newfoundland labrador hydro
a nalcor energy company

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February 10, 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 – January 2017**

Further to the Board's letter of July 29, 2016 changing the bi-weekly report to a monthly report to be filed on the 10th day of each month, 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***

Tracey Pennell

Tracey L. Pennell
Senior Counsel, Regulatory

TLP/lb

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

# January, 2017

February 10, 2017

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# Table of Contents

# 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 January 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 | History (GWh) |
|---|---|---|---|---|---|
| January 31, 2017 | 1818 | 1142 | 2452 | 74% | 2015 2151<br>2016 1200 |

Inflows into the reservoir system during January were approximately 32% below average. This follows inflows in December 2016 which were 41% below average. Total inflows for 2016 were 13% above average.

The aggregate reservoir storage level on January 31 was 1818 GWh, 74% of the seasonal maximum operating level (MOL) and above the 2016 minimum storage target (the minimum

storage targets for 2017 have not been finalized). The seasonal MOL is lower in winter due to the presence of snowpack in the reservoir basins that has the potential to lead to higher flood flows should rain and snowmelt happen concurrently. This storage level compares with an aggregate storage that was 1200 GWh, or 49% of the seasonal MOL, on the same date in 2016. The 20 year average position at the end of January is 1789 GWh. Figure 1 plots the 2015, 2016 and 2017 storage levels with the maximum operating level storage and 2016 minimum storage targets.

