Newfoundland & Labrador

BOARD OF COMMISSIONERS OF PUBLIC UTILITIES

IN THE MATTER OF THE

2022 CAPITAL BUDGET APPLICATION

FILED BY

NEWFOUNDLAND POWER INC.

REASONS FOR DECISION

ORDER NO. P.U. 36(2021)
Issued December 20, 2021

BEFORE:

Darlene Whalen, P. Eng., FEC
Chair and CEO

Dwanda Newman, LL.B.
Vice-Chair

John O'Brien, FCPA, FCA, CISA
Commissioner

Christopher Pike, LL.B., FCIP
Commissioner

NEWFOUNDLAND AND LABRADOR
BOARD OF COMMISSIONERS OF PUBLIC UTILITIES

REASONS FOR DECISION

ORDER NO. P.U. 36(2021)

IN THE MATTER OF the *Electrical Power Control Act, 1994*, SNL 1994, Chapter E-5.1 (the "*EPCA*") and the *Public Utilities Act*, RSNL 1990, Chapter P-47 (the "*Act*"), as amended, and regulations thereunder; 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.

BEFORE:

Darlene Whalen, P. Eng., FEC
Chair and CEO

Dwanda Newman, LL.B.
Vice-Chair

John O'Brien, FCPA, FCA, CISA
Commissioner

Christopher Pike, LL.B., FCIP
Commissioner

TABLE OF CONTENTS

1. BACKGROUND

1.1 Application

Newfoundland Power Inc. ("Newfoundland Power") filed its 2022 Capital Budget Application (the "Application") with the Board of Commissioners of Public Utilities (the "Board") on May 18, 2021. In the Application Newfoundland Power requested that the Board make an order:

(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.

The proposed 2022 Capital Budget includes the following estimated expenditures by asset class:

Asset Class	**Budget (000s)**
1. Generation - Hydro	$ 2,462
2. Generation - Thermal	307
3. Substations	11,639
4. Transmission	12,892
5. Distribution	47,744
6. General Property	2,660
7. Transportation	3,089
8. Telecommunications	564
9. Information Systems	21,044
10. Unforeseen Allowance	750
11. General Expenses Capitalized	6,500
Total	**$109,651**

On July 7, 2021 the Board advised the parties that one of the projects included in the proposed Distribution expenditures, the Electric Vehicle Charging Network project, would be considered separately from the rest of the Application and that a process for consideration of this project would be scheduled at a later date upon the conclusion of the electrification application filed by Newfoundland Power.[1] The removal of this project reduced the proposed expenditures by $1,530,000, resulting in a proposed 2022 Capital Budget of $108,121,000.

On December 20, 2021 the Board issued Order No. P.U. 36(2021) approving, among other things, the proposed capital expenditures and Newfoundland Power's 2022 Capital Budget with the Reasons for Decision to be issued separately. These are the Board's Reasons for Decision.

[1] On August 30, 2021 Newfoundland Power's 2021 Electrification, Conservation and Demand Management Application, which was filed on December 16, 2020, was joined with Newfoundland and Labrador Hydro's Application for Approvals Required to Execute Programming Identified in the Electrification, Conservation and Demand Management Plan 2021-2025 filed on June 16, 2021.

1.2 Regulatory Framework

Section 41 of the *Act* requires a public utility to submit an annual capital budget of proposed improvements or additions to its property for approval of the Board no later than December 15th in each year for the next calendar year. The utility is also required to include an estimate of contributions toward the cost of improvements or additions to its property which the utility intends to demand from its customers.

Subsection 41(3) of the *Act* prohibits a utility from proceeding with the construction, purchase or lease of improvements or additions to its property without the prior approval of the Board where (a) the cost of the construction or purchase is in excess of $50,000, or (b) the cost of the lease is in excess of $5,000 in a year of the lease.

Section 78 of the *Act* gives the Board the authority to fix and determine the rate base for the service provided or supplied to the public by the utility and also gives the Board the power to revise the rate base. Section 78 also provides the Board with guidance on the elements that may be included in the rate base.

In 2007 the Board established Capital Budget Guidelines. In 2019 the Board commenced a review of the guidelines and in early 2020, as part of this review, the Board advised that additional requirements would be implemented for the 2021 capital budgets, including:

i. introductory presentations outlining the capital budget application;
ii. additional information with respect to the deferral of projects; and
iii. additional information on the revenue requirement impacts of the proposed capital projects.

This proceeding was conducted pursuant to these amended guidelines. Late in 2021, after the filing of the Application, the Board issued provisional guidelines to be used for the utilities' 2023 capital budget applications.[2]

1.3 Procedural Matters

Notice of the Application, including an invitation to participate, was published in The Telegram on June 5, 2021 and June 9, 2021 and in The West Coast Wire on June 9, 2021.[3] Details of the Application and supporting documentation were posted on the Board's website.

On June 22, 2021 intervenor submissions were received from Newfoundland and Labrador Hydro ("Hydro") and the Consumer Advocate, Dennis Browne, Q.C. (the "Consumer Advocate"), indicating an intention to participate in the Application.

The procedural record for this Application is extensive, covering matters related to scheduling, the use of the capital budget guidelines, request for an oral hearing, application presentation and

[2] On December 20, 2021 the Board issued Provisional Capital Budget Application Guidelines to be effective January 2022.

[3] A revised notice, correcting Newfoundland Power's email contact address for the viewing of paper copies, was published in The Telegram on June 9, 2021.

format, filing of expert evidence, and the filing of additional requests for information ("RFIs").[4] The key steps are set out below.

On July 8, 2021 Newfoundland Power provided an overview of the Application in a presentation to representatives from the Board and the Intervenors during which participants were given an opportunity to ask questions or raise areas of concern on the Application.

A total of 174 RFIs on the Application were issued to Newfoundland Power by the Board, Hydro and the Consumer Advocate on July 13, 2021. Newfoundland Power responded to these RFIs on August 4, 2021.

On August 12, 2021 Grant Thornton LLP ("Grant Thornton"), the Board's financial consultant, filed a report in relation to its review of the calculations of the 2020 average rate base. Grant Thornton's report was circulated to Newfoundland Power, the Consumer Advocate and Hydro on August 13, 2021.

On August 13, 2021 the Consumer Advocate filed a report *Comments on Newfoundland Power's 2022 Capital Budget Application*, authored by John Todd and Andrew Blair of Elenchus Research Associates Inc. (the "Elenchus Report").

The Consumer Advocate filed 59 additional RFIs on August 20, 2021, which were responded to on September 14, 2021.

On August 23, 2021 the Board and Newfoundland Power issued 31 RFIs to the Consumer Advocate with respect to the Elenchus Report, which were responded to on September 3, 2021.

On September 16, 2021 the Consumer Advocate requested an oral hearing. The Consumer Advocate questioned the adequacy of the information in the Application and the responses to RFIs and stated that through cross-examination the Consumer Advocate could more effectively challenge Newfoundland Power's assertion that the Application and its responses to RFIs meet the onus on the utility.

Newfoundland Power replied on September 20, 2021 that an oral hearing is not necessary as the Consumer Advocate had been given a full opportunity through the written review process to understand and test the evidence provided by Newfoundland Power. Newfoundland Power stated that the Consumer Advocate's request was not justified as it did not identify specific issues regarding proposed projects and the request was solely to cross-examine Newfoundland Power's management on the projects.

On September 22, 2021 the Board stated that it agreed with the Consumer Advocate that careful scrutiny of the Application is required and that the Board believes that this is best accomplished through the public written hearing process. The Board expressed the view that the written process afforded the Consumer Advocate a full opportunity to understand the nature and scope of the proposals and to test the evidence filed.

[4] The full procedural record is available on the Board's website at http://www.pub.nl.ca/applications/NP2022Capital/index.htm.

On September 24, 2021 the Consumer Advocate requested that the Board reconsider its decision with respect to an oral hearing and argued that specific issues with respect to projects were raised, citing issues in the Elenchus Research report as examples. The Consumer Advocate stated that a public oral hearing would allow the Consumer Advocate to cross-examine Newfoundland Power witnesses as well as enable the expert witness for the Consumer Advocate to testify as to the shortcomings of the Application. On September 28, 2021 Newfoundland Power submitted that the issues raised by the Consumer Advocate in the request for reconsideration were addressed by Newfoundland Power on the record. Newfoundland Power asserted that the existing process has permitted evidence from the Consumer Advocate's expert witness to be part of the proceeding via the Elenchus Report and the responses to RFIs posed by Newfoundland Power and the Board.

On October 6, 2021 the Board stated that it would not reverse, change or modify its decision. The Board stated that, in its review of the Consumer Advocate's request for an oral hearing, the Board considered all arguments made in support of the request and there was no new information put before the Board to persuade it that an oral hearing is necessary. The Board further stated that it did not agree that the failure to reverse its decision to proceed based on the written record is inconsistent with fairness, due process and natural justice.

On October 21, 2021 Hydro and the Consumer Advocate filed written submissions. Newfoundland Power filed its reply submission on October 28, 2021.

2. EVIDENCE AND SUBMISSIONS

2.1 Application Evidence

The 2022 Capital Budget Application requests approval of, among other things:

- capital expenditures in 2022 of $84,360,000 for projects over $50,000 to be completed in 2022;
- capital expenditures in 2022 of $9,220,000 for multi-year projects over $50,000 commencing in 2022;
- capital expenditures in 2022 of $245,000 related to multi-year projects approved in Order No. P.U. 37(2020) and $15,826,000 related to multi-year projects approved in Order No. P.U. 12(2021); and
- future year capital expenditures associated with multi-year projects to start in 2022 in the amount of $13,526,000 in 2023 and $4,276,000 in 2024.

In accordance with the legislation, regulations and capital budget guidelines, the Application included information in relation to proposed expenditures and, for a number of projects, additional studies and reports were also provided. The Application also included specific information required to be filed in compliance with previous Board Orders, including a status report on 2021 capital expenditures, a five-year capital plan, as well as evidence relating to deferred charges and a reconciliation of average rate base to invested capital.

Newfoundland Power's five-year capital plan forecasts average expenditures of approximately $122.6 million annually from 2022-2026, compared to approximately $102 million annually over 2017-2021, on an inflation-adjusted basis. According to the Application the replacement of plant

and the requirement to serve new customers will continue to be the largest drivers of its capital expenditures over the next five years. The replacement of existing plant is expected to account for 60% of these forecast expenditures, compared to 54% in the last five years. These increased expenditures are expected to be offset by lower expenditures for connecting new customers and addressing system load growth as well as a reduction in system additions. Expenditure levels by asset class are also expected to remain mostly stable for the next five years, with upward variability expected in Information Systems, Generation and Telecommunications as a result of large-scale, one-time capital projects in these classes.[5]

Newfoundland Power identified variability in forecast customer and load growth and the age of certain electrical system assets, including existing power transformers, as key risks to the stability of expected future capital expenditures. Newfoundland Power noted that the number of in-service power transformers over the age of 50 will increase from 33% of its fleet in 2021 to 62% by 2031, which leads to a higher risk for more in-service failures and resulting negative customer impacts. Newfoundland Power also noted that the five-year outlook does not include any capital expenditures related to the reliability of supply following commissioning of the Muskrat Falls project as the impact of the reliability of this project on capital expenditures is uncertain at this time. Depending on the results of the Board's ongoing review of the reliability of supply from the project and the adequacy of generation on the Island Interconnected system, Newfoundland Power noted that expenditures may be required for back-up generation, upgrades to transmission lines, substations or protection equipment, and more advanced software or increased electrical system automation.[6]

2.2 Elenchus Report

The Elenchus Report filed by the Consumer Advocate states its intended purpose was to assess Newfoundland Power's 2022 Capital Budget taking into account i) generally accepted regulatory principles applicable to reviewing capital plans of regulated monopolies, ii) standard practice of Canadian economic regulators for review of capital budgets, iii) trends in Newfoundland Power's annual capital expenditures applied for and approved as compared to other regulated Canadian utilities, and iv) prospective impact on trends in capital expenditures as a result of increased reliance on non-wires alternatives ("NWAs").

The report included, among other things, a review of the Board's previously stated position on regulatory principles and prudence review standards. The key conclusion of the report was that Newfoundland Power has not identified a reasonable range of alternatives for all capital projects nor identified the relevant information for these alternatives and, as a result, it is not possible to determine whether the planned investments are the least-cost options. The report also concluded that Newfoundland Power's apparent preference for traditional capital intensive alternatives may be indicative of the inherent bias for an investor-owned utility to prefer alternatives that require

[5] 1) Information Systems: Customer Service Continuity Plan at a cost of $31.6 million over three years starting in 2021 as well as planned upgrades to the Geographic Information System and Outage Management System in 2025 and 2026. 2) Generation: Sandy Brook Penstock Replacement in 2022 and 2023 as well as the purchase of a 2nd mobile gas turbine to replace the existing Greenhill and Wesleyville gas turbines. 3) Telecommunications: replacement of the St. John's teleprotection system in 2022 and 2023 and the replacement of the current VHF radio mobile system in 2024 (Application, 2022 Capital Plan, pages 28-29, 32).

[6] Application, 2022 Capital Plan, pages 34-35.

high levels of capital investment, as evidenced by the focus on high capital cost project alternatives with minimal consideration of the industry modernization trend that is turning to lower capital cost, more flexible alternatives, including distributed energy resources ("DERs").

2.3 Submissions

The Consumer Advocate submitted that the evidence on the record shows that Newfoundland Power and its three most senior officers have the inherent incentive to prefer alternatives that require high levels of capital investment, pointing to the Elenchus Report and recent communications from Fortis Inc. ("Fortis") to its shareholders. The Consumer Advocate stated that the Board has, for far too long, failed to balance the interests of customers and Newfoundland Power. The Consumer Advocate submitted that Newfoundland Power bears the burden of establishing that each proposed project meets the Board's prudency test and "finds it puzzling" that the Board routinely accepts a Newfoundland Power's submission that no evidence has been filed to contradict Newfoundland Power's position. The Consumer Advocate repeated his request for the Board to bring Newfoundland Power's spending under control and the need for the Board to implement a capital budget spending envelope.

In proposing its 2022 capital budget the Consumer Advocate submitted that Newfoundland Power: i) demonstrated a puzzling indifference to the effects of the Covid-19 pandemic on the reliability of its capital cost estimates; ii) unlike Hydro, neither altered its asset management practices, incorporated any of Midgard's recommendations nor utilized customer input; and iii) exhibited a number of failures in deciding on the 2022 capital projects.[7] The Consumer Advocate expressed grave concern about the increasingly significant levels of capital spending by Newfoundland Power, stating it was even more concerning when, despite rate mitigation, rates will significantly increase with the commissioning of the Muskrat Falls project while the Covid-19 pandemic and its impact on the provincial economy continue.

Hydro submitted that the total cost of the proposed projects in the Application reflects a continuing pattern of growth in capital investments despite declining energy sales and strong reliability performance. Hydro expressed its concern with the historic and forecast growth in Newfoundland Power's capital expenditures and stated that the overall growth in capital spending does not appear to reflect a concerted effort to balance cost management and the provision of reliable service. Hydro submitted that, due to anticipated rate pressures and already high levels of customer reliability, the Board should require Newfoundland Power to undertake a demonstrable effort to reduce its forecast capital expenditures for the next five years and report on the results of this initiative in its next capital budget application.

In its reply submission Newfoundland Power stated that the principal focus of this proceeding is whether the proposed capital expenditures in 2022, and related expenditures in 2023 and 2024, are reasonably required to meeting its statutory obligations to provide service to its 271,000 customers. Newfoundland Power submitted that the record demonstrates that fully justified capital

[7] The Consumer Advocate argued that Newfoundland Power failed to do any laboratory testing, failed to embed productivity savings, did little benchmarking against other utilities, failed to incorporate customer preferences, failed to quantify risks associated with delaying projects, and failed to quantify benefits for projects proceeding in 2022 rather than being deferred.

expenditures can reduce overall costs to customers while maintaining reliable service and that a benchmarking exercise demonstrates that Newfoundland Power's performance in balancing cost and reliability has been reasonable. Newfoundland Power submitted that it has demonstrated sound management of its capital expenditures and effectively balances the cost and reliability of the service provided to its customers. Newfoundland Power also rejected any implication that it has taken advantage of an inadequate regulatory process to extract monopoly prices.

