newfoundland labrador hydro
a nalcor energy company

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September 11, 2017

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: Energy Supply Report – Monthly Report – August 2017

Enclosed please find the original and 12 copies of Newfoundland and Labrador Hydro's 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.

Should you have any questions, please contact the undersigned.

Yours truly,

NEWFOUNDLAND AND LABRADOR HYDRO

Michael Ladha
Legal Counsel & Assistant Corporate Secretary

ML/bs

cc: Gerard Hayes – Newfoundland Power
Paul Coxworthy – Stewart McKelvey Stirling Scales
Sheryl Nisenbaum – Praxair Canada Inc.
ecc: Larry Bartlett – Teck Resources Limited
Dennis Browne, Q.C. – Consumer Advocate
Thomas O' Reilly – Cox & Palmer

Monthly Energy Supply Report

For the Island Interconnected System

August 2017

September 11, 2017

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1.0 Introduction

On February 8, 2016, the Board of Commissioners of Public Utilities (the Board) requested Newfoundland and Labrador Hydro (Hydro) file a bi-weekly 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 henceforth be sufficient. This report covers data for August 2017.

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	2017 (GWh)	2016 Minimum Storage (GWh)	Maximum Operating Level (GWh)	Percent of Seasonal Maximum Operating Level	2016 (GWh)
August 31, 2017	1802	1130	2452	73%	2035

The trend of drier than average conditions continued through August and inflows into the reservoir system for the month were approximately 25% below average. Inflows to date in 2017 have been 17% below average.

The aggregate reservoir storage level on August 31 was 1802 GWh, 27% below the seasonal maximum operating level (MOL) and well above the 2016 minimum storage level. This storage level compares with an aggregate storage that was 2035 GWh at the end of August 2016. The 20-year average storage at the end of August is 1896 GWh.

Figure 1 plots the 2016 and 2017 storage levels with the maximum operating level storage and 2016 minimum storage targets.

