**Reference: 1.1 Distribution Reliability Initiative**

**Q. Pages 3-9. Newfoundland Power is proposing the relocation of a 4.8 km section of Western Avalon Substation distribution feeder WAV-01 which will include construction of 6.5 km new three phase distribution line and the replacement of and installation of new poles. This project is also in Schedule B on pages 11-14. Distribution feeder WAV-01 is not listed in Appendix A to Tab 1.1 Distribution Reliability Initiative which lists the company's fifteen worst performing feeders. The reliability data on page 5 of Tab 1.1 indicates that the reliability performance of the section of WAV-01 for which a capital project is proposed is better than some of the fifteen worst performing feeders listed in Appendix A to Tab 1. Why did Newfoundland Power determine it was appropriate to proceed with this project in 2024 as opposed to another poor performing feeder?**

A. The selection of the specific distribution feeders for consideration under the *Distribution Reliability Initiative* involves a three-stage assessment. First, the reliability performance of all of the Company's distribution feeders is assessed against five reliability indices. These include: (i) the distribution System Average Interruption Frequency Index ("SAIFI"); (ii) the distribution System Average Interruption Duration Index ("SAIDI"); (iii) the distribution Customers Interrupted per Kilometre ("CIKM"); iv) the distribution Customer Hours of Interruption per Kilometre ("CHIKM"); and v) customer minutes of interruption.

Second, once screening identifies the Company's worst performing distribution feeders, a data analysis is performed on these feeders. This analysis aims to correlate poor reliability performance with specific events or issues.[1] In most cases, this analysis results in the identification of specific issues which caused the poor reliability performance and resulted in the inclusion of that feeder on the worst performing feeders list.[2]

In recent years, the Company began incorporating reliability data provided by the new Outage Management System ("OMS") into the *Distribution Reliability Initiative* process. If OMS data identifies specific sections of feeders with poor reliability performance comparable to the worst performing feeders, then this analysis is also completed for those specific sections.[3]

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1 Common specific events or issues contributing to poor reliability performance in a particular year include major events, such as wind storms and the failure of a specific piece of equipment, such as poles or insulators.

2 See Newfoundland Power's *2024 Capital Budget Application*, report *1.1 Distribution Reliability Initiative*, Appendix B. Of the 45 distribution feeders which underwent data analysis to determine the cause of poor reliability performance, six were identified as requiring continued monitoring to determine if capital investments are required in the future. In addition, a specific section of distribution feeder WAV-01 was identified as having poor reliability using outage management system data.

3 For additional details on how the Company has incorporated data from OMS, see the response to Request for Information PUB-NP-027.

Finally, once the distribution feeders for which poor reliability cannot be attributed to specific causes are determined, engineering assessments are undertaken to determine if capital upgrades are required.

In the case of distribution feeder WAV-01, while the feeder did not appear on the worst performing feeders list, OMS data indicated that customers served by a specific 4.8-kilometre section of the feeder were experiencing particularly poor reliability performance. This section of distribution feeder was incorporated into the analysis undertaken for the *Distribution Reliability Initiative*. The analysis determined that there were no discrete or isolated events, or issues to which this section's poor reliability performance could be attributed. Subsequent engineering assessments of the specific section of the distribution feeder determined that the poor reliability performance was caused by: (i) corroded or damaged conductor; (ii) danger tree contacts; (iii) deteriorated poles, crossarms and insulators; and (iv) inaccessibility of the line.[4] In comparison to other worst performing feeders, addressing the deteriorated condition of this specific section of distribution feeder WAV-01 would provide benefits to customers and was prioritized for 2024.

[4] See Newfoundland Power's *2024 Capital Budget Application,* report *1.1 Distribution Reliability Initiative*, page 6.