January 5, 2015

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 and further to Hydro's letter of January 2, 2015 regarding the above referenced matter, enclosed is the original plus 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 update 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/jc

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 Dumasresque
Supply and Installation of a 100 MW Combustion Turbine Generator

Status Update Briefing– Jan 5, 2015
Contents

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

(Includes only material updated since Dec 23, 2014)
The project is progressing according to plan and in compliance with Safety, Quality, and Cost. Commissioning and function testing has continued to date. Plant energization is anticipated for week of Jan 4, 2015 (weather permitting).
Progress & Schedule Summary

1. Released from further Environmental Assessment and Certificate of Approval in place.
2. Additional authorities having jurisdiction including all required permits in place (Dept. of Labour, Service NL, CSA, etc.)
3. Commissioning and operations manuals in place and operator training ongoing.
4. Anticipated change in status from construction site to operational plant site week of January 4th.
5. Formal risk review of energization plan completed
Progress & Schedule Summary (cont’d)

6. Formal approval of energization plan completed

7. Consistent with plan, safety stand-down to be completed in anticipation of energization.

8. Functional protection tests substantially complete.

9. Cost S-Curve reflects tracking in compliance with original plan

10. Refer to Level 2 Summary Schedule on the following page.

11. Readiness for energization expected in next few days and will be dependent on weather window and ECC approval of required equipment outage.
Level 2 – Summary Schedule

- Summary level schedule provided below.

![Schedule Diagram]
Cost Summary – S-Curve

Holyrood 100MW Combustion Turbine
As of December 19, 2014
($,000's)
EPC Labour Hour Summary

EPC Contract - Labour Hour Summary S-Curve
(Data Provided by ProEnergy)

Notes:
Planned hours to Dec 31 (%Baseline Plan): 100%
Actual Progress to Dec 31 from Schedule: 93.08 %
Actual hours expended to Date (%Current Plan): 139.69%
Schedule Performance Index = 0.93 - Indicates tracking behind plan
Cost/Hrs Performance Index = 0.66 - Indicates slippage in labour efficiency, impacted adversely due to holiday period.
Total Hours to Date: 312,898 with 1 LTI
Risk Analysis

Two 3rd party facilitated risk workshops have been held to date:

June 26th – Focus on construction risks
Dec. 19th – Focus on energization risks

The resulting risk mitigation plans are 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.

(Jan 5 update – Full site safety standdown to be completed prior to energization)
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.

(Jan 5 update – Startup and Commissioning teams engaged and Plant Operator assigned for project and training has started)
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.

(Jan 5 update – Continue to have daily coordination meetings with relevant parties, and specific safety meetings where required)
Key Risks & Mitigation (cont’d)

Risk: During the start-up routine, the unit trips which results in customer impact.

Mitigation: Testing to be completed in the 0 to 40MW range to minimize impacts on the system. System configuration setup to minimize impacts should there be a trip. Corporate Communications engaged and coordination underway with Newfoundland Power on customer updates.

(Jan 5 update – this item identified in Dec. 19 risk workshop)
Key Risks & Mitigation (cont’d)

**Risk:** Lack of isolation plan or incomplete lock-outs leads to safety risk.

**Mitigation:** Isolation procedures are defined and a walk down completed prior to work activity. Boundary isolation approach used. Site stand-down planned prior to energization.

*(Jan 5 Update – Walkdowns completed, NLH stand-down completed, site stand down to be completed prior to energization this week)*
Key Risks & Mitigation (cont’d)

**Risk:** Availability of contractor and sub resources insufficient to meet project timeline

**Mitigation:** Secure local trade resources as much as possible over the holiday period. Engage additional subcontractor resources where possible to supplement the existing contracted resources. Source other resources for specialized tasks (e.g., Electrical testing)

*(Jan 5 – Risk was partially mitigated with marginal success in both numbers of skilled trades persons and realized productivities, with a resultant impact on schedule to energization.*
Project Photos
Photo 1 – Building Construction
Photo 2 – Inline Fuel Heating Panel
Photo 3 – Turbine Coupling
Photo 4 – 13.8kV Disconnect Switch
Photo 5 – 480V MCC in Fuel Pumphouse
Photo 6 – Inside Inlet Filter House
Photo 7 – Building East Wall
Photo 8 – 13.8kV Switchgear