Q. Reference: Reliability and Resource Adequacy Study – 2022 Update, October 3, 2022, page 4, lines 4-10.

Recognizing that the time from recommendation to eventual commissioning of a new resource (such as Bay d'Espoir Unit 8) could potentially take eight years, the need to proceed with the integration of incremental generation is required. Hydro must also consider the current LIL reliability analysis and plan for the potential of an extended loss of the LIL. Hydro is therefore recommending to proceed with the development of an application for new supply, with the primary consideration being given to expansion at the Bay d'Espoir Hydroelectric Generating Facility; specifically, the addition of Unit 8, with a capacity of 154 MW.

Please compare the advantages and disadvantages of constructing new sources of supply on the Avalon Peninsula, near the load centre on the Island Interconnected System, to those associated with constructing new sources of supply off the Avalon Peninsula.

A. The primary advantage of constructing additional capacity on the Avalon Peninsula would be to avoid potential transmission constraints, particularly in the case of a bipole outage of the Labrador-Island Link ("LIL"). As discussed in the "Reliability and Resource Adequacy Study – 2022 Update," Unit 8 at the Bay d'Espoir Hydroelectric Generating Facility could supply the Avalon Peninsula in the case of a LIL bipole outage. However, the capacity benefits of additional generation expansion off the Avalon Peninsula may be limited by transmission constraints. These same transmission constraints would generally not limit generation on the Avalon Peninsula. Hydro intends to continue studying transmission constraints as an input to the Reliability and Resource Adequacy Study – 2023 Update for various scenarios involving generation on and off the Avalon.

The advantage of constructing additional generating capacity off the Avalon Peninsula would be the availability of more expansion options, including renewable resource options, some of which may be more cost effective than thermal generation. By its nature, hydroelectric generation is

<sup>&</sup>lt;sup>1</sup> "Reliability and Resource Adequacy Study - 2022 Update," Newfoundland and Labrador Hydro, October 3, 2022, vol. III, sec. 5.5.3.

- 1 location-specific and Hydro has not identified any hydroelectric expansion options on the Avalon
- 2 Peninsula. However, there are hydroelectric expansion options available off the Avalon
- 3 Peninsula.