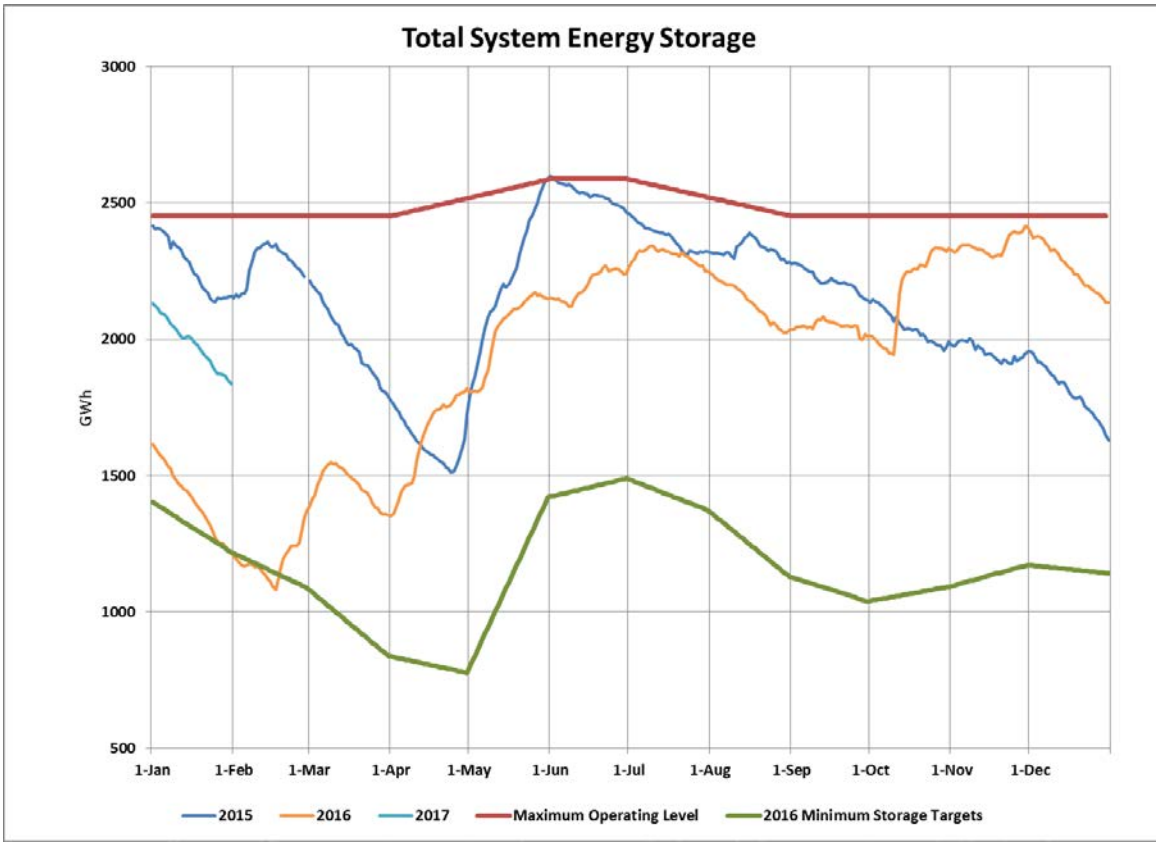


**Figure 1: Total System Energy Storage, January 31, 2017**

## 3.0 Production by Plant

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

## Table 2 Generation Production*

January 1 to January 31, 2017

| | | Generation, GWh |
|---|---|---|
| **Newfoundland and Labrador Hydro** | | |
| **Hydro Generation** | | |
| Bay d'Espoir Plant | *Unit 1* | *34.8* |
| | *Unit 2* | *38.8* |
| | *Unit 3* | *41.6* |
| | *Unit 4* | *38.2* |
| | *Unit 5* | *31.0* |
| | *Unit 6* | *26.7* |
| | *Unit 7* | *92.6* |
| Total Bay d'Espoir Plant | | 303.7 |
| Upper Salmon Plant | | 58.3 |
| Granite Canal Plant | | 20.9 |
| Hinds Lake Plant | | 44.2 |
| Cat Arm Plant | *Unit 1* | *40.9* |
| | *Unit 2* | *42.7* |
| Total Cat Arm Plant | | 83.6 |
| Paradise River | | 4.2 |
| Star Lake Plant | | 12.8 |
| Rattle Brook Plant | | 0.4 |
| Nalcor Exploits Plants | | 53.8 |
| Mini Hydro | | 0.3 |
| Total Hydro | | 582.3 |
| **Newfoundland and Labrador Hydro** | | |
| **Thermal Generation** | | |
| Holyrood | *Unit 1* | *79.9* |
| | *Unit 2* | *80.6* |
| | *Unit 3* | *80.9* |
| | Total | 241.4 |
| Holyrood CT and Diesels | | 7.3 |
| Hardwoods GT | | 0.3 |
| Stephenville GT | | 0.1 |
| Other Thermal | | 0.0 |
| Total Thermal | | 249.1 |
| **Purchases** | | |
| Requested NP and Vale | | 0.0 |
| CBPP Secondary | | 0.8 |
| CBPP Cogen | | 3.8 |
| Wind Purchases | | 18.5 |
| Total Purchases | | 23.1 |
| Total | | 854.4 |

**Gross generation.*

Reliability requirements led to three unit operation at Holyrood during January. Both Units 1 and 2 were offline for approximately one day during the month for minor maintenance. The Holyrood CT was operated for approximately 140 hours in January for reliability. Hardwoods was operated for 24 hours and Stephenville for 6 hours, also for reliability. Total standby thermal generation was approximately 8 GWh.

There has been no thermal generation specifically in support of hydrology since April 2016.

## 4.0 Unit De-ratings

Since December 2016 Holyrood Unit 1 has been de-rated to 160 MW (from 170 MW) due to a radial seal leak. The repair to the seals requires a two week outage so the unit is not expected to be returned to full capacity until after its next annual maintenance outage. From January 20 to January 27 Holyrood Unit 1 was further de-rated to 145 MW because it required an air heater wash.

Since January 20, Holyrood Unit 2 has been de-rated to 150 MW (from 170 MW) because it requires an air heater wash. The unit is expected to be returned to full capacity after the air heater wash is completed which is tentatively scheduled for late February.

The Stephenville gas turbine continues to be de-rated to 38 MW, operating with the loaner engine. Hydro intends to leave this configuration in place until after the winter period. Hydro continues to work with the vendor to get the refurbished unit tested to determine why it will not test successfully at site.