



NEWFOUNDLAND AND LABRADOR

BOARD OF COMMISSIONERS OF PUBLIC UTILITIES

120 Torbay Road, P.O. Box 21040, St. John's, Newfoundland and Labrador, Canada, A1A 5B2

E-mail: shirleywalsh@nlh.nl.ca

2023-08-21

Ms. Shirley Walsh
Senior Legal Counsel, Regulatory
Newfoundland and Labrador Hydro
P.O. Box 12400
Hydro Place, Columbus Drive
St. John's, NL A1B 4K7

Dear Ms. Walsh:

**Re: Newfoundland and Labrador Hydro - 2024 Capital Budget Application
Requests for Information**

Enclosed are Requests for Information PUB-NLH-001 to PUB-NLH-061 regarding the above-noted application.

If you have any questions, please do not hesitate to contact the Board's Legal Counsel, Ms. Jacqui Glynn, by email, jglynn@pub.nl.ca or telephone (709) 726-6781.

Sincerely,

Sara Kean
Assistant Board Secretary

SK/cj

Enclosure

ecc **Newfoundland and Labrador Hydro**
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1 **IN THE MATTER OF the Electrical Power**
2 **Control Act, 1994**, SNL 1994, Chapter E-5.1
3 (the “**EPCA**”) and the **Public Utilities Act**, RSNL
4 1990, Chapter P-47 (the “**Act**”), as amended,
5 and regulations thereunder; and
6

7 **IN THE MATTER OF** an Application by
8 Newfoundland and Labrador Hydro for an
9 Order approving:

- 10 i) its capital budget for 2024, pursuant to
11 section 41(1) of the **Act**;
12 ii) its proposed capital purchases and construction
13 projects for 2024 in excess of \$750,000, pursuant
14 to section 41(3)(a) of the **Act**; and
15 iii) for an Order pursuant to section 78 of the **Act**,
16 fixing and determining its average rate base for
17 2022.

PUBLIC UTILITIES BOARD
REQUESTS FOR INFORMATION

PUB-NLH-001 to PUB-NLH-061

Issued: August 21, 2023

1 **Schedule 1 2024 Capital Budget Overview**
2

- 3 **PUB-NLH-001** Page 1, lines 7-12. Hydro stated that a key area of strategic focus is balancing
4 management of aging infrastructure with its mandate. Explain how Hydro
5 evaluates the age of the asset as a consideration in determining whether to
6 plan capital work on an asset. Include in the response the other factors Hydro
7 considers in determining whether to plan capital work on an asset and how it
8 weighs or evaluates the various factors.
9
- 10 **PUB-NLH-002** Page 2, lines 7-11. Does Hydro anticipate filing or intend to file any additional
11 supplementary capital budget applications for 2024 capital expenditures? If
12 yes, list the capital expenditures and explain why they are not included in the
13 2024 Capital Budget Application.
14
- 15 **PUB-NLH-003** Page 2, lines 7-11. Please provide a table that lists Hydro’s approved capital
16 budgets and supplemental capital applications approved, pending or planned
17 since 2017 to 2028 forecast, that is, the same table provided in response to
18 NP-NLH-001, requested by Newfoundland Power in the 2023 Capital Budget
19 Application, updated to 2028.
20
- 21 **PUB-NLH-004** Page 2, lines 7-11. In Order No. P.U. 2(2023) Reasons for Decision the Board
22 stated on page 18;
23
24 “While the Board accepts that most of the supplemental capital budget
25 applications Hydro has filed in the last five years were customer driven or
26 were based on unforeseen events, there were applications which did not fall
27 into these categories. The Board acknowledges that the uncertainties as to
28 the operation of the Labrador Island Link and the future operations of the
29 Holyrood Thermal Generating station create challenges for capital planning.
30 Nevertheless, transparent capital planning requires Hydro to address these
31 uncertainties and their potential impact on its capital spending. The Board
32 believes Hydro can make further improvements in its capital planning process
33 to increase transparency and perhaps reduce the number of supplemental
34 capital applications. While the Board will not order Hydro to undertake a
35 review its (sic) capital planning process, the Board expects that Hydro will
36 conduct its own review and ensure that transparency is enhanced in its next
37 annual capital budget application and that measures are taken to reduce the
38 number of supplemental capital budget applications.”
39
40 Please explain what action Hydro has taken since this Order was issued to
41 review its capital planning process and what measures Hydro has introduced
42 or plans to introduce to enhance transparency and to reduce the number of
43 supplemental capital budget applications.
44
- 45 **PUB-NLH-005** Page 5, lines 2-6. Please provide a table that lists each instance where in the
46 2024 Capital Budget Application Hydro does not comply with the Provisional

