August 29, 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

Geoffrey P. Young
Senior Legal Counsel

GPY/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 29, 2014
Contents

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

(Includes only material updated since Aug 15, 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 complete.
2. Turbine and GSU placed on foundations.
3. Generator transported from Bay Bulls to Holyrood and placed on foundation.
4. Backfilling around auxiliary transformer and GSU foundations.
Progress & Schedule Summary (cont’d)

5. Installation of various duct banks continues.
6. Air inlet filter house construction has started.
7. Backfilling of CTG site to bring up to grade.
8. Begin installation of piping for fuel unloading station.
9. Transmission Line construction is proceeding on plan.
Progress & Schedule Summary (cont’d)

10. Terminal station interconnection work is progressing as per plan.

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.
Cost Summary – S-Curve

Holyrood 100MW Combustion Turbine
As of August 25, 2014
($,000's)

Note: earned = actual for this report
Risk Analysis

A 3\textsuperscript{rd} party facilitated risk workshop was held on June 26\textsuperscript{th}.

Risk Register was produced during the workshop. 50+ risks identified.

Risk mitigation plan in place and being used to manage risk during execution of the project.
Key Risks & Mitigation (cont’d)

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.

(Aug 29 update - Jack and Slide arrangement used to move turbine, generator and GSU)
Key Risks & Mitigation (cont’d)

**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.

*(Aug 29 update – commissioning coordinator assigned to project)*
Key Risks & Mitigation (cont’d)

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.

(Aug 29 – working closely with operations for assignment of resources to the project.)
Key Risks & Mitigation (cont’d)

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.

(Aug 29 update – coordination meeting held this period between u/g utility contractor and EPC contractor)
Key Risks & Mitigation (cont’d)

**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 (cont’d)

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; identify work around contingency plans.
Key Risks & Mitigation (cont’d)

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

Mitigation: Engage external resources where required.

(Aug 29 update – external resources engaged for P&C technician and electrician roles)
Photo 1 – CTG Site - Holyrood

CTG

Exhaust Stack Foundation

Air Inlet
Photo 2 – Generator Arriving - Holyrood

![Generator arriving at Holyrood](image)
Photo 3 – Generator Jack and Slide - Holyrood
Photo 4 – Turbine and Generator Rough Alignment – Holyrood, NL
Photo 5 – Fuel Offloading Pumphouse - Holyrood
Photo 6 – Fuel Offloading Pumphouse - Holyrood
Photo 7 – Duct Banks - Holyrood
Photo 8 – Transmission Line Construction - Holyrood

New Structures