

1 **Q. Reference: Volume II, Exhibit 4, Section 2.1.2.1 and Table 5; Exhibit 5**

2 **a)** Confirm the basis of the 4,600 GWh average annual hydraulic production, including the
3 period of record in the 2023 Hydrology Review and any adjustment for climate trends or
4 recent inflow experience.

5 **b)** Explain the inclusion in a normalized test year of 44 GWh of combustion turbine and
6 diesel generation attributable to the extended Bay d’Espoir Penstock 3 outage, quantify
7 the associated fuel cost in the revenue requirement, and state whether outage-related
8 incremental costs would more appropriately be addressed through the LT SCVDA when
9 incurred.

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12 **A. a)** In 2023, Hatch Ltd. (“Hatch”) was engaged by Newfoundland and Labrador Hydro (“Hydro”)
13 to conduct a hydrology review of Hydro’s hydraulic generation system. The purpose of this
14 study was to validate Hydro’s historic hydrology data and average annual energy production
15 to support rate applications to the Board of Commissioners of Public Utilities.

16 The objective of the work was to review the historic inflow series to estimate the average
17 annual energy using Vista DSS. The scope of work included analyzing the historic inflow
18 series for the Cat Arm, Hinds Lake, Paradise River, and Bay d’Espoir reservoirs for the period
19 1950–2022, including identifying any emerging trends. The study concluded that there is no
20 convincing evidence for statistically significant monotonic trends in the timeframe of the
21 1950s to the present. Since around 2010, there appears to be increasing annual runoff at
22 some Water Survey of Canada (“WSC”) stations on the western part of the Island and
23 decreasing annual runoff at some WSC stations in the eastern part of the Island; however, it
24 remains to be seen if this is a short-term phenomenon or part of a longer-term trend. As
25 confirmed by Hatch and presented in Exhibit 5 of Hydro’s 2026 General Rate Application,
26 the average annual energy estimated was 4,612.87 GWh from the Island. This is summarized
27 in Table 1.

Table 1: Average Annual Energy for Island System and Contributing Plants

System	Plant	Average Annual Energy (GWh)	System Total Energy (GWh)
Bay d’Espoir	Granite Canal	257.43	3,455.30
	Upper Salmon	532.53	-
	Bay d’Espoir	2,665.34	-
Cat Arm	Cat Arm	769.42	769.42
Hinds Lake	Hinds Lake	355.76	355.76
Paradise River	Paradise River	32.39	32.39
		Total	4,612.87

Lastly, a review of regional hydrology within the same study confirmed that the 1959–1961 dry sequence continues to represent the driest years on record. Inflows experienced post-2022, including the drought periods experienced on the Island in 2024 and 2025, were not drier than the historic dry sequence. Inflows in 2023, 2024, and 2025 were 120%, 86%, and 85% of average,¹ respectively. Inflows to date in 2026 are 113% of average.

The full 44 GWh of combustion turbine and diesel generation are not all directly attributable to the extended Bay d’Espoir outages. In the 2019 Test Year, approximately 22.7 GWh was forecast in consideration of thermal and hydraulic forced outage rates, and in consideration of the peak load forecast and Hydro’s typical load duration curve. The 2019 forecast also made allowances for unit testing.

The forecast for the 2027 Test Year is also based on a similar methodology with an additional forecast increase of approximately 15.0 GWh due to increased maintenance activity, primarily at Bay d’Espoir. This increase is expected to continue in the 2028–2030 time period and is not just a one-time cost impacting only the 2027 Test Year. Any variances from the test year can be addressed in the Long-Term Supply Cost Variance Deferral Account if forecast usage varies from actual, similar to forecast variances in other supply sources.

¹ Based on a 20-year historic average.

- 1 **b)** Please refer to Hydro's response to IIC-NLH-016 of this proceeding for further detail.