

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

June 10, 2019

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 May 2019**

Enclosed please find one original and eight copies of Newfoundland and Labrador Hydro's Monthly Energy Supply Report for the Island Interconnected System as directed by the Board of Commissioners of Public Utilities in correspondence dated February 8, 2016 and with schedule modifications on July 26, 2016 and July 29, 2016.

Should you have any questions, please contact the undersigned.

Yours truly,

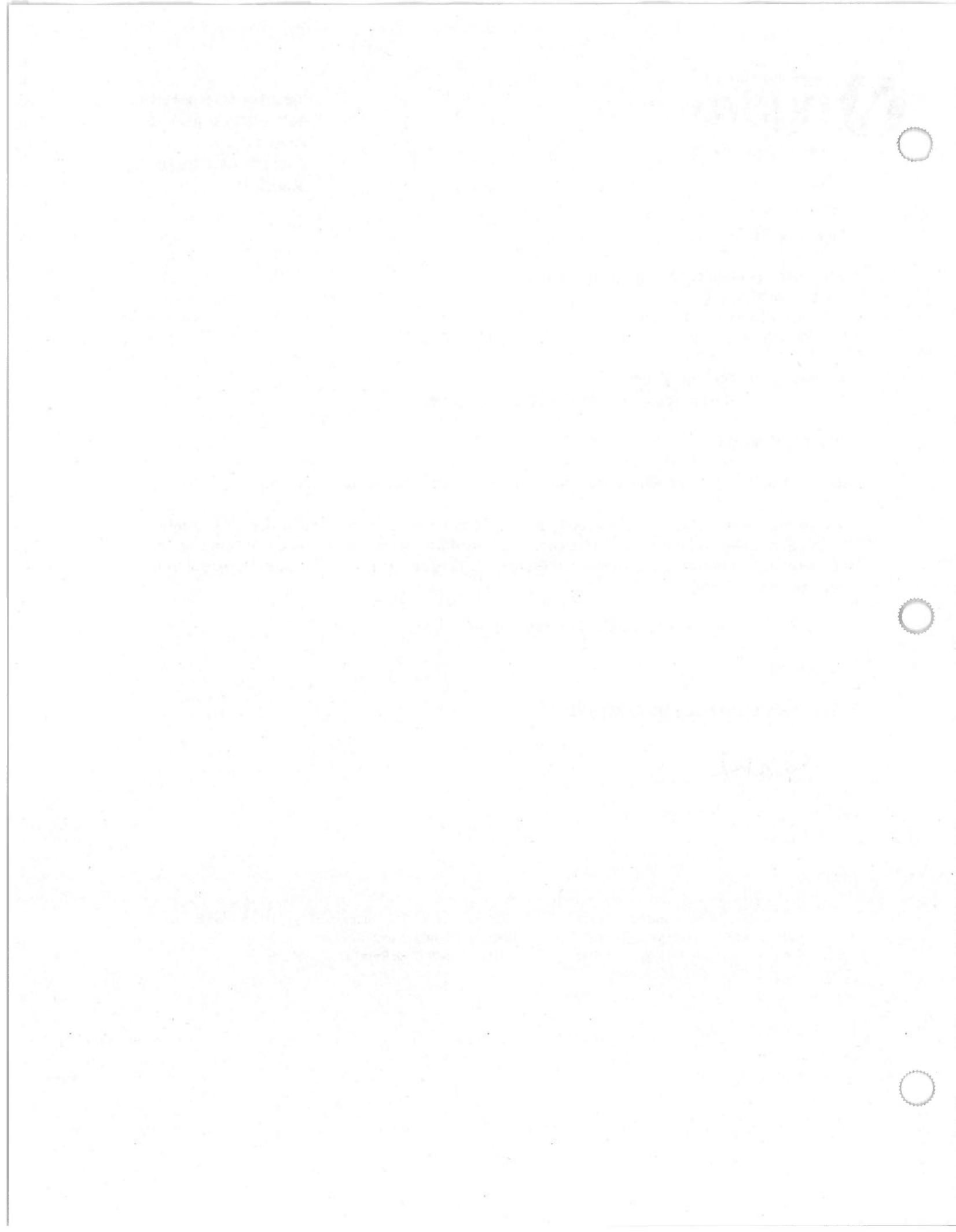
**NEWFOUNDLAND AND LABRADOR HYDRO**

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

Encl.

cc: Gerard Hayes, Newfoundland Power  
Paul Coxworthy, Stewart McKelvey  
ecc: Sheryl Nisenbaum, Praxair Canada Inc.  
Dean A. Porter, Poole Althouse

Dennis Browne, Q.C., Browne Fitzgerald Morgan & Avis  
Denis J. Fleming, Cox & Palmer  
Larry Bartlett, Teck Resources Limited





# Monthly Energy Supply Report for the Island Interconnected System for May 2019

June 10, 2019

A report to the Board of Commissioners of Public Utilities



## Contents

1.0	Introduction .....	1
2.0	System Hydrology .....	1
3.0	Production by Plant.....	2
4.0	Thermal Production and Imports.....	4
5.0	Unit Deratings .....	4

## 1.0 Introduction

On February 8, 2016, the Board of Commissioners of Public Utilities (the “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 de-rating.

