

1 **SECTION 2: CUSTOMER OPERATIONS/RELIABILITY**

2
3 **Q. Reference: NLH-NP-050**

4 **In its response to NLH-NP-050, Newfoundland Power states:**

5 **In Newfoundland Power's view, SAIFI performance is most reflective of the**
6 **condition of the electrical system.**

7 **a) Is Newfoundland Power's view that System Average Interruption Frequency**
8 **Index (“SAIFI”) performance is most reflective of the condition of the electrical**
9 **system consistent with industry best practice? Please provide any supporting**
10 **industry documentation.**

11 **b) If SAIFI is reflective of the condition of the electrical system, what metrics or**
12 **operational philosophies, in Newfoundland Power's view, is System Average**
13 **Interruption Duration Index reflective of?**

14
15 A. a) The *Electric Power Distribution Reliability* series published by Richard. E Brown
16 defines SAIFI as follows:

17
18 *“SAIFI is a measure of how many sustained interruptions an average customer*
19 *will experience over the course of a year. For a fixed number of customers, the*
20 *only way to improve SAIFI is to reduce the number of sustained interruptions*
21 *experienced by customers.”¹*

22
23 Since customer interruptions are most commonly caused by equipment failures,
24 which is directly related to the condition of the electrical system, this is consistent
25 with Newfoundland Power’s view that SAIFI performance in most reflective of the
26 condition of the electrical system.

27
28 b) The *Electric Power Distribution Reliability* series published by Richard. E Brown
29 defines SAIDI as follows:

30
31 *“SAIDI is a measure of how many interruption hours an average customer will*
32 *experience over the course of a year. For a fixed number of customers, SAIDI can*
33 *be improved by reducing the number of interruptions or by reducing the duration*
34 *of these interruptions. Since both of these reflect reliability improvements, a*
35 *reduction in SAIDI indicates an improvement in reliability.”²*

36
37 This is consistent with Newfoundland Power’s view that SAIDI performance reflects
38 both the condition of the grid, as well as the Company’s response when outages
39 occur.

¹ See Brown, R. E. (2002). *Electric Power Distribution Reliability* (p. 50). Marcel Dekker, Inc.

² Ibid.