

**NEWFOUNDLAND AND LABRADOR
BOARD OF COMMISSIONERS OF PUBLIC UTILITIES**

AN ORDER OF THE BOARD

NO. P.U. 12(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 2021 Capital Budget of \$111,298,000;
- (b) approving certain capital expenditures related to multi-year projects commencing in 2021; and
- (c) fixing and determining a 2019 rate base of \$1,153,556,000 and

IN THE MATTER OF Order No. P.U. 37(2020) in relation to Newfoundland Power’s 2021 Capital Budget Application; and

IN THE MATTER OF Newfoundland Power’s request for approval of proposed capital expenditures, in the amount of approximately \$31.6 million, to replace its customer service system.

BEFORE:

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

Dwanda Newman, LL.B.
Vice-Chair

John O’Brien, FCPA, FCA, CISA
Commissioner

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1 I BACKGROUND

3 1. The Application

5 Newfoundland Power Inc. (“Newfoundland Power”) filed its 2021 Capital Budget Application
6 with the Board of Commissioners of Public Utilities (the “Board”) on July 9, 2020.¹ One of the
7 projects proposed in this application was a multi-year project to replace Newfoundland Power’s
8 existing customer service system (the “CSS Project”). On October 9, 2020 the Board advised the
9 parties that the proposed expenditures related to the CSS Project would not be considered as part
10 of the 2021 Capital Budget Application and would be addressed in a separate proceeding.² This
11 order addresses the proposed expenditures associated with the CSS Project, in the amount of
12 approximately \$31.6 million, to be incurred over three years.

14 Newfoundland and Labrador Hydro (“Hydro”), and the Consumer Advocate, Dennis Browne,
15 Q.C. (the “Consumer Advocate”) are intervenors in this matter.³ The Consumer Advocate
16 requested that a technical conference be held and on October 9, 2020 the Board advised the parties
17 that there would be a technical conference with respect to the CSS Project.⁴ On October 30, 2020
18 the Consumer Advocate requested that the technical conference be recorded, the Commissioners
19 attend the technical conference and the public be allowed to attend. On November 4, 2020 the
20 Board advised that the technical conference would follow the usual format with only Board staff
21 and the parties and their representatives in attendance.⁵ The technical conference was held on
22 November 10, 2020. Thereafter thirty-eight requests for information (“RFIs”) were issued to
23 Newfoundland Power in relation to the CSS Project and the responses were filed on December 1,
24 2020. Newfoundland Power had previously answered forty-four RFIs in relation to the CSS
25 Project.⁶

27 On December 16, 2020 the Consumer Advocate requested that a public hearing be held in relation
28 to the CSS Project. On January 6, 2021 the Board advised that a public hearing would not be held
29 as there was a full opportunity to gather information and challenge Newfoundland Power’s
30 proposals through the written hearing process. The parties were provided an opportunity to request
31 further information through the filing of additional RFIs. On January 11, 2021 the Consumer
32 Advocate asked the Board to reconsider its decision to allow further RFIs. On January 14, 2021
33 the Board affirmed the decision to allow further RFIs and stated that the legislation clearly provides
34 the Board with the authority to establish its own procedure to obtain necessary information and to
35 proceed based on the written record and that the decision did not result in procedural unfairness.
36 Forty-three additional RFIs were issued to Newfoundland Power and the responses were filed on
37 January 26, 2021.

¹ On August 11, 2020 Newfoundland Power provided an overview of its 2021 Capital Budget Application.

² On December 15, 2020 during this proceeding Newfoundland Power’s proposed 2021 Capital Budget Application was approved in Order No. P.U. 37(2020).

³ Hydro and the Consumer Advocate were the intervenors in Newfoundland Power’s 2021 Capital Budget Application.

⁴ The Consumer Advocate requested a technical conference in relation to the 2021 Capital Budget on August 19, 2020 but the Board advised that this request would be addressed following the filing of RFI responses. On September 25, 2020, following the filing of RFI responses, the Consumer Advocate confirmed the request for a technical conference.

⁵ The Board found that the Capital Budget Guidelines, which set out guidance with respect to technical conferences, are not inconsistent with the *Public Utilities Act*, that the attendance of the public would not be consistent with the purpose of a technical conference, and that recording was not required as technical conferences do not form part of the record.

⁶ On August 19, 2020 181 RFIs were filed in relation to the 2021 Capital Budget Application. These included 44 related to the CSS Project. Newfoundland Power responded to the RFIs on September 9, 2020.

