

September 12, 2014

The Board of Commissioners of Public Utilities  
Prince Charles Building  
120 Torbay Road, P.O. Box 21040  
St. John's, Newfoundland & Labrador  
A1A 5B2

**Attention: Ms. Cheryl Blundon**  
**Director Corporate Services & Board Secretary**

Dear Ms. Blundon:

**Re: Newfoundland and Labrador Hydro - the Board's Investigation and Hearing into  
Supply Issues and Power Outages on the Island Interconnected System - Request for  
Project Updates**

Further to the Board's letter of August 1, 2014 regarding the above referenced matter, enclosed are the originals and 12 copies of Hydro's status updates for the following projects:

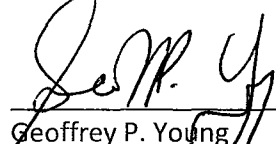
- Sunnyside Replacement Equipment; and
- Western Avalon Terminal Station T5 Tap Changer Replacement.

We trust you will find the enclosed updates to be in order.

Should you have any questions, please do not hesitate to contact the undersigned.

Yours truly,

**NEWFOUNDLAND AND LABRADOR HYDRO**

  
\_\_\_\_\_  
Geoffrey P. Young  
Senior Legal Counsel

GPY/cp

cc: Gerard Hayes – Newfoundland Power  
Paul Coxworthy – Stewart McKelvey Stirling Scales  
ecc: Roberta Frampton Benefiel – Grand Riverkeeper Labrador

Thomas Johnson – Consumer Advocate  
Danny Dumaresque

# Sunnyside Replacement Equipment

Status Update Briefing– September 12, 2014

Boundless Energy



# Contents

- Project Dashboard
- Progress & Schedule Summary
- Risk Analysis
- Project Photos

(Incremental to Information provided August 29)

# Project Dashboard

**PM - Sunnyside Transformer Project**

**Joe Yurchesyn**

Safety

Quality

Schedule

Cost

# Progress & Schedule Summary

1. Factory Acceptance Testing – Issue identified during factory testing requiring material change and retesting.
2. ICM – Site work started - removing B1L03/ B2T1/B1T1 Breakers, B1T1-1 Disconnect and preparing for new foundations.

## Progress & Schedule Summary (cont'd)

3. Existing T1 Transformer prepared for off-site transport – planned September 12.
4. T1 transformer delivery on critical path, and Ready for Service date maintained end of November (December 1). (See attached schedule showing progress to date).
5. B1L03 230 kV Breaker delivered to site September 8.

