

August 10, 2020

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: Holyrood Supplemental Capital Projects – Monthly Update

On April 7, 2020, Newfoundland and Labrador Hydro (“Hydro”) filed its application for approval of capital projects necessary for the continued operation of the Holyrood Thermal Generation Station (“Holyrood TGS”). The application was approved on May 11, 2020 in Board Order P.U. 14(2020). In that Order, the Board directed Hydro to file monthly updates on the status of the approved capital projects from June 2020 to September 2020 and, thereafter, to provide updates as part of the Winter Readiness reports filed in October, November, and December 2020.

Projects Overview

Four projects were approved in Board Order P.U. 14(2020):

- **Boiler Condition Assessment and Miscellaneous Upgrades:** Scope involves Level 2 condition assessments on internal components of the main steam generators (boilers) and associated external high energy piping to identify required refurbishment or replacement work. Hydro will also replace or refurbish components that are identified as requiring immediate intervention. This project also includes the completion of required miscellaneous upgrades of condition based deficiencies identified in the 2019 Condition Assessment and Miscellaneous Upgrades project.
- **Overhaul Unit 2 Turbine Valves:** Scope includes the total disassembly, detailed internal inspection, refurbishment, and reassembly of all major steam valves. Valve refurbishment includes replacement of any identified damaged components.
- **Overhaul Unit 3 Boiler Feed Pump West:** Scope includes disassembly, inspection, reassembly, and re-commissioning of the pump. During overhaul, parts, including the volute impeller cartridge, are replaced as necessary.
- **Overhaul Unit 2 Generator:** Scope includes disassembly of generator end shields, hydrogen seals, hydrogen coolers, and bearings; removal of the generator rotor from the stator; cleaning of internal components; detailed visual inspection and non-destructive evaluation of internal components; detailed measurement of clearances and alignments; mechanical integrity testing of windings and core wedges; and replacement or refurbishment of components found to be damaged.

Status Update

Project schedules and cost updates for the four projects are provided in Tables 1 - 4. All projects remain on schedule and on budget.

Status of Units:

- Holyrood TGS Unit 1 and Unit 2 are currently on their planned annual maintenance outages.
- The Holyrood TGS Unit 3 planned maintenance outage is complete and the unit is operating in synchronous condenser mode.

Table 1: Project Status - Boiler Condition Assessment and Miscellaneous Upgrades

Project: Boiler Condition Assessment and Miscellaneous Upgrades				
Approved Budget:	3,056.7			
Total Project YTD (\$000)	1,587.0			
Total Project Forecast (\$000)	3,056.7			
Major Milestones	Start Date	End Date	Status	Overall Project Update
Unit 3 Inspections	15-May-20	12-Jun-20	Complete	• Unit 3: No major findings requiring immediate attention were discovered during the Level 2 Condition Assessment. All work identified during the previous Level 2 Condition Assessment was completed in accordance with industry quality standards.
Unit 3 Refurbishments	15-May-20	12-Jun-20	Complete	
Unit 3 Major Findings	N/A	N/A	Complete	
Unit 1 Inspections	15-Jun-20	21-Aug-20	In progress	• Unit 1: To date, no major findings requiring immediate attention were discovered during the Level 2 Condition Assessment. Refurbishment work identified in the previous Level 2 Condition Assessment is currently in progress in accordance with industry quality standards. The table will be updated to include any major findings during subsequent monthly updates, as required.
Unit 1 Refurbishments	15-Jun-20	21-Aug-20	In progress	
Unit 1 Major Findings	N/A	N/A	N/A	
Unit 2 Inspections	24-Aug-20	16-Oct-20	Not Started	• Condition Assessment Report: The condition assessment report will be finalized after all on site work has been completed.
Unit 2 Refurbishments	24-Aug-20	16-Oct-20	Not Started	
Unit 2 Major Findings	N/A	N/A	N/A	
Condition Assessment Report	Jun-20	31-Dec-20	In progress	

Table 2: Project Status – Overhaul Unit 2 Turbine Valves

Project: Overhaul Unit 2 Turbine Valves				
Approved Budget:	2,919.5			
Total Project YTD (\$000)	377.0			
Total Project Forecast (\$000)	2,919.5			
Major Milestones	Start Date	End Date	Status	Overall Project Update
Turbine Valves Disassembly	27-Jul-20	17-Aug-20	In progress	• No major findings to date through inspection.
Turbine Valves Inspection	31-Jul-20	7-Sep-20	In progress	• There is time allocated in the Unit 2 outage schedule to address major findings, if required.
Turbine Valves Refurbishment	7-Aug-20	14-Sep-20	In progress	• Expected to be completed on budget.
Turbine Valves Reassembly	13-Aug-20	15-Sep-20	Not Started	
Commissioning	15-Sep-20	19-Sep-20	Not Started	
Unit 2 Outage	6-Jul-20	16-Oct-20		

Table 3: Project Status – Overhaul Unit 3 Boiler Feed Pump West

Project: Overhaul Unit 3 Boiler Feed Pump West

Approved Budget: 367.9
Total Project YTD (\$000) 185.0
Total Project Forecast (\$000) 367.9

Major Milestones	Start Date	End Date	Status	Overall Project Update
BFP Disassembly	25-May-20	27-May-20	Complete	• Through detailed inspection, a bent impellor shaft was discovered and requires replacement. Hydro is proceeding with all required refurbishment including shaft replacement. The refurbishment requirements have no impact on the overall schedule and cost.
Spare Volute Installed	28-May-20	28-May-20	Complete	
BFP Reassembled	28-May-20	10-Jun-20	Complete	
Offline Commissioning	10-Jun-20	12-Jun-20	Complete	• Final commissioning will occur during start up when Unit 3 is returned to generation mode.
Volute Refurbishment	25-Jun-20	30-Sep-20	In progress	
Final Commissioning	29-Oct-20	2-Nov-20	Not started	• Expected to be completed on budget.

Table 4: Project Status – Overhaul Unit 2 Generator

Project: Overhaul Unit 2 Generator

Approved Budget: 1,294.1
Total Project YTD (\$000) 196.0
Total Project Forecast (\$000) 1,294.1

Major Milestones	Start Date	End Date	Status	Overall Project Update
Generator Disassembly	27-Jul-20	8-Aug-20	In progress	• No major findings have been identified to date through testing and inspection.
Generator Testing and Inspection	28-Jul-20	21-Aug-20	In progress	
Refurbishment	N/A	N/A	N/A	• There is time allocated in the Unit 2 outage schedule to address major findings, if required.
Generator Reassembly	21-Aug-20	17-Sep-20	Not started	• Expected to be completed on budget.
Commissioning	17-Sep-20	18-Sep-20	Not started	
Unit 2 Outage	6-Jul-20	16-Oct-20		

Hydro continues to manage the required work and planned outage schedules with an aim to achieving project completion prior to the 2020–2021 winter season. At the time of this monthly update, there are no significant execution risks or concerns.

Should you have any questions or comments about any of the enclosed, please contact the undersigned.

Yours truly,

NEWFOUNDLAND AND LABRADOR HYDRO



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