1 On February 16, 2021 Hydro advised that it had no comments in relation to the proposed CSS
2 Project. On February 17, 2021 the Consumer Advocate filed written submissions.⁷ Newfoundland
3 Power filed its reply on February 24, 2021.

4 5 **2. Board Authority** 6

7 Section 41 of the *Act* requires a public utility to submit an annual capital budget of proposed
8 improvements or additions to its property for approval of the Board in each calendar year for the
9 next calendar year. Subsection 41(3) of the *Act* prohibits a utility from proceeding with the
10 construction, purchase or lease of improvements or additions to its property without the prior
11 approval of the Board where (a) the construction or purchase is in excess of \$50,000, or (b) the
12 cost of the lease is in excess of \$5,000 in a year of the lease. Section 16 of the *Act* establishes that
13 the Board is responsible for the general supervision of public utilities and has the right to obtain
14 from a public utility all information necessary to enable the Board to fulfil its duties. Section 22
15 of the *Board of Commissioners of Public Utilities Regulations, 1996* establishes that, when the
16 Board does not proceed by way of a public hearing, it may dispose of a matter on the basis of
17 written documentation and may require further information to be filed. The Capital Budget
18 Guidelines established by the Board set out a framework for clarity and consistency in application
19 requirements for capital budget filings from utilities and a transparent and fair process for the
20 review of such filings.⁸
21

22 **II. CUSTOMER SERVICE SYSTEM REPLACEMENT PROJECT** 23

24 Newfoundland Power requests approval for a multi-year project to replace its existing customer
25 service system with a modern, commercially available system. The anticipated cost for the new
26 customer service system is approximately \$31.6 million, with \$9.9 million projected to be spent in
27 2021, \$15.8 million in 2022 and \$5.9 million in 2023. Newfoundland Power provided
28 comprehensive evidence in support of the CSS Project, including information and reports prepared
29 by Newfoundland Power, expert reports and responses to 125 RFIs related to the project. This
30 evidence details both the issues with the existing customer service system and the basis for the
31 proposed project to replace this system.
32

33 *Existing Customer Service System*

34 Newfoundland Power's existing customer service system was implemented in 1993 with an
35 expected service life of twenty years.⁹ All essential customer service functions for Newfoundland
36 Power's approximate 269,000 active customer accounts are supported by this system, including
37 account management and billing, communications and contact management as well as program
38 and service delivery. The account management and billing functions involve reading
39 approximately 258,000 meters, issuing over three million bills annually and managing all customer
40 payments. Communications and contact management are handled through telephone, email and
41 the website. The program and service delivery functions include customer conservation programs,
42 customer financing programs and requests for field work.¹⁰

⁷ Written submissions were to be filed by February 10, 2021 but, at the request of the Consumer Advocate, this date was extended.

⁸ These Guidelines were established in 2007 and are currently being reviewed in a separate regulatory process.

⁹ The existing customer service system is a Customer/1 system which is a billing solution that was developed using a code basis that was customized to fit the specific requirements of Newfoundland Power.

¹⁰ Field work would include requests for new connections.

1 Risk assessments were completed on the existing customer service system in 1996, 2003, 2013
 2 and 2018. As part of the 2018 risk assessment Newfoundland Power conducted site visits with five
 3 utilities that had replaced their customer service system, attended product demonstrations with
 4 vendors, reviewed current industry trends and did consultations with customers.¹¹ Newfoundland
 5 Power also retained Ernst & Young Inc. (“EY”) to assist in this risk assessment. In its report, *CSS*
 6 *Technical Risk Assessment*, dated June 17, 2018 (the “2018 EY Risk Assessment”), EY set out the
 7 following with respect to the risks facing the system now and in the next five to ten years:

- 8
- 9 • Vendor risks, which relate to the probability and impact of a vendor no longer
 10 manufacturing, upgrading or supporting its product, were moderate-high and were forecast
 11 to increase to high.
- 12 • Support capacity risks, which relate to the probability and consequences of Newfoundland
 13 Power no longer having the necessary capacity and expertise to ensure system availability
 14 and performance, were moderate and were forecast to increase to high.
- 15 • Business-enabling risks, which relate to the ability to meet customer, regulatory and
 16 business requirements, were moderate-high and were forecast to increase to high.
- 17 • Reliability and security risks were low-moderate.¹²
- 18

