

1 **Q. Please highlight any actions that Newfoundland Power has taken in response to the**
 2 **current economic conditions within Newfoundland and Labrador to control and/or**
 3 **reduce capital expenditures while maintaining reliable service.**
 4

5 **A. A. Balancing Costs and Service**
 6

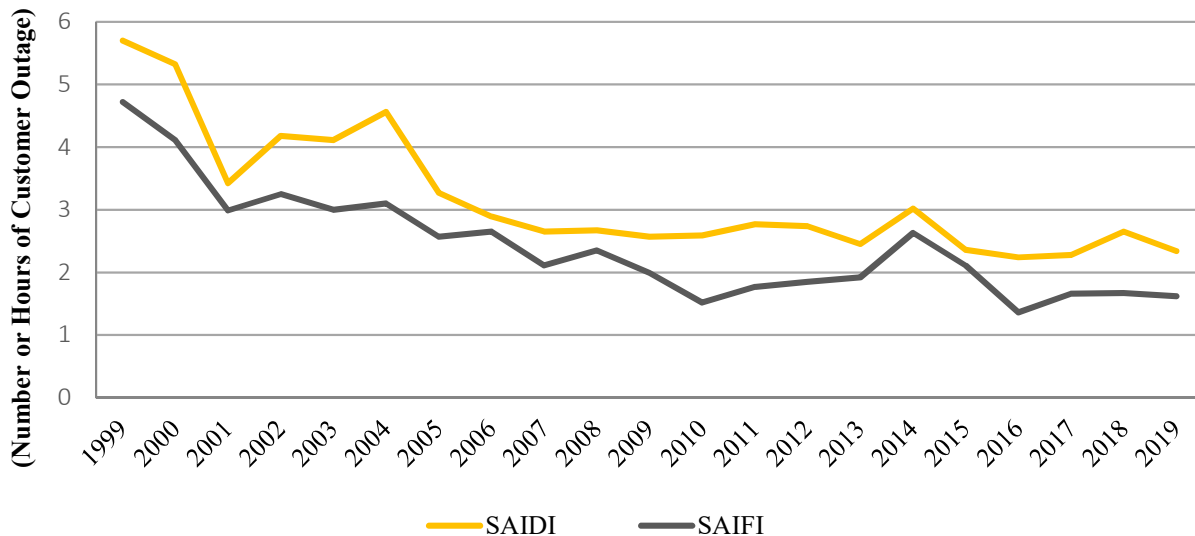
7 Newfoundland Power controls its capital expenditures under *all* economic conditions in a
 8 manner that results in the delivery of reliable service to customers at least cost. This is a
 9 requirement of the provincial power policy.¹
 10

11 Complying with the provincial power policy requires the Company to balance the
 12 reliability and cost of the service provided to customers. Achieving this balance is
 13 consistent with meeting customers’ service expectations.²
 14

15 Newfoundland Power balances the cost and reliability of its service delivery through a
 16 comprehensive capital planning process and a focus on the *overall* costs borne by
 17 customers through customer rates.
 18

19 Figure 1 provides the duration (“SAIDI”) and frequency (“SAIFI”) of outages
 20 experienced by Newfoundland Power’s customers under normal operating conditions
 21 over the period 1999 to 2019.³

Figure 1
Duration and Frequency of Customer Outages
(1999 to 2019)



¹ Section 3(b)(iii) of the *Electrical Power Control Act, 1994* requires that customers receive reliable service at the lowest possible cost.

² Quarterly surveys indicate the 2 most important issues to customers are reliability and price. For more information on customers’ service expectations, see response to Request for Information CA-NP-008.

³ See the *2021 Capital Budget Application, Volume 1, 2021 Capital Plan*, page 10, Figure 1. Excludes customer outages related to significant events and loss of supply.

1 The duration and frequency of customer outages was reduced by over ½ over the period
2 1999 to 2009.⁴ Customers' service reliability has been reasonably consistent since that
3 time.⁵

4
5 Table 1 compares Newfoundland Power's total contribution to average customer rates in
6 ¢/kWh in 2000 and 2020.⁶

Table 1
Newfoundland Power
Contribution to Customer Rates
(¢/kWh)

	2000	2020	Change
Actual	3.53	4.14	17%
Inflation-Adjusted ⁷	5.18	4.14	-20%

7 While customer outages were reduced by over ½, the Company also reduced its
8 contribution to customer rates by 20% on an inflation-adjusted basis. In fact, customer
9 rates have not changed as the result of a Newfoundland Power general rate application
10 since 2016.

