newfoundland labrador hydro
a nalcor energy company

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August 17, 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 July 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/sk

Encl.

ecc: **Board of Commissioners of Public Utilities**
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Praxair Canada Inc.
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Teck Resources Limited
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A report to the Board of Commissioners of Public Utilities

Contents

List of Appendices

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 July 2020.

2.0 System Hydrology

Reservoir inflows in July 2020 were approximately 48% of the month's historical average. Inflows in 2020 to date are equivalent to 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

Date	2020 (GWh)	2019 (GWh)	20-Year Average (GWh)	Minimum Storage Limit (GWh)	Maximum Operating Level (GWh)	Maximum Operating Level (%)
31-Jul-2020	1,780	1,683	2,025	1,479	2,544	70%

The aggregate reservoir storage level on July 31, 2020 was 1,780 GWh, which is 30% below the seasonal maximum operating level and 20% above the minimum storage limit.[1] The current storage level is shown

[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.

in Figure 1 in relation to the 20-year average storage level for the end of July of 2,025 GWh. At the end of July 2019, the aggregate storage level was 1,683 GWh.

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

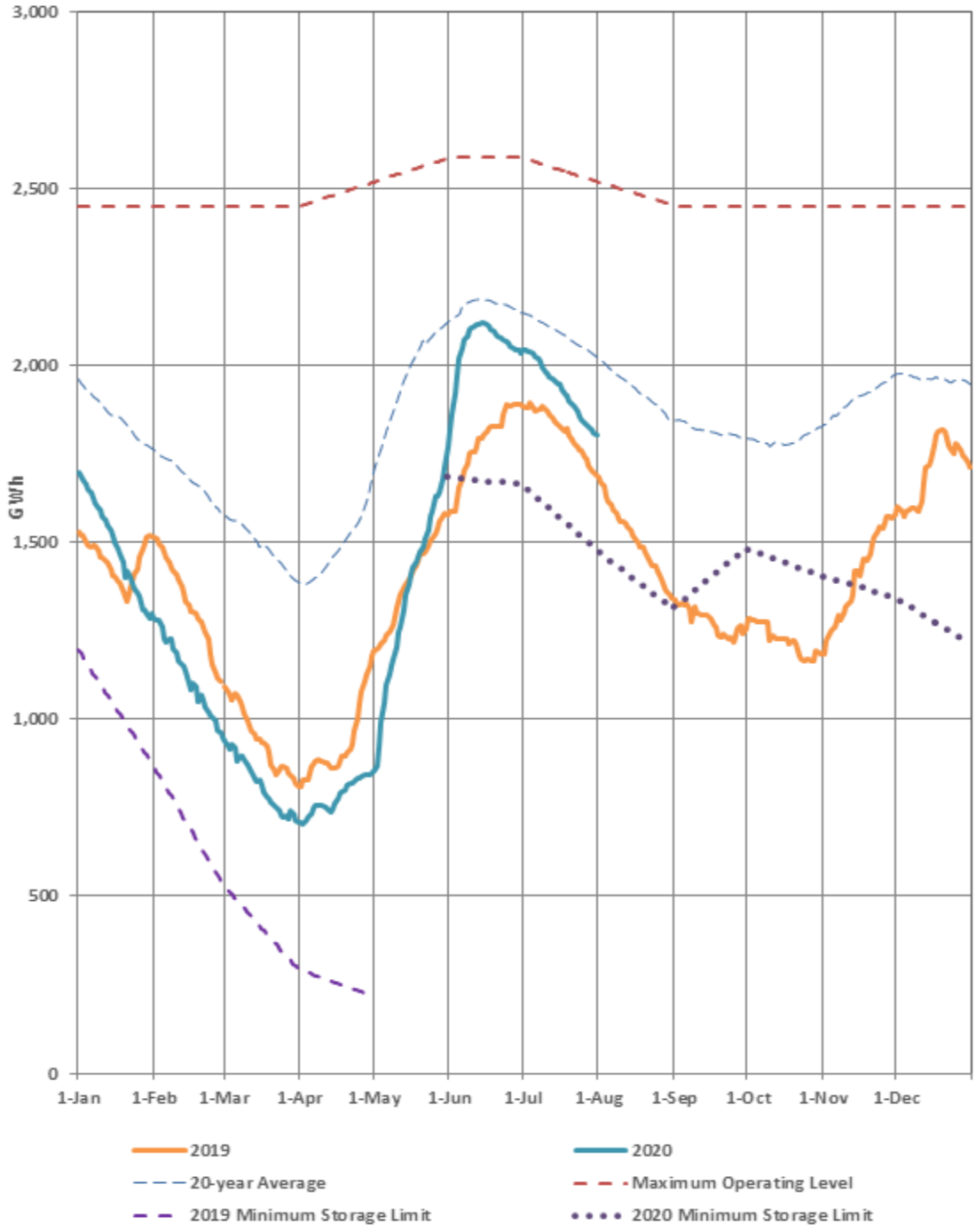

Figure 1: Total System Energy Storage

3.0 Purchases and Production by Plant

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

4.0 Thermal Production and Imports

Holyrood Thermal Generating Station ("Holyrood TGS") Unit 1 was not operated in July 2020. Holyrood TGS Unit 2 was operated for 38.0 hours at minimum unit loading to complete low load testing of the unit, required as part of Hydro's ongoing *Reliability and Resource Adequacy Study Review*, and to facilitate testing activities at Soldier's Pond. Holyrood TGS Unit 3 was operated in synchronous condense mode for all hours of July 2020 for system requirements. Total Holyrood TGS generation in July 2020 was 3.1 GWh. Standby units were only operated in July for testing purposes. Total standby generation during the month was 0.2 GWh.

Imports on the Maritime Link occurred in July 2020 for ponding purposes only. Total imported energy over the Maritime Link was 0.1 GWh. Ponding exports through July 2020 reduced the ponded balance to -2.1 GWh as of July 31, 2020. There was no energy imported over the Labrador-Island Link in July 2020 due to the continued outage.

5.0 Unit Deratings

Holyrood TGS Unit 1 was on planned annual outage for the entire month of July 2020.

