

Substations

Q. Reference: "2025 Capital Budget Application," Newfoundland Power Inc., June 28, 2024, Supporting Materials, Substations: 2.1, p. 6, f.n. 14.

The average age of failure for the Company's fleet of SF6 breakers is 27 years. The average age of failure for the Company's fleet of vacuum breakers is 20 years.

- a) What is the sample size of breakers used to derive 27 years and 20 years as the average age of failure for SF6 and vacuum breakers respectively?**
- b) Has Newfoundland Power completed any root cause analysis to determine the mode of failure for breakers? If so, what were the findings? If not, why not?**

- A. a) The sample size of SF₆ breakers used to derive the 27 year value was 44. The sample size of vacuum breakers used to derive the 20 year value was four.
- b) The main cause of the SF₆ breaker replacements was the failure of the SF₆ containment system, resulting in excessive gas leaks. There was no common link in failure mode for the four vacuum breaker replacements.