Office of the Consumer Advocate

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October 9, 2024

Via Email

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

Attention: Jo Galarneau
Executive Director and Board Secretary

Dear Ms. Galarneau:

Re: Newfoundland Power Inc. - 2025 Capital Budget Application
– Requests for Information CA-NP-193 to CA-NP-254

Further to the above-captioned, enclosed are the Consumer Advocate's Requests for Information numbered CA-NP-193 to CA-NP-254.

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

Yours truly,

Dennis Browne

Dennis Browne, KC
Consumer Advocate

Encl.
/jm

cc **Newfoundland Power Inc.**
Dominic J. Foley (dfoley@newfoundlandpower.com)
NP Regulatory (regulatory@newfoundlandpower.com)

Newfoundland & Labrador Hydro
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Board General (board@pub.nl.ca)

IN THE MATTER OF the *Public Utilities Act* (the *"Act"*); 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 its 2025 Capital Budget; and
(b) fixing and determining its 2023 rate base.

CONSUMER ADVOCATE
REQUESTS FOR INFORMATION
CA-NP-193 to CA-NP-254

Issued: October 9, 2024

CA-NP-193 (Reference CA-NP-002) Is the total expenditure proposed in the 2025 CBA $184.209 million versus $134.963 proposed in the 2024 CBA, representing a variance of $49.25 million and a 36.5% increase?

CA-NP-194 (Reference CA-NP-005, Attachment A) The data indicate that depreciation cost has increased dramatically from 1994 to 2026F, rising from approximately 55% of operating expenses in 1994 to exceeding it now. Please explain to what extent this increase in depreciation cost is due to cumulative capital expenditure.

CA-NP-195 (Reference CA-NP-013a) It is stated "*All projects and associated costs included in the Company's 2025 Capital Budget Application are necessary to meet its statutory requirements under the Public Utilities Act and Electrical Power Control Act, 1994 (the "EPCA")*".

a) Please confirm that NP did not meet its statutory requirements in the years 2002, 2003, 2021, 2022 and 2024 when the Board did not approve all capital requested in its CBAs (CA-NP-008).
b) Please explain how NP is falling short of its statutory requirements in 2024 owing to the Board's denial of $1,000,000 in expenditures for i) Extensions program ($500,000); ii), Relocate/Replace Distribution Lines for Third Parties program ($300,000); and iii) New Street Lighting program ($200,000) (CA-NP-008).

CA-NP-196 (Reference CA-NP-013(e)) In regard to the LED Street Lighting Replacement project, it is stated "*There is an energy efficiency improvement associated with this project of approximately 60% for each fixture replaced over the legacy HPS lighting. This will reduce the amount of energy required from Newfoundland and Labrador Hydro's ("Hydro") Holyrood Thermal Generating Station.*" Considering the manner by which Hydro is operating the Holyrood station, how does the LED Street Lighting Replacement project lead to a reduction of energy generation at Holyrood?

CA-NP-197 (Reference CA-NP-015a) The question notes that Mr. Chubbs stated "*the reliability of the electricity system is least cost for our customers.*" The response states "*Mr. Chubbs was consistent with the balance of the evidence of that proceeding that, in the Company's view, maintaining current levels of reliability is least cost for customers when compared to (i) increasing reliability, or (ii) allowing reliability to degrade.*"

a) Is this NP's view, or has NP undertaken an analysis with figures showing that current levels of reliability are optimum and least cost for consumers relative to levels that are, for example, 20% better or 20% worse than current levels of reliability? If so, please file the analysis.

b) Please confirm that NP is targeting current levels of reliability and for SAIDI, that level of reliability is about 40% better than the Canadian average.

CA-NP-198 (Reference CA-NP-016a) It is stated "*There are no capital expenditures associated with Advanced Metering Infrastructure ("AMI") included in Newfoundland Power's 2025 Capital Budget Application.*"

a) How much capital is NP forecasting in its 2025 CBA for the New Meters and Replacement Meters programs in each year from 2025 through 2030? Please identify the basis for the forecast including number of meters, types of meters, and unit cost.
b) Are these metering programs mandatory? If so, please file a copy of the document that mandates the metering programs.
c) Please file the clauses in NP's existing regulations relating to metering.
d) Is it mandated that NP provide AMR meters? If so, please provide the relevant documentation.
e) Did NP consider alternatives to AMR meters? If so, please provide the analysis that NP relied upon to select AMR metering.
f) Is there anything in legislation or NP's policies that preclude the application of evolving technologies and processes relating to metering as they become available?

CA-NP-199 (Reference CA-NP-016c) It is stated "*the Company is unable to determine whether $350, which was derived by simply dividing New Brunswick Power's total project budget by the total number of customers from a 2018 news article, is an appropriate unit cost to install smart meters for customers in this province.*" What unit cost was used in NP's most recent study and the Dunsky study on smart meters in NL?

