Transmission

Q. Reference: "2024 Capital Budget Application," Newfoundland Power Inc., June 22, 2023, Supporting Materials, Transmission: 3.1, sec. 3.2, p. 3, f.n. 3.

The typical useful service life of transmission overhead conductor is 63 years.

a) Please describe the criteria used by Newfoundland Power to determine the end of useful life for transmission overhead conductor. Has any of the conductor been tested to validate the assumption?

b) Please provide a table indicating the expected useful life inferred from the Federal Energy Regulatory Commission's Form 1 data for each of the utilities considered.

A. a) No, Newfoundland Power has not performed laboratory testing on its conductor.

Newfoundland Power inspects its transmission lines in accordance with its *Transmission Inspection and Maintenance Practices*. These practices outline the classification priority, and inspection and testing procedures for all components on Newfoundland Power's transmission lines. All conductor installed on Newfoundland Power's transmission system is inspected and evaluated by experienced Planners using the criteria outlined in the *Transmission Inspection and Maintenance Practices*.

During inspections, Planners inspect the conductor's sag to ensure uniformity across all three phases, as well as to ensure adequate clearances are maintained from the ground, buildings, trees or any other possible impediments. The Planners visually inspect the conductor for broken or frayed strands, bird-caging, burn marks, or any foreign objects. Deadend assemblies and splices are also examined for any abnormal conditions. Other attachments such as vibration dampers and anti-galloping devices are checked for wear and positioning. Planners prioritize any deficiencies found during inspections based on the guidelines found in the *Transmission Inspection and Maintenance Practices*.

Table 1 provides the guidelines for priority classifications for conductor damage.

Table 1
General Guidelines for Classification of Conductor Damage

Emergency	TD1/TD2	TD4
Sag causing public safety hazard	More than ¼ strands broken	Bird caging. 1 or 2 strands broken

b) Newfoundland Power does not currently have access to the data provided by each of the individual utilities that were used to develop the typical useful life values. Newfoundland Power has a summary of the information gathered from the Federal Energy Regulatory Commission's Form 1 data, the summary provides expected useful life values for asset classes found across the utility industry. Based on this data compiled from 38 different utilities across the industry, the expected useful life of transmission overhead conductor is 63 years.