In July 2016, the Board indicated that a monthly report would thereafter be sufficient. This report covers data for May 2019.

## 2.0 System Hydrology

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

**Table 1: System Hydrology Storage Levels**

Storage Level	2019 (GWh)	2018 (GWh)	20-Year Average (GWh)	2019 Minimum Storage Limit (GWh)	Maximum Operating Level (GWh)	Percent of Maximum Operating Level
31-May-2019	1,583	1,684	2,173	979	2,588	61%

Reservoir inflows in May 2019 were approximately 89% of average. To date, 2019 inflows have been 99% of average.

Observation has shown that all snow was melted from the Bay d’Espoir area by the middle of May. Snowpack in the higher elevation of the Hinds Lake and Cat Arm areas have remained longer. It is likely that most snow has melted from the Hinds Lake area now, and limited snow remains at Cat Arm.

The aggregate reservoir storage level on May 31, 2019, was 1,583 GWh, 39% below the seasonal Maximum Operating Level and 62% above the minimum storage level. This storage level compares with

- 1 the 20-year average storage level for the end of May of 2,173 GWh. At the end of May 2018, aggregate
- 2 storage level was 1,684 GWh.
- 3
- 4 Figure 1 plots the 2018 and 2019 storage levels, Maximum Operating Level storage, and the 20-year
- 5 average aggregate storage for comparison.

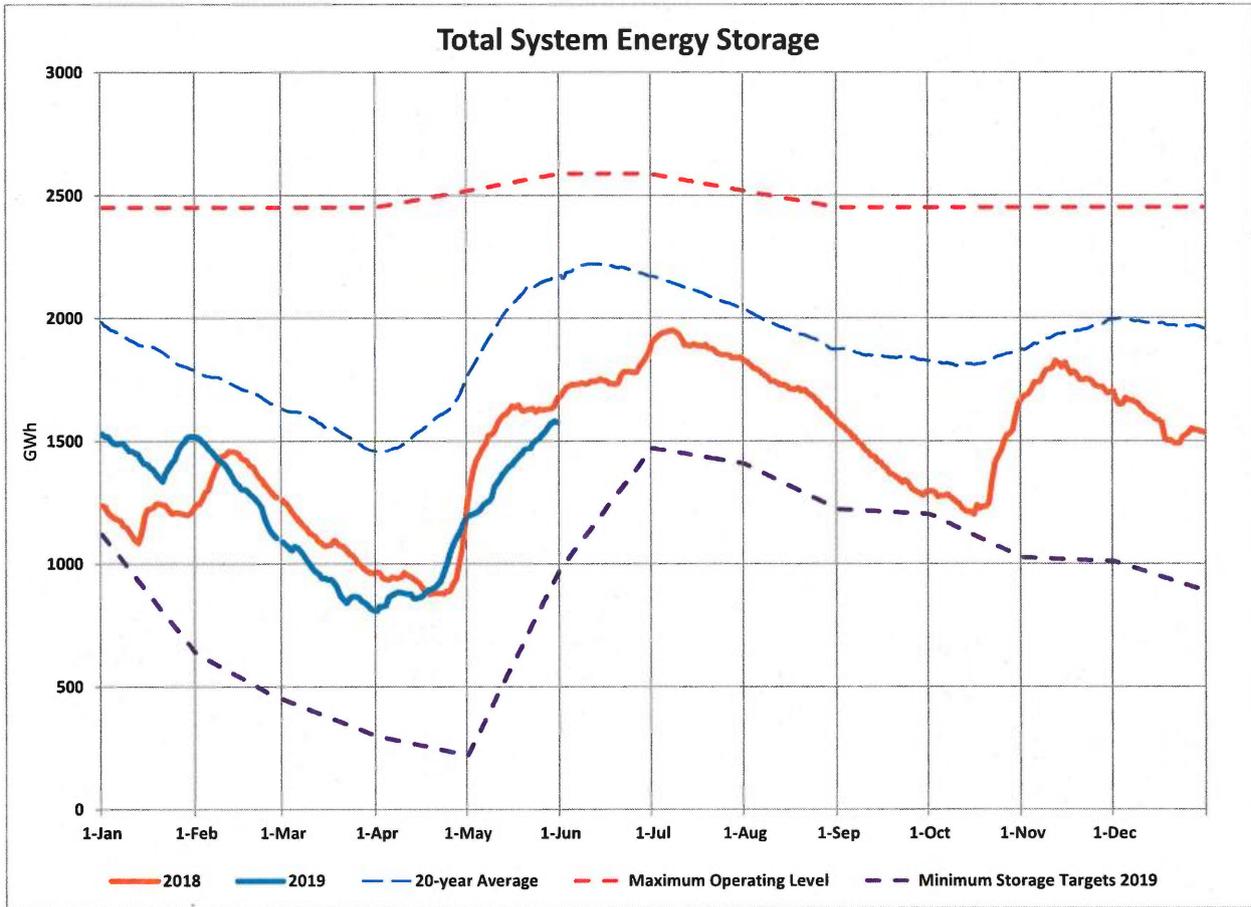


Figure 1: Total System Energy Storage for May 31, 2019

### 6 3.0 Production by Plant

- 7 Production during May 2019 by plant and unit, both hydraulic and thermal, is provided in Table 2.
- 8 Quantities imported are also provided in Table 2.

