Q. Further to PUB-NLH-617, does Hydro agree with Teshmont's estimate of the Expected Unserved Energy value?

A. Hydro's assessment of the Teshmont analysis is that the report is primarily concerned with the relative performance of the IIS in the Post-HVdc scenario as compared to the Pre-HVdc scenario. Due to the methodology and assumptions used in the analysis, it is Hydro's opinion that the results provide a reasonable comparison of system performance, but should not be used as an indication of the absolute expected unserved energy.

The Teshmont analysis was initiated in 2014 and some assumptions have since changed. These assumptions relate to IIS demand, gross continuous unit ratings, and capacity assistance arrangements, as per Hydro's response to PUB-NLH-615. It was determined that it was not necessary to redo the analysis with these updated parameters due to the fact that the assumptions were consistently applied to both the Pre-HVdc and Post-HVdc scenarios. Changing the assumptions would therefore not have an appreciable impact on the relative comparison performed in the analysis. However, these variations would impact the absolute value of expected unserved energy calculated in the analysis.

With respect to methodology, the calculation of expected unserved energy performed in the Teshmont analysis was based on the unavailability of system elements and load curtailment requirements at peak. Teshmont then reviewed load duration curves for the system and identified periods during which there would be an exposure for unserved load. This is in contrast to the Energy Supply Risk Assessment, which involved an hour by hour summation of unserved energy based

on load shape and the capacity impacts of probabilistic outage rates. The differences in these techniques are subtle, but it is Hydro's view that that both are appropriate for their respective purposes. For the Teshmont study, a complex analysis involving several system components was used to perform a relative reliability comparison for two systems. For Hydro's Energy Supply Risk Assessment, the analysis focused on the impact of specific units to determine an accurate estimate of expected unserved energy.

It is also noted that the Teshmont analysis involved the calculation of expected unserved energy on the basis that the performance of the Labrador Island Link would be equivalent to a typical HVdc system. Consideration of design aspects such as the robustness of the transmission towers or specific performance guarantees[1] were beyond the scope of the study.

[1] Please see Hydro's response to PUB-NLH-616 for discussion relating to performance guarantees for the converter stations.