At the beginning of July 2020, Holyrood TGS Unit 2 was online with full load capability to complete low load testing of Unit 2 and to facilitate testing activities at Soldier's Pond. On July 1, 2020 the unit tripped due to a power cell failure in the East Fan Variable Fan Drive. The unit was returned to service with full capacity approximately 33 hours later and remained online until testing was completed on July 3, 2020. The unit was then placed on hot standby as it was not required to be online to meet system requirements. On July 14, 2020, the unit began its annual planned outage and remained on outage for the remainder of the month.

Holyrood TGS Unit 3 was online in synchronous condenser mode for the month of July 2020.

The Stephenville Gas Turbine remained available at full capacity for the entire month of July 2020 with the exception of a planned outage from July 21, 2020 to July 22, 2020, which was required to complete instrumentation upgrades on the fuel and main lube oil systems.

The Hardwoods Gas Turbine was available at full capacity for the majority of July 2020 with the exception of a forced outage on July 29, 2020 when the unit tripped while operating in synchronous condenser mode. The cause of the trip was a problem with the gas relay on the unit transformer. The gas relay was repaired and the unit was returned to service on July 30, 2020.

Appendix A

Generation Production and Purchases

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Generation Production and Purchases[2]

	July 1, 2020 to July 31, 2020 (GWh)	Year-to-Date July 31, 2020 (GWh)
Hydro Generation (Hydro)		
Bay d'Espoir Plant		
Unit 1	20.5	231.4
Unit 2	0.0	234.1
Unit 3	7.8	209.3
Unit 4	3.6	72.8
Unit 5	23.0	115.0
Unit 6	29.1	142.6
Unit 7	80.1	560.7
Subtotal Bay d'Espoir Plant	**164.1**	**1,566.0**
Upper Salmon Plant	38.8	333.3
Granite Canal Plant	5.0	133.3
Hinds Lake Plant	23.5	210.6
Cat Arm Plant		
Unit 1	34.0	236.4
Unit 2	36.5	260.0
Subtotal Cat Arm Plant	**70.6**	**496.4**
Paradise River	0.9	20.8
Star Lake Plant	12.5	82.8
Rattle Brook Plant	0.6	6.5
Nalcor Exploits Plants	40.6	350.6
Mini Hydro	0.0	0.0
Total Hydro Generation	**356.4**	**3,200.3**
Thermal Generation (Hydro)		
Holyrood TGS		
Unit 1	0.0	251.7
Unit 2	3.1	302.7
Unit 3	0.0	199.0
Subtotal Holyrood TGS Units	**3.1**	**753.4**
Holyrood Gas Turbine and Diesels	0.2	2.7
Hardwoods Gas Turbine	0.0	0.2
Stephenville Gas Turbine	0.0	0.4
Other Thermal	0.0	0.1
Total Thermal Generation	**3.3**	**756.9**
Purchases		
Requested Newfoundland Power and Vale	0.0	0.1
Corner Brook Pulp and Paper		
Capacity Assistance	0.0	0.0
Firm Energy PPA	0.0	0.0
Secondary	2.5	21.7
Co-Generation	4.2	31.5
Subtotal Corner Brook Pulp and Paper	**6.7**	**53.3**
Wind Purchases	8.7	99.8
Maritime Link Imports[3]	0.1	179.9
New World Dairy	0.3	1.3
Labrador-Island Link Imports[4]	0.0	0.0
Total Purchases	**15.7**	**334.4**
Total[5]	**375.5**	**4,291.6**

[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.