19 EY recommended that Newfoundland Power examine its customer service system and
 20 modernization options. EY noted that Newfoundland Power was the only mid-to-large Canadian
 21 utility operating this legacy system with no upgrade path provided by the original vendor. At the
 22 time only nine of twenty-seven utilities in the United States were still operating the system with
 23 no upgrade plans. During this proceeding EY provided updated information in relation to these
 24 nine utilities and reported that six had migrated to a new system or planned to, leaving only three
 25 utilities continuing to utilize the same underlying technology with no upgrade plans.¹³

26

27 During this proceeding updated information with respect to the risk assessment was provided by
 28 Newfoundland Power. Since the 2018 risk assessment vendor risks were reported to have increased
 29 for both hardware and software and these risks are expected to further increase in the next five to
 30 ten years.¹⁴ In particular Newfoundland Power was advised in mid-2020 that the Integrity servers
 31 that the system operates on were no longer being manufactured and the existing supply was not
 32 expected to last beyond 2020. EY reported that the future of the software was precarious and that
 33 companies using this software were cautioned.¹⁵ The operating system is provided by a small
 34 vendor with a very small market share and the programming languages used for the software are
 35 no longer commonplace and training is no longer available.¹⁶ According to EY the available data
 36 demonstrates a continued, significant decline in the use of the technologies which are foundational
 37 to Newfoundland Power’s customer service system.¹⁷ EY stated:

38

39 The trend of declining number of utilities operating CSS and corresponding vendor
 40 market share is expected to continue. No coordinated enhancements or investments into
 41 CSS are being made by the remaining users; any enhancements required to modify CSS

¹¹ 2021 Capital Budget Application, Volume 1, Customer Service Continuity Plan, June 2020, page 9.

¹² 2018 EY Risk Assessment, pages 2 to 3.

¹³ PUB-NP-022, page 1.

¹⁴ PUB-NP-022.

¹⁵ PUB-NP-014, page 4.

¹⁶ PUB-NP-014, page 4.

¹⁷ PUB-NP-022, page 3.

1 to accommodate future requirements will be borne solely by Newfoundland Power.
2 Likewise, the foundational technologies comprising CSS have reached or are nearing
3 obsolescence, and the vendors that once sold them have shifted their focus to newer
4 technologies. It would be a high-risk strategy for any utility to continue procuring
5 aftermarket replacement Integrity servers with no warranty or support from the original
6 manufacturer, particularly for a critical system such as CSS.¹⁸

7
8 In addition to increases in vendor risks there were changes with respect to the other risks identified
9 by EY in 2018. In relation to support capacity risks EY stated that over the next five to ten years
10 it is expected that it will become increasingly difficult for Newfoundland Power to attract and
11 retain talent related to technologies that are nearing or reached obsolescence. In addition it would
12 be a challenge to expand beyond its core competencies and build its own training capability for
13 these obsolete technologies. Business enabling risks were reported to remain moderate to high but
14 were expected to continue to increase in the next five to ten years. According to EY the existing
15 system cannot deliver all required customer service functionality. EY noted the limitations of the
16 system with respect to the billing of net metering customers and the 2020 one-time bill credit. In
17 addition the system may not be able to be enhanced to provide time-of-use rates or other new
18 complex rate designs. It was EY's opinion that the gap between customer expectations and the
19 capabilities of the system would become more pronounced over time. In terms of reliability and
20 security risk which had been assessed as low-moderate in 2018, EY stated that it was expected that
21 these risks will increase in the next five to ten years given the obsolescence of the underlying
22 technologies.¹⁹

23
24 Newfoundland Power has taken measures to manage the increasing risks over the short term,
25 including using an existing server as an emergency spare and minimizing system changes.
26 Newfoundland Power also maintains contingency plans to manage system failures. These are
27 temporary solutions which do not extend the service life of the system.²⁰

28 29 *The Project*

30 Newfoundland Power proposes to begin the replacement of the existing customer service system
31 in 2021 with completion in 2023.

32
33 In 2019 Newfoundland Power retained EY through a competitive bidding process to conduct an
34 assessment and provide planning recommendations. EY's report, *Customer Information System:
35 Assessment Results and Planning Recommendations*, dated March 2020 (the "2020 EY Planning
36 Assessment"), sets out four alternatives: (1) maintaining the status quo; (2) extending the existing
37 system with bolt-on applications; (3) re-platforming the existing system and (4) replacement with
38 a new system. EY concluded that implementing a modern customer service system is the only
39 viable option as it would mitigate both the functional and technical risks facing the current system
40 and would ensure continuity in Newfoundland Power's customer service delivery. A modern
41 system would support existing business processes, provide opportunities to improve the customer
42 experience, and align Newfoundland Power with current industry practice. Twenty-nine potential
43 future enhancements in customer service delivery were identified by Newfoundland Power,
44 including real-time customer account information, enhanced self service capabilities for
45 commercial customers, an online calculator to estimate bills between meter reads, more proactive
46 notifications for customers, an online chat option, automated service transfers, more flexible

¹⁸ PUB-NP-022, page 3.