In response to Hydro's concerns relating to the level of capital investment in light of the current operating environment and anticipated rate pressures related to the Muskrat Falls project, Newfoundland Power stated that it manages its annual capital expenditures through a comprehensive planning process which routinely results in reductions in proposed capital expenditures. Newfoundland Power noted that the Application proposes capital expenditures that are over $12 million less than forecast in its 2021 Capital Budget Application. Newfoundland Power also submitted that the record includes significant information on its management of capital expenditures, including its approach to deferral of capital projects. Newfoundland Power noted that it identified 12 items from six capital projects that were originally planned for 2022 but were subsequently deferred, as well as a further 12 items from nine capital projects that have been deferred beyond the current forecast period.

With respect to the Consumer Advocate's comments on the level of capital spending Newfoundland Power noted that the proposed expenditures for 2022 are higher than historical expenditures due to the once-in-a-generation project to replace the Customer Service System. Excluding this project, 2022 capital expenditures would total $94 million, consistent with capital expenditures in 2017 when adjusted for inflation. Newfoundland Power stated that the Elenchus Report does not identify specific alternatives that were excluded from its consideration and that there is no evidence that the alternatives that were focused on, solar and battery storage, are viable for Newfoundland Power in 2022. Newfoundland Power submitted that it evaluates all viable alternatives to determine the least-cost option to serve customers. Newfoundland Power also reiterated that it does not expect the execution of its 2022 Capital Budget to be impacted by the Covid-19 pandemic.

The comments and submissions of the parties relating to the individual projects are discussed as part of the Board's decisions in relation to the proposed capital expenditures over $50,000.

3. BOARD DECISIONS

In considering the Application the Board must assess whether approval of the proposed capital expenditures is consistent with the statutory obligations of the Board and Newfoundland Power.[8] In making this determination the Board balances the interests of customers and the utility to ensure reasonable levels of capital spending that provide for least-cost reliable and safe service. This approach is set out in the Board's 2007 Capital Budget Guidelines and was further clarified by the Board in the recently released provisional capital budget guidelines as follows:

> The Board considers the interests of both customers and utilities in determining whether proposed capital expenditures should be approved. Appropriate capital spending is in the

[8] Sections 37 and 54 of the *Act* and sections 3 and 4 of the *EPCA*.

> interest of both customers and utilities as customers benefit from a utility which is well positioned to provide safe, reliable and adequate service and utilities benefit when the rates to be paid by customers are reasonable and just. Cost, performance and risk are among the factors considered by the Board in determining whether capital expenditures are appropriate and necessary to ensure the delivery of power to customers at the lowest possible cost consistent with reliable service.[9]

The Board has reviewed the Application and supporting materials, the responses to the RFIs, the Elenchus Report and the submissions of the parties and sets out its determinations below in relation to the proposed capital expenditures, the 2022 Capital Budget and the average 2020 rate base.

3.1 Proposed Capital Expenditures Over $50,000

Pursuant to s. 41(3) of the *Act* Newfoundland Power requires prior approval of the Board for any capital project in excess of $50,000. The proposed 2022 capital budget includes $82,830,000 for 34 projects over $50,000 to be completed in 2022 and $9,220,000 for five multi-year projects over $50,000 to commence in 2022. The Application provided support for each proposed project and associated expenditure in excess of $50,000, including the project description, justification, expenditures, costing methodology and future commitments. Engineering and technical reports were also provided in relation to many of the projects. Additional information was provided in Newfoundland Power's responses to 233 RFIs filed in relation to the Application.

The Consumer Advocate raised specific concerns with respect to a number of the proposed project expenditures and filed the Elenchus Report as evidence in the proceeding. Hydro did not comment on any proposed project expenditures, with the exception of providing its support for the approval of the Sandy Brook penstock replacement. The Board sets out its findings with respect to the proposed project expenditures below.

Generation - Hydro

Newfoundland Power proposes expenditures of $2,462,000 in 2022 and $4,694,000 in 2023 for hydro facility rehabilitation and the replacement of the Sandy Brook hydro plant penstock.

The proposed hydro facility rehabilitation expenditures of $2,062,000 in 2022 include five projects: i) replacement of the Morris Head Gate and Intake Gatehouse ($465,000); ii) replacement of Petty Harbour Surge Tank cladding ($347,000); iii) overhaul of the Petty Harbour Unit #2 Turbine ($301,000); iv) upgrades of generation control systems ($339,000); and, v) replacement of equipment due to in-service failures ($610,000). The proposed expenditures are supported with an engineering report detailing that the work is necessary to ensure the safe, reliable and environmentally compliant operation of various hydro facilities or to replace equipment due to in-service failures.[10]

The Sandy Brook Penstock Replacement project is to be completed over two years with expenditures of $400,000 in 2022 and $4,694,000 in 2023. This project involves the replacement

[9] Provisional Capital Budget Guidelines, January 2022, pages 1-2.
[10] Application, Tab 1.1: *2022 Facility Rehabilitation*, May 2021, page 1.

of the penstock at Newfoundland Power's Sandy Brook hydroelectric development located on a tributary of the Exploits River near the Town of Grand Falls-Windsor. This plant was placed into service in 1963 and contains one generating unit. The normal annual production of the plant is approximately 27.6 GWh of energy, or about 6.3% of Newfoundland Power's total hydroelectric generation. The engineering design and procurement for the penstock and site preparation work will be completed in 2022 and the installation of the replacement penstock will take place in 2023. Based on marginal energy costs and avoided generation capacity costs the 50-year levelized value of production benefits from the Sandy Brook plant is between 10.26 ¢/kWh (run of river) and 13.43 ¢/kWh (fully dispatchable) with a cost of production of 3.22 ¢/kWh, resulting in a net benefit of between 7.04 ¢/kWh to 10.21 ¢/kWh.[11]

The Consumer Advocate submitted that Newfoundland Power did not identify, nor provide all relevant information concerning, a reasonable range of alternative solutions for these projects. The Consumer Advocate also stated that, since marginal costs post-Muskrat Falls are unknown, Newfoundland Power's estimates of the energy-related value and capacity-related value from its hydro facilities are unreliable. The Consumer Advocate stated that "NP peremptorily assumed its Generation-Hydro projects including the Sandy Brook Plant will be needed no matter how much capacity and energy is available from alternative sources, such as the MFP, post-2041 Churchill Falls, or flexible alternatives such as DERs" and that these projects be deferred "until the Board determines the need for continuation or renewal of NP hydro capacity." The Consumer Advocate also submitted that Newfoundland Power did not address the costs of retirement of the hydro plant assets in its evaluation of alternatives.[12]

The Consumer Advocate submitted that, as the hydro facility rehabilitation projects are not multi-year, one of the five individual projects can and should be deferred until the Board determines the need for continuation or renewal of Newfoundland Power hydro capacity. In addition, since the Sandy Brook plant would be off-line in 2022-2023 because of the work, the Consumer Advocate submitted that the capacity and energy provided by the plant is not needed for 2022-2023 to maintain reliable service and, as such, the project can and should be deferred until the Board determines the need for continuation or renewal of Newfoundland Power hydro capacity.

Hydro submitted that the Sandy Brook plant penstock replacement project is justified and provided its support for the project. Hydro did not comment on the other proposed hydro generation expenditures.

Newfoundland Power submitted that the Consumer Advocate has not identified a reasonable alternative that Newfoundland Power failed to consider for its hydro facility rehabilitation projects or for the Sandy Brook penstock replacement project. Newfoundland Power stated that the alternative to maintaining its hydro plants is to retire them and determining the cost to retire a plant requires a detailed, site-specific evaluation. With respect to the value of hydro plant production following commissioning of Muskrat Falls Newfoundland Power explained that its calculation is based on Hydro's 2020 marginal cost update, which is based on export prices and is not expected

[11] Application, Tab 1.2: *Sandy Brook Penstock Replacement: Appendix A - Sandy Brook Economic Evaluation*, page A-5.

[12] Consumer Advocate's Submission, pages 5, 6 and 8 in reference to hydro facility refurbishments, the Sandy Brook penstock replacement project and the Tors Cove substation refurbishment and modernization project.

to be impacted by rate mitigation efforts. Newfoundland Power noted that it consults with Hydro with regard to capital expenditures related to the continued operation of its hydro plants over the long term and that Hydro has not objected to the continued operation of these facilities in recent years.[13]

In regard to the proposed facility rehabilitation projects Newfoundland Power submitted that, given that the individual plant components to be replaced in 2022 are modest in cost and would not impact the economic viability of the plants, retirement is not a reasonable alternative. Newfoundland Power further submitted that deferring the replacement of failed components would increase the risk of plant downtime, thereby increasing costs to customers. With respect to the penstock replacement project for the Sandy Brook hydro plant Newfoundland Power highlighted the independent condition report which determined that the entire length of the penstock is experiencing joint leakage and excessive decay and that failure of the penstock is likely due to wood stave collapse. Newfoundland Power submitted that continued operation of the Sandy Brook plant, including penstock replacement, has been economically justified and is least-cost for customers.

The Board notes that Newfoundland Power's hydro plants are considered to be part of the Island Interconnected system and are accounted for in Hydro's system planning and operations as well as Hydro's available capacity for peak load planning.[14] Newfoundland Power's generation is also used to maintain reliable service to customers on the Island and Hydro can, when required, request Newfoundland Power to operate its generation plants to meet the system peak demand and during forced and planned transmission outages to supply local loads or to support area voltages.[15] Based on Hydro's 2020 marginal cost update, the energy-related value of the production from Newfoundland Power's hydro facilities is estimated at $18,573,000 annually, while the capacity-related value is estimated at $18,482,000 annually.[16] Newfoundland Power's hydro facilities also provide localized reliability benefits including supplying customers during maintenance work and unplanned localized transmission line outages as well as supplying customers during periods of major electrical system distress.

Clearly Newfoundland Power's hydro production is of value to the Island Interconnected system and to customers in terms of reliability, reduced marginal energy costs and avoidance of the need for additional generation capacity.[17] The continued role of Newfoundland Power's generation assets to the Island Interconnected system once supply is available from the Muskrat Falls project will be more certain after the Board's ongoing review of Hydro's Reliability and Resource

[13] CA-NP-158, page 2/4-6.

[14] Newfoundland Power currently operates 23 small hydro generation facilities, ranging in age from 22 to 121 years, on the Island Interconnected system with a combined normal annual production of 434.8 GWh (Application, Tab 1.1, page 1).

[15] Step 2 of Hydro's System Operating Instruction T-001 Generation Loading Sequence and Generation Shortages provides for Hydro to request Newfoundland Power to maximize their hydroelectric production in the event of a system generation shortage.

[16] These estimates are calculated to reflect post Muskrat Falls marginal costs using the 2022 marginal cost values for energy and capacity.

[17] The Island Interconnected system's need for new capacity additions is being reviewed by the Board. Hydro's most recent assessment indicates that the system has limited capacity to meet future load growth.

Adequacy Study is completed.[18] Until such time, and as long as the continued operation of Newfoundland Power's generation assets continues to be economic and provide least-cost power to customers, it would be premature to deny or defer capital expenditures which are shown to be necessary to maintain these assets.

The following proposed hydro facility rehabilitation projects are justified on the basis of age, condition, damage or obsolescence:

i) The proposed expenditures for the Morris plant are to replace the head gate and gatehouse due to age and condition. The evidence shows that the head gate, which was installed in 1983, is essentially now inoperable and any attempts to manually lift the gate raises safety concerns and will likely result in the plant being out of service indefinitely. Replacement of the head gate and gatehouse will address safety concerns with continued plant operation and ensure reliable service.

ii) The two projects proposed for the Petty Harbour plant will address damage to the surge tank cladding due to extreme wind damage in March and April 2018 and January 2020, as well as refurbishment of the Unit 2 hydro turbine generator which was installed in 1907, upgraded in 1984 and refurbished in 2006. The evidence shows that the cladding and insulation need to be replaced to maintain the structure in a safe condition and that the risks associated with deferral of this project are significant. The evidence also shows that not completing the Unit 2 overhaul at this time could result in further deterioration of the unit and possible removal from service of the unit.

iii) The generation control system upgrades are proposed to replace obsolete control system components as identified in 2019 and set out in a multi-year plan filed with the 2020 Capital Budget Application. This plan provides for the completion of upgrades at generation facilities with obsolete components by 2025.

The facility rehabilitation expenditures to replace generation equipment will address failures while in-service, typically on an emergency basis to return a unit to service, or where deficiencies are observed and replacement is needed to prevent imminent failure or to address safety or environmental concerns. The project cost is estimated on the basis of the most recent five-year average historical costs, adjusted to current-year dollars.

The proposed expenditures for the Sandy Brook penstock replacement were originally planned to begin in 2020 but were deferred to allow for an updated condition assessment of the penstock. In 2020 an independent visual and condition assessment showed i) the overall condition of the saddles to be poor, ii) joint leakage over the entire length of the penstock, iii) severe quality loss and excessive decay of wooden staves, and iv) issues with site drainage which may lead to foundation failure.[19] Based on this assessment it was determined that failure of the penstock is likely due to wood stave collapse and/or loss of support from the saddles due to excessive cracking in the

[18] The study will assess, among other things, future supply requirements for the Island Interconnected system, including back-up generation and/or alternative supply requirements after interconnection as well as other system planning, capital and operational issues which may impact adequacy and reliability after interconnection. The study uses a planning period of 10 years and is updated annually. Newfoundland Power's assets are included in Hydro's modelling of scenarios post-Muskrat Falls interconnection. The review is underway and there are several outstanding important information filings and studies still to be filed by Q2 in 2022.

[19] Application, Tab 1.2: *Sandy Brook Plant Penstock Replacement: Appendix B - Penstock Inspection Report* (prepared by Kleinschmidt, April 2021).

timbers. Such a failure could, according to the engineering report, result in flooding of the powerhouse and surrounding area and significant downstream environmental damage. The economic analysis shows that continued operation of the Sandy Brook plant is economical over the long-term and will ensure continued availability of 27.6 GWh of least-cost energy to the Island Interconnected system.

The Board notes that the Elenchus Report offered commentary in relation to the evaluation of alternatives to the Sandy Brook penstock replacement project. The report discussed an illustrative alternative to the proposed project involving two consecutive utility-scale DER alternatives, each with half the service life of the proposed Sandy Brook project. Based on the information provided this alternative could result in a lower long-term cost and have a lower net present value; however, it was an illustrative example only and did not represent an analysis of the costs of an actual available alternative. The Board notes that, based on estimates provided by Newfoundland Power, the capital cost of a similarly sized solar/battery generation facility would be approximately $43 million compared to the proposed capital expenditures of approximately $6 million.[20] Other alternatives, including time-of-use pricing and direct load control, are also not currently considered to be economic.[21] The Board finds that the theoretical discussion offered in the Elenchus Report in relation to the Sandy Brook Penstock Replacement project is strongly outweighed by the evidence provided in support of this project. The Board also notes that there is no basis upon which to conclude, as suggested by the Consumer Advocate, that the project is not needed and should be deferred because the plant would be off-line in 2022-2023. Clearly the need to take facilities off-line to complete work is a routine requirement which has no bearing on the value or need for the facility. The Board is satisfied, based on the evidence, that the proposed expenditures for hydro facility rehabilitation and the Sandy Brook penstock replacement are justified, appropriate and necessary to ensure the delivery of power to customers at the lowest possible cost consistent with reliable service.

Generation - Thermal

Newfoundland Power proposes expenditures of $307,000 in 2022 for thermal plant facility rehabilitation. Newfoundland Power maintains four stationary thermal plants and two mobile thermal plants with a total capacity of 44.5 MW.[22] These plants are used to provide stand-by and emergency generation, both locally and for the Island Interconnected system, and to minimize customer outages during scheduled maintenance on transmission, distribution or substation assets. This project provides for the replacement or refurbishment of deteriorated thermal plant components, such as fuel lines, fuel pumps and auxiliary power units, that are identified through routine inspections, operating experience and engineering studies.

