

1 **Reference: Section 2: Customer Operations**

2
3 **Q. Volume 1, page 2-23. Explain how Newfoundland Power currently considers and**
4 **balances capital and operating costs incurred for system reliability and the**
5 **customer benefits expected from incurring such costs. In the response explain how**
6 **Newfoundland Power takes into account the upwards pressure on customer rates**
7 **arising from the Muskrat Falls Project outlined on pages 1-6 to 1-7.**

8
9 **A. A. Introduction**

10
11 The provincial power policy requires Newfoundland Power to operate in a manner that
12 results in power being delivered to customers at *the lowest possible cost consistent with*
13 *reliable service*.¹ Balancing the cost and reliability of the service provided to customers
14 is consistent with meeting customers' service expectations.²

15
16 Newfoundland Power manages its capital and operating costs to provide reliable, least-
17 cost service to its customers in *all* operating environments and economic conditions. The
18 Muskrat Falls Project has not altered the Company's continued focus on providing
19 reliable service to its customers at the lowest possible cost, as required by the provincial
20 power policy.

21
22 **B. Newfoundland Power's Performance**

23
24 Table 1 compares Newfoundland Power's reliability performance in 2000 and 2020
25 under normal operating conditions.³

Table 1:
Newfoundland Power's Reliability Performance
(Normal Operating Conditions)

	2000	2020	Change
Outage Frequency ("SAIFI")	4.1	2.4	-41%
Outage Duration ("SAIDI")	5.3	3.0	-43%

¹ See Section 3(b)(iii) of the *Electrical Power Control Act, 1994*.

² Approximately 1,800 Newfoundland Power customers are surveyed each quarter. Survey results indicate the 2 most important issues to customers are reliability and price.

³ The reliability data provided in Table 1 excludes outages due to loss of supply and significant events. "SAIFI" indicates "System Average Interruption Frequency Index." "SAIDI" indicates "System Average Interruption Duration Index." SAIFI and SAIDI are the standard reliability metrics used by the Canadian Electricity Association.

1 Table 1 shows that the Company's customers have experienced an improvement in
2 service reliability of over 40% over the last 2 decades. This service improvement is
3 reflected in both the frequency and duration of customer outages.
4

5 On an inflation-adjusted basis, the Company's contribution to average customer rates has
6 decreased by approximately 21% since 2000.⁴
7

8 Overall, Newfoundland Power's management of its operations has resulted in an
9 improvement in reliability of over 40% at a reduced cost to customers of over 20% over
10 the past 2 decades. This performance demonstrates that the Company is meeting its
11 obligation to provide reliable, least-cost service to its customers.
12

13 C. Cost Management at Newfoundland Power

14 *General*

15 Customers have experienced relatively stable service reliability since 2011.
16 Newfoundland Power has viewed its service reliability as acceptable over this period.⁵
17 Customers have also indicated a reasonable level of satisfaction with the Company's
18 service delivery over this period.⁶
19
20

21 Newfoundland Power is currently focused on *maintaining* overall levels of service
22 reliability for its customers. The principal consideration employed by Newfoundland
23 Power in managing its capital and operating costs is maintaining current levels of service
24 reliability at the lowest possible cost.
25

⁴ Newfoundland Power's contribution to customer rates was 3.53 ¢/kWh in 2000, or 5.23 ¢/kWh on an inflation-adjusted basis. The Company's contribution to customer rates is 4.14 ¢/kWh in 2021. $(4.14 - 5.23) / 5.23 = -0.21$, or approximately -21%.

⁵ In Newfoundland Power's 2010 *General Rate Application*, the Company stated it considered then current levels of service reliability to be satisfactory (see Volume 1 (1st Revision), Section 2: Customer Operations, page 2-8, line 6). Similarly, the Company has characterized its electrical system performance as reliable in its 2013/2014 *General Rate Application* (see Volume 1, Section 1: Introduction, page 1-3, line 10), its 2016/2017 *General Rate Application* (see Volume 1 (1st Revision), Section 1: Introduction, page 1-3, line 11), its 2019/2020 *General Rate Application* (see Volume 1, Section 1: Introduction, page 1-3, line 21), and in its 2022/2023 *General Rate Application* (see Volume 1, Section 1: Introduction, page 1-3, line 21).

