

- 1 **Q.** (Reference Application Schedule B, page iii) It is stated "*To comply with the*  
 2 *spirit and intent of the Provisional Guidelines, the Company developed a*  
 3 *methodology to provide consistency in its assessment of risks across projects*  
 4 *and programs. The methodology uses a risk matrix where priority is*  
 5 *determined based on assessments of probability and consequence."*  
 6 a) Please confirm that this same statement was made in NP's 2023 CBA.  
 7 b) Does the consequence of a failure change materially over time? For  
 8 example, is the consequence of the failure of MUN-T2 the same whether the  
 9 project is carried out now, 5 years from now, or 5 years ago?  
 10 c) Does the probability of failure change materially over time given NP's  
 11 inability to quantify the difference in risk of equipment failure between  
 12 now, 3 years from now, or 3 years ago?  
 13 d) Is this practice consistent with that used by distribution companies  
 14 elsewhere in Canada? Is it consistent with the approach used by Hydro?  
 15 e) What other prioritization methodologies are used by distribution companies  
 16 in Canada?  
 17 f) Are there other means for prioritizing projects that do not require a  
 18 significant amount of subjectivity as that used in the proposed  
 19 methodology?  
 20 g) Specifically, who at NP determines the priority of a project and how does  
 21 NP ensure that it is applied consistently across the broad range of projects  
 22 included in the Application?

- 23  
 24 **A.** a) It is confirmed.  
 25  
 26 b) Generally, the consequence of failure may change over time, with more material  
 27 changes occurring over the longer term. Factors that could contribute to the  
 28 consequence of failure changing over time include customer growth, the presence of  
 29 new safety or environmental hazards, or changes to costs which may affect the  
 30 overall economic benefit of not completing an identified project or program.<sup>1</sup>

31  
 32 Using the example of the MUN-T2 power transformer, the consequence of failure  
 33 may have been different if the risk assessment was completed five years ago, prior  
 34 to the construction of the Long Pond Substation. In the scenario of the MUN-T2  
 35 power transformer not failing and being in existence five years from now, the  
 36 consequence of failure may also differ given increased electrification forecasted by  
 37 Memorial University within the next five years.

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<sup>1</sup> For projects and programs included in Newfoundland Power's *2024 Capital Budget Application*, the consequence of failure is assessed based on four principle business objectives: (i) reliability – maintain long-term reliable service; (ii) safety – protect safety of employees and the public; (iii) environment – avoid environmental degradation; and (iv) economic – advance operational efficiency and effectiveness. See Newfoundland Power's *2024 Capital Budget Application, 2024 Capital Budget Overview, Appendix C, page 2.*

1 c) Generally, the probability of failure changes over time.<sup>2</sup> Depending on the condition  
 2 of the asset, the change could be material. For example, report *3.1 2024*  
 3 *Transmission Line Rebuild* provides details on the number of TD4 work requests over  
 4 the last 10 years for Transmission Line 146L.<sup>3</sup> TD4 work requests represent  
 5 deficiencies to be addressed as part of Newfoundland Power's longer-term capital  
 6 planning process. The number of TD4 work requests created for Transmission Line  
 7 146L has increased over the last decade, with additional deficiencies identified  
 8 annually. This shows the line's condition has deteriorated considerably over time,  
 9 and therefore indicates the probability of failure has increased over time.

10  
 11 d) Yes, Newfoundland Power's risk matrix methodology is consistent with that used by  
 12 distribution companies elsewhere in Canada. Nova Scotia Power, the primary  
 13 distribution utility in Nova Scotia, uses a similar methodology.

14  
 15 Newfoundland Power's and Hydro's approaches are consistent in that they both  
 16 employ a risk matrix which considers the probabilities of given risks occurring  
 17 associated with capital projects and programs.

18  
 19 e) Newfoundland Power's research of Canadian utility practice identified that utilities  
 20 use a range of different methodologies for prioritizing capital expenditures. Several  
 21 utilities use a formula-driven approach that relies on weighted criteria to prioritize  
 22 capital expenditures. Some utilities use advanced software, such as the Copperleaf  
 23 portfolio. Others rely exclusively on engineering judgment to prioritize capital  
 24 expenditures.

25  
 26 f) Based on Newfoundland Power's research, all methodologies rely to some degree on  
 27 engineering judgment in order to prioritize capital expenditures. While some  
 28 methodologies employ more quantifiable factors, such as asset condition data or  
 29 health indices, they still rely on a combination of quantifiable factors and engineering  
 30 judgment. Newfoundland Power's risk matrix methodology applies scoring  
 31 guidelines that rely on quantifiable factors. The methodology is therefore broadly  
 32 consistent with that observed elsewhere and provides reasonable consistency and  
 33 transparency in the resulting priority scores.<sup>4</sup>

34  
 35 g) Newfoundland Power's priority scores for capital projects were determined by  
 36 Professional Engineers and IT professionals within the Company who were  
 37 responsible for the development of the *2024 Capital Budget Application*. The  
 38 guidelines used to determine the priority scores are provided in Appendix C to the  
 39 *2024 Capital Budget Overview*.

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<sup>2</sup> For projects and programs included in Newfoundland Power's *2024 Capital Budget Application*, the probability of failure is assessed from the perspective of how likely the identified consequence is to occur if a capital project or program did not proceed. The categories are as follows: Rare (1) – Probable within a range of 0% to 10%; Unlikely (2) – Probable within a range of 11% to 25%; Possible (3) – Probable within a range of 26% to 75%; Likely (4) – Probable within a range of 76% to 90%; and, Near Certain (5) – Probable within a range of 91% to 100%. See Newfoundland Power's *2024 Capital Budget Application*, *2024 Capital Budget Overview*, Appendix C, page 4.

<sup>3</sup> See Newfoundland Power's *2024 Capital Budget Application*, report *3.1 2024 Transmission Line Rebuild*, page 4.

<sup>4</sup> See Newfoundland Power's *2024 Capital Budget Application*, *2024 Capital Budget Overview*, Appendix C.