

# Office of the Consumer Advocate

PO Box 23135  
Terrace on the Square  
St. John's, NL Canada  
A1B 4J9

Tel: 709-724-3800  
Fax: 709-754-3800

September 23, 2020

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 and Labrador Hydro - 2021 Capital Budget Application**

Further to the above-captioned, enclosed are the Consumer Advocate's Requests for Information numbered CA-NLH-001 to CA-NLH-085.

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

Yours truly,



**Dennis Browne, Q.C.**

Encl.  
/bb

cc **Newfoundland & Labrador Hydro**  
Shirley Walsh ([ShirleyWalsh@nlh.nl.ca](mailto:ShirleyWalsh@nlh.nl.ca))  
NLH Regulatory ([NLHRegulatory@nlh.nl.ca](mailto:NLHRegulatory@nlh.nl.ca))

**Newfoundland Power Inc.**  
NP Regulatory ([regulatory@newfoundlandpower.com](mailto:regulatory@newfoundlandpower.com))  
Gerard Hayes ([ghayes@newfoundlandpower.com](mailto:ghayes@newfoundlandpower.com))  
Kelly Hopkins ([khopkins@newfoundlandpower.com](mailto:khopkins@newfoundlandpower.com))

**Board of Commissioners of Public Utilities**  
PUB Official Email ([ito@pub.nl.ca](mailto:ito@pub.nl.ca))  
Jacqui Glynn ([jglynn@pub.nl.ca](mailto:jglynn@pub.nl.ca))  
Colleen Jones ([cjones@pub.nl.ca](mailto:cjones@pub.nl.ca))

**Industrial Customers Group**  
Paul Coxworthy ([pcoxworthy@stewartmckelvey.com](mailto:pcoxworthy@stewartmckelvey.com))  
Dean Porter ([dporter@poolealthouse.ca](mailto:dporter@poolealthouse.ca))  
Denis Fleming ([dfleming@coxandpalmer.com](mailto:dfleming@coxandpalmer.com))

**Praxair Canada Inc.**  
Sheryl Nisenbaum ([sheryl\\_nisenbaum@praixair.com](mailto:sheryl_nisenbaum@praixair.com))

**Teck Resources Limited**  
Shawn Kinsella ([shawn.kinsell@teck.com](mailto:shawn.kinsell@teck.com))

**Labrador Interconnected Group**  
Senwung Luk ([sluk@oktlaw.com](mailto:sluk@oktlaw.com))  
Julia Brown ([jbrown@oktlaw.com](mailto:jbrown@oktlaw.com))

**IN THE MATTER OF** the *Public Utilities Act*,  
(the “Act”); and

**IN THE MATTER OF** an Application by  
Newfoundland and Labrador Hydro (“Hydro”)  
for an Order approving: (i) its 2021 Capital  
Budget pursuant to s. 41(1) of the Act; (ii) its 2021  
capital purchases and construction projects in  
excess of \$50,000.00 pursuant to s. 41(3)(a) of  
the Act; and (iii) for an Order pursuant to s. 78  
of the Act fixing and determining its average  
rate base for 2017, 2018 and 2019

---

**CONSUMER ADVOCATE  
REQUEST FOR INFORMATION  
CA-NLH-001 to CA-NLH-085**

**Issued: September 23, 2020**

---

- 1 CA-NLH-001 (Reference Application Rev. 1, Volume 1, page 1) It is stated (lines 5 to 8)  
 2 “*To balance the provision of reliable service with cost management, Hydro*  
 3 *focuses on sound utility asset management practices, condition based*  
 4 *investments (versus age based) where appropriate, and the use of*  
 5 *operational and system requirements to inform the necessary level of*  
 6 *capital investment required.*”  
 7 (a) Does Hydro have a formal asset management plan such as ISO55000?  
 8 (b) Please provide examples of other jurisdictions that follow similar asset  
 9 management practices as that currently used at Hydro.  
 10 (c) What would it cost Hydro to implement a formal asset management plan  
 11 such as ISO55000?  
 12 (d) What benefits would Hydro expect as a result of implementation of a  
 13 formal asset management plan such as ISO55000?  
 14
- 15 CA-NLH-002 (Reference Application Rev. 1, Volume 1, page 9) It is stated (lines 17 to  
 16 18) “*There are no proposed capital projects for either the Hardwoods or*  
 17 *Stephenville Gas Turbines in the 2021 CBA or in the five-year capital plan.*”  
 18 Given the ongoing Reliability and Resource Adequacy Study, why are there  
 19 no capital projects planned for either Hardwoods or Stephenville Gas  
 20 Turbines? Is Hydro confident that these gas turbines can provide reliable  
 21 capacity, particularly Stephenville Gas Turbine which is expected to remain  
 22 in service until 2023?  
 23
- 24 CA-NLH-003 (Reference Application Rev. 1, Volume 1, page 13) It is stated (lines 23 to  
 25 25) “*Hydro’s proposal to modernize its street lights is consistent with*  
 26 *Newfoundland Power’s plan to transition to LED street lights and will*  
 27 *result in reduced street and area light rates to Hydro’s customers.*”  
 28 (a) Please provide Hydro’s proposed LED street lighting replacement  
 29 program and highlight any differences from Newfoundland Power’s  
 30 plan along with an explanation of why there are differences.  
 31 (b) Could the LED street lighting program be deferred? Please explain the  
 32 impact on customers if this project were delayed by a year.  
 33 (c) Are there other projects that might be comparable to this program such  
 34 as replacement of household/commercial lighting with LEDs and  
 35 replacement of residential/commercial electric resistance heating with  
 36 high efficiency heat pumps?  
 37 (d) Six years from now what percentage of street lights would be replaced  
 38 with LED lights under the current program?  
 39 (e) Please identify the expected savings in operations and maintenance  
 40 costs in each year of the LED Street Lighting Replacement Plan.  
 41 (f) Owing to the effectiveness of LED lighting, is it possible to reduce the  
 42 number of required streetlights? Has Hydro attempted to assess the  
 43 optimal number of streetlights after all have been replaced with LEDs?

