

1 **Q. (Reference Application, 3.1 2024 Transmission Line Rebuild, page 14) It is**
 2 **stated “The rebuilding of Transmission Line 146L has been deferred by over 15**
 3 **years.” Please explain this. Has NP been operating this line for the past 15 years**
 4 **in spite of the noted reliability issues and its sub-standard design?**

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 6 A. Transmission Line 146L was originally scheduled for rebuild in 2008 as a part of the
 7 *Transmission Line Rebuild Strategy*. Newfoundland Power has been able to defer the
 8 rebuild of Transmission Line 146L as a result of the Company’s *Transmission Inspection*
 9 *and Maintenance Practices* and the associated capital maintenance activities.¹

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 11 In accordance with its *Transmission Inspection and Maintenance Practices*,
 12 Newfoundland Power inspects all of its transmission lines annually. These annual
 13 inspections help determine the condition of transmission lines and inform whether
 14 capital maintenance is required to replace deteriorated components. Recent inspections
 15 of Transmission Line 146L have identified a large number of deficiencies. This rise in
 16 deficiencies increases the probability of an outage occurring on Transmission Line 146L.

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 18 While the historical reliability performance of 146L has been reasonable, the line’s
 19 sub-standard design and deteriorated condition increases the probability of failure going
 20 forward.² A failure on Transmission Line 146L would expose Newfoundland Power
 21 customers to an increased risk of outages, due to the line’s criticality to the Central
 22 Newfoundland 138 kV transmission system. In this scenario, the result would be the
 23 loss of a looped transmission network and the creation of two radial transmission
 24 systems. If this occurs, the possibility for customer outages exists in the case of a
 25 second transmission line failure, or if planning violations are created as a result of peak
 26 loading that require a forced customer outage.³

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 28 While the design of Transmission Line 146L is sub-standard, it does not necessarily
 29 mean that the line is currently unsafe to operate. The annual inspections completed by
 30 Newfoundland Power for this line ensure any deficiencies that could lead to unsafe
 31 conditions are addressed appropriately to ensure the line is operated in a safe manner.⁴

32
 33 The designation of “sub-standard” pertains to the design criteria originally used for this
 34 line as compared to the updated design standards established by the Canadian
 35 Standards Association (“CSA”). Over time, CSA standards governing overhead
 36 transmission design have evolved to include more severe loading conditions based on
 37 known historical local climatic data.⁵ The deteriorated condition of the line, combined
 38 with its sub-standard design and the expected impacts of climate change on weather
 39 conditions, increase the probability of a failure on the line.

1 For additional details, see the response to Request for Information NLH-NP-023.

2 See Newfoundland Power’s *2024 Capital Budget Application*, report *3.1 2024 Transmission Line Rebuild*, page 8.

3 For additional details, see the response to Request for Information PUB-NP-044.

4 The highest priority for Planners inspecting transmission lines is to identify deficiencies categorized as Emergencies, TD1 or TD2. These deficiencies require action over the near term to address or avoid failure of transmission assets. Work requests for Emergency deficiencies must be addressed immediately. Work Requests for TD1 deficiencies must be addressed within seven days and those for TD2 deficiencies must be addressed within one month.

5 See the response to Request for Information NLH-NP-019.