CA-NP-200 (Reference CA-NP-016g) With respect to LED Street Lighting Replacement project, it is stated "*The purpose of the Plan is to accelerate the installation of LED street lights so that customers realize the full economic benefit of the LED street lighting service option.*"

a) Please confirm that NP is replacing street lights before the end of their useful life in order to achieve the full economic benefit of the program.
b) What percentage of street lights replaced in each year of the plan have been replaced before the end of their useful life?
c) When NP identifies a project with economic benefits does it typically accelerate implementation so that customers realize the full benefit?

CA-NP-201 (Reference CA-NP-016h) It is stated "*The Energy Solutions Potential Study being undertaken by the Posterity Group is still ongoing. A copy of the study will be filed with the next Conservation, Demand Management and Electrification Plan, expected in 2025.*" Will this study assess all benefits of

smart meters. Will it assess load shifting benefits? Please provide extracts of the portions of the scope of work for this study that will assess the benefits of smart meters.

CA-NP-202 (Reference CA-NP-017b) Please confirm that the electrification program proposed by NP and NL Hydro had a negative net revenue requirement impact (a rate increase) in each of the first 5 years of the proposed program and a cumulative net revenue requirement impact of $3.035 million through 5 years. Please confirm that NP judged this rate impact to be acceptable to its customers.

CP-NP-203 (Reference CA-NP-019) It is stated "*Quarterly surveys show that the two most important issues to customers are reliability and price.*" Is NP aware of any survey conducted by, or on behalf of, an electric utility in Canada or the United States where customers did not rank reliability and price as the two most important issues? If so, please identify the surveys and the issues that were of greater importance.

CA-NP-204 (Reference CA-NP-025) For the hydro plants listed in Attachment A, please provide annual generation for each and the total for the years 2001 to 2023.

CA-NP-205 (Reference CA-NP-028) Please confirm that NP does not have a 5-year distribution expansion plan. If not confirmed, please file a copy for the record showing how the 2025 capital budget is consistent with this plan.

CA-NP-206 (Reference CA-NP-055) Regarding the LED Street Lighting Replacement project, assume as planned (Schedule B, page 2) that approximately 10,000 street light fixtures will be replaced with LED fixtures in 2025.

a) Once all 10,000 are installed, what would be the annual net reduction in energy use as a result?
b) What would be the annual cost savings to NP's streetlighting customers in 2026 due to that reduction in energy use?
c) What would be the annual impact on NP's earnings in 2026 due to that reduction in energy use?
d) What would be the impact on Hydro's 2026 revenues due to that reduction in energy use?

CA-NP-207 (Reference CA-NP-055f) It is stated "*The forecast increase in average rate base from 2024 to 2025 forecast is $47.7 million. The estimated impact on Newfoundland Power's return on equity for 2025 is $1.8 million.*" Please provide corresponding figures for 2026 through 2030 based on capital budgets forecast for these years in the 2025 CBA.

CA-NP-208 (Reference CA-NP-061, Table 1)

a) Please provide a table showing 5-year rolling averages beginning January 1, 2005 and ending December 31, 2023 for both number of interruptions and duration of interruptions.

b) What was the cause of the outages in June 2006, October 2009 and September 2014, and how did NP respond to the outages?

CA-NP-209 (Reference CA-NP-065) NP states that the original rationale for the Greenhill, Wesleyville and Port aux Basques thermal generation facilities "*was to ensure system reliability relating to peak load, voltage/frequency support and the ability to run isolated systems in the event of transmission line failures on radial transmission line systems.*"

a) In what ways, if at all, are these reasons still valid?

b) If these thermal units were not replaced then what would be the implications for system reliability?

c) It is stated that the proposed units will provide "*system support to ensure reliability during times of renewable generation shortages.*" Please elaborate. Specifically, what type of support will they provide and what type of renewable generation shortages are expected?

d) Are studies of the proposed units being coordinated with NL Hydro and do they form part of NL Hydro's reliability and resource adequacy study?

CA-NP-210 (Reference CA-NP-072e) It is stated "*It is Newfoundland Power's position that a less resilient and reliable system would be more expensive for customers, as increased equipment failures during weather events would result in additional overtime labour costs to complete repairs in a reactive, unplanned fashion.*" Please file documentation supporting this "position".

CA-NP-211 (Reference CA-NP-076) It is stated "*The Company does not consult specifically with customers served by feeders identified for upgrades through the Distribution Reliability Initiative.*" Why not?

