

- 1 Q. **2017 General Rate Application - Operations**  
2 Page 3.23, lines 10-12 – Provide the detailed calculation of the reserve at criteria for  
3 the test years 2018 and 2019.  
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6 A. Please refer to Tables 1 to 3 for the determination of Reserve at Criteria for the  
7 2018 and 2019 Test Years based on Expected Installed Capacity in 2018/19:

**Table 1 Gross Continuous Unit Rating (GCUR) (MW)**

<b>Newfoundland and Labrador Hydro</b>	
Total Hydraulic	954.4
Holyrood	490
Combustion Turbine	223.5
Diesel	24.7
<b>Newfoundland Power</b>	
As per generation test January 2017	122.5
<b>CBPP</b>	
Hydraulic	99.1 <sup>1</sup>
<b>Exploits</b>	
Hydraulic	63
<b>Non-Utility Generators</b>	
Hydraulic	33.6
<b>Combined System Available GCUR (2018/19):</b>	<b>2011 MW</b>

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<sup>1</sup> 60 hz only.

**Table 2 Existing Curtailable and Capacity Assistance Agreements<sup>2</sup>(MW)**

<b>Agreement</b>	<b>Capacity Available</b>
CBPP	80 <sup>3</sup>
Vale	6
Praxair	5
NP Curtailable Demand	9.9
<b>Total:</b>	<b>101</b>

**Table 3 Capacity and Demand for the 2018/19 Expected Installed Capacity**

Installed Capacity:	2011	MW
Curtailable and Capacity Assistance: <sup>1</sup>	101	MW
<b>Total Capacity Available on Peak:</b>	<b>2112</b>	<b>MW</b>
Total Capacity Available on Peak:	2112	MW
Less Reserve Requirement:	- 240	MW
<b>Maximum demand that can be supplied on peak:</b>	<b>1872</b>	<b>MW</b>

1 Using the information provided above, the Reserve at Criteria is calculated as follows:

$$\begin{aligned}
 \text{Reserve at Criteria} &= \frac{\text{Total capacity available on peak} - \text{Maximum demand that can be supplied on peak}}{\text{Maximum demand that can be supplied on peak}} \\
 &= \frac{2112 - 1872}{1872} = 12.8225\%
 \end{aligned}$$

2 Finally, applying this reserve at criteria to Newfoundland Power’s combined maximum  
 3 winter demand hydraulic and thermal capacity of 133,191 kW, as supplied to Hydro by  
 4 Newfoundland Power’s System Planning department, yields the results provided in Table 3-

<sup>2</sup> Vale’s diesel generation is embedded in Hydro’s GCUR.

<sup>3</sup> On October 13, 2017 Hydro filed an application with the Board to combine the two existing Corner Brook Pulp and Paper agreements into one single Revised Capacity Assistance Agreement that will provide up to 90 MW of capacity assistance to Hydro under consistent terms and conditions.

- 1 13 of Revision 2 to Hydro's 2017 General Rate Application submission. This table has been
- 2 reproduced for convenience.

**Table 3-13 Newfoundland Power Generation Credit (kW)**

Hydraulic Capacity	94,191
Thermal Capacity	39,000
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Total	133,191
Reserve at Criteria	1.128225
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<b>Newfoundland Power Generation Credit</b>	<b>118,054</b>