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August 15, 2014

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 of Corporate Services & Board Secretary**

Dear Ms. Blundon:

**Re: Newfoundland and Labrador Hydro Combined Applications - Installation of Diesel Units at Holyrood for the Purposes of Black Starting the Generating Units and Supply, and Install 100 MW (Nominal) of Combustion Turbine Generation - Request for Update**

Further to the Board's letter of August 1, 2014 regarding the above referenced matter, enclosed is the original and 12 copies of Hydro's status update for the following project:

- Supply and Installation of a 100 MW Combustion Turbine Generator.

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***

Tracey L. Pennell
Legal Counsel

TLP/cp

cc: Gerard Hayes – Newfoundland Power
Paul Coxworthy – Stewart McKelvey Stirling Scales
Fred Winsor – Sierra Club Canada
Thomas Johnson – Consumer Advocate
Thomas O'Reilly, QC – Cox & Palmer
Danny Dumaresque

# Supply and Installation of a 100 MW Combustion Turbine Generator

Status Update Briefing– August 15, 2014


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# Contents

- Project Dashboard
- Progress & Schedule Summary
- Cost Summary (S-Curve)
- Risk Analysis
- Project Photos

*(Includes only material updated since July 23, 2014)*

# Project Dashboard

The project is progressing according to plan and in compliance with Safety, Quality, Schedule, and Cost.

# Progress & Schedule Summary

1. Excavation for fuel unloading station is underway
2. Containment berm for fuel storage tanks is nearing completion
3. Generator Step Up (GSU) transformer foundation is complete
4. Auxiliary transformer foundations are complete

# Progress & Schedule Summary

5. Installation of various duct banks continues
6. Air inlet filter house foundation is complete
7. Turbine and GSU transported between Bay Bulls Marine Base and Holyrood Station – Major Milestone Achieved.
8. GSU Placed onto foundation on schedule
9. Transmission Line construction is proceeding on plan.

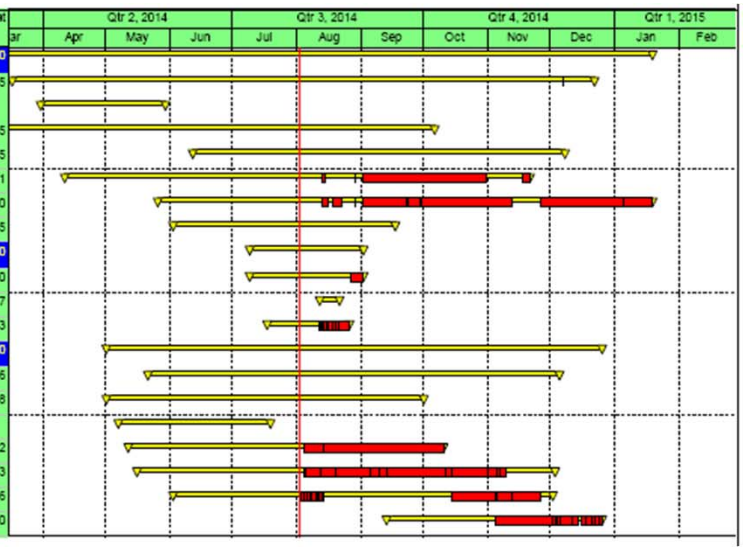
# Progress & Schedule Summary

10. Terminal station interconnection work has started on schedule.
11. Overall schedule is tracking in accordance with plan and ready for service date remains December 2014. See attached schedule showing progress to date.

# Level 2 – Summary Schedule

- Summary level schedule provided below.

