WHENEVER. WHEREVER. We'll be there.



October 28, 2021

Board of Commissioners of Public Utilities P.O. Box 21040 120 Torbay Road St. John's, NL A1A 5B2

Attention:

G. Cheryl Blundon

Director of Corporate Services

and Board Secretary

Dear Ms. Blundon:

Re: 2022 NP Capital Budget Application - Submission of Newfoundland Power Inc.

Please find enclosed the original and 10 copies of the Submission of Newfoundland Power in relation to the Company's 2022 Capital Budget Application.

If you have any questions, please contact the undersigned at your convenience.

Yours truly,

Lindsay Hollett Legal Counsel

Shaheup tellet.

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Enclosures

c. Shirley Walsh
Newfoundland and Labrador Hydro

Dennis Browne, Q.C. Browne Fitzgerald Morgan & Avis

IN THE MATTER OF the *Public*

Utilities Act, (the "Act"); and

IN THE MATTER OF capital expenditures and rate base of Newfoundland Power Inc.; and

IN THE MATTER OF an application by Newfoundland Power Inc. for an order pursuant to Sections 41 and 78 of the Act:

- (a) approving a 2022 Capital Budget of \$109,651,000;
- (b) approving certain capital expenditures related to multi-year projects commencing in 2022; and
- (c) fixing and determining a 2020 rate base of \$1,181,897,000.

SUBMISSION OF NEWFOUNDLAND POWER INC.

OCTOBER 28, 2021



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1.0 INTRODUCTION

- 2 Newfoundland Power Inc. ("Newfoundland Power" or the "Company") filed its 2022 Capital
- 3 Budget Application (the "Application") with the Board of Commissioners of Public Utilities
- 4 (the "Board") on May 18, 2021.

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- 6 The Application seeks an order of the Board, pursuant to section 41(1) of the *Public Utilities Act*,
- 7 approving proposed 2022 capital expenditures of \$109,651,000, and related capital expenditures
- 8 for 2023 and 2024 totalling \$13,526,000 and \$4,276,000, respectively. The Application also
- 9 seeks an order of the Board, pursuant to section 78 of the *Public Utilities Act*, fixing and
- determining the Company's average rate base for 2020 in the amount of \$1,181,897,000.

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2.0 OVERVIEW

- 13 To provide context for the Board's consideration of the Application, this submission will:
- 14 (i) review the legislative framework under which the Application is brought; (ii) address specific
- 15 compliance requirements; (iii) summarize the process engaged in by the Board and participants
- in reviewing the Application; (iv) address issues raised in the submission of the intervenors; and
- 17 (v) conclude with Newfoundland Power's submissions with respect to the Application.

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3.0 LEGISLATIVE FRAMEWORK

- 20 Section 37(1) of the *Public Utilities Act* states that a public utility shall provide service and
- 21 facilities that are reasonably safe and adequate and just and reasonable. Section 37(1) is a
- cornerstone of Newfoundland Power's obligation to serve its customers.

1 Section 3(b) of the Electrical Power Control Act, 1994 states that all sources and facilities for the 2 production, transmission, and distribution of power should be managed and operated in a manner 3 that would result in: (i) the most efficient production, transmission, and distribution of power; 4 (ii) customers having equitable access to an adequate supply of power; and (iii) power being 5 delivered to customers at the lowest possible cost consistent with reliable service. Section 3(b) 6 does not create a hierarchy between these principles; rather, each is equally important in the 7 management and operation of electrical facilities in the province. 8 9 Section 41(1) of the *Public Utilities Act* requires Newfoundland Power to submit for the Board's 10 approval an annual capital budget of proposed improvements and additions to its property. 11 Section 41(3) prohibits the Company from proceeding with an improvement or addition to its 12 property in excess of \$50,000 without the Board's prior approval. 13 14 The principal focus of this proceeding is whether Newfoundland Power's proposal for 15 \$109.7 million in capital expenditures in 2022, and related expenditures in 2023 and 2024, is 16 reasonably required to meet its statutory obligations in serving its 271,000 customers. 17 18 Newfoundland Power submits that its 2022 Capital Budget represents the expenditures necessary 19 to maintain its electrical system and to continue meeting its statutory obligations under 20 Section 37(1) of the *Public Utilities Act* and Section 3(b) of the *Electrical Power Control Act*, 21 1994.

4.0 COMPLIANCE MATTERS

2 In Order No. P.U. 5 (2020) (the "2020 Capital Order"), the Board required specific information

3 be filed with the Application. The Application complies with the requirements of the 2020

4 Capital Order.

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6 In Order No. P.U. 19 (2003) (the "2003 Rate Order"), the Board required that evidence relating

7 to deferred charges and a reconciliation of average rate base to invested capital be filed with the

Application. The Application complies with the requirements of the 2003 Rate Order.

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10 In Order No. P.U. 35 (2003) (the "2004 Capital Order"), the Board required specific information,

and in particular a 5-year capital plan, be provided with the Application. The Application

12 complies with the requirements of the 2004 Capital Order.

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14 In Order No. P.U. 32 (2007) (the "2008 Rate Order"), the Board approved Newfoundland

Power's calculation of rate base in accordance with the Asset Rate Base Method. The

16 Application complies with the requirements of the 2008 Rate Order.

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In Order No. P.U. 2 (2019) (the "2019 Rate Order"), the Board approved a change in the

capitalization of pension expense. The Application complies with the requirements of the 2019

20 Rate Order.

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The Board's Capital Budget Application Guidelines, dated October 2007 (the "Guidelines"),

provide direction on the definition, categorization and evidentiary requirements for proposed

24 capital expenditures.

1 On March 9, 2020, the Board directed that annual capital budget applications should also 2 include: (i) an introductory presentation; (ii) information on the deferral of capital expenditures; 3 and (iii) information on the revenue requirement impact of capital expenditures. On 4 March 2, 2021, the Board confirmed these requirements continue to be in effect. 5 6 The Application complies with the Guidelines and all applicable directives of the Board. 7 8 **5.0 PROCESS** 9 On June 25, 2021, the Board issued a schedule of dates for hearing the Application. The 10 schedule provided for, among other items, an introductory presentation, the submission of 11 requests for information ("RFIs"), the filing of intervenor evidence, and written submissions. 12 13 Newfoundland Power provided an introductory presentation on the Application on July 8, 2021. 14 Board staff, the Consumer Advocate and Newfoundland and Labrador Hydro ("Hydro") attended 15 the presentation. 16 17 On July 13, 2021, Newfoundland Power received 174 RFIs on the Application, including 15 18 RFIs issued by the Board, 43 RFIs issued by Hydro, and 116 RFIs issued by the Consumer 19 Advocate. Newfoundland Power responded to all RFIs on August 4, 2021. An additional 59 20 RFIs were subsequently filed by the the Consumer Advocate. Newfoundland Power responded 21 to these additional RFIs on September 14, 2021.

On August 13, 2021, the Consumer Advocate filed intervenor evidence in the form of a report by
Elenchus Research Associates Inc. titled *Comments on Newfoundland Power's 2022 Capital*

- 3 Budget Application (the "Elenchus Report"). A total of 31 RFIs were filed on the Elenchus
- 4 Report, including 10 RFIs issued by the Board and 21 RFIs issued by Newfoundland Power.
- 5 The Consumer Advocate responded to all RFIs on September 3, 2021.

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- 7 On July 7, 2021, the Board directed that the Electrical Vehicle Charging Network project will
- 8 proceed separately from the remainder of the Application. This submission addresses all
- 9 expenditures proposed in the Application with the exception of this project.

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- On October 21, 2021, written submissions on the Application were filed by Hydro ("Hydro's
- 12 Submission") and the Consumer Advocate (the "Consumer Advocate's Submission"). Sections
- 6 and 7 outline Newfoundland Power's responses to Hydro's Submission and the Consumer
- 14 Advocate's Submission, respectively.

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6.0 RESPONSE TO HYDRO'S SUBMISSION

- 17 In its submission, Hydro expresses concern regarding Newfoundland Power's level of capital
- investment in light of the current operating environment and anticipated rate pressures related to
- 19 the Muskrat Falls Project. Hydro claims that growth in Newfoundland Power's capital spending
- does not appear to reflect a concerted effort to balance cost management and service reliability.
- 21 Hydro recommends the Board require Newfoundland Power to reduce its forecast capital
- 22 expenditures and report on the results during its next capital budget application.
- 23 Reference: Hydro's Submission, pages 1 and 2.

