



Hydro Place, 500 Columbus Drive,
P.O. Box 12400, St. John's, NL
Canada A1B 4K7
t. 709.737.1400 f. 709.737.1800
www.nlh.nl.ca

October 19, 2020

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 September 2020

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/kd

Encl.

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

Newfoundland Power
Gerard M. Hayes
Regulatory Email

Consumer Advocate
Dennis M. Browne, Q.C., Browne Fitzgerald Morgan & Avis
Stephen F. Fitzgerald, Browne Fitzgerald Morgan & Avis
Sarah G. Fitzgerald, Browne Fitzgerald Morgan & Avis
Bernice Bailey, Browne Fitzgerald Morgan & Avis

Industrial Customer Group

Paul L. Coxworthy, Stewart McKelvey
Denis J. Fleming, Cox & Palmer
Dean A. Porter, Poole Althouse

Praxair Canada Inc.

Sheryl E. Nisenbaum

Teck Resources Limited

Shawn Kinsella



Monthly Energy Supply Report for the Island Interconnected System for September 2020

October 19, 2020



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 September 2020.

2.0 System Hydrology

Reservoir inflows in September 2020 were approximately 21% above the month’s historical average. Inflows in 2020 to date have increased to 4% above the 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

	2020	2019	20-Year Average	Minimum Storage Limit	Maximum Operating Level	Percentage of Maximum Operating Level
Date	(GWh)	(GWh)	(GWh)	(GWh)	(GWh)	(%)
30-Sept-2020	1,751	1,281	1,794	1,483	2,449	71

The aggregate reservoir storage level on September 30, 2020 was 1,751 GWh, which is 29% below the seasonal maximum operating level and 18% above the minimum storage limit.¹ The current storage level

¹ Minimum storage targets 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 target is designed to show 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.

17 is shown in Figure 1 in relation to the 20-year average storage level for the end of September of
 18 1,794 GWh. At the end of September 2019, the aggregate storage level was 1,281 GWh.

19 Figure 1 plots the 2019 and 2020 storage levels, maximum operating level storage, and the 20-year
 20 average aggregate storage for comparison.