11
12 Newfoundland Power's approach to controlling its capital expenditures has tended to
13 minimize overall costs to customers, while maintaining acceptable levels of service
14 reliability.⁸

16 **B. Controlling Capital Expenditures**

17
18 Newfoundland Power exercises control over its annual capital expenditures through a
19 comprehensive planning process. This planning process determines the necessity, scope

⁴ Over the period 1999 to 2009, the duration of customer outages was reduced by 55% and the frequency of customer outages was reduced by 58% under normal operating conditions. See the *2021 Capital Budget Application, Volume 1, 2021 Capital Plan*, page 10.

⁵ Over the period 2010 to 2019, the frequency of customer outages ranged from 1.4 to 2.6 outages per year under normal operating conditions. The duration of customer outages ranged from 2.2 to 3.0 hours under normal operating conditions.

⁶ See the *2021 Capital Budget Application, Volume 1, 2021 Capital Plan*, page 15.

⁷ Inflation-adjusted based on the GDP Deflator for Canada.

⁸ Current levels of service reliability have been viewed as acceptable for about a decade. For more information, see response to Request for Information PUB-NP-004.

1 and timing of each proposed capital project.⁹ The capital planning process is based on
2 sound engineering, objective data, and good utility practice.¹⁰
3

4 Approximately ¼ of capital expenditures proposed for 2021 are driven by the
5 requirement to respond to customers' service requests. This includes connecting new
6 customers to the electrical system, addressing customers' increased electrical loads, and
7 responding to third-party requests. These expenditures are necessary to meet
8 Newfoundland Power's obligation to serve.¹¹ The level of expenditure required in a
9 given year is generally contingent upon the number and scope of customer requests.¹²
10 Opportunities to control these expenditures are therefore limited and largely relate to an
11 assessment of available alternatives to ensure projects are least cost.¹³
12

13 Opportunities to control expenditures are greatest for capital projects driven by plant
14 replacement. Plant replacement accounts for approximately ½ of capital expenditures
15 proposed for 2021. Newfoundland Power exercises control over these expenditures
16 through 7 principal actions. Certain actions tend to reduce *capital* costs, while other
17 actions tend to reduce *overall* costs to customers. In general, these actions contribute to
18 stability in the Company's annual capital program. Stability in capital expenditures is
19 conducive to stability in customer rates.¹⁴
20

21 The 7 principal actions taken by Newfoundland Power to control capital expenditures are:

- 22
23 (i) An assessment of alternatives is completed for all capital projects. This includes
24 an assessment of whether a capital project can be deferred.¹⁵ The Company's
25 *2021 Capital Plan* outlines 3 plant replacement projects that were originally

⁹ For additional details on the Company's capital planning process, see the *2021 Capital Budget Application, Volume 1, 2021 Capital Plan, Section 2.1*.

¹⁰ The most recent independent review of Newfoundland Power's engineered operations was completed by the Board's consultant, The Liberty Consulting Group ("Liberty"), in 2014. With respect to Newfoundland Power, Liberty concluded: "*Annual capital strategies include measures (Transmission Rebuild Strategy, Rebuild Distribution Lines Projects, Distribution Reliability Initiative, and Substation Refurbishment and Modernization Strategy) well targeted to the needs of its equipment. Asset management strategies have promoted improved system reliability since 1998, while keeping annual capital T&D expenditures under control.*" See Liberty's *Report on Island Interconnected System to Interconnection with Muskrat Falls addressing Newfoundland Power Inc.*, December 17, 2014, pages 51-52.

¹¹ Section 3(b)(ii) of the *Electrical Power Control Act, 1994* requires that customers have equitable access to an adequate supply of power. This is commonly referred to as the "obligation to serve."

¹² As examples, capital expenditures for projects such as *Meters, Services* and *Extensions* are based on the number of customer requests received.

¹³ For example, the *St. John's North-Portugal Cove System Planning Study* identified the construction of a new substation near the airport as the least-cost alternative to meet customers' electrical system requirements.

¹⁴ Customer rate stability is an established regulatory principle of the Board. See, for example, Order No. P.U. 7 (2002-2003), page 29.

¹⁵ Newfoundland Power's capital plan is updated annually based on new data and information. This includes: (i) updated customer, energy and demand forecasts; (ii) updated condition assessments of equipment; and (iii) updated assessments of potential customer benefits. This process may result in the development or deferral of capital projects.

