**Effective Date**  
12/03/2019

**Impacted Manual #(#s)/Manual Title(s):**

| Manual 14-D: Generator Operational Requirements |

**Conforming Order(s):**

Electric Storage Participation in Markets Operated by Regional Transmission Organizations and Independent System Operators (Issued February 15, 2018)  
Docket Nos. RM16-23-000; AD16-20-000; Order No. 841

**Associated Issue Tracking Title:**  
Electric Storage Participation - FERC Order 841

**Committee Approval Path - What committee(s) have already seen these changes?**

<table>
<thead>
<tr>
<th>Date</th>
<th>Committee</th>
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<tbody>
<tr>
<td>6/6/19</td>
<td>System Operations Subcommittee</td>
</tr>
<tr>
<td>6/11/19</td>
<td>Operating Committee</td>
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<tr>
<td>9/5/19</td>
<td>System Operations Subcommittee</td>
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<tr>
<td>9/10/19</td>
<td>Operating Committee</td>
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<tr>
<td>9/26/19</td>
<td>Markets and Reliability Committee</td>
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<tr>
<td>10/31/19</td>
<td>Markets and Reliability Committee</td>
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**MRC 1st read date:** 9/26/2019  
**MRC voting date:** 10/31/2019

**Impacted Manual sections:**

Multiple – see below

**Reason for change:**

Compliance with FERC Order 841: Electric Storage Resource Participation model to allow ESRs to participate in all markets where technically feasible. (Bolded below)

Cover to cover review

**Summary of the changes:**

- Cover to cover review
- Throughout
  - Replaced references to Client Manager with Member Relations where applicable
  - Corrected typos and capitalized terms where appropriate
- About this Manual
  - Added subsection covering “Definitions and Applicability”
  - Section 1.2 - Generator Commercial Naming Convention
• Replaced Performance Compliance with Operations Analysis and Compliance
• Section 3.2.4 - Control Center Staffing Requirements
  • Remove reference to Section 6 as it relates to training and certification requirements
• Section 4.1.7 – SCADA—Supervisory Control and Data Acquisition
  • Corrected typo in heading in Exhibit 6
  • Updated Exhibit 6 to include State of Charge for Energy Storage Resources
• Section 4.2.3 – Metering for Individual Generators
  • Added metering requirement specific to Energy Storage Resources
• Section 6.2.2 – PJM Transmission Owner (TO) Operator and Generation Dispatcher Certification
  • Corrected typo
• Section 7.1.5 – Generator Operations Under Emergency Conditions
  • Corrected typo in Exhibit 9
• Section 7.3 – Critical Information and Reporting Requirements
  • Added Energy Storage Resource outage reporting requirements
• Section 7.3.5 – Fuel and Emissions Reporting
  • Replaced references to Supplementary Status Report (SSR) with references to Resource Limitations page in Markets Gateway.
• Section 10.2.3 – Implications for Terminating Black Start Units
  • Updated to cross reference correct section – Section 9
• Attachment D: PJM Generating Unit Reactive Capability Curve Specification and Reporting Procedures
  • Updated to include Energy Storage Resources
  • Corrected references to Exhibit 15
• Updated stand-alone document containing D-curve examples
• Attachment E: PJM Generator, Energy Storage and Synchronous Condenser Reactive Capability Testing
  • Updated to include Energy Storage Resources
• Attachment N: Attachment N: Cold Weather Preparation Guideline and Checklist
  • Deleted outdated link to PJM Polar Vortex Presentation at FERC Technical Conference, 4/1/14