
1 Q. **Reference Avalon Capacity Study, Section 4:**

2 Please provide Hydro's estimates of the probabilities of 230 kV transmission outages in the
3 Bay d'Espoir to Soldier's Pond corridor occurring either simultaneously with or during a LIL
4 bipole outage.

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7 A. The most probable event that would involve both a Labrador-Island Link ("LIL") bipole
8 failure and a 230 kV transmission outage in the Bay d'Espoir and Soldiers Pond corridor is a
9 1 in 500-year meteorological event that passes over the Avalon Peninsula between the
10 Sunnyside Terminal Station and the Soldiers Pond Terminal Station causing structural
11 failure of the LIL and one or more 230 kV lines. The LIL is the highest structural capacity line
12 on the Avalon Peninsula, designed for a 1 in 500-year meteorological event with an annual
13 probability of failure of 0.2%. Given that the LIL is primarily in the same transmission
14 corridor with the 230 kV lines on the Avalon Peninsula, an extreme weather event that
15 results in structural failure of the LIL may also result in failure to one or more of the parallel
16 230 kV lines. Loading below the 1 in 500-year event may damage other 230 kV lines, but
17 will not cause a LIL bipole outage. Other independent failure combinations, such as a bipole
18 trip due to an electrical issue and a separate trip of a 230 kV line, have lower probabilities
19 than the mechanical failure scenario.