

1 Q. **Reference: Project 9 - Install Oil Spill Containment Transformer T1S (2023-2024) - Cat Arm,**
2 **Page 2, Lines 2-6**

3 Hydro states that Transformer T1S was purchased in 1984 and served the Cat Arm Hydroelectric
4 Generating Station until it was removed from service in 2016 in accordance with Hydro's power
5 transformer replacement criteria and that the transformer was originally planned for disposal.
6 However, following decommissioning, Hydro decided to retain the transformer as a dedicated
7 spare for the generating station.

8 a) Why did Hydro decide to keep the transformer as a spare given that it had to be replaced
9 under Hydro's power transformer replacement criteria?

10 b) What repairs/refurbishments were performed on the transformer prior to it being deemed a
11 spare and what repairs/refurbishments, if any, are anticipated in order to maintain the
12 transformer as a spare.

13 c) Hydro's 5-year capital plan submitted as part of the 2022 capital budget application
14 estimated this project to be \$50,000 in 2023 and \$150,000 in 2024 for a total project cost of
15 \$200,000. Hydro currently estimates the total project cost to be \$581,000. Please explain
16 this increase.

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19 A. a) Newfoundland and Labrador Hydro decided to keep the transformer as a spare due to the
20 fact that, although the unit was approaching its end of life, the removed transformer has not
21 failed and can be used to bridge the lead time gap of 12–24 months for a new replacement
22 unit.

23 b) There were no repairs/refurbishment completed on this transformer and the anticipated
24 repairs/refurbishment known at this time in order to maintain this unit as a spare is limited
25 to completion of outstanding maintenance on a low-voltage bushing, which is planned to be
26 completed in 2022.

1 c) The increase in the cost estimate from the five-year plan, submitted in 2022, and the
2 updated 2023 capital budget estimate can be attributed primarily to the variance in the
3 estimate class. The Class 5 estimate, completed for the five-year plan, was compiled with
4 minimal engineering. The Class 3 estimate, completed for the 2023 Capital Budget
5 Application included more extensive front end engineering (“FEED”) to increase the
6 expected level of accuracy as required for a Class 3 estimate.

7 Following the completion of the FEED, it was determined that the optimal location for the
8 installation of the concrete foundation and secondary containment system, was within the
9 footprint of the current transformer location. Subsequently, this required the transformer to
10 be temporarily relocated to enable the completion of the site work before being transferred
11 back to its final resting spot atop the pad; this requires two transformer moves which were
12 not considered in the original estimate.

13 Further cost increases were observed in the recent tendered contract pricing, which was
14 utilized to prepare the Class 3 estimate. The increase in contract costs is believed to be
15 attributed primarily to the pronounced increase in inflation, observed over the past few
16 years.