

1 **Q. Reference: 2026 CBA Substation Power Transformer Strategy, Service Life**  
2 **Study**

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4 **The Service Life Study identifies 107 forecast power transformer retirements.**  
5 **Indicate the ranking of the transformers proposed for replacement in the**  
6 **Application relative to the other transformers considered.**  
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8 **A.** The Gannett Fleming *Service Life Study* (the "Study") provides a fleet-level statistical  
9 forecast of expected power transformer retirements over the study period. While the  
10 Study forecasts approximately 107 transformer retirements over the study period, it  
11 does not predict which specific transformers will fail, when failures will occur, or the  
12 consequences associated with those failures. Newfoundland Power does not have  
13 forecasted dates of retirement for individual transformers and no relative ranking of  
14 retirement dates of individual transformers can be provided. As a result, the statistical  
15 retirement forecast is used as long-term planning guide, while individual replacement  
16 decisions are driven by transformer condition information, inspection and testing results,  
17 operating experience, risk assessments, system requirements, spare transformer  
18 availability, portable substation capability, and procurement considerations.<sup>1</sup> See the  
19 response to Request for Information PUB-NP-015 for additional information.  
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21 As stated in the response to Request for Information PUB-NP-008, aging power  
22 transformers that were previously stable can abruptly begin rapid deterioration.  
23 Newfoundland Power regularly tracks the condition of its substation power transformers  
24 through its *Substation Inspection and Maintenance Practices* to assess any changes in  
25 the probability of failure of individual substation power transformers.<sup>2</sup> However, since  
26 this equipment does not deteriorate on a strictly linear basis based on age,  
27 Newfoundland Power does not maintain a fixed ranking of all 107 power transformers  
28 based on probability of failure.

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<sup>1</sup> Based on the outcome of the Study, the 2019 Depreciation Study, and the average service age of Newfoundland Power's transformers, on a statistical basis, Newfoundland Power can expect to have to replace an average of three power transformers per year for the next 30 years. This statistical outcome denotes the most likely rate at which transformers will arrive at the end of their useful service lives but does not serve as a forecast of individual transformer retirements.

<sup>2</sup> See the response to Request for Information PUB-NP-011.