The Consumer Advocate submitted that Newfoundland Power did not identify, nor provide all relevant information concerning, a reasonable range of alternative solutions for this project or

[20] CA-NP-158; CA-NP-173; Newfoundland Power's Submission, page 9.
[21] CA-NP-158, page 4.
[22] CA-NP-102: Stationary thermal plants include the Wesleyville gas turbine (8.0 MW), Greenhill gas turbine (20.0 MW), Port aux Basques diesel generator (2.5 MW) and the Mobile Gas Turbine (6.0 MW). These plants were brought into service between 1969 and 1975. Mobile thermal plants include the Mobile Diesel #3 and the Mobile Gas Turbine #2. These plants were brought into service in 2004 and 2019 respectively.

provide information on the gas turbine and diesel units such as capacity, age and remaining service life, location and cost per customer service hour provided.

Newfoundland Power submitted that the Consumer Advocate has not identified a reasonable alternative that it failed to consider and that it provided all information that was requested with respect to its thermal facilities.

The Board notes that this project is a recurring annual project that provides for the replacement or refurbishment of critical structures and equipment as identified during annual inspections and maintenance activities as well as in-service failures that have to be addressed as they occur. These assets are important to the provision of reliable service to customers on the Island Interconnected system and need to be maintained and repaired as required to remain operable. The only alternative to continued maintenance and operation of these assets is to retire them which, in the Board's view, would not be in the best interest of customers. The proposed expenditures are based on an historical average, adjusted for anticipated extraordinary expenditures. The Board notes that the proposed 2022 expenditures of $307,000 are lower than the actual 2020 and forecast 2021 expenditures. The Board also notes that much of the information claimed by the Consumer Advocate as not having been provided was included in responses to the Consumer Advocate's information requests.[23] The Board is satisfied, based on the evidence, that the proposed capital expenditures for thermal facility rehabilitation are justified, appropriate and necessary to ensure the delivery of power to customers at the lowest possible cost consistent with reliable service.

Substations

Newfoundland Power proposes expenditures of $11,639,000 in 2022 for refurbishment and modernization of substations, replacements due to in-service failures, and continuation of the PCB bushing phase-out project.

Substation Refurbishment and Modernization

Expenditures of $7,049,000 are proposed in 2022 for the planned replacement and modernization of deteriorated and substandard substation infrastructure.[24] Of this amount $6,416,000 is for the refurbishment and modernization of three substations: Humber ($2,858,000), Tors Cove ($1,813,000) and Glovertown ($1,745,000). The proposed expenditures are justified in an engineering report detailing how the work is necessary to ensure continued reliable operation of these facilities.[25] The remaining project costs are for upgrades to the communications gateways that connect digital devices in substations to the Supervisory Control and Data Acquisition ("SCADA") system ($187,000) as well as upgrades to ground grids in the St. John's Main, Goulds and Oxen Pond substations ($446,000).

[23] CA-NP-101, CA-NP-102, CA-NP-103, CA-117 and CA-NP-146.

[24] Infrastructure would include breakers, bus structures, equipment foundations, fencing, grounding, potential transformers, protective relaying, support structures, switches and transformers. Infrastructure to be replaced is identified as a result of inspections, engineering assessments and operating experience.

[25] Application, Tab 2.1: *2022 Substation Refurbishment and Modernization*, May 2021. This report is an annual update to the *Substation Refurbishment and Modernization Plan* filed with the Board as part of Newfoundland Power's *Substation Strategic Plan* filed as part of the 2007 Capital Budget Application.

The Consumer Advocate submitted that Newfoundland Power provided episodic, but not comprehensive, information as to when Humber Substation has been out of service or required significant maintenance and that this comprehensive information is required to properly assess the urgency of the proposed refurbishment. In relation to the Tors Cove Substation refurbishment, the Consumer Advocate stated that the need for refurbishment is linked to the continued operation of the Tors Cove plant and that Newfoundland Power provided no information concerning the plant's current condition or how much it would cost to remain operational or on whether the Tors Cove plant will be required to provide reliable service to customers after the commissioning of Muskrat Falls. The Consumer Advocate further submitted that, as the Tors Cove plant would be off-line in 2022-2023, the capacity and energy provided by the plant is not needed for 2022-2023 to maintain reliable service and the project can and should be deferred until the Board determines the need for continuation or renewal of Newfoundland Power hydro capacity. The Consumer Advocate also submitted that, other than coordination with the rebuild of transmission line 124L, Newfoundland Power provided no reason as to why the Glovertown Substation refurbishment has such significant priority that it must be completed in 2022. According to the Consumer Advocate Newfoundland Power is pursuing this project simply because it can be linked to rebuilding transmission line 124L. The Consumer Advocate also submitted that planned expenditures for future years on substation refurbishment and modernization are increasing and that such increasing expenditures are unsustainable. No comments or submissions were made with respect to the proposed projects to upgrade the communications gateways or ground grids.

Newfoundland Power noted that, in discussing the Humber Substation, the Consumer Advocate references only select passages from the supporting condition assessment. According to Newfoundland Power this condition assessment was comprehensive and determined that the transformer is approaching end of life and should be a candidate for decommissioning by 2022. Refurbishment of Humber Substation is also required to address deterioration of other 4.16 kV substation infrastructure, which Newfoundland Power noted was not referenced by the Consumer Advocate. Newfoundland Power submitted that a net present value analysis confirmed the proposed project is the least-cost alternative to address the deteriorated condition of Humber Substation. With respect to Tors Cove Substation, Newfoundland Power stated that an economic evaluation of the Tors Cove hydro plant conducted as part of refurbishing a generating unit in 2017 was revisited to reflect proposed 2022 project costs and this analysis confirmed continued operation of the plant is economically justified. The refurbishment and modernization of the Glovertown Substation will, according to Newfoundland Power, allow the substation to be reconfigured to provide looped transmission service to 3,700 customers served by three substations along transmission line 124L in Central Newfoundland.

Newfoundland Power submitted that increasing expenditures for substation refurbishment and modernization reflect the need to refurbish and modernize major substations in urban areas. These substations have been in service for an average of 58 years and are anticipated to require capital expenditures over the forecast period. Newfoundland Power noted that detailed engineering analysis will be conducted to determine whether individual projects are necessary.

The Board notes that the substation refurbishment and modernization project is a continuation of work that started in 2007 as a result of the *Substation Strategic Plan* reviewed and accepted by the Board at that time. The plan provides for a structured approach over time to maintaining critical

substation equipment at Newfoundland Power's 131 substations to ensure continued compliance with industry standards. The plan is reviewed and updated annually with projects identified based on i) the condition of the infrastructure and equipment; ii) the need to upgrade and modernize protection and control systems; and iii) other relevant work. In the intervening years Newfoundland Power has proposed annual projects in each of its proposed capital budgets based on this annual review.

The proposed substation work totals $6,416,000 or just over 90% of the total 2022 project costs for substation refurbishment and modernization. While these expenditures are significant the Board does not agree with the Consumer Advocate that these projects have not been justified. The evidence filed for the proposed substation projects demonstrates that these projects are necessary at this time to ensure continued reliable service to customers. In particular the Board notes the following:

1. With respect the Humber Substation the age, condition and failure history of the 4.16 kV components justify replacement of the individual components. Concerns are documented with respect to arc flash hazards due to equipment not up to current standards, difficulty in sourcing replacement parts due to equipment age, and potential for further cable faults due to their age and physical condition. The feeder protection relays for the four 4.16 kV feeder exits are also at an age and deteriorated to the point that replacement is necessary. Faults on the power transformer HUM-T2, which was manufactured in 1968, have resulted in a number of customer outages. Oil leaks and cracked welds had to be repaired in 2020 requiring the installation of a portable transformer to avoid customer outages. There are also maintenance concerns around the on-load tap changer and PCB contaminants in the transformer bushings. In 2020 an independent assessment concluded that HUM-T2 was at the end of its service life and recommended replacing HUM-T2 in 2022.[26]

2. The Tors Cove Substation connects the 6.5 MW Tors Cove hydro plant to the Island Interconnected system. An independent condition assessment completed in 2020 of transformer TCV-T1, which was manufactured in 1950, found that the transformer is severely deteriorated and should be removed from service and replaced within 1 to 2 years. The transformer has operated under full-load for most of the time since it was installed and is now at risk of an-service failure due to its age and condition.[27] Transformer protection will also be installed. Engineering assessments have also determined that the 66 kV and 6.9 kV wood pole structures are splitting and the cross arms are deteriorated. These wood structures will be replaced by steel structures.

3. To maximize project efficiencies the Glovertown Substation project is being done at the same time as the proposed rebuild of transmission line 124L which will result in the termination of the line at this substation. The proposed yard extension, 138 kV steel bus extension and other work will accommodate new equipment to be installed in

[26] Application, page B-18: *HUM-T2 Transformer Condition Assessment* (prepared by van Kooy Transformer Consulting Services Ltd).
[27] Application, page C-8: *TCV-T1 Transformer Condition Assessment* (prepared by van Kooy Transformer Consulting Services Ltd).

connection with transmission lines 121L and 124L. Additional protective equipment is also planned.

The remaining proposed expenditures include ground grid upgrades to ensure compliance with safety standards and substation monitoring upgrades to upgrade the functionality of the SCADA system. With respect to the increasing forecast expenditures for the substation refurbishment and modernization plan in 2023 and beyond the Board notes Newfoundland Power's explanation that work will be required in that time period for refurbishment and modernization in several major substations as well as replacement of major equipment in 12 substations that are beyond their expected service life.[28] These expenditures and supporting documentation will have to be justified by Newfoundland Power in its subsequent capital budget applications. The Board is satisfied, based on the evidence, that the proposed capital expenditures for refurbishment and modernization of substations are justified, appropriate and necessary to ensure the delivery of power to customers at the lowest possible cost consistent with reliable service.

Replacements Due to In-Service Failures

Expenditures of $3,691,000 are proposed in 2022 for replacement of substation equipment that has been removed from service due to storm damage, lightning strikes, vandalism, electrical or mechanical failure, corrosion damage, technical obsolescence or failure during maintenance testing.

The Consumer Advocate submitted that Newfoundland Power has not provided a detailed breakdown of inventory requirements compared to historical expenditures for this project nor explained why the 2022 amount is higher than the annual average expenditures for 2017-2021. Newfoundland Power explained that the increase in expenditures for 2022 for this project reflects inflationary increases.

The Board notes that this project provides for the replacement of critical substation equipment that fails in-service and would require immediate attention as it is essential to the integrity and reliability of the electrical supply to customers. The projected 2022 expenditure of $3,691,000 is consistent with recent years' expenditures when adjusted for inflation. The Board is satisfied, based on the evidence, that the proposed capital expenditures for replacement of substation equipment due to in-service failures are justified, appropriate and necessary to ensure the delivery of power to customers at the lowest possible cost consistent with reliable service.

PCB Bushing Phase-Out

Expenditures of $899,000 are proposed in 2022 to replace bushings on one substation transformer and replace eight bulk oil circuit breakers. Federal regulations require that substation transformer bushings, breakers and instrument transformers with PCB concentrations of greater than 50 ppm be removed from service by the end of 2025.[29] This project is necessary to facilitate this requirement. The Consumer Advocate does not object to this project on the basis it is required to

[28] CA-NP-027. The substations planned for refurbishment and modernization were originally constructed in the 1950s, 1960s and 1970s and have an average age of 58 years.
[29] Application, Schedule B, page 15 of 99.

meet the requirements of the Federal regulations. The Board is satisfied, based on the evidence, that the proposed capital expenditures for PCB bushing phase-out are justified, appropriate and necessary to ensure the delivery of power to customers at the lowest possible cost consistent with reliable service.

Transmission

Newfoundland Power proposes transmission expenditures of $12,892,000 in 2022, $4,346,000 in 2023 and $4,276,000 in 2024 related to projects for transmission line rebuilds, as well as transmission line maintenance and third-party relocations.

Transmission Line Rebuilds

Proposed expenditures of $10,494,000 for transmission line rebuilds in 2022 comprise 81% of the proposed transmission expenditures for 2022. The proposed transmission line rebuilds include the following work:

i) Rebuilding the remaining 26.7 km section of transmission line 124L from Terra Nova Substation to Gambo Substation, which will involve the rebuild of 23.6 kms of transmission line infrastructure, the dismantling of 3.1 kms of transmission line infrastructure, and the construction of a new 5.4 km section of transmission line infrastructure into Glovertown Substation. This project will be completed in 2022 with an estimated expenditure of $6,021,000.

ii) Rebuilding a 21.5 km section of transmission line 94L which operates between Blaketown Substation and Riverhead Substation. This is a multi-year project with estimated expenditures of $4,473,000 in 2022, $4,346,000 in 2023 and $4,276,000 in 2024.

The engineering report filed with the Application to support the need for these transmission line rebuild expenditures concluded the work related to transmission lines124L and 94L is necessary based on recent inspections which identified significant deterioration and deficiencies on both lines. The report concluded that continued maintenance is no longer feasible and these two sections of transmission line must be rebuilt to continue providing safe and reliable electrical service to customers. The report also identified improvements in reliability that could be attained via some reconfiguration with respect to the transmission line routes.[30]

Transmission line 124L was originally constructed in 1964 and is 86.1 km in length. The line serves approximately 3,700 customers through the Glovertown, Port Blandford, and Terra Nova substations via three transmission taps. Since 2001 a total of 22.3 kms of transmission line 124L has been rebuilt between Clarenville substation and Thorburn Lake to correct ground clearance issues and address line failures caused by severe ice and wind loading. During 2021 another 30.0 kms of transmission line124L is being rebuilt between Port Blandford Substation and Terra Nova Substation. The 2022 project will address the remaining 26.7 kms of the 1964 vintage section from Terra Nova Substation to Gambo substation. With the current design, a fault at either substation or anywhere along the line results in outages to all customers served by these three substations. The work proposed as part of this rebuild, in conjunction with the Substation Refurbishment and

[30] Application, Tab 3.1: *Transmission Line Rebuild*, May 2021.

Modernization project for Glovertown Substation, will result in the termination of transmission line 124L at Glovertown Substation, thereby reducing outages to customers supplied from the Glovertown, Port Blandford, and Terra Nova substations.[31]

Transmission line 94L was originally constructed in 1969 by Hydro and includes approximately 58 kms of original construction consisting of 290 two-pole H-Frame structures and 32 single pole structures, with sub-standard transmission line conductor. The line provides the only source of supply for the St. Catherine's and Riverhead substations along with the Trepassey substation via transmission line 95L. These three substations serve approximately 2500 customers. The engineering report documented the deteriorated condition of this line, with 62% of poles and 68% of cross braces deteriorated. The line also does not meet current design standards. According to the engineering report the deteriorated condition exposes customers to potentially more frequent and extended unplanned outages. Significant costs would be incurred to transport, install and operate mobile generation to supply customers for the duration of any planned outages to address deficiencies. The report concluded that transmission line 94L must be rebuilt to continue the provision of safe and reliable service to customers in the area. Based on its age, deteriorated condition and criticality, the line will be rebuilt over three years starting in 2022.

The Consumer Advocate did not comment on transmission line 124L. In relation to transmission line 94L the Consumer Advocate submitted that the Board cannot know how the condition of this line in 2020 compared to earlier years as Newfoundland Power has not quantified the deterioration of transmission line 94L identified during pre-2020 inspections. The Consumer Advocate stated that, over the past five years, transmission line 94L has experienced no reliability events and that Newfoundland Power has not quantified the "costs to transport, install and operate mobile generation" were transmission line 94L to experience such an outage. The Consumer Advocate noted that annual preventative maintenance of $83,000 annually is a mere 0.6% of the $13 million cost to rebuild transmission line 94L and submitted that the record indicates that continued maintenance of transmission line 94L is currently a significantly better option than spending $13 million to rebuild it. The Consumer Advocate also noted that planned expenditures for future years on transmission line rebuilds are increasing and submitted that such increasing expenditures are unsustainable.

Newfoundland Power stated that the transmission line rebuild project involves rebuilding sections of the oldest, most deteriorated transmission lines. Newfoundland Power submitted that historical information on the condition of transmission line 94L is not available and is not required to observe the transmission line is now heavily deteriorated. Newfoundland Power further submitted that the rebuilding of this transmission line has been deferred by over 10 years through routine maintenance; however continued maintenance cannot address the deterioration now found on transmission line 94L.

