

- 1 **Q. (Reference Application, Schedule B, page 33) Footnote 33 indicates that the**  
 2 **cost of transformers is expected to increase by an additional 11% in 2025.**  
 3 **a) Please provide NP's historical and forecast cost of transformers for the**  
 4 **years 2000 through 2029 and provide the basis for the forecast.**  
 5 **b) In light of the 37% increase in transformer cost over 2020 to 2024 and**  
 6 **the anticipated 11% increase in 2025, has NP explored whether the rising**  
 7 **costs are due to a temporary phenomenon in which case reduced purchase**  
 8 **costs may be appropriate?**  
 9 **c) What is the average life expectancy of a new transformer compared to one**  
 10 **purchased in 1980 or 2000?**  
 11 **d) How often does NP replace rather than repair a problematic transformer?**  
 12 **In light of the large increase in the purchase cost of a transformer, it is**  
 13 **now more cost-effective to provide additional maintenance/protection of**  
 14 **transformers as well as to repair them? Has NP developed a new protocol**  
 15 **for increasing the service life of its transformers?**  
 16 **e) Considering the circumstances, should the historical approach be replaced**  
 17 **with an alternative?**  
 18  
 19 **A. a) Table 1 provides the historical and forecast distribution transformer costs from 2000**  
 20 **to 2029.<sup>1</sup>**

Table 1: Distribution Transformer Costs 2000-2029F (\$000s)		
Year	Forecast Cost	Actual Cost
2000	3,328	4,243
2001	4,678	4,550
2002	4,805	5,194
2003	4,975	5,529
2004	4,965	5,449
2005	5,189	4,976
2006	5,540	5,643
2007	5,728	6,992
2008	5,811	8,545
2009	6,406	6,909
2010	7,668	6,588
2011	7,999	7,196

<sup>1</sup> Values for 2023-2029F are the sum of the *New Transformers* and *Replacement Transformers* programs.

2012	7,944	6,565
2013	7,983	6,710
2014	6,995	7,106
2015	6,778	7,462
2016	5,759	4,956
2017	6,103	5,835
2018	6,084	5,782
2019	6,716	5,696
2020	6,581	5,628
2021	5,945	6,332
2022	5,958	7,307
2023	6,312	6,410
2024F	10,947	-
2025F	11,963	-
2026F	9,580	-
2027F	9,749	-
2028F	9,917	-
2029F	10,096	-

- 1 b) Newfoundland Power has not received indication from vendors that these cost  
2 increases are temporary.  
3
- 4 c) Newfoundland Power's most recent depreciation study indicates the life expectancy  
5 of distribution transformers is 42 years.<sup>2</sup> Previous depreciation studies completed in  
6 2010 and 2014 listed the life expectancy to be 40 years for distribution transformers.  
7 The life expectancy data for transformers purchased in 1980 and 2000 is not  
8 comparable to the transformers currently being purchased by Newfoundland Power  
9 due to the change to stainless steel distribution transformers in 2001.<sup>3</sup>  
10
- 11 d) See response to Request for Information CA-NP-094 and CA-NP-158.  
12
- 13 e) In Newfoundland Power's view, its current budgeting practices provide reasonable  
14 accuracy in estimating future expenditures. For more information, see the response  
15 to Request for Information PUB-NP-008.

<sup>2</sup> See Newfoundland Power's *2022/2023 General Rate Application, Volume 3: Expert Evidence, Depreciation Study: Mr. John Wiedmayer, Gannett Fleming Valuation and Rate Consultants LLC*, page VI-7, line 364.1.

<sup>3</sup> To address a large number of corrosion-related transformer failures, Newfoundland Power began specifying 316L stainless steel as the tank material for all new pole mounted transformers purchased beginning in 2001. As the stainless steel transformer tanks were deployed, an overall reduction of transformer replacements due to rusting was observed.