

1 Q. **Reference: Schedule 3 - Holyrood TGS Overview**

2 Please detail the total capital expenditures required to maintain generation at the Holyrood TGS  
3 each year since 2017 as well as the anticipated annual capital expenditures for each year  
4 assuming that generation is maintained until 2027. Please include detail on any significant  
5 capital projects/programs that have occurred or are expected to occur during that timeframe.

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8 A. Please refer to PUB-NLH-011, Attachment 1 for a listing of total capital expenditures required to  
9 maintain generation at the Holyrood Thermal Generating Station (“Holyrood TGS”) each year  
10 from 2017 to 2023. Newfoundland and Labrador Hydro’s (“Hydro”) five-year plan includes  
11 projects required for continued generation at the Holyrood TGS until March 2024. Hydro is  
12 completing an update to its Reliability and Resource Adequacy Study that will inform the future  
13 requirements for the Holyrood TGS, including associated capital investment. This filing will be  
14 submitted to the Board of Commissioners of Public Utilities in September 2022.

**Newfoundland and Labrador Hydro**  
**Total Capital Expenditures Required to Maintain Generation at the Holyrood Thermal Generating Station**  
**(\$000)**

Investment Description	Expenditure/Forecast						
	2017	2018	2019	2020	2021	2022 <sup>1</sup>	2023
Overhaul Turbine Valves Unit 2 - Holyrood	2,496.6						
Purchase Capital Spares Holyrood	338.3						
Condition Assessment and Miscellaneous Upgrades - Holyrood	3,058.1						
Overhaul Pumps - Holyrood	661.3						
Exciter Controls Replacement Units 1 and 2- Holyrood	1,339.9						
Reliability Improvements - Holyrood <sup>2</sup>	3,586.6	297.3					
Purchase of 12 MW Diesel Generation - Holyrood	497.1	678.2					
Holyrood Unit 2 Fire Damage Rehabilitation	540.8						
Stage 1 Pumphouse Siding Replacement - Holyrood	51.9						
Thermal In-Service Failures		2,699.9					
Overhaul Pumps - Holyrood		302.7					
Condition Assessment and Miscellaneous Upgrades - Holyrood		3,906.9					
Overhaul Unit 1 Generator - Holyrood		1,060.6					
Overhaul Unit 1 Turbine Valve - Holyrood		2,247.7					
Improve Boiler Load Capacity Units 1, 2, and 3 - Holyrood		1,665.9					
Replace Heat Sensors on Day Tank - Holyrood		48.1					
Overhaul Unit 3 Turbine Valves - Holyrood			2,683.0				
Condition Assessment and Miscellaneous Upgrades - Holyrood			2,941.7				
Thermal In-Service Failures			2,327.4				
Replace 258 Vdc Battery Banks - Holyrood			350.7				
Tanks 3 and 4 Life Expectancy Study - Holyrood			34.2				
Unit 3 Electrical Testing - Holyrood			33.4				
Thermal In-Service Failures <sup>3</sup>				1,752.9			
Overhaul Unit 3 Boiler Feed Pump West - Holyrood				369.5			
Overhaul Unit 2 Turbine Valves - Holyrood				3,159.3			
Overhaul Unit 2 Generator - Holyrood				1,410.2			
Boiler Condition Assessment and Miscellaneous Upgrades - Holyrood				3,221.2			
Overhaul Unit 1 Turbine and Valve - Holyrood					9,765.0		
Thermal In-Service Failures <sup>3</sup>					5,744.8		
Overhaul Unit 3 Boiler Feed Pump East - Holyrood					257.8		
Boiler Condition Assessment and Miscellaneous Upgrades - Holyrood					3,889.2		
Inspect Chemical Tanks - Holyrood					514.6		
Unit 3 Boiler Tube - Holyrood					2,249.8		
Overhaul Unit 1 Boiler Feed Pump East - Holyrood					554.7		
Thermal In-Service Failures (2022)						2,789.1	
Major Pumps Overhaul - Holyrood						985.1	
Boiler Condition Assessment and Miscellaneous Upgrades - Holyrood						4,510.2	
Turbine Valve Overhaul Unit 3 - Holyrood						3,325.3	
Purchase Turbine Last Stage Blades Units 1 and 2 - Holyrood						158.2	1,559.5
Refurbishment of Tank 2						137.3	4,563.3
Refurbishment of Day Tank						77.4	707.8
Replacement of Tank Farm Underground Firewater Distribution System						83.5	1,330.5
Upgrade of Turbine Controls - Unit 2						235.9	490.1
Overhaul Unit 2 Turbine and Valves (2023) - Holyrood							9,701.8
Boiler Condition Assessment and Miscellaneous Upgrades (2023) - Holyrood							2,926.6
Thermal In-Service Failures (2023)							3,300.0
Overhaul Pumps (2023) - Holyrood							742.4
<b>Total</b>	<b>12,570.6</b>	<b>12,907.3</b>	<b>8,370.4</b>	<b>9,913.1</b>	<b>22,975.9</b>	<b>12,302.0</b>	<b>25,322.0</b>

<sup>1</sup> 2022 Forecast as of August 2022

<sup>2</sup> 2018 spend in carryover

<sup>3</sup> These expenditures may not match that found in the associated year capital expenditure reports as this table only include items required for generation.