Q. Please refer to the response to PUB-NLH-013, Attachment 3, filed in Hydro's Holyrood Blackstart Diesel Units Application, which starts with, "Here is note from Terry Ledrew and John MacIsaac's response. This is not surprising but nevertheless a concern for the Avalon and Holyrood's security. If we lose transmission supply to Holyrood we will not be able to get the plant started to begin restoration." The remaining material in the attachment does not address this security concern. Please clarify and explain the concern.

A. As laid out in PUB-NLH-013 and in PUB-NLH-013 Attachments 1 to 12 filed in Hydro's Application, *Installation of Diesel Units for the Purpose of Blackstarting*, the concern was the lack of blackstart capability for the Holyrood Thermal Generating Stations (HGTS). The HGTS is normally started using power from the Island Interconnected System (IIS) transmission grid. The Holyrood Gas Turbine Unit was in place to be used as a back-up source of power to start the HTGS in the event of a sustained interruption of the transmission supply to the plant. It was not used for short duration interruptions to the HTGS as the gas turbine start time is generally longer than the time to restore the transmission lines to service. It thus helped to secure the ability to start the HTGS for low probability events[1].

A sustained transmission supply interruption requiring the use of the Holyrood Gas Turbine could occur from a severe weather event resulting in multiple transmission line failures requiring repair or field investigation to enable the restoration of one of

[1] In most transmission interruptions the restoration to service of transmission lines is relatively quick as the interruptions are caused by high winds or lightning which do not cause sustained outages to multiple lines requiring repairs or field investigation to restore the lines. Please refer to CA-NLH-004 of Hydro's Application, *Installation of Diesel Units for the Purpose of Blackstarting* for the number of times the unit was used for blackstart.

the lines. For the broader Avalon Peninsula, this could be caused by the loss of two of the parallel 230 kV transmission lines connecting the Avalon Peninsula stations to the remainder of the ISS. Therefore, the Holyrood Gas Turbine could be used to start the HTGS and begin restoring customers as part of an isolated or electrically islanded grid on the Avalon Peninsula while repairs and field investigations took place to restore the lines to the remainder of the IIS grid. It therefore provided security for faster restoration of customer service under this scenario.

The Holyrood Gas Turbine also provided security to the HTGS by providing power to the station above the emergency supply to the plant provided by the emergency diesel units at the plant. This could occur if due to severe weather there was a sustained outage to all transmission lines into the plant (there are five transmission lines connected to the plant, three 230 kV, one 138 kV and one 69 kV) or a broader Avalon Peninsula grid interruption as noted above. Under this scenario, the Holyrood Gas Turbine provided security for faster restoration of customer service once one of the major 230 kV transmission lines connecting the plant to customers was restored to service.