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

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

Has Newfoundland Power experienced any outages due to conductor failure on 363L? If so, please provide the dates and durations of these outages.

A. No, Newfoundland Power has not experienced any outages due to conductor failure on transmission line 363L.

Transmission Line Rebuild projects, including the rebuilding of 363L, are intended to be *proactive* in addressing aged and deteriorated transmission lines. This requires assessing the potential risk of customer outages on a transmission line and, when necessary, undertaking capital investments to *prevent* those outages from impacting customers.[1] This *proactive* approach recognizes that transmission lines are critical in providing reliable service to large numbers of customers.

Reliability indices, as requested in this question, are lagging indicators that encompass historical issues. Waiting for reliability on the transmission system to degrade before undertaking capital investments would result in a poor quality of service being experienced by large numbers of customers for several years. Such an approach would not recognize the criticality of transmission lines in serving customers[2] and would be inconsistent with the provincial power policy.[3]

Newfoundland Power *does* rely on reliability indices to target certain capital investments in the electrical system, when appropriate. For example, reliability indices are used to target capital investments under the Company's Distribution Reliability Initiative. Under this capital project, reliability indices are used to determine the worst-performing feeders where capital investments may improve the quality of service experienced by customers in specific areas. This is consistent with maintaining an adequate level of reliability for all customers.

[1] Newfoundland Power's Transmission Line Rebuild Strategy establishes that rebuild projects will be prioritized based on the: (i) condition of a transmission line; (ii) risk of failure; and (iii) impact on customers.

[2] The North American Electric Reliability Corporation publication *Reliability Concepts* describes risk in the context of electric system reliability as the likelihood that an operating event will reduce reliability to the point where the consequences are unacceptable. For example, a lower level of reliability could be tolerated on a distribution feeder serving 500 customers than on a transmission line serving 25,000 customers.

[3] The provincial power policy effectively requires that electricity be delivered to customers at the lowest possible cost consistent with *reliable* service. See Section 3(b)(iii) of the *Electrical Power Control Act, 1994.*

This difference in approaches effectively recognizes the different levels of criticality distribution and transmission lines play in providing reliable service to customers.[4] The appropriateness of such an approach has been recognized by The Liberty Consulting Group[5] and other Canadian utilities.[6]

[4] The difference in criticality of distribution and transmission lines is also observed within Newfoundland Power's inspection practices. While distribution lines are inspected on a 7-year cycle, transmission lines are inspected annually.

[5] In its *Report on Island Interconnected System to Interconnection with Muskrat Falls addressing Newfoundland Power Inc.*, December 17, 2014, The Liberty Consulting Group concluded that: *"Newfoundland Power uses an effective combination of periodic O&M inspection and maintenance programs and capital transmission, distribution, and annual capital substation capital rebuild and modernization projects to address condition, reliability, and operating issues with its transmission, distribution, and substation assets"* (page 49).

[6] For example, in its *2007-2008 Transmission Revenue Requirement and Rate Application* (EB-2006-0501), Hydro One stated that it would be inappropriate to wait for *"reduced transmission system reliability before any corrective action is taken."*