[31] The effect of sectionalizing transmission line 124L via breakers in Glovertown, Port Blandford, and Terra Nova substations on historical outage minutes was assessed and it was determined that sectionalizing the line at Glovertown Substation would have resulted in a potential net reduction of transmission-related outage minutes to all transmission line 124L customers by 80% since 2002. In comparison, sectionalizing the line at the Port Blandford or Terra Nova substations would have resulted in a potential net reduction to transmission-related outage minutes by 18% and 29%, respectively.

The Board notes that the proposed transmission line rebuild work is a continuation of work that started in 2006 as a result of the Transmission Line Rebuild Strategy reviewed and accepted by the Board at that time. This plan set out a program to redesign and rebuild sub-standard transmission lines that were built in the 1940s, 50s and 60s with projects prioritized on the basis of physical condition, risk of failure and potential customer impact in the event of a failure. A total of 26 transmission lines have been rebuilt under the strategy since 2006 and by the end of 2021 76% of the rebuild strategy will have been executed. The final transmission line rebuilds are scheduled for 2027.[32] The evidence filed for the proposed transmission rebuild projects demonstrates that these projects are necessary at this time to ensure continued reliable service to customers. The Board does not agree with the Consumer Advocate's suggestion that continued maintenance of transmission line 94L is a better option due to its lower cost. Newfoundland Power has already deferred this project for 10 years through routine maintenance. The Board agrees that the criticality of the line for serving customers and its deteriorated condition justify approval of this project at this time. The Board is satisfied, based on the evidence, that the proposed capital expenditures for transmission line rebuilds are justified, appropriate and necessary to ensure the delivery of power to customers at the lowest possible cost consistent with reliable service.

Transmission Line Maintenance and Third-Party Relocations

Expenditures of $2,398,000 in 2022 are proposed for the following:

i) Replacing transmission line poles, crossarms, conductors, insulators and hardware. Equipment replacements can result from deficiencies identified during inspections and engineering reviews, or in-service and imminent failures.

ii) Accommodating third-party requests to relocate or replace transmission structures. The relocation or replacement of transmission lines results from work initiated by municipal, provincial and federal governments, work initiated by other users such as Bell Aliant, Eastlink and Rogers Communications, and requests from customers.

Newfoundland Power operates over 2,000 kms of transmission lines. Transmission line maintenance includes annual inspections and engineering reviews to assess plant condition and the requirement to replace deteriorated structures and equipment. The replacement of deteriorated structures and equipment is required annually to maintain overall plant condition. Project costs for 2022 are based on recent requirements for addressing transmission line deterioration. Responding to third-party requests to relocate or replace transmission structures is necessary to maintain safe and adequate facilities. The relocation or replacement of transmission lines is governed by the provisions of agreements in place with the requesting parties or the Contributions in Aid of Construction policy approved by the Board.

The Consumer Advocate stated that Newfoundland Power has not explained why the 2022 amount of approximately $2.4 million is 4.5% higher than the 2017-2021 annual average of $2.3 million. The Consumer Advocate also commented that, by the end of 2021, 76% of Newfoundland Power's Transmission Line Rebuild Strategy will be completed and, presumably, customers should expect the annual cost of transmission line maintenance to decrease after 2027.

[32] Application, Tab 3.1: *2022 Transmission Line Rebuild*, page 1.

Newfoundland Power stated that the cost estimate for transmission line maintenance and third-party relocations is based on the five-year historical average adjusted for inflation and, accordingly, the cost increases reflect inflation. Newfoundland Power further stated that the transmission lines to be rebuilt under the Transmission Line Rebuild Strategy comprise only 27% of Newfoundland Power's transmission lines and that it does not expect its maintenance expenditures to decrease following the conclusion of the strategy. Newfoundland Power noted that, as of 2021, 64% of its transmission lines will be 40 years of age or older and, given the age of these assets, ongoing maintenance will continue to be required.

The Board notes that, accounting for inflation, the proposed expenditures for 2022 are consistent with the actual annual expenditures for the period 2017-2020 and the forecast expenditure for 2021, and with the projected expenditures for 2022-2026. Actual expenditures in 2022 will depend on the number of deficiencies identified and the number of third-party requests received. Any increases in future spending for this project category will have to be justified in annual capital budgets. The Board is satisfied, based on the evidence, that the proposed capital expenditures for transmission line rebuilds are justified, appropriate and necessary to ensure the delivery of power to customers at the lowest possible cost consistent with reliable service.

Distribution

Newfoundland Power proposes distribution expenditures of $46,214,000 in 2022, which comprise 44% of the proposed 2022 Capital Budget.[33] Expenditures are planned for distribution line extensions and upgrades, purchase and installation of customer meters and service wires, installation of new street lighting fixtures, purchase and replacement of transformers, rebuild of distribution lines, reconstruction of deteriorated or damaged distribution structures and electrical equipment, relocation/replacement of distribution lines for third parties, feeder additions for load growth, and automation of distribution feeders. Expenditures are also included for the Street Lighting LED Replacement Program, the Distribution Reliability Initiative, the conversion of the 4.16 kV distribution system at Humber substation to 12.5 kV as well as an allowance for funds used during construction.

Extensions and Upgrades

Expenditures of $10,333,000 in 2022 are proposed for construction of both primary and secondary distribution lines to connect new customers to the system as well as for upgrades to the capacity of existing lines to accommodate increased electrical loads. The expected project expenditure is estimated on the basis of historical data and forecast number of new customers. Newfoundland Power stated that this project is justified on the obligation to provide customers with equitable access to an adequate supply of power and cannot be deferred.

The Consumer Advocate stated that Newfoundland Power provided no detailed, quantified data indicating how its forecast of new customers for 2022 was derived and that it is not possible to determine why Newfoundland Power's forecasts for new customers in 2019 and 2020 were apparently inflated by 8% and 22%. The Consumer Advocate submitted that Newfoundland

[33] Newfoundland Power proposed $47,744,000 in distribution expenditures in the Application which was reduced by $1,530,000 due to the removal of the Electric Vehicle Charging Network project to be considered in a separate process.

Power's forecast for 2022 is likely similarly inflated and that is it very doubtful that this project is required to address increases in customers' electrical load as Newfoundland Power has reported elsewhere that both sales and demand in recent years declined or flattened and this pattern is expected to continue.

Newfoundland Power referred to its response to CA-NP-030 which explained that its forecast of new customer connections is derived from economic data published by the Conference Board of Canada. Newfoundland Power stated that, while its energy sales have declined in recent years, it continues to see growth in new customer connections and that system load growth continues in certain areas where commercial and residential development is occurring.[34]

The Board notes that this expenditure is a recurring annual project which allows Newfoundland Power to respond to customer needs. Newfoundland Power uses independent economic data to derive its forecast of customer growth. While total sales and demand may have decreased in recent years the evidence shows that system load growth is occurring in certain areas for which Newfoundland Power has an obligation to serve. There is no basis upon which to conclude that Newfoundland Power has inflated its forecast customer numbers, as suggested by the Consumer Advocate, either in recent years or for the 2022 Capital Budget. The Board notes that the actual expenditures in 2022 for this project will depend on the actual number of new customers who request connection and load growth. The Board is satisfied, based on the evidence, that the proposed capital expenditures for extensions and upgrades are justified, appropriate and necessary to ensure the delivery of power to customers at the lowest possible cost consistent with reliable service.

Meters and Services

Expenditures of $818,000 in 2022 are proposed for the purchase and installation of meters for new customers and replacement meters for existing customers. The proposed expenditures are consistent with Newfoundland Power's 2016 Metering Strategy. The replacement component of this project ensures compliance with legislation and the removal of deteriorated or failed meters from service.[35] The new component of this project is justified on the obligation to provide customers with equitable access to an adequate supply of power and cannot be deferred. Expenditures of $3,038,000 are also proposed for the installation of service wires to connect new customers, and larger service wires to accommodate customer loads and the replacement of existing wires due to deterioration, failure or damage. Newfoundland Power stated that this project is justified on the obligation to provide customers with equitable access to an adequate supply of power and cannot be deferred.

As with the Extensions project above the Consumer Advocate submitted that the accuracy of the forecast of new customers for 2022 is open to significant doubts. The Consumer Advocate stated that there is no indication that the process used to derive the 2020 and 2021 predictions has been revised or corrected.

[34] Newfoundland Power's Submission, page 26.
[35] Revenue metering of electrical service is regulated under the Electricity and Gas Inspection Act (Canada).

Newfoundland Power repeated that, while its energy sales have declined in recent years, it continues to see growth in new customer connections. Newfoundland Power also stated that, to the extent that actual capital expenditures vary from forecast, so too will the costs that are recovered from customers for these projects.

The Board notes that the proposed expenditures for meters and services are recurring annual projects which allow Newfoundland Power to respond to customer needs, accommodate increased system loads, replace deteriorated or failed meters and service wires, and meet legislative requirements. While total sales and demand may have decreased in recent years the evidence shows that system load growth is occurring in certain areas for which Newfoundland Power has an obligation to serve. As stated above there is no basis upon which to conclude that Newfoundland Power has inflated its forecast customer numbers, as suggested by the Consumer Advocate, either in recent years or for the 2022 Capital Budget. The Board notes that the actual expenditures in 2022 for this project will depend on the number of new customers, the number of replacement meters required and the extent of service wire replacements and upgrades. The Board is satisfied, based on the evidence, that the proposed capital expenditures for meters and services are justified, appropriate and necessary to ensure the delivery of power to customers at the lowest possible cost consistent with reliable service.

Street Lighting

Expenditures of $2,507,000 in 2022 are proposed for installation of new street lighting fixtures and replacement of overhead and underground wiring where necessary. This project is driven by customer requests. Newfoundland Power justifies this project on the basis that street lighting is an established service offering and providing equitable access to this service requires responding to customers' requests for street light installations.

The Consumer Advocate stated that Newfoundland Power does not address whether consideration should be given to changes in forecasting or capital budgeting process despite the actual number of street lights installed in 2019 and 2020 being higher than forecast. The Consumer Advocate stated that Newfoundland Power provided no explanation for the increase in 2019 or why the failure rate was so much higher than forecast in 2020.

Newfoundland Power stated that, as described in the Application, the costing methodology for the Street Lighting project was changed to address the variances in recent years with cost estimates now based on the most recent five-year average, adjusted for inflation.

The Board notes that the proposed expenditures for street lighting are recurring annual expenditures required to respond to customer requests for new street lighting and for related repairs. The Consumer Advocate's assertions with respect to the need for changes in the forecasting or budgeting process for this recurring project were addressed by Newfoundland Power in the Application and again in its reply submission. The Board is satisfied, based on the evidence, that the proposed capital expenditures for street lighting are justified, appropriate and necessary to ensure the delivery of power to customers at the lowest possible cost consistent with reliable service.

Transformers

Expenditures of $5,958,000 in 2022 are proposed for the purchase of transformers to serve customer growth and for the replacement or refurbishment of units that have deteriorated or failed.

The Consumer Advocate stated the planned expenditures for this project for 2022-2026 increase by 5.3% and that the Board needs to consider whether customers can afford such increasing expenditures, particularly where there is considerable doubt whether customer growth will occur. The Consumer Advocate repeated that Newfoundland Power has stated in other matters that sales and demand have declined in recent years. The Consumer Advocate submitted that Newfoundland Power should be required to delineate how much of this project is attributable to customer growth and reject this portion of the project.

Newfoundland Power repeated that, while energy sales have declined overall, the request for new customer connections and increased electrical system loads continue in certain areas. Newfoundland Power stated that this project is justified on the obligation to provide customers with equitable access to an adequate supply of power and cannot be deferred.

The Board notes that proposed expenditures for transformers are recurring annual expenditures required to address customer growth or deteriorated or failed equipment. The estimated expenditure is based on an historical average and is consistent with actual expenditures from 2017 to 2020 and forecast expenditures for 2021. The costs that are ultimately recovered from customers for this project will depend on the actual capital expenditures incurred. The Board is satisfied, based on the evidence, that the proposed capital expenditures for transformers are justified, appropriate and necessary to ensure the delivery of power to customers at the lowest possible cost consistent with reliable service.

Rebuild Distribution Lines

Expenditures of $4,333,000 in 2022 are proposed for replacement of deteriorated distribution structures and electrical equipment that have been identified through the ongoing preventative maintenance program or engineering reviews. Based on a seven-year inspection cycle for distribution feeders work is planned for 43 of Newfoundland Power's feeders in 2022.

The Consumer Advocate stated the planned expenditures for this project for 2022-2026 increase by 11.3% and that such increasing expenditures are unsustainable. The Consumer Advocate stated that Newfoundland Power's justification for the project's cost estimate is simply that it approximates what it has spent on rebuilding distribution lines in the past and submitted that Newfoundland Power's tardiness in identifying rebuild work may explain why work ends up as more expensive unplanned replacement under the Reconstruction project.

Newfoundland Power stated that increasing expenditures for the Rebuild project over the forecast period reflect inflationary increases. Newfoundland Power submitted that the difference between the costs under Reconstruction versus Rebuild does not reflect tardiness in identifying deficiencies but rather reflects Newfoundland Power's approach of targeting the highest priority deficiencies.

Newfoundland Power stated that this project is justified on the obligation to provide reliable service to customers at least-cost and cannot be deferred.

The Board notes that these proposed expenditures are recurring annual expenditures to replace deteriorated or damaged structures and equipment on the distribution system. Inspection work was ongoing throughout 2021 for the specific work to be completed in 2022 on the identified feeders. Given that the Application was filed in May and the inspections would for the most part be expected to occur during the summer and fall when field conditions allow, it is reasonable to estimate the 2022 budget based on historical costs. The Board notes that the proposed expenditures are consistent with the *Rebuild Distribution Lines Update* filed with the 2013 Capital Budget Application, which set out Newfoundland Power's current preventative maintenance program, distribution inspection standards and targeted replacement programs. There is no basis on which to conclude, as suggested by the Consumer Advocate, that delays in identifying rebuild work for the next budget year results in more unplanned replacements and higher costs. The Board is satisfied, based on the evidence, that the proposed capital expenditures for the rebuild distribution lines project are justified, appropriate and necessary to ensure the delivery of power to customers at the lowest possible cost consistent with reliable service.

Reconstruction Distribution Lines

Expenditures of $5,902,000 are proposed in 2022 for replacement of deteriorated or damaged distribution structures and electrical equipment comprised of high priority deficiencies identified during the budget year or recognized during follow-up on operational problems, including power interruptions and customer trouble calls. This project differs from the *Rebuild Distribution Lines* project, which involves planned rebuilding or replacement of lines and line components based on preventative maintenance inspections or engineering reviews.

The Consumer Advocate stated that planned expenditures for this project for 2022-2026 increase by 11% and submitted that such increasing expenditures are unsustainable. The Consumer Advocate submitted that Newfoundland Power does not indicate how its structures and equipment can become so deteriorated as to require replacement yet had not been identified in a timely enough manner to be undertaken under a planned, and therefore less costly, Rebuild Distribution Lines project.

Newfoundland Power stated that increasing expenditures for this project over the forecast period reflect inflationary increases. Newfoundland Power further stated that it inspects its distribution feeders on a seven-year cycle and high-priority deficiencies are addressed in the year identified. Newfoundland Power submitted that higher expenditures for Reconstruction than for Rebuild reflects that Newfoundland Power targets its capital expenditures to address the highest priority deficiencies on the distribution system.

The Board notes that these proposed expenditures are recurring annual expenditures to replace deteriorated or damaged structures and equipment on the system as they are identified. This project allows Newfoundland Power to address serious issues that arise during the year which could not have been anticipated or identified as part of its preventative maintenance inspections. The Board is satisfied, based on the evidence, that the proposed capital expenditures for the reconstruction

distribution lines project are justified, appropriate and necessary to ensure the delivery of power to customers at the lowest possible cost consistent with reliable service.

Relocate/Replace Distribution Lines for Third Parties

Expenditures of $3,370,000 in 2022 are proposed to accommodate third-party requests to relocate or replace distribution lines. Newfoundland Power's response to requests from governments and other service providers for relocation and replacement of distribution facilities is governed by the provisions of agreements in place with the requesting parties. The relocation or replacement of facilities for customers is governed by Newfoundland Power's policy respecting Contributions in Aid of Construction.

