Office of the Consumer Advocate

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September 20, 2022

Board of Commissions of Public Utilities
120 Torbay Road, P.O. Box 2140
St. John's, NL A1A 5B2

Attention: G. Cheryl Blundon, Director of Corporate Services / Board Secretary

Dear Ms. Blundon:

Re: Newfoundland Power's 2023 Capital Budget Application

Further to the above-captioned, enclosed are the Consumer Advocate's Requests for Information numbered CA-NP-128 to CA-NP-179.

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

Yours truly,

Dennis Browne, KC
Consumer Advocate

Encl.
/bb

cc **Newfoundland & Labrador Hydro**
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IN THE MATTER OF the *Public Utilities Act,* (the "Act"); and

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

IN THE MATTER OF an Application by Newfoundland Power Inc. for an order pursuant to Sections 41 and 78 of the Act for a total of $123.5 million annually:

(a) approving single-year 2023 capital expenditures in the amount of $93,292,000;
(b) approving multi-year projects with capital expenditures of $10,483,000 in 2023 and $10,645,000 in 2024; and
(c) fixing and determining a 2021 rate base of $1,202,946,000.

CONSUMER ADVOCATE
REQUESTS FOR INFORMATION
CA-NP-128 to CA-NP-179

Issued: September 20, 2022

CA-NP-128 (Reference PUB-NP-007) The NPV analyses in Table 1 and Table 2 of Attachment A imply that the cumulative NPVs of the two alternatives for street lighting replacement become equal sometime in 2041.

a) Please confirm that from 2041 to 2055, the avoided electricity costs used in those analyses are based on the 2040 value of marginal costs from the Marginal Cost Study Update-2021 escalated by the Conference Board of Canada forecast of the GDP deflator.

b) What evidence does NP possess to support the conjecture that marginal cost after 2041 to 2055 will increase at the same rate as the GDP deflator forecast?

c) For the years 2023 to 2040 inclusive, please provide a table containing the annual values of CBOC's GDP deflator forecasts and the estimated marginal cost of energy and of transmission/capacity from the Marginal Cost Study Update-2021. Also include in that table, the annual percentage change in the forecast GDP deflator and each of the two marginal costs. Based on those figures please provide the correlation coefficient between the annual percentage changes in the forecast GDP deflator and the annual percentage changes in each marginal cost.

d) Did NP consider the potential impact that the end of the Churchill Falls contract in 2041 could have on marginal costs and therefore on avoided electricity costs in that year and to 2055? Did NP consider any other alternative way to develop forecasts of avoided cost beyond 2040 other than using the percentage increases in the forecasts of the GDP deflator?

e) In PU-36 (1998-1999) the GDP deflator was authorized for forecasting. Please provide any further studies that were undertaken in reference to this GDP deflator.

CA-NP-129 (Reference PUB-NP-007) Regarding the choice of discount rate in the NPV calculations:

a) Why did NP choose a discount rate of 5.81% for the years 2023 to 2055?

b) What was the yield on the most recent NP debt issue, when was that debt issued and for how long?

c) Has NP obtained any forecasts of interest rates from the Conference Board of Canada, financial advisors or other forecasters for the years 2023 to 2055? If so, please provide same.

d) If NP's average cost of capital were to increase in 2023 by two percentage points and if the project were approved, what would be the impact on rates for street lighting?

e) Has NP's average cost of capital ever exceeded 5.81%? If so, when and by how much?

CA-NP-130 (Reference PUB-NP-007) Please provide sensitivity analysis for Tables 1 and 2 by recalculating NPVs (and provide the spreadsheets) under the following scenarios:

a) Assume discount rates of 6.5%, 7%, 7.5%, 8% and 8.5%.
b) Assume the avoided electricity cost for 2041 is 50% lower than used in PUB-NP-007 for that year and similarly for 2042 to 2055. Calculate the NPVs under this assumption in combination with discount rates of 5.81% and each of those listed in (a).
c) Please indicate the year in which the cumulative NPV of the two alternatives become equal for each of scenarios considered in a) and b).

CA-NP-131 (Reference PUB-NP-007) What would be the impacts from 2023 to 2055 of each of the two LED Street Lighting Replacement alternatives on Newfoundland and Labrador Hydro's revenue due to the reduced electricity consumption on the island integrated system?

