

September 26, 2022

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 and Board Secretary

Dear Ms. Blundon:

Re: Request for Change or Modification to Board Order No. P.U. 24(2022) – Approval of Various Supplemental Capital Projects at the Holyrood Thermal Generation Station

On June 6, 2022, Newfoundland and Labrador Hydro (“Hydro”) filed an application with the Board of Commissioners of Public Utilities (“Board”) for approval of supplemental capital expenditures for the following projects at the Holyrood Thermal Generating Station (“Holyrood TGS”):

- (i) Refurbishment of the Day Tank;
- (ii) Refurbishment of Tank 2;
- (iii) Replacement of the Tank Farm Underground Firewater Distribution System; and
- (iv) Upgrade of the Unit 2 Turbine Control System.¹

These projects were approved in Board Order No. P.U. 24(2022).² Subsequent to receiving the Board’s approval, Hydro has determined that Tank 1 at the Holyrood TGS could be refurbished and reinstated for substantially less than the amount estimated for the refurbishment of Tank 2. The estimated costs for refurbishment of Tank 2 were \$4.7 million. Hydro estimates the costs of refurbishment of Tank 1 to be less than \$2.5 million. Reinstatement of Tank 1 also reduces schedule risk, as Hydro expects that refurbishment can commence immediately and be completed by June 2023, coinciding with the expiration of Tank 2’s certification. All other justification regarding the requirement for three No. 6 fuel oil vertical storage tanks, as provided in Hydro’s June 6, 2022 application, remains the same. Hydro notes that refurbishment of Tank 1 instead of Tank 2 does not have any impact on any other ongoing or planned capital projects, including those approved in Board Order No. P.U. 24(2022).

Hydro requests, pursuant to section 28(2) of the *Board of Commissioners of Public Utilities Regulations, 1996*,³ that Board Order No. P.U. 24(2022) be modified or changed to approve the refurbishment of

¹ “Application for Approval of Various Supplemental Capital Projects at the Holyrood Thermal Generating Station,” Newfoundland and Labrador Hydro, June 6, 2022.

² *Public Utilities Act*, RSNL 1990, c P-47, Board Order No. P.U. 24(2022), Board of Commissioners of Public Utilities, August 18, 2022.

³ Nfld Reg 39/96, s 28(2).

Tank 1 at the Holyrood TGS, instead of Tank 2. Further information supporting this change is attached to this correspondence.

The determination and approval of refurbishment of Tank 1 instead of Tank 2 is very time sensitive, as materials (i.e., the steel for the floor refurbishment) must be ordered now to ensure they are received in time to complete the scope in sufficient time to allow for three tanks to be in service for the 2023–2024 operating season.

Should you have any questions, please contact the undersigned.

Yours truly,

NEWFOUNDLAND AND LABRADOR HYDRO



Shirley A. Walsh
Senior Legal Counsel, Regulatory
SAW/kd

Encl.

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Holyrood Thermal Generating Station – Refurbishment of Tank 1 vs Tank 2

Holyrood Thermal Generating Station – Refurbishment of Tank 1 vs Tank 2

1 **Background**

2 The Holyrood Thermal Generating Station (“Holyrood TGS”) has four large No. 6 fuel oil vertical storage
3 tanks, identified as Tanks 1, 2, 3, and 4. Based on the anticipated reduction in production at the
4 Holyrood TGS, Tank 1 was retired upon the expiration of the tank certification in 2021, and the Holyrood
5 TGS moved to a three-tank operation. The last out-of-service inspection on Tank 2 was completed in
6 2008. As per the Government of Newfoundland and Labrador regulations,¹ Tank 2 must be drained,
7 cleaned, and re-inspected before June 2023 to maintain its certification. The No. 6 fuel oil storage tanks
8 are subject to deterioration due to corrosion. A leak or spill of No. 6 fuel oil from the storage tanks could
9 cause major environmental and operational issues. The 2018 in-service inspection and the 2020
10 remaining life assessment on Tank 2 indicated that the tank will require refurbishment before the
11 renewal of tank certification in 2023. Newfoundland and Labrador Hydro (“Hydro”) has committed to
12 maintaining the Holyrood TGS as a generating facility until March 31, 2024. To ensure the Holyrood TGS
13 is fully available for generation at its maximum output when required, three fuel oil storage tanks must
14 be in service and in reliable condition. Hydro therefore proposed refurbishment of Tank 2 to ensure
15 three tanks remained in operation.

