

1 Q. **References: Volume I, 2019 Capital Projects, \$500,000 and Over, Project Title:**  
2 **Thermal Generation In-Service Failures, page C17.**

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4 Provide historical expenditures for the period 2014 to 2018 for the historical  
5 projects now covered by this project.

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8 A. Prior to the inception of the “Thermal Generation In-Service Failures Program”,  
9 failures and incipient failures of Thermal Generation equipment were addressed  
10 either as a Supplemental Capital Budget Application, within Hydro’s Unforeseen  
11 Allowance, or within Projects less than \$50,000. The “In-Service Failures Program”  
12 has allowed Hydro to address equipment failures or incipient equipment failures, in  
13 a more prompt and regulatory efficient manner to maintain or restore system  
14 reliability.

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17 Activities for the years 2014-2017, inclusive, which were covered under the  
18 Unforeseen Allowance, Supplemental Application, or Projects less than \$50,000, but  
19 would be addressed under in-service failures today, are outlined in Table 1. For  
2018, the forecasted in-service failures expenditures are provided.

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**Table 1: Thermal In-Service Failures (\$000s)**

Activity	Actual Expenditures - Completed Activities	Forecasted Expenditures - Ongoing Activities	Addressed Within
<b>2014</b>			
Replace Unit #1 Air Compressor - Holyrood	319.4		Supplemental
<b>Total</b>	<b>319.4</b>		
<b>2015</b>			
Unit Service Transformer for Unit 3 - Holyrood Thermal Generating Station	75.8		Unforeseen Allowance
Purchase Critical Spares Generation Stations	400.0		Supplemental
Replace Rectifier Transformers - Holyrood Units 1 and 2	870.4		Supplemental
<b>Total</b>	<b>1,346.20</b>		
<b>2016</b>			
<b>N/A</b>			
<b>Total</b>	<b>0.0</b>		
<b>2017</b>			
Holyrood Unit 2 Fire Damage Rehabilitation	540.8		Unforeseen
Domestic Waterline Replacement - Holyrood	56.9		Projects less than \$50k
Line Replacement and New Valve - Holyrood	50.3		Projects less than \$50k
PA System Wiring Damage Refurbishment - Holyrood	54.1		Projects less than \$50k
<b>Total</b>	<b>702.1</b>		
<b>2018</b>			
Refurbish 4160 V FD Fan and Boiler Feed Pump motors		70.0	In-Service Failures
4" pump out line refurb (Marine Terminal)		150.0	In-Service Failures
Variable Frequency Drive (VFD) Failures, U1 U2		74.0	In-Service Failures
Mark V Failure U1		85.0	In-Service Failures
Boiler Refractory Ports, U1 U2 (Boiler Defined Work)		571.0	In-Service Failures

**2018**

DCS Failure	35.0	In-Service Failures
DCS Operator Station	6.0	In-Service Failures
Unit 3 East Cooling Water Pump Motor	65.0	In-Service Failures
Unit 2 West Cooling Water Pump Motor	42.0	In-Service Failures
<b>Total</b>	<b>1,098.0</b>	