## Progress & Schedule Summary (cont'd)

7. Overall the project continues to track with compliance to plan against Safety, Quality, Cost, and Delivery targets.

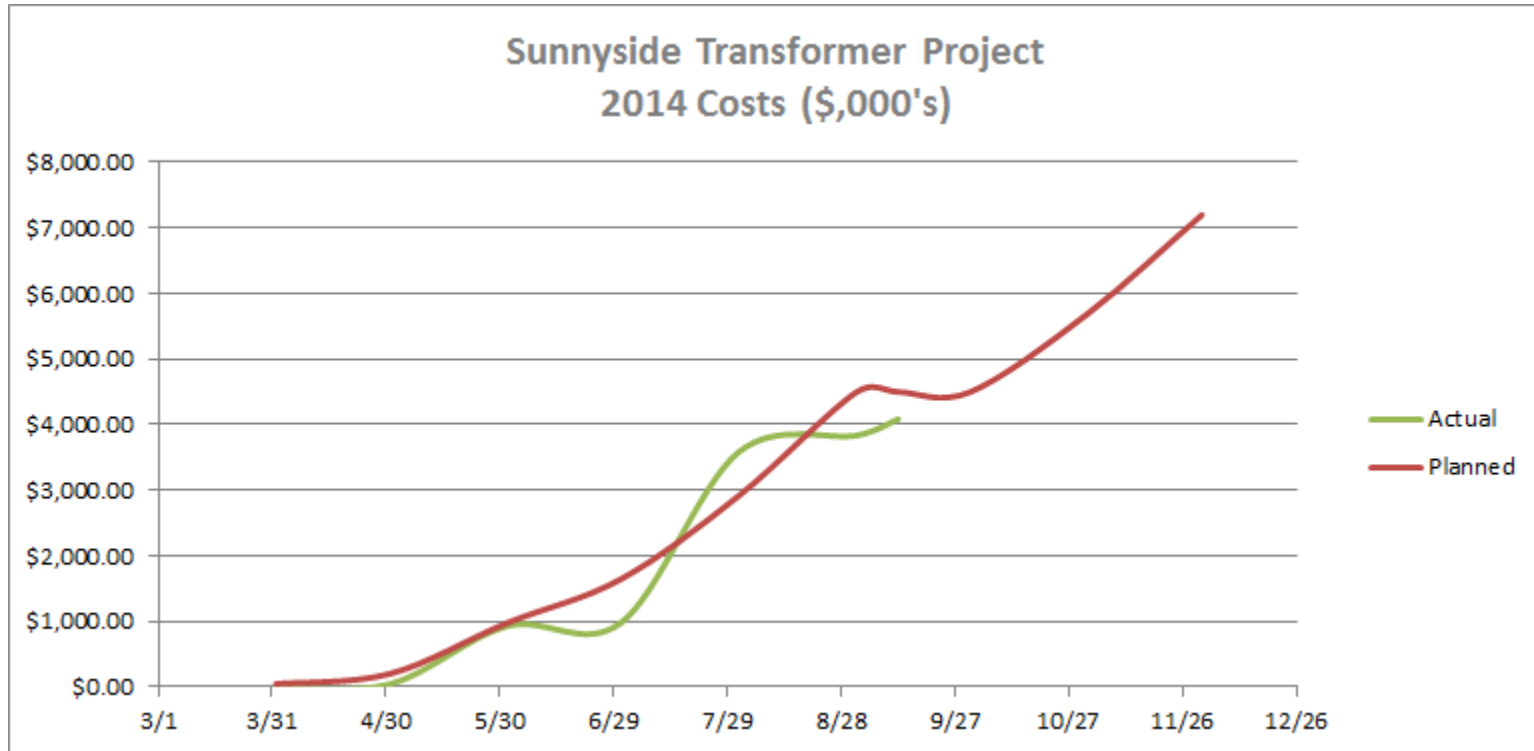
# Level 2 - Schedule Summary

Sunnyside Transformer					Incremental SSD Level 2																												11-Sep-14	
#	Activity Name	Remaining Duration	Start	Finish	Comments	June 2014				July 2014				August 2014				September 2014				October 2014				November 2014				December 2014				
						01	08	15	22	29	06	13	20	27	03	10	17	24	31	07	14	21	28	05	12	19	26	02	09	16	23	30	07	14
1	<b>Sunnyside Transformer</b>	71	01-May-14A	01-Dec-14		[Gantt bar from May to Dec]																												
2	PM Tasks	0	25-Jun-14A	19-Aug-14A		[Gantt bar from Jun to Aug]																												
3	Sunnyside Transformer	71	01-May-14A	01-Dec-14		[Gantt bar from May to Dec]																												
4	Engineering	48	16-Jun-14A	14-Nov-14		[Gantt bar from Jun to Nov]																												
5	Procurement - Material	45	01-May-14A	31-Oct-14		[Gantt bar from May to Oct]																												
6	230/138 kV Auto Transformer (T1)	45	01-May-14A	31-Oct-14		[Gantt bar from May to Oct]																												
7	230 kV Breaker (B1L03)	0	01-May-14A	01-May-14A		[Gantt bar from May to May]																												
8	230 kV Breaker (B1T1)	31	01-May-14A	22-Oct-14		[Gantt bar from May to Oct]																												
9	138 kV Breaker (B2T1)	31	16-May-14A	22-Oct-14		[Gantt bar from May to Oct]																												
10	230 kV Disconnect (B1T1-1)	4	24-Jun-14A	15-Sep-14		[Gantt bar from Jun to Sep]																												
11	Station Post Insulators	25	16-Jun-14A	14-Oct-14		[Gantt bar from Jun to Oct]																												
12	Station Service Transformer	19	30-Jun-14A	01-Oct-14		[Gantt bar from Jun to Oct]																												
13	Station Service Transfer Switch	3	28-Jul-14A	12-Sep-14		[Gantt bar from Jul to Sep]																												
14	HV Risers & Connectors	9	21-Jul-14A	22-Sep-14		[Gantt bar from Jul to Sep]																												
15	Power & Control Cables	0	25-Jun-14A	22-Aug-14A		[Gantt bar from Jun to Aug]																												
16	Transformer Protection Panel	0	21-Jul-14A	14-Aug-14A		[Gantt bar from Jul to Aug]																												
17	Transformer Protection Relays	0	25-Jun-14A	22-Aug-14A		[Gantt bar from Jun to Aug]																												
18	Procurement - Install	0	02-Jun-14A	12-Aug-14A		[Gantt bar from Jun to Aug]																												
19	Construction - Equipment Removals	71	14-Aug-14A	01-Dec-14		[Gantt bar from Aug to Dec]																												
20	Construction - Foundations Removals/Install	53	03-Sep-14A	10-Nov-14		[Gantt bar from Sep to Nov]																												
21	Electrical Construction	51	18-Sep-14	15-Nov-14		[Gantt bar from Sep to Nov]																												
22	ABB Schedule T1	10	31-Oct-14	11-Nov-14		[Gantt bar from Oct to Nov]																												
