

1 Q. **Reference Application**

2 Please identify all reliability risk metrics used by Hydro in the 2021 Capital Budget Application.  
3 What risk mitigation value is provided by Hydro's asset management program; i.e., the  
4 difference between baseline risk and residual risk.

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7 A. Newfoundland and Labrador Hydro's ("Hydro") capital investments are primarily informed by  
8 condition-based assessments. With respect to the 2021 capital investments proposed,  
9 quantitative reliability metrics were used in the following two situations.

10 **1)** Load Growth: The load growth related metrics used in the 2021 Capital Budget  
11 Application are listed and explained in NLSO<sup>1</sup> Standard "Transmission Planning Criteria  
12 Doc # TP-S-007," Rural Planning Standard "Rural Isolated Systems Generation Planning  
13 Criteria Doc # RP-S-002," and Rural Planning Standard "Distribution Planning Criteria  
14 Doc # RP-S-003" documents which are provided as attachments to Hydro's response to  
15 CA-NLH-019 of this proceeding.<sup>2</sup>

16 **2)** Worst Performing Feeders Project: The following distribution feeder reliability metrics  
17 were used:

18 • System Average Interruption Duration Index ("SAIDI"): SAIDI measures the average  
19 cumulative duration of outages per customer for a five-year period.

20 • System Average Interruption Frequency Index ("SAIFI"): SAIFI measures the average  
21 cumulative number of sustained interruptions per customer for a five-year period.

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<sup>1</sup> Newfoundland and Labrador System Operator ("NLSO").

<sup>2</sup> Hydro has proposed criteria for resource planning as part of its Reliability and Resource Adequacy Study which is currently before the Board of Commissioners of Public Utilities. There are no projects in the 2021 Capital Budget Application that resulted from application of Hydro's proposed resource planning criteria.

- 1                   • Customer-Hours of Interruption (“CHI”): CHI measures the average time to restore  
2                   service in a for a five-year period.

3                   In the noted situations, Hydro does not undertake residual risk analysis at this time. Specific  
4                   quantitative risk assessments would require Hydro’s asset management system to be further  
5                   matured than its current state.