CA-NP-212 (Reference CA-NP-081b) It is stated "*Newfoundland Power does not anticipate that its asset management review will result in a cessation of expenditures associated with corrective and preventative maintenance of the electricity system.*" What impact does NP expect the asset management review will have on expenditures associated with corrective and preventative maintenance? Will it enable NP to quantify the risk of proceeding relative to delaying the project? Will it enable NP to quantify reliability improvements resulting from the project?

CA-NP-213 (Reference CA-NP-083) Please explain why the costs of the new meter and replacement meter programs are forecast to increase so much over the 2025-2029 period.

CA-NP-214 (Reference CA-NP-086) NP indicates that it "*is not required to seek Board approval of variances between actual and approved capital expenditures or carry-over amounts for approved capital projects that have not been fully completed by the end of the budget year.*" Please reconcile that statement with the request (Application, Schedule B, page 83) for additional funding of $12.6 million for the rebuilding of transmission line 94L, a project that was previously approved in 2021.

CA-NP-215 (Reference CA-NP-089)
a) Was the CIAC amount adjusted to reflect actual cost?
b) How did the actual cost compare to the approved CIAC amount and who pays for cost differences between approved and actual CIAC costs?

CA-NP-216 (Reference CA-NP-090) The Reconstruction program.
a) Please define "major event". Does NP use the same definition of "major event" as NL Hydro and other Canadian utilities?
b) Please describe the major events and their causes as well as how NP responded to the events.
c) What adjustments have been made in the 2025 CBA to account for these major events?

CA-NP-217 (Reference CA-NP-096) Please refine Table 1 by showing the programs according to investment classification.

CA-NP-218 (Reference CA-NP-097) Regarding use of historical averages for budget estimation:
a) (i) How does NP escalate its contract labour cost for its capital programs? (ii) Is the same method used for the contract labour cost component of its capital projects?
b) Please provide a revised Table 1, extending it to run from 2010 to 2029F, and adding the CPI-based inflation rate. Please confirm that the "Non-Labour" inflation rate in the table is determined using the GDP deflator.
c) In what way does NP's internal labour inflation rate encompass any increased compensation to NP employees for labour productivity improvement?

CA-NP-219 (Reference CA-NP-098) Does NP have any measure or indication of any labour productivity improvement over time for its estimates of the cost of internal labour used in its capital programs and projects?

CA-NP-220 (Reference CA-NP-103b) It is stated "*To date, Newfoundland Power has three net metering installation applications that included customer-owned battery storage.*"
a) Do these customers own stand-alone battery storage systems, or do these

applications relate to customers who own electric vehicles?
b) What advantages do customers who own electric vehicles gain by submitting applications for net metering?
c) What benefits does NP gain from customers who own electric vehicles that submit applications for net metering?

CA-NP-221 (Reference CA-NP-108) It is accurate to say that a single substation outage could also result in loss of service to one customer? How is NP's approach to substation refurbishment and modernization impacted by the number of customers served by the substation?

CA-NP-222 (Reference CA-NP-109c) The RFI asks NP to identify the reduction in the risk to the reliable operation of the substations before and after the proposed capital expenditures. Is NP able to quantify the risk before and after the proposed project? If so, please provide the requested information.

CA-NP-223 (Reference CA-NP-111) Please provide NP's assessment that shows its surveillance systems are consistent with the least cost provision of service.

CA-NP-224 (Reference CA-NP-113) For Tables 1a and 1b, please add columns identifying the year the refurbishment and modernization took place, the capital spend, and reliability averaged over the years prior to refurbishment and modernization and reliability averaged over the years following refurbishment and modernization. For the average calculation, please omit the year that refurbishment and modernization took place.

CA-NP-225 (Reference CA-NP-124) In regard to transmission line 108L:
a) If a transmission line was not designed to meet current standards then does that require immediate replacement? How often do design standards change?
b) According to 3.1 Gander–Twillingate Transmission System Planning Study (page 11, Table 4) during October –December 2021, there was planned outage on 108L of 1015.4 hours for preventative maintenance. (i) Please provide the details of that preventive maintenance and whether the 2019 unplanned outage was the impetus for it. (ii) Indicate how that maintenance may have helped increase the longevity of the line.
c) How many poles on 108L have been replaced each year since 2000?

CA-NP-226 (Reference CA-NP-128d) It is stated "*Newfoundland Power is unable to confirm future trends in contractor pricing.*" How does NP determine whether to do the work itself, including the hiring of additional staff, versus contracting the work out?

CA-NP-227 (Reference CA-NP-133b) It is stated "*The proposed project at Mount Carmel Pond will increase winter availability of the Cape Broyle and Horse Chops plants which will potentially increase the firm capacity from the Cape Broyle – Horse Chops hydroelectric development.*" Will this project increase firm capacity provided by NP's hydro plants beyond 60.1 MW, and if so, by how much?

