Q. **Reference: PUB-NLH-470:** The spare 350kV cable will need to be rapidly discharged from one potential and then connected to the opposite polarity pole. This means the spare 350kV cable will be exposed to a polarity reversal over a short period of time. Please confirm that the 350kV cable insulation, factory joints, field joints and station terminations will be designed to withstand the polarity reversal, and will be factory tested with the polarity reversal. Please also provide the amount of years of life that are reduced due to each polarity reversal for the 350kV cable insulation, factory joints, field joints and station terminations.

A. The Strait of Belle Isle HVdc mass-impregnated cables, joints, and terminations have been successfully type tested in accordance with Electra 189 (CIGRE), to withstand polarity reversals with voltage 1.4 times the rated DC voltage of +/-350 kV, with no impact on the design life of 50 years.

Polarity reversals are normal operating events for line commuted converter (LCC) systems, as a polarity reversal is required to facilitate a reversal in the direction of power flow.