

1 Q. **Reference: Reliability Study, page 3 (p. 93 pdf)**

2 Citation:

3 The unavailability of the proposed sub-transmission line is assumed to be
4 approximately 0.213% per 100 km on the basis of benchmark statistics in
5 consideration of Hydro's 66 kV transmission lines as well as 138 kV
6 transmission line L1301. The proposed interconnection line will be built to a 66
7 kV transmission line standard and L1301 was considered to reflect the operation
8 of the most comparable transmission line in Labrador.

9 a. Given the age and length of L1301, please explain why it is believed to be comparable to a
10 new line in Labrador, for purposes of estimating unavailability.

11

12

13 A. As per Appendix C of the *Long-Term Supply Study for Southern Labrador: Economic & Technical*
14 *Assessment*, Newfoundland and Labrador Hydro ("Hydro") considered three different
15 benchmark statistics to use for line related sustained forced outages. This included the Canadian
16 Electricity Association ("CEA") average unavailability for lines up to 109 kV, Hydro 66 kV
17 statistics, and L1301 statistics. Of these statistics, both Hydro 66kV and L1301 were relatively
18 close with an unavailability of 0.179% and 0.213% respectively. Hydro decided to use L1301 as it
19 was a more conservative value to use to assess the reliability of the proposed interconnected
20 system. The CEA average unavailability contains lines of various environmental conditions, age,
21 and fitness, and is much higher than L1301 and Hydro's typical 66 kV transmission line. Given
22 the broad sample used in this statistic, Hydro considers this statistic less reflective of what to
23 expect for the proposed 25 kV lines in southern Labrador.