Q. The report indicates that the proposed alternative was the only technically-viable alternative considered (Section 7.0, page 56). What other alternatives are available that meet the technical requirements of the system and how do they compare economically to the proposed alternative?

A. Preliminary analysis of the 230 kV transmission system east of Bay d'Espoir considered the alternative of converting the existing 230 kV transmission system to 315 kV. Preliminary load flows found that the system preformed well during peak load periods but the system experienced significant overvoltage under light load conditions due to the high levels of transmission line charging and required application of shunt reactors and/or removal of a 345 kV transmission line for voltage control.

Appendix C1 of the Application provides the September 2011 application for the construction of a new 230 kV transmission line from Bay d'Espoir to Western Avalon. Section 4 of Appendix C1 demonstrates the application of a new 315 kV transmission line between Bay d'Espoir and Western Avalon. Given the technical viability of a new 230 kV transmission line between the two stations, the alternative of a new 315 kV line was dismissed as 315 kV line construction is more costly than 230 kV and the 315 kV alternative would require additional 230/315 kV transformation not required in the 230 kV alternative.