

1 Q. Please provide NLH's worst-case estimate for the duration of an ice-related forced  
2 outage of the HVDC line through the Northern Peninsula.

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5 A. The HVdc transmission line design has incorporated many features to reduce the  
6 probability of ice-related failures and in the event a failure should occur, to limit the  
7 extent of damage to minimize the repair time. As outlined in the response to PUB-  
8 NLH-221, the design of the transmission line takes into account the 50 years of  
9 monitoring of conditions along the HVdc transmission route such that the ice  
10 loading design for areas such as the most severe areas of the Great Northern  
11 Peninsula accommodates over 135 mm of radial ice. In the unlikely event of a  
12 failure due to the ice load being greater than design, anti-cascading structures will  
13 limit the amount of damage and restoration plans with special focus for areas with  
14 poor accessibility will be developed prior to the line going in service with an  
15 objective to limit the repair duration to two weeks.

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17 The restoration plan will include:

- 18 • Purchase and storage at strategic locations of materials required for line  
19 restoration;
- 20 • Availability of all-terrain equipment to access remote sites;
- 21 • Development of an access and restoration trail-way system as part of the initial  
22 construction;
- 23 • Design of temporary emergency structures which can be flown to remote sites;  
24 and
- 25 • Mutual aid agreements with neighboring utilities to assist with restoration.