CA-NP-228 (Reference CA-NP-134) It is stated "*The capital cost to automate the gate structure at the Mount Carmel Pond Dam to improve performance during peak winter conditions is approximately $2.2 million or $1,467 / kW.*" How does this compare to the forecast marginal value of capacity?

CA-NP-229 (Reference CA-NP-137)

a) Please provide a cost-benefit comparison of the cost of providing more remote areas with powerline technician crews and more commonly required materials to the associated benefits.
b) It is stated "*The target is the same throughout Newfoundland Power's entire service territory. Newfoundland Power is obligated by statute to provide service in a non-discriminatory and non-preferential manner.*" Is NP obligated to target the same SAIDI and SAIFI for all areas of the province? Does cost come into play?

CA-NP-230 (Reference CA-NP-138c) It is stated "*Given that AMI is currently cost prohibitive and incompatible with AMR, Newfoundland Power does not view the partial deployment of smart meters as a viable alternative to address outages or customer supply interruptions in remote areas.*" Since a smart metering program would take 5 years to implement, will smart metering never be a viable program? How did NP overcome incompatibility issues when it implemented its current AMR metering program? How have other utilities overcome this issue?

CA-NP-231 (Reference CA-NP-144) Given the importance that customers place on reliability, why does NP not track customer complaints relating to reliability?

CA-NP-232 (Reference CA-NP-146d) It is stated "*Newfoundland Power has met the information requirements of the Provisional Guidelines when the required information is available.*" What is NP doing to obtain the required information that is not currently available, and what progress has been made since the Provisional Guidelines were issued?

CA-NP-233 (Reference CA-NP-147) Has AMCL made recommendations that will enable NP to meet the requirements set out in the Provisional Guidelines? If so, please identify the specific recommendations.

CA-NP-234 (Reference CA-NP-150) With respect to the Extensions program's 2025 cost per connection being significantly in excess of inflation, it is stated (footnote 2) that "*The cost of pole materials increased by an average of approximately 15%. Also, in 2023, Newfoundland Power entered into a new contract for pole installation services which resulted in a 23% increase in contract labour costs.*" and in the text of the response "*There was also an increase in the number of large-scale extensions required to connect customers.*"

a) In light of such developments, why does the estimate for cost-per-connection rely on historical averages when it is apparent that such recent developments, which are known, drive the cost per connection?

b) Should not the estimate of the cost per connection be based on the most recent pricing information rather than historical costs that no longer reflect current circumstances and are not forward looking?

c) In Schedule B, page 17, Table 1, the expenditure on extensions in 2023, at $15.145 million, is much higher than in the previous three years and 2024F. (i) What was the reason for this? (ii) Do the figures for total expenditures and adjusted cost per customer include any CIAC? (iii) If so, please reproduce Table 1 with all CIAC customers and payments removed.

d) Please provide a table with the same cost categories as Table 2 (Schedule B, page 18) for the years, 2020 to 2024F.

CA-NP-235 (Reference CA-NP-151) According to the 2023 Capital Expenditure Report, Appendix A (page 5 of 12) the reason that expenditure on the Reconstruction program in 2023 was so high, namely $923,000 in excess of that year's budget of $6,699,000, is that "major events late in the year resulted in additional work being required as compared to the historical average."

a) Please comment on the likelihood of such major events reoccurring.

b) In the 2025-2029 Capital Plan, Table A-2, the forecast expenditures on the Reconstruction program are given for 2025 to 2029 and are increasing. (i) Why has NP embodied the effect of the major 2023 events into all these years? (ii) Please provide a table that gives the reconstruction program expenditure in each year for 2025F to 2029F along with the percentage increases over the preceding year and the forecast GDP-deflator-based inflation rate for each of those years.

CA-NP-236 (Reference CA-NP-152) Please clarify the derivation of the 2025 budget for the Reconstruction program by addressing the following questions.

a) How is the $7,200,000 inflation-adjusted five-year average expenditure decomposed into "Labour" and "Non-Labour" components as given in Table 1?

b) Please assess the accuracy of the following statement. "*The 2025 budget of $7,425,000 is derived by increasing the Labour and Non-Labour Average Adjusted Cost, as given in Table 1, by the respective inflation rates of 4.45% and 1.63%, and then summing the two results.*"

c) How is the $7,425,000 budget for 2025 decomposed into Material, Labour-Internal, Labour-Contract, Engineering, and Other, as given in Application, Schedule B, page 21, Table 2?
d) Have the relative magnitudes of the components of Reconstruction program remained the same over the past five years? In response, please provide a table with the same cost categories as Table 2 (Schedule B, page 21) for the years, 2020 to 2024F.
e) Are the tasks of internal labour and contract labour in the Reconstruction distinct from one another? Please explain the role of each type of labour and the extent to which one can be substituted for the other.
f) If contract costs for this program were to be higher than expected, please explain how NP would proceed and how it has addressed this situation if it has occurred in the past.