1 Newfoundland Power manages its annual capital expenditures through a comprehensive planning 2 process. This process routinely results in reductions in proposed capital expenditures. For 3 example, the capital plan filed with Newfoundland Power's 2021 Capital Budget Application 4 forecasted capital expenditures of approximately \$122.4 million for 2022. The Application 5 proposes capital expenditures that are over \$12 million less than forecast. 6 Reference: Newfoundland Power's 2021 Capital Budget Application, 2021 Capital Plan, 7 Attachment B, page B-1. 8 9 Newfoundland Power's capital plan is designed to provide reasonable predictability of future 10 requirements for capital expenditures. However, all planned expenditures undergo detailed 11 analyses prior to being proposed for Board approval. The record of this proceeding includes 12 significant information on the Company's management of its capital expenditures, including its 13 approach to deferring planned capital projects. Newfoundland Power identified 12 items from 14 6 capital projects that were originally planned for 2022, but were subsequently deferred. The 15 Company identified a further 12 items from 9 capital projects that have been deferred beyond its 16 current forecast period. 17 Reference: CA-NP-074; CA-NP-075. 18 19 The record of this proceeding demonstrates that fully justified capital expenditures can reduce 20 overall costs to customers while maintaining reliable service. As examples, the LED 21 Replacement Program provides street lighting customers with lower rates for a more reliable 22 service, the Application Enhancements project reduces overall costs to customers through the 23 elimination of manual processes, and the Workforce Management System Replacement project

1 provides a cost benefit to customers in comparison to returning to manual dispatching processes. 2 Reference: Application, Schedule B, page 34; Report 7.1 2022 Application Enhancements; 3 Report 7.3 Workforce Management System Replacement. 4 5 A benchmarking exercise included in Newfoundland Power's 2022 Capital Plan demonstrates 6 the Company's performance in balancing cost and reliability has been reasonable. It shows that 7 Newfoundland Power's investment in transmission and distribution assets has increased at a rate 8 that is 9% less than the average of other Atlantic Canadian utilities over the last decade. At the 9 same time, the Company's customers have experienced ½ the duration of outages in comparison 10 to customers of these utilities. 11 Application, 2022 Capital Plan, pages 14 to 15. Reference: 12 13 Newfoundland Power's capital planning process ensures that only capital expenditures that are 14 fully justified in providing reliable, least-cost service are proposed for Board approval. In the 15 Company's view, it would be contrary to the provincial power policy to defer capital 16 expenditures that are fully justified in providing reliable, least-cost service to customers. 17 18 Newfoundland Power submits that it has demonstrated sound management of its capital 19 expenditures and effectively balances the cost and reliability of the service provided to its 20 customers.

1 7.0 RESPONSE TO CONSUMER ADVOCATE'S SUBMISSION

2 *7.1* **General Comments** 3 This section addresses general comments made in the Consumer Advocate's Submission 4 regarding Newfoundland Power's level of capital spending, the Elenchus Report and the 5 COVID-19 pandemic. 6 7 The Consumer Advocate expresses concern regarding the level of capital spending proposed by 8 Newfoundland Power and alleges the Company has taken advantage of an inadequate regulatory 9 process to extract monopoly prices. 10 Consumer Advocate's Submission, pages 1, 22 and 24. Reference: 11 12 Capital expenditures proposed for 2022 are higher than historical expenditures due to the once-13 in-a-generation project to replace the Company's Customer Service System. The Application 14 proposes capital expenditures of approximately \$109.7 million for 2022. Excluding the 15 Customer Service System Replacement project, 2022 capital expenditures would total 16 approximately \$94 million. This is consistent with capital expenditures in 2017 when adjusted for inflation. 17 18 Reference: Application, 2022 Capital Plan, page 16, footnote 45. 19 20 Newfoundland Power rejects any implication that it has taken advantage of an inadequate 21 regulatory process to extract monopoly prices. Over the last 2 decades, the Company has

reduced its contribution to customer rates by over 20% on an inflation-adjusted basis, while also

reducing the duration of customer outages by over 40%. There has not been a customer rate

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1 increase resulting from a Newfoundland Power general rate application since 2016. 2 Reference: NLH-NP-042. 3 4 The Consumer Advocate claims the Elenchus Report concludes that: (i) Newfoundland Power 5 has not identified a reasonable range of alternatives for all capital projects; and (ii) the 6 Company's evaluation of alternatives is consistent with the inherent bias of investor-owned 7 utilities to prefer alternatives that require high levels of capital investment. Comments regarding 8 whether Newfoundland Power has met the prudency standard, as discussed in the Elenchus 9 Report, also relate to the identification of a reasonable range of alternatives. 10 Reference: Consumer Advocate's Submission, pages 1, 2 and 21; Elenchus Report, 11 pages 12 to 15. 12 13 While the Elenchus Report claims that Newfoundland Power excluded consideration of 14 alternatives, the report does not identify specific alternatives that were excluded and focuses on a 15 discussion of non-wires alternatives, such as solar and battery storage. There is no evidence 16 these alternatives are viable for Newfoundland Power in 2022. For example, the cost of a 17 combined solar and battery generation facility that provides capacity equivalent to that of the 18 Sandy Brook Plant is estimated at \$43 million, compared to \$6 million to replace the plant 19 penstock. 20 Reference: Elenchus Report, page 33; CA-NP-158. 21 22 Newfoundland Power evaluates all viable alternatives to determine the least-cost option to serve 23 customers. Net present value ("NPV") analyses are used to determine which alternative is least-24 cost. Certain alternatives reduce overall costs to customers, such as the LED Replacement

1 *Program.* Other alternatives reduce *capital* costs to customers, such as replacement of the 2 deteriorated 4.16 kV infrastructure at Humber Substation with 12.5 kV infrastructure. 3 Application, Schedule B, page 34; Report 2.1 2022 Substation Refurbishment and Reference: 4 Modernization, Section 3.1 Humber Substation. 5 6 Newfoundland Power submits that the Application assesses all reasonable alternatives for capital 7 projects proposed for 2022 to determine the least-cost options to serve customers. 8 9 The Consumer Advocate claims that the Application demonstrates a puzzling indifference to the effects of the COVID-19 pandemic. 10 11 Reference: Consumer Advocate's Submission, page 3. 12 13 Newfoundland Power does not expect the execution of its 2022 Capital Budget will be impacted 14 by the COVID-19 pandemic. Operational procedures amended in 2020 in response to public 15 health measures have returned to normal and are expected to remain stable in 2022. The 16 procurement of materials, such as software, during the COVID-19 pandemic is not expected to 17 impact the execution of capital projects in 2022. 18 Reference: CA-NP-164; CA-NP-165; Newfoundland Power's correspondence to the Board, 19 September 20, 2021, page 4, footnote 12. 20 21 7.2 Specific Comments 22 Newfoundland Power disagrees with the Consumer Advocate's comments on the capital projects 23 proposed for 2022, which can be characterized as either incorrect, misleading or not reflective of 24 the information on the record of this proceeding. To assist the Board in considering the

1 Application, this section provides an overview of each capital project, summarizes the Consumer 2 Advocate's claims on each project, and provides the Company's response to those claims. 3 4 Hydro Facility Rehabilitation 5 **Project Overview** 6 The Application proposes 2022 capital expenditures of \$2,062,000 for the *Hydro Facility* 7 Rehabilitation project. 8 9 The Hydro Facility Rehabilitation project is required to replace or refurbish hydro plant 10 equipment that has failed in service or is significantly deteriorated. The 2022 project includes: 11 (i) equipment replacements due to in-service failures; (ii) replacement of the head gate at Morris 12 Plant, which has failed and is being held in place with secure straps; (iii) replacement of the 13 surge tank cladding at Petty Harbour Plant, which has failed and is being held in place with 14 nylon straps; (iv) overhaul of the unit #2 turbine at Petty Harbour Plant due to deterioration of 15 the wicket gate and related components; and (v) generation control system upgrades to replace 16 obsolete modules that have been discontinued by the vendor. 17 Reference: Application, Report 1.1 2022 Facility Rehabilitation. 18 19 Consumer Advocate's Submission 20 The Consumer Advocate claims that: (i) Newfoundland Power has not identified a reasonable 21 range of alternatives for the *Hydro Facility Rehabilitation* project; (ii) no information has been 22 provided concerning the implications and costs of deferring this project; (iii) no information has 23 been provided showing that the Morris and Petty Harbour hydro plants will be required

1 following commissioning of the Muskrat Falls Project; and (iv) estimates of the value of plant

- 2 production are unreliable as the effect of rate mitigation is unknown.
- 3 Reference: Consumer Advocate's Submission, page 5.

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- 5 Newfoundland Power's Response
- 6 The Consumer Advocate has not identified a reasonable alternative that Newfoundland Power
- 7 failed to consider as part of the *Hydro Facility Rehabilitation* project. The alternative to
- 8 maintaining the Company's hydro plants is to retire them. Determining the cost to retire a hydro
- 9 plant requires a detailed, site-specific evaluation. Newfoundland Power assesses the cost of
- retiring a hydro plant when: (i) significant capital expenditures are required to replace or
- refurbish plant components; and (ii) an economic analysis indicates that continued operation of
- the plant is not economically justified. The individual plant components to be replaced in 2022
- under the *Hydro Facility Rehabilitation* project are modest in cost and would not impact the
- economic viability of the plants. Accordingly, plant retirement is not a reasonable alternative.
- 15 Reference: PUB-NP-002.

- 17 Deferring the replacement of failed components would increase the risk of plant downtime,
- thereby increasing costs to customers. Based on Hydro's 2020 marginal cost update, the value of
- 19 Newfoundland Power's plant production following commissioning of the Muskrat Falls Project
- 20 is approximately \$37.1 million annually. Hydro's estimates of future marginal costs are based
- 21 on export prices and are not expected to be impacted by rate mitigation efforts.
- 22 Reference: CA-NP-020; CA-NP-022; PUB-NP-003.

