

1     **Q.       Reference: Volume I, Section 6.3.1; and Volume III, Exhibit 16**

2             Hydro proposes to reclassify purchases of wind generation from 22% demand/ 78% energy to  
3             43% demand / 57% energy based on the 2025 Effective Load Carrying Capability ("ELCC") study's  
4             finding of a marginal ELCC of 43% for 50 MW of wind.

5                 **a)** Explain why a marginal ELCC computed for a 50 MW increment is the appropriate basis  
6                 for classifying the embedded cost of the existing 54 MW of contracted wind purchases,  
7                 rather than the average ELCC of the existing fleet, and provide the average ELCC of the  
8                 existing 54 MW.

9                 **b)** Reconcile the use for cost-classification purposes of a study conducted "for the purpose  
10                of system planning".

11                **c)** Describe the sensitivity of the ELCC result to wind penetration levels, resource mix, and  
12                study assumptions, and state how frequently Hydro proposes to update the  
13                classification.

14                **d)** Quantify the class revenue requirement impact of moving from the 22/78 to the 43/57  
15                classification.

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18     **A.       a)** The study was intended for the purposes of long-term resource planning; however, it is  
19             appropriate to use the study for cost classification for the existing facilities. The Effective  
20             Load Carrying Capability ("ELCC") Study was completed using data from the existing wind  
21             farms at Fermeuse and St. Lawrence. This is because the existing wind farms are the most  
22             robust source of real-world wind generation data available for the region. As a result, the  
23             current study accurately reflects the ELCC of the existing wind farms.

24             Because the size of any new future wind farms is not known, the study calculated the ELCC  
25             of wind based on 50 MW increments. On a percentage basis, the ELCC of the 54 MW

1 existing fleet should not be significantly different from the modelled result at 50 MW, which  
2 was presented in the study.

3 **b)** Please refer to Newfoundland and Labrador Hydro's ("Hydro") response to part a).

4 **c)** Wind penetration levels have a significant impact on the ELCC result, which is discussed in  
5 detail in the report. The resource mix and study assumptions have an impact on the result;  
6 however, the magnitude of the impact is dependent on the specific assumption being  
7 changed and the magnitude of the change. For example, adding battery energy storage  
8 system capacity can have a positive effect on the ELCC of wind resources. As shown in  
9 Table 9 of the ELCC Study, at 100 MW of wind penetration, the addition of 100 MW of  
10 battery capacity would raise the marginal ELCC of wind from 38% to 41%.

11 Hydro intends to update the ELCC Study in advance of each future Resource Adequacy Plan  
12 filing.

13 **d)** Please refer to Hydro's response to CA-NLH-146 of this proceeding.