- 1 (g) Who is the manufacturer of LED street lights that are currently installed  
2 in the Province and where were they manufactured?
- 3 (h) Are these lights designed specifically for the NL climate and  
4 environmental conditions?
- 5 (i) What type of warranty is on the currently installed street lights and what  
6 type of warranty does Hydro expect on new LED street lights that it  
7 proposes to purchase? Please confirm that Hydro expects the warranty  
8 to be adequate for environmental conditions in the Province.  
9

10 CA-NLH-004 (Reference Application Rev. 1, Volume 1, page 15) It is stated (lines 12 to  
11 13) "*Hydro is also proposing to install 18 level 2 chargers for electric  
12 vehicles at nine Hydro-owned sites across the province as part of its 2021  
13 expenditures (\$0.3 million).*"

14 (a) Will these charging stations be available for use by the public? Has  
15 consideration been given to this possibility?

16 (b) What is Hydro's current plan for adding electric vehicles to its fleet and  
17 what are the expected costs over the next five years?  
18

19 CA-NLH-005 (Reference Application Rev. 1, Volume 1, page 16) It is stated (lines 3 to  
20 5) "*Hydro has made an application for government funding, which if  
21 approved, will offset approximately 30% of the capital cost of this project  
22 and will be required to be expended in 2021.*" When does Hydro expect a  
23 decision from the government concerning its application for funding?  
24

25 CA-NLH-006 (Reference Application Rev. 1, Volume 1, page 16) It is stated (lines 17 to  
26 18) "*Hydro's cost management efforts have also resulted in the reduced  
27 frequency of computer replacements by extending the life cycle duration.*"  
28 Please explain Hydro's cost management effort in this area and indicate if  
29 it is consistent with practice elsewhere.  
30

31 CA-NLH-007 (Reference Application Rev. 1, Volume 1, page 17) It is stated (lines 23 to  
32 25) "*This pro forma estimate is comprised of return on rate base and  
33 depreciation. It does not reflect potential reductions in operating and  
34 maintenance charges (e.g., changes related to technology such as the  
35 conversion to LED streetlights where savings are expected to be realized).*"  
36 What are the expected reductions in operating and maintenance charges  
37 over the next five years resulting from the 2021 Capital Budget? Please  
38 provide a forecast of operating and maintenance charges over the next five  
39 years with and without the 2021 Capital Budget.  
40

41 CA-NLH-008 (Reference Application Rev. 1, Volume 1, Appendix A, page A-6) Does  
42 "*Payback (10)*" mean that if the anticipated life of the project is 10 years,  
43 the payback period is expected to be within one year?

- 1 CA-NLH-009 (Reference Application Rev. 1, Volume 1, Appendix A, Table A-2) Are the  
2 prioritization criteria and weight factors shown in table A-2 used in other  
3 jurisdictions?  
4
- 5 CA-NLH-010 (Reference Application Rev. 1, Volume 1, 2021 to 2025 Capital Plan, pages  
6 2 and 3) Would SNC Lavalin and Hatch be allowed to bid on the Bay  
7 d’Espoir penstock refurbishment work if approved by the Board?  
8
- 9 CA-NLH-011 (Reference Application Rev. 1, Volume 1, Holyrood Thermal Generating  
10 Station Overview) Is Hydro’s plan for Holyrood TGS consistent with  
11 recommendations made by the Board’s consultant Liberty?  
12
- 13 CA-NLH-012 (Reference Application Rev. 1, Volume 1, Holyrood Thermal Generating  
14 Station Overview, page 11) If it is necessary to maintain generation  
15 production capability at Holyrood TGS beyond March 31, 2022, for  
16 example until March 31, 2023, how would this impact the proposed capital  
17 budget expenditures at the plant?  
18
- 19 CA-NLH-013 (Reference Application Rev. 1, Volume 1, Section A: 2021 Capital Budget,  
20 page A-2) Please expand the table on page A-2 to include a comparison to  
21 corresponding figures over the past 5 years for capital amounts applied for,  
22 capital amounts approved and actual capital amounts spent.  
23
- 24 CA-NLH-014 (Reference Application Rev. 1, Volume 1, Section A: 2021 Capital Budget,  
25 page A-2) Please re-organize the table on page A-2 according to the  
26 investment classifications in Midgard’s proposed modifications to the  
27 Capital Budget Application Guidelines including mandatory, access,  
28 system growth, renewal, service enhancement and general plant.  
29
- 30 CA-NLH-015 (Reference Application Rev. 1, Volume 1, Section A: 2021 Capital Budget)  
31 During the cod moratorium of the early 1990s:  
32 (a) Were Hydro’s Capital Budget submissions impacted, and if so, did  
33 reliability suffer as a result?  
34 (b) Please provide SAIDI and SAIFI data for each year and on a 5-year  
35 rolling average basis for 1990 through 2000.  
36 (c) Please provide Hydro’s capital expenditures for each year from 1990  
37 through 2000.  
38
- 39 CA-NLH-016 (Reference Application) With respect to the 2021 Capital Budget  
40 submission, please provide all documentation between Hydro senior  
41 management and line managers relating to prioritization and cost cutting,  
42 or any other documentation from senior management relating to cost  
43 reduction in light of rate pressures brought on by the Muskrat Falls Project.