1 Newfoundland Power submits that all reasonable alternatives have been considered as part of the

- 2 Hydro Facility Rehabilitation project. This project is required to provide customers with reliable
- 3 service at the lowest possible cost and should be approved.

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- 5 Sandy Brook Plant Penstock Replacement
- 6 Project Overview
- 7 The Application proposes 2022 capital expenditures of \$400,000 and 2023 capital expenditures
- 8 of \$4,694,000 for the Sandy Brook Plant Penstock Replacement project.

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- 10 The Sandy Brook Plant is supplied via a wood stave penstock that was installed in 1963. A
- 11 condition assessment conducted by Kleinschmidt Canada Inc. determined the entire length of the
- penstock is experiencing joint leakage and excessive decay, and that failure of the penstock is
- 13 likely due to wood stave collapse.
- 14 Reference: Application, Report 1.2 Sandy Brook Plant Penstock Replacement, Appendix B.

- An economic evaluation determined that continued operation of the Sandy Brook Plant,
- including penstock replacement, is least-cost for customers. The value of production from the
- 18 Sandy Book Plant is approximately 3 to 4 times the cost of plant production. The net benefit of
- 19 plant production is between 7.04 ¢/kWh and 10.21 ¢/kWh. Numerous sensitivity analyses have
- 20 confirmed the economic viability of the plant.
- 21 Reference: Application, Report 1.2 Sandy Brook Plant Penstock Replacement, Appendix A;
- 22 CA-NP-077; CA-NP-158; CA-NP-161; CA-NP-162; NLH-NP-015;
- 23 NLH-NP-016; NLH-NP-019; NLH-NP-020; NLH-NP-022.

1 Consumer Advocate's Submission

- 2 The Consumer Advocate claims that: (i) Newfoundland Power has not identified a reasonable
- 3 range of alternatives for the Sandy Brook Plant Penstock Replacement project; (ii) no
- 4 information has been provided concerning the implications and costs of deferring this project;
- 5 (iii) no information has been provided showing that the Sandy Brook Plant will be required
- 6 following commissioning of the Muskrat Falls Project; and (iv) estimates of value of plant
- 7 production are unreliable as the effect of rate mitigation is unknown.
- 8 Reference: Consumer Advocate's Submission, pages 5 to 6.

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Newfoundland Power's Response

- 11 The Consumer Advocate has not identified a reasonable alternative that Newfoundland Power
- 12 failed to consider as part of the Sandy Brook Plant Penstock Replacement project. As stated
- above, the Company evaluates the retirement of a hydro plant when continued operation is not
- economically justified. Continued operation of the Sandy Brook Plant is economically justified.
- 15 The economic evaluation of the plant is based on Hydro's 2020 marginal cost update. Hydro's
- 16 estimates of future marginal costs are based on export prices and are not expected to be impacted
- by provincial rate mitigation efforts, as referenced by the Consumer Advocate. Hydro supports
- 18 continued operation of the Sandy Brook Plant. Deferring penstock replacement would increase
- 19 the risk of plant downtime, which would increase costs to customers.
- 20 Reference: Hydro's Submission, page 2; CA-NP-024.

- Newfoundland Power submits that all reasonable alternatives have been considered as part of the
- 23 Sandy Brook Plant Penstock Replacement project. This project is required to provide reliable
- service to customers at the lowest possible cost and should be approved.

Thermal Plant Facility Rehabilitation

- 2 Project Overview
- 3 The Application proposes 2022 capital expenditures of \$307,000 for the *Thermal Plant Facility*
- 4 Rehabilitation project.

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- 6 Newfoundland Power maintains gas turbine and diesel units to provide emergency generation
- 7 and to reduce customer outages during maintenance on the electrical system. *Thermal Plant*
- 8 Facility Rehabilitation is a recurring annual project required to replace or refurbish thermal plant
- 9 components that are deteriorated or failed in service.
- 10 Reference: Application, Schedule B, pages 8 and 9.

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- 12 Consumer Advocate's Submission
- 13 The Consumer Advocate claims that: (i) Newfoundland Power has not identified a reasonable
- range of alternatives for the *Thermal Plant Facility Rehabilitation* project; and (ii) information
- has not been provided regarding thermal units, such as the capacity, location and age of the units.
- 16 Reference: Consumer Advocate's Submission, page 6.

- 18 Newfoundland Power's Response
- 19 The Consumer Advocate has not identified a reasonable alternative that Newfoundland Power
- 20 failed to consider as part of the *Thermal Plant Facility Rehabilitation* project. The Company
- 21 provided all information that was requested with respect to its thermal facilities. This includes a
- 22 list of all stationary thermal units and their years in service, and information on the hours,
- location and reasons for deployment of its mobile diesel unit, MD3.
- 24 Reference: CA-NP-146; CA-NP-117.

1 Newfoundland Power submits that all reasonable alternatives have been considered as part of the 2 Thermal Plant Facility Rehabilitation project. This project is necessary to provide reliable 3 service to customers at the lowest possible cost and should be approved. 4 5 Substation Refurbishment and Modernization 6 **Project Overview** 7 The Application proposes 2022 capital expenditures of \$7,049,000 for the Substation 8 Refurbishment and Modernization project. 9 10 Substation Refurbishment and Modernization involves the replacement and modernization of 11 deteriorated and substandard infrastructure, such as breakers, bus structures, switches and 12 transformers. The 2022 project includes the refurbishment and modernization of 3 substations. 13 14 Humber Substation serves 1,850 customers in the City of Corner Brook. The 4.16 kV 15 infrastructure at Humber Substation was installed in the 1950s and 1960s and is deteriorated. 16 The results of a condition assessment conducted by van Kooy Transformer Consulting Services 17 Inc. determined the 66 kV to 4.16 kV transformer, HUM-T2, has deteriorated and is at the end of 18 its service life. An NPV analysis determined the least-cost alternative to address this 19 deterioration is to replace the 4.16 kV infrastructure with 12.5 kV infrastructure. 20 Reference: Application, Report 2.1 2022 Substation Refurbishment and Modernization, Section 3.1 Humber Substation. 21 22 23 Tors Cove Substation connects the Tors Cove Plant to the transmission system. Transformer 24 TCV-T1 is 71 years old with severe rusting and requires replacement. Wood pole structures at

1 the substation have also deteriorated and the site layout does not meet current design standards. 2 Refurbishment and modernization is required. Application, Report 2.1 2022 Substation Refurbishment and Modernization, 3 Reference: Section 3.2 Tors Cove Substation. 4 5 6 Glovertown Substation serves 2,730 customers in the Glovertown and Eastport Peninsula areas. 7 This item is clustered with the *Transmission Line Rebuild* project for transmission line 124L. 8 Transmission line 124L is significantly deteriorated and requires rebuilding. Refurbishing and 9 modernizing Glovertown Substation would provide looped transmission service to customers in 10 this area. Application, Report 2.1 2022 Substation Refurbishment and Modernization, 11 Reference: 12 Section 3.3 Glovertown Substation. 13 14 Consumer Advocate's Submission 15 The Consumer Advocate claims that: (i) increasing expenditures under the Substation 16 Refurbishment and Modernization project over the 2022-2026 period are unsustainable; 17 (ii) comprehensive information has not been provided for the Humber Substation project; (iii) no 18 reason has been provided for prioritizing the Glovertown Substation project, other than 19 coordination with rebuilding transmission line 124L; and (iv) while the Tors Cove Substation 20 requires refurbishment, no information has been provided on the Tors Cove Plant. 21 Reference: Consumer Advocate's Submission, pages 6 to 8. 22 23 Newfoundland Power's Response 24 Increasing expenditures for Substation Refurbishment and Modernization over the forecast 25 period reflect the anticipated need to refurbish and modernize major substations in urban areas,

1 including St. John's. These substations have been in service for an average of 58 years and are 2 anticipated to require capital expenditures over the forecast period. However, more detailed 3 engineering analysis will be conducted to determine whether individual projects are required. 4 Reference: CA-NP-027. 5 6 With respect to Humber Substation, the Consumer Advocate references only select passages 7 from the 2020 condition assessment of HUM-T2 conducted by van Kooy Transformer 8 Consulting Services Inc. The condition assessment was comprehensive and determined that 9 transformer HUM-T2 is approaching end of life and should be a candidate for decommissioning 10 by 2022. Supporting this recommendation is the age of the transformer, observed mechanical 11 degradation and maintenance concerns. Refurbishment of Humber Substation is also required to 12 address deterioration of other 4.16 kV substation infrastructure, which is not referenced in the 13 Consumer Advocate's Submission. An NPV analysis confirmed the proposed project is the 14 least-cost alternative to address the deteriorated condition of Humber Substation. 15 Reference: Application, Report 2.1 2022 Substation Refurbishment and Modernization, 16 Appendix B, Attachment B. 17 18 With respect to Tors Cove Substation, Newfoundland Power conducted an economic evaluation 19 of the Tors Cove Plant as part of refurbishing a generating unit in 2017. The economic 20 evaluation included costs associated with refurbishing and modernizing the substation. The 21 Company revisited the analysis to reflect project costs proposed for 2022. The analysis 22 confirmed continued operation of the plant is economically justified. 23 Reference: NLH-NP-002.