¹⁹ PUB-NP-022, pages 3 to 5.

²⁰ PUB-NP-019, page 2.

1 account management options for commercial customers and better information for employees to
2 serve customers.²¹

3
4 The cost estimate for the CSS Project of \$31.6 million is comparable to the experience of other
5 utilities implementing similar projects.²² This estimate was developed based on EY's experience
6 in implementing similar projects for other utilities as well as an assessment of Newfoundland
7 Power's operations.²³ The cost per customer was estimated to be approximately \$106 and the range
8 experienced by other utilities for similar projects was \$65 to \$137.²⁴

9
10 The proposed project has three stages: pre-implementation which includes procurement of a
11 replacement solution; implementation of the new system; and post implementation. Newfoundland
12 Power plans on retaining an independent procurement advisor to assist with the request for
13 proposals for the new system and a system integrator to provide technical expertise to assist with
14 implementation. This additional advisory and implementation support is necessary as the
15 magnitude and complexity of the project requires resources and expertise beyond Newfoundland
16 Power's day-to-day operational requirements.²⁵

17 18 **III. SUBMISSIONS**

19
20 The Consumer Advocate submitted that Newfoundland Power's request for approval of the
21 customer service system replacement project should be dismissed as the burden of proof has not
22 been met. In the Consumer Advocate's view the request falls short in its assessment of alternatives
23 and risks, the provision of evidence on experience elsewhere, the identification of critical success
24 factors and the provision of essential financial information.

25
26 The Consumer Advocate submitted that Newfoundland Power did not provide any evidence that
27 customers value the benefits of the CSS Project relative to its costs. He noted that customers were
28 not told the cost of the project nor how the project would affect their electricity bills during
29 customer focus groups relating to the project. The Consumer Advocate submitted that, in the
30 absence of evidence that customers value the benefits and risk reduction arising from the project,
31 the parties and the Board are unable to assess the merits of the project and the burden of proof has
32 not been met.

33
34 The Consumer Advocate submitted that Newfoundland Power has not provided a proper
35 quantification of the benefits, including any cost savings and the risks of proceeding with the
36 project. The Consumer Advocate noted EY's statement that in its experience risks and benefits to
37 consumers for projects of this magnitude are typically described in qualitative terms. According
38 to the Consumer Advocate it is not possible to determine if the project is necessary to provide least
39 cost service to customers in the absence of an analysis of the costs and benefits as has been done
40 by other utilities for similar projects.

41
42 The Consumer Advocate submitted that the evidence does not show that replacement of the
43 existing system is driven by failure rates or reliability concerns. According to the Consumer

²¹ 2021 Capital Budget Application, Volume 1, Customer Service Continuity Plan, June 2020, page 18.

²² 2021 Capital Budget Application, Volume 1, Customer Service Continuity Plan, June 2020, page 20.

²³ PUB-NP-015.

²⁴ 2020 EY Planning Assessment, page 23.

²⁵ 2021 Capital Budget Application, Volume 1, Customer Service Continuity Plan, June 2020, page 13.

1 Advocate the possibility of extending the life of the existing customer service system was not
2 considered by Newfoundland Power or its expert and no analysis was completed of the cost of
3 continuing with the existing system relative to the proposed system. Moreover, no evidence was
4 filed on other possible alternatives, including modular systems, contracting out and joint use with
5 Hydro.

6
7 The Consumer Advocate noted that changing customer expectations and regulatory requirements
8 were indicated by EY as factors to consider when determining whether it is time to replace a
9 customer service system. He submitted that no evidence was filed to demonstrate that
10 Newfoundland Power's customer expectations are changing to require additional customer service
11 functionality or that there are upcoming regulatory changes that would require a new customer
12 service system. The Consumer Advocate also noted that no evidence was filed on the experience
13 of other utilities that replaced their customer service systems or on the experience of other utilities
14 that decided not to replace their systems.

