Q. On page 23 of the Upgrade Transmission Line Corridor Report report reference is made to the pre-contingency overload of TL202 and TL206 when dealing with maximum island hydraulic generation. Does this condition exist presently and how is the proposed solution different other than the substitution of the Labrador Island Link for the Holyrood Plant?

A. On page 23 of the Report, reference is made to the pre-contingency overload of TL202 and TL206 (105%) when Island hydraulic generation is maximized (1085 MW) during the spring/fall period with system loads of 1261 MW (BC8). Today, under similar conditions, TL202 and TL206 are loaded to 99% of their respective thermal ratings as shown in Figure 1. TL202 and TL206 are not overloaded in Figure 1 due, in part, to Vale operations at Long Harbour not being in service, and, in part, due to the operation of thermal generation at Holyrood. On page 23 of the Report, the TL202 and TL206 loading equals 105% given that the study assumes Vale is in operation with a load of 80 MW. A steady state load flow assuming Vale online in the existing system is shown in Figure 2. Under these conditions, TL202 and TL206 will be loaded to 102% of thermal rating, very similar to the BC8 study case.

In the existing system, thermal overloads of TL202 and TL206 would be present if Hydro were to maximize Island hydraulic generation prior to the start of the first generating unit at Holyrood in the fall. To avoid thermal overloading of TL202 and TL206 within the existing system, Hydro operates generating units at Holyrood and reduces generation from off Avalon Peninsula hydro-electric resources.

Maximizing hydraulic sourced generation west of Bay d'Espoir has been an issue for Hydro following the closure of the pulp and paper mills at Grand Falls-Windsor and

Stephenville with only two 230 kV transmission lines (TL202 and TL206) provide transmission onto the Avalon Peninsula. Today, the Island Interconnected System is not operated to maximize hydraulic generation due to the thermal limits along the Bay d'Espoir – Western Avalon corridor. Transfers along this corridor are limited due to the thermal limits (current carrying limits) of each circuit. Each line is rated at 199.3 MVA during the summer, 297.7 MVA during the spring/fall seasons and 369.5 MVA during the winter months. During normal operations, TL202 and TL206 are limited to 50% of their thermal rating plus the standby generation behind the load, to ensure thermal ratings are not exceeded for loss of the parallel line. The remaining customer load is supplied via generation on the Avalon Peninsula including Holyrood.

The addition of the HVdc converter station at Soldier's Pond will provide increased generation on the Avalon Peninsula and provide additional reactive support in the form of filter banks and synchronous condensers, maximizing theoretical transfers over the Bay d'Espoir – Western Avalon corridor. The base cases in this analysis were used to stress the system and identify possible issues with the performance of the transmission system post-interconnection.

