

1 **Reference: "2023 Capital Budget Application," Newfoundland Power Inc., June 29,**
 2 **2022, Schedule B, pp. 105–107 (Transmission Line 55L Rebuild).**

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- 4 **Q. a) Of the Transmission Line 55L poles identified as deteriorated, what**
 5 **quantity of poles has been identified as deteriorated through**
 6 **mechanical testing (i.e., sounding or core sampling)?**
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- 8 **b) Does Newfoundland Power plan to test a portion of poles removed to**
 9 **build a condition assessment database for the purpose of establishing a**
 10 **maintenance program? If not, why not?**
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- 12 **c) Does Newfoundland Power consider the degree of deterioration**
 13 **(decay, shell separation, and checking) in determining whether wood**
 14 **poles require replacement? If so, please provide the thresholds utilized**
 15 **for such decisions. If not, why not?**

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- 17 A. a) Newfoundland Power inspects its transmission lines in accordance with its
 18 *Transmission Inspection and Maintenance Practices*. Following these practices,
 19 the condition of a pole can be assessed using visual inspections or mechanical
 20 testing. Visual inspections identify types of pole deterioration or defects, such as
 21 pole top rot, external decay, and large splits and checks. Mechanical testing
 22 includes a sounding test.¹

23

24 Transmission Line 55L was inspected in 2022 to assess its current condition. The
 25 inspection results identified that 51.6% of poles are deteriorated on transmission
 26 line 55L to the point where replacement is required. The inspection results do
 27 not indicate what quantity of poles were inspected via mechanical testing.
 28 However, the Company's *Transmission Inspection and Maintenance Practices*
 29 require sounding tests be completed for all poles over 35 years of age. Given
 30 that this transmission line was placed in service in the 1970s, except for a small
 31 1.0-kilometre section constructed in the 1960s and the tap to Quartz ("QTZ")
 32 Substation which was constructed in the 1980s, the majority of poles would have
 33 undergone sounding tests.

- 34
- 35 b) No, Newfoundland Power does not plan to test a portion of poles removed to
 36 build a condition assessment database.

37

38 Newfoundland Power has already established a maintenance program for its
 39 transmission lines. Transmission lines are inspected in accordance with the
 40 Company's *Transmission Inspection and Maintenance Practices*. Transmission
 41 line maintenance is completed under the *Transmission Line Maintenance*
 42 program.²

¹ Sounding tests use a flat faced hammer to strike the pole at regular intervals while listening for changes in the sound produced. If the sound does differ, for example giving a hollow sound, this could indicate internal decay is present, and further testing can be used to help make a final determination on pole integrity.

² See the *2023 Capital Budget Application, Schedule B*, pages 108 to 112.

In Order No. P.U. 5 (2020), the Board stated:

“The Board is satisfied that Newfoundland Power’s current practices are reasonable in the circumstances. The Board believes that it may be appropriate for Newfoundland Power to review its practices upon the completion of the second inspection cycle in relation to Hydro’s test and treat program.”³

In Order No. P.U. 37 (2020), the Board stated:

“The Board remains satisfied that changes with respect to Newfoundland Power’s transmission line testing practices are not necessary at this time but that it may be appropriate for Newfoundland Power to review its practices upon the completion of Hydro’s test and treat program in 2023.”⁴

Consistent with the findings of the Board, Newfoundland Power will review its practices upon completion of Newfoundland and Labrador Hydro’s program to determine whether changes are necessary.

- c) Yes, Newfoundland Power considers the degree of deterioration such as decay, shell separation, and checking in determining whether wood poles require replacement.

The Company makes decisions on the replacement of wood poles based on the criteria outlined in its *Transmission Inspection and Maintenance Practices*. These practices outline the classification priority and inspection and testing procedures used to determine the integrity of poles.

Table 1 provides the priority classifications for wood poles outlined in the Company’s *Transmission Inspection and Maintenance Practices*.

Table 1 General Guidelines for Classification of Priority Wood Poles			
Emergency	TD1	TD2	TD4
Broken/severe undermining	Serious cracks or deterioration/unauthorized attachment		Serious checks or splits/woodpecker holes/decay

³ Order No. P.U. 5 (2020), page 22, lines 24 to 27.

⁴ Order No. P.U. 37 (2020), page 15, lines 4 to 7.

1 These classification criteria, evaluated by planners with expertise in conducting
2 inspections, determine the priority and type of maintenance or replacement
3 required for all wood pole deficiencies identified during line inspections.
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5 Wood poles classified as Emergency are replaced through corrective
6 maintenance as soon as possible. Wood poles classified as TD1 and TD2 are
7 replaced through preventative maintenance in the year in which they are
8 identified. Wood poles classified as TD4 are addressed through preventative
9 maintenance the following year. Depending on the deterioration noted, wood
10 poles classified as TD4 will be replaced or repaired. Wood poles that do not
11 meet these classifications are not replaced.