15
16 The Consumer Advocate expressed concern on the level of capital spending by Newfoundland
17 Power particularly at this time when, barring rate mitigation, electricity rates could potentially
18 increase substantially with the commissioning of the Muskrat Falls Project and the impacts on the
19 economy due to the Covid-19 pandemic are profound. The Consumer Advocate noted that
20 Newfoundland Power has not provided a firm cost quote but only an estimate of costs from its
21 expert and that in his view the project should not be approved without obtaining a firm quote from
22 all service providers. He submitted that every expenditure must be carefully scrutinized. The
23 Consumer Advocate submitted that the proposed CSS Project has not been shown to be needed to
24 provide least cost reliable power. The Consumer Advocate is not satisfied that the existing system
25 cannot operate satisfactorily without adverse impacts on customers for several more years.

26
27 Newfoundland Power submitted that the CSS Project is required to meet its statutory obligation
28 under section 37 of the *Act* to provide service that is reasonably safe and adequate and just and
29 reasonable and, under section 3(b) of the *EPCA*, to deliver power at the lowest possible cost
30 consistent with reliable service and should be approved by the Board. In its view the CSS Project
31 is consistent with sound utility practice and current industry experience. According to
32 Newfoundland Power it has provided detailed evidence that the plan for mitigating the risks is
33 consistent with current industry experience and sound utility practice and that the benefits for
34 customers have been described. Newfoundland Power submitted that there is no evidence before
35 the Board that contradicts the expertise applied in preparing the CSS Project, or that demonstrates
36 that reasonable alternatives were not considered or that deferral is appropriate or beneficial for
37 customers.

38
39 Newfoundland Power submitted that the Consumer Advocate's position is based, in part, on
40 erroneous claims that are not reflective of the information on the record and in part on new
41 information not considered as part of the proceeding.²⁶ According to Newfoundland Power the
42 Consumer Advocate's submission that the benefits of proceeding with the project have not been
43 quantified is not reflective of the record which establishes that the benefits include service
44 continuity as it would mitigate current risks and provide continuity over the longer term by
45 supporting existing business processes and allowing future upgrades. In addition it would support
46 service efficiency as no net additional staff would be required and would enhance the customer

²⁶ As an example Newfoundland Power referenced the Consumer Advocate's statement that metering costs have increased for customers and stated that the record shows such costs have decreased.

1 experience. Newfoundland Power submitted that these benefits are consistent with typical industry
2 experience. In relation to the Consumer Advocate's submission that customers weren't told the
3 cost of the project, Newfoundland Power submitted that the justification and costs of the project
4 are most appropriately considered as part of a public proceeding before the Board and were fully
5 examined in this proceeding.²⁷
6

7 With respect to the Consumer Advocate's submission that the risks of not proceeding with the CSS
8 Project have not been quantified, Newfoundland Power submitted that the record establishes that
9 it has monitored the risks facing its customer service system since 1996. Risk assessments were
10 completed in 1996, 2003, 2013 and 2018. Recent assessments have determined that the service life
11 of the customer service system has been fully extended and replacement is required to maintain
12 continuity in customer service delivery. According to Newfoundland Power the evidence
13 establishes that the risks facing the customer service system have increased to the point where the
14 system is at risk of no longer meeting requirements. The system is operating on obsolete
15 technology, is facing diminished support capacity and can no longer be cost effectively upgraded.
16 Newfoundland Power acknowledged that current system reliability and security performance are
17 not currently drivers of system replacement. Newfoundland Power stated that the risk of operating
18 obsolete hardware and software is significant and increases annually. It noted that the 2018 EY
19 Risk Assessment determined that the customer service system was facing moderate to moderate-
20 high risks across three categories: vendor risks, support capacity and business enabling risks with
21 these risks increasing over time. Newfoundland Power submitted that these three risks have now
22 increased to high. With respect to vendor risks, all core hardware and software components have
23 become obsolete. In 2020, the servers underpinning the system became obsolete and in 2021
24 Newfoundland Power was advised that the Oracle database is being retired. Newfoundland Power
25 also submitted that the evidence establishes that support capacity risks have increased since 2018
26 and with respect to business enabling risks, the system can no longer be cost-effectively upgraded
27 to provide new functionality. Newfoundland Power noted that EY also determined that vendor
28 support capacity and business enabling risks will further increase in the next five to ten years.
29

30 With respect to the Consumer Advocate's submission that alternatives to replacement were not
31 considered, Newfoundland Power submitted that all alternatives raised by the Consumer Advocate
32 were considered. The assessment of alternatives demonstrated that there are no viable alternatives
33 to further extend the life of the current system and replacement with a modern system is the only
34 viable option. Newfoundland Power submitted that contracting out its customer service delivery
35 function and the use of a joint system with Hydro as suggested by the Consumer Advocate are not
36 viable options. Contracting out customer service delivery is usually pursued by utilities with
37 capacity-related challenges which does not apply for Newfoundland Power. Hydro's customer
38 service technology would not provide the functionality necessary to serve Newfoundland Power's
39 customers and, as well, its service requirements are greater than Hydro's.
40

