Q. Will the Labrador Link and Maritime Link utilize redundancy in telecommunication paths between the HVDC converter stations and between the HVDC converter stations and the primary and backup system control centers? If yes, please describe the telecommunications technologies and paths that will be used.

A. Both the Labrador-Island Link and the Maritime Link will use route redundancy in telecommunications paths.

The detailed design of telecommunications for the Labrador-Island Link has not been finalized. The primary path for communications between these HVDC converter stations will be provided by OPGW (Optical Power Ground Wire) which will be installed on the HVDC power line between the sites. OPGW is a combination of ground wire and fiber optic cable. In addition, submarine power cables with embedded fiber optic cables shall be used across the Strait of Belle Isle. There will be additional combinations of communications links using optical and microwave facilities used for the path to the control centers. An OTN (Optical Transport Network) technology shall be used for the primary path. The design for the secondary path for communications for the Labrador-Island Link has not been finalized.

Hydro understands that while detailed design of the Maritime Link telecommunications facilities has not been finalized, diverse optical facilities will be established between the converter stations providing route redundancy. A combination of microwave and optical facilities will be used to establish a diverse communications network from the converter stations to control centres, also providing route redundancy.

In each case, the capacity and latency of the telecommunications facilities will be in accordance with the converter suppliers' requirements.