| # | Activity ID | Activity Name | Remaining Duration | Start | Finish | Total Float |
|---|---|---|---|---|---|---|
| 1 | | 100 MW Combustion Turbine (Integrated) | 107.5 | 03-Mar-14 A | 19-Jan-15 | -13.0 |
| 2 | | Milestones - Key Dates | 11.0 | 17-Mar-14 A | 22-Dec-14 | 3.5 |
| 3 | | EPC Contract Preparation | 0.0 | 31-Mar-14 A | 30-May-14 A | |
| 4 | | Enabling Works | 30.0 | 03-Mar-14 A | 06-Oct-14 | 56.5 |
| 5 | | System Operations Interfaces | 80.0 | 12-Jun-14 A | 08-Dec-14 | 14.5 |
| 6 | | Terminal Station | 69.4 | 11-Apr-14 A | 21-Nov-14 | 25.1 |
| 7 | | Combustion Turbine Interface | 107.5 | 26-May-14 A | 19-Jan-15 | -13.0 |
| 8 | | Water Supply/Effluent | 25.0 | 02-Jun-14 A | 17-Sep-14 | 69.5 |
| 9 | | Transmission & Distribution | 15.5 | 09-Jul-14 A | 02-Sep-14 | 0.0 |
| 10 | | General & Milestones | 5.0 | 09-Jul-14 A | 02-Sep-14 | 0.0 |
| 11 | | Materials | 8.3 | 12-Aug-14 | 21-Aug-14 | 9.7 |
| 12 | | Installation Work | 10.3 | 18-Jul-14 A | 26-Aug-14 | 5.3 |
| 13 | | NALCOR - Simple Cycle 1 x Westinghouse 501 D5A - B-1 - NEW | 130.3 | 01-May-14 A | 26-Dec-14 | 0.0 |
| 14 | | Payment Milestones | 150.0 | 21-May-14 A | 05-Dec-14 | 25.6 |
| 15 | | Pre Project | 41.4 | 01-May-14 A | 01-Oct-14 | 56.8 |
| 16 | | Pre EPC | 0.0 | 07-May-14 A | 19-Jul-14 A | |
| 17 | | Engineering | 49.0 | 12-May-14 A | 10-Oct-14 | 49.2 |
| 18 | | Procurement | 110.0 | 16-May-14 A | 03-Dec-14 | 20.3 |
| 19 | | Construction | 107.8 | 02-Jun-14 A | 02-Dec-14 | 22.6 |
| 20 | | Comissioning and Start Up | 92.8 | 13-Sep-14 | 26-Dec-14 | 0.0 |



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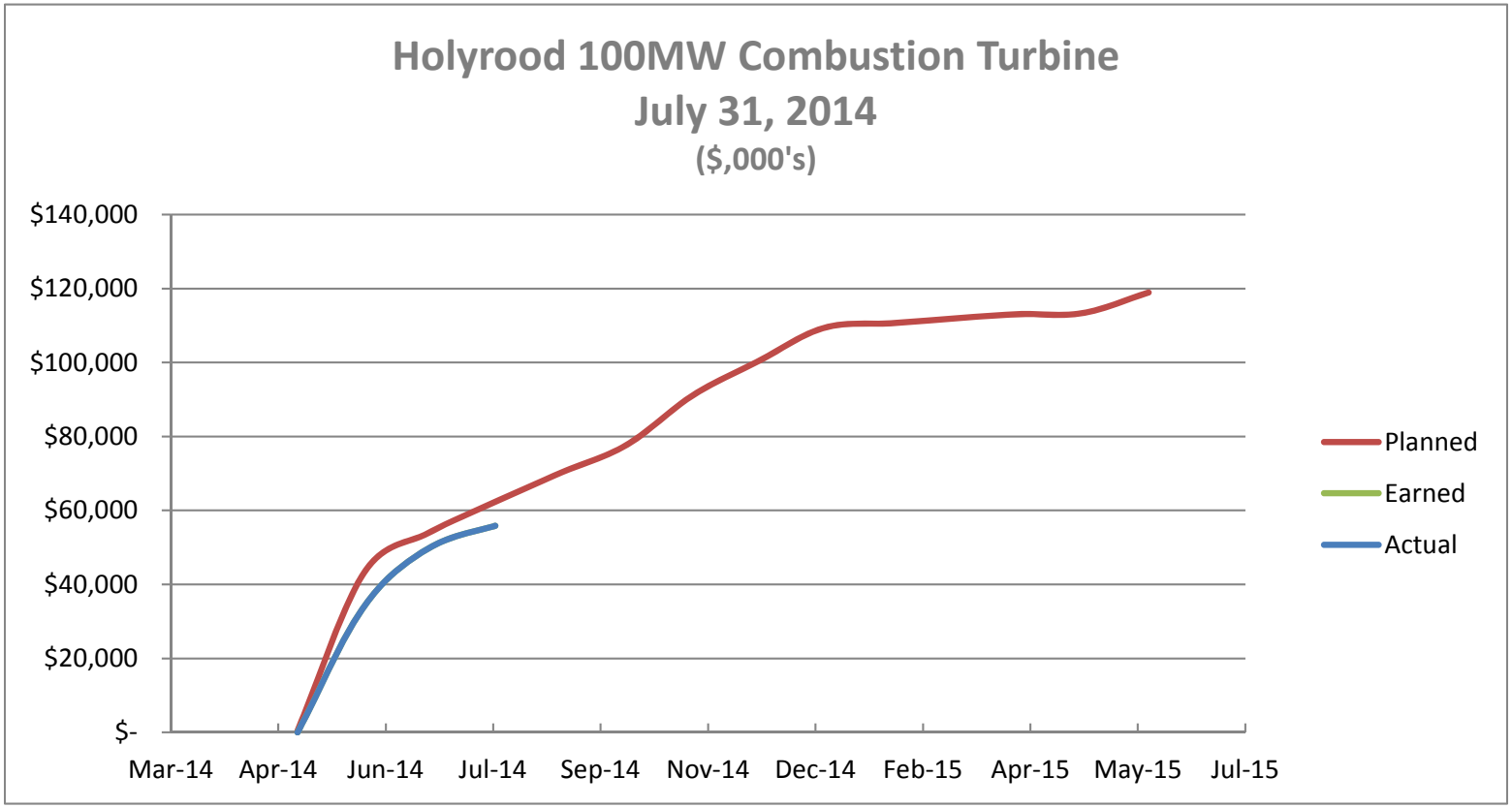
# Cost Summary – S-Curve




