

- 1 Q. **Reference: Application, Replace Light- and Heavy-Duty Vehicles (2023-2025))**
- 2 a) How many vehicles will be replaced with electric vehicles (EVs)?
- 3 b) How many EVs does Hydro currently own?
- 4 c) What are the prospects for electric heavy-duty vehicles?
- 5 d) Does the purchase of gasoline/diesel vehicles rather than EVs set back Hydro’s
- 6 electrification program and represent a lost opportunity?
- 7 e) How do the lifetime costs of Hydro-owned EVs compare to Hydro-owned gasoline/diesel-
- 8 powered vehicles?
- 9 f) What is the current lead time for purchasing gasoline/diesel light-duty vehicles? What is the
- 10 current lead time for purchasing comparable EVs?
- 11 g) What is the current capital cost of a gasoline/diesel light-duty vehicle and a comparable EV?
- 12 h) Does current supply chain issues and high levels of inflation imply that the proposed
- 13 electrification program should be deferred by a year or two
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- 16 A. a) Newfoundland and Labrador Hydro’s (“Hydro”) 2023 light-duty vehicle replacements, 39 in
- 17 total, are proposed to be pickup trucks and work (transit) vans.
- 18 Hydro is currently evaluating the specifications, range, pricing, and availability of electric
- 19 vehicle (“EV”) pickup trucks and work (transit) vans to assess the timing of the integration of
- 20 electric models into its fleet.
- 21 b) Hydro currently has five EVs in its fleet—two passenger vehicles and three SUVs.¹
- 22 c) With respect to transportation electrification, this can be generally segmented into light
- 23 duty, medium duty, bus, and heavy duty. Heavy-duty vehicles would typically comprise long-
- 24 haul trucks, dump trucks, or utility bucket trucks, for example.

¹ Sports utility vehicle (“SUV”).

1 While there is potential for electrification of heavy-duty vehicles, uptake is forecast to be
2 less than other segments due to greater technical challenges (i.e., range and payload
3 requirements). Hydro will continue to monitor all segments of transportation electrification
4 as it relates to both its fleet and potential system impacts associated with heavy-duty
5 vehicle electrification.

6 **d)** The purchase of EVs for Hydro’s fleet is not part of the electrification program currently
7 under review by the Board of Commissioners of Public Utilities (“Board”). The timing of the
8 installation of EV charging infrastructure will, however, impact the pace at which Hydro will
9 purchase EVs. For example, there is presently no public EV charging infrastructure in the Bay
10 d’Espoir region; therefore, deploying an EV in this area in advance of supporting
11 infrastructure is unlikely to be successful.²

12 Hydro’s fleet serves operations across the province with various use cases. To ensure a
13 successful transition to EVs across its fleet, careful planning is required to ensure the EVs
14 purchased will meet company requirements, are supported by sufficient infrastructure, and
15 ultimately accrue a sufficient number of kilometres driven to result in operational savings
16 versus a gasoline-powered equivalent. As a result, the electrification of fleet vehicles is
17 analyzed on a case-by-case basis, considering all factors to ensure Hydro’s obligation for
18 least-cost, reliable service is met.

19 **e)** As noted in part b), Hydro currently has five EVs in its fleet—two passenger vehicles and
20 three SUVs. As of August 2022, these vehicles, combined, have travelled approximately
21 60,000 kilometres resulting in more than \$9,000 in fuel savings versus an equivalent
22 gasoline-powered vehicle.³

23 In addition to fuel savings, Hydro also expects to realize maintenance savings with fleet EVs
24 versus gasoline-powered equivalents. However, Hydro’s ownership experience with fleet
25 EVs (i.e., repairs and maintenance costs, residual values, etc.) is limited in the context of
26 comparing the life cycle cost of gasoline-powered vehicles versus EVs at this point in time.

² Further, Hydro’s fleet comprises a number of pickup trucks and medium-duty vehicles that are not readily available for purchase as EVs.

³ Net of electricity costs at marginal rates. Compared to a Chevrolet Equinox and an assumed fuel price of \$1.65 per litre.

1 **f)** Vendors are typically indicating six months minimum lead time as typical on current orders
2 of gasoline/diesel light-duty vehicles; however, that guidance is relatively optimistic
3 compared to Hydro’s recent experience. Hydro’s last significant set of orders was placed in
4 April 2021—the typical lead time was 12 months and several remain outstanding.

5 Vendor advice on EVs indicates popular models have lead times in excess of two years.
6 Hydro’s only recent delivery in May 2022 of two electric AWD⁴ SUVs was completed with a
7 lead time of just three months, which is no longer considered representative of the market.

8 **g)** Hydro tendered for two AWD SUV crossovers in the light-duty vehicle category in 2022. Two
9 electric SUV crossovers were chosen to test the use of AWD EVs in Hydro’s fleet. There were
10 no equivalent gasoline-powered light-duty vehicles tendered in 2022 by Hydro; as such, a
11 direct comparison is not possible using 2022 prices. If using the current 2022 manufacturer
12 suggested retail prices, the EV AWD SUVs Hydro purchased cost approximately \$19,000
13 more than an equivalent gasoline-powered light-duty AWD vehicle. A net present value
14 analysis indicated expected savings over the typical lifetime of a fleet vehicle by choosing
15 the EV SUV over an equivalent gasoline-powered vehicle. As Hydro gains operational
16 experience with EVs in its fleet, it will leverage the data to further refine the cost analysis for
17 EVs.

18 **h)** As indicated in Hydro’s response to CA-NLH-014 of this proceeding, there are no
19 electrification program expenditures in Hydro’s 2023 Capital Budget Application. The
20 purchase of EVs to become part of Hydro’s fleet is not part of the electrification program
21 currently under review by the Board. With respect to EV purchases, however, recent
22 inflationary price increases have materially impacted the price of gasoline. In this regard, the
23 operations savings associated with fleet EVs, which do not require gasoline purchases,
24 would improve the business case for the purchase of fleet EVs.

25 For each purchase of an EV, Hydro computes a cost-benefit analysis to ensure the purchase
26 of an EV (versus a gasoline-powered vehicle) is cost-effective and consistent with Hydro’s
27 obligation for least-cost, reliable service. Delaying the ordering of EVs that have been

⁴ All-wheel drive (“AWD”).

- 1 determined to be the least-cost alternative thereby extends the use of gasoline-powered
- 2 vehicles, which would delay achieving savings for customers.