

1 Q. **Capacity and Planning**

2 With the reference to section 3.5.3 Adequacy of Supply, please provide in table
3 format changes to the generation and transmission planning criteria's since the
4 outages in 2014.

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7 A. With respect to Generation Planning, prior to 2014 Hydro had employed the
8 following criteria:

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10 **Capacity:** The Island Interconnected System should have sufficient generating
11 capacity to satisfy a Loss of Load Hours (LOLH) expectation target of not
12 more than 2.8 hours per year.¹

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14 **Energy:** The Island Interconnected System should have sufficient generating
15 capability to supply all of its firm energy requirements with firm system
16 capability.²

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18 Since 2014, Hydro has modified its capacity planning criteria to include additional
19 metrics, specifically reserve margin, and to consider a more onerous peak demand
20 forecast. Modifications to Hydro's planning criteria are presented in Table 1.

¹ LOLH is a statistical assessment of the risk that the System will not be capable of serving the System's firm load for all hours of the year. For Hydro, an LOLH expectation target of not more than 2.8 hours per year represents the inability to serve all firm load for no more than 2.8 hours in a given year.

² Firm capability for the hydroelectric resources is the firm energy capability of those resources under the most adverse three-year sequence of reservoir inflows occurring within the historical record. Firm capability for the thermal resources (Holyrood Thermal Generating Station) is based on energy capability adjusted for maintenance and forced outages.

Table 1 – Modifications to Hydro's Capacity Planning Criteria

Criterion	Date Modified	Description
Reserve Margin 240 MW	February 2015	Hydro maintains a 240 MW reserve margin which provides Hydro with the ability to withstand the most onerous single contingency while maintaining a spinning reserve of 70 MW.
P90 Forecast as a base for supply planning decisions.	February 2015	Hydro now uses a P90 demand forecast as a base for its supply planning decisions. This change, from a P50 forecast, adds approximately 60 MW to the peak demand forecast.

1 Hydro has not made any changes to its transmission planning criteria since 2014.