1 **Q.** **(Reference Application Schedule B, Transmission Line Maintenance, page 111)**
2 **It is stated "***For example, an outage to transmission lines 94L and 95L during***
3 ***a severe wind storm in March 2017 resulted in approximately 3.2 million***
4 ***outage minutes to customers on the Avalon Peninsula.***" **Does Newfoundland**
5 **Power design its transmission system to withstand severe storms such as that**
6 **in March 2017?**
7
8 A. The actual wind speed conditions experienced on transmission lines 94L and 95L during
9 the March 2017 wind storm are unknown. The maximum wind speed measured at the
10 closest Environment Canada weather station at Cape Race on March 11, 2017 was
11 114 km/h.
12
13 Newfoundland Power designs transmission lines to meet Canadian Standards Association
14 ("CSA") standards and guidelines outlined in *C22.3 No. 1 Overhead Systems*. This
15 standard designates Newfoundland Power's service territory as either severe or heavy
16 weather loading areas.
17
18 In severe loading areas, such as the Bonavista and Avalon Peninsulas, Newfoundland
19 Power uses the CSA deterministic weather design loads of 19 mm of ice at a
20 temperature of -20° C with 92 km/h winds.
21
22 The rest of the island is identified as heavy loading areas. Newfoundland Power uses
23 the CSA deterministic weather design loads of 12.5 mm of ice at a temperature of
24 -20° C with 92 km/h winds.
25
26 In addition, *C22.3 No. 1 Overhead Systems* cautions that consideration should be given
27 to local areas that have higher icing and/or wind forces than the severe and heavy
28 weather design loading indicated above. Newfoundland Power designs to additional
29 loads derived from data obtained from historical major weather events experienced
30 within its service territory. In severe loading regions, transmission lines are designed to
31 withstand a weather load of 40 mm of ice with no wind, and 176 km/h of wind with no
32 ice. In heavy loading regions, transmission lines are designed to withstand 25.4 mm of
33 ice with no wind, and 153 km/h of wind with no ice.