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July 19, 2021

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: Monthly Energy Supply Report for the Island Interconnected System for June 2021

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

A handwritten signature in blue ink, appearing to read "Shirley A. Walsh", written over a horizontal line.

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

Encl.

ecc: **Board of Commissioners of Public Utilities**
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PUB Official Email

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Monthly Energy Supply Report for the Island Interconnected System for June 2021

July 19, 2021



A report to the Board of Commissioners of Public Utilities

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Appendix A: Production and Purchases

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, as contained in Hydro's Quarterly 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 June 2021.

2.0 System Hydrology

Reservoir inflows in June 2021 were approximately 16% of the month’s historical average. Inflows in 2021 decreased to 86% of the year-to-date historical average.

Table 1 summarizes the aggregate storage position of Hydro’s reservoirs at the end of the reporting period.

Table 1: System Hydrology Storage Levels

	2021	2020	20-Year Average	Minimum Storage Limit	Maximum Operating Level	Percentage of Maximum Operating Level
Date	(GWh)	(GWh)	(GWh)	(GWh)	(GWh)	(%)
30-June-2021	1,967	2,041	2,134	1,007	2,588	76

The aggregate reservoir storage level on June 30, 2021 was 1,967 GWh, which is 24% below the seasonal maximum operating level and 95% above the minimum storage limit.¹ The current storage level is shown

¹ 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, maximum generation at Holyrood Thermal Generating Station, and non-firm imports. Hydro’s long-term critical dry sequence is defined as January 1959 to March 1962 (39 months). Other dry periods are also examined during the derivation to ensure that no other shorter term historic dry sequence could result in insufficient storage.

1 in Figure 1 in relation to the 20-year average storage level for the end of June of 2,134 GWh. At the end
2 of June 2020, the aggregate storage level was 2,041 GWh.

3 On June 29, 2021 the Granite Canal Plant was derated from 40 MW to 32 MW while the water level was
4 below the normal low supply level in preparation for its planned annual outage. The unit was taken
5 offline for its planned annual outage on July 4, 2021.

6 Figure 1 plots the 2020 and 2021 storage levels, minimum storage limits, maximum operating level
7 storage, and the 20-year average aggregate storage for comparison.

