Q. At page 12 of Hydro's report "Upgrade Transmission Line Corridor" dated April 28, 2014, Hydro states that "As *the current power system is also unable to remain stable with a similar three* phase *fault at Holyrood, it was decided to not by to prevent this condition when completing the present analysis* as *the system is still susceptible to only one location where a three* phase *fault is of concern. Due to the generally concentrated physical location of the major generation source (BDE) within the electrical grid, this* has been *accepted* as *the cost to mitigate would be a major capital expense. "*

Please explain if the foregoing unmitigated circumstance will continue to exist following completion of the proposed transmission line project.

A. With the sanction of the Maritime Link, Hydro is proposing a system that includes the new 230 kV transmission line between Bay d'Espoir and Western Avalon with a total of 3 x 175 MVAR synchronous condensers installed at Soldiers Pond. For system planning purposes, it is assumed that one of these units is out of service. This is further described in Hydro's response to PUB-NLH-013.

The results of the transient stability study demonstrate system instability in the event of a three-phase fault at Bay d'Espoir Terminal Station during peak load conditions with this proposed system configuration.

As indicated in the figure below, system stability is maintained in the event of a three-phase fault at Bay d'Espoir under peak load conditions when all three Soldiers Pond synchronous condensers are online.

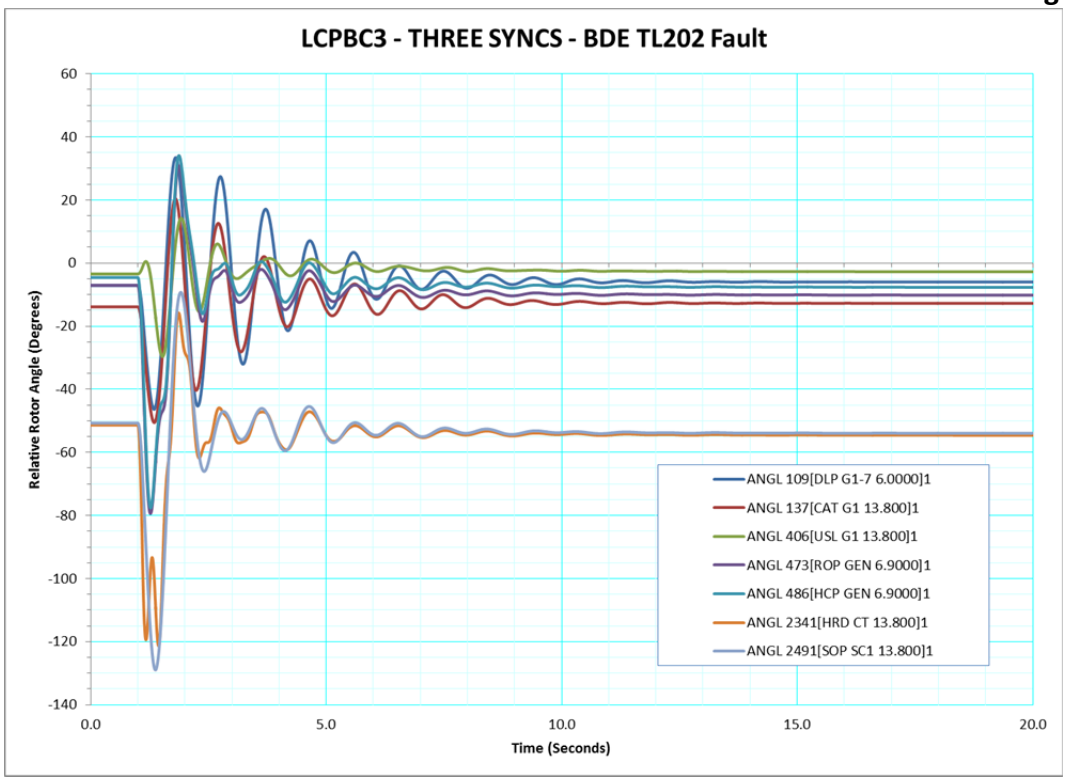


**Figure 1 - Peak Case - Relative Rotor Angles following Three-Phase Fault at BDE with Three SOP Synchronous Condensers in Service**

The System Planning Criteria requires that the system be able to operate assuming one synchronous condenser is out of service at Soldiers Pond to firstly, ensure these critical units can be maintained and secondly, that in the events of a forced outage, system performance would not be adversely impacted. Hydro would plan to perform maintenance on the Soldier's Pond synchronous condensers during off peak periods to have them available to dispatch to ensure the reliable operation of the system during peak periods. In winter months or during severe weather events, all three synchronous condensers may be brought online to enhance system security and mitigate the impact of the Bay d'Espoir three-phase fault.