

1 Q. **Newfoundland and Labrador Hydro - EFLA Consulting Engineers Report - *Structural Capacity***
2 ***Assessment of the Labrador Island Transmission Link, April 30, 2020 ("EFLA" Report)***

3 With respect to air density factor addressed at page 29 of the April 30, 2020 EFLA report, please:

4 a. Explain why the values of air correction factors used by the designers were different than
5 CSA air correction factors.

6 b. State which the EFLA analysis used: CSA, LIL design basis, or other (explain if other).

7 c. How choosing the other would affect return period measures.

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10 A. a. The CSA standard in paragraph 6.2.5, Table 5 provides air density correction factors based
11 on temperature and altitudes as identified in IEC¹ Standard which has been adopted by CSA.
12 These values were utilized by SNC Lavalin during the original design. The Canadian
13 deviations to the standard specify a simplification with two values (with and without ice).
14 EFLA Consulting Engineers ("EFLA") chose to follow the Canadian deviations as this is specific
15 to Canada.

16 b. The study used the air correction factors stated in the Canadian deviations of the standard
17 for calculation of wind pressure. Refer to paragraph 6.2.5 of the Canadian deviations.

18 c. The impacts on the selected air correction factors according to the CSA standard can be
19 seen in Section 3.3.2, page 29 of the EFLA report.

¹ International Electrotechnical Commission ("IEC")