41 Newfoundland Power submitted that the Consumer Advocate's submissions with respect to
42 information on customer service system replacements by other utilities are not reflective of the
43 record. According to Newfoundland Power the cost of implementing modern customer service
44 systems varies significantly by utility with estimates reflecting the utility's specific needs,
45 resources and restraints and the results validated against average or aggregate data. Newfoundland
46 Power observed that it is standard practice for the Board to approve capital projects based on cost

²⁷ Newfoundland Power explained that the focus groups were conducted as part of assessing the strengths and weaknesses of the existing system with the results assisting in prioritizing potential future enhancements.

1 estimates. Newfoundland Power explained that the cost estimate for the customer service system
2 project was developed with a detailed assessment of its requirements and resources which was
3 then validated against aggregate industry data. A contingency of 10% was applied which according
4 to EY is common in the industry. EY indicated a reasonable level of accuracy for its cost estimates
5 with an average variance of 4.8% for projects for which it performed system integration work. In
6 Newfoundland Power's view the cost estimate for the customer service system project is
7 reasonable and consistent with the experience of other utilities.

8
9 Newfoundland Power noted that it has provided evidence on the experience of other utilities with
10 similar customer service systems. It submitted that the record discloses that it conducted site visits
11 with other utilities that recently completed similar projects, attended product demonstrations with
12 vendors and reviewed industry guidance. Newfoundland Power also referred to the 2018 EY Risk
13 Assessment and the updated information that showed the experience of North American utilities,
14 including that 93% of these utilities have implemented modern customer service systems and only
15 three of the selected peer group with similar customer service systems had not initiated evaluation
16 or replacement projects by 2021.

17
18 With respect to the timing for the CSS Project Newfoundland Power submitted that replacing the
19 current customer service system commencing in 2021 would avoid exposing a critical business
20 application to a high degree of risk, avoid additional investment in obsolete technology and help
21 manage project execution risk. In Newfoundland Power's view the criticality of the customer
22 service system requires that it be replaced before obsolescence exposes it to a high degree of
23 operational risk which would pose a significant risk to the provision of service to customers. As
24 well, Newfoundland Power submits that implementing a modern customer information system is
25 a complex, multi-year effort and adequate resourcing is required. The support capacity risks for
26 implementation would be increased if system replacement is delayed. Newfoundland Power
27 submitted that delaying system replacement beyond the proposed timing would increase risks and
28 costs to customers without a corresponding customer benefits.

29
30 Newfoundland Power submitted that a phased approach is not appropriate in relation to the CSS
31 project as it would increase costs and risks to customers. Newfoundland Power stated that in this
32 case full approval is required to bring the replacement system to the point where it is used and
33 useful for customers. Newfoundland Power noted that, consistent with the current Capital Budget
34 Guidelines, material changes in the scope, nature or cost of the project are required to be reported
35 to the Board. Additional reporting requirements may also be imposed by the Board as it has done
36 for other significant capital projects. According to Newfoundland Power such reporting
37 requirements are a reasonable means through which to ensure the project is executed according to
38 the approval.

39
40 Newfoundland Power submitted that the total project costs, including the general costs, should be
41 capitalized and recovered over the life of the system. Newfoundland Power proposed that
42 approximately \$2.9 million of the project costs, including costs related to data conversion,
43 employee training and procurement which are more general in nature, be capitalized and recovered
44 over the life of the new customer service system. It submitted that this approach is permissible
45 under U.S. GAAP, is consistent with the regulatory principles of intergenerational equity and
46 customer rate stability, is current practice before the Board and is consistent with sound utility
47 practice.

1 IV. BOARD FINDINGS

2
3 Newfoundland Power's customer service system supports all essential customer service functions,
4 including account management and billing. The existing system had an expected service life of
5 twenty years and has now been in service for almost thirty years. The customer service system is
6 critical to the provision of service to customers and it is clear that the existing system is well past
7 the end of its service life.