- 1 CA-NLH-017 (Reference Application) Please provide a summary of all benchmarking  
2 exercises performed by Hydro relating to costs and performance that have  
3 been incorporated in the 2021 Capital Budget Application. Specifically,  
4 show how Hydro spending and performance compares to a peer group and  
5 provide relevant information on each peer included in the group.  
6
- 7 CA-NLH-018 (Reference Application) Please explain and show how customer  
8 preferences have been incorporated in the 2021 Capital Budget Application.  
9
- 10 CA-NLH-019 (Reference Application) Please provide a summary of Hydro planning  
11 criteria used in formulating the 2021 Capital Budget Application.  
12
- 13 CA-NLH-020 (Reference Application) Please identify all reliability risk metrics used by  
14 Hydro in the 2021 Capital Budget Application. What risk mitigation value  
15 is provided by Hydro's asset management program; i.e., the difference  
16 between baseline risk and residual risk.  
17
- 18 CA-NLH-021 (Reference Application) Please provide a summary of where Hydro has  
19 used laboratory testing to verify the need for asset replacement.  
20
- 21 CA-NLH-022 (Reference Application) Does Hydro own steel towers and if so, does it use  
22 coating to extend the life? Please explain why or why not and provide a cost  
23 benefit analysis comparing coating to replacement of the steel tower.  
24
- 25 CA-NLH-023 (Reference Application) Has Hydro identified zones on the power system  
26 where deterioration of equipment is greater owing to such things as  
27 corrosion, insect infestation, etc?  
28
- 29 CA-NLH-024 (Reference Application) What does Hydro use as its security code of  
30 practice? Is it consistent with NERC requirements; i.e., NERC CIP v5  
31 standard?  
32
- 33 CA-NLH-025 (Reference Application) How has Hydro ensured that its 2021 Capital  
34 Budget provides an appropriate balance between reliability and rate  
35 impacts? Has Hydro conducted a customer engagement process to make  
36 such determinations? Please provide customer surveys and documentation  
37 relating to direct customer contacts that Hydro has relied upon to determine  
38 the appropriate balance between reliability and rate impacts.  
39
- 40 CA-NLH-026 (Reference Application) What is the overall improvement in productivity  
41 stemming from the projects included in the 2021 Capital Budget  
42 Application? Please identify the expected cost savings and provide a rough  
43 estimate of the impact on rates.

- 1 CA-NLH-027 (Reference Application) Please provide Hydro's forecast number of  
2 customers and energy demand by customer class for 2020 and each of the  
3 next 5 years in total and by service area. Please identify expected impacts  
4 stemming from Covid-19.  
5
- 6 CA-NLH-028 (Reference Application) With respect to capital expenditures, if the revenue  
7 requirement is lower based on actual cost than based on forecast cost is the  
8 cost difference returned to customers?  
9
- 10 CA-NLH-029 (Reference Application) Please provide a detailed calculation of the cost to  
11 own and operate Hydro's hydro generation facilities; i.e., the amount of  
12 money recovered annually from Hydro customers owing to Hydro's hydro  
13 generation facilities.  
14
- 15 CA-NLH-030 (Reference Application) How much would it cost to retire Hydro's smaller  
16 hydro generation facilities? Please provide for the small hydro plants: age,  
17 capacity, annual energy production, storage capacity and levelized cost.  
18
- 19 CA-NLH-031 Is it premature for Hydro to be spending capital on its generating capacity  
20 before its 2020 Reliability and Resource Adequacy Study has been  
21 completed when there will be a better idea of the value of capacity?  
22
- 23 CA-NLH-032 (Reference Application) Please provide a table for all of Hydro's Island  
24 hydro generation facilities and Exploits showing age, capacity, annual  
25 energy production, storage capacity, capital spending over the past 10 years  
26 and levelized cost. Is Hydro responsible for capital investment and  
27 operating and maintenance costs at Exploits?  
28
- 29 CA-NLH-033 (Reference Application) What is Hydro's current estimate of the marginal  
30 value of capacity and energy over the next five years?  
31
- 32 CA-NLH-034 (Reference Application Rev. 1, Volume 1, Section C: Projects Over  
33 \$500,000, Hydraulic Generation Refurbishment and Modernization, pages  
34 C-7 to C-9) It is stated that this project is "*required for safety, reliability  
35 and environmental purposes*". Please quantify risk, reliability and rate  
36 impacts on customers if this project were deferred by two years. With  
37 respect to risk, please identify the probability of failure and the  
38 consequences of failure. In effect, what is the trade-off between cost to  
39 ratepayers, system reliability and risk?  
40
- 41 CA-NLH-035 (Reference Application Rev. 1, Volume 1, Section C: Projects Over  
42 \$500,000, Refurbish Ebbegunbaeg Control Structure, pages C-10 to C-13)  
43 It is stated that this project is "*required to maintain the reliable operation  
44 of the Ebbegunbaeg Control Structure and includes addressing existing*

