

1 Q. **Reference: Application**

2 a) Specifically, what is Hydro's mandate?

3 b) Provide Hydro's definition of "reliable service" and all reliability criteria used to define
4 "reliable service".

5 c) Is it a requirement under current legislation that Hydro provide service commensurate
6 with the value its customers place on the service? Does Hydro attempt to do so? Please
7 explain.

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10 A. a) Newfoundland and Labrador Hydro ("Hydro") operates consistent with its obligations under
11 the *Public Utilities Act* and the *Electrical Power Control Act, 1994* ("EPCA"), particularly the
12 power policy of the province as set out in Section 3 of the *EPCA*, and even more specifically,
13 the mandate in Section 3(b)(iii) of the *EPCA* to manage and operate its production,
14 transmission, and distribution facilities in a manner that results in power being delivered to
15 consumers at the lowest possible cost consistent with reliable service.

16 b) Hydro strives to provide electrical service to its customers that meets its mandate and
17 complies with good utility practice. To measure its performance, Hydro uses reliability
18 metrics such as:

19 ● **Weighted Capability Factor:** A reliability indicator for generation assets which
20 measures the percentage of the time that a unit or a group of units is available to
21 supply power at maximum continuous rating. The measure is used for Hydro's
22 thermal, gas turbine, and hydroelectric generation. This measure is weighted to
23 reflect the differences in generating unit capacity, such that larger units have a
24 greater impact on the measure.

25 ● **Derated Adjusted Forced Outage Rate ("DAFOR"):** A performance metric that
26 measures the percentage of the time that a unit or group of units is unable to
27 generate at its maximum continuous rating due to forced outages or unit deratings.

- 1 This measure applies only to Hydro’s thermal and hydroelectric generation. This
2 measure is weighted to reflect the differences in generating unit capacity, such that
3 larger units have a greater impact on the measure.
- 4 ● Utilization Forced Outage Probability (“UFOP”): A performance metric that
5 measures the probability that a generating unit or group of units will encounter a
6 forced outage and not be available when required. This measure applies only to
7 Hydro’s gas turbine generating units.
 - 8 ● Derated Adjusted Utilization Forced Outage Probability (“DAUFOP”): A performance
9 metric that measures the probability that a generating unit of group of units will
10 encounter a forced outage and not be available when required or will be unable to
11 generate at its maximum continuous rating due to deratings. This measure applies
12 only to Hydro's gas turbine generating units.
 - 13 ● Transmission-System Average Interruption Duration Index (“T-SAIDI”): A reliability
14 indicator for bulk transmission assets which measures the average duration of
15 outages in minutes per delivery point.
 - 16 ● Transmission-System Average Interruption Frequency Index (“T-SAIFI”): A reliability
17 indicator for bulk transmission assets which measures the average frequency of
18 outages per delivery point.
 - 19 ● Transmission-System Average Restoration Index (“T-SARI”): A reliability indicator for
20 bulk transmission assets which measures the average duration per transmission
21 interruption.
 - 22 ● Distribution System Average Interruption Duration Index (“SAIDI”) and System
23 Average Interruption Frequency Index (“SAIFI”): Reliability indicators which measure
24 the duration and frequency of service interruptions to Hydro’s isolated and
25 interconnected systems.

- 1 • End-Consumer SAIDI and SAIFI: Reliability indicators which measure the duration
2 and frequency of service interruptions to all end-consumers of electricity in the
3 province who are supplied by Hydro, other than Hydro’s Industrial customers.¹
- 4 • Under Frequency Load Shedding (“UFLS”) Events: measures the number of events in
5 which shedding of customer load is required to counteract loss of generation
6 capacity.

7 Hydro sets targets and reports its performance on these metrics to the Board of
8 Commissioners of Public Utilities as part of its Quarterly Regulatory Report and Quarterly
9 Report on Performance of Generating Units.² Where possible, Hydro compares its
10 performance to that of a Canadian Electricity Association benchmark to ensure its
11 performance is aligned with good utility practice.

- 12 c) As noted in part a) of this response, current legislation requires Hydro to manage and
13 operate its production, transmission, and distribution facilities in a manner that results in
14 power being delivered to consumers at the lowest possible cost consistent with reliable
15 service. However, although not expressly required by legislation, Hydro does consider
16 customer impact when making capital investment decisions and strives to achieve the
17 appropriate balance between cost and reliability. Please refer to Hydro’s responses to CA-
18 NLH-019 and CA-NLH-031 of this proceeding for further information regarding customer
19 engagement and feedback. Please refer to Hydro’s response to CA-NLH-016 of this
20 proceeding for further information regarding the actions taken by Hydro to reduce its 2022
21 capital budget.

¹ End-consumer SAIDI and SAIFI are a combination of Hydro’s service continuity data and Newfoundland Power Inc.’s service continuity data for outages related to the loss of supply due to events on Hydro’s transmission system.

² Weighted Capability Factor is reported in Hydro’s Annual Report on Key Performance Indicators which is provided as part of Hydro’s Fourth Quarterly Regulatory Report.