1 With respect to Glovertown Substation, refurbishment and modernization will allow the 2 substation to be reconfigured to provide looped transmission service to 3,700 customers served 3 by 3 substations along transmission line 124L in Central Newfoundland. Without this 4 reconfiguration, an outage to either substation or anywhere along the transmission line would 5 result in outages to all 3,700 customers. The Consumer Advocate's Submission does not 6 specifically address the project to rebuild transmission line 124L, which is heavily deteriorated. 7 Reference: Application, Report 3.1 2022 Transmission Line Rebuild. 8 9 Newfoundland Power submits that the Substation Refurbishment and Modernization project 10 includes comprehensive information on the need to refurbish and modernize Humber, Tors Cove 11 and Glovertown substations. This project is required to provide reliable service to customers at 12 the lowest possible cost and should be approved. 13 14 Replacements Due to In-Service Failures 15 **Project Overview** 16 The Application proposes 2022 capital expenditures of \$3,691,000 for the Replacements Due to 17 *In-Service Failures* project. 18 19 Replacements Due to In-Service Failures is a recurring annual project required to replace 20 substation equipment that has been removed from service due to storm damage, lightning strikes, 21 vandalism, electrical or mechanical failure, corrosion, obsolescence or failure during 22 maintenance testing. Substation equipment that fails in service requires immediate attention as 23 these failures can result in outages to thousands of customers at once. 24 Reference: Application, Schedule B, pages 13 to 14.

- 1 Consumer Advocate's Submission
- 2 The Consumer Advocate claims that Newfoundland Power has not explained why the 2022
- 3 budget for *Replacements Due to In-Service Failures* is 4.1% higher than average.
- 4 Reference: Consumer Advocate's Submission, page 8.

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- 6 Newfoundland Power's Response
- 7 The budget for the Replacements Due to In-Service Failures project is based on a 5-year
- 8 historical average adjusted for inflation. Accordingly, the 4.1% increase in expenditures in 2022
- 9 reflects inflationary increases.

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- 11 Newfoundland Power submits that the *Replacements Due to In-Service Failures* project is
- 12 essential to ensuring the continued operation of Company substations. This project is necessary
- to provide reliable service to customers at the lowest possible and should be approved.

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PCB Bushing Phase-Out

- 16 <u>Project Overview</u>
- 17 The Application proposes 2022 capital expenditures of \$899,000 for the PCB Bushing Phase-
- 18 Out project.

- The PCB Bushing Phase-Out project is required to comply with the Government of Canada's
- 21 PCB Regulations. These regulations require that equipment with PCB concentrations greater
- than 50 parts-per-million be removed from service by 2025.
- 23 Reference: Application, Schedule B, pages 15 to 16.

1 Consumer Advocate's Submission 2 The Consumer Advocate states that the PCB Bushing Phase-Out project is required to meet PCB 3 Regulations and is justified. 4 5 Newfoundland Power's Response 6 Newfoundland Power submits that the PCB Bushing Phase-Out project is necessary to meet 7 Government of Canada regulations and should be approved. 8 9 Transmission Line Rebuild 10 **Project Overview** The Application proposes 2022 capital expenditures of \$10,494,000, 2023 capital expenditures 11 12 of \$4,346,000, and 2024 capital expenditures of \$4,276,000 for the Transmission Line Rebuild 13 project. 14 15 The Transmission Line Rebuild project involves rebuilding sections of the Company's oldest, 16 most deteriorated transmission lines. The 2022 project is a multi-year project that includes 17 rebuilding 2 transmission lines. 18 19 Transmission line 124L was constructed in 1964 and runs between Clarenville and Gambo 20 substations. Inspections determined that a section of this line is heavily deteriorated, with 97% 21 of poles and 94% of eye bolts experiencing deterioration. Transmission line 124L serves 22 approximately 3,700 customers in Central Newfoundland via 3 substations. With the current

configuration, a fault at either substation or anywhere along the transmission line results in an

outage to all customers. This section of line is proposed to be reconfigured to provide looped

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2 transmission service, thereby reducing outages to customers. 3 Reference: Application, Report 3.1 2022 Transmission Line Rebuild, 4 Section 3.0 Transmission Line 124L. 5 6 Transmission line 94L is a radial line constructed in 1969 that serves as the sole source of supply 7 for 2,500 customers on the Southern Avalon Peninsula. Inspections determined that this line is 8 heavily deteriorated, with 62% of poles, 68% of cross braces and 83% of cribs experiencing 9 deterioration. As this is a radial line with no alternate sources of supply, its deteriorated 10 condition exposes customers in the area to the potential for more frequent and extended outages. 11 Transmission line 94L is proposed to be rebuilt over 3 years, with approximately 22 kilometres rebuilt in 2022 and approximately 20 kilometres rebuilt in each of 2023 and 2024. 12 13 Reference: Application, Report 3.1 2022 Transmission Line Rebuild, 14 Section 4.0 Transmission Line 94L. 15 16 Consumer Advocate's Submission 17 The Consumer Advocate claims that: (i) increasing expenditures under the *Transmission Line* 18 Rebuild project over the 2022-2026 period are unsustainable; (ii) because Newfoundland Power 19 has not quantified the condition of transmission line 94L prior to 2020, the Board cannot know 20 how its condition compares to earlier years; and (iii) transmission line 94L has experienced no 21 reliability events over the past 5 years and the record indicates continued maintenance is a 22 significantly better option than rebuilding. 23 Reference: Consumer Advocate's Submission, pages 8 to 9.

1 Newfoundland Power's Response

2 Historical information regarding the condition of transmission line 94L is not available and is not

3 required to observe that this transmission line is now heavily deteriorated.

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5 Transmission lines are critical to providing reliable service to customers. Newfoundland Power

implements a proactive approach to rebuilding its oldest and most deteriorated transmission lines

based on their condition and criticality in serving customers. Transmission line 94L is critical as

it is the sole source of supply for 2,500 customers. Waiting for reliability to degrade would

therefore result in poor service reliability for thousands of customers. The rebuilding of this

transmission line has been deferred by over 10 years through routine maintenance. However,

continued maintenance could not practically address the widespread deterioration now found on

transmission line 94L, including the replacement of 62% of poles, 68% of cross braces and 83%

of cribs.

14 Reference: CA-NP-073.

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Newfoundland Power submits that the *Transmission Line Rebuild* project includes

comprehensive information that transmission lines 94L and 124L are critical to serving

customers and are experiencing widespread deterioration. This project is required to provide

reliable service to customers at the lowest possible cost and should be approved.

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Transmission Line Maintenance and 3rd Party Relocations

22 Project Overview

The Application proposes 2022 capital expenditures of \$2,398,000 for the *Transmission Line*

24 Maintenance and 3rd Party Relocations project.

Transmission Line Maintenance and 3rd Party Relocations is a recurring annual project required 1 to replace deteriorated and deficient transmission line infrastructure identified through 2 3 inspection. It also involves accommodating requests from governments, communications 4 providers and customers to relocate or replace transmission structures. 5 Reference: Application, Schedule B, pages 21 to 22. 6 7 Consumer Advocate's Submission 8 The Consumer Advocate claims that: (i) Newfoundland Power has not explained why proposed 9 expenditures for 2022 are higher than the average over the last 5 years; and (ii) maintenance 10 costs should decrease following conclusion of the *Transmission Line Rebuild Strategy*. 11 Reference: Consumer Advocate's Submission, pages 8 to 9. 12 Newfoundland Power's Response 13 The cost estimate for the Transmission Line Maintenance and 3rd Party Relocations project is 14 15 based on a 5-year historical average adjusted for inflation. Accordingly, cost increases reflect 16 inflation. 17 18 The transmission lines to be rebuilt under the *Transmission Line Rebuild Strategy* comprise only 19 27% of Newfoundland Power's total transmission lines on a kilometre basis. The Company does 20 not expect its maintenance expenditures to decrease following conclusion of the strategy. 21 Maintenance expenditures are a function of the number of deficiencies identified and corrected 22 in a given year. In 2021, 64% of the Company's transmission lines will be 40 years of age or 23 older. Given the age of these assets, ongoing maintenance will continue to be required.

NLH-NP-013.

24

Reference:

1 Newfoundland Power submits that maintaining the transmission system is essential to providing 2 reliable service to customers, and responding to third-party requests is required to maintain safe 3 and adequate facilities. This project is required to provide reliable, safe and adequate service to 4 customers at the lowest possible cost and should be approved. 5 6 Extensions 7 Project Overview 8 The Application proposes 2022 capital expenditures of \$10,333,000 for the Extensions project. 9 10 Extensions is a recurring annual project required to construct primary and secondary distribution 11 lines to connect new customers to the electrical system. It also involves upgrading existing 12 distribution lines to accommodate customers' increased electrical system loads. 13 Reference: Application, Schedule B, pages 24 to 25. 14 15 Consumer Advocate's Submission 16 The Consumer Advocate claims that: (i) Newfoundland Power has not provided detailed data 17 indicating how its forecast of 2,038 customer connections in 2022 is derived; (ii) the forecast is 18 likely inflated based on past experience; and (iii) it is doubtful the project is required to address 19 increases in electrical system load as energy sales and demand have declined or flattened. 20 Reference: Consumer Advocate's Submission, pages 9 to 11.

