

- 1 Q. Reference: “2020 Capital Budget Application,” Newfoundland Power, July 5, 2019,
2 Report 3.1 “2020 Transmission Line Rebuild,” sec. 2.2, at p. 2.

3
4 In 2017, inspections identified significant deterioration of the line due to decay,
5 splits and checks in the poles and spar arms, cracks in insulators and other
6 hardware deficiencies. Many of these components were identified as being in
7 advanced stages of deterioration and requiring replacement. The inspections also
8 identified conductor damage requiring repair.

9
10 What evaluation criteria does Newfoundland Power use to determine when the
11 rebuilding of a line or line section is proposed versus replacement of various
12 deteriorated components?

- 13 A. Newfoundland Power’s transmission lines are inspected annually. These annual
14 inspections determine the condition of transmission lines and whether rebuilding a
15 section of line or selectively replacing deteriorated components is required. A copy of
16 the evaluation criteria used during the annual inspection of transmission lines is provided
17 as Attachment B in response to Request for Information NLH-NP-001.

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19 Under Newfoundland Power’s Transmission Line Rebuild Strategy, approximately $\frac{2}{3}$ of
20 capital expenditures have related to rebuilding sections of line, with the remaining $\frac{1}{3}$
21 related to the selective replacement of plant components.

22
23 Newfoundland Power’s approach to rebuilding sections of lines has focused on
24 transmission lines built in the 1940s, 1950s and 1960s. These lines were not built to a
25 particular standard and were therefore not engineered to withstand local weather
26 conditions, making them more susceptible to failure.¹ The Company determines when to
27 rebuild these lines based on: (i) a line’s physical condition; (ii) its risk of failure; and (iii)
28 the impact a failure would have on customers. Rebuilt lines are constructed to current
29 Canadian Standards Association (“CSA”) standards, making them better able to
30 withstand the severe weather conditions experienced throughout Newfoundland Power’s
31 service territory.²

32
33 The selective replacement of deteriorated components is routinely conducted as part of
34 the Company’s annual inspection and maintenance practices. In some cases, the selective
35 replacement of deteriorated components allows for extension of the useful service lives of
36 transmission lines. As examples, the useful service lives of both transmission lines 302L
37 and 49L were extended by approximately a decade through the selective replacement of

¹ The Transmission Line Rebuild Strategy, filed with the Company’s 2006 Capital Budget Application, noted: “Prior to the amalgamation of the three largest utilities in the province in 1966 (United Towns Electric, Newfoundland Light & Power, and Union Electric) there was limited transmission design expertise in any utility. There was little consistency in the design of transmission lines and, as a result, many lines built before 1960 were not designed to any standard (and do not meet present day standards)” (page 4).

² For more information on execution of Newfoundland Power’s Transmission Line Rebuild Strategy, see response to Request for Information PUB-NP-007.

1 deteriorated components.³ While such efforts can extend the useful service lives of
2 transmission lines, they do not, however, result in a line being constructed to current
3 standards.

4
5 Overall, the combination of transmission line rebuilds and the selective replacement of
6 deteriorated components has allowed Newfoundland Power to maintain its electrical
7 system in a manner consistent with the least-cost delivery of reliable service to
8 customers.⁴

³ Transmission line 302L was originally scheduled for rebuilding in 2010, but was deferred until 2019. Transmission line 49L was originally scheduled for rebuilding in 2009, but was deferred until 2020. The selective replacement of deteriorated components was completed on both lines and contributed to extending their service lives until rebuilds were required.

⁴ For more information on Newfoundland Power's history of delivering least-cost, reliable service to customers, see the response to Request for Information PUB-NP-001.