

1 **Q. Describe in detail any problems Newfoundland Power experienced in implementing**
2 **rotating power outages in December 2013 and January 2014, including difficulties**
3 **experienced with switching equipment not operating properly and any other**
4 **technical difficulty experienced.**

5
6 **A. *Introduction***

7 Newfoundland Power did not implement rotating power outages in December 2013.
8 Rotating power outages commenced at 1613 hours on January 2nd, 2014 and continued as
9 permitted by system conditions throughout the period from January 2-8, 2014.¹

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11 The following is a summary of the equipment operating issues and technical difficulties
12 experienced by the Company during the implementation of the rotating power outages.

13
14 ***Substation Breakers and Reclosers***

15 There were 9 substation breakers or reclosers which failed to operate correctly during the
16 rotating power outages, which prolonged the duration of customer outages. The majority
17 of these failures were due to the cold temperatures affecting the operating mechanisms.

18
19 In each of these cases, staff was dispatched to the field and either made required repairs
20 immediately or completed switching to temporarily transfer the customers to another
21 distribution feeder while the repairs were completed.²

22
23 During rotating power outages, Newfoundland Power's breaker and recloser operations
24 were successful 99% of the time.³

25
26 ***Feeder Sectionalizing***

27 Cold Load Pickup ("CLPU") issues were experienced during the rotating power outages
28 when distribution feeders were de-energized for extended periods of time.⁴ When a
29 distribution feeder cannot be restored due to CLPU, feeder restoration can be
30 accomplished by either sectionalizing the feeder into multiple smaller loads, by
31 offloading a part of the feeder unto an adjacent feeder, or by adjusting protection settings
32 on the feeder breaker or recloser.⁵ In some cases, the lack of switches limited the ability
33 to reinstate some of the larger distribution feeders. This prolonged some customer
34 outages.

¹ See the response to Request for Information PUB-NP-022 for details on rotating power outages.

² As a result of these breaker and recloser failures, on January 6-7, 2014, Newfoundland Power inspected every breaker and recloser on the Avalon Peninsula to reduce the risk of further failures compromising customer service.

³ There were 447 distribution feeder rotations completed in the period January 2-8, 2014. $(9/(447 \times 2) = 0.01)$.

⁴ See the response to Request for Information PUB-NP-022 for further detail on CLPU.

⁵ Issues restoring distribution feeders due to CLPU that resulted in the requirement to sectionalize feeders occurred frequently throughout the January 2-8, 2014 period.

Requests for Information

- 1 An assessment of possible switch installations, including remote control capability, is
2 currently underway.⁶

⁶ See the response to Request for Information PUB-NP-036.