

### 3.1 Gander Twillingate Transmission System Planning Study

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3 **Q. Page 10. Newfoundland Power states that “The historical reliability**  
4 **performance of Transmission Line 108L has been poor, and the line has**  
5 **experienced a number of outages in recent years due to a variety of factors.”**  
6 **a) Footnote 14 states that “Over the last 10 years, approximately \$262,000**  
7 **has been spent on completing corrective and preventative maintenance of**  
8 **Transmission Line 108L.” Does Newfoundland Power consider that it has**  
9 **performed sufficient preventive maintenance on Transmission Line 108L**  
10 **given that Newfoundland Power describes its historical reliability**  
11 **performance to be poor? Please explain.**  
12 **b) Please provide the T-SAIDI and T-SAIFI for Transmission Line 108L and**  
13 **compare its reliability metrics to Newfoundland Power’s average reliability**  
14 **metrics for similar transmission lines within its service territory.**

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16 **A. a) Yes, Newfoundland Power has performed sufficient preventative maintenance on**  
17 **Transmission Line 108L over the last 10 years.**

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19 Newfoundland Power makes decisions around the execution of preventative  
20 maintenance on its transmission infrastructure in accordance with its *Transmission*  
21 *Inspection and Maintenance Practices*. These guidelines outline the frequency in  
22 which transmission lines are to be inspected and identify the deficiencies that  
23 warrant the completion of preventative maintenance.

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25 Over the last 10 years, Newfoundland Power has completed preventative  
26 maintenance on numerous components across Transmission Line 108L, including  
27 replacing poles, cross arms, anchors, guys, and insulators as required.

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29 While Newfoundland Power considers the historical reliability of Transmission Line  
30 108L to be relatively poor when compared to other transmission lines in its service  
31 territory, this is to be expected due to the advanced age of the line, which at 59  
32 years is among the oldest lines within Newfoundland Power’s transmission system.

- 1           b) Table 1 shows T-SAIFI and T-SAIDI of Transmission Line 108L compared to similar  
2           66 kV transmission lines within Newfoundland Power’s service territory.<sup>1</sup>

Table 1: Comparison of T-SAIFI & T-SAIDI for Radial 66 kV Transmission Lines 2019 to 2023		
Transmission Line ID	T-SAIFI	T-SAIDI
108L	7.97	0.85
095L	6.70	3.67
140L	3.99	4.38
113L	3.98	1.17
065L	2.02	0.40
358L	1.99	3.99
005L	1.04	1.21
353L	0.99	0.21
110L	0.99	0.13
142/114L	0.34	1.85
Average:	3.00	1.79

3           As shown in Table 1, Transmission Line 108L has a T-SAIFI value that is significantly  
4           worse than other similar lines in Newfoundland Power’s service territory. With  
5           respect to Transmission Line 108L performing better than average in terms of  
6           T-SAIDI, this is a result of the normally-open configuration with transmission lines  
7           142L and 114L, which provides a backup supply to customers served by  
8           Transmission Line 108L. For example, in June 2019, Transmission Line 108L  
9           experienced an unplanned outage and was out of service for a total of 358.7 hours.  
10          Customers served by Transmission Line 108L experienced a maximum outage  
11          duration of only 2.7 hours hours during this event, as they were able to be  
12          transferred onto transmission lines 142L and 114L, thereby avoiding an extended  
13          outage, which is reflected in the relatively low T-SAIDI value for Transmission Line  
14          108L.

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<sup>1</sup> For comparative purposes, transmission lines considered similar to Transmission Line 108L are defined as radial 66 kV transmission lines that serve multiple customers. Excluded from Table 1 are looped transmission lines, 138 kV transmission lines, transmission lines that connect generating plants to the transmission network, as well as transmission lines currently undergoing rebuild projects.