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December 5, 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 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 Cou

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 Dumaresque

Supply and Installation of a 100 MW Combustion Turbine Generator

Status Update Briefing—Dec 5, 2014





Contents

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

(Includes only material updated since Nov 21, 2014)



Project Dashboard

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





Progress & Schedule Summary

- 1. Civil work is near completion.
- Transmission line and Terminal Station construction is complete.
- 3. CTG unit final assembly nearing completion. Several on board mechanical systems are commissioned including the lube oil and lift oil systems. Starting package and generator are aligned and are rotating.
- 4. Mechanical BOP placement continues to be an area of focus with respect to schedule. An additional mechanical subcontractor has been engaged to advance additional work fronts in parallel.



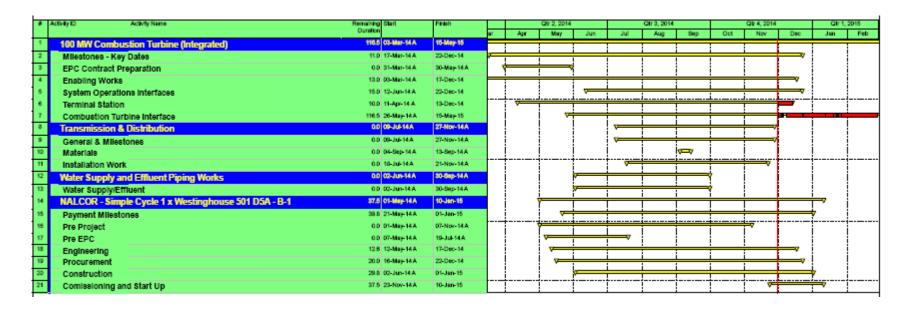
Progress & Schedule Summary (cont'd)

- 5. Fuel storage tank has been completed and tested.
- 6. Electrical work was late starting, but productivity is good with this trade.
- Mechanical and electrical trades are working double shifts to advance schedule.
- 8. Cost S-Curve reflects tracking in compliance with original plan.
- Overall schedule is now reflecting slippage on several work fronts, but function testing and initial commissioning of CTG unit still planned for the month of December 2014.



Level 2 – Summary Schedule

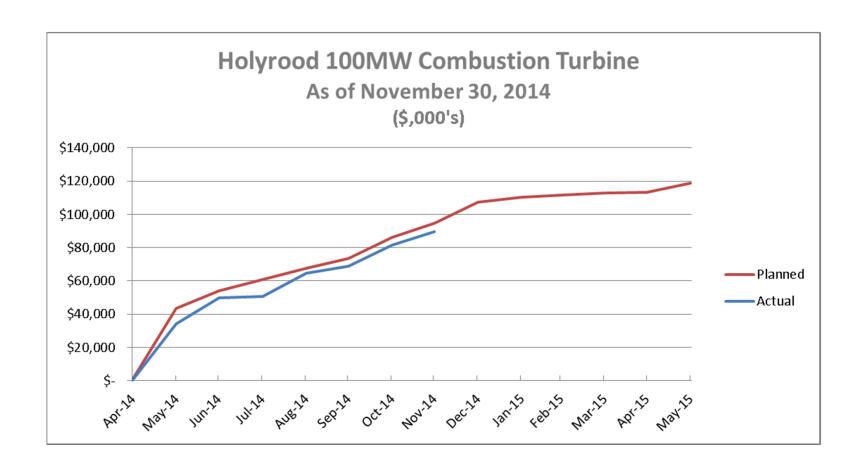
Summary level schedule provided below.



 'Combustion turbine interface' task adjusted as the redundant black start line is not required and can not be connected until the temporary black start diesels are removed from service, which is being planned for 2015.

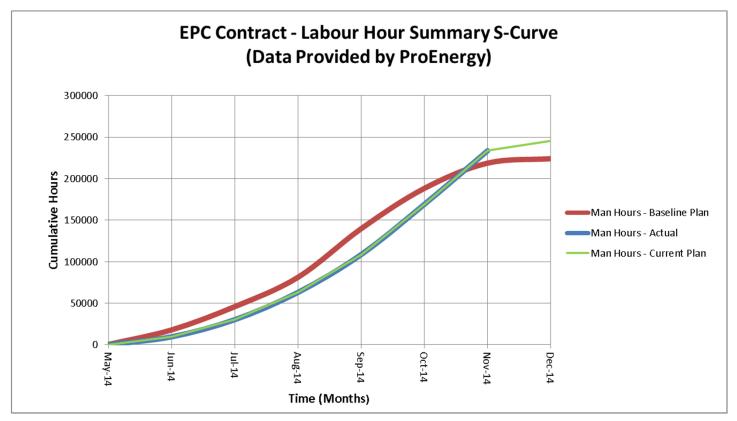


Cost Summary – S-Curve





EPC Labour Hour Summary



Notes:

Planned hours to Nov 16 (%Baseline Plan): 95.29%
Actual Progress to Nov 16 from Schedule: 84.17 %
Actual hours expended to Date (%Current Plan): 97.63%
Schedule Performance Index = 0.88 - Indicates tracking behind plan
Cost/Hrs Performance Index = 0.87 - Indicates slippage in labour efficiency



Risk Analysis

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

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.



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.

(Dec 5 update – No issues to report this period – Several outages taken to work safely)



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.

(Dec 5 update – Operations discussing training and O&M support with ProEnergy. Commissioning teams established)



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.

(Dec 5 update – Continue to have daily coordination meetings with relevant parties. Several specific safety meetings held to discuss working in congested work areas.)



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, increase shifts as required to pick up any delays. Mitigation action ongoing requires day by day measurement and management.

(Dec 5 update – Additional schedule review and issues and solves sessions held to mitigate schedule impacts. Additional technical resources engaged at job site to mitigate any technical issues as they may arise.)



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.

(Dec 5 Update - Late materials delivery continues to be an exposure. Shipments are being expedited daily. Late deliveries on electrical equipment and materials has pushed function testing and commissioning later into December)



Risk: Adverse weather conditions could negatively impact construction progress.

Mitigation: Use of temporary enclosures to protect equipment and enable work to proceed during adverse weather conditions.

(Dec 5 – Many temporary enclosures have been constructed and construction of others is ongoing)



Project Photos



Photo 1 – Building Construction



Temporary enclosure



Photo 2 - Fuel Tank Roof Install





Photo 3 – Fuel Tank Berm Construction





Photo 4 – Inline Fuel Heater





Photo 5 – MCC Installation





Photo 6 – Fuel Injection Skid





Photo 7 – Site Overview