CA-NP-237 (Reference CA-NP-153) The Rebuild Distribution Lines program.
a) Please provide a table with the same cost categories as Table 2 (Schedule B, page 25) for the years, 2020 to 2024F.
b) If contract costs for this program were to be higher than expected, please explain how NP would proceed and how NP has addressed this situation if it has occurred in the past.

CA-NP-238 (Reference CA-NP-156) Regarding the 2025 budget for the Replacement Transformers program,
a) In Table 2, the Three-Year Average Adjusted Costs ($2024) is increased by 11% for Material Cost, which, as stated in PUB-NP-008, that 11% is based on "*the forecast average cost of a distribution transformer in 2025.*" However, that cost is further increased by $80,000 for GDP inflation in 2025. Why increase the amount by GDP inflation when the cost of transformers has already been escalated by the expected price increase in 2025?
b) In Table 2, there is provision for $1,343,000 expenditure for Additional Inventory. (i) What is the current inventory? (ii) Has NP ever experienced an exhaustion of replacement transformer inventory, and if so, what were the circumstances?

CA-NP-239 (Reference CA-NP-160) Regarding the 2025 budget for the New Transformers program.
a) In Table 2, the Three-Year Average Adjusted Costs ($2024) is increased by the 11% for 2025. However, that cost is further increased by $71,000 for GDP inflation in 2025. Why increase the amount for GDP inflation when the cost of transformers has already been escalated by the expected price increase in 2025?
b) In Table 2, there is provision for $1,192,000 expenditure for Additional Inventory. (i) What is the current inventory? (ii) Has NP ever been

experienced an exhaustion of inventory of new transformers, and if so, what were the circumstances?

c) Are the target minimum inventory levels of new transformers and replacement transformers determined independently?

CA-NP-240 (Reference CA-NP-143and NLH-NP-025)

a) Please quantify the savings resulting from the OMS.

b) Please repeat the NPV analysis for the OMS system alternatives using a 9.0% discount rate.

CA-NP-241 (Reference NLH-NP-013a) It is stated "*The sample size of SF6 breakers used to derive the 27 year value was 44. The sample size of vacuum breakers used to derive the 20-year value was four.*" Does NP believe these sample sizes are statistically significant? What minimum sample size is generally needed to establish statistical significance?

CA-NP-242 (Reference PUB-NP-030) It is stated "*Almost all of the wheeling amounts charged to Hydro are charged back to Newfoundland Power through Hydro's rural deficit allocation.*" Is this still the case under the government's rate mitigation plan?

CA-NP-243 (Reference PUB-NP-031) It is indicated that while 108L has experienced relatively high SAIFI over the period 2019-2023, its SAIDI has been 0.85. That is well below NP's overall SAIDI value of 1.79 and appears to reflect the available back-up supply.

a) Please reconcile this low SAIFI value with the proposition that the transmission line is in imminent need of replacement.

b) Please provide the SAIFI and SAIDI values for 108L from 2010 to 2023.

c) For the transmission lines given in Table 1, please provide the amount of expenditure on corrective and preventative maintenance on each over the same 10-year period during which the $262,000 was spent on maintenance expenditure.

d) Please provide any documentation of complaints from customers served by 108L related to power interruptions over the past 10 years.

CA-NP-244 (Reference PUB-NP-032, Attachment A). In regard to the NPV analysis of the three Alternatives: Gander-Twillingate Transmission System.

a) Footnotes 1, 3 and 5 indicate that capital costs are given in 2025 dollars for 2025 to 2029 and escalated afterward according to the GDP deflator. (i) Is it not inappropriate to use a mix of real and nominal values in NPV analysis? (ii) Are the figures for "capital revenue requirements" and "operating costs" in the NPV Tables 1, 2 and 3 in nominal or real terms, and is the discount rate in nominal or real terms? (iii) What are the

estimated capital costs for 2025 to 2029 in nominal dollar terms and are they based on detailed engineering assessments?

b) For the entire 60-year period of the analysis, it appears that a discount rate of 6.65% was used. (i) Please confirm that 6.65% was used. (ii) Please explain the rationale for the choice of 6.65% for the discount rate.

c) Please repeat the NPV analysis of Alternatives 1, 2 and 3 using a 9.0% discount rate with all monetary values expressed in nominal terms. Also, include a variation on Alternative 1 in which the rebuild of 108L does not begin until 2029.

d) For the last time that NP decommissioned a transmission line and built a replacement one for it on an alternate route, what were the budget cost estimates for decommissioning of the old line and construction of the new line and the final cost of each?