23	230/138 kV Auto Transformer (T1)	6	10-Nov-14	15-Nov-14		[Gantt bar from Nov to Nov]																												
24	230 kV Breaker (B1L03)	11	18-Sep-14	30-Sep-14		[Gantt bar from Sep to Sep]																												
25	138 kV Breaker (B2T1)	8	22-Oct-14	31-Oct-14		[Gantt bar from Oct to Oct]																												
26	230 kV Disconnect (B1T1-1)	6	25-Sep-14	01-Oct-14		[Gantt bar from Sep to Oct]																												
27	Station Post Insulators	2	14-Oct-14	16-Oct-14		[Gantt bar from Oct to Oct]																												
28	Station Service Transformer	1	08-Nov-14	08-Nov-14		[Gantt bar from Nov to Nov]																												
29	Station Service Transfer Switch	10	26-Sep-14	08-Oct-14		[Gantt bar from Sep to Oct]																												
30	Transformer Protection Panel & Relays	38	30-Sep-14	13-Nov-14		[Gantt bar from Sep to Nov]																												
31	Elect/P&C/Comms. Commissioning	56	22-Sep-14	25-Nov-14		[Gantt bar from Sep to Nov]																												
32	Breaker B1L03	9	22-Sep-14	01-Oct-14		[Gantt bar from Sep to Oct]																												
33	230 kV Disconnect B1T1-1	2	02-Oct-14	03-Oct-14		[Gantt bar from Oct to Oct]																												
34	Breaker B2T1	7	30-Oct-14	07-Nov-14		[Gantt bar from Oct to Nov]																												
35	Transformer T1	13	11-Nov-14	25-Nov-14		[Gantt bar from Nov to Nov]																												



# Cost Summary - S Curve

(Preliminary – Project Accounting Reconciliation in process)



Note: Forecast Final Expenditures (FFE) tracking with compliance with original budget. Actual Costs reflects contractual commitments for major equipment and install contracts.

# Risk Analysis

Third Party Facilitated Risk Workshop held July 23 and Actions Review August 7 (50+ risks and tasks identified).

Risk Register used to manage risk during Project Execution.

ABB Options and Contingency Plan Review - September 7. ABB status update every two days.

# Risk Analysis – Example of Issues

- T1 Delivery – Timing, Logistics, Damage
  - ABB PD failure root cause assessment, contingency plan preparations.
- B1T1-1 230 kV Disconnect – September 15 delivery
  - Expedite and monitor.

# Risk Analysis – Examples of Issues (cont'd)

- Long Lead Miscellaneous Items
  - Monitor ongoing status and expedite.
- Site hydrocarbon in foundations soil.
  - Inspections have showed that this is unlikely an issue, remove if required. None found in foundation digs so far.
- Outage requirements.
  - Coordinate outages with other projects.

# Project Photos

# Photo 1 – Assembled Transformer T1





# Photo 2 – T1 Ready to Transport Off-Site (Planned for Sept 12)





# Photo 3 – 230kV Breaker (B1L03) New Foundation Dig





# Photo 4 – 230kV Breaker (B1L03) Delivered to Site



# Photo 5 – 138kV Breaker (B2T1) Foundation Removal Preparation





# Photo 6 – 230kV Disconnect B1T1-1 Foundation Removal