1 Newfoundland Power's Response 2 The Company explained that its forecast of new customer connections is derived from economic 3 data published by the Conference Board of Canada in its March 2021 Provincial Medium-Term 4 Forecast. The key economic indicators used are provided on the record of this proceeding. 5 CA-NP-030. Reference: 6 7 While Newfoundland Power's energy sales have declined in recent years, the Company 8 continues to see growth in new customer connections. For example, Newfoundland Power 9 experienced an average of over 2,600 new customer connections annually from 2017 to 2020. 10 Additionally, system load growth continues to be observed in certain areas where commercial 11 and residential development is occurring, such as the St. John's area. 12 Reference: Application, Schedule B, page 25. 13 14 Newfoundland Power submits that the *Extensions* project is based on the best available 15 information. This project is necessary to provide customers with equitable access to an adequate 16 supply of power and should be approved. 17 18 Meters and Services 19 Project Overview 20 The Application proposes 2022 capital expenditures of \$818,000 for the *Meters* project and 21 \$3,038,000 for the Services project. 22 23 Meters is a recurring annual project required to install meters for new customers and replace

deteriorated and failed meters for existing customers. Services is a recurring annual project

1 required to install service wires to connect new customers, replace existing service wires that 2 have failed or deteriorated, and upgrade service wires to accommodate customers' increasing 3 electrical system loads. 4 Reference: Application, Schedule B, pages 26 to 31. 5 6 Consumer Advocate's Submission 7 For both Meters and Services, the Consumer Advocate claims there is significant doubt regarding 8 Newfoundland Power's forecast for new customer connections in 2022 based on its declining 9 energy sales and demand, and variances from forecast experienced in 2019 and 2020. 10 Reference: Consumer Advocate's Submission, page 11. 11 12 Newfoundland Power's Response 13 As stated above, while Newfoundland Power's energy sales have declined in recent years, the 14 Company continues to see requests for new customer connections. To the extent that actual 15 capital expenditures vary from forecast, so too will the costs that are recovered from customers 16 for the Meters and Services projects. 17 18 Newfoundland Power submits that the *Meters* and *Services* projects are based on the best 19 available information. These projects are required to provide customers with equitable access to 20 an adequate supply of power and should be approved.

1 Street Lighting

- 2 Project Overview
- 3 The Application proposes 2022 capital expenditures of \$2,507,000 for the *Street Lighting*
- 4 project.

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- 6 Street Lighting is a recurring annual project required to install new street lighting fixtures and
- 7 replace overhead and underground wiring, where necessary.
- 8 Reference: Application, Schedule B, pages 32 to 33.

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- 10 Consumer Advocate's Submission
- 11 The Consumer Advocate claims that, given recent variances, Newfoundland Power has not
- 12 addressed whether there should be changes to the budgeting process for this project.
- 13 Reference: Consumer Advocate's Submission, pages 11 to 12.

- 15 Newfoundland Power's Response
- Newfoundland Power changed its costing methodology for the *Street Lighting* project for the
- 17 Application. Previously, the costing methodology was based on unit costs and a forecast of new
- 18 customer connections. Based on variances in recent years, the Company now estimates the cost
- of this project based on the most recent 5-year average, adjusted for inflation. This change is
- described on page 33 of Schedule B to the Application.
- 21 Reference: Application, Schedule B, page 33.

1 Street Lighting - LED Replacement Program

- 2 Project Overview
- 3 The Application proposes 2022 capital expenditures of \$5,428,000 for the Street Lighting LED
- 4 Replacement Program.

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- 6 The LED Replacement Program involves the replacement of existing High Pressure Sodium
- 7 ("HPS") fixtures with LED fixtures. Customer rates for LED fixtures are between 9% and 39%
- 8 less than customer rates for HPS fixtures. LED fixtures also experience fewer outages.
- 9 Reference: Application, Schedule B, pages 34 to 35.

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- 11 <u>Consumer Advocate's Submission</u>
- 12 The Consumer Advocate states the *LED Replacement Program* is consistent with the description
- of a multi-year project, but does not otherwise comment on this project.
- 14 Reference: Consumer Advocate's Submission, page 12.

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- 16 Newfoundland Power's Response
- 17 The LED Replacement Program is not a multi-year project. Capital expenditures for the LED
- 18 Replacement Program are proposed, reviewed and approved by the Board on an annual basis to
- 19 ensure they continue to be in the interest of customers.

- 21 Newfoundland Power submits that the LED Replacement Program provides customers with
- lower rates for a more reliable service. This project is required to provide customers with
- reliable service at the lowest possible cost and should be approved.

Transformers

- 2 Project Overview
- 3 The Application proposes 2022 capital expenditures of \$5,958,000 for the *Transformers* project.
- 4 Transformers is a recurring annual project required to install transformers to serve customer
- 5 growth and replace or refurbish units that have deteriorated or failed in service.
- 6 Reference: Application, Schedule B, pages 36 to 37.

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- 8 Consumer Advocate's Submission
- 9 The Consumer Advocate claims there is considerable doubt as to whether customer growth will
- occur, given energy sales and demand have declined or flattened, and recommends the Board
- reject the portion of this project that involves transformers required to serve customer growth.
- 12 Reference: Consumer Advocate's Submission, page 12.

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- 14 Newfoundland Power's Response
- 15 As stated previously, while energy sales have declined overall, the Company continues to see
- requests for new customer connections and increased electrical system loads in certain areas.
- 17 The Company has an obligation to provide customers with equitable access to an adequate
- supply of power. Rejecting the portion of this project required to serve customer growth would
- 19 be inconsistent with this obligation.

- Newfoundland Power submits that the *Transformers* project is based on the best available
- 22 information. This project is necessary to provide customers with equitable access to an adequate
- supply of power and should be approved.

Reconstruction

2 Project Overview

3 The Application proposes 2022 capital expenditures of \$5,902,000 for the *Reconstruction*

4 project.

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- 6 Reconstruction is a recurring annual project required to replace deteriorated or damaged
- 7 structures and equipment on the distribution system. This project addresses high-priority
- 8 deficiencies that are identified during inspections or operational experience. Deficiencies
- 9 identified during inspections are addressed in a planned manner. Other deficiencies are
- addressed on an emergency basis in response to storms, vehicle accidents and other events.
- 11 Reference: Application, Schedule B, pages 38 to 39.

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Consumer Advocate's Submission

- 14 The Consumer Advocate claims that: (i) increasing expenditures under the *Reconstruction*
- project over the 2022-2026 period are unsustainable; and (ii) Newfoundland Power offers no
- 16 explanation as to why the *Reconstruction* budget is greater than the *Rebuild Distribution Lines*
- 17 budget. The Consumer Advocate questions how structures and equipment can become so
- deteriorated as to require replacement under *Reconstruction*, and yet have not been identified in a
- 19 timely enough manner to be undertaken under the *Rebuild Distribution Lines* project.
- 20 Reference: Consumer Advocate's Submission, page 13.

21

22 Newfoundland Power's Response

- 23 Increasing expenditures for the *Reconstruction* project over the forecast period reflect
- inflationary increases throughout the 5-year period.

1 Newfoundland Power maintains over 300 distribution feeders. The Company inspects its 2 distribution feeders on a 7-year cycle. High-priority deficiencies are addressed in the year 3 identified. Other deficiencies are addressed in a planned fashion during the subsequent year. 4 The fact that expenditures for *Reconstruction* are higher than expenditures for *Rebuild* 5 Distribution Lines simply reflects how Newfoundland Power targets its capital expenditures to 6 address the highest priority deficiencies on the distribution system. 7 Reference: CA-NP-033. 8 9 Rebuild Distribution Lines 10 **Project Overview** 11 The Application proposes 2022 capital expenditures of \$4,333,000 for the Rebuild Distribution 12 Lines project. 13 14 Rebuild Distribution Lines is a recurring annual project required to replace deteriorated or 15 damaged structures and equipment on the distribution system. This project is a preventative 16 maintenance program that includes both the selective replacement of line components and, when 17 necessary, the rebuilding of sections of line. 18 Reference: Application, Schedule B, pages 40 to 42. 19 20 Consumer Advocate's Submission

- 21 The Consumer Advocate claims that: (i) increasing expenditures under the Rebuild Distribution
- 22 Lines project over the 2022-2026 period are unsustainable; and (ii) tardiness in identifying
- 23 rebuild work may explain why more expensive unplanned replacement occurs under the

Reconstruction project. 1 2 Reference: Consumer Advocate's Submission, page 13. 3 4 Newfoundland Power's Response 5 Increasing expenditures for the Rebuild Distribution Lines project over the forecast period reflect 6 inflationary increases throughout the 5-year period. 7 8 As described above, the difference between the cost of the *Reconstruction* project versus the 9 Rebuild Distribution Lines project does not reflect tardiness in identifying deficiencies. Rather, 10 it reflects the Company's approach of targeting capital expenditures on the highest priority 11 deficiencies on the distribution system. 12 13 Relocate/Replace Distribution Lines for Third Parties 14 **Project Overview** 15 The Application proposes 2022 capital expenditures of \$3,370,000 for the *Relocate/Replace* 16 Distribution Lines for Third Parties project. 17 18 Relocate/Replace Distribution Lines for Third Parties is a recurring annual project required to

accommodate requests from governments, communications providers and customers to relocate

Newfoundland Power Inc. – 2022 Capital Budget Application

Application, Schedule B, pages 43 to 45.

or replace distribution structures.

