

1 Q. **Reference: Tab 12; Volume II: Replace Transformer T7 - Holyrood**

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3 With respect to the loss of Holyrood Transformer T7 in October of 2018 Hydro states on page 1,
4 lines 10-15:

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6 The loss of Holyrood T7 weakens Hydro’s ability to supply the load on the 138
7 kV loop. While Hydro can meet peak load conditions with all remaining
8 equipment in service, the loss of the largest transformer in the loop (Holyrood
9 T8), with Holyrood T7 out of service, would result in the overload of transformer
10 Holyrood T6. The loss of Newfoundland Power’s transmission line 64L, with
11 Holyrood T7 out of service, would result in the overload of Western Avalon
12 Transformers T1 and T2 in the Western Avalon TS. Load flow analysis indicates
13 that load shedding would be required to eliminate these transformer overloads.

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15 Given the existing liability described above, why did Hydro decide not to order a replacement
16 transformer sooner so as to enable its installation prior to the upcoming 2019-2020 winter
17 season?

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20 A. As per the schedule provided in Newfoundland and Labrador Hydro’s (“Hydro”) response to NP-
21 NLH-053, it was recognized that the procurement, delivery, installation, and commissioning of a
22 newly procured transformer to replace Holyrood T7 could not be completed prior to the 2019–
23 2020 winter season.

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25 The transformer that will be utilized in this project (Churchill Falls T31) is not yet available¹ and,
26 therefore, could not be installed prior to the 2019–2020 winter season. The transformer will be
27 placed in service before the 2020–2021 winter season.

28 From a long-term transmission planning standpoint, the overload conditions described are not
29 acceptable as they represent violations to criteria. When performing a load flow analysis for
30 system planning purposes, transformers cannot be overloaded and customer loads must be

¹ The transformer is currently servicing Labrador East and will be available following the interconnection of Muskrat Falls to Happy Valley.

1 curtailed. Transformer overload capability is not considered when performing such analyses.
2 However, overload capability serves to provide an operational margin that may be used in short-
3 term contingency conditions. This operational margin will be employed by Hydro to ensure
4 reliable operation for the 138 kV loop during the winter of 2019–2020. In the event of the
5 contingencies described, Hydro would permit the overloading of power transformers in
6 accordance with operational guidelines. Forecasted loads are such that power transformers
7 overloads would be held within acceptable limits without customer interruption.