

IN THE MATTER OF the *Electrical Power Control Act*, R.S.N.L. 1994, Chapter E-5.1 (“*EPCA*”) and the *Public Utilities Act*, R.S.N.L. 1990, Chapter P-47 (the “*Act*”); and regulations thereunder;

AND

IN THE MATTER OF an Application (the “*Application*”) by Newfoundland and Labrador Hydro (“*Hydro*”) pursuant to Sections 58, 71 and 80 of the Act, for the approval of an economic test and a deferral of Electrification, Conservation and Demand Management (“*ECDM*”) program costs in the proposed ECDM Cost Recovery Adjustment;

AND

IN THE MATTER OF an application by Hydro, pursuant to Section 41(3) of the Act, for the approval of supplemental 2021 capital expenditures related to the construction of an electric vehicle (“*EV*”) charging network.

**CONSUMER ADVOCATE
REQUESTS FOR INFORMATION**

TC-CA-NLH-001 to TC-CA-NLH-047

Issued: February 17, 2021

- 1 TC-CA-NLH-001 Is a primary objective of the proposed electrification program to
 2 increase consumption of electricity in the Province, particularly the
 3 Island Interconnected System (IIS)? If so, by how many years is the
 4 proposed electrification program expected to advance electrification
 5 in the Province?
 6
- 7 TC-CA-NLH-002 Which of the electrification and CDM expenditures included in the
 8 Electrification, Conservation and Demand Management Plan 2021-
 9 2025 (the 2021 Plan) for programs during 2021 to 2025 have been
 10 approved by the Board? Do all the 2021 Plan expenditures have to
 11 be approved by the Board?
 12
- 13 TC-CA-NLH-003 Will all the electrification and CDM program expenditures under the
 14 2021 Plan have to pass the modified Total Resource Cost (mTRC)
 15 test prior to a request to the Board for approval? If Board approval
 16 is not needed, would Hydro proceed with programs that do not pass
 17 the mTRC test?
 18
- 19 TC-CA-NLH-004 Please give a formal definition of the TRC test as well as the mTRC
 20 test and provide the documentation or manual that will guide Hydro
 21 in applying the mTRC test methodology.
 22
- 23 TC-CA-NLH-005 The Board's December 20, 2021 letter titled *Provisional Capital*
 24 *Budget Application Guidelines* states "In addition Government
 25 recently announced a plan for the renewable energy industry in the
 26 province which may have an impact on utility capital expenditures
 27 in the near future as the province transitions to a net-zero economy
 28 and more renewable energy sources."
 29 a) As part of this initiative, has the Government contacted Hydro
 30 about their role?
 31 b) Has the Government specifically endorsed the electrification
 32 programs proposed by Hydro and identified them as a critical
 33 component of the initiative to transition to a net-zero economy?
 34 c) How might the Government's initiative to transition to a net-zero
 35 economy impact the analyses relating to the electrification
 36 program, particularly the baseline scenario?
 37
- 38 TC-CA-NLH-006 (Reference slide 4)
 39 (a) Is it accurate to state that the driving force behind encouraging
 40 more IIS consumption of electricity is that Muskrat Falls will
 41 create a surplus of energy that would otherwise have to be sold
 42 at lower prices on export markets?
 43 (b) Confirm that the anticipated surplus of energy is currently
 44 approximately 3 million MWh and the price advantage for selling