Table 2: Generation Production from May 1 to 31, 2019<sup>1</sup>

<b>Newfoundland and Labrador Hydro Hydro Generation</b>			
Bay d'Espoir Plant	Unit 1	42.3	206.7
	Unit 2	42.2	207.4
	Unit 3	11.4	143.7
	Unit 4	8.2	93.8
	Unit 5	19.6	83.3
	Unit 6	21.6	105.5
	Unit 7	75.4	430.0
<i>Bay d'Espoir Plant Total</i>		220.6	1270.4
Upper Salmon Plant		53.5	263.2
Granite Canal Plant		29.7	120.0
Hinds Lake Plant		39.2	161.3
Cat Arm Plant	Unit 1	30.9	190.6
	Unit 2	31.8	195.2
<i>Cat Arm Plant Total</i>		62.7	385.8
Paradise River		2.4	14.9
Star Lake Plant		12.8	62.4
Rattle Brook Plant		2.6	5.6
Nalcor Exploits Plants		55.3	276.6
Mini Hydro		0.4	1.4
<b>Total Hydro Generation</b>		<b>479.3</b>	<b>2561.7</b>
<b>Newfoundland and Labrador Hydro Thermal Generation</b>			
Holyrood	Unit 1	54.5	295.7
	Unit 2	21.8	246.5
	Unit 3	0.0	171.6
<i>Holyrood Units Total</i>		76.3	713.8
Holyrood Gas Turbine and Diesels		0.1	5.9
Hardwoods Gas Turbine		0.1	0.4
Stephenville Gas Turbine		0.1	1.0
Other Thermal		0.1	0.2
<b>Total Thermal Generation</b>		<b>76.6</b>	<b>721.4</b>
<b>Purchases</b>			
Requested Newfoundland Power and Vale		0.0	0.1
Corner Brook Pulp and Paper Secondary		2.3	18.5
Corner Brook Pulp and Paper Co-Generation		4.8	25.4
Wind Purchases		14.5	86.3
Maritime Link Imports <sup>2</sup>		3.5	101.3
New World Dairy		0.3	1.3
Labrador-Island Link Imports <sup>3</sup>		9.2	213.9
<b>Total Purchases</b>		<b>34.6</b>	<b>446.8</b>
<b>Total<sup>4</sup></b>		<b>590.5</b>	<b>3729.8</b>

<sup>1</sup> Gross generation.

<sup>2</sup> Includes energy flows as a result of purchases and inadvertent energy.

<sup>3</sup> Includes purchases as a result of testing activity.

<sup>4</sup> Actuals reflect rounded values to the nearest tenth of a GWh. Differences between total and addition of individual components due to rounding.

## 4.0 Thermal Production and Imports

In May 2019, Holyrood Unit 1 was operated for 744 hours and Holyrood Unit 2 was operated for 297.2 hours; Holyrood Unit 3 was not operated. Total Holyrood generation was 76.3 GWh.

Standby units were operated for a total of 24.2 hours during the month. Total standby generation was 0.3 GWh. No standby generation was used for water management.

Imports on the Maritime Link throughout May 2019 were for ponding. Total imported energy over the Maritime Link was 3.5 GWh.

A total of 9.2 GWh was delivered to the system via the Labrador-Island Link in May 2019 as a result of testing activity.

## 5.0 Unit Deratings

Holyrood Unit 1 was derated to 166 MW from May 1 to May 13, 2019, after which it was capable of producing at full load through the remainder of May 2019.

Holyrood Unit 2 was returned to service on May 4, 2019, after a forced outage to correct an issue with the camshaft bearings on the turbine control valves. The unit was capable of full load operation for the remainder of May 2019. As of May 16, 2019, the unit was no longer required to be online to meet system requirements and was placed into hot standby with a recall time of eight hours.

Holyrood Unit 3 remained on its planned annual outage for the month of May 2019.

When online in May 2019, the Stephenville Gas Turbine was capable of operating at its full capacity of 50 MW. On May 28, 2019, the unit was taken off line for its planned annual outage. The unit remained on planned outage for the remainder of the month.

The Hardwoods Gas Turbine has been returned to full capacity of 50 MW as of May 28, 2019, following inspection and repairs. During the inspection, it was determined that a problem had occurred with the thrust portion of the exciter bearing. Repair of the unit was completed by replacing the exciter bearing

- 1 shell and polishing the thrust pad assemblies. The unit was tested successfully and returned to service
- 2 once reassembled.

