

1 **Section 1: Introduction**

2

3 **Q. Reference: “2025/2026 General Rate Application,” Newfoundland Power Inc.,**
 4 **December 12, 2023, vol. 1, Evidence, sec. 1.1.2, p. 1-2/20–23 and sec. 2.3.4, p. 2-27,**
 5 **fig. 2-11.**

6 **a) Does Newfoundland Power have a preventive maintenance strategy to address the**
 7 **aging of assets? If yes, please explain. If not, why not?**

8 **b) What percentage of overall operating budgets are assigned to preventive**
 9 **maintenance? Please complete the table provided.**

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Total Spend Preventative Maintenance (\$)										
Total Operations and Maintenance Budget (\$)										
Percentage of Operations and Maintenance Budget (%)										

10 **c) Please provide a figure similar to Figure 2-11 that charts inflation-adjusted**
 11 **operations and maintenance costs for preventive maintenance versus capital**
 12 **renewal programs for the last ten years.**

13 **d) Over the last ten years, what percentage of Newfoundland Power's renewal budgets**
 14 **has addressed refurbishment of assets versus replacement? Please complete the**
 15 **table provided.**

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Total Capital Spend Renewal Investment Class										
Total Spend on Replacement of Assets										
Total Spend on Refurbishment of Assets										

16 **A. a) Newfoundland Power has preventative maintenance strategies in place for its assets to**
 17 **ensure the electrical system continues to operate reliably.¹**

18

19 *The Rebuild Distribution Lines* program is Newfoundland Power’s annual preventative
 20 maintenance program for its distribution system. The program involves the planned
 21 replacement of distribution assets identified during inspections. Distribution feeders are

¹ Generally, the age of an asset is given higher consideration in the later years of the Company’s capital plan (i.e. beyond year two of the plan). Newfoundland Power does not complete detailed engineering assessments of future investment priorities. Age is therefore used as one indicator that future investment may be required. As capital projects move from the future plan period to the budget year, they are examined in detail to further assess the scope and justification of the required work. Age is not considered as heavily in this assessment. Rather, condition assessments, inspection results and objective data are used to determine whether a capital expenditure may be necessary.

1 inspected on a seven-year cycle in accordance with the criteria outlined in the Company's
2 *Distribution Inspection and Maintenance Practices*.² These practices establish that:

- 3
- 4 (i) All key components of a distribution feeder shall be inspected in accordance
5 with the established guidelines. For example, poles are inspected for their
6 condition, including any splits, cracks or rot.
- 7
- 8 (ii) Deficiencies identified for correction are to be recorded in the Company's
9 asset management information system, Avantis.
- 10
- 11 (iii) Inspection personnel must assign a maintenance priority for each deficiency
12 identified for correction, indicating whether the work is required immediately,
13 within the current year, or within the next budget cycle.
- 14

15 Deficiencies identified during inspections are prioritized for correction based on severity.
16 High priority deficiencies that require correction within a month are addressed under the
17 *Reconstruction* program. Other deficiencies are addressed in a planned manner under the
18 *Rebuild Distribution Lines* program. For example, if a wood pole is inspected in 2024 and
19 found to have a serious crack, it would be replaced within a week to a month under the
20 2024 *Reconstruction* program. If a wood pole inspected in 2024 has rotted and failed a
21 core test or has severe woodpecker holes, it would be addressed in a planned manner
22 under the 2025 *Rebuild Distribution Lines* program.

23

24 The *Transmission Line Maintenance* program is Newfoundland Power's annual
25 preventative maintenance program for its transmission system. The program involves the
26 replacement of transmission line infrastructure that has failed or is at risk of failure.
27 Transmission lines are inspected annually to identify deficiencies in accordance with the
28 criteria outlined in the Company's *Transmission Inspection and Maintenance Practices*.³
29 In addition, the transmission system is maintained through planned rebuild projects
30 completed in accordance with the *Transmission Line Rebuild Strategy*, which targets the
31 Company's oldest and most deteriorated transmission lines.⁴

32

33 Newfoundland Power inspects its substations eight times annually to identify deficiencies
34 and required maintenance.⁵ Equipment that fails in service or is at imminent risk of
35 failure is typically addressed under the *Substation Replacements Due to In-Service*
36 *Failures* program. Major refurbishment projects are implemented in accordance with the
37 Company's *Substation Refurbishment and Modernization Plan*.⁶ The Company has also

² It has been found that these inspection and maintenance practices are good utility practice. See section 7.2.3 of the Board's Phase One Report, September 29, 2016, in the *Investigation and Hearing into Supply Issues and Power Outages on the Island Interconnected System*.

³ Ibid.

⁴ For additional information, see the response to Request for Information PUB-NP-051.

⁵ It has been found that these inspection and maintenance practices are good utility practice. See section 7.2.3 of the Board's Phase One Report, September 29, 2016, in the *Investigation and Hearing into Supply Issues and Power Outages on the Island Interconnected System*.

⁶ For additional information, see the response to Request for Information PUB-NP-051.

1 recently implemented a component-based program to address obsolete substation
2 protection and control systems within Newfoundland Power's substations.

3
4 Newfoundland Power's generating plants are routinely inspected by plant operators to
5 identify deficiencies. Equipment that fails or is at imminent risk of failure is addressed
6 under the *Hydro Plant Replacements Due to In-Service Failures* program, *Thermal Plant*
7 *Replacements Due to In-Service Failures* program, and *Hydro Facility Rehabilitation*
8 project. Major plant refurbishment projects such as penstock replacements, are
9 accompanied by economic analyses to confirm that continued operation of a plant is
10 least-cost for customers.

