Non-Retail BTMG Performance
NRBTMG Operational Requirements

• Non-Retail Behind the Meter Generation (NRBTMG) that has output netted from load for purposes of determining LSE’s Network Service Peak Load (NSPL) & Obligation Peak Load (OPL) is required to operate during the first 10 occurrences of Maximum Generation Emergency conditions in the zone where the unit resides between the period of November 1 through October 31
  • Applies to MGE condition called for generation or transmission emergencies

• Maximum Generation Emergency Action and Deploy All Resources Action trigger requirement to operate
  • Operate at maximum net or gross electrical power output, subject to equipment stress limits of unit

• Performance of a unit during emergency event will be measured against an expected performance level of such unit
Impact of Performance Shortfalls for Area

- Unit performance shortfalls are netted for units located in same modeled wholesale area

- Positive net performance shortfall (under-performance) in area results in event netting reduction penalty for area
  
  \[
  \text{Event Netting Reduction Amount} = 10\% \text{ of net performance shortfall}
  \]
  
  \[
  \text{Total Netting Reduction Amount} = \text{Sum of Event Netting Reduction Amounts for first 10 events}
  \]

- EDC’s procedures for calculating an area’s NSPL and OPL shall ensure that the total operating Non-Retail BTMG that is allowed to net against the area’s actual load during the relevant hours is reduced by the total netting reduction amount in the area
  
  ➢ \textbf{Results in an increase in the area’s NSPL in subsequent calendar year and OPL in subsequent delivery year}
NRBTMG required to operate during emergency events from Nov 1-Oct 31

- If unit operated during CP hours in prior Nov 1-October 31 period required to operate during first 10 events

Failure to operate during first 10 events impacts NSPL for wholesale area

- Upward adjustment to NSPL for subsequent calendar year

Performance results for Dec 2022 events available early April 2023

- Unit performance shortfalls
- Netting reduction penalty amount for wholesale area

Final total netting reduction penalty amount for wholesale area as a result of first 10 events

- Available no later than Nov. 30

Failure to operate during first 10 events impacts OPL for wholesale area

- Upward adjustment to OPL for subsequent delivery year
Expected Performance Level

Expected Performance Level = Minimum (Netting Capability Value, Highest Hourly Output MW During CP Hours*)

*Excludes generation output that was participating in PJM Markets

Netting Capability Value = Summer Rated ICAP MW - ICAP MWs in PJM Markets
(1) Select the desired Compliance Year from the drop down list.

A list of NRBTMG units with their Expected Performance value for the compliance year is displayed.

Expected Performance for a compliance year is available in December of the compliance year. PJM sends a communication when expected performance data is available in Capacity Exchange.
Unit Performance Shortfall

- Excused MWs may be granted due to scheduled outages or transmission restrictions
- No excused MWs for scheduled outages that occur during emergency events from June through September
## Average Output for Event

### 12/23/2022 Event: 17:30 – 23:00 EPT

<table>
<thead>
<tr>
<th>Unit Name</th>
<th>Emergency Event</th>
<th>HOUR ENDING (EPT)</th>
<th>TOTAL OUTPUT (MW)</th>
<th>OUTPUT IN PJM MARKETS (MW)</th>
<th>PERFORMANCE OUTPUT (MW)</th>
<th>Number of Intervals in Event Hour</th>
<th>Performance Output * Number of Intervals in Event Hour (MW)</th>
</tr>
</thead>
<tbody>
<tr>
<td>NRBIMG DIESEL UNIT 3</td>
<td>12/23/2022 Max Gen Emergency Action</td>
<td>12/23/2022 18:00</td>
<td>2.5</td>
<td>0</td>
<td>2.5</td>
<td>6</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td></td>
<td>12/23/2022 19:00</td>
<td>3.2</td>
<td>0</td>
<td>3.2</td>
<td>12</td>
<td>38.4</td>
</tr>
<tr>
<td></td>
<td></td>
<td>12/23/2022 20:00</td>
<td>3.3</td>
<td>0</td>
<td>3.3</td>
<td>12</td>
<td>39.6</td>
</tr>
<tr>
<td></td>
<td></td>
<td>12/23/2022 21:00</td>
<td>3.3</td>
<td>0</td>
<td>3.3</td>
<td>12</td>
<td>39.6</td>
</tr>
<tr>
<td></td>
<td></td>
<td>12/23/2022 22:00</td>
<td>3.3</td>
<td>0</td>
<td>3.3</td>
<td>12</td>
<td>39.6</td>
</tr>
<tr>
<td></td>
<td></td>
<td>12/23/2022 23:00</td>
<td>3.3</td>
<td>0</td>
<td>3.3</td>
<td>12</td>
<td>39.6</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>66</strong></td>
<td></td>
<td><strong>211.8</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Performance Output MW = Total Output MW – Output in PJM Markets

Average Output for Event = Sum of (Performance Output * Number of Intervals in Event Hour)/Total Number of Intervals for Event = 211.8 MW/66 = **3.2 MW**

Output in PJM Markets is reported if unit is tied to a Pre-Emergency/Emergency DR Hub registration ID.
Excused MW due to Scheduled Outage

- If Average Output MW < Expected Performance, Excused MWs may be granted if scheduled outage reported to PJM in advance of the emergency event.
- Outages submitted to PJM or modified during the emergency event will not be considered.
- No Excused MW will be granted for emergency events occurring during June through September.

Excused MW due to Transmission Restrictions

- If Average Output MW < Expected Performance, Excused MWs may be granted if unit was unable to generate due to the actual wholesale area load level and restrictions placed on the unit to prevent injections into the PJM transmission system.
Unit Shortfalls & Net Shortfalls

(1) Select the desired Compliance Year from the drop down list.

(2) Select the desired Event from the drop down list.

Wholesale area with positive net shortfall subject to netting reduction penalty

Unit Performance Shortfalls netted for NRBTMG units in wholesale area
Total Netting Reduction for Wholesale Area

Event Netting Reduction = 10% of the Net Performance Shortfall for wholesale area for the emergency event

Total Netting Reduction = Sum of event netting reduction amounts for wholesale area for the first 10 emergency events in compliance period
Netting Reduction

(1) Select the desired Compliance Year from the drop down list.

The total netting reduction amount for a wholesale area due to the first ten emergency events during the compliance year is displayed.

The EDC that is responsible for calculating the NSPL and OPL for wholesale areas in the zone will be able to view netting reduction data for all wholesale areas in the zone.

In EDC procedures for calculating a wholesale area’s NSPL or OPL for the subsequent calendar year/delivery year, the total amount of operating NRBTMG that is allowed to net against the wholesale area’s actual load during the relevant hours is to be reduced by the total netting reduction amount for the wholesale area.
### Impact to NSPL and OPL

<table>
<thead>
<tr>
<th>CP Hour</th>
<th>Area Gross Load (MW)</th>
<th>Operating NRBTMG (MW)</th>
<th>Area Net Load (MW)</th>
<th>Total Netting Reduction Amount (MW)</th>
<th>Operating NRBTMG Minus Total Reduction Amount (MW)</th>
<th>Adjusted Area Net Load (MW)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>10</td>
<td>5</td>
<td>5</td>
<td>3</td>
<td>2</td>
<td>8</td>
</tr>
</tbody>
</table>

- **EDC** is to account for total netting reduction amount in procedures for calculating wholesale area’s NSPL or OPL for subsequent calendar year/delivery year.
- Operating Non-Retail BTMG that is eligible to net against the wholesale area’s actual load during the relevant coincident peak hours is to be reduced by total netting reduction amount.
- Results in an upward adjustment to NSPL and OPL for wholesale area.