Q. **Reference: Evidentiary Update, Page 7**

It is stated that "*The amount of shortfall is defined as the amount of load shedding required to restore a minimum regulating reserve of 70MW.*"

a) What is the relationship between that statement and the 100 MW threshold used in Tables 3 to 7?

b) What would be the implications of changing that minimum regulating reserve (e.g., using 35 MW instead of 70 MW)?

A. **a)** The amount of shortfall that is simulated in the shortfall analysis reflects the amount of shortfall that is required to ensure that a minimum regulating reserve of 70 MW is maintained to support system frequency and to prevent the collapse of the Island Interconnected System. Separate from the regulating reserve requirement, Newfoundland and Labrador Hydro ("Hydro") has proposed to minimize the extent of the generation shortfall to a manageable level of 100 MW, which is the amount that Newfoundland Power Inc. was able to rotate during the loss-of-load events of 2014.

b) In theory, if the minimum regulating reserve was reduced from 70 MW to 35 MW, that would result in an additional 35 MW that could contribute to the reduction of shortfall. However, in practice, a minimum of 70 MW of regulating reserve is required when the Labrador-Island Link ("LIL") bipole is unavailable. Unlike other reserves that are used in response to contingencies (i.e., operating reserves), regulating reserve is used throughout an operating hour to maintain system frequency in response to fluctuations in loads and output from variable generation resources.

In the 2019 Update to the Reliability and Resource Adequacy Study, Hydro preliminarily defined a minimum regulating reserve of 35 MW for when the LIL was in service, while maintaining a minimum reserve of 70 MW within the Island Interconnected System when the LIL was out of service to provide acceptable frequency regulation. However, the

assumption was modified in the Reliability and Resource Adequacy Study – 2022 Update back to a minimum 70 MW regulating reserve whether the LIL was available or not.[1] This assumption remained unchanged in the 2024 Resource Adequacy Plan.[2] Please refer to Hydro's response to CA-NLH-011 of this proceeding for further discussion on regulating reserve.

[1] "Reliability and Resource Adequacy Study – 2022 Update," Newfoundland and Labrador Hydro, October 3, 2022, vol. I.
[2] "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.