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Reference:

1 Consumer Advocate's Submission

- 2 The Consumer Advocate claims that: (i) increasing expenditures under the *Relocate/Replace*
- 3 Distribution Lines for Third Parties project over the 2022-2026 period are unsustainable; and
- 4 (ii) the Board must consider whether these expenditures are warranted, particularly when
- 5 Newfoundland Power cannot identify the specific items required.
- 6 Reference: Consumer Advocate's Submission, page 13.

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- 8 Newfoundland Power's Response
- 9 Increasing capital expenditures for the Relocate/Replace Distribution Lines for Third Parties
- project over the forecast period reflect inflationary increases throughout the 5-year period.
- 11 Actual expenditures incurred under this project will reflect the actual requests received from
- 12 governments, communications providers and customers throughout the year. These requests are
- 13 not generally foreseeable and must be addressed in a timely manner.

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- 15 Newfoundland Power submits that the Relocate/Replace Distribution Lines for Third Parties
- project is based on the best available information. This project is required to maintain safe and
- 17 adequate facilities and should be approved.

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- Distribution Reliability Initiative
- 20 Project Overview
- The Application proposes 2022 capital expenditures of \$350,000 for the *Distribution Reliability*
- 22 *Initiative*.

1 The Distribution Reliability Initiative involves the replacement of deteriorated poles, conductor 2 and hardware on Newfoundland Power's worst-performing feeders. The 2022 capital project 3 involves upgrading a 2 kilometre section of Broad Cove ("BCV") Substation feeder BCV-04 in 4 Portugal Cove - St. Phillip's. Customers served by this section of feeder experienced an average 5 of approximately 16 hours of outage in 2020, approximately 9 times the Company average. This 6 section of line is located along the coast of Conception Bay. An engineering assessment 7 determined the primary cause of customer outages on this section of line is wind and salt 8 contamination caused by high winds. Targeting capital expenditures to address this section of 9 line will improve the poor service reliability experienced by customers in this area. 10 Reference: Application, Report 4.1 Distribution Reliability Initiative. 11 12 Consumer Advocate's Submission 13 The Consumer Advocate claims that: (i) distribution feeder BCV-04 is far from Newfoundland 14 Power's worst-performing distribution feeder; and (ii) the Company did not specify the number 15 of customers served by the 2 kilometre section of BCV-04 to be rebuilt. Reference: 16 Consumer Advocate's Submission, pages 13 to 14. 17 18 Newfoundland Power's Response 19 While it is correct that BCV-04 is not among Newfoundland Power's worst-performing feeders, 20 the Company is not proposing to rebuild the entire distribution feeder. Newfoundland Power is 21 proposing to rebuild a relatively short, 2 kilometre section of this feeder. The duration of 22 outages experienced by customers in this location is 9 times the Company average.

1 While the 2 kilometre section of distribution feeder BCV-04 proposed to be rebuilt directly 2 serves 140 customers, this section of line runs along the main trunk of the feeder. Accordingly, 3 the service reliability of all 1,037 customers will be impacted by this project. 4 Reference: CA-NP-151. 5 6 Newfoundland Power submits that the *Distribution Reliability Initiative* appropriately targets 7 capital expenditures in an area where customers experience among the worst service reliability in 8 the Company's service territory. This project is required to provide customers with reliable 9 service at the lowest possible cost and should be approved. 10 11 Feeder Additions for Load Growth 12 Project Overview 13 The Application proposes 2022 capital expenditures of \$1,690,000 for the Feeder Additions for 14 Load Growth project. 15 16 Feeder Additions for Load Growth involves upgrading sections of distribution feeders to address 17 overload conditions and provide additional capacity to accommodate growth in the number of 18 customers and electrical system loads. Capital expenditures proposed for 2022 include 19 upgrading sections of 4 distribution feeders: 20 21 A section of Pulpit Rock ("PUL") Substation feeder PUL-03 is proposed to be upgraded (i) 22 from 2-phase to 3-phase to address overload conditions resulting from customer 23 connection growth, large home renovations and electrical service upgrades in areas 24 around Bauline Line.

1 (ii) A section of Virginia Waters Substation ("VIR") Substation feeder VIR-01 is proposed to 2 be upgraded from single-phase to 3-phase to address overload conditions resulting from 3 customer connection growth, large home renovations and electrical service upgrades in 4 the areas around Marine Drive. 5 6 (iii) Sections of Springfield ("SPF") Substation feeder SPF-01 are proposed to be upgraded to 7 3-phase, from single-phase and 2-phase, to address overload conditions resulting from 8 residential and cabin development in the community of Halls Town and surrounding area. 9 10 (iv) A section of Harmon ("HAR") Substation feeder HAR-02 in Stephenville is proposed to 11 be reconductored to address overload conditions resulting from increased load associated 12 with the Northern Harvest Smolt Salmon Hatchery development in the area. 13 Reference: Application, Schedule B, pages 48 to 49; Report 4.2 Feeder Additions for Load 14 Growth. 15 16 Consumer Advocate's Submission 17 The Consumer Advocate questions whether Newfoundland Power has been forced to deny 18 service to customers located on the 4 feeders to be addressed under the Feeder Additions for 19 Load Growth project, and claims the Company has not explained why these feeders have priority 20 over others in its 5-year capital plan or why the project cannot be deferred. 21 Reference: Consumer Advocate's Submission, pages 14 to 15.

1 Newfoundland Power's Response 2 Deferring capital expenditures to the point where Newfoundland Power is forced to deny service 3 would not be acceptable to customers and would contravene the Company's obligation to 4 provide equitable access to an adequate supply of power. 5 6 Newfoundland Power assesses all viable alternatives for addressing overload conditions on 7 distribution feeders. The 4 feeders identified for upgrading in 2022 have been prioritized based 8 on existing or forecast overload conditions and assessments of alternatives. Distribution feeders 9 PUL-03, VIR-01 and SPF-01 are currently experiencing overload conditions. HAR-02 is 10 forecasted to become overloaded in 2022 due to a large commercial development. Feeder 11 balancing and load transfers are no longer viable options to manage these overload conditions. 12 Upgrades are therefore required. 13 14 Newfoundland Power submits that all viable alternatives have been assessed to address existing 15 and forecast overload conditions on the distribution feeders included in the Feeder Additions for 16 Load Growth project. This project is required to provide reliable service to customers at the 17 lowest possible cost and should be approved. 18 19 Distribution Feeder Automation 20 **Project Overview** 21 The Application proposes 2022 capital expenditures of \$893,000 for the Distribution Feeder

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Automation project.

1 Distribution Feeder Automation involves the installation of downline reclosers and fault 2 indicators to automate and sectionalize the distribution system. Electrical system automation 3 enhances Newfoundland Power's response to customer outages, particularly during significant 4 electrical system events. For 2022, 16 devices are proposed to be installed on 14 feeders. 5 Reference: Application, Schedule B, pages 50 to 51. 6 7 Consumer Advocate's Submission 8 The Consumer Advocate claims that: (i) Newfoundland Power has not indicated whether it 9 intends to carry on with the Distribution Feeder Automation project indefinitely; and (ii) the 10 customer outage minutes avoided through automation are not routinely quantified. 11 Reference: Consumer Advocate's Submission, pages 15 to 16. 12 13 Newfoundland Power's Response 14 The Company filed its plan to automate its distribution system 2 years ago as part of its 2020 15 Capital Budget Application. The project proposed for 2022 is consistent with that plan. Future 16 capital expenditures under this project will be assessed in accordance with this plan. 17 Reference: CA-NP-132. 18 19 Downline reclosers operate regularly to avoid customer outages. Quantifying the benefit each 20 time a device operates is not practical. However, the benefits of downline reclosers are most 21 pronounced during significant electrical system events. Detailed engineering reviews routinely 22 quantify the benefit of downline reclosers during these events. For example, the Company 23 quantified that the operation of 5 downline reclosers avoided approximately

1 3.5 million customer outage minutes during a severe blizzard in 2020. 2 Reference: CA-NP-167. 3 4 Tools and Equipment and Additions to Real Property 5 **Project Overview** 6 The Application proposes 2022 capital expenditures of \$598,000 for the *Tools and Equipment* 7 project and capital expenditures of \$716,000 for the Additions to Real Property project. 8 9 Newfoundland Power maintains facilities and equipment throughout its service territory to 10 provide a prompt response to customer outages and other service requests. Tools and Equipment 11 is a recurring annual project required to add and replace items used in providing safe and reliable 12 service to customers. Additions to Real Property is a recurring annual project required to 13 upgrade, refurbish or replace facility components due to organizational changes, damage, 14 deterioration, corrosion and in-service failure. 15 Reference: Application, Schedule B, pages 60 to 64. 16 17 Consumer Advocate's Submission 18 The Consumer Advocate's claims regarding the Tools and Equipment and Additions to Real 19 Property projects are similar. The Consumer Advocate claims: (i) increasing expenditures under 20 these projects over the 2022-2026 period are unsustainable; (ii) the province's economic 21 conditions are incongruent with proposed expenditures to replace deteriorated office furniture 22 and improve sanitary conditions; and (iii) spending \$124,000 on office furniture and \$113,000 to 23 promote sanitary conditions is unwarranted.

