

1 Q. Further to the response to GRK-NLH-033 explain why a repair duration of two
2 weeks was selected as the objective for the restoration plans which are to be
3 developed and provide the information relied on to support that the two weeks
4 objective is appropriate.

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7 A. The two-week repair time was selected as a reasonable repair time when compared
8 to Hydro's response to ice storm damage on the Buchans Plateau and Avalon and
9 Connaigre Peninsulas. The available data used in the determination is as follows:

- 10 • 1967 Storm;
- 11 ○ TL228 (Buchans to Massey Drive) conductor came within four feet of
12 ground.
- 13 • 1970 Storm;
- 14 ○ February 27 TL203 (Sunnyside to Western Avalon) 14 conductor
15 miles, 28 structures failed. Returned to service in 50 days.
- 16 ○ February 27 TL207 (Sunnyside to Come By Chance) 17 conductor
17 miles, three structures failed. Returned to service in 13 days.
- 18 ○ February 27 TL212 (138 kV, Sunnyside to Linton Lake) 62 conductor
19 miles, 71 structures failed. Returned to service in 42 days.
- 20 ○ February 28 TL202 (Bay d'Espoir to Sunnyside) 19 conductor miles,
21 five structures failed. Returned to service in 19 days.
- 22 ○ February 28 TL206 (Bay d'Espoir to Sunnyside) eight conductor
23 miles, four structures failed. Returned to service in 12 days.
- 24 ○ In this storm service was re-established between Bay d'Espoir and
25 the Avalon Peninsula in 13 days via TL206 and TL207.

- 1 • 1980 Storm;
 - 2 ○ TL228 (Buchans to Massey Drive) one structure failure with
 - 3 conductor damage. Returned to service in ten days.
- 4 • 1981 Storm;
 - 5 ○ TL228 (Buchans to Massey Drive) conductor came in contact with
 - 6 ground.
- 7 • 1984 Storm;
 - 8 ○ April 9 TL237 (Come By Chance to Western Avalon) five conductor
 - 9 miles, seven structures failed. Returned to service in 35 days.
 - 10 ○ April 13 TL201 (Western Avalon to Hardwoods) five conductor miles,
 - 11 38 structures failed. Returned to service in 29 days.
 - 12 ○ April 14 TL217 (Western Avalon to Holyrood) 7.5 conductor miles, 12
 - 13 structures failed. Returned to service in 14 days.
 - 14 ○ April 14 TL218 (Holyrood to Oxen Pond) five conductor miles, 12
 - 15 structures failed. Returned to service in nine days.
 - 16 ○ April 14 TL236 (Hardwoods the Oxen Pond) five conductor miles, 12
 - 17 structures (same double circuit with TL218) failed. Returned to
 - 18 service in 14 days.
 - 19 ○ In this storm service was re-established between Holyrood
 - 20 generation and the St. John's load center with the restoration of
 - 21 TL218 in nine days. The system on the Avalon was reinforced with
 - 22 the restoration of TL236 and TL217 in 14 days, providing a
 - 23 connection between the hydro generation, Holyrood generation and
 - 24 the Avalon Peninsula load.
- 25 • 1986 Storm;
 - 26 ○ March 29 TL220 (Bay d'Espoir to Barachoix) four structures failed.
 - 27 Returned to service in 1 1/3 days.

- 1987 Storm;
 - TL228 (Buchans to Massey Drive) seven structures failed with broken conductor. Returned to service in 63 days.
 - For this storm repair efforts were hampered due to considerable snow depths impeding access. Service was maintained to the west coast through TL233 (Buchans to Bottom Brook) and TL211 (Massey Drive to Bottom Brook). This storm indicated the need for detailed restoration plans.
- 1988 Storm;
 - February 12 TL220 (Bay d’Espoir to Barachoix) broken conductor. Returned to service in 1.5 days.
 - April 14 TL217 (Western Avalon to Holyrood) four conductor miles, four structures failed. Returned to service in 18 days. In this particular instance the parallel lines, TL201 (Western Avalon to Hardwoods), TL218 (Holyrood to Oxen Pond) and TL242 (Holyrood to Hardwoods) did not fail and the weather was expected to improve (i.e., moving towards spring temperatures and not continued winter weather).
- 1990 Storm ;
 - April 25 TL217 (Western Avalon to Holyrood) one conductor span failed. Returned to service within 24 hours.
- 1992 Storm;
 - October 19 TL220 (Bay d’Espoir to Barachoix) broken pole. Returned to service in 1.75 days.
- 1994 Storm; and
 - December 8 TL201 (Western Avalon to Hardwoods) six conductor miles, eight structures failed. Returned to service in 14 days.

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- 1 ○ December 9 TL217 (Western Avalon to Holyrood) conductor sagged
- 2 close to ground. Returned to service in 1.25 days.
- 3 ○ December 10 TL217 (Western Avalon to Holyrood) clamp failure.
- 4 Returned to service in 15 hours.

- 5 ● 1995 Storm.

- 6 ○ January 17 TL220 (Bay d'Epsoir to Barachois) five structures failed
- 7 with broken conductor. Returned to service in 3.75 days.

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9 For the low probability event of the load exceeding the design criteria and based

10 upon the restoration durations for previous ice storms, the two-week repair

11 duration objective was selected as reasonable for the development of restoration

12 plans.