CA-NP-132 (Reference PUB-NP-008) It is stated "*No, the proposed 2023 capital expenditures for the Electric Vehicle Charging Network are not contingent on the approval of Newfoundland Power's 2021 Electrification, Conservation and Demand Management Application (the "2021 ECDM Application")*."

a) Are 2023 capital expenditures for the electric vehicle charging network contingent only on approval of the 2023 Capital Budget Application?
b) If the ECDM program is not approved by the Board, how will this impact the programs and costs included in the 2023 Capital Budget Application?

CA-NP-133 (Reference PUB-NP-009 and PUB-NP-011) It is stated "*The revised estimate of $594,000 for three DCFC charging stations in 2023 reflects the Company's actual experience with the construction of charging stations since the 2021 Plan was filed in December 2020. The original estimate provided in the 2021 Plan was approximately $150,000 per station. Actual costs have been approximately $200,000 per charging station.*"

a) Please confirm that the revised estimate for the charging stations is approximately 33% greater than the cost approved by the Board.
b) How does this cost increase impact the economics of the ECDM program including the estimated impact on rates?
c) What is the degree of accuracy of the estimated rate mitigation benefits stemming from the electrification program including the timing of such benefits?
d) Please re-evaluate the rate mitigation effect with the higher costs of charging stations and any other available information updates and use discounts rates of 6.5%, 7.5% and 8.5% in the NPV calculation. Please provide a spreadsheet of the calculations.
e) What impact does the increase in gasoline and diesel prices have on the economic analysis of the electrification program? Do higher gasoline

and diesel prices accelerate EV adoption and increase the probability of free ridership?

CA-NP-134 (Reference PUB-NP-010) If Newfoundland Power determines that a charger site requires expansion owing to high usage rates, why does it believe that the business case remains too weak for the private sector to undertake the charger expansion?

CA-NP-135 (Reference PUB-NP-016) It is stated "*Ongoing rate design and load research studies will inform the business case for AMI technology when it is developed.*"

a) Please explain how these studies will be used to inform the AMI business case.

b) Has Newfoundland Power considered meter replacement/new meters programs similar to the approach being used in the LED street lighting program; i.e., all new and replacement meters would include AMI technology?

c) Are there other reasons for proceeding with AMI? For example, fairness in the rate design, giving customers a measure of control over their electricity bills, etc? Further, the response to NLH-NP-021 states "*As the Company does not currently utilize Advanced Metering Infrastructure, loading on individual sections of distribution line can only be approximated by the modeling software, and must be verified in the field*".

d) Did Dunsky in fact allude to other reasons why AMI might be pursued earlier than 2030?

CA-NP-136 (Reference PUB-NP-018) Is the proposed asset management review driven by the requirements set out in the Board's Provisional Capital Budget Application Guidelines? If not, what steps is Newfoundland Power taking to gain the data and information necessary to meet the requirements set out in the Provisional Capital Budget Application Guidelines such as quantification of the reliability and risk mitigation benefits arising from a project?

CA-NP-137 (Reference PUB-NP-024)

a) Please confirm that if the Board approves the proposed 2023 transmission line rebuild program, the program will be completed with the exception of five lines to be rebuilt by 2028.

b) What are Newfoundland Power's plans with respect to transmission line rebuilds following 2028?

CA-NP-138 (Reference NLH-NP-009(c), CA-NP-089 and CA-NP-093) It is stated (NLH-NP-009(c)) "*Newfoundland Power estimates that its annual capital*

expenditures over the next five years would be reduced by approximately $26 million annually if the replacement and refurbishment of electrical system assets remained consistent with historical investment levels."

a) Will expenditures for the renewal classification increase by roughly $34 million (79%), from $43 million in 2022 to $77 million in 2025 (Section 3.2 of Capital Plan)?
b) Please reproduce the graph in CA-NP-093 showing the renewal category only.
c) What is the justification for this cost increase?
d) Is the identification of aging equipment a relatively new experience? When did Newfoundland Power first determine that its assets are aging?
e) What role will the asset management review play in the determination of costs in the renewal classification going forward?
f) Has Newfoundland Power undertaken any actions to offset these expenditures and maintain current levels of capital spending?
g) Will the asset management review proposed by Newfoundland Power be a similar exercise to that performed by Liberty in 2014?
h) Will customers be consulted and take part in the asset management review?
i) What is the expected cost of the asset management review and in what year is it expected to inform costs in the renewal classification?