Consumer Advocate Submission, page 17.

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Reference:

1 Newfoundland Power's Response 2 Increasing expenditures over the forecast period reflect inflationary increases throughout the 3 5-year period and anticipated requirements. More detailed engineering analysis will be 4 conducted to further evaluate specific requirements as part of future capital budget applications. 5 6 Replacing deteriorated furniture and ensuring sanitary conditions is necessary to maintain 7 Company facilities in safe and adequate condition for employees and customers visiting the 8 facilities. 9 10 Newfoundland Power submits that the *Tools and Equipment* and *Additions to Real Property* 11 projects are necessary to maintain Company facilities in safe and adequate condition and should 12 be approved. 13 14 Physical Security Upgrades 15 **Project Overview** 16 The Application proposes 2022 capital expenditures of \$492,000 for the *Physical Security* 17 Upgrades project. 18 19 Physical Security Upgrades is a recurring annual project required to refurbish and upgrade 20 security infrastructure at Company facilities. Substation break-ins can result in significant safety 21 risks to employees, as well as property damage and theft. Other facilities contain equipment and 22 information that needs to be secured from theft, as well as hazardous materials that pose a safety 23 risk. For 2022, security upgrades are proposed for 10 substations, 8 hydro plants and 3 other

1 facilities to deter unauthorized entry and improve surveillance.

2 Reference: Application, Schedule B, pages 67 to 68.

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- 4 Consumer Advocate's Submission
- 5 The Consumer Advocate claims this project is required to prevent theft and damage, but that
- 6 Newfoundland Power has not provided information on the cost incurred to replace stolen copper
- 7 wire or whether security upgrades have reduced theft.
- 8 Reference: Consumer Advocate's Submission, page 17.

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- 10 Newfoundland Power's Response
- 11 The *Physical Security Upgrades* project is not justified based on the cost of replacing stolen
- 12 items. Rather, it is required to prevent unauthorized access to Company facilities, which poses
- safety hazards to both the individuals entering the substation and employees following up on the
- 14 intrusion.

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- 16 Newfoundland Power submits that the *Physical Security Upgrades* project is required to
- maintain safe and adequate facilities and should be approved.

- 19 Replace Vehicles and Aerial Devices
- 20 Project Overview
- 21 The Application proposes 2022 capital expenditures of \$3,089,000 and 2023 capital expenditures
- of \$2,135,000 for the *Replace Vehicles and Aerial Devices* project.

1 Replace Vehicles and Aerial Devices is a multi-year project required to add and replace vehicles 2 in Newfoundland Power's fleet. The Company maintains vehicles throughout its service 3 territory to respond to customer outages and other work requirements. For 2022/2023, it is 4 anticipated that 5 heavy/medium duty vehicles, 4 light-duty vehicles, 32 passenger vehicles and 5 14 off-road vehicles will require replacement. Inspections will confirm these vehicles have 6 reached end of life prior to replacement. 7 Application, Schedule B, pages 70 to 72. Reference: 8 9 Consumer Advocate's Submission 10 The Consumer Advocate claims that Newfoundland Power has provided no information 11 concerning how often vehicles break down while in service, or whether such breakdowns have 12 impeded responses to customer outages. 13 Reference: Consumer Advocate's Submission, page 18. 14 15 Newfoundland Power's Response 16 Newfoundland Power applies evaluation criteria to determine whether individual vehicles require 17 replacement, which involves: (i) evaluating which vehicles have reached a certain age or 18 mileage; and (ii) inspecting those vehicles to assess whether they can be economically 19 maintained for additional service. This criteria is consistent with Canadian utility practice. 20 Reference: CA-NP-045; NLH-NP-004. 21 22 Newfoundland Power submits that the Replace Vehicles and Aerial Devices project is consistent 23 with Canadian utility practice. This project is necessary to provide reliable service to customers

at the lowest possible cost and should be approved.

Replace/Upgrade Communications Equipment

- 2 Project Overview
- 3 The Application proposes 2022 capital expenditures of \$114,000 for the *Replace/Upgrade*
- 4 Communications Equipment project.

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- 6 Replace/Upgrade Communications Equipment is a recurring annual project required to ensure
- 7 the continued integrity of operational voice systems and the remote monitoring and control of
- 8 field devices. Operational voice systems are used to provide communication between field staff.
- 9 Remote monitoring and control equipment provides the System Control Centre with real-time
- information and control of the electrical system. The 2022 project involves the replacement
- and/or upgrade of communications equipment that has failed or become obsolete.
- 12 Reference: Application, Schedule B, pages 74 to 75.

13

- 14 Consumer Advocate's Submission
- 15 The Consumer Advocate claims that: (i) increasing expenditures under the Replace/Upgrade
- 16 Communications Equipment project over the 2022-2026 period are unsustainable; and
- 17 (ii) if failures and obsolescence are uniform from year to year, it might be remarkable or a
- practice of invariably spending the budgeted amount.
- 19 Reference: Consumer Advocate's Submission, page 18.

- 21 Newfoundland Power's Response
- 22 Increasing expenditures for the Replace/Upgrade Communications Equipment project over the
- 23 forecast period reflect inflationary increases throughout the 5-year period.

1 Any implication that Newfoundland Power invariably spends the budgeted amount, regardless of 2 need, is without merit. The Company maintains hundreds of communications devices throughout its service territory. Given the large quantity of communications equipment required, 3 4 a degree of equipment failure and obsolescence is to be expected annually. 5 Reference: Application, Schedule B, page 74. 6 7 Newfoundland Power submits that the Replace/Upgrade Communications Equipment project is 8 required to provide reliable service to customers at the lowest possible cost and should be 9 approved. 10 11 Application Enhancements 12 Project Overview 13 The Application proposes 2022 capital expenditures of \$1,007,000 for the *Application* 14 Enhancements project. 15 16 The Application Enhancements project is required to enhance the functionality of Company 17 software to provide operational efficiencies or enhance the services provided to customers. 18 Three application enhancements proposed for 2022 are justified based on NPV analyses that 19 demonstrate the enhancements will reduce overall costs to customers. This project also includes 20 a component for Various Minor Enhancements that are required throughout the year, and 21 enhancements to the customer energy conservation website to implement changes related to the 22 new 5-year plan for customer program delivery.

Application, Report 7.1 2022 Application Enhancements.

23

Reference:

1 Consumer Advocate's Submission

- 2 The Consumer Advocate claims that: (i) scant evidence is provided as to how this project can be
- 3 justified on the obligation to provide reliable service to customers at least cost and cannot be
- 4 deferred; and (ii) Various Minor Enhancements should be addressed under the *Allowance for*
- 5 Unforeseen Items.
- 6 Reference: Consumer Advocate's Submission, page 18.

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- 8 Newfoundland Power's Response
- 9 Newfoundland Power has quantified that this project will reduce overall costs to customers by
- 10 \$94,000 on an NPV basis over 7 years. Deferring projects that reduce costs to customers would
- be inconsistent with the requirements of the provincial power policy.
- 12 Reference: Application, Report 7.1 2022 Application Enhancements.

13

- 14 The Allowance for Unforeseen Items project permits the Company to act expeditiously to
- respond to events affecting the electrical system, such as damage following severe weather.
- 16 Reference: Application, Schedule B, page 97.

- 18 Newfoundland Power maintains over 180 software applications in providing service to
- 19 customers. Certain enhancements can be identified and budgeted for as part of the capital
- planning process. However, in Newfoundland Power's experience, other enhancements often
- 21 arise throughout the year. This is not unreasonable given the large volume of software
- 22 applications currently in operation. The Various Minor Enhancements project reflects this
- 23 operational requirement and provides a degree of flexibility to respond to these requirements
- 24 throughout the year.

1 Newfoundland Power submits that the *Application Enhancements* project will reduce overall 2 costs to customers. This project is required to provide reliable service to customers at the lowest 3 possible cost and should be approved. 4 5 System Upgrades 6 **Project Overview** 7 The Application proposes 2022 capital expenditures of \$802,000 for the System Upgrades 8 project. 9 10 The System Upgrades project involves upgrading software applications used in providing service 11 to customers. For 2022, the project includes upgrades to the Company's SCADA System to 12 ensure system reliability and performance, upgrades to 2 applications for which vendor support 13 is expiring, and Various Minor Upgrades that arise throughout the year. 14 Application, Report 7.2 System Upgrades. Reference: 15 16 Consumer Advocate's Submission The Consumer Advocate claims that increasing expenditures under the System Upgrades project

- 17
- 18 over the 2022-2026 period are unsustainable and questions how upgrades can be completed for
- 19 software when vendor support is expiring in December 2021.
- 20 Reference: Consumer Advocate's Submission, page 19.