1 *safety limitations of the stoplog hoist system.*” Please quantify risk,  
 2 reliability and rate impacts on customers if this project were deferred by  
 3 two years. With respect to risk, please identify the probability of failure and  
 4 the consequences of failure. In effect, what is the trade-off between cost to  
 5 ratepayers, system reliability and risk?  
 6

7 CA-NLH-036 (Reference Application Rev. 1, Volume 1, Section C: Projects Over  
 8 \$500,000, Terminal Station Refurbishment and Modernization, pages C-42  
 9 to C-44) It is stated “*The replacement of such assets is required to ensure*  
 10 *Hydro continues to deliver safe, reliable, least-cost electricity in an*  
 11 *environmentally responsible manner.*” Please quantify risk, reliability and  
 12 rate impacts on customers if this project were deferred by two years. With  
 13 respect to risk, please identify the probability of failure and the  
 14 consequences of failure. In effect, what is the trade-off between cost to  
 15 ratepayers, system reliability and risk?  
 16

17 CA-NLH-037 (Reference Application Rev. 1, Volume 1, Section C: Projects Over  
 18 \$500,000, Upgrade Circuit Breakers, pages C-45 to C-48) It is stated “*This*  
 19 *project is required for Hydro to provide safe, reliable electrical service,*  
 20 *and to comply with federal PCB regulations.*” Please quantify risk,  
 21 reliability and rate impacts on customers if this project were deferred by  
 22 two years. With respect to risk, please identify the probability of failure and  
 23 the consequences of failure. In effect, what is the trade-off between cost to  
 24 ratepayers, system reliability and risk?  
 25

26 CA-NLH-038 (Reference Application Rev. 1, Volume 1, Section C: Projects Over  
 27 \$500,000, Distribution In-Service Failures, Miscellaneous Upgrades, and  
 28 Street Light Modernization, pages C-49 to C-52) Please provide details of  
 29 the estimate that all streetlights will be converted to LED within six years.  
 30 What is the expected cost and savings in each of the six years relative to the  
 31 status quo?  
 32

33 CA-NLH-039 (Reference Application Rev. 1, Volume 1, Section C: Projects Over  
 34 \$500,000, Wood Pole Line Management Program, pages C-55 to C-57) It  
 35 is stated “*There are no alternatives to undertaking the activities outlined in*  
 36 *this program*”. Please quantify risk, reliability and rate impacts on  
 37 customers if this project were deferred by two years. With respect to risk,  
 38 please identify the probability of failure and the consequences of failure. In  
 39 effect, what is the trade-off between cost to ratepayers, system reliability  
 40 and risk?  
 41

42 CA-NLH-040 (Reference Application Rev. 1, Volume 1, Section C: Projects Over  
 43 \$500,000, Wabush Terminal Station Upgrades, pages C-60 to C-62) Has



- 1 Covid-19 had any short- or long-term impacts on the load supplied by this  
 2 station?  
 3
- 4 CA-NLH-041 (Reference Application Rev. 1, Volume 1, Section C: Projects Over  
 5 \$500,000, Provide Service Extensions, pages C-75 to C-77) It is understood  
 6 that the number of service extensions has decreased in recent years. Is  
 7 Covid-19 expected to further reduce the number of service extensions?  
 8
- 9 CA-NLH-042 (Reference Application Rev. 1, Volume 1, Section C: Projects Over  
 10 \$500,000, Replace Hydro Personal Computers, pages C-100 to C-103) It is  
 11 stated with respect to the Deferral Option "*Analysis of this option has shown*  
 12 *that the risk is not acceptable.*" Please quantify the risk, reliability and rate  
 13 impacts on customers if this project were deferred by a year. With respect  
 14 to risk, please identify the probability of failure and the consequences of  
 15 failure. In effect, what is the trade-off between cost to ratepayers, system  
 16 reliability and risk?  
 17
- 18 CA-NLH-043 (Reference Application Rev. 1, Volume 1, Section D: Projects Over  
 19 \$200,000 but less than \$500,000, Overhaul Unit 3 Boiler Feed 1 Pump East  
 20 - Holyrood, pages D-2 to D-8)  
 21 (a) Please confirm that the overhaul is needed for Holyrood Unit 3 to  
 22 operate in synchronous condenser mode.  
 23 (b) Will the overhaul enable Holyrood Unit 3 to operate for power  
 24 production purposes beyond the winter of 2021/22 if the Reliability and  
 25 Resource Adequacy Study deems necessary?  
 26
- 27 CA-NLH-044 (Reference Application Rev. 1, Volume 1, Section D: Projects Over  
 28 \$200,000 but less than \$500,000, Overhaul Unit 3 Boiler Feed 1 Pump East  
 29 - Holyrood, pages D-2 to D-8) It is stated "*Following the overhaul, the*  
 30 *pump will be returned to service and the volute impeller cartridge will be*  
 31 *refurbished and placed into inventory as a critical spare.*" Please provide  
 32 examples of situations where the impeller cartridge might be used as a  
 33 "*critical spare*".  
 34
- 35 CA-NLH-045 (Reference Application Rev. 1, Volume 1, Section D: Projects Over  
 36 \$200,000 but less than \$500,000, Overhaul Unit 3 Boiler Feed 1 Pump East  
 37 - Holyrood, pages D-2 to D-8) Please quantify the risk, reliability and rate  
 38 impacts on customers if this project were deferred by a year. With respect  
 39 to risk, please identify the probability of failure and the consequences of  
 40 failure. In effect, what is the trade-off between cost to ratepayers, system  
 41 reliability and risk?

