Q. In the event of a sudden and unexpected loss of generation or transmission assets on the Island Interconnected System, how long does Hydro expect it would take to start the 100 MW combustion turbine and supply 100 MW of load?

A. The new 120 MW combustion turbine is being designed and constructed to complement existing generating capacity to provide reliable service to customers. It will be placed in dispatch order with other available generating capacity including existing gas turbines to meet service reliability requirements and minimize operating costs. Procedures will be developed, implemented, tested and drilled with staff to provide the minimum start-up and loading time under different operating scenarios.

During periods of heightened alert during severe weather conditions or reduced operating reserves, the unit will be placed in a state of readiness including, as the situation dictates, being placed on-line to be ready to quickly increase output as required to supply customers.

Under the stated scenario of the question, where a heightened level of readiness is not in place, the start-up and loading time for the unit has been estimated for the following scenarios:

Scenario 1 - Emergency Service Duty: Start-up power is provided from the Island Grid.

Estimated time: 40 minutes

It is estimated it will take 20 minutes to bring the main generator unit to its minimum load. It will then take an additional 20 minutes to load the unit to 100 MW.

Scenario 2 – Blackstart Service: Start-up power is provided from the unit's blackstart facilities.

Estimated time: 55 minutes

The plant is equipped with a diesel generating unit and a small combustion turbine to provide blackstart capability for the main generator. It is estimated it will take 15 minutes to bring the main generating unit to the "Ready to Start" status using this equipment. It will take an additional 20 minutes to bring the main generator up to speed and support the blackstarting load requirement of the Holyrood Thermal Generating Station load. It will take an additional 20 minutes to bring the unit to a 100 MW output level. The actual rate of picking up customer load under a blackstart scenario will be established through procedures developed between Hydro's Energy Control Centre and Newfoundland Power's control centre.