1		Guidelines, explain why not and detail the information Hydro has provided
2		instead to meet the spirit and intent of the Provisional Guidelines.
3		
4	PUB-NLH-006	Page 5, lines 2-6. Explain the process Hydro is using to achieve compliance
5		with the Provisional Guidelines. In the response state when Hydro anticipates
6		that it will be able to fully meet the requirements of the Provisional
7		Guidelines.
8		
9	PUB-NLH-007	Page 6, lines 3-12. Please provide a summary of Hydro's asset management
10		system, including how identified deficiencies are reported and scheduled for
11		correction.
12		
13	PUB-NLH-008	Page 6, lines 3-12. Explain the process underway to identify and implement
14		process improvements in Hydro's asset management system. In the
15		response: (a) identify any process improvements that have been
16		implemented to date or are planned for implementation; (b) include any
17		framework document that outlines the scope of the ongoing review; (c) state
18		whether an expert has been retained to assist with the review; and (d) state
19		the schedule for the review.
20		
21	PUB-NLH-009	Page 16, lines 19-21. Please explain the process Hydro follows to identify the
22		need for new programs to be implemented or existing programs cancelled.
23		
24	PUB-NLH-010	Pages 18-21. Please explain the process Hydro follows to assess whether a
25		planned capital expenditure can be deferred, cancelled or advanced. In the
26		response include the criteria that Hydro considers in this assessment and the
27		weighting or values placed on the criteria considered.
28		
29	PUB-NLH-011	Page 19, Table 6. Please reproduce Table 6 with a column added to explain
30		why each 2024 planned capital expenditure was deferred.
31		
32	PUB-NLH-012	Page 20, Table 7. Please reproduce Table 7 with a column added to explain
33		why each 2024 planned capital expenditure has been cancelled.
34		
35	PUB-NLH-013	Page 21, Table 8. Please reproduce table 8 with a column added to explain
36		the reason why each 2024 planned capital expenditure was advanced.
37		
38	PUB-NLH-014	Page 23, lines 12-14. Please explain how Hydro develops a contingency
39		amount for a project budget and determines the appropriate amount of
40		contingency to include from 10% to 15%. In the response include whether
41		Hydro has developed any guidelines on the calculation of an appropriate
42		contingency and whether Hydro's practices are consistent with Canadian
43		utility practice.
44		