- 1 CA-NLH-046 (Reference Application Rev. 1, Volume 1, Section D: Projects Over  
2 \$200,000 but less than \$500,000, Construct Lube Oil Cooler Hood and  
3 Containment System, pages D-9 to D-13)  
4 (a) Why was this work not completed when the Holyrood Gas Turbine was  
5 originally placed in service?  
6 (b) Does the existing system violate current legislative or regulatory  
7 requirements?  
8 (c) Please quantify the risk, reliability and rate impacts on customers if this  
9 project were deferred by a year. With respect to risk, please identify the  
10 probability of failure and the consequences of failure. In effect, what is  
11 the trade-off between cost to ratepayers, system reliability and risk?  
12
- 13 CA-NLH-047 (Reference Application Rev. 1, Volume 1, Section D: Projects Over  
14 \$200,000 but less than \$500,000, Purchase Capital Spares – Gas Turbines,  
15 pages D-14 to D-19) Please quantify the risk, reliability and rate impacts on  
16 customers if this project were deferred by a year. With respect to risk, please  
17 identify the probability of failure and the consequences of failure. In effect,  
18 what is the trade-off between cost to ratepayers, system reliability and risk?  
19
- 20 CA-NLH-048 (Reference Application Rev. 1, Volume 1, Section D: Projects Over  
21 \$200,000 but less than \$500,000, Replace Voltage Regulator – Happy  
22 Valley Gas Turbine, pages D-21 to D-26) Please quantify the probability of  
23 failure of the 138 kV transmission line connected at Muskrat Falls Terminal  
24 Station #2 followed by the subsequent failure of the Happy Valley Gas  
25 Turbine regulator.  
26
- 27 CA-NLH-049 (Reference Application Rev. 1, Volume 1, Section D: Projects Over  
28 \$200,000 but less than \$500,000, Replace Snow Groomer, pages D-42 to  
29 D-44) For the “Defer” Alternative, what is the cost to bring the snow  
30 groomer to an acceptable level of performance? Please quantify the  
31 probability of failure and the cost to maintain the snow groomer in 2021 if  
32 not replaced. In effect, what is the trade-off between cost to ratepayers,  
33 system reliability and risk?  
34
- 35 CA-NLH-050 (Reference Application Rev. 1, Volume 1, Section D: Projects Over  
36 \$200,000 but less than \$500,000, Purchase Meters and Metering  
37 Equipment, pages D-45 to D-48) On what basis did Hydro determine that  
38 120 demand meters and 908 residential meters must be purchased in 2021?  
39
- 40 CA-NLH-051 (Reference Application Rev. 1, Volume 1, Section D: Projects Over  
41 \$200,000 but less than \$500,000, Perform Hydro Software Upgrades &  
42 Minor Enhancements, pages D-49 to D-53)  
43 (a) Please quantify the expected efficiency improvements resulting from  
44 this project.

- 1 (b) Please quantify the risk, reliability and rate impacts on customers if this  
2 project were deferred by a year. With respect to risk, please identify the  
3 probability of failure and the consequences of failure. In effect, what is  
4 the trade-off between cost to ratepayers, system reliability and risk?  
5
- 6 CA-NLH-052 (Reference Application Rev. 1, Volume 1, Section D: Projects Over  
7 \$200,000 but less than \$500,000, Replace Battery Banks and Chargers,  
8 pages D-54 to D-58) Please quantify the risk, reliability and rate impacts on  
9 customers if this project were deferred by a year. With respect to risk, please  
10 identify the probability of failure and the consequences of failure. In effect,  
11 what is the trade-off between cost to ratepayers, system reliability and risk?  
12
- 13 CA-NLH-053 (Reference Application Rev. 1, Volume 1, Section D: Projects Over  
14 \$200,000 but less than \$500,000, Upgrade Core IT/OT Infrastructure, pages  
15 D-65 to D-68) Please quantify the risk, reliability and rate impacts on  
16 customers if this project were deferred by a year. With respect to risk, please  
17 identify the probability of failure and the consequences of failure. In effect,  
18 what is the trade-off between cost to ratepayers, system reliability and risk?  
19
- 20 CA-NLH-054 (Reference Application Rev. 1, Volume 1, Section D: Projects Over  
21 \$200,000 but less than \$500,000, Replace Peripheral Equipment, pages D-  
22 69 to D-72) Please quantify the risk, reliability, efficiency improvements  
23 and rate impacts on customers if this project were deferred by a year. With  
24 respect to risk, please identify the probability of failure and the  
25 consequences of failure. In effect, what is the trade-off between cost to  
26 ratepayers, system reliability and risk?  
27
- 28 CA-NLH-055 (Reference Application Rev. 1, Volume 1, Section D: Projects Over  
29 \$200,000 but less than \$500,000, Replace Radomes, pages D-73 to D-80)  
30 Please quantify the risk, reliability, efficiency improvements and rate  
31 impacts on customers if this project were deferred by a year. With respect  
32 to risk, please identify the probability of failure and the consequences of  
33 failure. In effect, what is the trade-off between cost to ratepayers, system  
34 reliability and risk?  
35
- 36 CA-NLH-056 (Reference Application Rev. 1, Volume 1, Section E: Projects Over  
37 \$50,000 but less than \$200,000, Purchase Backhoe, pages E-8 to E-10) The  
38 economic analysis is based on rental costs for the period October 2018 to  
39 September 2019. How does this compare to rental costs in previous  
40 periods? Please provide rental costs by year for the past five years.  
41
- 42 CA-NLH-057 (Reference Application Rev. 1, Volume 1, Section E: Projects Over  
43 \$50,000 but less than \$200,000, Purchase SF<sub>6</sub> Gas Recovery Systems, pages  
44 E-11 to E-14) The Deferral alternative states that it “*is not recommended by*

