

1 Q. **Reference: Volume 1, pages 183-184 (including footnote 11)**

2 Provide the complete fall-2025 Effective Load Carrying Capability (ELCC) study underlying the
3 proposed 43% demand / 57% energy wind-purchase classification, including the study's author,
4 methodology, input data, and the full calculation producing the 43%/57% split. Provide the
5 study report in full (or the relevant excerpt if part of a larger report), the underlying wind-
6 generation and load data used, and a comparison table showing how the 2018 study's 22%/78%
7 split and the 2025 study's 43%/57% split were each calculated, so that the methodology change
8 — not just the numerical result — can be assessed.

9
10
11 A. The Effective Load Carrying Capability ("ELCC") Study was filed with the Board of Commissioners
12 of Public Utilities ("Board") as Attachment 1 to Newfoundland and Labrador Hydro's ELCC
13 Overview, filed in accordance with the 2024 Resource Adequacy Plan Settlement Agreement in
14 the Reliability and Resource Adequacy Study Review proceeding.¹ The ELCC Study was
15 performed by Energy and Environmental Economics, Inc. ("E3") and contains the details on the
16 study's authors, methodology, assumptions, and input data used to estimate the effective load
17 carrying capability of wind, solar, and storage resources on the Island Interconnected System.
18 The ELCC Study used E3's Renewable Energy Capacity Planning ("RECAP") model to conduct Loss
19 of Load Probability modeling and calculate ELCC values for all resources, including existing,
20 planned, and future resource options, to quantify their contribution towards resource adequacy
21 for the Island Interconnected System. The study explains the ELCC methodology, including the
22 process of calibrating the system to a specified reliability target, adding the resource under
23 evaluation, and determining the amount of perfect capacity that can be removed while
24 maintaining the same reliability standard.

¹ "Reliability and Resource Adequacy Study Review – Effective Load Carrying Capability Study," Newfoundland and Labrador Hydro, December 9, 2025.

1 The previous wind ELCC Study was filed as Attachment 6 to Volume I of Hydro's 2018 Reliability
2 and Resource Adequacy Study.² That study used the PLEXOS reliability model and historical
3 hourly wind generation data from the Fermeuse and St. Lawrence wind facilities from
4 January 2010 to June 2018. The study determined an ELCC of approximately 12 MW, or 22%, for
5 the existing 54 MW of wind generation.

6 Neither the 2018 ELCC Study nor the 2025 ELCC Study contains the underlying model files,
7 simulation outputs, Monte Carlo results, or intermediate calculations used to derive the
8 reported ELCC percentages. Accordingly, Hydro is unable to provide a step-by-step
9 reconstruction of the calculations that produced the approximately 22% ELCC result in the 2018
10 study or the approximately 43% ELCC result in the 2025 study beyond the methodologies,
11 assumptions, inputs, and results contained in the filed studies.

² "Reliability and Resource Adequacy Study, Volume I: Study Methodology and Proposed Planning Criteria," Newfoundland and Labrador Hydro, Attachment 6 – Effective Load Carrying Capability Study Newfoundland and Labrador Hydro Wind Turbines, November 16, 2018.