- 1 **PUB-NLH-015** Page 23, lines 15-18. Please provide a copy of any memo, report, or document
2 that describes the statistical analysis completed and the results of that
3 analysis.
4
- 5 **PUB-NLH-016** Page 34, lines 10-12. Please provide a table that (a) lists each program and
6 project where Hydro anticipates a potential reduction in operating and
7 maintenance charges as a result of the implementation of the proposed
8 programs and projects; (b) details why a reduction is anticipated; and (c)
9 provides the estimated reduction.
10
- 11 **PUB-NLH-017** Appendix F, page F-5, lines 5-13. Appendix F provides details on the asset
12 management strategy for individual components of Hydro's terminal stations
13 but does not explain Hydro's overall approach to the maintenance of its
14 terminal stations. Please provide a description of Hydro's overall Asset
15 Management System strategy for terminal stations, including when it was
16 implemented, the date it was last reviewed, whether any reviews are
17 ongoing, the goals and objectives the system is designed to achieve, the
18 frequency of terminal station inspections, and how it compares to the asset
19 management strategies for terminal stations of other Canadian utilities.
20
- 21 **PUB-NLH-018** Appendix F, page F-29, lines 4-6. It is stated that foundations in terminal
22 stations are inspected every 120 days during regular terminal stations
23 inspections.
24 (a) Explain how deficiencies in foundations are identified, reported and
25 prioritized for corrective action.
26 (b) Explain when the foundation in Figure 15 was first identified as
27 deteriorating, when first it was identified as requiring repair, when
28 first scheduled for repair and the date now scheduled for repair.
29
- 30 **PUB-NLH-019** Appendix F, page F-33, lines 9-12. It is stated that Hydro will continue with
31 the replacement of 230kV electromechanical and obsolete solid-state
32 generator, transformer, line and bus relays as part of the Terminal Station
33 Renewal Program. However, on page 28, line 21-page 29, line 3 of the 2024
34 Capital Budget Overview it is stated that the Terminal Station Renewal
35 Program has been dissolved for the 2024 Capital Budget Application and
36 replaced with programs for specific terminal station assets. Please list each
37 program in the 2024 Capital Budget application which is intended to replace
38 a component or part of the previous Terminal Station Renewal Program.
39
- 40 **PUB-NLH-020** Appendix G. Please describe the process that Hydro follows in applying the
41 Capital Risk Assessment Matrix, including the degree to which objective
42 criteria and judgment both apply in the application of the matrix.
43
- 44 **PUB-NLH-021** Please provide in MS Excel a separate detailed breakdown by Minor Asset
45 Category similar to Schedules A and B of Order No. P.U. 2(2023) for
46 expenditures over \$750,000 and expenditures under \$750,000.

1 **Schedule 2 Five-Year Plan (2024-2028)**
2

3 **PUB-NLH-022** Page 3, lines 4-17. Hydro stated that it anticipates filing application(s) for
4 approval of additional generation in the second half of 2024. What process
5 does Hydro have in place to consider and determine how future generation
6 additions will influence the proposed 2024 capital budget for which it is now
7 requesting approval and the Five-Year 2024-2028 Capital Plan? In the
8 response include the schedule for addressing the implications of additional
9 generation applications for the 2024 capital budget and Hydro's Five-Year
10 Capital Plan.
11

12 **PUB-NLH-023** Page 12, Chart 10. Explain how Hydro has taken potential load growth arising
13 from electrification into account in the development of its Five-Year Capital
14 Plan.
15

16 **PUB-NLH-024** Hydro in its Five-Year Capital Plan in its 2023 Capital Budget Application
17 referenced a two-year project in 2025-2026 to replace the diesel generating
18 station in Paradise River for \$10 million. Please explain why that project has
19 not been included in Hydro's Five-Year Capital Plan in this year's capital
20 budget application.
21

22 **Schedule 3 Holyrood Thermal Generating Station Overview**
23

24 **PUB-NLH-025** Page 15, lines 9-15. It is stated that the approval, engineering, procurement,
25 construction, and commissioning of new generation sources will take seven
26 to ten years. On page 4 of Schedule 3 Hydro stated that its commitment is
27 to have the Holyrood Thermal Generating Station fully available to March
28 31, 2030. Is Hydro investigating the required capital that would be necessary
29 to extend the life of the Holyrood Thermal Generating Station beyond 2030
30 if new generation sources are not commissioned by 2030?
31

32 **Schedule 4 2023 Capital Expenditures Overview**
33

34 **PUB-NLH-026** Page 4, lines 12-14. Please detail the performance issues with the owner's
35 engineer for the Rotor Rim Shrinking and Stator Recentering Project at the
36 Upper Salmon Hydroelectric Plant that Hydro had originally contracted for
37 this project and detail the estimated impact to the cost and schedule of the
38 project arising from the performance issues.
39

40 **PUB-NLH-027** Page 19, lines 9-16. Hydro stated that it would be in a position to update
41 project costs and schedule for the Bay d'Espoir Penstock 1 project when the
42 EPCM contract was awarded which was anticipated to be tendered in July
43 2023. Please provide an update on the status of the tendering process and
44 whether the EPCM contract has been awarded.
45