16 **Tank 1**

17 As noted above, Tank 1’s certification expired in 2021 and further inspection and refurbishment would
18 have been necessary to recertify the tank. Based on calculations completed pursuant to American
19 Petroleum Institute (“API”) Standard 653² for tank inspection, repair, alteration, and reconstruction,
20 Hydro believed that significant refurbishment would be required to keep Tank 1 in service. Hydro had
21 decided to move to a three-tank operation instead of investing in what was expected to be significant
22 refurbishment. In the spring of 2022, Hydro began to clean Tank 1 in preparation for decommissioning
23 under its Asset Retirement Obligation. Hydro has recently determined that the actual corrosion levels
24 were less than had been estimated using the API Standard, and that refurbishment and re-instatement
25 of Tank 1 can be completed for less than the estimated cost of refurbishment of Tank 2. Tank 1 requires
26 replacement of significantly less floor plating than was estimated for Tank 2. Refurbishment of Tank 1
27 can begin immediately upon receipt of materials and is expected to be completed in mid-2023.

¹ Required under the *Provincial Storage and Handling of Gasoline and Associated Products Regulations, 2003* (“GAP Regulations”) as part of the *Environmental Protection Act*.

² *Tank Inspection, Repair, Alteration, and Reconstruction*, API Standard 653, 2014.

Holyrood Thermal Generating Station – Refurbishment of Tank 1 vs Tank 2

1 Scope

2 The scope of work on Tank 1 will include the following:

- 3 • Tank internal cleaning and degassing;
- 4 • Installation of new floor plates;
- 5 • Installation of new roof plates;
- 6 • Refurbishment of tank internal components, such as heaters and valves;
- 7 • Refurbishment of tank external components, such as stairs;
- 8 • Refurbishment of the tank foundation concrete ring;
- 9 • Application of coating on roof plates, roof access platform, and any new steel structure
- 10 members or supports installed to refurbish the tank;
- 11 • Door sheet cutting and reinstallation on the tank shell to allow access to the inside of the tank to
- 12 complete the installation of new floor patch plates and other refurbishments; and
- 13 • Completion of an out-of-service inspection to ensure the tank’s fitness for service in accordance
- 14 with API Standard 653.

15 The scope of work on Tank 1 will be complete by external contractors with support from Hydro
16 engineering and other internal labour as required.

17 The estimate for this project is shown in Table 1.

Table 1: Project Estimate (\$000)

Project Cost	2022	2023	Beyond	Total
Material Supply	0.0	100.0	0.0	100.0
Labour	149.1	142.9	0.0	292.0
Consultant	50.0	10.0	0.0	60.0
Contract Work	930.0	466.0	0.0	1,396.0
Other Direct Costs	0.0	0.0	0.0	0.0
Interest and Escalation	57.9	66.3	0.0	124.2
Contingency	8.0	71.9	0.0	79.9
Total	1,195.0	857.1	0.0	2,052.1

Holyrood Thermal Generating Station – Refurbishment of Tank 1 vs Tank 2

1 Schedule

2 The anticipated project schedule is shown in Table 2.

Table 2: Project Schedule

Activity	Start Date	End Date
Planning:		
Prepare planning documentation	September 2022	October 2022
Design:		
Prepare technical conditions	October 2022	November 2022
Procurement:		
Tender and award contract to supply steel plates	October 2022	November 2022
Tender and award Refurbishment contract	November 2022	December 2022
Procure steel plates	November 2022	March 2023
Construction:		
Tank refurbishment	March 2023	May 2023
Commissioning:		
Commission the tank	May 2023	May 2023
Closeout:		
Prepare closeout documentation	June 2023	July 2023

3 Summary and Recommendation

4 Refurbishment of Tank 1 instead of Tank 2 results in a substantial cost savings, as well as a reduction in
 5 schedule risk. Tank 1 is expected to be refurbished and reinstated by June 2023, coinciding with the
 6 expiration of Tank 2’s certification; three tanks can remain in operation at all times during refurbishment
 7 work and three tanks will be available for the 2023–2024 operating season. Hydro believes that
 8 refurbishment of Tank 1 is the least-cost solution to ensure reliable service from the Holyrood TGS.