Q. What steps have been taken in the design and build of the electrode lines to minimise its outage rate, when it is not run on the HVDC OHL?

A. Meteorological load cases for the Labrador Island Transmission Link were presented in Exhibit 97, Appendix A, Revision 1 in the Muskrat Falls review. These meteorological load cases were used for all transmission infrastructure, including the electrode lines.

With respect to ice loading, it should also be noted that the electrode line structures are short and similar to distribution class structures, and therefore as per CSA C22.3 No. 60826-10, the height factor of 1.15 used in the conversion from CSA reference load to design load is not applicable. To use the Avalon Peninsula electrode line as an example, the reference load of 40 mm radial glaze ice as specified in CSA C22.3 No. 60826-10 is increased only by the spatial factor of 1.3 to provide the 50-year design load, equating to 52 mm radial ice, and subsequently increased by 1.42 to provide the 500-year design load of 74 mm radial ice. LCP used 75 mm radial glaze ice in the design of these structures. Therefore, even though the electrode line is constructed from wood poles, they have the same or greater level of operational reliability as the HVdc line in the respective zones.