CA-NP-245 (Reference PUB-NP-039b) It is stated "*As a result of the condition assessment, the Company has determined that replacement of the facility can no longer be deferred. However, Newfoundland Power has not concluded that the building constitutes an imminent or immediate risk or danger to the health or safety of employees.*" Did the condition assessment determine that there is no imminent risk or danger to employees in 2024 and 2025, but there will be in 2026?

CA-NP-246 (Reference PUB-NP-040) New Brunswick Power filed evidence with the New Brunswick Energy and Utilities Board on August 1, 2019 entitled "Advanced Metering Infrastructure Capital Project (https://www.nbpower.com/media/1489724/nbp0103.pdf) which states (page 5) "*The pace of technological change has been increasing and will continue to increase. NB Power believes that continuing to plan on the basis of making investments in traditional utility assets in the face of such change may not be prudent and reasonable.*" Further, Nova Scotia Power states on its website (https://www.nspower.ca/cleanandgreen/innovation/smart-grid-nova-scotia) "*Globally, the electrical grids that have served us over the past century are evolving through new technology into "smart grids." Smart grids offer a future in which individual pieces of the electrical system — including "smart devices" in customers' homes and businesses — can communicate with one another, so that the entire electrical system works together to use energy more efficiently. This means lower overall costs for customers and a cleaner environment.*"

a) Please file documentation produced by, or on behalf of, NP that supports or refutes these statements.

b) What is NP doing to make its grid smarter so that the entire electrical system works together to use energy more efficiently?

c) How is NP's asset management review taking into consideration technological change and investing in traditional utility assets in the face of such change that may not be prudent and reasonable?

CA-NP-247 (Reference CA-NP-016) It is understood that NP is proposing New Meters and Replacement Meters programs in the 2025 CBA that will use AMR metering technology rather than AMI (smart meter) technology.

In CA-NP-093d it is stated "*the implementation of Advanced Metering Infrastructure ("AMI") technology is not least cost for customers at this time.*" Footnote 1 references the 2019 Dunsky study as support for this statement.

In CA-NP-070b it is stated "*As part of the 2019 market potential study, Dunsky Energy Consulting assessed the load shifting potential of dynamic rate structures, including an estimate of the cost of AMI implementation. The consultant did not complete an overall assessment of smart meters.*"

In CA-NP-016d it is stated "*As a result of the studies referenced in part a) of this response, Newfoundland Power is aware that system cost savings resulting from the demand response potential of AMI technologies are not sufficient to offset implementation costs at this time. As a result, the Company has not conducted a more detailed assessment of various AMI technology options or their individual expected useful service lives.*"

In CA-NP-070c it is stated "*The benefits of smart meter technology can include: the ability to remotely read meters, automatic outage detection and management; the ability to remotely connect or disconnect service to customers; monitoring power quality; implementation of demand response programs such as Time-Of-Use rates; enablement of distributed energy generation; and the ability to provide customers personalized energy-saving tips and recommendations.*"

a) Please confirm that NP has not undertaken an assessment of AMI in the past 5 years because the demand response potential of AMI was judged insufficient to offset implementation costs at the time of the Dunsky study completed in 2019.
b) Please confirm that NP bases its opinion that AMI is not least cost on the 2019 Dunsky study that quantified only the benefits of load shifting while ignoring the numerous other benefits of smart meters.

CA-NP-248 (Reference CA-NP-016) It is understood that NP is proposing New Meters and Replacement Meters programs in the 2025 CBA that will use AMR metering technology rather than AMI (smart meter) technology. New Brunswick Power filed evidence with the New Brunswick Energy and Utilities Board on August 1, 2019 entitled "Advanced Metering Infrastructure Capital Project (https://www.nbpower.com/media/1489724/nbp0103.pdf). The New Brunswick Power study of smart meters quantified the following benefits of smart meters relative to AMR: i) Reduced Manual Meter Reading and Meter

Service Orders; ii) Avoided Meter Replacement Costs; iii) Conservation Voltage Reduction; iv) High Bill Alert Service; v) Distribution Network Losses; vi) Meter Accuracy Losses; vii) Avoided Cost of Load Research Program; viii) Avoided Cost of Net Metering Program; ix) Avoided Cost of Meter Services Manager Salary; x) Avoided Cost of Meter Reading Vehicles; xi) Outage Restoration (Crew management); xii) Reduced Customer Inquiries; xiii) Avoided Cost Of Handheld System; xiv) Unbilled/Uncollectable Accounts; xv) Avoided Cost of Meter Reading Supervisor; and xvi) Reduced Overtime for Meter Service Orders. It also identified 12 additional customer and societal benefits of AMI that were not quantified such as (page 32) "*time-varying rates, which can provide significant benefits to customers and NB Power by providing more efficient price signals, and geographically-targeted demand-side management (DSM) programs, which can avoid or defer costly transmission & distribution ("T&D") investments based on AMI-derived visibility into grid needs and patterns.*" The 12 additional benefits that were not quantified were identified by Dunsky (page 32). Dunsky also reviewed the list of quantified benefits (page 32).

