

# Resource Adequacy Capacity Target Statistical Approach

**Resource Adequacy Forum**  
**Technical Committee**  
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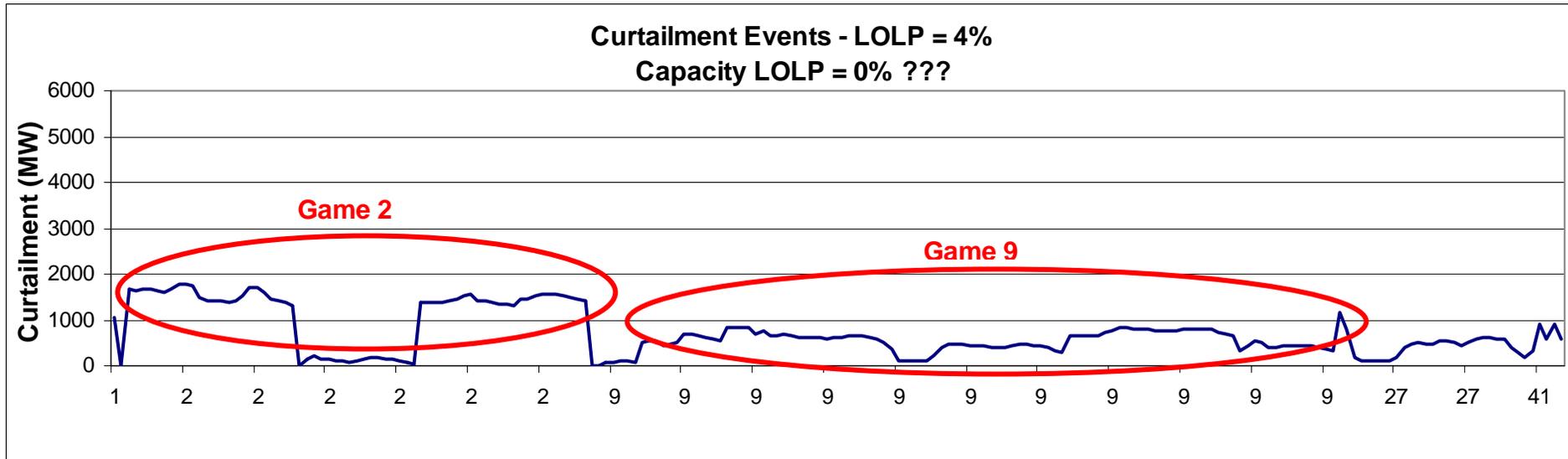
# Capacity Target Statistical Approach

- Define a significant “peaking” event, for example:
  - Duration – **10 Hours**
  - Magnitude – **Peaks greater than 3,000 MW**
- Determine an acceptable likelihood for peaking events (i.e. like the 5% energy LOLP).
- Run Genesys to assess the capacity LOLP.
- Adjust the load so that the **capacity** LOLP is 5%.
- Calculate the resulting reserve margin (= estimate for the capacity target).

# Curtailement Events

L/R Bal approximately -1,500 aMW

This is a scenario that is **just** adequate for **energy** needs.





# Regional Capacity Assessment

(L/R Bal = -1,500 aMW, LOLP = 5%)

January 2006	1-Hour	2-Hour	4-Hour	10-Hour
Hydro ('37)	26,850	21,131	20,541	18,686
Non-hydro	9,760	9,760	9,760	9,760
Firm Imports	-1,218	-1,218	-1,218	-1,218
Spot Imports	3,000	3,000	3,000	3,000
Total Resource	38,392	32,673	32,083	30,228
Load (Avg)	25,633	25,506	24,847	22,691
Balance	12,759	7,167	7,236	7,537
<b>Reserve</b>	<b>50%</b>	<b>28%</b>	<b>29%</b>	<b>33%</b>

This is a scenario that is **just** adequate for **energy** needs.

# Estimating the Capacity Target

- Planning to the reserve margins in the previous slide yields a **0%** capacity LOLP
- Adding 500 aMW of load raises the capacity LOLP to 6%
- Calculate the resulting reserve margins, which produce an estimate for the capacity target
- **Planning to these reserve margin targets will yield a 6% capacity LOLP**

# Regional Capacity Assessment

(L/R Bal = -2,000 aMW, LOLP = 10%)

<b>January 2006</b>	<b>1-Hour</b>	<b>2-Hour</b>	<b>4-Hour</b>	<b>10-Hour</b>
Total Resource	38,392	32,673	32,083	30,228
Load (Avg)	25,633	25,506	24,847	22,691
Add'l Load	610	610	595	540
New Load	26,243	26,116	25,442	23,231
Balance	12,149	7,167	6,641	6,997
<b>Cap Target</b>	<b>46%</b>	<b>27%</b>	<b>26%</b>	<b>30%</b>

This scenario yields a 6% capacity LOLP.