The Consumer Advocate stated the planned expenditures for this project for 2022-2026 increase by 5.4% and submitted that such increasing expenditures are unsustainable and the Board must consider whether these expenditures are warranted, especially where Newfoundland Power stated the expenditures cannot be identified at the time the budget is prepared.

Newfoundland Power stated that increasing expenditures for this project over the forecast period reflect inflationary increases and that actual expenditures will reflect the actual requests received, which are not generally foreseeable and have to be addressed in a timely manner.

The Board notes that proposed expenditures for this project are recurring annual expenditures to accommodate requests to relocate or replace distribution structures. As Newfoundland Power is unable to determine the number and nature of third-party requests that may be received in the upcoming year, the 2022 budget estimate is based on historical experience with contributions from customers and requesting parties included. Ultimately only the actual expenditures incurred will be recorded to be recovered from customers. The Board is satisfied, based on the evidence, that the proposed capital expenditures to relocate or replace distribution lines for third parties are justified, appropriate and necessary to ensure the delivery of power to customers at the lowest possible cost consistent with reliable service.

Feeder Additions for Load Growth

Expenditures of $1,690,000 in 2022 are proposed for the following distribution line feeder upgrades:

i) A section of Pulpit Rock feeder PUL-03 will be upgraded from 2-phase to 3-phase in order to address an overload condition that has developed as a result of customer connection growth, as well as large home renovations and electrical service upgrades in the areas of Bauline Line, Middle Three Island Pond Cabin Area, Bauline Line Extension and Pondside Subdivision. ($560,000)

ii) A section of Virginia Waters feeder VIR-01 will be upgraded from single-phase to 3-phase in order to address an overload condition that has developed as a result of customer connection growth as well as large home renovations and electrical service upgrades in the area of Marine Drive and Doran's Lane. ($350,000)

iii) A section of Springfield feeder SPF-01 will be upgraded from single-phase to 3-phase, and an additional section will be upgraded from 2-phase to 3-phase in order to address

an overload condition that has developed as a result of residential development in the community of North River, Halls Town and the cabin area along North River Road. ($600,000)

iv) A section of Harmon feeder HAR-02 will be reconductored in order to address an overload condition that has developed as a result of the addition of a new large load customer on the feeder. ($180,000)

The Consumer Advocate noted that neither of these feeders are listed by Newfoundland Power as being among the 15 worst performing feeders for the period 2016-2020, nor has Newfoundland Power indicated that it has had to deny service to customers on these feeders due to increases in loads. The Consumer Advocate submitted that Newfoundland Power has not shown that the work cannot be deferred for one or more years or why these four feeders should have priority over the upgrading of other feeders Newfoundland Power has planned for 2023-2026. The Consumer Advocate stated the planned expenditures for 2022-2026 increase by more than 100% and that such increasing expenditures are unsustainable.

Newfoundland Power submitted that deferring capital expenditures to the point where it is forced to deny service would not be acceptable to customers and would contravene Newfoundland Power's obligation to provide equitable access to an adequate supply of power. Newfoundland Power stated that it assesses all viable alternatives for addressing overload conditions on distribution feeders and that the four projects have been identified for upgrading in 2022 based on existing or forecast overload conditions. According to Newfoundland Power feeder balancing and load transfers are no longer viable options and upgrades are required.

The Board notes that the distribution lines proposed for upgrades are associated with overload conditions due to increases in customer numbers supplied by these lines from surrounding residential development as well as higher loads from large home renovations, electrical service upgrades and/or commercial customers. Feeder balancing or load transfers are not options to address the overload conditions identified. The evidences shows that the project is necessary to allow Newfoundland Power to continue to provide customers with reliable service. Increases in future spending will have to be justified by Newfoundland Power in its subsequent capital budget applications. The Board is satisfied, based on the evidence, that the proposed capital expenditures for feeder additions due to load growth are justified, appropriate and necessary to ensure the delivery of power to customers at the lowest possible cost consistent with reliable service.

Distribution Feeder Automation

Expenditures of $893,000 in 2022 are proposed to increase automation in Newfoundland Power's distribution system by adding new equipment to the distribution system or replacing some older equipment in service with modern, communications-capable equipment. The increase in automation will include the addition of technologies such as automated downline reclosers and fault indicators at 14 locations. These devices reduce outage response and restoration time as sections of feeders no longer need to be patrolled to identify the cause of outages. Newfoundland Power noted that distribution feeder automation is recognized in the electric utility industry as providing both reliability and efficiency benefits for customers.

The Consumer Advocate stated that this project is *de facto* a multi-year project, that the annual cost in 2022 is 458% higher than in 2015, and that project costs are intended to continue to increase with no end in sight as Newfoundland Power has not indicated whether it intends to carry on with Distribution Feeder Automation projects. The Consumer Advocate submitted that, while Newfoundland Power has occasionally quantified the number of customers saved from service interruption by the increase in automation, the duration of customer service interruptions avoided is not routinely quantified and as such, the Board cannot compare the value provided by Distribution Feeder Automation projects to their costs.

Newfoundland Power stated that it filed its plan to automate its distribution system as part of its 2020 Capital Budget Application and that the projects proposed for 2022 are consistent with that plan. Newfoundland Power further stated that any future capital expenditures will be assessed in accordance with the plan. Newfoundland Power submitted that quantifying the benefit each time a device operates is not practical but that the benefits are most pronounced during significant electrical system events. Newfoundland Power noted that during a severe blizzard in 2020 the operation of five downline reclosers avoided approximately 3.5 million customer outage minutes.

The Board notes the proposed expenditures for this project are based on detailed engineering estimates of individual feeder requirements. The installation of automated downline reclosers on selected feeders began in 2014 following the widespread supply outages on the Island Interconnected system in late 2013 and early 2014.[36] These reclosers have been shown to result in reduced outage duration and response time.[37] The 2022 project is consistent with the *Distribution Feeder Automation* report filed with the 2020 Capital Budget, is in accordance with modern distribution utility practice and will reduce the impact of outages and improve reliability. The Board is satisfied, based on the evidence, that the proposed capital expenditures for distribution feeder automation are justified, appropriate and necessary to ensure the delivery of power to customers at the lowest possible cost consistent with reliable service.

Street Lighting – LED Replacement Program

Expenditures of $5,428,000 in 2022 are proposed for the Street Lighting LED Replacement Program. This is the second year of a six-year program to replace all High Pressure Sodium (HPS) street light fixtures with LED fixtures.[38] The LED street lighting replacement plan will cost approximately $32.8 million over six years and is estimated to reduce energy and maintenance costs by $52 million over 20 years, resulting in lower overall costs for customers.

[36] In Order No. P.U. 14(2014) the Board approved supplemental capital expenditures proposed by Newfoundland Power to improve electrical system performance following the supply outages. Up to 2019 Newfoundland Power had installed approximately 30 automated downline reclosers. The *Distribution Feeder Automation* report filed with the 2020 Capital Budget Application detailed a plan to install an average of 15 downline reclosers per year on select feeders from 2020 to 2024.

[37] CA-NP-132. Examples are also provided in the *Distribution Feeder Automation* report.

[38] The *LED Street Lighting Replacement Plan* was approved by the Board in Order No. P.U. 2(2019). Order No. P.U. 37(2020) noted that the proposed program was consistent with Canadian practice and supported by Municipalities Newfoundland and Labrador.

The Consumer Advocate stated that the LED Replacement project is consistent with the description of a multi-year project, despite not being characterized as multi-year, but provided no further comment.

Newfoundland Power stated that the LED Replacement project is not a multi-year project as capital expenditures for the program are proposed, reviewed and approved by the Board on an annual basis to ensure they continue to be in the best interest of customers.

The Board notes that the LED street lighting was adopted as its new service standard with the approval of customer rates in Order No. P.U. 2(2019). Customer rates for LED street lights are between 8% and 39% less than equivalent HPS rates. When completed the implementation of the LED Replacement Plan will result in significantly lower costs for customers as well as more reliable and better quality lighting. Contrary to the suggestion of the Consumer Advocate this is a single year project for 2022 proposed in accordance with the Street Lighting Replacement Program. The proposed 2022 costs were based in detailed engineering estimates and Newfoundland Power has provided documentation to show that the program continues to be in the best interest of customers. The Board is satisfied, based on the evidence, that the proposed capital expenditures for the LED street lighting replacement program are justified, appropriate and necessary to ensure the delivery of power to customers at the lowest possible cost consistent with reliable service.

Distribution Reliability Initiative

Expenditures of $350,000 in 2022 are proposed for replacement of deteriorated poles, conductor and hardware to reduce both the frequency and duration of power interruptions to the customers served by specific distribution lines. The engineering report filed to support this project sets out that individual feeder projects are identified and prioritized based on historic interruption statistics and engineering assessments are completed to determine whether targeted capital investments would improve reliability.[39] Newfoundland Power has also identified a section of distribution feeder BCV-04 where reliability performance can be improved by focused work on a two-kilometre section exposed to high winds and salt contamination.

The Consumer Advocate stated feeder BCV-04 is not the worst performing feeder and submitted that, based on the principle of equitable access, the project is unwarranted as many other distribution feeders are far less reliable. The Consumer Advocate stated that Newfoundland Power has not provided information to show that the expenditure on BCV-04 could not be used to improve distribution reliability for other customers.

Newfoundland Power acknowledges that BCV-04 is not among its worst-performing feeders but notes that it is not proposing to rebuild the entire distribution feeder, only a two kilometre section. Newfoundland Power stated that the duration of outages experienced by customers in this location is 9 times the average of that experienced by other customers.

[39] Application, Tab 4.1: *Distribution Reliability Initiative*, May 2021.

These proposed expenditures are justified in the *Distribution Reliability Initiative* report, supported by an engineering assessment report for the BCV-04 feeder work.[40] The Board notes that 140 customers are supplied directly from this two km section of BCV-04 and that these customers experienced 16.5 hours of outages in 2020, compared to a company average of 1.8 hours.[41] The poor performance of this section of feeder is due to wind and salt contamination and related equipment failures. The engineering assessment noted that regular maintenance will not remediate all the reliability issues identified and proposed upgrades for insulators, hardware, switches and cut-outs that have a higher insulation value as well as replacing all deteriorated fittings and crossarms. The evidence shows that rebuilding the damaged section of the feeder will improve reliability for all 1,037 customers on the feeder.[42] The Board is satisfied, based on the evidence, that the proposed capital expenditures for the distribution reliability initiative are justified, appropriate and necessary to ensure the delivery of power to customers at the lowest possible cost consistent with reliable service.

Trunk Feeders – Humber 4.16 kV Conversion

Expenditures of $1,355,000 in 2022 are proposed for the conversion of the 4.16 kV distribution system at Humber Substation to 12.5 kV. Engineering condition assessments have identified a number of components in this substation, including the 4.16 kV switchgear, power transformer HUM-T3, and high voltage switches, that are approaching the end of their service life. Newfoundland Power proposes to dismantle the existing 4.16 kV infrastructure and replace it with 12.5 kV infrastructure. Upgrading the 4.16 kV distribution system in downtown Corner Brook will also improve operational flexibility through the creation of tie points to the existing 12.5 kV distribution system adjacent to the distribution system being converted.

The Consumer Advocate's submissions in relation to this project referred to his comments made in relation to the Humber Substation refurbishment.[43] Newfoundland Power did not specifically address this project.

The Board has already found that the Humber Substation should be modernized based on the age, condition and failure history of the 4.16 kV components at the Humber Substation. This distribution project will convert the existing 4.16 kV distribution feeders to 12.5 kV and construct a new feeder as part of the modernization project for the Humber Substation. The Board is satisfied, based on the evidence, that the proposed capital expenditures for the conversion of the 4.16 kV distribution system at Humber Substation to 12.5 kV are justified, appropriate and necessary to ensure the delivery of power to customers at the lowest possible cost consistent with reliable service.

[40] Application, Tab 4.1: *Broad Cove BCV-04 Feeder Study*, Appendix C - *Distribution Reliability Initiative*, May 2021.
[41] CA-NP-035.
[42] CA-NP-151.
[43] See page 14 of this Decision.

Allowance for Funds Used During Construction

Expenditures of $239,000 are proposed for an allowance for funds used during construction which will be charged on distribution work orders with an estimated expenditure of less than $50,000 and a construction period in excess of 3 months. Such allowances are consistent with Order No. P.U. 32(2007) and regulated Canadian utility practice. The Board is satisfied, based on the evidence, that the proposed allowance is justified, appropriate and necessary to ensure the delivery of power to customers at the lowest possible cost consistent with reliable service.

General Property

Newfoundland Power proposes general property expenditures of $2,660,000 in 2022 for projects and amounts related to replacement of tools and equipment, additions to real property, physical security upgrades and refurbishment of the Clarenville area office building.

Expenditures of $598,000 in 2022 are proposed for replacement of tools and equipment including $474,000 for operations and engineering tools and equipment, and $124,000 for the replacement of office furniture. The Consumer Advocate stated the planned expenditures for this project for 2022-2026 increase by 15.6% and that such increasing expenditures are unsustainable. The Consumer Advocate submitted that, in this period of challenging economic conditions, the Board must consider whether spending $124,000 to replace office furniture is warranted. Newfoundland Power submitted that increasing expenditures for tools and equipment over the forecast period reflect inflationary increases and that replacing deteriorated furniture is necessary to maintain its facilities in safe and adequate condition for employees and customers visiting the facilities.

Expenditures of $716,000 in 2022 are proposed for additions to real property, which includes upgrading, refurbishment or replacement of equipment and facilities due to organizational changes, damage, deterioration, corrosion and in-service failure.[44] The project includes $383,000 based on historical expenditures for similar work for the previous five-year period, $150,000 for refurbishment of identified deteriorated transformer storage racks at Newfoundland Power service centres, $113,000 for the refurbishment of washrooms and $70,000 for the installation of electric vehicle chargers for Newfoundland Power's electric vehicle fleet.[45] The Consumer Advocate submitted that, in this period of challenging economic conditions, the Board must consider whether spending $113,000 to promote sanitary conditions is justified, noting that Newfoundland Power did not provide evidence that provincial government, crown corporations or privately-held corporations are spending money to replace existing faucets and doors. The Consumer Advocate also noted that planned expenditures for additions to real property for 2022-2026 increase by 36.9% compared to 2017-2021 and that such increasing expenditures are unsustainable. Newfoundland Power submitted that increasing expenditures for additions to real property over the forecast period reflect inflationary increases and that ensuring sanitary conditions is necessary to maintain its facilities in safe and adequate condition for employees and customers visiting the facilities.

[44] Examples of past expenditures in this category include items such as emergency water line replacement, sewer interceptor installation and correcting major drainage problems.

[45] The charging stations will be installed at various Newfoundland Power properties to support the use of electric vehicles for functions such as meter reading and other field services.

Expenditures of $492,000 in 2022 are proposed for physical security upgrades at ten substations, three office/storage facilities and eight hydro plant facilities, primarily to address unauthorized entry to company facilities, including substation break-ins which result in theft of bare copper wire. The Consumer Advocate submitted that, while theft is to be denounced, Newfoundland Power has not provided information on the cost to replace stolen copper wire or information that past security upgrade expenditures have reduced the theft of copper wire. The Consumer Advocate stated the record does not show that security upgrades actually deter thieves. Newfoundland Power stated that substation break-ins can result in significant safety risks to employees, as well as property theft and damage. Newfoundland Power submitted that the project is not justified based on the cost of replacing stolen items; rather it is required to prevent unauthorized access to its facilities which poses hazards to individuals entering the substation and employees following up on the intrusion.

Expenditures of $854,000 in 2022 are also proposed to refurbish the Clarenville area office building. Planned work includes upgrades to the heating, ventilation and air-conditioning system as well replacement of the built-up roofing system. The expenditures are supported by an engineering report which documented the condition assessments for the roof as well as the heating, ventilation and air conditioning ("HVAC") systems.[46] The Consumer Advocate did not specifically address this project in submissions.

