

1 Q. Further to the response to PUB-NLH-212, and given that an overhead line tower
2 collapse is most likely to occur during adverse weather conditions please explain
3 and justify the average repair time of 24 hours.
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6 A. Attachment 2 of Hydro's response to PUB-NLH-212 (*Reliability Assessment of the*
7 *HVdc Island Link* dated April 10, 2012) calculates the forced outage rates and
8 durations, or expected performance, of the Labrador-Island HVdc Link (LIL). Section
9 2.2 of the report assesses the reliability of the HVdc overhead line section. The
10 analysis considers available Cigre data and calculates the the expected reliability
11 performance for one pole of the overhead line to be 2.101 outages per pole per
12 year with an average repair time of 1.78 hours per outage. The analysis must
13 consider the common mode failure of both poles of the bipole system. The analysis
14 assumed that the performance would be one order of magnitude less than the
15 single pole fault. In other words, there would be 0.2101 outages per bipole per
16 year (i.e., 0.02 outages/100km/yr) with an average repair time of 24 hours per
17 outage (i.e. 1.78 hrs x 10 = 17.8 hrs rounded to 24 hours). The base performance
18 figures for the entire LIL are then calculated. Section 4.1 of the report provides the
19 impact on overall forced outage rate of the Link for variations in overhead line
20 repairs ranging from 24 hours to two weeks.
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22 Attachment 1 of Hydro's response to PUB-NLH-212 (*Technical Note Labrador –*
23 *Island HVdc Link and Island Interconnected System Reliability* dated October 30,
24 2011) provides an analysis of the impact on unsupplied energy on the Island
25 Interconnected System for a bipole failure due to loss of the overhead line with a
26 mean repair time of two weeks.