

1 Q. RE: HGB 8:

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3 55.1 Will the change from an LOLE of 0.2 days to a LOLH of 2.8 hours per
4 year require any capital expenditure for capacity requirements?

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6 55.2 Is the use of a LOLH of 2.8 hours the current Canadian industry
7 norm? If not what is?

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10 A. 55.1 The change from an LOLE of 0.2 days per year to an LOLH of 2.8
11 hours per year will not require any capital expenditure for capacity
12 requirements.

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14 55.2 In order to confirm our understanding of what the current capacity
15 reliability criteria is for other utilities in Canada, Newfoundland and
16 Labrador Hydro (Hydro) completed a telephone survey in July of this
17 year. The results of the survey are provided in the table below. Utilities
18 express generation reliability as either LOLE (Loss of Load
19 Expectation) or LOLH (Loss of Load Hours) target. The only difference
20 being the units of measure. The expression of the reliability target as
21 an LOLE is most prevalent, as well as the use of a target value of 0.1
22 days/year. Hydro's reliability criteria of an LOLH of 2.8 hours/year is
23 equivalent to an LOLE of 0.2 days/year. Also note that although most
24 utilities use the same reliability target, their capacity reserve margins
25 can differ. This is because capacity reserve margins are influenced by
26 many factors such as:

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- An acceptable level of reliability;

- 1 • The size of a system;
- 2 • The number and size of generating units;
- 3 • The type of generating units;
- 4 • Whether interconnection assistance from other utility systems is
- 5 available and at what level; and
- 6 • System load shape.

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8 Each utility system is unique in its design and operation.

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10 The expression of capacity reserve, by utility, also differs. While some
11 calculate the reserve as a percentage of firm load, others calculate it
12 as a percentage of firm capacity. For the island interconnected
13 system, Hydro calculates capacity reserve, as a percentage of firm
14 load at 18.5 %. When the equivalent capacity is expressed as a
15 percentage of firm generating capacity, the value becomes 15.6 %.

Utility	Generation Capacity Reliability Target	Capacity Reserve	Comments
Newfoundland & Labrador Hydro	LOLH = 2.8 Hours/Year ¹	18.5% of firm load	
Nova Scotia Power	LOLE = 0.1 Days/Year	20% of firm load	Follows the guidelines set out by the Northeast Power Co-ordinating Council (NPCC)
New Brunswick Power	LOLE = 0.1 Days/Year	20% of firm load	Follows the guidelines set out by the NPCC
Hydro Quebec	LOLE = 0.1 Days/Year LOLH = 2.4 Hours/Year	12% of firm load	Follows the guidelines set out by the NPCC
Ontario Power Generation	LOLE = 0.1 Days/Year	18% (short term), 20-25% (long term) of firm load	Follows the guidelines set out by the NPCC.
Manitoba Hydro	LOLE = 0.1 Days/Year Without Interconnections (guideline)	12% of firm load as a minimum	Follows the guidelines set out by the Mid-Continent Area Power Pool (MAPP)
SaskPower	Unserved Energy not greater than 0.035%/Year	15% as a minimum, of firm load	Follows the guidelines set out by the MAPP
BC Hydro	LOLE = 0.1 Days/Year	14% of firm installed capacity	Follows the guidelines set out by the Western System Co-ordinating Council (WSCC)

1 – Equivalent to LOLE = 0.2 Days/year