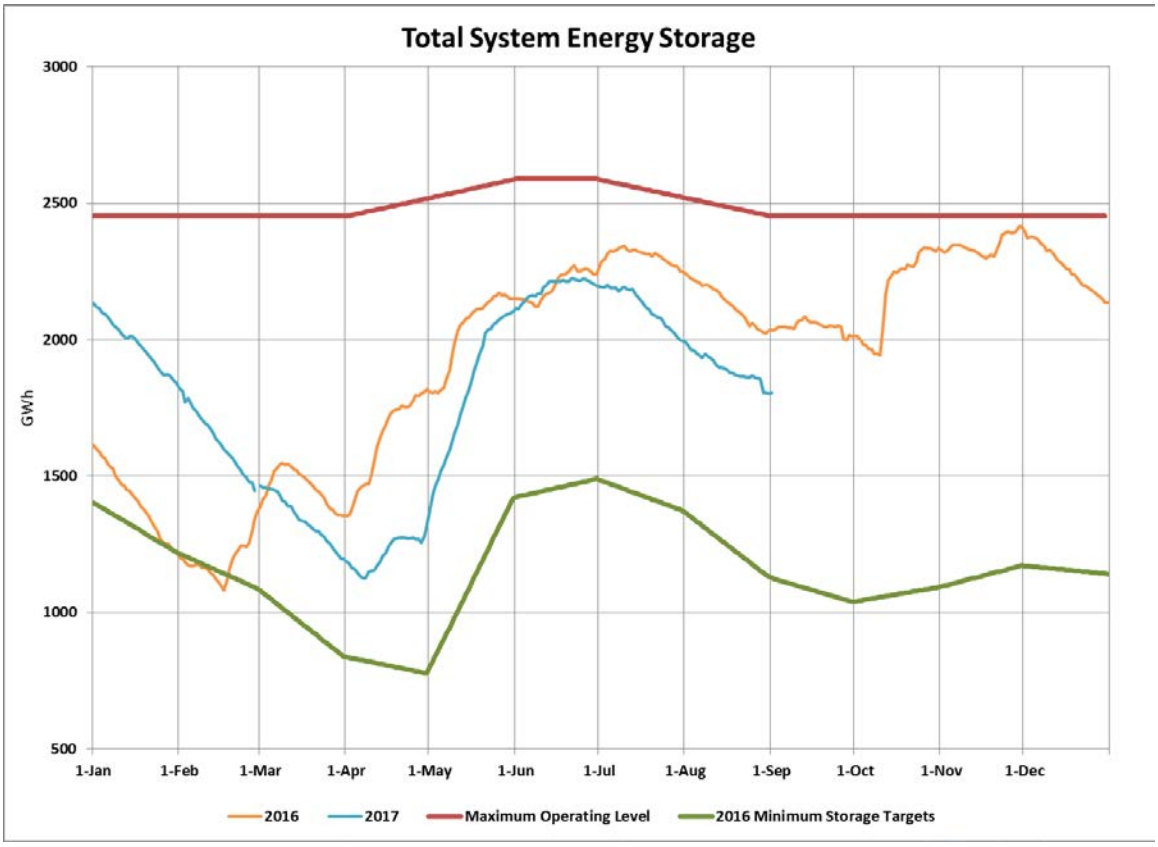

Figure 1: Total System Energy Storage, August 31, 2017

3.0 Production by Plant

Production during August by plant and unit, both hydraulic and thermal, is provided in Table 2.

Table 2 Generation Production*

August 1 to August 31, 2017

		Generation, GWh	Year to Date, GWh
Newfoundland and Labrador Hydro			
Hydro Generation			
Bay d'Espoir Plant	*Unit 1*	*22.6*	255.4
	Unit 2	*14.5*	188.6
	Unit 3	*39.9*	209.5
	Unit 4	*6.2*	144.4
	Unit 5	*17.2*	209.3
	Unit 6	*14.7*	140.9
	Unit 7	*67.8*	*614.8*
Total Bay d'Espoir Plant		182.8	1762.9
Upper Salmon Plant		18.8	377.0
Granite Canal Plant		10.2	140.5
Hinds Lake Plant		15.6	245.3
Cat Arm Plant	*Unit 1*	*31.9*	291.3
	Unit 2	*33.0*	*299.0*
Total Cat Arm Plant		64.8	590.3
Paradise River		0.8	19.6
Star Lake Plant		11.6	95.1
Rattle Brook Plant		1.4	9.7
Nalcor Exploits Plants		45.9	378.3
Mini Hydro		0.2	2.5
Total Hydro		352.3	3621.4
Newfoundland and Labrador Hydro			
Thermal Generation			
Holyrood	*Unit 1*	*0.0*	373.1
	Unit 2	*0.0*	355.3
	Unit 3	*21.2*	*355.6*
	Total	21.2	1083.9
Holyrood CT and Diesels		9.2	48.3
Hardwoods GT		0.1	2.8
Stephenville GT		0.0	1.0
Other Thermal		0.1	0.4
Total Thermal		30.6	1136.5
Purchases			
Requested NP and Vale		0.0	1.1
CBPP Secondary		1.4	9.0
CBPP Cogen		6.3	46.6
Wind Purchases		10.2	120.7
Total Purchases		17.8	177.5
Total		400.7	4935.3

**Gross generation.*

Unit 3 at Holyrood was in service and online from August 19 through to the end of the month. The Holyrood Gas Turbine was in use for reliability each day of the Holyrood Generation Station total plant outage. Total standby thermal generation was approximately 9 GWh.

4.0 Unit De-ratings

All Holyrood units were offline from late July until August 19 for the total plant outage. Units 1 and 2 remained offline or the balance of August for continuation of their annual maintenance. Unit 3 returned to service at full capacity (150 MW) on August 19 and remained in service for the rest of the month.

The Hardwoods gas turbine is currently de-rated to 25 MW due to a combustion can failure on engine s/n 202205 (End A). This was identified during a planned borescope inspection of the unit completed on August 16. The failed combustion can caused no damage to any other part of the engine. The unit will be transported to the overhaul shop for repair. In the interim, a loaner engine is being shipped to site for installation to return of the gas turbine to full capacity (50 MW). It is currently expected that this will be completed by the end of September.

The Stephenville gas turbine continues to be de-rated to 25 MW from 38 MW due to continued vibration issues on End A (leased engine). Investigations and adjustment to date have not resolved the vibration issue, and further investigations are ongoing. Hydro continues to work with the package original equipment manufacturer and internal engineering to establish the source of the vibration issue. A Hydro 25 MW engine is currently being repaired and it is anticipated that this engine will be installed in the fall and the gas turbine will be returned to full capacity (50 MW) by December 1, 2017.