CA-NP-139 (Reference NLH-NP-031) It is stated "*The 2022 inspections determined that the line had deteriorated to the point that 253 of 490 poles on the line required replacement. In addition, 61 structures were identified as either having deteriorated insulators, crossarms, or hardware deficiencies.*" Please provide corresponding data for the inspections undertaken in each of the previous 10 years, together with any reports and documentation.

CA-NP-140 (Reference NLH-NP-033) It is stated "*In Newfoundland Power's view, a replacement generator would not provide any additional benefits sufficient to justify these added costs. The plant's efficiency would not necessarily improve and the expected remaining service life would not change materially.*" What is the typical water conversion efficiency of hydro generator technology today versus when the Mobile Hydro Plant was commissioned?

CA-NP-141 (Reference CA-NP-004) It is stated "*The Company views both capital budget caps and capital budget envelopes as arbitrary limits on capital expenditures and notes that neither are best practice in jurisdictions with cost of service regulation such as Newfoundland and Labrador.*"

a) Did Midgard recommend that the Board approve "arbitrary" capital budget envelopes? What exactly did Midgard recommend with respect

to capital budget envelopes? Please provide references from the Midgard report.

b) Did Midgard recommend that the Board have the flexibility to approve ***either*** capital budget envelopes ***or*** individual projects? Is Newfoundland Power opposed to the Board having greater flexibility in its decision-making?

c) Does Newfoundland Power believe that the Board has the expertise to manage Newfoundland Power's assets. Does Newfoundland Power want the Board to manage its assets?

d) Was Midgard aware that the province is a cost of service jurisdiction? Please provide references in the Midgard report indicating that Midgard did not know that NL is a cost of service jurisdiction.

e) Did Midgard recommend performance-based regulation in the province?

f) Does Newfoundland Power believe that capital budget envelopes are best practice in jurisdictions with performance-based regulation?

CA-NP-142 (Reference CA-NP-013) What changes did Newfoundland Power make to its asset management plan and practices in response to the Board's Provisional Capital Budget Application Guidelines?

CA-NP-143 (Reference CA-NP-015(vii)) Please identify the peer group used to benchmark Newfoundland Power performance on customer satisfaction.

CA-NP-144 (Reference CA-NP-016)

a) Please provide survey questions and responses concerning customer trade-offs between service improvements (e.g., SAIDI and SAIFI), costs and rate impacts.

b) Please provide survey questions and responses relating to customer ability and willingness to pay for electricity service.

c) Has Newfoundland Power informed ratepayers in their surveys of the relevance of SAIDI and SAIFI and their significance in deciding projects and how Newfoundland Power's SAIDI and SAIFI numbers compare with other Canadian utilities?

CA-NP-145 (Reference CA-NP-018) The questions in the RFI include: 1) At what unit cost system reliability and risk profile would be improved by a proposed project, 2) If the ratepayer values the improvement in system reliability and risk reduction more than the project cost, and 3) How cost effective the proposed improvements in system reliability and risk reduction are compared to other budget items proposed and other alternatives that are available. Were any of these questions addressed in the 2023 Capital Budget Application? Is it a requirement of the Provisional Capital Budget Application Guidelines that these questions be addressed?

CA-NP-146 (Reference CA-NP-029) Please file a copy for the record.

CA-NP-147 (Reference CA-NP-030)

a) Please confirm that in Newfoundland Power's opinion, the Board does not have the authority to take into consideration rate impacts on customers at times when customers are experiencing financial distress.

b) Please confirm that Newfoundland Power does not take into account such considerations when it files its capital budgets and general rate applications.

c) Please confirm that regulation should replicate the effects of a competitive market in markets where competition does not exist.

CA-NP-148 (Reference CA-NP-031) It is stated "*The topic of integrated resource planning is ongoing as part of Newfoundland and Labrador Hydro's Reliability and Resource Adequacy Study review, of which Newfoundland Power is a participant.*" Does Newfoundland Power perform integrated resource planning for its distribution system?