- 1 to IIS ratepayers rather than exporting is about 10 cents per kWh
 2 (\$100 per MWh) as long as capacity constraints are not binding.
 3
- 4 TC-CA-NLH-007 For the years 2023 to 2034, what is Hydro's estimate of the annual
 5 marginal cost and average fixed cost of the surplus energy once the
 6 Muskrat Falls project is fully operating?
 7
- 8 TC-CA-NLH-008 (Reference slide 6) The slide compares the Baseline consumption
 9 with the "Upper;" what is the comparison between the Baseline and
 10 the 2021 Plan? For the years given in the graph, please provide a
 11 table showing the annual projected Baseline energy consumption,
 12 Plan 2021 consumption and difference between them.
 13
- 14 TC-CA-NLH-009 (Reference slides 5, 6, 7 and 8) The graphics on slides 6, 7 and 8
 15 show the potential impact of EVs on electric energy consumption,
 16 load, and revenues. Are the graphics on these slides based on the
 17 information on slide 5, which shows that the number of EVs will
 18 more than triple by 2034?
 19 (a) Is this a hypothetical scenario or does Hydro believe that the
 20 proposed electrification program will result in a tripling of EVs
 21 in the Province by 2034?
 22 (b) If hypothetical, please provide the graphics on slides 5, 6, 7 and
 23 8 based on the number of EVs expected to result from the
 24 proposed electrification program, as well as any additional
 25 electrification applications that might be submitted in the future.
 26
- 27 TC-CA-NLH-010 (Reference slide 5) Please show the graphic on slide 5 extended out
 28 to the year when the expected number of electric vehicles resulting
 29 from the proposed electrification program is equal to the expected
 30 number of electric vehicles without the proposed electrification
 31 program.
 32
- 33 TC-CA-NLH-011 (Reference slide 12) It is indicated that Hydro expects to stop
 34 investment in EV charging stations in 2025.
 35 (a) Is this because Hydro expects that the number of EVs will be
 36 sufficient for private business and other entities to undertake such
 37 investments thereafter?
 38 (b) Is there any other reason for Hydro to stop such investment in
 39 2025?
 40
- 41 TC-CA-NLH-012 Does Hydro plan to remove themselves from the EV charger
 42 business after 2025?
 43 (a) If so, when and how will Hydro dispose of their charger assets?

- 1 (b) Would the net revenue from sale of the assets accrue to the
 2 associated deferral account?
 3 (c) Or, will Hydro retain and operate its EV chargers in competition
 4 with non-utility operations?
 5

6 TC-CA-NLH-013

7 It is understood that the Provincial Government incentive for EV
 8 purchases expires in March 2022.

- 9 (a) Please confirm that the analyses relating to the electrification
 10 program are based on this assumption.
 11 (b) If the Government extends the program for another year under
 12 the same terms and conditions, how will that impact the analyses
 13 of the electrification program, particularly the baseline scenario?

14 TC-CA-NLH-014

15 Please confirm that placing a timer on household chargers so that
 16 they do not charge during the peak period is a relatively simple
 17 means for managing EV charger demand.

- 18 (a) Do most household EV chargers on the market come with a built-
 19 in timer?
 20 (b) What would be the best way to take advantage of this capability
 21 from the perspective of electrification and rate design?

22 TC-CA-NLH-015

23 (Reference slide 8) Regarding the statement that the 2021 Plan will
 24 provide 0.5 cents/kWh in rate mitigation by 2034, please provide the
 25 decomposition of the Plan's rate mitigating effect due to
 26 electrification and due to CDM.

27 TC-CA-NLH-016

28 When estimating the impacts and benefits of the electrification
 29 program, are impacts such as the 0.5 cents/kWh rate mitigation
 30 effect based on the electrification applications that are now before
 31 the Board, or do they include any additional electrification initiatives
 32 performed by Hydro that will be the subject of future applications?

- 33 (a) What is assumed with respect to the baseline scenario; i.e., does
 34 it reflect the scenario where the Board does not approve the
 35 proposed electrification program?
 36 (b) Further, in the baseline scenario is Hydro assumed to continue to
 37 provide household service entrance upgrades needed to support
 38 EV charging, generation, transmission and distribution system
 39 upgrades needed to support EV charging, load management/rate
 40 design to manage EV charging impacts on capital and O&M
 41 costs while ensuring rates are fair and cost reflective, and
 42 customer education relating to use of electricity including EV
 charger use?

