

- 1 **Q. (Reference Application Schedule B, Substation Replacements Due to In-Service**
 2 **Failures, page 75) It is stated "The Substation Replacements Due to In-Service**
 3 **Failures program involves replacing substation equipment that has failed as a**
 4 **result of storm damage, lightning strikes, vandalism, electrical or mechanical**
 5 **failure, corrosion damage, technical obsolescence or failure during**
 6 **maintenance testing."**
- 7 **a) For each year since 2000, please provide the number of substation in-**
 8 **service failures and their average duration. Describe the impact such**
 9 **failures typically have on customers.**
- 10 **b) The amount requested for 2024 is \$4.797 million while Table 1 indicates a**
 11 **forecast expenditure on substation replacements of \$4.422 million in 2023.**
 12 **(i) Please confirm that this represents an 8.5% increase in 2024. (ii) How**
 13 **does that increase compare to the Conference Board of Canada's forecast**
 14 **for inflation (GDP deflator) for 2024? (iii) Please provide specific**
 15 **engineering or cost data that NP has available to justify an 8.5% increase**
 16 **in spending on the Substation Replacements program in 2024.**
- 17
- 18 **A. a) Newfoundland Power does not collect outage statistics for individual pieces of**
 19 **equipment across its fleet of 131 substations. The information is therefore not**
 20 **readily available to provide.¹**
- 21
- 22 Individual substations provide service to an average of approximately 2,400
 23 customers, with the largest substation providing service to over 10,000 customers.
 24 When substation failures occur, they can result in significant customer outages. For
 25 example, a power transformer failure at Bonavista Substation in 2018 resulted in
 26 3.7 million customer outage minutes.²
- 27
- 28 **b) (i) It is confirmed.**
- 29
- 30 **(ii) The Conference Board of Canada is forecasting an inflationary increase of 2.05%**
 31 **for 2024.**
- 32
- 33 **(iii) The budget for the *Substation Replacements Due to In-Service Failures* program**
 34 **is based on a historical average. Historical annual expenditures under this**
 35 **program over the most recent five-year period are expressed in current-year**
 36 **dollars ("Adjusted Costs"). The estimate for the budget year is calculated by**
 37 **taking the average of the Adjusted Costs (\$4,688,000) and inflating it using the**
 38 **GDP Deflator for Canada for non-labour costs and the Company's internal labour**
 39 **inflation rate for labour costs.**

¹ Newfoundland Power was able to obtain the dates and duration of service interruptions at three substations as requested in the responses to Requests for Information CA-NP-091, 092 and 094. This involved correlating interruptions at substations with daily system logs for major outages and capital work.

² See Newfoundland Power's 2024 Capital Budget Application, Schedule B, page 78.

1 Table 1 shows annual expenditures for the *Substation Replacements Due to In-*
 2 *Service Failures* program from 2019 to 2024, the Adjusted Costs and the five-
 3 year historical average.

Table 1 Substation Replacements Due to In-Service Failures Program Historical Expenditures (000s)							
Cost	2019	2020	2021	2022	2023F	Average	2024F
Total	\$4,532	\$3,684	\$4,113	\$4,562	\$4,422		\$4,797
Adjusted ¹	\$5,395	\$4,328	\$4,546	\$4,751	\$4,422	\$4,688	

¹ 2023 dollars.

4 The increase from the five-year average of \$4,688,000 to \$4,797,000 is 2.3%.
 5 This includes the GDP Deflator and the Company's internal labour inflation rate.
 6 Approximately 6.0% is attributable to the difference between the average of the
 7 Adjusted Costs (\$4,688,000) and the 2023 forecast cost (\$4,422,000).