1 Q. **2015 Capital Plan**

2   With reference to IC-NLH-6, explain, in detail, what foreseeable "emergency",

3   "system peak", or "voltage support" scenarios, after full commissioning of the 100

4   MW combustion turbine at Holyrood and of the Post-Isolated Island System**,** and

5   the conversion of Holyrood plant to synchronous condenser mode, will still need to

6   be addressed by the continued operational status of the Hardwoods gas turbine?

7

8

9 A. The Hardwoods combustion turbine will continue to be an integral component of

10   Hydro's standby generating capacity following completion of the Labrador – Island

11   HVdc Link (LIL). The Hardwoods combustion turbine role in meeting system peak

12   during an "emergency" situation such as the loss of the LIL is outlined in Hydro's

13   response to IC-NLH-006.

14

15   In addition to providing standby/emergency capacity in the event of the loss of the

16   LIL, the Hardwoods combustion turbine will continue to provide voltage support on

17   the Avalon Peninsula when operated in synchronous condenser mode. The

18   synchronous condenser mode of operation assists in ensuring acceptable system

19   voltages on the Avalon Peninsula following the loss of one of the other voltage

20   support devices on the Avalon including the Holyrood synchronous condenser, the

21   Soldiers Pond synchronous condensers and the shunt capacitor banks at Hardwoods

22   and Oxen Pond.

23

24   Further, Hydro maintains sufficient 230/66 kV transformer capacity in the

25   Hardwoods – Oxen Pond Loop to supply peak load in the loop following the loss of

26   the largest unit in the loop. The Hardwoods combustion turbine is used to assist in

27   supply of the loop load with the largest transformer out of service. At a high level,

1   the removal of the Hardwoods combustion turbine is approximately equal to a

2   230/66 kV transformer rated at 51 MVA. Consequently, removal of the Hardwoods

3   combustion turbine from service would advance the requirement for additional

4   transformer capacity in the Hardwoods – Oxen Pond Loop as the firm load serving

5   capacity of the loop would be reduced.