1 planned for 2021 and subsequently deferred.¹⁶ The total cost of these projects is
 2 approximately \$12 million. The deferral of these capital projects, in effect,
 3 reduced the capital expenditures proposed for 2021.
 4

5 (ii) Capital projects are coordinated, where possible, to realize productivity gains and
 6 reduce customer outages. For example, *Substation Refurbishment and*
 7 *Modernization* projects are coordinated with *Additions Due to Load Growth*
 8 projects and PCB removal projects.¹⁷ In 2021, this coordination will reduce
 9 capital costs associated with undertaking refurbishment and growth-related
 10 projects at Dunville Substation.¹⁸
 11

12 (iii) Well established economic analyses are used to ensure capital projects benefit
 13 customers. 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. The Net Present Value of these savings
 17 is approximately \$4.8 million. This project will result in lower rates for Street
 18 and Area Lighting customers commencing in 2021.¹⁹
 19

20 (iv) Capital expenditures are targeted in the areas that provide the most benefits for
 21 customers. For example, the Company's *Distribution Reliability Initiative* targets
 22 the replacement of plant in areas where customers experience service reliability
 23 significantly below the corporate average.²⁰ This targeted approach controls
 24 capital expenditures in a manner that maintains acceptable levels of service
 25 reliability for all customers at least cost.²¹
 26

27 (v) Long-term asset management strategies provide a structured approach for
 28 maintaining the electrical system. Examples include the Company's 2006
 29 *Transmission Line Rebuild Strategy* and 2007 *Substation Strategic Plan*.²² These
 30 strategies provide a controlled approach to maintaining or replacing a large

¹⁶ These projects are: (i) the rebuilding of transmission line 95L, which was deferred to permit a further assessment of alternatives; (ii) the rebuilding of transmission line 105L, which was deferred based on an inspection of line condition; and (iii) the replacement of the Company's teleprotection system, which was deferred based on the need to understand system requirements post Muskrat Falls Project commissioning. See the *2021 Capital Budget Application, Volume 1, 2021 Capital Plan*, page 8, Table 2.

¹⁷ For more information on the coordination of capital projects, see responses to Requests for Information CA-NP-026 and CA-NP-028.

¹⁸ See the *2021 Capital Budget Application, Volume 2, report 2.1 2021 Substation Refurbishment and Modernization*.

¹⁹ See the *2021 Capital Budget Application, Volume 1, LED Street Lighting Replacement Plan*.

²⁰ See the *2021 Capital Budget Application, Volume 2, report 4.1 Distribution Reliability Initiative*.

²¹ For example, 2021 represents the final year of a multi-year project to address the reliability experienced by customers in Dunville. Based on the most recent 5-year average, the frequency of outages for these customers is 3.5 times the Company average. The duration of outages for these customers is 4.6 times the Company average.

²² See the *2021 Capital Budget Application, Volume 2, report 2.1 2021 Substation Refurbishment and Modernization* and *report 3.1 2021 Transmission Line Rebuild*.

1 volume of electrical equipment over time.²³ This controlled approach provides
2 reasonable stability in annual capital expenditures.
3

4 (vi) Several capital projects are program-based and are consistent from year to year.
5 These programs address the planned replacement of plant that is identified
6 through inspections as deteriorated or deficient. Capital projects are prioritized
7 based on risk of failure²⁴ and the potential impact on customers.²⁵ This
8 programmatic approach ensures capital expenditures are controlled in a manner
9 that achieves reliable service for customers and stability in the capital program.
10

11 (vii) Capital projects are undertaken to extend the useful life of electrical system assets
12 that continue to provide value to customers. Extending the useful service life of
13 electrical system assets tends to reduce the requirement for larger, one-off capital
14 expenditures. For example, investments to extend the service lives of the
15 Company's hydro generating plants have ensured the provision of low-cost
16 electricity to customers for over 100 years.²⁶
17

18 Overall, this approach to capital planning is consistent with the delivery of reliable
19 service to Newfoundland Power's customers at least cost.

²³ As examples, Newfoundland Power maintains 131 substations with over 4,000 pieces of critical equipment, and over 2,000 kilometres of transmission line.

²⁴ For example, high-priority deficiencies on the distribution system are addressed in the year during which they are identified through the *Reconstruction* project. Lower-priority deficiencies are addressed in a subsequent year as part of a *Rebuild Distribution Lines* project.

²⁵ For example, transmission lines are inspected and maintained annually, while distribution lines are inspected and maintained on a 7-year cycle. This owes to the fact that a distribution-related outage may affect hundreds of customers, while a transmission-related outage may affect thousands of customers.

²⁶ For more information on Newfoundland Power's hydro generating facilities, see response to Request for Information CA-NP-024.