Manual 21- Revision 13
Rules and Procedures for Determination of Generating Capability Changes

Jerry Bell
Resource Adequacy Department
Planning Committee
April 11th, 2019
<table>
<thead>
<tr>
<th>Action Required</th>
<th>Effective Date</th>
<th>Who May Be Affected</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prepare for testing within temperature bounds</td>
<td>06/01/2019</td>
<td>Generators</td>
</tr>
<tr>
<td>Prepare for simultaneous testing</td>
<td>06/01/2022</td>
<td>Generators</td>
</tr>
</tbody>
</table>
• New Capacity Interconnection Rights section (Section 1.1)
  – Explains how CIRs are attained, retained and lost
  – Calculation examples

• Section 1.2, Installed Capacity
  – Emphasizes ICAP must be determined based on summer conditions
  – Defines summer conditions (also known as rated conditions)
    • Generator site conditions coincident with the last 15 years’ PJM summer peaks
  – Adds additional details for determining Installed Capacity (Rated ICAP)
• Section 1.3, Testing (new section)
  – Summer Test Period remains June 1\textsuperscript{st} through August 31\textsuperscript{st}
  – Delineates what units must correct for generator site conditions and for what conditions a units test must be corrected
  – Units subject to generator site condition corrections must test when:
    • Actual Dry Bulb Air Temperature is within 20°F of Rated Dry Bulb Temperature
    • Actual Wet Bulb Air Temperature is within 10°F of Rated Wet Bulb Temperature
    • Actual Cooling Body Temperature is within 5°F of Rated Cooling Body Temperature
    • If these conditions cannot be met, testing from July 7th through August 31\textsuperscript{st} can occur without adherence to these parameters as long as the testing start time is 10 am or later and the testing end time is 10 pm or earlier
• Section 2 – Net Capability, reconfigure, and split into Conventional Generators, Capacity Storage Units and Intermittent Units
  – Capacity Storage and Intermittent Units are defined in Manual 18
  – Does not include wind or solar units
• Section 1.4 (New Section) rules to commence for DY 22/23
  – Simultaneous multiple unit testing for up to ten plants per summer per PJM directive
    • Notifications sent via email before the test period and a minimum 14 day window specified
    • Specific wording to permit extension of the time period for testing if PJM cannot accommodate the testing schedule:
      – “Coordination between PJM Dispatch and the Generator Owner will be necessary for testing units whether they are scheduled day ahead or real time and it is important for both the Generator Owner and the PJM Dispatcher to maintain open communications. It is also incumbent upon the Generation Owner to ensure its preparation for the generator/plant testing has been executed properly. PJM will facilitate test coordination with other dependent resources, e.g. run of river hydro units.” There may be times that testing cannot be accommodated by PJM Dispatch because of constraints or other system issues. If PJM Dispatch cannot accommodate the testing, extension of the delineated testing period in the PJM required simultaneous testing request can be granted only for those capacity verification tests specifically delineated under section 1.4.1 of Manual 21........
  – All Capacity Storage and Intermittent Resources (other than wind and solar) must test all units at a plant simultaneously
Appendix B changes

- Changes to wind and solar capacity factor calculations have been postponed
Jerry Bell

Jerry.Bell@pjm.com

610-666-4526