1　Q.　**Reference: 2024 Resource Adequacy Plan**

2　　　Please refer to Hydro's 2024 Resource Adequacy Plan: Technical Conference #1: Load

3　　　Forecast/Reliability Planning Criteria, dated September 17, 2024 at slide 55. Please explain how

4　　　in the LIL shortfall assessment Hydro determined the level of customer interruption that it

5　　　considers appropriate and how such interruption would be managed.

6

7

8　A.　While the expansion plan analysis included in the 2024 Resource Adequacy Plan meets the

9　　　traditional planning criteria (such as firm energy criteria and the probabilistic planning criteria),

10　　the analysis is limited when considering the reliability of the Island Interconnected System,

11　　which faces most of its supply shortage risk during the winter period should a prolonged loss of

12　　the Labrador-Island Link ("LIL") bipole occur. Even if the LIL consistently has a LIL bipole

13　　equivalent forced outage rate ("EqFOR") towards the bottom of the analyzed range (i.e. 1%),

14　　there is still the risk of an extended LIL bipole outage due to line icing or other failure modes. As

15　　a result, Newfoundland and Labrador Hydro ("Hydro") included a deterministic assessment of an

16　　extended outage of the LIL and the associated risk of supply shortfall events, due to the

17　　potential system impact of this high-consequence event. This additional capacity criteria was

18　　established in the 2018 Reliability and Resource Adequacy Study, detailed as follows:

19　　**LIL Shortfall Assessment:** The Island Interconnected System should have sufficient generating

20　　capacity to limit the loss of load to a manageable level in the case of a LIL shortfall event.[1]

21　　The amount of shortfall is defined as the amount of load shedding required to restore to a

22　　minimum regulating reserve of 70 MW.[2] Hydro determined that the maximum level of customer

23　　interruption would be equivalent to a loss of load that can be managed on the Island

24　　Interconnected System. During the 2014 loss of load event, Newfoundland Power Inc.

---

[1] Please refer to the "2024 Resource Adequacy Plan – An Update to the Reliability and Resource Adequacy Study," Newfoundland and Labrador Hydro, rev. August 26, 2024 (originally filed July 9, 2024), app. C, sec. 3.0.
[2] For more information on regulating reserve requirements, please refer to "2024 Resource Adequacy Plan – An Update to the Reliability and Resource Adequacy Study," Newfoundland and Labrador Hydro, rev. August 26, 2024 (originally filed July 9, 2024), app. B, sec. 5.1.5.

1   ("Newfoundland Power") was able to rotate 100 MW. As this is the most significant event to

2   have occurred on the Island Interconnected system during the last decade, 100 MW was used as

3   the maximum threshold in the 2024 Resource Adequacy Plan to ensure that any potential future

4   loss of load event remains manageable, should it occur. Hydro also notes that system upgrades,

5   such as feeder automation, have improved the utilities' ability to manage customer interruption

6   and rotation.[3]

7   Advancing a second capacity resource to 2031 within the recommended Minimum Investment

8   Required expansion plan[4] provides a balance between mitigating the reliability impact of a

9   prolonged LIL outage to a manageable level and cost. Another reason for advancing the second

10   capacity resource as soon as possible is to reduce the reliance on aging thermal assets, it

11   supports the least-cost On-Avalon transmission upgrade, and the capacity resource option is

12   also common to meeting the Reference Case requirements. A further reduction below the

13   100 MW maximum threshold, or elimination of the potential for shortfall entirely, would require

14   additional investment beyond what is proposed in the 2024 Resource Adequacy Plan.

---

[3] Please refer to Newfoundland Power's response to part b) of NLH-NP-030 of their 2025 Capital Budget Application proceeding.
[4] Please refer to the "2024 Resource Adequacy Plan – An Update to the Reliability and Resource Adequacy Study,"
Newfoundland and Labrador Hydro, rev. August 26, 2024 (originally filed July 9, 2024), app. C, sec. 8.1.