The Board notes that the majority of the proposed general property projects are to provide and replace critical tools and equipment for technicians and field staff or to address physical or security concerns at Newfoundland Power's buildings and plant. The projects are justified on the basis of the need to ensure staff have the necessary tools and equipment to operate and maintain the system, ensuring that the company's buildings and facilities and associated equipment are maintained in good working order and that safety concerns are addressed. A number of the projects comprise individual budget items of less than $50,000 with expected expenditures based on historical costs and anticipated need. Expenditures for other planned projects are based on engineering estimates supported by engineering or technical assessments where required. The Board notes that increases in these expenditures over the forecast period reflect inflationary increases.

The Board also notes that there have been 24 substation break-ins since 2016, mostly related to theft of bare copper wire. These substations are high hazard areas and the potential for serious injury or worse for unauthorized persons entering the area is significant. The proposed security enhancements are to reduce the risk of personal injury as well as prevent the theft or damage of materials required to provide service to customers. The evidence also shows that the roofing system at the Clarenville area office building is deteriorated to the point that water ingress and mould growth are serious concerns, both in terms of the building envelope integrity and worker safety. The HVAC system is unable to operate reliably raising concerns with the adequacy of ventilation and exhaust systems in areas of the building. The Board also believes that the proposed expenditures for the refurbishment of washrooms and the replacement of office furniture are reasonable to provide for the comfort and safety of its employees and customers. The Board is satisfied, based on the evidence, that the proposed capital expenditures for general property are

[46] Application, Tab 5.1: *Clarenville Area Office Building Refurbishment*, May 2021. The report includes a copy of an independent inspection report for the HVAC system completed in 2020.

justified, appropriate and necessary to ensure the delivery of power to customers at the lowest possible cost consistent with reliable service.

Transportation

Newfoundland Power proposes transportation expenditures of $3,089,000 in 2022 and $2,135,000 in 2023 for the Replace Vehicles and Aerial Devices project. This is a multi-year project to replace vehicles expected to be required to be replaced in 2022 and 2023 based on Newfoundland Power's vehicle replacement criteria. The project identifies four light duty fleet, 32 passenger and 14 off-road vehicles for replacement in 2022 and five heavy and medium duty fleet vehicles for replacement in 2023. Newfoundland Power stated that the long delivery times associated with the purchase of heavy/medium fleet vehicles have reached the point where these vehicles can no longer be ordered and delivered in a calendar year and that a multi-year project better addresses these long delivery times.

The Consumer Advocate submitted that Newfoundland Power has not provided information on how often vehicles break down or whether such breakdowns have impeded response to service outages. The Consumer Advocate stated that it is reasonable to infer that Newfoundland Power plans to continue similar spending in 2024-2026.

Newfoundland Power stated that it applies evaluation criteria to determine whether individual vehicles require replacement which involves: (i) evaluating which vehicles have reached a certain age or mileage; and (ii) inspecting those vehicles to assess whether they can be economically maintained for additional service. Newfoundland Power submitted these criteria are consistent with Canadian utility practice.

The Board notes that the proposed level of expenditure for transportation is consistent with historical expenditures since 2017 and that objective evaluation criteria were used to identify vehicles to be evaluated and ultimately selected for replacement. The vehicle evaluation criteria used by Newfoundland Power was last reviewed in 2015 following direction by the Board in Order No. P.U. 40(2014). In Order No. P.U. 28(2015) addressing Newfoundland Power's 2016 Capital Budget the Board found Newfoundland Power's vehicle replacement criteria and practices were consistent with those used by Atlantic Canadian utilities which would be expected to operate in similar conditions and "provide an objective and sound basis for decision-making". The project is proposed as a multi-year project to address long delivery times for heavy/medium duty fleet vehicles. Future expenditures in this category will be required to be justified in subsequent capital budget applications. The Board is satisfied, based on the evidence, that the proposed capital expenditures for transportation are justified, appropriate and necessary to ensure the delivery of power to customers at the lowest possible cost consistent with reliable service.

Telecommunications

Newfoundland Power proposes telecommunications expenditures of $564,000 in 2022 and $1,150,000 in 2023 to replace or upgrade communications equipment and to replace the St. John's Teleprotection System.

Replace/Upgrade Communications Equipment

Expenditures of $114,000 in 2022 are proposed for the replacement and/or upgrade of communications equipment, including radio communications equipment associated with electrical system operations, and data communications equipment providing remote monitoring and control capabilities associated with Newfoundland Power's SCADA system.

The Consumer Advocate stated the planned expenditures to replace or upgrade communications equipment for 2022-2026 increased by 9.0% and that such increasing expenditures are unsustainable. The Consumer Advocate stated that, while Newfoundland Power does not say this is a multi-year project, future expenditures indicate that Newfoundland Power uses this project to spend more than $100,000 annually. The Consumer Advocate submitted that it might be said to be remarkable that the cost of such failures and obsolescence is uniform year after year and the equipment obsolescence is susceptible to being influenced and determined by the eye of the beholder.

Newfoundland Power stated that increasing expenditures to replace or upgrade communications project over the forecast period reflect inflationary increases. Newfoundland Power submitted that any implication that it invariably spends the budgeted amount, regardless of need, is without merit. Newfoundland Power maintains hundreds of communication devices and a degree of equipment failure and obsolescence is to be expected.

The Board notes that the estimated budget to replace or upgrade communications equipment as required during the upcoming year is based on the historical five-year average of actual spending, excluding planned expenditures. This is a reasonable approach for the nature of these expenditures, which are a reoccurring yearly capital expenditure based on expected operations and not a multi-year project as suggested by the Consumer Advocate. The proposed expenditures for 2022 are consistent with the actual annual expenditures for the period 2017-2020 and the forecast annual expenditures for 2021, when adjusted for inflation. Increases in future spending for this project category will have to be justified in annual capital budgets. The Board is satisfied, based on the evidence, that the proposed capital expenditures to replace or upgrade communications equipment are justified, appropriate and necessary to ensure the delivery of power to customers at the lowest possible cost consistent with reliable service.

St. John's Teleprotection System Replacement

Expenditures of $450,000 in 2022 and $1,150,000 in 2023 are proposed to replace Newfoundland Power's St. John's teleprotection system which protects the 66 kV transmission network serving substations in the St. John's area. The existing teleprotection system has been in service for 20 years and has reached the end of its service life. The teleprotection system provides communications for the differential protection relays at both ends of the associated transmission lines interconnecting the substations, protecting employees and the public from energized failures of transmission line infrastructure. In 2021 TransGrid Solutions Inc., at the direction of Hydro, completed a study of critical clearing times on Newfoundland Power's 138 kV and 66 kV transmission systems following the introduction of the Labrador-Island Link ("LIL"). Study results confirmed the need to maintain critical clearing times for the St. John's 66 kV transmission system

when the Holyrood Thermal Generating Station is no longer operational and the LIL begins supplying the Island Interconnected system. Newfoundland Power stated that the critical nature of the teleprotection system and the potential of a teleprotection failure causing outages to both the Holyrood Thermal Generating Station and the LIL makes the replacement of the existing equipment by 2023 necessary.

The Consumer Advocate did not comment on this project.

The Board notes that this project is required to be completed by Newfoundland Power to meet requirements set by Hydro to comply with its Transmission Planning Criteria for the Island Interconnected bulk power system. The Board is satisfied, based on the evidence, that the proposed capital expenditures to replace the St. John's teleprotection system are justified, appropriate and necessary to ensure the delivery of power to customers at the lowest possible cost consistent with reliable service.

Information Systems

Newfoundland Power proposes information systems expenditures of $21,044,000 in 2022 for application enhancements, system upgrades, personal computer infrastructure, shared server infrastructure, network infrastructure, cybersecurity upgrades, and replacement of the Workforce Management System.[47]

Application Enhancements

Expenditures of $1,007,000 in 2022 are proposed for application enhancements. These enhancements include business support system enhancements, internet enhancements as well as a various minor enhancements to respond to unforeseen requirements encountered during the course of each year, such as legislative and compliance changes, vendor-driven changes or employee identified enhancements designed to improve customer service and operational efficiency. Details and justification for the proposed expenditures were included in a report included as part of the Application.[48] The business support system enhancements include enhancements to applications used to manage the company's safety, human resource and financial functions. Proposed projects include (i) enhancing the digital forms application for work observations, contractor inspections and tailboard meetings; (ii) replacing the current systems and manual processes used to manage technology service requests with a modern technology management solution; and (iii) enhancing the existing financial management system to automate processes for recording financial transactions. Internet enhancements are planned for Newfoundland Power's web-based applications, including the customer website and the takeCHARGE website.

The Consumer Advocate stated that, while Newfoundland Power does not say this is a multi-year project, "information provided suggests NP utilizes this project as an ongoing opportunity to annually spend $1,000,000 on software."[49] According to the Consumer Advocate scant evidence

[47] The 2022 information systems expenditures includes $15,826,000 for the second year of the multi-year Customer Service System Replacement project approved by the Board in Order No. P.U. 12(2021).
[48] Application, Tab 7.1: *2002 Application Enhancements*, May 2021.
[49] Consumer Advocate's Submission, page 18.

is provided as to how this project is justified on the obligation to provide reliable service to customers and why it cannot be deferred. The Consumer Advocate suggested that funds needed to pay for truly "unforeseen requirements" under this project should be drawn from the $750,000 Allowance for Unforeseen Items.

Newfoundland Power submitted that it has quantified that its business support system enhancements will reduce overall costs to customers by $94,000 on a net present value basis over seven years and that deferring projects that reduce costs to customers would be inconsistent with the requirements of the provincial power policy. Newfoundland Power also stated that certain enhancements can be identified and budgeted for as part of the capital planning process but in its experience, other enhancements often arise throughout the year. Newfoundland Power submitted that this is not unreasonable given the large volume of software applications currently in operation and that the various minor enhancements project reflects this operational requirement and provides a degree of flexibility to respond to these requirements throughout the year. With respect to the Consumer Advocate's suggestion that the Allowance for Unforeseen Items could be used for unanticipated expenditures in this category Newfoundland Power clarified that this allowance permits it to act expeditiously to respond to events affecting the electrical system, such as damage following severe weather.

The Board notes that the business support enhancement project has been demonstrated to reduce costs to customers and the internet enhancements to the takeCHARGE website are needed to support changes related to updated energy conservation and electrification programming. Newfoundland Power has also identified the types of unanticipated expenditures that might arise under the various minor enhancements category and has estimated the anticipated budget based on a three-year historical average cost. This is, in the Board's view, a reasonable approach. There is no basis on which to conclude that Newfoundland Power uses this project to spend funds annually without justification as suggested by the Consumer Advocate. In addition, the suggestion by the Consumer Advocate that the Allowance for Unforeseen Items should be used for these unanticipated expenditures is not in accordance with the requirements for the use of this allowance which is intended to cover emergency situations where a delay in waiting for Board approval would have serious negative consequences.[50] The Board is satisfied, based on the evidence, that the proposed capital expenditures for application enhancements are justified, appropriate and necessary to ensure the delivery of power to customers at the lowest possible cost consistent with reliable service.

System Upgrades

This project proposes total expenditures in 2022 of $802,000 for upgrading software applications used in providing service to customers and includes $91,000 for upgrades to Newfoundland Power's SCADA System, $106,000 for the SCADA Reporting System, $135,000 for Database Management Software as well as a budget of $225,000 for various minor upgrades.[51] The nature

[50] The Allowance for Unforeseen Items is to be used only where a delay, even of a short duration, is not possible in the circumstances, which would not be the case for most, if not all, of the types of expenditures contemplated in the category.

[51] The project also includes the annual expenditure of $245,000 for the Microsoft Enterprise Agreement approved by the Board in Order No. P.U. 37(2020).

and timing of system upgrades are largely determined by the third-party vendors for each system. The release of new versions of systems to improve performance or address known issues may require system upgrades to ensure continued vendor support. As well upgrades may be required to improve compatibility with other software or hardware upgrades or to take advantage of new functionality and security improvements.

The Consumer Advocate stated the planned expenditures for this project for 2022-2026 increase by 20.1% and that such increasing expenditures are unsustainable. The Consumer Advocate questioned how upgrades can be completed when vendor support is ending.

Newfoundland Power stated that increasing expenditures for the Systems Upgrades project over the forecast period reflect inflationary increases and that detailed analysis will be conducted to evaluate specific requirements as part of future capital budget applications. Newfoundland Power also confirmed that upgrades will be completed as early as practical to minimize any potential reliability or security issues resulting from a lack of vendor support.

The Board notes that the proposed expenditures for 2022 are lower than actual annual expenditures for the period 2017-2020 and much lower than the forecast expenditure for 2021. While the projected expenditures for 2023-2026 are higher, any increases in future spending for this project category will have to be justified in the respective annual capital budgets submitted for Board approval. The Board is satisfied, based on the evidence, that the proposed capital expenditures for system upgrades are justified, appropriate and necessary to ensure the delivery of power to customers at the lowest possible cost consistent with reliable service.

Personal Computer Infrastructure

This project proposes expenditures of $615,000 in 2022 to replace or upgrade personal computers, workgroup printers and associated assets that have reached the end of useful life. In 2022 a total of 146 personal computers will be purchased. To enable greater flexibility of the workforce to work remotely Newfoundland Power also plans to increase its number of mobile personal computers by replacing 66 retired desktop units with mobile units. The increase in the number of mobile personal computers has an average incremental cost of approximately $600 per device, for a total of approximately $40,000. This project also includes the purchase of peripheral equipment, such as monitors, mobile devices, and workgroup printers, to replace existing units that have reached the end of their service lives.

The Consumer Advocate stated that, while expenditures on personal computer infrastructure from 2017-2021 total $2,616,000, planned expenditures for 2022 to 2026 total $3,000,000, a 14.7% increase. The Consumer Advocate submitted that such increasing expenditures are unsustainable.

Newfoundland Power stated that increasing expenditures for these projects over the forecast period primarily reflect inflationary increases throughout the five-year period and anticipated requirements, which will undergo further analysis.

The Board notes that the proposed expenditure for 2022 is generally consistent with actual annual expenditures for the period 2017-2020 adjusted for inflation and the forecast expenditure for 2021

when the increase in mobile personal computers is included. Any increases in future spending for this project category will have to be justified in the respective annual capital budgets submitted for Board approval. The Board is satisfied, based on the evidence, that the proposed capital expenditures for personal computer infrastructure are justified, appropriate and necessary to ensure the delivery of power to customers at the lowest possible cost consistent with reliable service.

Shared Server Infrastructure

This project proposes expenditures of $613,000 in 2022 for upgrading of existing shared server infrastructure to accommodate growth in information storage needs, extending the service life of existing shared servers and improving performance of Newfoundland Power applications. The project also includes upgrading the associated shared server operating systems to the current, vendor-supported versions. Additional server infrastructure is also required to support Newfoundland Power's SCADA System. This is critical infrastructure that allows Newfoundland Power to monitor and control the electricity system.

The Consumer Advocate stated that, while expenditures on shared server infrastructure from 2017-2021 total $4,034,000, planned expenditures for 2022 to 2026 total $4,299,000, a 6.6% increase. The Consumer Advocate submitted that such increasing expenditures are unsustainable. The Consumer Advocate also noted that this project, while not a multi-year, has been ongoing since at least 2017 and is planned into the future and that Newfoundland Power has or plans to spend an annual average of $833,000 over a ten-year period.

Newfoundland Power stated that increasing expenditures for these projects over the forecast period primarily reflect inflationary increases throughout the five-year period and anticipated requirements, which will undergo further analysis.

The Board notes that the proposed expenditure for 2022 is lower than actual annual expenditures for the period 2017-2020, which have ranged from $635,000 in 2018 to $1,275,000 in 2020, and slightly higher than the forecast expenditure of $538,000 in 2021. Any future spending for this project category will have to be justified in the respective annual capital budgets submitted for Board approval. The Board is satisfied, based on the evidence, that the proposed capital expenditures for shared server infrastructure are justified, appropriate and necessary to ensure the delivery of power to customers at the lowest possible cost consistent with reliable service.

Network Infrastructure

This project proposes expenditures of $508,000 in 2022 for the purchase and implementation of network and video conference equipment that has reached the end of its service life and to increase overall network availability and disaster recovery capabilities. Newfoundland Power stated that the reliability and availability of the network infrastructure is critical to enabling Newfoundland Power to continue to provide least-cost, reliable service to customers.