⁶ Customer satisfaction with Newfoundland Power's service delivery has averaged approximately 86% since 2011. See the 2022/2023 *General Rate Application, Volume 1, Application, Company Evidence and Exhibits, Section 2: Customer Operations*, page 2-10, footnote 28.

1 **Capital Costs**

2
3 The majority of customer outages typically occur at the distribution level.⁷ Maintaining
4 the condition of the distribution system is therefore critical to maintaining service
5 reliability for customers.

6
7 Approximately ½ of Newfoundland Power’s annual capital expenditures relate to the
8 replacement of deteriorated, deficient or failed plant. The need to replace plant is
9 generally determined through inspections, condition assessments and operating
10 experience.

11
12 A variety of considerations are applied to manage capital expenditures required for plant
13 replacement. Examples include:

- 14
15 (i) An assessment of alternatives for capital projects. When multiple viable
16 alternatives are identified, a net present value (“NPV”) analysis is conducted to
17 identify the least-cost solution.⁸
18
19 (ii) The coordination of capital projects, when possible. This permits the Company to
20 realize productivity gains, while also reducing the requirement for customer
21 outages.⁹
22
23 (iii) The deferral of capital projects, when possible. Deferring capital projects through
24 routine maintenance and other means extends the useful service life of electrical
25 system assets, which can reduce costs to customers.¹⁰

26
27 These considerations ensure capital expenditures for plant replacement are undertaken at
28 the lowest possible cost consistent with reliable service.

⁷ Based on outage duration, approximately 90% of customer outages in Canada occurred on the distribution system in 2019. See CEA, *2019 Service Continuity Report – Data*, June 22, 2020. See the *2022/2023 General Rate Application, Volume 1, Application, Company Evidence and Exhibits, Section 3: Finance*, page 3-38, footnote 94.

⁸ For example, see the *2022 Capital Budget Application, Report 2.1 Substation Refurbishment and Modernization, Appendix B*, page B-11.

⁹ For example, substation refurbishments are coordinated with polychlorinated biphenyl removal projects. This coordination has reduced costs associated with the deployment of portable substations by over \$1 million.

¹⁰ For example, transmission line 124L was originally planned for rebuild in 2011, but was deferred to 2022 through routine maintenance. See the *2022 Capital Budget Application, Report 3.1 Transmission Line Rebuild*.

1 In balancing the costs and benefits of capital expenditures required to maintain reliable
2 service for customers, the Company also:

- 3
- 4 (i) Targets its investments in areas that provide the most customer benefits. While,
5 overall, current levels of reliability are viewed as acceptable, not all customers
6 experience the same quality of service. The Company's *Distribution Reliability*
7 *Initiative* targets the replacement of sections of distribution line where customers
8 experience among the worst service reliability in Newfoundland Power's service
9 territory.¹¹ This approach is consistent with maintaining acceptable levels of
10 service reliability for all customers.
- 11
- 12 (ii) Identifies opportunities to reduce overall costs to customers while maintaining
13 reliable service. For example, the replacement of existing street lights with LED
14 fixtures is estimated to cost approximately \$32.8 million over 6 years. This
15 project is forecast to reduce energy and maintenance costs to customers by
16 approximately \$52 million over 20 years, resulting in lower rates for customers.¹²
17 The Company's current operating cost forecast reflects a reduction in costs
18 associated with implementing LED street lights.¹³
- 19
- 20 (iii) Focuses on initiatives that balance reliability and operating efficiency.
21 Newfoundland Power commenced the largescale installation of automated
22 downline reclosers to sectionalize its distribution system following widespread
23 customer outages, known as #darkNL.¹⁴ The efficiency and reliability benefits of
24 downline reclosers are most pronounced during significant electrical system
25 events. For example, the operation of 5 downline reclosers during a severe
26 blizzard in January 2020 avoided approximately 3.5 million customer outage
27 minutes. This reliability benefit was provided without incurring labour costs
28 associating with dispatching field crews.¹⁵
- 29

30 These practices demonstrate how Newfoundland Power manages its capital expenditures
31 to balance both the cost and reliability of the service provided to customers.