CA-NP-149 (Reference CA-NP-034)

a) How are inflation and supply chain issues expected to impact the accuracy of Newfoundland Power's estimates in 2023?

b) (Reference Hydro Application, 2022 Capital Expenditures Overview, Appendix A) Of 17 projects/programs in 2022, 13 of Hydro's projects have variances between the Board-approved budget amounts and the total budget expenditures and forecast. It is understood that the variances are in part owing to supply chain issues and inflation. On the other hand, Newfoundland Power shows 2022 capital expenditure variances in only 1 of 11 projects/programs (see Newfoundland Power 2023 Capital Budget Application, 2022 Capital Expenditure Status Report). Why is Hydro able to judge the impacts of supply chain and inflation issues to date in 2022 when Newfoundland Power is not?

CA-NP-150 (Reference CA-NP-042) Please confirm that Newfoundland Power did ***not*** discuss with the customer alternative means for improving the reliability of supply to the hospital.

CA-NP-151 (Reference CA-NP-045, Footnote 3) It is stated "*Investigate the installation of downstream feeder reclosers for the purpose of improving distribution SAIFI and SAIDI indices, in addition for reducing cold load pick up difficulties, with priorities given to feeders based on installation costs versus anticipated avoided customer interruptions.*"

a) Has Newfoundland Power proposed the addition of reclosers on the basis of SAIDI and SAIFI improvements as recommended by Liberty?

b) In the response to NLH-NP-014 is Newfoundland Power stating that it is ***not*** justifying installation of reclosers on the basis of improved reliability performance or cost reduction?

CA-NP-152 (Reference CA-NP-046(d)) It is stated "*An increase in customer rates due to electrification initiatives would be minimal over the near term, with a forecast increase of 0.006 ¢/kWh in the first year of implementing the 2021 Plan, representing an average annual customer bill increase of approximately $1.17 for a residential customer with electric heating.*" Given the "minimal" rate impact, and the benefits to Newfoundland Power's shareholder deriving from the gain in sales revenue owing to the ECDM program, why is Newfoundland Power's shareholder not taking on this cost in the 2022 through 2025 timeframe?

CA-NP-153 (Reference CA-NP-049) If Newfoundland Power were to forego this work in 2023, would the level of reliability on the system continue to exceed the Canadian average? More specifically, does this program need to be done annually? Would there be savings if done every other year?

CA-NP-154 (Reference CA-NP-055) Why are 8 inspections completed annually rather than 6 or 4 or 1? How did Newfoundland Power decide that "8" inspections were required? Please provide a description of these inspections and if reports were documented? What would the cost of this program be in 2023 if the number of inspections was reduced?

CA-NP-155 (Reference CA-NP-065(c)) Please confirm that Newfoundland Power is promoting accelerated EV adoption in the province, but is not adding EVs to its own fleet until it gains experience with EVs and monitors trends in the EV market.

CA-NP-156 (Reference CA-NP-069) It is stated "*Yes, Newfoundland and Labrador Hydro ("Hydro") has information on customer trade offs between cost and reliability through their digital engagement process in 2018 as part of its Reliability and Resource Adequacy Study.*"

a) Specifically, what questions were posed to customers during this engagement relating to trade-offs between service improvements and cost, and customer willingness to pay?
b) What were the findings of this initiative relating to customer trade-offs between cost and service improvements, and customer willingness to pay?
c) How has this information been incorporated in Newfoundland Power's 2022 and 2023 Capital Budget Applications?
d) Please file for the record a copy of the report documenting the results of this process.

CA-NP-157 (Reference CA-NP-078) It is stated "*A white paper entitled "Worst Performing Feeders" released by Electricity Canada in 2015, suggests that within the industry one common methodology used to identify Worst Performing Feeders is based on feeder reliability metrics exceeding the corporate average by 300%.*"

a) It is understood that this methodology is used to ***identify*** worst-performing feeders, but is it also used in the industry as a basis for taking action to improve reliability performance on such feeders?

b) Does Newfoundland Power subscribe to this methodology? If not, to what methodology does Newfoundland Power subscribe?

CA-NP-158 (Reference CA-NP-087) It is stated "*the replacement of a reasonably reliable feeder with a new feeder would carry a high cost and provide no material benefit for customers.*"

a) Please confirm that such a project would provide a reliability benefit.

b) Please define "material benefit".

c) Please quantify the "material benefit" of each project in the 2023 Capital Budget Application that has a reliability component.