1 Newfoundland Power's Response 2 Increasing expenditures for the System Upgrades project over the forecast period reflect 3 anticipated requirements. More detailed analysis will be conducted to further evaluate specific 4 requirements as part of future capital budget applications. 5 6 Newfoundland Power confirms that, for systems where vendor support is expiring in December 7 2021, upgrades will be completed as early as practical in 2022 to minimize any potential 8 reliability or security issues resulting from a lack of vendor support. 9 10 Personal Computer, Shared Server and Network Infrastructure 11 **Project Overview** 12 The Application proposes 2022 capital expenditures of \$615,000 for *Personal Computer* 13 Infrastructure, capital expenditures of \$613,000 for Shared Server Infrastructure, and capital 14 expenditures of \$508,000 for Network Infrastructure. 15 16 Software applications used in providing service to customers operate using a combination of 17 information technology infrastructure, including personal computers ("PCs"), servers and 18 network components. 19 20 Personal Computer Infrastructure is a recurring annual project required to replace or upgrade 21 PCs and associated equipment that has reached the end of its service life. A total of 146 PCs are 22 proposed to be purchased in 2022, in addition to peripheral equipment such as monitors and 23 printers. 24 Reference: Application, Schedule B, pages 83 to 85.

1 The Shared Server Infrastructure project is required to add, upgrade and replace computer

- 2 hardware and related technologies. Expenditures proposed for 2022 will upgrade existing
- 3 hardware to accommodate growth in information storage needs, extend the hardware's service
- 4 life, improve the performance of software applications, and ensure continued vendor support.
- 5 Additional server infrastructure is also required to support the SCADA System.
- 6 Reference: Application, Schedule B, pages 86 to 87.

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- 8 Network Infrastructure is a recurring annual project required to add network components that
- 9 provide employees with access to applications and data in order to provide service to customers.
- 10 For 2022, this project includes implementing network and video conference equipment that has
- reached the end of its service life and increasing overall network availability and disaster
- 12 recovery capabilities.
- 13 Reference: Application, Schedule B, pages 88 to 89.

14

- 15 <u>Consumer Advocate's Submission</u>
- 16 The Consumer Advocate claims that increasing expenditures under the *Personal Computer*
- 17 Infrastructure, Shared Server Infrastructure and Network Infrastructure projects over the 2022-
- 18 2026 period are unsustainable.
- 19 Reference: Consumer Advocate's Submission, pages 19 and 20.

- 21 Newfoundland Power's Response
- 22 Increasing expenditures for these projects over the forecast period primarily reflect inflationary
- 23 increases throughout the 5-year period and anticipated requirements, which will undergo further
- 24 analysis.

1 Newfoundland Power submits that the Personal Computer Infrastructure, Shared Server 2 *Infrastructure* and *Network Infrastructure* projects are required to provide reliable service to 3 customers at the lowest possible cost and should be approved. 4 5 Cybersecurity Upgrades 6 **Project Overview** 7 The Application proposes 2022 capital expenditures of \$865,000 for the Cybersecurity Upgrades 8 project. 9 10 The risk of cybersecurity threats has increased materially for utilities. Ensuring cybersecurity 11 infrastructure is adequately designed to address potential vulnerabilities and respond to threats is 12 increasingly important to the safe and reliable operation of the electrical system. For 2022, 13 proposed expenditures include new technologies to reduce risk and enhance network security, 14 endpoint security, logging, alerting and event management. 15 Reference: Application, Schedule B, pages 90 to 91. 16 Consumer Advocate's Submission The Consumer Advocate claims that: (i) increasing expenditures under the Cybersecurity

- 18
- 19 Upgrades project over the 2022-2026 period are unsustainable; and (ii) expenditures for
- 20 Information Systems currently account for an increasing percentage of Newfoundland Power's
- 21 annual capital budget.
- 22 Reference: Consumer Advocate's Submission, page 20.

1 Newfoundland Power's Response 2 Increasing expenditures for the Cybersecurity Upgrades project over the forecast period reflect 3 an anticipated increase in cybersecurity measures required to respond to more frequent and 4 sophisticated threats. The increasing threat that cybersecurity poses is not unique to 5 Newfoundland Power. Appropriately responding to cybersecurity threats is necessary to protect 6 the electrical system and customer and Company information. 7 8 Increasing expenditures for Information Systems over the forecast period are primarily 9 attributable to the once-in-a-generation project to replace Newfoundland Power's Customer 10 Service System at an estimated cost of \$31.6 million. 11 12 Newfoundland Power submits that the Cybersecurity Upgrades project is required to provide 13 reliable service to customers at the lowest possible cost and should be approved. 14 15 **Other Capital Projects** 16 The Consumer Advocate's Submission does not specifically address: (i) the Clarvenville Area 17 Office Building Refurbishment project; (ii) the Workforce Management System Replacement 18 project; or (iii) the St. John's Teleprotection System Replacement project. 19 20 The Application proposes 2022 capital expenditures of \$854,000 for the Clarenville Area Office 21 Building Refurbishment project. The Clarenville Area Office is Newfoundland Power's centre of 22 operations in the Clarenville area. Condition assessments of the HVAC and roofing systems by 23 Crosbie Engineering Ltd. have identified significant deterioration of each system. The HVAC

system has experienced numerous breakdowns and no longer operates reliably. The roofing

1 system is experiencing water leaks, water ponding and vegetation growth. Replacement of both 2 systems is therefore required. 3 Application, Report 5.1 Clarenville Area Office Building Refurbishment. Reference: 4 5 The Application proposes 2022 capital expenditures of \$808,000 and 2023 capital expenditures 6 of \$1,201,000 for the Workforce Management System Replacement project. Newfoundland 7 Power's existing system, Click, is used in responding to approximately 34,000 customer requests 8 for field work annually. Click has been discontinued by its vendor and will no longer be 9 supported at year-end 2023. In comparison to manual dispatching, system replacement will 10 provide a cost benefit to customers of approximately \$499,000 on an NPV basis over 7 years. 11 System replacement is therefore necessary to provide least-cost service to customers. 12 Reference: Application, Report 7.3 Workforce Management System Replacement. 13 14 The Application proposes 2022 capital expenditures of \$450,000 and 2023 capital expenditures 15 of \$1,150,000 for the St. John's Teleprotection System Replacement project. The St. John's 16 teleprotection system is critical to protecting the 66 kV transmission network serving substations 17 in the St. John's area. The existing system has been in service for 20 years and has reached the 18 end of its useful service life. System failures have become more frequent, spare parts are 19 becoming depleted, and certain modules have been discontinued by the vendor. System 20 replacement is therefore required. 21 Application, Report 6.1 St. John's Teleprotection System Replacement. Reference: 22 23 Newfoundland Power submits that the Clarenville Area Office Building Refurbishment, 24 Workforce Management System Replacement and St. John's Teleprotection System Replacement

1 projects are required to provide reliable service to customers at least cost and should be 2 approved. 3 4 8.0 **CONCLUSIONS** 5 8.1 Capital Projects 6 The projects proposed in the Application are necessary to: (i) respond to customer growth and 7 changes in customer requirements; (ii) replace deteriorated, deficient or failed equipment; 8 (iii) respond to mandatory requirements; (iv) address safety and environmental issues; and 9 (v) maintain or improve operational efficiencies and customer service levels. 10 11 The claims of the Consumer Advocate challenging certain capital expenditures proposed in the 12 Application have been addressed in this submission. Hydro does not object to approval of the Application, but has raised issues in relation to Newfoundland Power's planned capital 13 14 expenditures. This has also been addressed in this submission. 15 16 To assist the Board in determining whether the engineering judgments reflected in the 2022 17 Capital Budget are sound, Newfoundland Power submits that there is no evidence before the 18 Board that: (i) contradicts the engineering judgments reflected in the capital projects presented 19 in the Application; (ii) demonstrates reasonable alternatives that were not considered by 20 Newfoundland Power; or (iii) demonstrates that not proceeding with a particular capital project is 21 a preferable alternative. 22 23 Newfoundland Power submits that the Application represents the capital expenditures required to 24 meet its statutory obligations, including the delivery of reliable service to customers at the lowest

possible cost. Pursuant to Section 41 of the *Public Utilities Act*, the 2022 Capital Budget should

- 2 be approved by the Board. The expenditures requested for approval in 2022, excluding
- 3 expenditures related to the *Electric Vehicle Charing Network* project, total \$108,121,000.

4

- 5 **8.2** *Rate Base*
- 6 Newfoundland Power has requested that the Board fix and determine its 2020 average rate base.
- 7 Schedule D to the Application shows Newfoundland Power's actual average rate base for 2020.

8

- 9 The Board's financial consultants, Grant Thornton, have reviewed the calculation of
- Newfoundland Power's 2020 actual average rate base and confirmed that it is accurate and in
- accordance with established practice and Board Orders.
- 12 Reference: Grant Thornton, Letter to the Board re. Newfoundland Power Inc. 2022 Capital
- 13 Budget Application, August 12, 2021.

- Based upon the evidence before the Board, and pursuant to Section 78 of the *Public Utilities Act*,
- the Board should fix and determine Newfoundland Power's average rate base for 2020 at
- 17 \$1,181,897,000.

- 1 RESPECTFULLY SUBMITTED at St. John's, Newfoundland and Labrador, this 28th day of
- 2 October, 2021.

NEWFOUNDLAND POWER INC.

Endseup Hele

P.O. Box 8910

55 Kenmount Road

St. John's, Newfoundland A1B 3P6

Telephone:

(709) 737-5364

Telecopier:

(709) 737-2974