

1 Q. Further to PUB-NLH-438 what would be the impact on the Island Interconnected
2 System of the Labrador Island Link operating for extended periods with reduced dc
3 voltage?

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6 A. The Labrador – Island HVdc Link will be capable of delivering approximately 650
7 MW at Soldiers Pond in bipole mode when operating under reduced dc voltage
8 conditions. During reduced dc voltage operation, there will be a prorated share
9 between the Island use and the Nova Scotia Block. Given a continuous reduced dc
10 voltage rating of 650 MW, the pro rata split will be 123 MW for the Nova Scotia
11 Block and 527 MW for the Island.

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13 Under the reduced dc voltage operation, capacity available to supply Island load
14 would include approximately:

- 15 • 1013 to 1043 MW of on Island hydro-electric (variation due to reservoir
16 levels);
- 17 • 234.7 MW of NLH standby combustion turbines and diesel (including the
18 new 120 MW Holyrood CT);
- 19 • 41.5 MW of Newfoundland Power standby combustion turbine and
20 diesel;
- 21 • 527 MW of supply at Soldiers Pond on LIL; and
- 22 • Customer generation including:
 - 23 ○ 79.1 MW of Newfoundland Power hydro-electric (gross
24 continuous rating), and
 - 25 ○ 81.1 MW of 60 Hz Deer Lake Power hydro-electric generation,
26 for a total Island capacity of 1976.4 to 2006.4 MW.

Island Interconnected System Supply Issues and Power Outages

- 1 Under a continuous reduced dc voltage scenario, there is sufficient Island
- 2 generating capacity to supply the total Island load until the mid-2030's based upon
- 3 recent load forecasts.