1 **PUB-NLH-028** Page 19, lines 17-24. When will Hydro file a report on the results of the
 2 inspections on Penstocks 2 and 3 and the review work by Kleinschmidt?
 3

4 **Schedule 5 2022 Average Rate Base**
 5

6 **PUB-NLH-029** In Order No. P.U. 30(2021) the Board approved capital expenditures for the
 7 deployment of Electric Vehicle charging stations in the amount of \$1.6 million
 8 and in Order No. P.U. 33(2022) the Board stated "To be consistent with
 9 Newfoundland Power's approach Hydro should also request approval of a
 10 separate electrification cost deferral account." However, to date, Hydro has
 11 not requested approval of this account.

- 12 (a) Were any of these chargers completed and placed in service during
 13 2022? If so, how were these costs treated for accounting purposes?
 14 (b) Please confirm that the costs for these chargers are not included in
 15 the average rate base for 2022.
 16

17 **Program 1 Replace Light- and Heavy-Duty Vehicles (2024-2028)**
 18

19 **PUB-NLH-030** Page 1, lines 12-20. Describe the light-duty verification exercise Hydro
 20 completed in 2023 and provide a copy of any report, memo or analysis
 21 completed on the results of the exercise.
 22

23 **PUB-NLH-031** Page 3, lines 4-6. It is stated that assets in service in 2020 and 2021 are below
 24 average due to global supply issues. Schedule 4, the 2023 Capital
 25 Expenditures Overview, on page 12 indicates that both the 2020-2021 and
 26 the 2021-2022 programs for vehicles have been carried over to 2023. Explain
 27 how Hydro has taken the delay in the replacement of vehicles into account in
 28 planning its 2024 program for vehicle replacement.
 29

30 **PUB-NLH-032** Page 5, lines 12-16. It is stated that Hydro's replacement criteria are
 31 consistent with utility counterparts across Canada. Please provide survey
 32 results or other information Hydro relied on for this statement.
 33

34 **Program 3 Replace Diesel Gensets (2024-2028)**
 35

36 **PUB-NLH-033** Page 1, line 11. It is stated that the load profile in both Nain and Makkovik is
 37 expected to grow over the next five years and Tables 2 and 6 provide the long-
 38 term forecasts for these communities. Please explain the reasons why the
 39 load is forecast to increase in both communities.
 40

41 **PUB-NLH-034** Page 5, lines 13-15. It is stated that the current criteria for the replacement
 42 of diesel gensets was determined based on the OEM's recommendations
 43 and historical experience.

- 44 (a) Please explain the historical experience that influenced the
 45 establishment of this criteria.
 46 (b) When was the criteria established and when was it last reviewed?

1 (c) Is Hydro's criteria for replacement consistent with Canadian standard
 2 utility practice? In the response include how and when Hydro reviewed
 3 the practice of other Canadian utilities on the criteria for the
 4 replacement of diesel gensets.
 5

6 **PUB-NLH-035** Page 6, line 3. Please provide the sizing study.
 7

8 **PUB-NLH-036** Pages 14-15. How were the cost estimates for the 2024 program determined?
 9

10 **Program 4 Distribution System In-Service Failures, Miscellaneous Upgrades, and Street Lights**
 11 **(2024)**
 12

13 **PUB-NLH-037** Page 6, lines 2-3. It is stated that the estimate for the 2024 Distribution
 14 System In-Service Failures program is based on the average expenditures
 15 from 2020 to 2022. Project cost estimates for some other programs (e.g.,
 16 Provide Service Extensions) contain similar statements regarding the use of a
 17 three-year historical average of costs while others do not specify how the
 18 estimate was determined (e.g., Replace Diesel Gensets and Boiler Condition
 19 Assessment and Miscellaneous). Does Hydro typically use a three-year
 20 average of historical expenditures with cost escalation to determine a cost
 21 estimate for a program for a capital budget proposal? In the response explain
 22 how Hydro determines the program cost each year for ongoing capital
 23 programs.
 24

25 **Program 7 Wood Pole Line Management (2024)**
 26

27 **PUB-NLH-038** Page 3, lines 1-3. It is stated that Hydro's experience demonstrates that the
 28 expected life of its transmission line can be extended by more than fifteen
 29 years through the early inspection and refurbishment.