The Consumer Advocate stated that, while expenditures on network infrastructure from 2017-2021 total $2,034,000 planned expenditures for 2022 to 2026 total $2,269,000, an 11.6% increase. The Consumer Advocate submitted that such increasing expenditures are unsustainable.

Newfoundland Power stated that increasing expenditures for these projects over the forecast period primarily reflect inflationary increases throughout the five-year period and anticipated requirements, which will undergo further analysis.

The Board notes that the proposed expenditures for 2022 are higher than actual annual expenditures for the period 2017-2020, which have ranged from $338,000 in 2019 to $487,000 in 2020, and are higher than the forecast expenditure of $363,000 in 2021. Given the nature of these expenditures and accounting for inflation this level of expenditure appears reasonable. Any future spending for this project category will have to be justified in Newfoundland Power's subsequent capital budget applications. The Board is satisfied, based on the evidence, that the proposed capital expenditures for network infrastructure are justified, appropriate and necessary to ensure the delivery of power to customers at the lowest possible cost consistent with reliable service.

Cybersecurity Upgrades

This project proposes expenditures of $865,000 in 2022 for the introduction of new technologies to reduce risk and enhance security in the following areas: Network Security, Endpoint Security, Logging, Alerting and Event Management. The risk of cybersecurity threats has increased materially for utilities as a result of the widespread use of operations technology within utilities and the continual evolution and sophistication of cybersecurity threats. Ensuring cybersecurity infrastructure is adequately designed to address potential vulnerabilities and respond to threats is increasingly important to the safe and reliable operation of the electrical system.

The Consumer Advocate stated that, while average annual expenditures on cybersecurity from 2019-2021 were $528,000, planned annual average expenditures for 2022 to 2026 are $813,000, a 54.0% increase. The Consumer Advocate submitted that such increasing expenditures are unsustainable.

Newfoundland Power submitted that increasing expenditures for Cybersecurity Upgrades over the forecast period reflect an anticipated increase in cybersecurity measures required to respond to more frequent and sophisticated threats. Newfoundland Power submitted that increasing cybersecurity threats are not unique to Newfoundland Power and that appropriately responding to such threats is necessary to protect the electrical system and customer and Newfoundland Power's information.

The Board notes that this is a relatively new capital spending category for Newfoundland Power with expenditures first approved by the Board as part of the 2019 Capital Budget Application. Expenditures were also proposed and approved for 2020 and 2021.[52] While expenditure levels for these upgrades have been increasing each year, given the nature of the expenditures and the increased risks and potential impacts on utility operations, this is not unexpected. The proposed expenditures are based on annual assessments of cybersecurity infrastructure and cost estimates for the individual budget items identified. Increases in future spending for this project category will have to be justified in Newfoundland Power's subsequent capital budget applications. The

[52] Capital expenditures for cybersecurity upgrades were approved for 2019 in Order No. P.U. 35(2018) in the amount of $398,000, in Order No. P.U. 5(2020) in the amount of $510,000, and for 2021 in Order No. P.U. 37(2020) in the amount of $675,000.

Board is satisfied, based on the evidence, that the proposed capital expenditures for cybersecurity upgrades are justified, appropriate and necessary to ensure the delivery of power to customers at the lowest possible cost consistent with reliable service.

Workforce Management System Replacement

This project proposes expenditures of $808,000 in 2022 and $1,201,000 in 2023 to replace Newfoundland Power's current Workforce Management System ("WFMS"). The existing WFMS, known as Click, was deployed in 2011 and will become obsolete in 2023. Newfoundland Power proposes to replace the existing system with a commercially available product. Details on this project were included in a report filed with the Application.[53] Implementation of a new WFMS will address the software obsolescence of the current system and ensure continuity in vendor support, which reduces risks of system failure. Newfoundland Power stated that the replacement of Click with an alternative system is in line with industry best practice, and will allow Newfoundland Power to maintain its service performance in field operations, including but not limited to outage response, new service connections, and street light repair. The Consumer Advocate did not comment on this project.

The Board notes the existing WFMS system has been discontinued by the vendor and will no longer be supported beyond 2023 and the proposed replacement project has been demonstrated to result in lower costs for consumers. The Board is satisfied, based on the evidence, that the proposed capital expenditures for the workforce management system replacement are justified, appropriate and necessary to ensure the delivery of power to customers at the lowest possible cost consistent with reliable service.

Other

Allowance for Unforeseen Items

The proposed unforeseen allowance in the amount of $750,000 for 2022 will permit Newfoundland Power to proceed with capital expenditures that were not budgeted so that it can respond expeditiously to events affecting the electrical system. The Consumer Advocate did not comment on the allowance. This allowance is consistent with the amount approved in previous Newfoundland Power capital budget applications. The Board is satisfied that the proposed allowance is justified, appropriate and necessary to ensure the delivery of power to customers at the lowest possible cost consistent with reliable service.

General Expenses Capitalized

The proposed general expenses capitalized ("GEC") of $6,500,000 in 2022 are amounts that are capitalized due to the fact that they are related, directly or indirectly to capital projects. These amounts include two sources: direct charges to GEC and amounts allocated from specific operating accounts. The budget estimate of GEC is determined in accordance with pre-determined percentage allocations to GEC based on the guidelines approved by the Board. The Consumer Advocate did not comment on GEC. The Board is satisfied that the proposed GEC are justified,

[53] Application, Tab 7.3: *Workforce Management System Replacement*, May 2021.

appropriate and necessary to ensure the delivery of power to customers at the lowest possible cost consistent with reliable service.

Additional Comments

The Board has found that the proposed project expenditures in Newfoundland Power's 2022 Capital Budget Application are justified, appropriate and necessary to ensure the delivery of power to customers at the lowest possible cost consistent with reliable service. In reaching this determination the Board considered the evidence and submissions related to each of the projects as well as the more general issues raised in relation to several projects, including whether Newfoundland Power: i) considered a reasonable range of alternatives, ii) demonstrates a preference for high-cost capital alternatives, iii) considered the impacts of Covid-19; and iv) failed in certain aspects of its assessment of projects. These matters are addressed below.

Reasonable Range of Alternatives

The Consumer Advocate submitted that the Elenchus Report shows that Newfoundland Power has not been meeting the Board's standards for prudence. According to the Elenchus Report, to reasonably balance the interests of the utility and customers all elements of the Board's prudence review standard should be met before capital expenditures are approved, including the identification of a reasonable range of alternatives. The Elenchus Report concluded that Newfoundland Power excluded consideration of alternatives such as DERs and NWAs that merit at least preliminary inclusion and that, as a result, it is impossible to know whether the planned investments are the least-cost options. The Elenchus Report stated that the generally accepted approach which assumes that grid assets will remain used and useful for the full duration of the asset's service life "is not reasonable at this time when technological advancement and declining DER costs are transforming the electricity sector."[54] According to the Elenchus Report rather than long-life traditional grid projects, utilities should plan for multiple short-term projects to allow more flexibility near-term capital costs to be deferred.[55]

While the Board accepts that technological and policy change may have implications for future utility capital investment decisions the Board does not find the commentary in the Elenchus Report to be helpful in assessing whether the proposed capital expenditures for projects to begin in 2022 should be approved. The Board notes that the Elenchus Report does not provide evidence of reasonable alternatives which were excluded from Newfoundland Power's consideration of specific projects. The only specific alternative raised in Elenchus Report is the theoretical example provided for the Sandy Brook Penstock Replacement project which, as discussed earlier, was illustrative only and did not include information as to actual available alternatives. While the Elenchus Report suggested that Newfoundland Power "takes a very limited view of the role of NWAs in the modern electrical grid", Newfoundland Power confirmed that its capital planning process includes an assessment of alternatives, including consideration of emerging technologies such as NWAs.[56]

[54] Elenchus Report, page 16/18-19.
[55] Elenchus Report, page 23/4-7.
[56] CA-NP-114, CA-NP-158.

The Board notes that the implementation of NWA solutions in Canada appears to be in early stages with a number of pilot and demonstration projects as well as regulatory initiatives currently underway to explore the impact and customer benefits of these emerging solutions.[57] The Elenchus Report acknowledged that to date, customer adoption of non-grid solutions in Canada has been minimal.[58] Elenchus confirmed in the report that it was not aware of any examples from other Canadian jurisdictions where regulators have determined that the prudent economic life for a capital asset can be shorter than its physical, or potential service, life. The Elenchus Report acknowledged that, to date, utilities in other Canadian jurisdictions have not, as a matter of course, sought regulatory approval for DER projects with lower capital costs and shorter lives than traditional capital assets.[59]

The Board's responsibility in this Application is to assess Newfoundland Power's proposed capital expenditures for 2022 based on the best information available at this time in the context of current circumstances, including available technology, the existing system and the regulatory framework in which Newfoundland Power operates. While new approaches and technologies may eventually contribute to the routine adoption of DER projects and NWAs in this province, the Elenchus Report provided only general commentary which does not demonstrate that these technologies are a reasonable alternative for any project in Newfoundland Power's 2022 Capital Budget Application. The Board believes that Newfoundland Power considered a range of reasonable alternatives in its assessment of the proposed projects in the Application.

Preference for High-Cost Capital

The Consumer Advocate submitted that the record contains evidence that Newfoundland Power and its three most senior officers have "the inherent incentive…to prefer alternatives that require high levels of capital investment." The Consumer Advocate cited both the Elenchus Report and recent Fortis statements. The Board notes that the Elenchus Report does not state that Newfoundland Power's evaluation of alternatives for any capital projects is biased towards higher cost alternatives but instead states that Newfoundland Power's "apparent preference" for traditional capital-intensive alternatives over NWAs "may be indicative" of the inherent bias for an investor-owned utility to prefer alternatives that require high levels of capital investments. The Elenchus Report does not cite any lower cost alternatives which were not considered and does not recommend the denial of any particular project on this basis.[60] In addition, Newfoundland Power confirmed that emerging technologies such as NWAs are considered in its capital planning process. In terms of the Fortis statements, Newfoundland Power confirmed that Fortis is not involved in Newfoundland Power's capital planning process and that the planned capital expenditures for 2022 to 2026 were not influenced by these statements.[61] In the Board's view, the comments in the Elenchus Report and the referenced Fortis statements and Newfoundland Power officers' ownership of Fortis shares, do not demonstrate that Newfoundland Power has a preference for alternatives with high levels of capital investment.

[57] CA-NP-114 sets out examples of various initiatives underway in other jurisdictions in Canada.
[58] PUB-CA-003.
[59] PUB-CA-005.
[60] The Elenchus Report provided an illustrative example of theoretical alternatives in the case of the Sandy Brook Penstock Replacement project.
[61] CA-NP-005.

Covid-19 Impacts

The Consumer Advocate submitted that Newfoundland Power did not adequately address the impact of the Covid-19 pandemic on the reliability of its cost estimates. While Newfoundland Power stated that it does not expect the execution of its 2022 Capital Budget to be impacted, the Board does not believe that it is possible at this stage to know the course of the Covid-19 pandemic and how this may impact the actual costs of the approved projects. The Board accepts that the proposals are based on the best information available at the time and does not believe that there should be changes on the basis that the pandemic may ultimately result in differences which could not have been anticipated.

Failures in Newfoundland Power's Project Assessment

The Consumer Advocate submitted that, in deciding on the proposed expenditures to be included in the 2022 Capital Budget Application, Newfoundland Power failed to do any laboratory testing, failed to embed productivity savings, did little benchmarking, failed to incorporate customer preferences, failed to quantify risks associated with delaying projects, and failed to quantify any benefits of proceeding with projects in 2022.[62] In response Newfoundland Power referenced the evidence which contradicts the Consumer Advocate's allegations.[63]

Based on the record the Board finds that the broad assertions of the Consumer Advocate as to the failures of Newfoundland Power in the preparation of its 2022 Capital Budget Application are not supported. In particular, the Board notes:

i) Laboratory testing is conducted when required.[64]
ii) While productivity savings are not embedded as a bottom-line adjustment the evidence demonstrates that cost management is part of Newfoundland Power's capital planning process.[65]
iii) Benchmarking exercises were conducted against Atlantic and Canadian utilities.[66]
iv) Newfoundland Power conducts quarterly surveys of customers which consistently show that reliability and price are the two most important issues and that there is a reasonable level of satisfaction with service delivery.[67]
v) Risk and reliability are considered in Newfoundland Power's capital budget planning, including the risks and benefits of deferral.[68]
vi) Newfoundland Power conducts net present value analyses for all justifiable capital projects and for capital projects where multiple alternatives exist and other economic analyses are used to assess customer benefits of projects.[69]

[62] Except that Newfoundland Power did quantify the benefits of the LED street light replacement project.
[63] CA-NP-172.
[64] CA-NP-017.
[65] CA-NP-011, NLH-NP-042.
[66] CA-NP-012.
[67] CA-NP-013.
[68] CA-NP-014, CA-NP-016.
[69] CA-NP-031, CA-NP-014.

3.2 Proposed 2022 Capital Budget

As the proposed 2022 Capital Budget is the compilation of expenditures which the Board has determined should be approved, the total budget would, in the ordinary course, also be approved. In this case the Consumer Advocate has argued that Newfoundland Power's increasing capital expenditures are unsustainable and that the Board should bring Newfoundland Power's spending under control through the use of a budget envelope. Hydro also expressed concern as to the level of Newfoundland Power's investment but did not suggest that Newfoundland Power's 2022 Capital Budget should be reduced. The question for the Board is whether the evidence supports a finding that Newfoundland Power's 2022 Capital Budget should be approved as proposed or whether it should be reduced, despite the fact that the proposed projects have been shown to be reasonable and necessary for the provision of least-cost reliable service.

It has been argued in the past, and now in the context of expected rate pressures associated with the commissioning of the Muskrat Falls Project, that the Board should place a limit on utility capital expenditures to reduce costs for customers. While the magnitude and impact of capital expenditures on customers is an important consideration, the Board must also consider the potential impacts of any imposed expenditure reduction on the reliability and adequacy of service. The power policy of the province requires, among other things, the most efficient production, transmission and distribution of power, equitable access to an adequate supply of power and the delivery to consumers at the lowest possible cost consistent with reliable service.[70] In addition utilities have a legislated duty to supply electrical energy and to provide service and facilities which are reasonably safe and adequate and just reasonable.[71] As stated by the Board:

> In accordance with the Act the Board must ensure the provision of least cost, safe and reliable service. It is in this context that the Board has resisted requests over the years to set arbitrary limits on capital spending. The Board does not assume that higher levels of capital budget spending are always undesirable. Sometimes a higher level of spending is reasonable and necessary in circumstances which may involve aging assets, increasing load, inflation, and changing regulatory standards and requirements. Each capital budget is comprehensively reviewed for reasonableness with a view to ensuing the provision of least cost, safe and reliable service.[72]

The Board believes that appropriate levels of capital spending are good for both customers and the utility. For example the operation of downline reclosers installed as part of the *Distribution Feeder Automation* project avoided approximately 3.5 million customer outage minutes without the assistance of field crews during a severe blizzard in January 2020.[73] The experience of supply shortages and power outages associated with "Dark NL" in late December 2013 and early January 2014 offers a telling example of the potential impacts of imprudent utility capital and maintenance decisions.[74] These service interruptions were found to be caused by poor decisions with respect to

[70] Sections 3 and 4 of the *EPCA*.
[71] Sections 37 and 54 of the *Act.*
[72] Order No. P.U. 38(2010), page 6.
[73] NLH-NP-042, page 5.
[74] Order No. P.U. 13 (2016): Prudence Review by the Board of Certain Projects and Expenditures of Newfoundland and Labrador Hydro.

