971.0**

[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 196.2 GWh less Maritime Link exports of 132.5 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.