

1 Q. Reference PUB-NLH-008: Please explain how generation reserves will be impacted
2 by the reliability and the availability of the LIL. In particular, will Hydro plan for the
3 total outage of the LIL plus an outage of the largest generator in the IIS?
4

5

6

7 A. In its probabilistic generation planning, Hydro considers the probability of bi-pole
8 and mono-pole outages on the LIL along with the probability of outages of all other
9 generating plants to determine the level of generating reserve required to maintain
10 LOLH targets. The LOLH target will be met for a number of years after the LIL goes in
11 service due to the combination of a low LIL bi-pole forced outage rate and low
12 forced outage rates for Hydro's hydraulic generation. During the initial years of
13 operation of the LIL when there may be early operational and equipment problems,
14 NLH will maintain the Holyrood plant in standby to enhance the security of supply
15 to customers. Once the LIL reliability performance has been demonstrated, which is
16 expected to be two years following start-up, Hydro will apply to the PUB to remove
17 the Holyrood plant from a standby state and to begin executing decommissioning
18 plans.

19

20 Also, from a generation reserve perspective, the island will have sufficient capacity
21 to supply load in the event of a full bi-pole outage for a number of years after the
22 ML and LIL are in-service and the Holyrood Plant is decommissioned. During this
23 period, Hydro will monitor the reliability and availability of the LIL and will continue
24 to perform analysis to determine if additional generation support is required.

25

26 From a Transmission Planning perspective, Hydro considers a number of single
27 contingency events (N-1) that the system must be able to withstand without loss of
load, utilizing the generation reserves identified through the generation planning

1 process. This is consistent with NERC transmission planning standards. These
2 contingencies, amongst others, include the loss of the largest generating unit, the
3 loss of a pole on the LIL, leading to mono-pole operation and a temporary bi-pole
4 fault.

5

6 In addition to the above, Hydro will be planning for the rare simultaneous outage of
7 the LIL and an outage of the largest generator on the IIS in its contingency planning
8 process and through the development of its emergency operating procedures.

9 Depending on customer demand, the plans for such rare circumstances will include

10 planned customer load curtailment.