Q. **Reference Avalon Capacity Study, page 26, Table 7-3:**

Please:

a. Describe and explain whether 4 GTs solve all the issues analyzed in this study.

b. Describe whether resolution would also require reactive support or thermal upgrades.

c. Indicate and explain whether the table implies that a generation-only option could work for all cases, including a 3PF at BDE.

A. a. It is correct that the addition of four 60 MW gas turbines would resolve all technical issues related to transmission constraints identified in the Avalon Capacity Study.[1] Such a solution would allow for the application of steady state Transmission Planning Criteria, even in the unlikely event of a bipole outage, and would also provide the capability to withstand a three-phase fault at Bay d'Espoir without the risk of system instability.

It must be noted that the Newfoundland and Labrador Transmission System is currently not designed to withstand a three-phase fault on the 230 kV bus at Bay d'Espoir. Given the cost implications to reinforce the transmission system and the unlikelihood of such an event occurring [please refer to Newfoundland and Labrador Hydro's ("Hydro") response to PUB-NLH-073], Hydro did not consider it prudent to upgrade the transmission system solely to provide the ability to withstand a three-phase fault on or near the 230 kV bus at Bay d'Espoir. In the interconnected scenario, the NLSO[2] Standard Transmission Planning Criteria[3] currently states that the system must maintain stability following any three-phase fault **except** a three-phase fault on, or near, the Bay d'Espoir 230 kV bus.

[1] "Solutions to Serve Island Demand During a LIL Bipole Outage," TransGrid Solutions, May 23, 2019.
[2] Newfoundland and Labrador System Operator ("NLSO").
[3] "NLSO Standard Transmission Planning Criteria TP-S-007," March 7, 2019, s.5.9, at p.15. <https://www.oasis.oati.com/woa/docs/NLSO/NLSOdocs/TP-S-007_Transmission_Planning_Criteria_UPDATED_03072019.pdf>

b. This solution would not require additional thermal upgrades or reactive support. The incremental generation would be operated to offload the transmission corridor between the Bay d'Espoir Terminal Station and the Soldiers Pond Terminal Station such that there would be no violations to Transmission Planning Criteria.

c. It is correct that a generation-only option would eliminate all violations to Transmission Planning Criteria, including a three-phase fault at Bay d'Espoir, as described in Part a by alleviating the system condition described in Hydro's response to PUB-NLH-065.