

1 Q. Referring to NP-NLH-004, details are provided on design of the LITL HVdc line
2 regarding ice and wind loading, but there is no inclusion of the impact ice could
3 have on electrical flashovers due to ice on insulators. Please provide an overall
4 MTBF (mean time before failure) and MTTR (mean time to repair) for both
5 mechanical and electrical outages for the LITL overhead line and end-to-end
6 evaluation of the LITL including the converter stations, submarine cable and
7 electrode stations. The MTBF and MTTR should include both monopolar faults and
8 bipolar faults.

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11 A. Electrical flashovers are not structural failures, and were therefore not addressed in
12 the underlying analysis presented in Hydro's response to NP-NLH-004. As indicated
13 in Hydro's response to CA-NLH-100, electrical flashovers are not expected due to ice
14 on insulators.

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16 MTBF and MTTR data do not exist for the components of the LITL and are not
17 available. Reliability studies have considered forced outage and unavailability data
18 available from CIGRE. Refer to Hydro's response to PUB-NLH-212.