8
9 While the customer service system has operated reliably without security violations over the years
10 based on the evidence there are significant risks associated with the continued operation of this
11 system. All core hardware and software components of the system are now obsolete. In particular:

- 12 • The Customer/1 base of the system is obsolete.
- 13 • The Integrity servers are no longer being manufactured and the existing supply was not
14 expected to last beyond 2020 and continued vendor support is contingent on the
15 availability of spare parts.
- 16 • The Oracle database is being retired in 2021 and will no longer receive cybersecurity or
17 other patches to address potential vulnerabilities which will make the system more
18 vulnerable to failure as cybersecurity threats and technologies evolve over time.²⁸

19 At the same time that the system is facing both technological and functional obsolescence,
20 Newfoundland Power's capacity to support the system is subject to increased risks. The small
21 specialized team supporting the system is forecast to decrease annually over the period 2023 to
22 2027 and there are limited options to replace this capacity. In addition it is clear based on the
23 evidence that the existing system can no longer be cost-effectively upgraded to deliver new
24 functionality.²⁹ Newfoundland Power has taken measures to manage the increasing risks facing
25 the customer service system over the short term but these are temporary solutions which do not
26 extend the service life of the system.³⁰ The Board is satisfied that the existing customer service
27 system is obsolete and should be modernized.

28
29 The proposed replacement of the customer service system is the result of a multi-year analysis
30 involving an expert risk assessment and planning assessment as well as industry consultations, site
31 visits, product demonstrations, consultations with customers and review of current industry trends.
32 Based on the planning assessment conducted by EY the replacement of the existing customer
33 service system is the only viable alternative. The Board notes that, of the twenty-seven other
34 utilities that had been using similar systems, twenty-four were reported by EY to have initiated or
35 completed replacement projects. While the Consumer Advocate suggested that there were
36 alternatives that were not considered the evidence demonstrates that these alternatives were in fact
37 considered and are not appropriate in the circumstance.³¹ The Board is satisfied that there was a
38 full review of all reasonable alternatives and that the replacement of the customer service system
39 is reasonable and appropriate in the circumstances based on the obsolescence of the existing
40 system and the risks associated with the continued operation of this system. The Board does not
41 agree with the Consumer Advocate that Newfoundland Power failed to quantify the benefits of the
42 new system. The benefits for this project are clear, and most importantly include the elimination
43 of the well documented risks associated with the continued operation of this obsolete system. The

²⁸ PUB-NP-020.

²⁹ PUB-NP-020.

³⁰ PUB-NP-019, page 2.

³¹ 2020 EY Planning Assessment, pages 7 to 11; CA-NP-072; CA-NP-078; CA-NP-163; and PUB-NP-005.

1 Board does not believe that, as suggested by the Consumer Advocate, it is necessary for
2 Newfoundland Power to produce research as to the views of customers or the experience of other
3 utilities to justify replacing this obsolete system the operation of which is subject to high and
4 increasing risks.

5
6 In terms of whether the CSS Project can be deferred, the Board notes that this is a multi-year effort
7 which will not be completed until 2023 when the existing system will have been in service for
8 thirty years. Beginning this project in 2021 minimizes the exposure of this critical business
9 application to risk, avoids the necessity of further investment in obsolete technology and allows
10 for the management of project execution risks. While the Consumer Advocate stated that he is not
11 satisfied that the existing system cannot operate satisfactorily without adverse impacts on
12 customers for several years, the Board finds that this view is not consistent with the record. Based
13 on the evidence even a short delay in the start of the project of one or two years would involve
14 high risks and these risks would increase each year.³² While it is difficult to accurately quantify
15 the risks and costs which would be realized in a deferral it is clear from the evidence that any
16 deferral of the project would result in the operation of this system in a period of high and increasing
17 risk.³³ Failure of this system would pose a significant risk to the provision of service to customers
18 and undertaking this project in response to failure would increase costs and risks and reduce
19 customer service quality.³⁴ The potential costs of a delay would include costs related to
20 enhancements, infrastructure upgrades, system interruption, additional planning and assessments
21 and inefficiencies in project execution.³⁵ Prolonged system failure would result in, among other
22 things, delayed and estimated customer bills and substantially longer wait times and inability to
23 resolve certain customer enquiries.³⁶ The Board believes that, as a result of the criticality of this
24 system, the increased risks associated with the continued operation of this obsolete system
25 outweighs any potential benefits of deferring this project. The Board is satisfied that the customer
26 service system replacement project should not be deferred.