- 1 TC-CA-NLH-017 (Reference slide 8)
- 2 a) Please explain the statement that unmanaged EV charging results
- 3 in a negative NPV of \$22 million.
- 4 b) If the Board were not to approve the proposed electrification
- 5 program, would there be no options available to Hydro to manage
- 6 EV charging and avoid additional capacity costs owing to EV
- 7 charger demand?
- 8 c) Does management of electricity demand fall under Hydro's
- 9 responsibility with or without approval of the electrification
- 10 program?
- 11
- 12 TC-CA-NLH-018 It was stated during the Technical Conference that Hydro had about
- 13 2000 "*paid chargings*" at its 14 EV charging stations in 2021.
- 14 (a) Please confirm this figure, and identify the revenues and costs
- 15 associated with Hydro's electrification program in 2021 and
- 16 beyond that will be included in the deferral account for recovery
- 17 from customers.
- 18 (b) Where will these chargers be purchased and under what
- 19 competitive process? Please provide details of the warranties and
- 20 maintenance agreements, including the anticipated life of each
- 21 charger.
- 22
- 23 TC-CA-NLH-019 Please confirm if Hydro's ratepayers were surveyed/consulted on: 1)
- 24 Hydro's involvement in EV electrification, and 2) that Hydro's
- 25 involvement will lead to increased electricity rates for all Hydro's
- 26 ratepayers.
- 27
- 28 TC-CA-NLH-020 Please confirm that General Service customers such as Tim
- 29 Horton's, Canadian Tire, Irving and Costco were not surveyed about
- 30 any concerns they might have with Hydro owning charging stations
- 31 with costs paid by the Province's electricity ratepayers.
- 32
- 33 TC-CA-NLH-021 (a) How many, if any, additional stations does Hydro plan to
- 34 establish on the island from the end of 2025 and beyond?
- 35 (b) What will be the cost of each charging station?
- 36 (c) What competitive tendering process has Hydro utilized in
- 37 purchasing the same?
- 38 (d) Please provide details regarding warranties and maintenance
- 39 agreements and the anticipated life of each charger.
- 40
- 41 TC-CA-NLH-022 Will the smart-charger rebate also be reduced after 2023? If so, by
- 42 how much? What is the plan?
- 43
- 44 TC-CA-NLH-023 (Reference slide 19) With respect to the example of an mTRC test:

- 1 a) Please provide a breakdown of each of the example's three cost
 2 categories into finer detail and indicate the portion of each borne
 3 directly by the program participants.
 4 b) Since the example deals with residential EV and charger
 5 programs, please add the associated load management costs and
 6 the cost of the EV demand response pilot study (re: slide 15), if
 7 they are not already included, and provide the new result.
 8

9 TC-CA-NLH-024

(Reference slide 19) Regarding Electricity Supply Costs:

- 10 (a) Is the cost figure of \$8,045,129 based on the marginal production
 11 cost (i.e., all-in marginal cost including generation, transmission and
 12 distribution), on the export price or on some other unit cost?
 13 (b) Please provide a tabular calculation of the \$8,045,129 figure
 14 showing the annual quantity of electricity and corresponding annual
 15 electricity supply cost.
 16

17 TC-CA-NLH-025

(Reference slide 21)

- 18 (a) Please decompose the annual capital costs (Column A) into their
 19 main components and similarly for program costs (Column B)
 20 decompose into the separate programs (presumably the three
 21 programs listed on slide 13).
 22 (b) Regarding Incremental System Costs (Column D), what is the
 23 source of these costs considering that the electricity would otherwise
 24 still have been produced for export and therefore have entailed
 25 system costs?
 26

27 TC-CA-NLH-026

(Reference slide 21) Please provide a similar NPV analysis but for
 28 the Residential EV & Charger Program only.
 29

30 TC-CA-NLH-027

(Reference slide 22)) It is indicated that the \$33.9 million net
 31 revenue due to electrification causes an average annual bill savings
 32 for ratepayers of \$100. However, that net revenue impact is the
 33 result of ratepayers paying higher bills as electrification induces
 34 them to consume more electricity. (a) Is the \$33.9 million in net
 35 revenue derived from the gross revenue from increased bill
 36 payments due to that higher electricity consumption? (b) Taking
 37 into account the higher bills due to that increased consumption, how
 38 can the average annual ratepayer bill go down?
 39

40 TC-CA-NLH-028

(Reference slide 33)

- 41 (a) Is this slide meant to be some form of evaluation for CDM
 42 programs from 2009 to 2025?
 43 (b) How does it relate to the 2021 Plan?

