Q. Please provide the AC Power System Integration Studies for the Isolated Island option.

A. The report "Island Transmission Outlook" dated December 2010 and filed as Exhibit 24 provides a description of the Newfoundland AC transmission system and outlines the near term requirements for load increase. In the context of the Isolated Island option the report provides the following:

- The 230 kV transmission system east of Bay d'Espoir is thermally constrained with respect to the start of the first oil-fired unit at Holyrood with start of the second and third units at Holyrood based on voltage constraints;
- Increased generation off the Avalon Peninsula as envisioned by the Isolated Island scenario (i.e. Portland Creek, Island Pond and Round Pond) will require additional transmission capacity between Bay d'Espoir and the Avalon Peninsula load center if the proposed hydroelectric resources are to be efficiently used prior to the start of units at Holyrood; and
- To this end the report outlines thermal uprating of 230 kV transmission lines TL202 and TL206 between Bay d'Espoir and Sunnyside Terminal Stations, four 230 kV capacitor banks totaling approximately 150 MVAR at Come By Chance Terminal Station for voltage support, a new 230 kV transmission line between Bay d'Espoir and Western Avalon Terminal Stations, and rebuild of 230 kV transmission line TL201 between Western Avalon and Hardwoods Terminal Stations to increase its thermal rating such that the required transmission capacity is in place to effectively deliver the proposed generation additions to the load center in the Isolated Island option.