CA-NP-159 (Reference CA-NP-095) It is stated "*As such, annual variances greater than 10% and $100,000 for 2022 projects and programs are typically not known at that time.*" What then is the value and purpose of this report?

CA-NP-160 (Reference CA-NP-098) In Table 1 of Attachment A it is indicated that LED Street Lighting Replacement Alternative 2 would have an advantage over Alternative 1 equal to a 20-year NPV of $4.9 million. NP's response to PUB-NP-007 implies a 32-year NPV of $4.6 million advantage. Please clarify which is the more accurate figure.

CA-NP-161 (Reference CA-NP-098) In Table 1 of Attachment A, the NPV for the three alternatives regarding Transmission Line 55L are given.

a) Please provide the Excel spreadsheet calculations of those NPVs.

b) Please estimate the NPVs based on a discount rate of 6.5%, of 7.5% and of 8.5% and provide Excel spreadsheets showing the calculations.

CA-NP-162 (Reference CA-NP-104) It is stated "*Newfoundland Power does not capture data related to customer complaints about reliability by feeder.*"

a) Why not? Do customers place a high level of importance on reliability? Is tracking customer complaints about reliability inconsistent with Newfoundland Power's mandate?

b) Please provide the detailed step-by-step process followed when a customer files a complaint with either Newfoundland Power or the Board.

c) Please provide the detailed step-by-step process followed when a customer files a dispute against Newfoundland Power.
d) Please file a summary list of complaints/disputes for each of the past 10 years including a description of the complaint/dispute and any action taken.

CA-NP-163 (Reference CA-NP-107) Please confirm that Dunsky did not assess the cost effectiveness of dynamic rates as they relate to this particular project.

CA-NP-164 (Reference CA-NP-112) It is stated "*the economic cost of replacing lost production if the project were to be deferred to 2024 is $700,000.*" Please confirm that this is an estimate of the value of capacity and energy from Sandy Brook in 2024 rather than the risk-adjusted cost of a failure if the project were to be deferred by a year.

CA-NP-165 (Reference CA-NP-115, footnote 3) What percentage of the windings at Sandy Brook have failed in the past 10 years? What are the outage rates for the Sandy Brook hydro plant in each of the past 10 years?

CA-NP-166 (Reference CA-NP-119) It is stated "*The loss of a year of production from the Mobile Hydro Plant resulting from an unplanned failure is approximately $1.2 million.*" Please confirm that this is an estimate of the value of capacity and energy from the Mobile hydro plant in 2024 rather than the risk-adjusted cost of a failure if the project were to be deferred by a year.

CA-NP-167 (Reference CA-NP-121) What are the outage rates for the Mobile hydro plant in each of the past 10 years?

CA-NP-168 (Technical Conference – Issue 1) For the years 2005 to 2020 please provide a table containing annual values for: the GDP deflator, NP's price index using the same base year as the GDP deflator, actual capital expenditure by NP, actual capital expenditure by NP expressed in real terms using the GDP deflator, and actual capital expenditure expressed in real terms using NP's price index.

CA-NP-169 (Technical Conference – Issue 2) With respect to the proposed transmission line 55L rebuild project, it is stated in the application "*in 2017 customers experienced an outage of approximately 4.5 hours due to a severe wind storm" and "Customers experienced a similar outage due to a wind storm in 2020*".
a) Please confirm that these 2 events resulted in 1.7 million customer minutes of outage (850,000 minutes of customer outage per event), and that this compares to 10 million minutes of outage over the past 20 years,

or 500,000 minutes of customer outage per year, or 147 minutes of outage per customer per year (based on 3400 customers).

b) Are outages to Line 55L included in Newfoundland Power's system SAIDI/SAIFI statistics?

c) Are the 2 referenced wind storms judged to be severe storms for the purposes of calculating SAIDI/SAIFI statistics?

d) Would the rebuilt line maintain continuity of supply during such wind storms?

e) Are "hotline work methods using specialized resources" common industry practice in such circumstances? What "specialized resources" are utilized?

f) Please provide the step-by-step process and timeline followed to restore power supply during the 4.5 hour outage resulting from the severe wind storm in 2017.

g) Please provide the step-by-step process and timeline followed to restore power supply during the wind storm of 2020.

h) Please identify the severity of any damages to 55L due to the recent post-tropical storm Hurricane Earl and what, if any, outages were experienced.