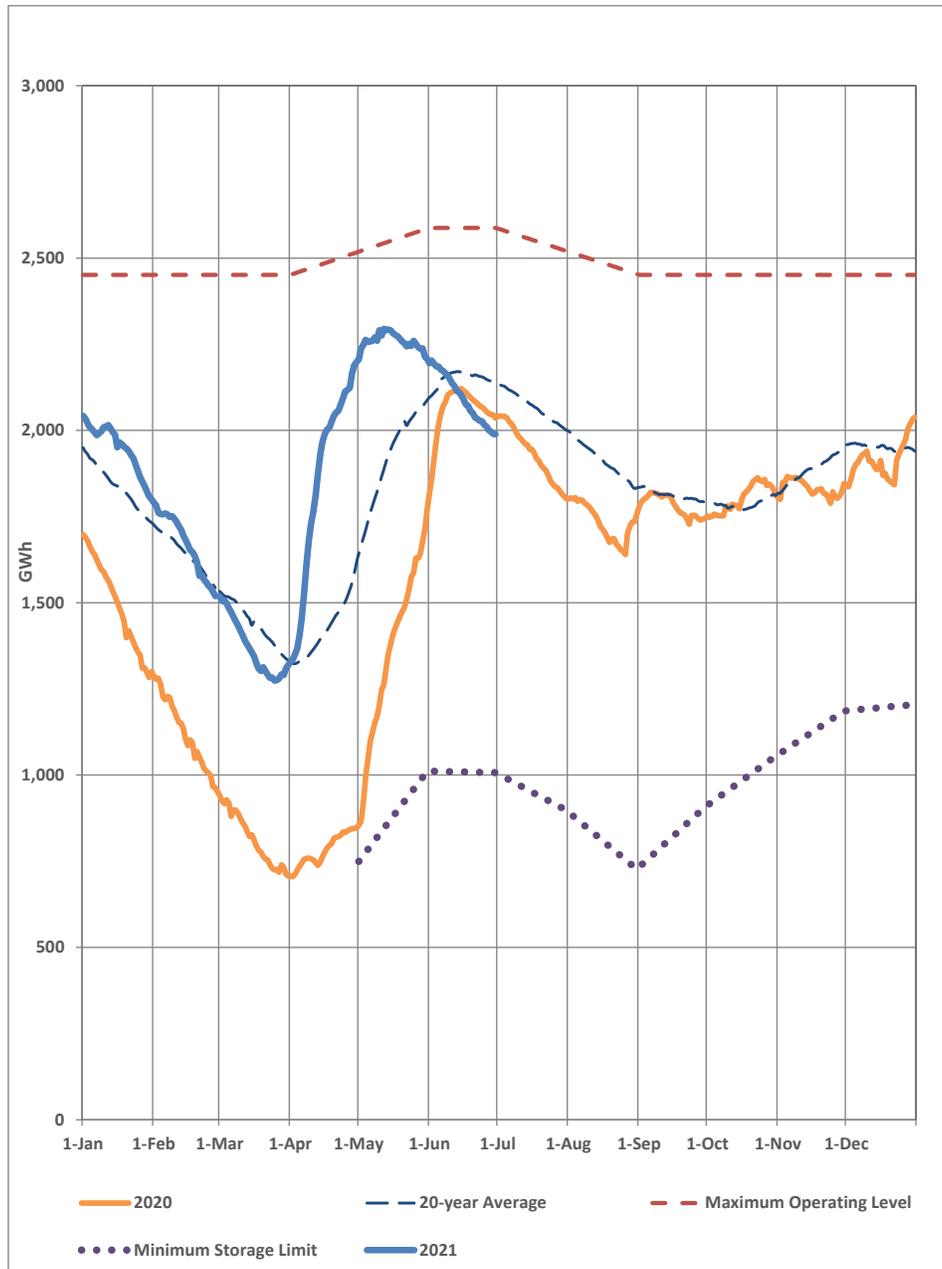


Figure 1: Total System Energy Storage

3.0 Production and Purchases

Appendix A provides a breakdown of power purchases, including imports, and production by plant during June 2021.

4.0 Thermal Production and Imports

Unit 2 at the Holyrood Thermal Generating Station (“Holyrood TGS”) generated at minimum output from June 9, 2021 to June 11, 2021 for a total of 53.9 hours to support Labrador-Island Link (“LIL”) commissioning activities. The Holyrood Gas Turbine was operated on June 1, 2021 and June 3, 2021 for a total of 12.6 hours to support LIL commissioning activities. Costs associated with the operation of thermal generation to support LIL commissioning activities are recovered from the Lower Churchill Project.

Holyrood TGS Units 1 and 3 were not required to generate during the month of June 2021. Total Holyrood TGS production was 3.0 GWh.

Remaining standby units were operated during the month for system operating limit requirements and for testing purposes. Standby units were operated for a total of 37.0 hours during the month.² Total standby production during the month was 1.0 GWh. Standby generation was not required to support reservoir storage.

In June 2021, exports of 1.5 GWh occurred over the Maritime Link for ponding purposes. The ponded balance at month end was -1.6 GWh. Testing activities continued on the LIL in June 2021, resulting in the delivery of 8.2 GWh of energy at Soldiers Pond. On June 28, 2021, approximately 0.0 GWh³ was generated to supply Emergency Energy to Nova Scotia Power, pursuant to the Interconnection Operators Agreement⁴ between Hydro and Nova Scotia Power.⁵ Total exports over the Maritime Link for the month of June were 10.1 GWh.⁶ In addition to exports over the Maritime Link, a total of 1.1 GWh was delivered to Corner Brook Pulp and Paper Limited by Nalcor Energy Marketing (“NEM”) via the LIL as per the Temporary Energy Exchange Agreement.

² Includes the 12.6 hours of operation to support LIL commissioning activities.

³ Total energy supplied amounted to 31 MWh.