- 1 *Hydro*". Please identify the expected costs of deferral and quantify the  
 2 environmental risk and the impact on reliability if the project is deferred.  
 3
- 4 CA-NLH-058 (Reference Application Rev. 1, Volume 2, Overhaul Unit 1 Turbine and  
 5 Valves – Holyrood, page i) It is stated "*Hydro expects to complete the*  
 6 *project in 2021.*" It is understood that Holyrood Unit 1 is not expected to  
 7 be used for production purposes beyond March 31, 2022. The above  
 8 statement implies that the overhaul is "*expected*" but may not be completed  
 9 in 2021.
- 10 (a) If it may not be completed in 2021 and will not be needed beyond March  
 11 31, 2022, why is Hydro proposing to do this work in its 2021 Capital  
 12 Budget Application? Would it be more appropriate to inspect the turbine  
 13 during annual maintenance in 2021 and decide at that time on the extent  
 14 of repairs needed to get the plant through the winter of 2021/22?  
 15 (b) Please quantify the risk, reliability, efficiency improvements and rate  
 16 impacts on customers if this project were eliminated (or deferred by a  
 17 year if it is ultimately determined that there is a continued need for the  
 18 plant beyond March 31, 2022). With respect to risk, please identify the  
 19 probability of failure and the consequences of failure. In effect, what is  
 20 the trade-off between cost to ratepayers, system reliability and risk?  
 21
- 22 CA-NLH-059 (Reference Application Rev. 1, Volume 2, Hydraulic Generation  
 23 Refurbishment and Modernization (2021 – 2022)) Please explain how this  
 24 project fits with Hydro's asset management program.  
 25
- 26 CA-NLH-060 (Reference Application Rev. 1, Volume 2, Refurbish Ebbegunbaeg Control  
 27 Structure, pages 4 and 5)  
 28 (a) Does RDE do consulting work only or does it also do construction?  
 29 (b) Will RDE be allowed to bid any subsequent aspects of the project if  
 30 approved by the Board?  
 31 (c) Did RDE conclude that the existing system is unsafe for use now, or that  
 32 it would soon be unsafe for use? If unsafe for use now, for how long has  
 33 Hydro been using this unsafe system given that RDE completed its  
 34 assessment in 2017 and Hydro deferred the project in 2019?  
 35 (d) Please provide copies of all correspondence between Hydro and RDE  
 36 during the course of the RDE study.  
 37
- 38 CA-NLH-061 (Reference Application Rev. 1, Volume 2, Refurbish Ebbegunbaeg Control  
 39 Structure, pages 6 and 7) In the cost benefit analysis:  
 40 (a) What study period was used in the analysis?  
 41 (b) Please confirm that the cost estimates for the alternatives are based on  
 42 RDE estimates provided in the attachment.  
 43 (c) What life expectancy did Hydro give each alternative?

- 1 (d) What operating and maintenance cost estimates did Hydro use for each  
 2 alternative?  
 3
- 4 CA-NLH-062 (Reference Application Rev. 1, Volume 2, Upgrade Wastewater  
 5 Equalization System - Holyrood)  
 6 (a) It is stated (page 4) "*The proposed completion of upgrades to the waste  
 7 water equalization system was originally incorporated into Hydro's  
 8 Capital Plan in 2014 but was deferred at that time due to the uncertainty  
 9 surrounding the future operating state of the Holyrood TGS.*" Please  
 10 explain why the project could be deferred at that time when it cannot be  
 11 deferred now. Was a "*long-term, cost effective solution for wastewater  
 12 management and processing*" not needed then as it is now?  
 13 (b) It is understood that the bio-aerosol test was completed in the fall of  
 14 2016 (REL Report, page 4) with results exceeding safe levels. Why has  
 15 Hydro waited until 2021 to address this issue?  
 16 (c) Is it much safer for employees and members of the public to be inside  
 17 rather than outside the waste water storage building (REL Report page  
 18 9)?  
 19 (d) Please identify the probability that this project will be needed for the  
 20 full 25-year service life assumed in the analysis (page 6).  
 21 (e) It is understood that the Holyrood site Certificate of Approval expires  
 22 on August 31, 2021 (page 21). What is the status of plans to extend the  
 23 Certificate of Approval?  
 24
- 25 CA-NLH-063 (Reference Application Rev. 1, Volume 2, Inspect Chemical Tanks -  
 26 Holyrood)  
 27 (a) It is stated (page 3) "*Liquid Storage Tanks containing hazardous  
 28 materials are required by API and ASME Codes to be inspected every  
 29 ten years. The last inspection took place in 2010 ...*". Because an  
 30 inspection will not take place in 2020, is Hydro in violation of the API  
 31 and ASME Codes?  
 32 (b) For the recommended Alternative 3, what is the probability that the  
 33 inspection will result in a scenario where the chemical storage tanks  
 34 would not be returned to service in time for the winter of 2021/22?  
 35
- 36 CA-NLH-064 (Reference Application Rev. 1, Volume 2, Unit 3 Overhaul - Holyrood) Is  
 37 it feasible to defer both the Holyrood Unit 3 overhaul and the stator rewind  
 38 project to 2022?  
 39
- 40 CA-NLH-065 (Reference Application Rev. 1, Volume 2, Upgrade Distributed Control  
 41 System Hardware – Holyrood, page 6)  
 42 (a) Please quantify the risk, reliability and rate impacts on customers if this  
 43 project were deferred by a year. With respect to risk, please identify the



