

1 Q. Please provide the specified Reliability and Availability guarantee requirements for
2 the converter stations included in the Maritime Link, providing at least the following
3 information (using Cigre terminology):

- 4 1. Mono-polar Forced Outage Rate (i.e. the total number of forced outages of the
5 complete scheme in a 12 month period).
- 6 2. Bipolar Forced Outage Rate (i.e. the total number of forced outages of the one
7 pole in a 12 month period)
- 8 3. Mono-polar Forced Energy Unavailability (i.e. the number of MWhrs as a
9 percentage of the scheme rating multiplied by the number of hours in a year
10 that could not be transmitted due to forced outages on either of the poles).
- 11 4. Bipolar Forced Energy Unavailability (i.e. the number of MWhrs as a percentage
12 of the scheme rating multiplied by the number of hours in a year that could not
13 be transmitted due to forced outages on a pole)
- 14 5. Scheduled Energy Unavailability (i.e. the number of MWhrs as a percentage of
15 the scheme rating multiplied by the number of hours in a year that could not
16 be transmitted due to planned outages for maintenance).

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19 A. As outlined in public documents between Emera and Nova Scotia's utility regulator,
20 the Utility and Review Board (UARB), the reliability and availability guarantee
21 requirements for the converter stations are as follows, with reference to CA-NLH-
22 050 Attachment 5:

- 23 1. Mono-polar Forced Outage Rate: 8 per year (4/pole/year);
- 24 2. Bipolar Forced Outage Rate: 0.1 per year (1 every 10 years);
- 25 3. Mono-polar Forced Energy Unavailability: Unknown;
- 26 4. Bipolar Forced Energy Unavailability: Unknown;
- 27 5. Total Forced Energy Unavailability: <1%; and

1 6. Scheduled Energy Unavailability: <1.5%.

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3 Overall, the annual energy availability shall be guaranteed greater than 98%.

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5 At this time, there is insufficient data to answer the question as outlined using Cigre

6 terminology. More will be known about the reliability and availability statistics

7 following detailed design with the selected vendor of the Maritime Link.