

1 Q. **Reference: *Structural Capacity Assessment of the Labrador Island Transmission Link (LITL)*,**  
2 ***EFLA, April 28, 2020, page 25.***

3 *“Damage limit 75% of the characteristic strength or rated tensile strength (typical range in*  
4 *70% to 80%)”*

5 Please explain why EFLA used an 80% utilization tension limit as opposed to the 75% damage  
6 limit referenced above, or values as low as 60% as shown in Table 12.

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9 A. The 80% Rated Tensile Strength (“RTS”) was selected based on the following:

- 10 • It is within the specified range in most standards, e.g., CSA, European standard (EN 50341-1)  
11 and ASCE recommendation; and
- 12 • 80% RTS was used for the pole conductor and the optical ground wire in some areas in the  
13 design of Labrador-Island Link (“LIL”).

14 EFLA Consulting Engineers considers the use of one tension limit for all conductors and weather  
15 related load cases to be a reasonable approach that is commonly observed across most  
16 standards.

17 For reliability-based design, Clause 8.7.3.1.3 of CSA 22.3 No.1 states “The final tension limit after  
18 creep or permanent stretch due to ice and wind loads should not exceed 70 to 80% UTS.” The  
19 damage limits used during the LIL design that were below this range may be considered to be  
20 conservative.