CA-NP-170 (Technical Conference – Issue 2) With respect to the proposed transmission line 55L rebuild project, it is understood that maintenance expenditures since 2018 have been $30,000/year. Please provide maintenance expenses from 2010 forward?

CA-NP-171 (Technical Conference – Issue 2) With respect to the proposed transmission line 55L rebuild project, how will Newfoundland Power dispose of old poles? Is this cost/estimated included in the economic assessment and, if so, provide particulars?

CA-NP-172 (Technical Conference – Issue 2) With respect to the proposed transmission line 55L rebuild project, it is stated in the application "*The inspections [in 2022] determined that 253 of 490 poles on the line (52%) are deteriorated to the point where replacement is required. In addition, 61 structures were identified as either having deteriorated insulators, deteriorated crossarms or hardware deficiencies.*"

a) How many poles have been replaced since the last inspection? In the past year? In the past 5 years?

b) How many outages have occurred since the last inspection?

c) At what percentage of deteriorated poles does NP decide the entire line should be replaced?

d) When a pole is replaced, does this also include replacement of all cross-arms and insulators?

e) Are the deteriorated poles in concentrated clusters or are they evenly distributed throughout the line?

CA-NP-173 (Reference Technical Conference Issue 3).

a) What is the purpose of the risk matrix?

b) Does the risk matrix show relative priorities of projects and a priority ranking of these projects?

c) Does the matrix quantify the risk associated with project deferral?

d) Does NP use its risk matrix for decision-making? In particular, does it eliminate any capital projects based on an application of the matrix?

e) Why are the weights assigned to probabilities for the matrix not proportionate to the underlying probabilities? For example, a project/program with a probability of 5% is assigned a value of 1 but a project/program with a probability of 80%, which is 16 times higher, is assigned a weight of 4, which is just 4 times higher.

f) Why are the weights assigned to consequence values for the matrix not proportionate to the underlying values when those underlying values can be expressed in numerical terms? For example, a project/program with an NPV of $50,000 is assigned a value of 2 but one with a NPV of $750,000, which is 15 times larger, is assigned a value of 4, which is only twice as much as 2.

g) Would Newfoundland Power use the risk matrix to prioritize projects to be completed if the Board were to approve a capital budget envelope in an amount that is less than that requested?

CA-NP-174 (Reference Technical Conference Issue 3 relating to financial aspects of projects such as pay-back periods).

a) Does Newfoundland Power do both economic and financial analyses when it analyzes a capital project? For example, has Newfoundland Power determined a pay-back period for any of the projects proposed in the 2023 CBA? Are pay-back periods relevant in light of government initiatives relating to a carbon-free society and the potential for stranded assets; i.e., continued use of diesel generation?

b) Does NP consider any project that has a positive net present value a good investment for customers even if the payback period is more than 20 years into the future?

c) Please confirm that in the assessment of alternatives relating to transmission line 55L, "Alternative 1 – Address Existing Deficiencies" the upfront cost is about $7.5 million while the upfront cost of the favored Alternative 3 – "Rebuild in New Right-of-Way" is $10.6 million. What weighting did NP give to this fact in its economic assessment of the line rebuild?

d) Considering that outcomes are more and more uncertain the further into the future that technology improves over time, would it not be

worthwhile for Newfoundland Power to have a pay-back period criterion for projects in addition to the NPV criterion? Otherwise, how does NP adjust NPVs for the uncertainty associated with long-lived project with large up-front capital cost?

e) Please provide pay-back periods of other Canadian utilities undertaking similar projects.

CA-NP-175 (Reference Technical Conference Issue 6)

a) According to NLH-NP-014, over the past 5 years, SAIDI performance has been 47% of the Canadian average and SAIFI performance has been 84% of the Canadian average. Please confirm that this performance reflects NP's target reliability when making decisions on planning and operating its power system.

b) Please confirm that the basis for NP's reliability performance strategy is NP's customer surveys.

c) Please confirm that NP's customer surveys do not ask customers about the value they place on reliability of supply. If this is not confirmed, please identify questions in the survey that assess customer trade-offs between cost and reliability.

d) Did Hydro's digital engagement initiative attempt to gain this information? Does NP use the results of this initiative in any way to inform its planning and operation decisions?