⁴ Article 5, Schedules A3 and C9.

⁵ A copy of the agreement was provided in “The Board’s Investigation and Hearing into Supply Issues and Power Outages on the Island Interconnected System – Availability of Requested Information from Hydro, July 5, 2017 Update,” Appendix C.

⁶ Total exports include the provision of emergency and inadvertent energy to Nova Scotia Power Inc. and export activity conducted by NEM including the export of spilled energy on Hydro’s behalf.

5.0 Unit Deratings

- 1
- 2 Holyrood TGS Unit 1 was on annual maintenance outage for the entire month of June 2021.
- 3 Holyrood TGS Unit 2 was in standby until June 9, 2021, as it was not required to support system
- 4 requirements. From June 9, 2021 to June 11, 2021 the unit was put online to support LIL commissioning.
- 5 The unit was fully available during this period. On June 11, 2021 the unit was returned to standby mode,
- 6 and remained in standby through the remainder of the month, with the exception of a planned outage
- 7 from June 23, 2021 to June 25, 2021 to allow work to proceed on the Unit 3 outfall piping.
- 8 Holyrood TGS Unit 3 remained on annual maintenance outage for the month of June 2021.
- 9 The Hardwoods, Holyrood, and Stephenville Gas Turbines were all available at full capacity for the entire
- 10 month of June 2021.

Appendix A

Production and Purchases

Monthly Energy Supply Report for the Island Interconnected System for June 2021
Appendix A: Production and Purchases

Production and Purchases⁷

	June 1, 2021 to June 30, 2021 (GWh)	Year-to-Date June 30, 2021 (GWh)
Hydro Generation (Hydro)		
Bay d'Espoir Plant		
Unit 1	32.8	200.3
Unit 2	39.3	213.5
Unit 3	9.8	173.7
Unit 4	2.4	78.3
Unit 5	8.2	118.6
Unit 6	11.4	96.1
Unit 7	67.4	486.6
Subtotal Bay d'Espoir Plant	171.3	1,367.2
Upper Salmon Plant	50.2	306.4
Granite Canal Plant	12.6	127.5
Hinds Lake Plant	23.1	186.7
Cat Arm Plant		
Unit 1	30.0	209.2
Unit 2	31.5	214.5
Subtotal Cat Arm Plant	61.4	423.8
Paradise River	0.9	10.9
Star Lake Plant	12.2	73.0
Rattle Brook Plant	0.3	6.1
Nalcor Exploits Plants	44.6	306.7
Mini Hydro	0.0	0.0
Total Hydro Generation	376.7	2,808.2
Thermal Generation (Hydro)		
Holyrood TGS		
Unit 1	0.0	206.6
Unit 2	3.0	242.2
Unit 3	0.0	112.6
Subtotal Holyrood TGS Units	3.0	561.4
Holyrood Gas Turbine and Diesels	0.5	5.3
Hardwoods Gas Turbine	0.4	0.8
Stephenville Gas Turbine	0.1	0.3
Other Thermal	0.0	0.0
Total Thermal Generation	3.9	567.8
Purchases		
Requested Newfoundland Power and Vale	0.0	0.0
Corner Brook Pulp and Paper		
Capacity Assistance	0.0	0.0
Firm Energy Power Purchase Agreement	0.0	0.0
Secondary	2.1	11.3
Co-Generation	3.6	26.9
Subtotal Corner Brook Pulp and Paper	5.7	38.2
Wind Purchases	12.9	102.8
Maritime Link Imports ⁸	0.1	1.0
New World Dairy	0.2	1.7
Labrador-Island Link Imports ⁹	8.2	285.0
Total Purchases	27.2	428.7
Total¹⁰	407.8	3,804.6

⁷ Gross generation.

⁸ Includes energy flows as a result of purchases and inadvertent energy.

⁹ Includes purchases as a result of testing activity as well as deliveries that are then exported over the Maritime Link.

¹⁰ Actuals reflect rounded values to the nearest tenth of a GWh. Differences between total vs. addition of individual components due to rounding.