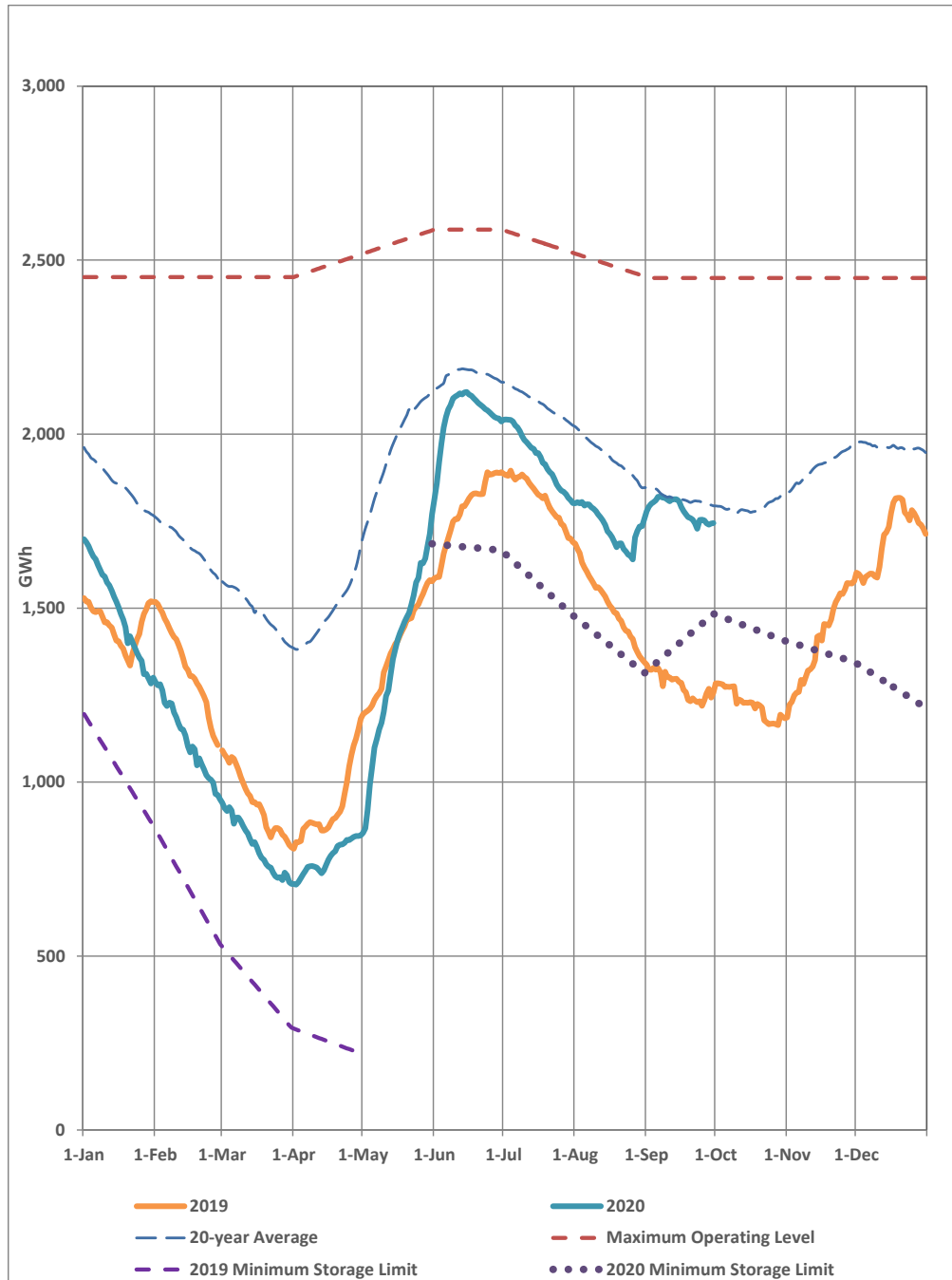


Figure 1: Total System Energy Storage

21 **3.0 Production and Purchases**

22 Appendix A provides a breakdown of power purchases, including imports, and production by plant
23 during September 2020.

24 **4.0 Thermal Production and Imports**

25 In September 2020, Holyrood Thermal Generating Station (“Holyrood TGS”) Unit 1 was operated for
26 35.2 hours to establish the unit as ready for operation in advance of the winter operating season.
27 Holyrood TGS Unit 2 was not operated during September 2020. Holyrood TGS Unit 3 was operated in
28 synchronous condenser mode in all hours of September 2020 for system requirements. Total Holyrood
29 TGS generation was 2.3 GWh.

30 Standby units were operated for a total of 9.6 hours during the month. Total standby generation during
31 the month was 0.4 GWh. Standby generation was not required to support reservoir storage.

32 Imports over the Maritime Link did not occur for ponding purposes or system energy requirements in
33 September 2020. Exports of 1.8 GWh occurred in September 2020 for ponding purposes, reducing the
34 ponded balance to -3.9 GWh as of September 30, 2020. There was no energy imported over the
35 Labrador-Island Link in September 2020 due to the continued outage.

36 **5.0 Unit Deratings**

37 Holyrood TGS Unit 1 was placed online on September 1, 2020 and ran at 70 MW until
38 September 2, 2020. It was then taken offline and remained in cold standby for the remainder of
39 September 2020. Holyrood TGS Unit 2 remained on planned annual outage for the entire month of
40 September 2020. Holyrood TGS Unit 3 was online in synchronous condenser mode for the entire month
41 of September 2020.

42 The Stephenville Gas Turbine was available at full capacity for the entire month of September 2020.

43 The Hardwoods Gas Turbine was available at full capacity until commencement of a planned
44 maintenance outage from September 23, 2020 to October 9, 2020 to complete preventative and
45 corrective maintenance and capital upgrades.



Appendix A

Production and Purchases

Production and Purchases²

	September 1, 2020 to September 30, 2020 (GWh)	Year-to-Date September 30, 2020 (GWh)
Hydro Generation (Hydro)		
Bay d'Espoir Plant		
Unit 1	19.7	257.5
Unit 2	0.0	234.4
Unit 3	38.0	283.1
Unit 4	12.8	98.4
Unit 5	12.3	142.8
Unit 6	26.7	198.0
Unit 7	35.7	680.8
Subtotal Bay d'Espoir Plant	145.2	1,894.9
Upper Salmon Plant	27.9	393.1
Granite Canal Plant	13.6	160.1
Hinds Lake Plant	20.2	248.4
Cat Arm Plant		
Unit 1	36.2	287.2
Unit 2	40.2	313.6
Subtotal Cat Arm Plant	76.5	600.8
Paradise River	4.0	26.9
Star Lake Plant	10.9	104.6
Rattle Brook Plant	1.0	8.3
Nalcor Exploits Plants	44.5	439.5
Mini Hydro	0.0	0.0
Total Hydro Generation	343.8	3,876.6
Thermal Generation (Hydro)		
Holyrood TGS		
Unit 1	2.3	254.1
Unit 2	0.0	302.7
Unit 3	0.0	199.0
Subtotal Holyrood TGS Units	2.3	755.7
Holyrood Gas Turbine and Diesels	0.3	4.1
Hardwoods Gas Turbine	0.1	0.6
Stephenville Gas Turbine	0.0	0.4
Other Thermal	0.1	0.2
Total Thermal Generation	2.7	761.0
Purchases		
Requested Newfoundland Power and Vale	0.0	0.1
Corner Brook Pulp and Paper		
Capacity Assistance	0.0	0.0
Firm Energy Power Purchase Agreement	0.0	0.0
Secondary	3.3	38.9
Co-Generation	4.2	38.8
Subtotal Corner Brook Pulp and Paper	7.5	77.6
Wind Purchases	15.3	126.8
Maritime Link Imports ³	0.1	180.0
New World Dairy	0.2	1.8
Labrador-Island Link Imports ⁴	0.0	0.0
Total Purchases	23.0	386.4
Total⁵	369.6	5,023.9

² Gross generation.

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

⁴ Includes purchases as a result of testing activity.

⁵ Actuals reflect rounded values to the nearest tenth of a GWh. Differences between total vs. addition of individual components due to rounding.