30 (a) Is Hydro targeting a specific extension of the life of its transmission line
 31 wood poles?

32 (b) What is the depreciation period over which Hydro depreciates a
 33 transmission line wood pole?

34 (c) What is the Canadian utility standard for the average life of a
 35 transmission line wood pole?
 36

37 **PUB-NLH-039** Page 15, Chart 9. Please explain why the budget for 2024 is significantly higher
 38 than the budgets in the period 2018-2023.
 39

40 **Program 8 Upgrade Power Transformers (2024-2025)**
 41

42 **PUB-NLH-040** Page 1. Please describe Hydro's asset management strategy for terminal
 43 station power transformers, including the total number of transformers, the
 44 numbers refurbished over the period 2014-2023, the number remaining to
 45 be refurbished under the program and the frequency of inspections for the
 46 power transformers.

1 **Program 10 Replace Protective Relays (2024-2025)**

2

3 **PUB-NLH-041** Page 1. It is stated that the program was initiated in 2016 to replace all
4 existing electromechanical relays associated with transformers, buses and
5 line protection with modern digital relays. How many have been replaced
6 since the program began and how many will be remaining to replace
7 following completion of the proposed 2024 program?
8

8

9 **Program 11 Upgrade Worst Performing Distribution Feeders (2024-2025)**

10

11 **PUB-NLH-042** Page 9, lines 8-11. Please explain why Hydro does not track the assets
12 installed and upgraded under this program.
13

13

14 **Program 12 Renew Circuits Breakers (2024-2025)**

15

16 **PUB-NLH-043** Page 2, Table 1. What is the timeframe associated with the ‘Risk of Failure’
17 (e.g., one year, five years, etc.)?
18

18

19 **Program 13 Renew Distribution Feeders (2024-2025)**

20

21 **PUB-NLH-044** Page 2, line 5-18. It is stated that Hydro had discontinued its condition-based
22 asset renewal program for distribution feeders when it introduced its Worst-
23 Performing Feeders program in 2019. Please explain the factors Hydro
24 considered in evaluating the need to re-introduce a condition-based program
25 and the process Hydro used in making the decision to re-instate the program.
26 In making the decision to re-instate the program did Hydro consider the
27 practices of other Canadian utilities?
28

28

29 **PUB-NLH-045** Page 10, lines 13-16. Hydro stated that it chose to initiate a new program
30 rather than augment the existing reliability-based Upgrade Worst-Performing
31 Feeders program as feeder performance can be impacted by numerous
32 factors and is not limited to asset condition. Please identify the other factors
33 that are most likely to impact feeder performance and compare their
34 incidence rates to the incident rate associated with asset condition.
35

35

36 **Program 15 Replace Disconnects (2024-2025)**

37

38 **PUB-NLH-046** Page 4, line 2. Please explain why Hydro does not record disconnect switch
39 outage statistics and whether this is consistent with industry practice?
40

40

41 **Program 17 Replace Instrument Transformers (2024-2025)**

42

43 **PUB-NLH-047** Page 1, lines 10-12. Why did Hydro determine that 40 years of age is the
44 appropriate age to target replacement of instrument transformers and is this
45 target consistent with Canadian utility practice?

1 **Program 19 Overhaul Diesel Units (2024)**

2

3 **PUB-NLH-048** Page 1, lines 13-17. In establishing the criteria for overhauls, did Hydro
4 consider the practice of other Canadian utilities and is Hydro's criteria
5 consistent with Canadian utility practice?
6

7 **PUB-NLH-049** Page 4, line 2. Please identify the five units to be overhauled including the
8 location and number of hours of operation for each unit.
9

10 **Project 2 Refurbish Intake 1 (2024-2025)**

11

12 **PUB-NLH-050** Page 1, lines 1-3. A Hydraulic Generation Refurbishment and Modernization
13 Program was included in previous Hydro capital budget applications but is not
14 included in the 2024 Capital Budget Application. Has this program been
15 discontinued, paused or replaced by another program?
16