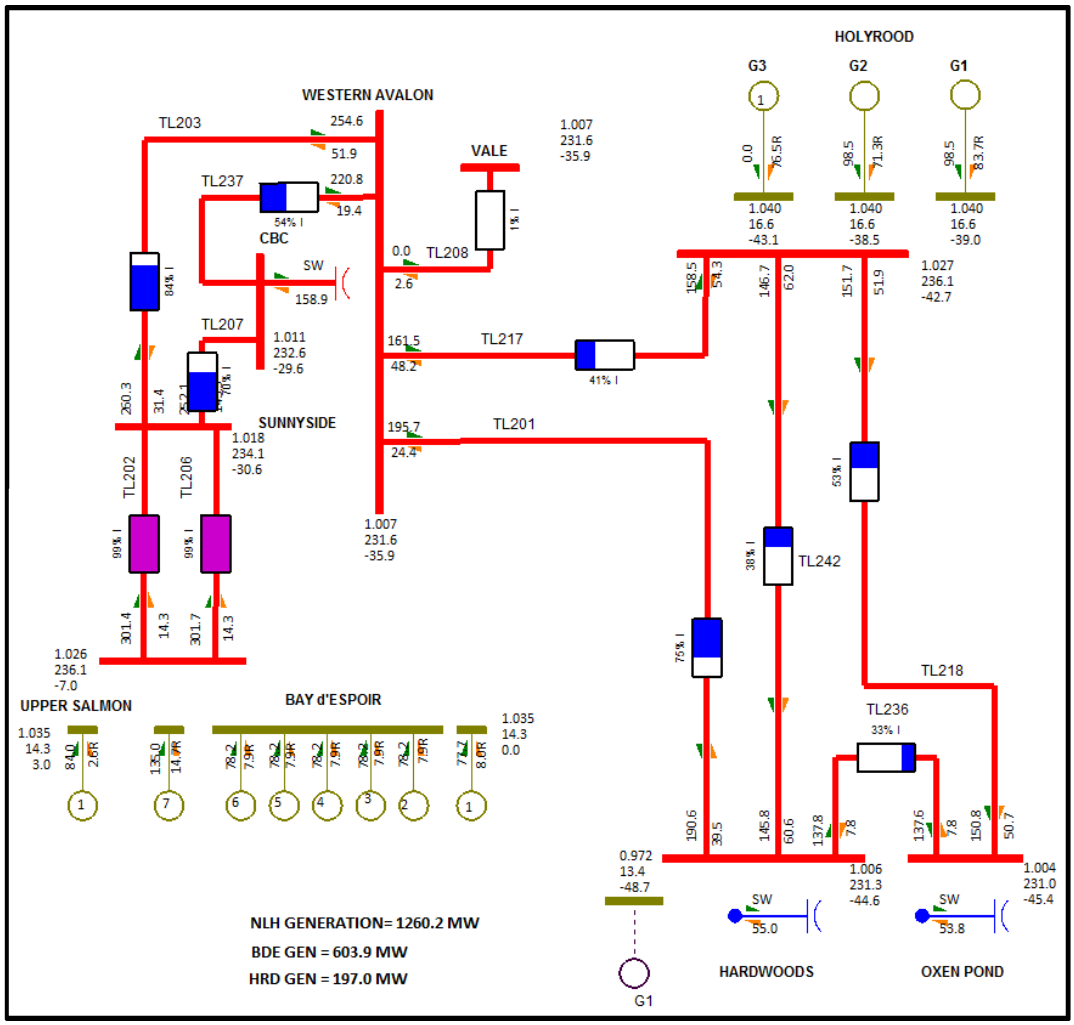

Figure 1: Spring/Fall – Maximum Hydraulic Generation –

TL202/TL206 Loaded to 99% of Thermal Rating

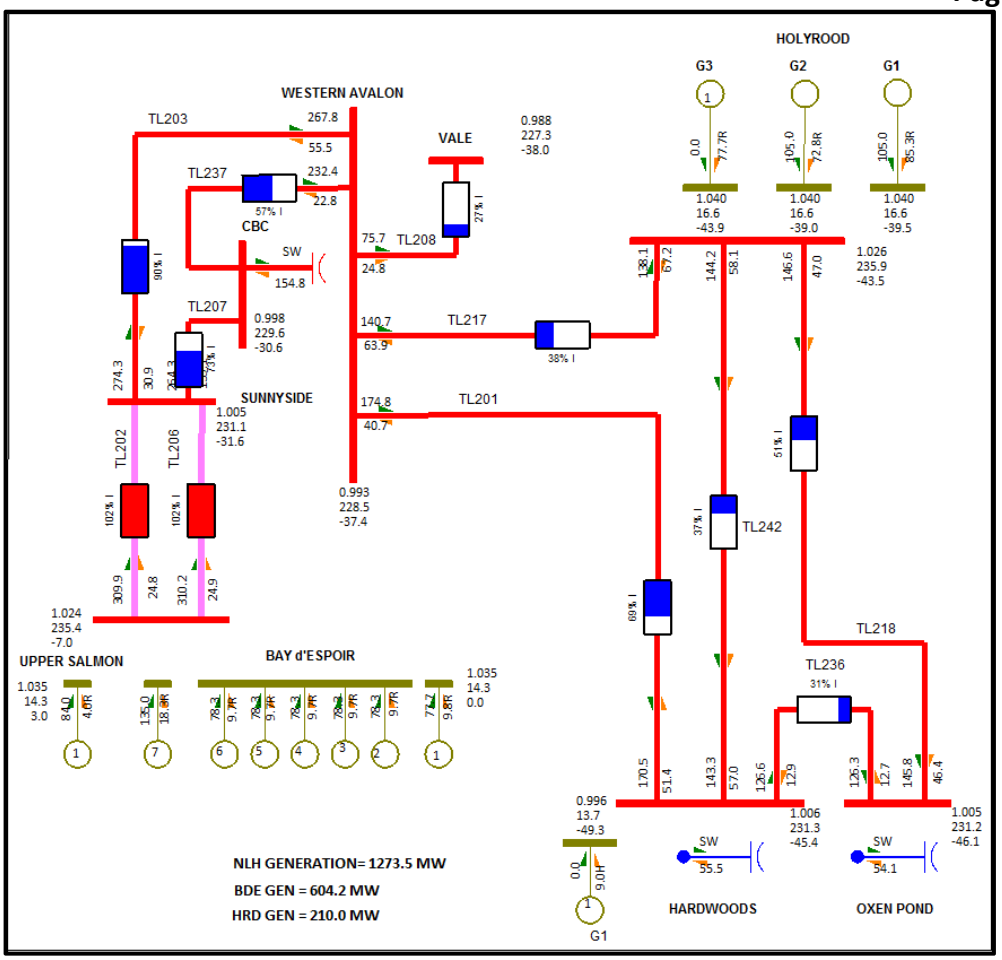

Figure 2: Spring/Fall – Maximum Hydraulic Generation –

TL202/TL206 Loaded to 102% of Thermal Rating – Vale Online