Hydro's capital assets which were made, at least in part, based on "balancing reliability considerations, resources and costs".[75]

Based on its review of the evidence filed in relation to the proposed projects in the 2022 Capital Budget the Board has found that all the projects are justified for the provision of least-cost reliable service. The evidence shows that Newfoundland Power's capital planning process includes the consideration of alternatives at multiple points throughout the process with a view to ensuring the provision of least-cost reliable service.[76] There are a number of examples of cost reductions made as part of Newfoundland Power's capital planning process. Economic analyses, such as net-present value analyses, are used to determine whether proposed capital projects will reduce overall costs to customers.[77] In addition, the 2022 Capital Budget is approximately $12 million less than forecast in the 2021 Capital Budget Application and reflects the deferral of several expenditures into future years, including:[78]

i) Feeder Additions for Load Growth - two aspects of this project were deferred, one to 2023 (to supply load requirements with the new Corner Brook hospital) and one to 2025 (Islington Substation).
ii) Trunk Feeders - two aspects of this project were deferred, one to 2023 (St. John's, PEP-01 along Pleasantville Avenue and Selfridge Road) and one to 2025 (Robinsons, ROB-02).
iii) Renovations to Company Buildings – two aspects of this project were deferred to 2023 (replacement of emergency diesel generator at Kenmount Road, St. John's, and upgrades at the Port Aux Basques building).
iv) Mobile Hydro Plant Refurbishment – this project was deferred to 2023.
v) Substation Refurbishment and Modernization – three aspects of this project were deferred, two to 2023 (Broad Cove and Memorial substations) and one to 2024 (Laurentian substation).
vi) Transmission Line Rebuild – two aspects of this project were deferred, one to 2023 (transmission line 108L) and one to 2025 (transmission line 95L).

The 2022 Capital Plan also reflects reductions to the forecast expenditures for 2023 to 2026 as a result of the removal of the following projects:[79]

i) refurbishment of distribution feeders HWD-02 and BFS-01;
ii) refurbishment of the hydro plants at Seal Cove, Horsechops and Petty Harbour;
iii) new feeders and feeder terminations at Kelligrews and Hardwoods substations;

---

[75] Order No. P.U. 13(2016), pages 27, 35 and 42-43, where Hydro asserted that in the Board's review of the prudence of these decisions that there was "a lack of any meaningful acknowledgement of the balance that Hydro was making between costs and reliability".

[76] Application: Capital Plan, page 4. Newfoundland Power assesses whether the expenditure is necessary based on objective criteria including inspection data, condition assessments and forecast customer requirements. New data and information may result in a project being advanced to an earlier year, deferred to a later year, or removed entirely from the five-year capital plan.

[77] NP-NLH-042, pages 3-4. Examples include the replacement of existing street lights with LED fixtures (NPV savings of $4.8 million and forecast lower operating and maintenance costs to customers of approximately $52 million over 20 years), replacement of the workforce management system (NPV savings of $499,000 over seven years), and replacement of the Sandy Brook penstock (NPV net benefit of plant production of between 7.04 ¢/kWh and 10.21 ¢/kWh).

[78] Newfoundland Power's Submission, page 6; CA-NP-074; Application: Capital Plan, pages 6-7.

[79] CA-NP-075.

iv) new substation in Galway;
v) fibre optic cables related to the Stephenville Gas Turbine substations; and
vi) protection and control upgrades at Harmon Substation.

There were also three projects deferred in previous years which are now proposed to proceed in 2022:

i) Sandy Brook Hydro Plan Penstock Replacement, originally planned for 2020.
ii) St. John's Teleprotection System Replacement, originally planned for 2021.
iii) Transmission line 124L was originally planned for 2011 but was deferred to 2022 through routine maintenance.[80]

In addition to the deferral of projects Newfoundland Power's capital budget process also includes other measures to control or reduce costs, including the coordination of projects to realize productivity gains and reduce customer outages, targeting capital expenditures in areas that provide most benefits for customers, and upgrading to reduce costs to customers.[81] The record shows that Newfoundland Power's capital planning process is comprehensive and includes reasonable controls on capital spending.

While Newfoundland Power's 2022 Capital Budget has increased significantly since 1996, the increase does not appear to be unreasonable, considering inflationary pressures and the need to maintain and replace aging assets over a 25-year period. The Board notes that Hydro's capital budget increased by approximately the same proportion over the same time period. From 1996 to 2021 Hydro's capital budget increased by approximately three times, from $33 million to $104 million.[82] In addition based on available information, the increase in Newfoundland Power's capital spending appears to be comparable with the experience of other Atlantic Canadian utilities. Newfoundland Power's investment in transmission and distribution assets was the lowest of other Atlantic Canadian utilities over the 10-year period ending 2019, and increased at a rate 9% less than the average of these utilities.[83] The Board also notes that the proposed 2022 Capital Budget is in keeping with the level of Newfoundland Power's capital budgets in recent years and does not reflect a marked increase for the year. The Board concludes that, while Newfoundland Power's capital spending has increased over the years, the increases are in-keeping with expectations and are in-line with other Atlantic Canadian utilities.

Even with the increases in Newfoundland Power's capital expenditures over the years the Board notes that there have been no increases in customer rates as a result of a Newfoundland Power general rate application in recent years. The last rate increase flowing from a Newfoundland Power

[80] PUB-NP-006.
[81] NLH-NP-042, pages 4-5. Examples include the coordination of the Substation Refurbishment and Modernization projects with the PCB removal projects, the targeted replacement of a two km section of distribution line in the 2022 Distribution Reliability Initiative, and the upgrades at Humber Substation which would reduce costs by approximately $1.6 million over 20 years when compared to a like-for-like replacement.
[82] Order Nos. P.U. 10(1996-1997) and P.U. 2(2021). Order No. P.U. 37(2021) approved Hydro's 2022 capital budget in the amount of $84.2 million which did not include proposed 2022 expenditures of $15.8 million related to the Southern Labrador project which Hydro applied for separately on July 16, 2021.
[83] Application: Capital Plan, pages 14-15. At the same time Newfoundland Power had the highest rate of growth of customers and its customers experienced approximately half the duration of customer outages of other Atlantic Canadian utilities.

general rate application would have been in 2016 but the increase of approximately 1.2% was offset by the annual rate stabilization adjustment.[84] Since 2016 there have been no such rate increases.[85] The Board also notes, that over the last two decades, Newfoundland Power's contribution to average customer rates decreased by 21% on an inflation-adjusted basis.[86] Since 2014 Newfoundland Power's contribution to revenue requirement has decreased by 2% on an inflation-adjusted basis.[87] The Board concludes that Newfoundland Power's capital spending has not led to undue increases in Newfoundland Power's customer rates or "monopoly prices" as suggested by the Consumer Advocate.

According to Newfoundland Power its capital planning process is a deliberate effort to balance the cost and reliability of service provided to customers. The Board notes that since 2009 the duration and frequency of Newfoundland Power customer outages has remained reasonably consistent and, over the last two decades, the duration of customer outages was reduced by over 13%.[88] The Liberty Consulting Group found in its 2014 review that Newfoundland Power's capital and maintenance programs appropriately recognized the age of its assets and materially contributed to improved reliability.[89] In addition Newfoundland Power's planning and design of its system, its asset management practices, its system operations, its outage management and emergency practices and its customer communications processes were found to conform to good utility practices.[90] The Board notes Newfoundland Power's view that current levels of reliability are reasonable and that it is focussed on maintaining current levels of service reliability at the lowest possible cost.[91] Newfoundland Power noted that its customers have indicated a reasonable level of satisfaction with its service delivery.[92] Hydro also confirmed that Newfoundland Power has demonstrated strong reliability performance. Neither Hydro nor the Consumer Advocate submitted that lower levels of reliability would be acceptable.

The Board concludes that the 2022 Capital Budget, which is comprised of project expenditures which have been found to be justified in the circumstances, represents a reasonable balance of costs and reliability. The Board is satisfied that approval of the proposed 2022 Capital Budget is justified, reasonable and necessary to ensure the delivery of power to customers at the lowest possible cost consistent with reliable service. While the Board is satisfied that approval of Newfoundland Power's 2022 Capital Budget is in the interests of customers and the utility, the Board acknowledges the rate pressures which are expected in association with the commissioning of the Muskrat Falls Project. The Board believes that, given the circumstances, both Newfoundland Power and Hydro should renew their efforts to provide evidence which demonstrates every effort is being made to reduce costs for customers while ensuring the continued provision of reliable

[84] Order No. P.U. 25(2016).
[85] Order No. P.U. 2(2019).
[86] Application: Capital Plan, page 13. It was an increase of approximately 17% before adjusting for inflation.
[87] Application: Capital Plan, page 12. It was an increase of approximately 6% before adjusting for inflation. Capital investments averaged approximately $100 million over the period.
[88] Application: Capital Plan, page 9.
[89] Liberty Report on Island Interconnected System to Interconnection with Muskrat Falls addressing Newfoundland Power dated December 17, 2014, page ES-2.
[90] Liberty Report, page ES-1.
[91] CA-NP-013.
[92] CA-NP-014. Quarterly customer surveys indicated a satisfaction level of approximately 87% over the period 2010-2020.

service. The Board notes that the recently issued provisional capital budget guidelines set out additional requirements with respect to the information to be provided by both utilities as part of the 2023 capital budget applications. Given these requirements the Board does not believe that it is necessary to specifically direct Newfoundland Power to undertake the cost reduction exercise suggested by Hydro. The Board expects that the 2023 capital budget applications filed by both utilities will include comprehensive and detailed support for proposed capital expenditures, including evidence which addresses the level of capital expenditures in the context of expected customer rate pressures, clearly delineates the cost reduction measures which were considered and taken and the savings achieved, and demonstrates that the proposed capital expenditures and capital budget are consistent with the provision of least-cost reliable service in the current circumstances.

Additional Comments

Before concluding the Board would like to address two issues which arose in this proceeding: the introduction of a budget envelope and the adequacy of the Board's process.

The Consumer Advocate expressed the view that the Board has the jurisdiction to implement a budget envelope and that it should do so for Newfoundland Power's 2022 Capital Budget. The Consumer Advocate did not suggest an appropriate amount for the budget envelope or the basis upon which the amount should be determined and did not provide evidence in this regard. As the Board has determined, based on the record, that the proposed project expenditures and Newfoundland Power's 2022 Capital Budget are justified, appropriate and necessary, there is no basis upon which to implement a budget envelope to reduce Newfoundland Power's capital spending in 2022. In addition, the Board notes that a budget envelope would be new for this province and it is not clear that it would be consistent with the legislative framework which requires approval of both the annual capital budget and the individual proposed project expenditures. While budget envelopes are in use in some other Canadian jurisdictions they are not, as far as the Board is aware, used for utilities in Atlantic Canada, or for Canadian utilities subject to cost-of-service regulation. It is also not clear on what basis the amount of any budget envelope would be determined where it has been found through a comprehensive review that the proposed projects expenditures are justified, appropriate and necessary, pursuant to s. 41(3) of the *Act*.

The Board would also like to comment on the Consumer Advocate's submission that Newfoundland Power has taken advantage of an inadequate regulatory process to extract monopoly prices. As already discussed there is no evidence to support the existence of "monopoly prices" on the record of this proceeding. The Board also does not believe that the regulatory process for Newfoundland Power's 2022 Capital Budget Application or any recent utility capital budget application has been inadequate. The Board notes that the same capital budget filing requirements and process are in place for both Newfoundland Power and Hydro. As a part of this process the utilities are required to file comprehensive supporting information, including detailed financial, economic and engineering analysis and professional reports where appropriate. The review of capital budget applications is conducted through a public process which involves full information exchange. The utility is required to make a presentation of its proposals and there are opportunities for multiple rounds of RFIs as well as a technical conference. While it is true that Newfoundland Power's capital proposals have ultimately all received approval in recent years,

there have been occasions where proposals were not initially approved and instead were subject to additional requirements through a separate process.[93]

The Board notes that the Elenchus Report did not state that the process followed in this proceeding was inadequate or led to monopoly prices. Further the discussion in the Elenchus Report in relation to the approach taken in other jurisdictions for the review of capital budget applications did not show how these approaches are relevant to Newfoundland Power's 2022 Capital Budget Application and whether these approaches could or should be used in this province given the significant differences in statutory framework. In addition the Elenchus Report did not demonstrate the relevance of the discussion of the prudence standard to Newfoundland Power's 2022 Capital Budget Application and in particular did not demonstrate that the Board's review was inconsistent with this standard. In the Board's view there is no basis for the Consumer Advocate's assertion that the regulatory process is inadequate. The fact that customers have experienced reasonable levels of reliability without material rate increases as a result of Newfoundland Power's capital spending is, in the Board's view, indicative of an effective capital budget application process which provides for a thorough and appropriate review of utility capital expenditures.

[93] Order Nos. P.U. 37(2020), P.U. 10(2021) and P.U. 12(2021). The capital expenditures proposed in the 2021 Capital Budget Application associated with a new substation for St. John's North, Portugal Cove and for the replacement of its customer service system were addressed in separate processes and separate orders with reasons were issued.

3.3 2020 Average Rate Base

The following table shows the calculation of the average rate base as of December 31 for 2020 compared with 2019:[94]

Newfoundland Power Inc.
Computation of Average Rate Base
For The Years Ended December 31
($000s)

	2020	2019
Net Plant Investment		
Plant Investment	2,020,501	1,954,715
Accumulated Depreciation	(828,004)	(790,243)
Contributions in Aid of Construction	(44,357)	(44,616)
	$1,148,140	$1,119,856
Additions to Rate Base		
Deferred Pension Costs	89,900	91,824
Deferred Credit Facility Costs	46	61
Cost Recovery Deferral – Hearing Costs	247	494
Cost Recovery Deferral – Conservation	17,049	17,371
Customer Finance Programs	2,098	2,494
Demand Management Incentive Account	1,002	1,881
	$ 110,342	$ 114,125
Deductions from Rate Base		
Weather Normalization Reserve	3,734	(5,654)
Other Post-Employment Benefits	66,739	61,791
Customer Security Deposits	1,212	1,420
Accrued Pension Obligation	5,258	5,104
Accumulated Deferred Income Taxes	12,683	10,088
2019 Cost Recovery Deferral	613	1,226
	$ 90,239	$ 73,975
Year End Rate Base	1,168,243	1,160,006
Average Rate Base Before Allowances	1,164,124	1,137,174
Rate Base Allowances		
Materials and Supplies Allowance	7,270	6,475
Cash Working Capital Allowance	10,503	9,907
Average Rate Base at Year End	$1,181,897	$1,153,556

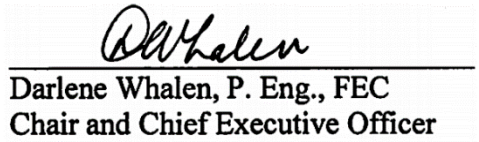
[94] Application, Schedule D.

Grant Thornton reviewed the calculation of the average rate base for 2020 and provided an opinion that the calculation is accurate and in accordance with established practice and Board Orders. Grant Thornton also reviewed the additions, deductions and allowances included in the rate base and found no discrepancies or unusual items, and that they are consistent with Board Orders.

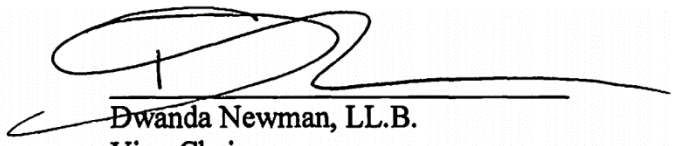
The Consumer Advocate and Hydro did not comment on Newfoundland Power's 2020 rate base. Newfoundland Power submitted that the Board should fix and determine its average rate base for 2020 at $1,181,897,000.

The Board finds that the components of Newfoundland Power's average rate base for 2020 in the amount of $1,181,897,000 should be approved.

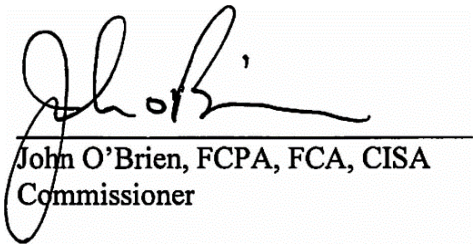
DATED at St. John's, Newfoundland and Labrador, this 31st day of January, 2022.



Darlene Whalen, P. Eng., FEC
Chair and Chief Executive Officer



Dwanda Newman, LL.B.
Vice-Chair



John O'Brien, FCPA, FCA, CISA
Commissioner

Christopher Pike, LL.B., FCIP
Commissioner

Cheryl Blundon
Board Secretary