- 1 probability of failure and the consequences of failure. In effect, what is  
 2 the trade-off between cost to ratepayers, system reliability and risk?  
 3 (b) What is the expected life of the new hardware?  
 4 (c) Will Schneider be allowed to bid on any subsequent parts of the project?  
 5 (d) Please provide copies of all documentation between Schneider and  
 6 Hydro over the course of the Schneider study.  
 7
- 8 CA-NLH-066 (Reference Application Rev. 1, Volume 2, Terminal Station Refurbishment  
 9 and Modernization)  
 10 (a) To date, how much has this approach to asset management saved  
 11 Hydro's customers? Please provide savings on an annual basis.  
 12 (b) What improvements has Hydro made to this asset management plan  
 13 over the years since initial startup in terms of effectiveness and  
 14 efficiency?  
 15
- 16 CA-NLH-067 (Reference Application Rev. 1, Volume 2, Upgrade Circuit Breakers -  
 17 Various) Are other Canadian utilities replacing their air-blast circuit  
 18 breakers, and if so, according to a similar schedule as that proposed by  
 19 Hydro?  
 20
- 21 CA-NLH-068 (Reference Application Rev. 1, Volume 2, Wood Pole Line Management  
 22 Program) How does Hydro's wood pole line management program compare  
 23 to that used by NP? In Hydro's opinion should a consistent approach to  
 24 wood pole line management be used across the Province?  
 25
- 26 CA-NLH-069 (Reference Application Rev. 1, Volume 2, Diesel Genset Replacements) In  
 27 the analysis only two alternatives are considered: 1) defer, and 2) install  
 28 new genset. Would this be an ideal time to consider other alternatives for  
 29 supply to isolated communities such as connection to the grid or  
 30 development of renewable energy sources such as hydro or wind?  
 31
- 32 CA-NLH-070 (Reference Application Rev. 1, Volume 2, Diesel Genset Replacements)  
 33 What is driving the "*increasing load profile*" in Nain? Has Hydro  
 34 considered energy efficiency and demand management alternatives as a  
 35 means for decreasing the very high cost of supply to Nain that is subsidized  
 36 by other customers in the Province?  
 37
- 38 CA-NLH-071 (Reference Application Rev. 1, Volume 2, Diesel Genset Replacements)  
 39 What is the probability that the project will become stranded before the  
 40 useful life of the diesel gensets is reached?  
 41
- 42 CA-NLH-072 (Reference Application Rev. 1, Volume 2, Wabush Terminal Station  
 43 Upgrades)  
 44 (a) What is driving load growth in the Labrador West region?

- 1 (b) Have IOC and Wabush mines indicated a willingness to pay for the  
 2 project in order to firm up their supply and avoid curtailment (page 2)?  
 3 Who is responsible for these costs under Hydro's connection policy?  
 4 Please explain.
- 5 (c) Have generation and/or energy efficiency/demand management  
 6 alternatives been considered to alleviate supply issues in Labrador  
 7 West?  
 8
- 9 CA-NLH-073 (Reference Application Rev. 1, Volume 2, Upgrades for Future Retirement  
 10 of Stephenville Gas Turbine)
- 11 (a) Is this project being coordinated with Newfoundland Power?  
 12 (b) How many times, and for what duration, has the Stephenville Gas  
 13 Turbine been operated to meet Stephenville and the surrounding area  
 14 load over the past five years?  
 15 (c) What is driving the forecast load increase in the Stephenville area?  
 16 (d) Did Hydro consider extending the life of the Stephenville Gas Turbine  
 17 in its assessment of alternatives? How would the costs of this alternative  
 18 compare to the costs of other alternatives considered in the analysis?  
 19 Might extending the life of the Stephenville Gas Turbine also help with  
 20 potential capacity issues identified in the Reliability and Resource  
 21 Adequacy Study?  
 22 (e) Please provide the economic analysis and all assumptions that support  
 23 the recommended alternative (page 4).  
 24
- 25 CA-NLH-074 (Reference Application Rev. 1, Volume 2, Overhaul Diesel Units)
- 26 (a) With the significant increase in the cost of parts for diesel units (page  
 27 4), is Hydro re-evaluating alternatives for supply to its isolated systems  
 28 including connection to the grid, the addition of renewable generation  
 29 and increased energy efficiency and demand management options?  
 30 (b) What is the probability that this project will become stranded before the  
 31 useful life of diesel units is reached?  
 32
- 33 CA-NLH-075 (Reference Application Rev. 1, Volume 2, Additions for Load Growth –  
 34 Wabush Substation Upgrades)
- 35 (a) What is driving the increasing demand on the Wabush Substation?  
 36 (b) Have generation and/or energy efficiency/demand management  
 37 alternatives been considered to alleviate demand on the Wabush  
 38 Substation?  
 39 (c) Please provide the economic analysis of alternatives including all  
 40 assumptions.  
 41
- 42 CA-NLH-076 (Reference Application Rev. 1, Volume 2, Additions for Load Growth –  
 43 Happy Valley Line 7) Why is the load growing in this area and why does  
 44 Hydro expect load growth to continue?

