

1 Q. Please identify and describe the expected reliability of the supply via the Labrador
2 Island Link project, the probability of losing one pole and the associated loss of MW.

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5 A. Hydro's response to PUB-NLH-212 Attachment 2 provides a reliability and
6 availability assessment of the Labrador-Island HVdc Link. The composite system has
7 a calculated forced outage rate of 0.109%, or in other words, an availability of
8 99.89%.

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10 The calculated forced outage rate for one pole is 0.81%, or an availability of 99.19%.

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12 As described in Hydro's response to PUB-NLH-224, the amount of power
13 transferred over the line for consumption on the Island will vary. The loss of power
14 transfer capacity during a single pole outage will discontinue exports of power on
15 the Maritime Link as necessary to ensure system stability and to prevent loss of
16 load on the Island Interconnected System. At maximum Labrador-Island Link
17 loading, for loss of a pole, the power delivery at Soldiers Pond will be reduced from
18 830 MW in bipole mode to 662 MW for ten minutes due to the higher transmission
19 line losses in monopolar mode with earth return. After the ten-minute period, the
20 amount of power delivered to Soldiers Pond will reduce to 552 MW in continuous
21 monopolar mode. However, as noted in Hydro's response to PUB-NLH-217,
22 through the dispatch of on-Island generation during the ten-minute Labrador-Island
23 HVdc Link overload capability period, there will be no loss of supply to Island
24 Interconnected Customers for a pole outage on the Labrador-Island Link. For
25 loading on the Labrador-Island Link that is less than maximum (but greater than 552
26 MW), the redispatch impacts described above are reduced. For loading on the

Island Interconnected System Supply Issues and Power Outages

- 1 Labrador-Island Link that is less than 552 MW, there would be no requirement for
- 2 redispatch on Island Interconnected System.