17 **Project 7 Replace VHF Radio System (2024-2025)**

18

19 **PUB-NLH-051** Page 4, line 11. Did Hydro have any consultations with Newfoundland Power
20 to explore synergy opportunities given that Newfoundland Power is planning
21 to replace its VHF radio system in 2025? If so, please provide details. If not,
22 please explain.
23

24 **Project 8 Purchase Accommodations Trailers (2024-2025)**

25

26 **PUB-NLH-052** Page 1, lines 24-25. Please explain the options Hydro has explored to provide
27 suitable accommodations in Cartwright and Makkovik, including whether
28 Hydro has explored partnerships with local business or homeowners to
29 provide the accommodations.
30

31 **PUB-NLH-053** Page 1, lines 26-27. It is stated that Hydro's personnel travel to these
32 locations at least five times annually. Please provide the number of days each
33 year that personnel have stayed in each community over the period 2018 to
34 2022 and 2023 year to date.
35

36 **PUB-NLH-054** Page 2, lines 1-12. Has Hydro investigated the use of portable buildings,
37 designed and built to be movable rather than permanently located, as a
38 potential mitigation tool against the occupancy issues currently being
39 experienced? If so, please explain why Hydro chose not to pursue such an
40 option. If not, please explain.
41

42 **Project 9 Replace MDR8000 Microwave Radios (2024-2025)**

43

44 **PUB-NLH-055** Page 6, line 2. Did Hydro have any consultations with any of the
45 communications service providers (e.g., Bell, Rogers, etc.) to explore whether
46 either of them could provide a lower-cost solution than that being proposed

1 by Hydro? If yes, please provide details and explain why Hydro decided
2 against a service provider option. If no, please explain.

3
4 **Capital Expenditures and Carryover Report**

5
6 **PUB-NLH-056** Page 2, lines 7-8. Hydro will carryover approximately \$40 million of work into
7 2023 and beyond. Please provide a table that shows the capital budget
8 carryover each year for the period 2013 to 2022.

9
10 **PUB-NLH-057** Page 2, lines 7-8. Explain how Hydro takes carryovers from a previous year
11 into account in planning a current year capital budget application, including
12 the carryover's impact on its ability to complete the work proposed in the
13 current year application.

14
15 **PUB-NLH-058** Page 57, Replace Failed Jetty Bumper Timbers Hydro stated a drone
16 inspection was completed which identified failure of the wooden bumpers.
17 Please explain how Hydro uses drones as part of its inspection programs for
18 assets and whether any reduction in costs has been identified as a result of
19 the use of drones.

20
21 **General**

22
23 **PUB-NLH-059** Several capital projects are included in the 2024 Capital Budget Application
24 for the Bay d'Espoir Generating Plant, a number have been the subject of
25 supplemental capital budget applications in recent years and others are
26 included in the Five-Year Capital Plan. Please provide a table that lists all
27 capital expenditures, approved and proposed for the Bay d' Espoir Plant from
28 2013 to 2028, showing the project cost for each, the year approved or
29 planned and the total for these capital expenditures.

30
31 **PUB-NLH-060** Has Hydro completed a condition assessment of the overall condition of the
32 Bay d'Espoir Generating Plant and prepared a short and long-term plan to
33 maintain the plant? Please explain Hydro's asset management plan for this
34 plant.

35
36 **PUB-NLH-061** Further to **PUB-NLH-060** has Hydro completed a condition assessment of the
37 overall condition of its other hydroelectric generating facilities, not including
38 the Bay d'Espoir Plant? Please explain Hydro's asset management plan for
39 these facilities.

DATED at St. John's, Newfoundland and Labrador, this 21st day of August, 2023.

BOARD OF COMMISSIONERS OF PUBLIC UTILITIES

Per

A handwritten signature in blue ink that reads "Sara Kean". The signature is written in a cursive style with a large initial 'S'.

Sara Kean

Assistant Board Secretary