

Distribution

1
2
3 **Q. Reference: "2024 Capital Budget Application," Newfoundland Power Inc.,**
4 **June 22, 2023, sch. B, Distribution Reliability Initiative, p. 13.**

5
6 **An engineering assessment of the 4.8-kilometre section of WAV-**
7 **01 feeder has identified that the factors contributing to poor**
8 **reliability performance are: (i) corroded or damaged conductor;**
9 **(ii) danger tree contacts; (iii) deteriorated poles, crossarms and**
10 **insulators; and (iv) inaccessibility of the line.**

11
12 **a) Please provide a copy of the engineering assessment.**

13
14 **b) Please identify the number and percentage of outages in the last three**
15 **years due to each of the particular causes—corroded or damaged**
16 **conductor; danger tree contacts; deteriorated poles, crossarms, and**
17 **insulators; and inaccessibility of the line.**

18
19 **c) Would additional vegetation management on this section of the WAV-01**
20 **feeder materially impact the distribution interruption statistics for this**
21 **feeder? If not, why not?**

22
23 **A. a) Report *1.1 Distribution Reliability Initiative* contains the engineering assessment and**
24 **analysis of alternatives completed as justification for this project.**

- 1 b) Table 1 provides the number and percentage of outages by cause in the last three
 2 years as requested.

Table 1 WAV-01 Outage Cause Details 2020-2023						
Cause	Customer Interruptions		Outage Minutes		Incidents	
	Number	% of Total	Number	% of Total	Number	% of Total
Damaged Conductor	1,000	6%	230,470	12%	7	7%
Tree Contacts	9,026	55%	1,038,456	56%	12	12%
Deteriorated Structure	998	6%	231,049	12%	5	5%
Other ¹	5,306	33%	367,124	20%	80	77%
Total	16,330	100%	1,867,099	100%	104	100%

- 3 c) Yes, it would be expected that additional vegetation management would impact the
 4 distribution interruption statistics of the feeder. As shown in Table 1 above, while
 5 tree contacts only account for 12% of the number of incidents, they account for over
 6 half of the total outage minutes and customer interruptions on the feeder.²
 7 However, only completing additional vegetation management on this section would
 8 not address the deterioration identified on this section of distribution feeder WAV-01.
 9
 10 Newfoundland Power evaluated the alternative of widening the existing right-of-way
 11 and addressing deteriorated components identified during inspections. This
 12 alternative was determined to not be least cost.³

¹ Includes failure of equipment including transformers, lightning arresters, switches, fuses and service equipment, along with no trouble found and unknown causes.

² The vegetation on the right-of-way along the 4.8-kilometre section of feeder has been maintained to the full 7.4 metre width. However, tree contacts continue to be a cause of customer outages due to danger trees outside the maintained right-of-way contacting the line when they fall.

³ See Newfoundland Power's 2024 Capital Budget Application, report 1.1 Distribution Reliability Initiative, page 10.