27
28 The Board acknowledges the concerns expressed by the Consumer Advocate in relation to the cost
29 of the CSS Project and the level of Newfoundland Power's capital spending in the context of the
30 current economic circumstances in the Province. At the same time the customer service system
31 serves a critical role in the provision of reliable customer service. While the expenditures
32 associated with the proposed replacement are significant and may cause some upward pressure on
33 rates, the existing system is obsolete and replacement was shown to be the only reasonable
34 alternative. The evidence demonstrates that the scope, duration and estimated costs of the proposed
35 CSS Project are consistent with current industry guidance.³⁷ The estimated per customer cost is
36 within the range experienced by other utilities for similar projects.³⁸ The Board does not believe,
37 as suggested by the Consumer Advocate, that it is necessary to require a firm cost quotation in
38 advance of approval of this project as this would extend the schedule and potentially increase costs.
39 It is usual practice for approval of capital budget expenditures to be based on estimated costs with

³² PUB-NP-023, page 1.

³³ PUB-NP-014 and PUB-NP-022.

³⁴ PUB-NP-014.

³⁵ PUB-NP-023, page 2.

³⁶ PUB-NP-014 and PUB-NP-020.

³⁷ 2021 Capital Budget Application, Volume 1, Customer Service Continuity Plan, page 14 and Attachment A, page 23; and NLH-NP-009.

³⁸ 2021 Capital Budget Application, Volume 1, Customer Service Continuity Plan, Attachment A, page 23.

1 regulatory oversight of actual costs through reporting and the required approval for additions to
2 rate base.³⁹

3
4 It was proposed by Newfoundland Power that all project costs, including general project costs in
5 the amount of \$2.9 million, be recovered over the life of the replacement system.⁴⁰ The proposed
6 approach is permissible under U.S. GAAP with the Board's approval and is consistent with the
7 principles of intergenerational equity and customer rate stability as well as the current practice of
8 the Board and sound utility practice. This proposal was not questioned by the parties in this
9 proceeding. The Board finds that it is reasonable in the circumstances to approve Newfoundland
10 Power's proposal to include the general costs associated with the CSS Project in the capital
11 expenditures of the project.

14 V. ORDER

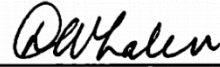
16 **IT IS THEREFORE ORDERED THAT:**

- 18 **1. Newfoundland Power's proposed capital expenditures to replace its customer service**
19 **system, in the amount of \$9,903,000 in 2021, \$15,826,000 in 2022 and \$5,917,000 in 2023,**
20 **are approved.**
- 22 **2. Newfoundland Power's multi-year construction and purchase of improvements or**
23 **additions to its property to begin in 2021 approved in Order No. P.U. 37(2020) are**
24 **amended, as set out in Schedule A to this Order.**
- 26 **3. Newfoundland Power's 2021 Capital Budget for improvements or additions to its**
27 **property approved in Order Nos. P.U. 37(2020) and P.U. 10(2021) is amended, as set**
28 **out in Schedule B to this Order.**
- 30 **4. Newfoundland Power shall pay all expenses of the Board arising from this application.**

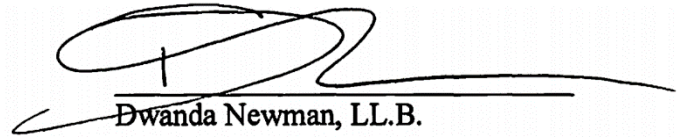
³⁹ Newfoundland Power must report on the progress of the project as part of the required 2021, 2022 and 2023 capital expenditure reports and as well in the required capital project progress reports with each annual capital budget application. In addition approval of the Board is required before any capital expenditures, including those associated with this project, can be added to rate base.

⁴⁰ The general costs include amounts related to data conversion, employee training and procurement.

DATED at St. John's, Newfoundland and Labrador, this 7th day of April, 2021.



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



Dwanda Newman, LL.B.
Vice-Chair



John O'Brien, FCPA, FCA, CISA
Commissioner



Cheryl Blundon
Board Secretary

Newfoundland Power Inc.
2021 Capital Budget
Multi-Year Projects Over \$50,000
(000s)

Multi-Year Projects Commencing in 2021

Project Description	2021	2022	2023	Total
Multi-Year Projects over \$50,000 approved in Order No. P.U. 37(2020)	\$245	\$245	\$245	\$735
Customer Service System Replacement	\$9,903	\$15,826	\$5,917	\$31,646
Total Multi-Year Projects over \$50,000 commencing in 2021	\$10,148	\$16,071	\$6,162	\$32,381

Newfoundland Power Inc.
2021 Capital Budget
(000s)

2021 Capital Budget approved in Order No. P.U. 10(2021)	\$101,395
Customer Service System Replacement	\$9,903
Approved 2021 Capital Budget	<u><u>\$111,298</u></u>