Note: earned = actual for this report



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# Risk Analysis

A 3rd party facilitated risk workshop was held on June 26th.

Risk Register was produced during the workshop. Fifty + risks identified.

Risk mitigation plan in place and being used to manage risk during execution of the project.

# Key Risks & Mitigation

**Risk:** Construction activities lead to contact with energized lines leading to safety incident

**Mitigation:** Relocate lines, power line hazard training for operators, use permit system, prepare lift plans, de-energize lines where possible,

# Key Risks & Mitigation

**Risk:** Unfamiliarity with new equipment leads to delay in commissioning

**Mitigation:** Training included in EPC contract; engage operations and commissioning personnel early in the process;

# Key Risks & Mitigation

**Risk:** Labour issues at the plant/TRO leads to work disruption and delay in project

**Mitigation:** Contract terms currently under negotiation; maintain open communications with stakeholders

# Key Risks & Mitigation

**Risk:** Lack of coordination of work with all of the work crews on site leads to safety incident

**Mitigation:** HSE Plans; Site Orientations; Contractor coordination meetings; toolbox meetings;

# Key Risks & Mitigation

**Risk:** Aggressive project schedule does not allow for any delay or rework in design – leads to schedule delay

**Mitigation:** Close coordination between fast-track design and construction teams; regular coordination meetings; field engineering engaged with design team.

# Key Risks & Mitigation

**Risk:** Delay in delivery of equipment and/or materials leads to schedule delay

**Mitigation:** expediting; order materials as early as possible; identify long lead items early in project; choose appropriate shipping method.

# Key Risks & Mitigation

**Risk:** Lack of available of resources to execute the Holyrood terminal station P&C work

**Mitigation:** Engage external resources where required.

# Project Photos

# Photo 1 – CTG Site - Holyrood




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# Photo 2 – CTG Foundation - Holyrood

# Photo 3 – Auxiliary Transformer Foundation - Holyrood




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# Photo 4 – Fuel Tank Area - Holyrood




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# Photo 5 – Duct Banks - Holyrood




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# Photo 6 – Transmission Line Construction - Holyrood




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# Photo 7 – Turbine Transport– Holyrood, NL




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# Photo 8 – GSU and Turbine Arriving at Holyrood

# Photo 9 – Turbine at Holyrood




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# Photo 10 – GSU Placement on Foundation - Holyrood

# Photo 11 – GSU Placement on Foundation - Holyrood

# Photo 12 – GSU Placed on Foundation