- 1 CA-NLH-077 (Reference Application Rev. 1, Volume 2, Replace Light Duty Mobile  
2 Equipment) Please quantify the risk, reliability and rate impacts on  
3 customers if this project were deferred by a year. With respect to risk, please  
4 identify the probability of failure and the consequences of failure. In effect,  
5 what is the trade-off between cost to ratepayers, system reliability and risk?  
6
- 7 CA-NLH-078 (Reference Application Rev. 1, Volume 2, Upgrade of Worst Performing  
8 Distribution Feeders)  
9 (a) What does Hydro consider to be acceptable SAIDI, SAIFI and CHI  
10 levels for a feeder on its system? Please provide a full explanation of the  
11 figures along with benchmarking relative to other Canadian utilities.  
12 (b) What is the expected gain in reliability following implementation if this  
13 project is approved by the Board?  
14 (c) What is the expected impact on reliability if the Board defers the project  
15 by a year?  
16
- 17 CA-NLH-079 (Reference Application Rev. 1, Volume 2, Replace Light and Heavy Duty  
18 Vehicles)  
19 (a) Please quantify the risk, reliability and rate impacts on customers if this  
20 project were deferred by a year. With respect to risk, please identify the  
21 probability of failure and the consequences of failure. In effect, what is  
22 the trade-off between cost to ratepayers, system reliability and risk?  
23 (b) What happens to the replaced vehicles and how are revenues accounted  
24 for?  
25 (c) How does Hydro's policy on replacement of vehicles and aerial devices  
26 compare to NP's policy?  
27
- 28 CA-NLH-080 (Reference Application Rev. 1, Volume 2, Replace Transfer Switches and  
29 Associated Hardware – Hydro Place)  
30 (a) Will Madera be allowed to bid any follow-on work associated with this  
31 project if approved by the Board?  
32 (b) Please quantify the risk, reliability and rate impacts on customers if this  
33 project were deferred by a year. With respect to risk, please identify the  
34 probability of failure and the consequences of failure. In effect, what is  
35 the trade-off between cost to ratepayers, system reliability and risk?  
36 (c) Please provide all documentation between Hydro and Madera over the  
37 course of the Madera study.  
38
- 39 CA-NLH-081 (Reference Application Rev. 1) When an allowance is made for unforeseen  
40 items, what happens if approved funds are not spent? Could unforeseen  
41 items be paid for with funds from approved projects that are deferred or  
42 delayed rather than have the Board approve funding for the unknown?

- 1 CA-NLH-082 (Reference Application Rev. 1) For what period of time has Hydro been  
 2 carrying out a formal project prioritization process? Going forward, does  
 3 Hydro expect to conduct a formal project prioritization annually?  
 4
- 5 CA-NLH-083 (Reference Application Rev. 1) With respect to the Capital Budget  
 6 Guidelines, in Hydro's opinion is the onus on the utility to fully support  
 7 with evidence expenditures in the Capital Budget or is the onus on the  
 8 intervenors to submit evidence indicating that a capital expenditure is not  
 9 needed? Please provide support for your response.  
 10
- 11 CA-NLH-084 (Reference Midgard Report, page 22) Midgard states "*Although it is the*  
 12 *utility's responsibility to manage its system and to prioritize and implement*  
 13 *expenditures based on the needs of its system, under the current approach,*  
 14 *some portion of this management onus is effectively transferred to the*  
 15 *NLPUB when specific projects are being disallowed.*" Does Hydro agree  
 16 with this statement? Please explain.  
 17
- 18 CA-NLH-085 (Reference Midgard Report, page 22) It is stated "*Midgard is of the opinion*  
 19 *that existing legislation enables the NLPUB either to continue with the*  
 20 *existing itemized explicit project approvals, or alternatively, to approve*  
 21 *capital budget envelopes that represent all or some portion of the total*  
 22 *proposed utility budgets.*"  
 23 (a) Does Hydro agree with this statement? Please explain.  
 24 (b) Does Hydro believe that the Board can approve a capital budget  
 25 envelope under the current Capital Budget Guidelines or does Hydro  
 26 believe that a change in the Capital Budget Guidelines would be  
 27 needed? Please explain.  
 28 (c) If the Board were to approve a capital budget envelope, what process  
 29 would Hydro propose be followed subsequent to the Board approval?  
 30 (d) Would Board approval of a capital budget envelope avoid the  
 31 appearance that the Board is "*managing*" the utilities?

**DATED** at St. John's, Newfoundland and Labrador, this 23<sup>rd</sup> day of September, 2020.

Per:

  
 Dennis Browne, Q.C.

**Counsel for the Consumer Advocate**

Terrace on the Square, Level 2, P.O. Box 23135  
 St. John's, Newfoundland & Labrador A1B 4J9

Telephone: (709) 724-3800

Telecopier: (709) 754-3800