(c) For the 2021 Plan period, will the annual energy savings, as shown in the slide, partially or more than fully offset the increased energy consumption due to electrification?

TC-CA-NLH-029

Once Muskrat Falls is fully and reliably operational, energy savings resulting from CDM will not lead to substantial production cost savings (as previously would have been the case with reliance on Holyrood) but, instead, the energy will still be produced but at Muskrat Falls, the total costs of which are fixed.

(a) Would system costs change much, if at all, considering that the CDM energy savings would still be produced but sent to export markets?

(b) With CDM induced energy savings causing a shift in energy sales from local to lower-price export markets, and considering Hydro's fixed requirements to pay for Muskrat Falls, how would Hydro recover its net revenue loss?

TC-CA-NLH-030

Please provide a table showing, for the 2023 to 2034 period, the change in electricity consumption and change in peak demand due to current and planned electrification programs, the change in electricity consumption and change in peak demand due to current and planned CDM programs, and the respective net differences.

TC-CA-NLH-031

(Reference slide 36) Can Hydro manage EV charger demand through existing curtailment programs without the need for time-of-use (TOU) rates which have benefits that are only ½ the cost to implement and administer. Further, it is stated that TOU rates are not expected to be economic until after 2030 when EV demand increases. It is understood that this is based on the Dunskey report which states that optimized dynamic rates such as TOU and critical peak pricing do not provide sufficient benefits to carry the full cost of the AMI investments needed to enable these programs before 2034. However, the Dunskey report goes on to say that a full business case assessment for AMI may reveal other benefits streams that could be combined with TOU/ CPP programs to render the investment cost-effective. Has Hydro undertaken a "*full business case assessment for AMI*"? If so, does it take into consideration rate design principles such as fairness and equity, and providing customers with a level of control over the bills?

TC-CA-NLH-032

(Reference slide 36)

(a) When household rates have a flat energy charge as they do now, does the potential exist for significant cross-subsidization; i.e., under the current rate design, are oil heating customers

1 subsidizing electric baseboard heating customers, and will
 2 customers with no EV chargers be subsidizing customers with
 3 EV chargers?

4 (b) If it has been determined that no such cross-subsidization is
 5 taking place, please provide the analyses.
 6

7 TC-CA-NLH-033

(Reference slide 36) It is understood that Hydro can manage EV
 8 charger demand through existing curtailment programs without the
 9 need for time-of-use rates.

- 10 a) Can Hydro also manage EV charger demand without the need to
 11 provide subsidies/rebates for EV chargers?
 12 b) If the Board does not approve the proposed electrification
 13 program, will Hydro still have opportunities to manage EV
 14 charger demand through existing curtailment programs without
 15 the need for time-of-use rates? If so, please explain the available
 16 opportunities.
 17 c) Would time-of-use rates be an effective means for managing
 18 charger demand, leaving the decision on how and when to charge
 19 EVs with the customer rather than the utility?
 20

21 TC-CA-NLH-034

In its application, Hydro (Schedule 1, page 1 footnote 4) defines
 22 electrification as "...the process of converting customer end uses
 23 from fossil fuels to electricity."

- 24 a) Should this definition be clarified to state that the electricity is
 25 from a renewable source or, at least, not generated by fossil fuel?
 26 b) In light of the recent Hydro announcement
 27 (vocm.com/2022/02/07/hydro-holyrood-extension) of the
 28 extension of Holyrood as an energy source and the concerns
 29 raised over the reliability of the LIL (e.g., Haldar & Associates
 30 report of March 2021), can Hydro assure those ratepayers who
 31 participate in electrification programs from 2021 to 2025 that
 32 they will have their electricity needs over those years met by the
 33 Muskrat Falls surplus and not by thermal energy from Holyrood?
 34 Can such an assurance be made to all IIS ratepayers?
 35 c) What is Hydro's estimate of the minimum amount of energy and
 36 capacity that can be guaranteed for reliable delivery to the IIS for
 37 each year from 2022 to 2025?
 38

39 TC-CA-NLH-035


(Reference slide 35) It is stated that the Rate Impact Measure (RIM)
 40 test is not recommended for the economic evaluation of CDM
 41 programs.