CA-NP-176 (Reference Technical Conference Issue 6) For the: 1) proposed addition of closers project, 2) the transmission line 55L rebuild project, and 3) the refurbishment of feeder SUM-01 project, please provide the following:

a) Historic SAIDI and SAIFI figures for customers served by these facilities for each of the past 10 years.

b) All complaints from customers served by these facilities for each of the past 10 years.

c) Feedback received when customers were contacted about the projects, specifically feedback relating to willingness to pay and trade-offs between improved reliability and cost.

d) Project cost estimates consistent with the requirements set out in the Provisional Capital Budget Application Guidelines.

e) The forecast improvement in reliability performance (quantified) resulting from each of the projects.

f) The expected risk (quantified) of deferring each of the projects by one or two years.

g) Historic maintenance costs on these lines for each of the past 10 years.

h) The expected improvement in operating costs resulting from each of the projects.

i) The payback period for the recommended alternative relative to continuing to maintain existing assets.

CA-NP-177 (Reference Technical Conference Issue 6). CA-NP-045, Footnote 3 states (statement attributed to Liberty) "*Investigate the installation of downstream feeder reclosers for the purpose of improving distribution SAIFI and SAIDI indices, in addition for reducing cold load pick up difficulties, with priorities given to feeders based on installation costs versus anticipated avoided customer interruptions.*" Please provide the analysis recommended by Liberty, and more specifically, provide the analysis of SAIDI and SAIFI performance improvements and installation costs versus anticipated avoided customer interruptions.

CA-NP-178 (Reference Technical Conference Issue 7) PUB-NP-016 states "*Ongoing rate design and load research studies will inform the business case for AMI technology when it is developed.*"

a) What details can NP provide with respect to the proposed study of meters in terms of timing and scope?
b) It has been stated that there is no business case for AMI before 2030 (Dunsky). Why is NP proposing to undertake this study now?
c) Is AMI inevitable given the high penetration levels of electric heat, upcoming EV charger demand and other changes going on in the industry, if for no other reason than to ensure the fairness of the rate structure?
d) The response to NLH-NP-021 states "*As the Company does not currently utilize Advanced Metering Infrastructure, loading on individual sections of distribution line can only be approximated by the modeling software, and must be verified in the field*". How much would AMI reduce such costs?

CA-NP-179 (Reference Technical Conference Issue 9)

a) Can NP confirm that the purpose of its 2023 CBA proposal for more EV charging stations is to encourage more consumption of excess energy from Muskrat Falls?
b) Can NP confirm that excess energy from the Muskrat Falls project will be reliably available throughout 2023 on the island integrated system?
c) For a vehicle model that is available with a gasoline engine as well as an all-electric version (e.g., a Ford F-150) what is the current cost of a full charge using a fast charger at one of NP's charging stations and what is the resulting range? How many litres of gasoline would the gasoline counterpart need in order to cover the same range, and at what cost at current gasoline prices?
d) Has NP considered setting the price of charges either to reflect the actual cost of its charging stations or to reflect the cost of equivalent coverage by a gasoline vehicle as per (c) above? If the price is not set in relation to cost, how does NP set the price of electricity at its charging stations?

e) To the extent that NP's charging stations do not cover cost, what will be the cost to NP ratepayers of covering NP's losses over time including any compensation for the time value of money?

f) Has NP considered the risk that hydrogen fuel-cell vehicles could overtake electric vehicles and thereby strand charging station assets? Did Dunsky allude to hydrogen fuel cell vehicles in its report or in correspondence with Newfoundland Power over the course of its study? Does Newfoundland Power plan to enter the market to service fuel-cell vehicles as well?

g) In its estimation of the rate mitigation effect of increased electricity consumption due to EVs has NP taken into account the offsetting effect of reduced electricity consumption due to its accelerated LED Street Lighting Replacement plan?

DATED at St. John's, Newfoundland and Labrador, this 20th day of September, 2022.

Per:

Dennis Browne, KC
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