¹¹ See the 2022 *Capital Budget Application, Report 4.1 Distribution Reliability Initiative*.

¹² See Newfoundland Power's 2022 *Capital Budget Application, Schedule B*, page 34.

¹³ See response to Request for Information PUB-NP-012.

¹⁴ Downline reclosers are pole-mounted devices that are controlled remotely to: (i) isolate a fault so only a portion of customers on a feeder experience an outage, instead of all customers; and (ii) systematically restore power to customers following a prolonged outage.

¹⁵ See Newfoundland Power's 2022/2023 *General Rate Application, Volume 1, Section 2: Customer Operations*, page 2-30.

1 **Operating Costs**

2
3 Maintaining service reliability requires maintaining a prompt response to customer
4 outages. The Company employs a skilled workforce throughout its service territory.
5 This workforce is deployed in an efficient manner using a combination of operational
6 technologies and electrical system automation.¹⁶

7
8 While Newfoundland Power has maintained a reasonably consistent level of service
9 reliability for its customers over the last decade, the Company provides service more
10 efficiently today than it did 10 years ago. From 2011 to 2020, Newfoundland Power
11 reduced its operating cost per customer by approximately 16% when adjusted for
12 inflation.¹⁷

13
14 This cost performance is better than the Company's peers. The operating cost per
15 customer of the Company's U.S. peer group has increased by 20% over the same period
16 when adjusted for inflation.¹⁸

17
18 The capital projects described above have contributed to Newfoundland Power's long-
19 term operating efficiency. See response to Request for Information PUB-NP-012 for
20 additional information on the specific actions taken by Newfoundland Power to ensure a
21 continued focus on operating efficiency.

22
23 **D. Conclusion**

24
25 Newfoundland Power's costs of serving customers have been incurred in a manner
26 consistent with the provincial power policy. The Company's capital expenditures are
27 reviewed annually in public applications to the Board. Newfoundland Power's annual
28 operating costs are typically interrogated by the Board on a triennial basis through
29 general rate applications, including the Company's current Application. Through these
30 processes, the Board determines what Newfoundland Power costs are consistent with the
31 delivery of least-cost, reliable service to customers and should be recovered through
32 customer rates.

33
34 In Newfoundland Power's view, it would be contrary to existing public policy to limit the
35 Company's ability to recover its reasonable costs of delivering reliable service to
36 customers. This includes limiting Newfoundland Power's cost recovery to permit

¹⁶ See the 2022/2023 General Rate Application, Volume 1, Application, Company Evidence and Exhibits, Section 2: Customer Operations, Field Response Capabilities, page 2-26 et seq.

¹⁷ See the 2022/2023 General Rate Application, Volume 1, Application, Company Evidence and Exhibits, Section 2: Customer Operations, page 2-31.

¹⁸ See response to Request for Information CA-NP-047.

1 recovery of costs related to Nalcor Energy’s Muskrat Falls Project, which have not been
2 determined to be reasonable or consistent with the least-cost delivery of reliable service.¹⁹
3
4 As described above, Newfoundland Power intends to continue managing its capital and
5 operating costs in a manner consistent with maintaining reliable, least-cost service to its
6 customers in *all* operating environments and economic conditions.

¹⁹ Nalcor Energy’s Muskrat Falls Project is the single most costly electrical system investment in the history of Newfoundland and Labrador. Unlike Newfoundland Power’s costs, the significant costs related to Nalcor Energy’s Muskrat Falls Project have not been subject to the *Public Utilities Act* or the *Electrical Power Control Act, 1994*. As a result, these costs have never been adjudged to be reasonable or consistent with the least-cost delivery of reliable service to customers. See the *Muskrat Falls Project Exemption Order under the Electrical Power Control Act, 1994 and the Public Utilities Act* (O.C. 2013-342), dated November 29, 2013.