a) Does NP agree with the list of benefits owing to smart meters relative to AMR identified in the New Brunswick Power study? If not, which of these benefits are not relevant to NP's system and why?
b) Why does NP believe that as stated in CA-NP-016d "*system cost savings resulting from the demand response potential of AMI technologies are not sufficient to offset implementation costs at this time*" is a valid reason for ***not*** conducting a more detailed assessment of AMI when New Brunswick Power justified its AMI program without quantifying load shifting benefits and according to Natural Resources Canada, more than 82% of Canadian residents have adopted smart meters with a similar trend observed in the United States (https://www.mordorintelligence.com/industry-reports/north-america-smart-meters-market-industry)?
c) Does NP believe that the Posterity study results are needed before it can undertake a study of smart meters?
d) What was the basis for the load shifting benefits used in the 2019 Dunsky study, and how did the load shifting benefits compare to costs of AMI implementation in the net present value analysis?
e) Why did NP not request Dunsky to identify and quantify benefits of smart meters other than load shifting given that Dunsky had participated in a similar study for New Brunswick Power at roughly the same time?
f) Based on CA-NP-016b, can it be concluded that of the other 9 Canadian provinces, 8 of the provinces have, or are in the process of, installing smart meter programs including British Columbia, Alberta, Saskatchewan, Ontario, Quebec, New Brunswick, Nova Scotia and Prince Edward Island?

CA-NP-249

(Reference CA-NP-016) It is understood that NP is proposing New Meters and Replacement Meters programs in the 2025 CBA that will use AMR metering

technology rather than AMI (smart meter) technology. CA-NLH-012 pertaining to NL Hydro's 2025 CBA, Attachment 1 includes a June 15, 2020 report by Util-Assist Inc. entitled "Business Case Report for Next Generation Metering (NGM) - Newfoundland and Labrador Hydro". Attachment 1, page 8 of 64 states "*The third case, Option 3 (Appendix D) – Full-scale Drive-by AMR "lite" with NL Power's Itron Drive-by solution over a 21- year system lifecycle was reviewed next. While a viable solution financially ($17.6M NPV), like that with Option 1, the technological limitations to a drive-by solution are too great. As noted in Section 2: Technology and Trends, the trend amongst utilities in Canada and really across North America is toward the deployment of AMI. Drive-by AMR meter reading is something that electric utilities are moving away from and not towards. As the utility industry is searching for ways in which to improve Customer Experience, drive-by metering does the opposite in that it improves the utility's experience while preventing any meaningful impact to the customer. Regardless of technology solution selected, the most significant cost by far to the utility is the replacement of meters, at upwards of 75% of the capital cost. With this in mind, understanding that money is going to have to be spent, NLH must consider what the best investment is for their customers and their utility. Drive-by metering is enticing due to relative cost in comparison to AMI, but when viewed in the current climate of where the industry is with more advanced AMI solutions and the fact that this will be a 20-year investment, the risk to move forward with Drive-by metering is too great and is not recommended.*"

a) Did NP participate in, or was it made aware of, this study? Were the results of this study incorporated in NP's own studies of smart meters, or the Dunsky NL study completed in 2019?

b) Why is NP continuing with AMR metering when "*the technological limitations to a drive-by solution are too great*", it "*is something that electric utilities are moving away from and not towards.*" and "*As the utility industry is searching for ways in which to improve Customer Experience, drive-by metering does the opposite in that it improves the utility's experience while preventing any meaningful impact to the customer*"?

c) CA-NLH-012 pertaining to NL Hydro's 2025 CBA (Attachment 1, page 20 of 64, Table 6) quantifies three AMI-Lite benefits including: avoided costs of meter replacements ($13.7 million), reduced manual meter reading ($84 million) and avoided cost of meter reading vehicles ($1.0 million). Would NP likewise experience such benefits if it were to embark on an AMI program, and if so, what would be the net present value of such benefits?

d) Please confirm that there are numerous other benefits of AMI beyond those identified in part (c) such as real-time information concerning usage, remote disconnect/reconnect or power limiting, an improved knowledge of the distribution system bettering responses to outages, and the ability to

implement dynamic rate structures such as time-of-use rates or critical peak pricing, monitoring power quality, enablement of distributed energy generation, the ability to provide customers personalized energy-saving tips and recommendations and the ability to provide outage and power restoration notifications to customers.

e) What is the probability that the AMR meters being installed under the New Meters and Replacement Meters programs becoming stranded?

