

1 **Q.** Reference: "2026 Capital Budget Application," Newfoundland Power Inc., June
2 27, 2025, Supporting Materials, Transmission: 3.1, p. 16.

3
4 The NPV analysis determined that Alternative 3, which involves
5 rebuilding Transmission Line 100L in a partially re-routed right-of-way,
6 is the lowest cost alternative.
7

8 **a) Please reconcile the statement that Newfoundland Power's NPV analysis**
9 **determined that rebuilding Transmission Line 100L in a partially re-routed**
10 **right- of-way is the lowest cost alternative addressing the factors below which**
11 **indicate certain costs could be avoided by addressing existing deficiencies**
12 **through like- for-like replacements of the deteriorated structures, or by**
13 **rebuilding in a parallel right-of-way:**

- 14 • The construction of any new 138 kV lines should be designed in
15 accordance with CSA 60826. This standard is much more robust than
16 CSA 22.1 or original design standards and will potentially require the
17 construction of additional structures to meet rigorous strength
18 requirements for the area in question. Refurbishing the existing line
19 does not require meeting the new standard, in conjunction with good
20 operational experience to date.
- 21 • Should the conductor be tested and confirmed to not have reached
22 end of life, rebuilding in place would avoid procurement and stringing of
23 new conductor. The cost of conductor is extremely high in today's
24 market and is considered as one of the highest costs associated with
25 Transmission Line procurement and installation.
26

27 **b) Has the conductor for Transmission Line 100L been tested to determine**
28 **condition?**
29

30 **A.** a) As detailed in report *3.1 Transmission Line 100L Rebuild*, Newfoundland Power
31 completed a detailed assessment of alternatives in determining the least-cost option
32 to address the deteriorated condition of Transmission Line 100L. The assessment
33 included three alternatives; Alternative 1 - Replace deteriorated structures and defer
34 rebuild; Alternative 2 - Rebuild in a parallel right-of-way; and Alternative 3 - Rebuild
35 in a partially re-routed right-of-way. A net-present value analysis of the three
36 alternatives determined that Alternative 3 was the least cost option and, therefore, it
37 is the approach proposed for execution by Newfoundland Power.

1 Table 1 on the following page outlines the results of this NPV.

Table 1 Net Present Value Analysis of Transmission Line 100L Rebuild Alternatives (\$000)	
Alternative	NPV
1 – Address Existing Deficiencies and Defer Rebuild	16,527
2 – Rebuild in Parallel Right-of-Way	16,032
3 – Rebuild in Partially Re-routed Right-of-Way	15,002

2 Alternative 2 and Alternative 3 will require Newfoundland Power to design the new
3 transmission line to current day standards and install new conductor. As a result, the
4 two factors identified by Newfoundland and Labrador Hydro in this Request for
5 Information have no effect on the estimates outlines in Alternatives 2 and 3.

6
7 In executing the rejected Alternative 1, Newfoundland Power would defer the
8 replacement of conductor for an additional five years, until 2031. In 2031, the
9 original conductor will be 67 years old and, as such, well beyond its expected useful
10 service life. At that time, Newfoundland Power would replace the conductor while
11 rebuilding the structures that had been deferred from the 2026 scope of work. The
12 cost of procuring and installing new conductor is therefore still included in the cost of
13 Alternative 1.

14
15 Under the rejected Alternative 1, replacing the conductor on Transmission Line 100L
16 in 2031 will subject the line to revised loading. As a result, Newfoundland Power
17 would have to ensure that new structures built in 2026 are designed to meet current
18 standards based on the new conductor which would be installed in 2031.

19
20 Furthermore, the current route of Transmission Line 100L traverses a large area of
21 bog and wetlands. Completing like-for-like structure replacements would require
22 work in this area which has poor site conditions. Construction activities in this area
23 will increase the overall cost of the alternative. Lessons learned from recent
24 transmission line rebuild projects have demonstrated that relocating lines away from
25 areas of bogs and wetlands is a more cost-effective approach where possible.

- 26
27 b) The conductor on Transmission Line 100L has not been tested. Industry experience
28 indicates the typical useful service life of transmission overhead conductor is 63
29 years. Newfoundland Power partly relies on industry experience to inform asset
30 management decisions.