- 42 (a) Why is that the case?

- 1 (b) Is the electrification programs' "Rate Mitigation Benefit,"
 2 referred to on slide 22, the same as a rate impact measure or are
 3 they different concepts?
 4
- 5 TC-CA-NLH-036 (Reference slide 35)
 6 a) Does Hydro intend to continue evaluating CDM programs using
 7 both the TRC and PAC tests?
 8 b) Is the only difference between the TRC and mTRC tests that the
 9 latter includes non-electricity benefits and costs while the former
 10 does not?
 11 c) With respect to the TRC test, please provide a numerical
 12 illustration of its calculation for Hydro's Business Efficiency
 13 program (Application, Table 3, page 13 of 25) identifying the
 14 benefits and costs by type for each year. Also, for each year
 15 please indicate the energy saved (and coincident peak reduction)
 16 and the marginal valuation used for it.
 17
- 18 TC-CA-NLH-037 (a) Is the intention of Hydro to permanently get into the electric
 19 vehicle charger business?
 20 (b) What role does Hydro see for private enterprises in this business?
 21
- 22 TC-CA-NLH-038 Has Hydro consulted the Automobile Dealers Association to
 23 determine how many electric cars will be available in the province
 24 in 2022, 2023, 2024, and beyond? Please provide a list year over
 25 year from 2022 to 2030 of the number of the electric cars which will
 26 be available for purchase in each of these years and the source of
 27 your information.
 28
- 29 TC-CA-NLH-039 What research has Hydro undertaken to determine the cost and
 30 uptake by consumers in electric car purchases?
 31
- 32 TC-CA-NLH-040 If there are limited supplies of electric cars coming to the province
 33 during the next decade, how would this affect the forecast in your
 34 presentations?
 35
- 36 TC-CA-NLH-041 What research has Hydro undertaken to determine how electric
 37 chargers and the uptake in electric vehicles have been dealt with by
 38 the various utilities boards in these jurisdictions:
 39 (a) Nova Scotia
 40 (b) Prince Edward Island
 41 (c) New Brunswick
 42 (d) Quebec
 43 (e) Ontario
 44 (f) Manitoba

- 1 (g) Saskatchewan
- 2 (h) Alberta
- 3 (i) British Columbia
- 4
- 5 TC-CA-NLH-042 In any of these Canadian jurisdictions have the utility boards
- 6 permitted all ratepayers to subsidize the purchase of electric vehicles
- 7 or any of the components thereof, including electric chargers, and, if
- 8 so, please state where this has occurred.
- 9
- 10 TC-CA-NLH-043 (a) How does Hydro justify charging all ratepayers for the expense
- 11 pertaining to the construction and maintenance of electric
- 12 charger stations?
- 13 (c) Why should all ratepayers subsidize someone's electric vehicle?
- 14
- 15 TC-CA-NLH-044 Are EV charging stations used for the production or transmission of
- 16 electrical energy?
- 17
- 18 TC-CA-NLH-045 Please provide the legislative authority under the *Public Utilities Act*
- 19 which would allow the production, operation and maintenance of
- 20 electric chargers for the benefit of electric vehicle owners to be
- 21 charged to all the ratepayers of the province.
- 22
- 23 TC-CA-NLH-046 Please provide copies of Hydro's application to the federal
- 24 government for funding and any correspondence therein related.
- 25
- 26 TC-CA-NLH-047 Please provide amounts that Hydro will be required to pay back to
- 27 the federal government should it be determined that this business is
- 28 more appropriate for the private sector.

DATED at St. John's, Newfoundland and Labrador, this 18th day of February, 2021.

Per: 

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