

PUB-NLH-061

Island Interconnected System Supply Issues and Power Outages

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1 Q. Further to the response to PUB-NLH-018, state when Hydro first became aware
2 there could be a capacity deficit and the amount of the anticipated deficit at that
3 time and now. Explain in the response why Hydro has not to date initiated an
4 application for approval to construct any additional capacity to meet the forecast
5 deficit and what action Hydro has taken to provide the necessary additional
6 generation.

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9 A. A capacity deficit is defined by the Loss of Load Hours (LOLH) exceeding 2.8 hours.
10 This is a probabilistic measure that considers the expected load and the generation
11 available. It is determined through use of a computer model called Strategist. The
12 model uses as input the forecast load, generation maintenance requirements and a
13 probability of generation forced outages.¹

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15 A capacity deficit was first identified in the 2008 Strategist results, with the deficit
16 projected to occur in 2012. This deficit has moved out further into the future with
17 subsequent Strategist analyses. The load has evolved with decline of paper
18 production and the delays in the startup of the Vale processing facility. These are
19 considered major drivers behind the timing changes to the potential deficit. The
20 most recent analysis in 2012 shows the capacity deficit occurring in 2015.

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22 From the Strategist analysis, Hydro determined that the combustion turbine was
23 the least cost option. In 2011, Hydro commenced the preliminary site analysis,
24 budget and engineering work. In 2012, Hydro determined that the combustion
25 turbine would be best established at Holyrood. Hydro was finalizing an application

¹ Forced outage probability is established by generation type and forced outage rates that are benchmarked against actual unit performance.