CA-NP-250

(Reference CA-NP-016) It is understood that NP is proposing New Meters and Replacement Meters programs in the 2025 CBA that will use AMR metering technology rather than AMI (smart meter) technology. The Nova Scotia Utility and Review Board's decision (M08349 issued in 2018) on Nova Scotia Power's proposed AMI (smart meter) project (https://nsuarb.novascotia.ca/sites/default/files/M08349%20Decision.pdf) notes (pages 9 and 10) that the largest benefit of the AMI project relates to a reduction in meter reading and field work. Nova Scotia Power determined that AMI would eliminate 99% of manual meter reading costs and 55% of other meter related service order field work, resulting in annual cost savings of $4.6 million which on a net present value basis offset roughly one-third of the total lifecycle cost of the AMI project.

a) What is the comparable figure included in NP's study of smart meters?

b) What were NP's meter reading costs in 2023?

CA-NP-251

In the Capital Budget Application Guidelines Review, the October 2020 Midgard Consulting report stated on page 22: *"The PUA specifies the frequency of Capital Budget Applications and sets materiality thresholds requiring approval, however, it does not specify that the NLPUB must review and approve expenditures on a line by line basis. Midgard is of the opinion that existing legislation enables the NLPUB either to continue with the existing itemized explicit project approvals, or alternatively, to approve capital budget envelopes that represent all or some portion of the total proposed utility budgets. Using the latter approach, utility management may need to re-prioritize, modify or defer some projects to meet the approved capital budget envelope.*

a) Given that the 2025 Capital Budget summary totals the expenditures at $127,951,000.00 and given the trajectory expanding capital budgets well into the next six years, should the Public Utilities Board, in an effort to balance the interests between ratepayers and the utility, approve a capital budget envelope which will require NP to re-prioritize, modify or defer some projects to meet the approved capital budget envelope?

b) Should the Board decide that a capital budget envelope is now appropriate in these circumstances, is NP prepared to re-prioritize, modify or defer some projects at the direction of the Board to meet the approved capital budget envelope?

CA-NP-252 NP has referenced the System Average Interruption Duration Index (SAIDI) and the System Average Interruption Frequency Index (SAIFI) of which the 2020 Midgard report states at page 51: *"Renewal spending trends can be compared against customer service reliability results, such as industry standard metrics like... ("SAIDI") and ... ("SAIFI") to assess if the level of spending is adequate to achieve the desired reliability performance."* and at page 52 *"If a utility's SAIFI trends showed that its average frequency of customer outages was materially worse than that of its peers and that a primary cause was failure of aging poletop transformers, the utility could argue for increasing Renewal investments in poletop transformer replacements to mitigate the problem."*

a) If NP's SAIDI and SAIFI performance trends exceed Canadian averages, how can NP justify expenditure expansion in this application and in future applications?
b) Has NP informed the Board how SAIDI and SAIFI are relevant in the regulatory process if capital budget applications continue to expand despite the fact that SAIDI and SAIFI trends and averages are well above the Canadian average?
c) How are SAIDI and SAIFI considered in the regulatory process if the PUB makes no reference as to how these industry standards have been applied in capital budget decisions?
d) If NP's proposed spending is not based on a deterioration in its SAIFI and SAIDI relative to recent years' values or relative to other utilities' index values then why shouldn't the Board accept this as evidence that the level of spending and proposed spending is unnecessarily high?

CA-NP-253 In a report by Elenchus titled "Comments on Newfoundland Power's 2022 Capital Budget Application", Elenchus stated at page 35: *"Elenchus has not examined the alternatives that NP included in its economic evaluations of all capital projects included in the 2022 CBA for the purpose of identifying information deficiencies. However, as noted above, it appears to Elenchus that NP has not approached the economic analysis of the projects by identifying and evaluating "a reasonable range of alternative solutions".* Elenchus then concluded: *"... it follows that all relevant information has not been identified and included as is necessary to identify the least cost option and therefore prudent alternative."*

a) In this particular application, please provide evidence that NP has, in fact, conducted economic evaluations of all capital projects and evaluated a reasonable range of alternative solutions.
b) In each and every capital budget expenditure, has NP examined and expensed all of the alternatives to provide evidence to the Board that its proposal is cost effective and reasonable?

CA-NP-254 The Board (and indeed the Province) is currently in the midst of a reliability and resource adequacy review to determine the way forward. How can NP justify proposing expenditures on thermal generation until the recommendations resulting from the reliability and resource adequacy review are available and all the alternatives, which may be considered other than thermal as proposed in NP's Application, have been evaluated?

DATED at St. John's, Newfoundland and Labrador, this 9th day of October, 2024.

Per: Dennis Browne

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