System Operations Report

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MC Webinar
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January 2022
Hourly Error: **1.63%**  Peak Error: **1.53%**
Daily Peak Forecast Error (January)

- Error at Peak Hour
- Weekend / Holiday

Over-forecasting

Under-forecasting
PJM’s BAAL performance has exceeded the goal of 99% for each month in 2022.
• One spinning event
• Seven reserve sharing events with the Northeast Power Coordinating Council (NPCC)
• The following Emergency Procedures occurred:
  – 1 Conservative Operations
  – 7 Cold Weather Alerts
  – 44 Post-Contingency Local Load Relief Warnings (PCLLRW)
  – 11 Shortage Cases Approved
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• The approved Shortage Cases occurred on:
  – 01/13/22:
    – 1 Shortage Case for 06:30
    – 1 Shortage Case for 06:35
    – Fast load increase, unit tripping, and increased interchange
  – 01/16/22:
    – 1 Shortage Case for 16:40
    – Fast load increase and increased interchange
Shortage Case Approvals (Continued)

- 01/27/22:
  - 1 Shortage Case for 06:05
  - 1 Shortage Case for 06:15
  - Fast load increase, increased interchange, and transfer interface binding

- 01/30/22:
  - 1 Shortage Case for 01:45
  - 1 Shortage Case for 01:50
  - 1 Shortage Case for 01:55
  - 1 Shortage Case for 01:59
  - Increased interchange and transfer interface binding

- 01/31/22:
  - 1 Shortage Case for 06:40
  - 1 Shortage Case for 06:45
  - Fast load increase
The 13-month average forced outage rate is 4.49% or 8,979 MW. The 13-month average total outage rate is 15.58% or 31,157 MW.
Note: “Unplanned Outages” include tripped facilities. One tripping event may involve multiple facilities.
<table>
<thead>
<tr>
<th>Event</th>
<th>Date</th>
<th>Start Time</th>
<th>End Time</th>
<th>Duration</th>
<th>Region</th>
<th>Tier 1 Estimate (MW)</th>
<th>Tier 1 Response (MW)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>01/03/22</td>
<td>12:27:31</td>
<td>12:36:27</td>
<td>00:08:56</td>
<td>RTO</td>
<td>516.8</td>
<td>377.6</td>
</tr>
</tbody>
</table>

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<thead>
<tr>
<th>Event</th>
<th>Date</th>
<th>Start Time</th>
<th>End Time</th>
<th>Duration</th>
<th>Region</th>
<th>Tier 2 Assigned (MW)</th>
<th>Tier 2 Response (MW)</th>
<th>Tier 2 Penalty (MW)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>01/03/22</td>
<td>12:27:31</td>
<td>12:36:27</td>
<td>00:08:56</td>
<td>RTO</td>
<td>1344.2</td>
<td>1344.2</td>
<td>0.0</td>
</tr>
</tbody>
</table>

*Tier 2 Response is equal to Tier 2 Assigned for events with duration less than ten minutes*
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Appendix
Goal Measurement: Balancing Authority ACE Limit (BAAL)

- The purpose of the new BAAL standard is to maintain interconnection frequency within a predefined frequency profile under all conditions (normal and abnormal), to prevent frequency-related instability, unplanned tripping of load or generation, or uncontrolled separation or cascading outages that adversely impact the reliability of the interconnection. NERC requires each balancing authority demonstrate real-time monitoring of ACE and interconnection frequency against associated limits and shall balance its resources and demands in real time so that its Reporting ACE does not exceed the BAAL (BAAL<sub>LOW</sub> or BAAL<sub>HIGH</sub>) for a continuous time period greater than 30 minutes for each event.

- PJM directly measures the total number of BAAL excursions in minutes compared to the total number of minutes within a month. PJM has set a target value for this performance goal at 99% on a daily and monthly basis. In addition, current NERC rules limit the recovery period to no more than 30 minutes for a single event.
The 13-month average forced outage rate is 4.49% or 8,979 MW. The 13-month average total outage rate is 15.58% or 31,157 MW.
PROTECT THE POWER GRID
THINK BEFORE YOU CLICK!

Be alert to malicious phishing emails.

Report suspicious email activity to PJM.
(610) 666-2244 / it_ops_ctr_shift@pjm.com