11
12 b) Table 1 provides maintenance operating costs compared to total operating costs.

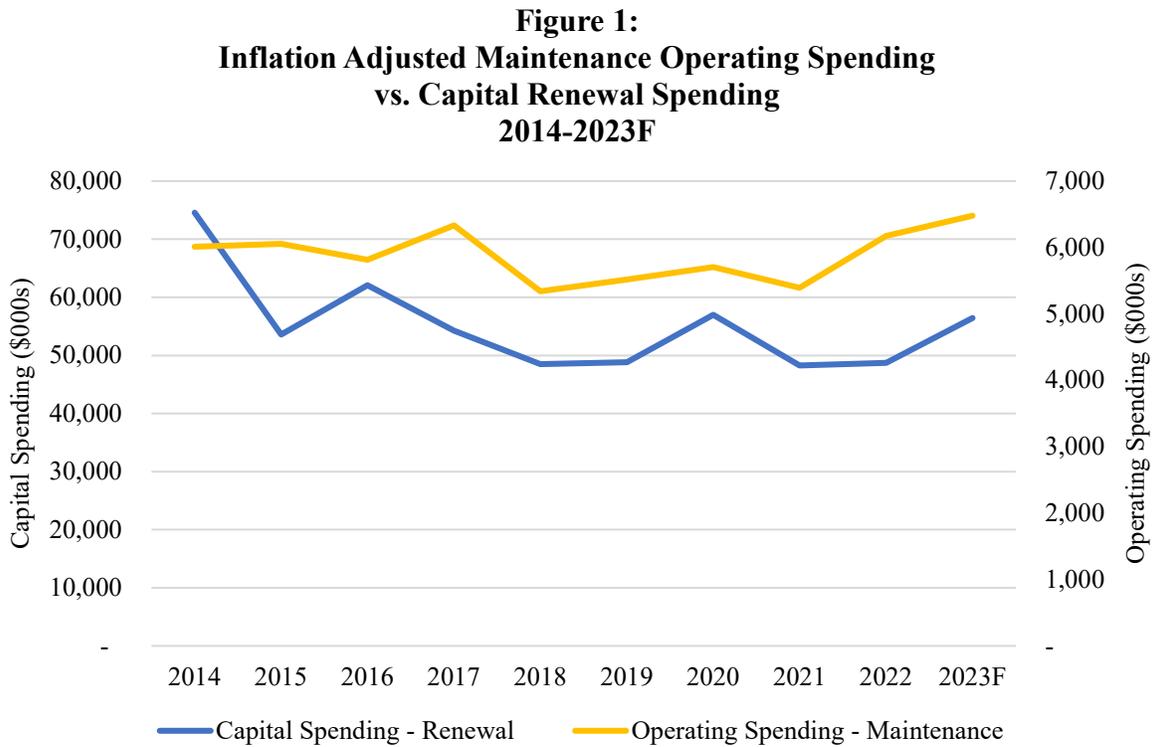
Table 1:
Maintenance Operating Costs
2014 to 2023F
(\$000s)

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023F
Total Spend Maintenance ⁷	4,829	4,927	4,826	5,391	4,637	4,871	5,111	5,109	6,173	6,586
Total Operating Cost ⁸	59,623	57,600	57,922	59,680	60,198	61,726	63,443	63,312	70,530	72,492
Percentage of Operations and Maintenance Budget (%)	8	9	8	9	8	8	8	8	9	9

⁷ Newfoundland Power does not subcategorize maintenance costs as corrective and preventative. Total maintenance spend includes costs for completing inspections for the transmission and distribution asset classes. For generation and substation asset classes, both preventative or corrective maintenance costs are included. Vegetation management costs are also included. General properties and transportation maintenance costs are not included.

⁸ The Company does not budget specifically for Operations and Maintenance as requested. The number provided represents the actual total operating costs for 2014 to 2022 and forecast for 2023.

- 1 c) Figure 1 shows the total capital spend in the renewal investment classification and the
 2 total operating spending on maintenance over the period 2014 to 2023.



- 3 d) Over the last 10 years, an average of 65% of Newfoundland Power’s renewal capital
 4 budget has addressed the replacement of assets versus the refurbishment of assets.

1 Table 2 below provides the data as requested.⁹

**Table 2:
Renewal Spending
Replacement vs. Refurbishment
2014 to 2023F
(\$000s)**

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023F ¹⁰
Total Spend Renewal Investment Class	60,178	43,356	50,998	45,815	41,661	42,599	50,531	45,493	48,734	57,252
Total Spend on Asset Replacement	38,432	28,481	35,340	27,068	25,570	27,750	32,737	29,436	32,491	37,107
Total Spend on Asset Refurbishment	21,746	14,875	15,658	18,747	16,091	14,849	17,794	16,142	16,243	20,145

⁹ Newfoundland Power notes that investment classifications were introduced beginning in the 2023 *Capital Budget Application* as a result of the *Capital Budget Application Guidelines (Provisional)*, effective January, 2022. As a result, expenditures prior to 2023 have been assigned the Renewal investment classification retroactively.

¹⁰ The forecast for 2023 is based on the Company's 2023 *Capital Budget Application*.