System Operations Report

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MC Webinar
June 20th, 2023
Daily Peak Forecast Error (May)

18:00 Day Ahead Forecast Error

- Error at Peak Hour
- Weekend / Holiday

Over-forecasting
Under-forecasting

Error at Peak Hour:
-6% -5% -4% -3% -2% -1% 0% 1% 2% 3% 4% 5% 6%

Weekend / Holiday:
-6% -5% -4% -3% -2% -1% 0% 1% 2% 3% 4% 5% 6%
PJM's BAAL performance has exceeded the goal of 99% for each month in 2022 and 2023.
• 1 spinning event
• 5 Shared Reserve events
• The following Emergency Procedures occurred:
  – 7 High System Voltage Actions
  – 1 Hot Weather Alert
  – 8 Post Contingency Local Load Relief Warnings
• 39 Shortage Cases Approved

• The approved Shortage Cases occurred on:
  • 5/12/2023 – 13 Approved Shortage Cases
    • Approved for the 1:59, 2:10-2:50, and 5:35-5:59 intervals
    • Mainly due to increased RTO reserve requirement
  • 5/15/2023 – 21 Approved Shortage Cases
    • Approved for the 00:25-00:55, 1:25-1:59, 17:50-17:55, and 18:10 intervals
    • Mainly due to increased RTO reserve requirement
  • 5/26/2023 – 5 Approved Shortage Cases
    • Approved for the 22:10-22:25 intervals
    • Mainly due to increased RTO reserve requirement
The 13-month average forced outage rate is 4.79% or 9,629 MW.
The 13-month average total outage rate is 17.19% or 34,681 MW.
2021-2022 Planned Emergency, Unplanned, and Total Outages by Ticket

Note: “Unplanned Outages” include tripped facilities. One tripping event may involve multiple facilities.
PCLLRW Count Vs. Peak Load – Daily Values For 3 Months
<table>
<thead>
<tr>
<th>Event</th>
<th>Date</th>
<th>Start Time</th>
<th>End Time</th>
<th>Duration</th>
<th>Region</th>
<th>Assigned (MW)</th>
<th>Response (MW)</th>
<th>Penalty (MW)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>05/28/23</td>
<td>20:09:28</td>
<td>20:16:50</td>
<td>00:07:22</td>
<td>RTO</td>
<td>2437.1</td>
<td>2437.1</td>
<td>0.0</td>
</tr>
</tbody>
</table>

*Response is equal to 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_{LOW} or BAAL_{HIGH}) 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 4.79% or 9,629 MW. The 13-month average total outage rate is 17.19% or 34,681 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