

1 Q. **References: Volume I, 2019 Capital Projects, \$500,000 and Over, Project Title:**
2 **Hydraulic Generation In-Service Failures, page C14.**

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

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

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

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

Activity	Actual Expenditures - Completed Activities	Forecasted Expenditures - Ongoing Activities	Addressed Within
2014			
Replace Excitation Transformer, Unit #6 – Bay d'Espoir	71.1		Unforeseen Allowance
Purchase of Critical Spares	491.8		Supplemental
Replacement of Excitation Transformers (Units 1 to 7) – Bay d'Espoir	1040.6		Supplemental
Total	1,603.5		
2015			
Purchase Critical Spares Generation Stations	300.0		Supplemental
Replace 125VDC Battery Bank - Paradise River Hydro Plant	29.1		Projects less than \$50k
Replace Unit 7 Carbon Seal - Bay d'Espoir	46.6		Projects less than \$50k
Replace Unit 7 Turbine Base Plate – Bay d'Espoir	46.4		Projects less than \$50k
Spare Turbine Bearing Refurbishment Unit 1- 6 – Bay d'Espoir	37.2		Projects less than \$50k
Replace Unit 1 Turbine Guide Bearing – Bay d'Espoir	49.5		Projects less than \$50k
Thrust Bearing Refurbishment – Units 1 – 6, Bay d'Espoir	32.8		Projects less than \$50k
Total	541.6		
2016			
N/A			
Total	0.0		
2017			
Replace Powerhouse Lighting – Paradise River	36.2		Projects less than \$50k
Replace Generator Bearing Coolers – Upper Salmon	46.2		Projects less than \$50k
Replace Tracks for V7601 Groomer – Bay d'Espoir	44.7		Projects less than \$50k
Total	127.1		

Activity	Actual Expenditures - Completed Activities	Forecasted Expenditures - Ongoing Activities	Addressed Within
2018			
Bear Brook Culvert refurbishment		34.0	In-Service Failures
Procure and install a replacement pump for Sump #1 in Bay d'Espoir		32.9	In-Service Failures
Procure and install a replacement HVAC unit for Cat Arm Control Room		73.6	In-Service Failures
Procure and install a replacement High Pressure Pump in Hinds Lake		13.0	In-Service Failures
Procure and install a replacement guide bearing assembly on Unit 2 in Bay d'Espoir		180.0	In-Service Failures
Procure and install a replacement thrust bearing assembly on Unit 2 in Bay d'Espoir		165.0	In-Service Failures
Total		498.5	