NERC and Regional Coordination Update

Srinivas Kappagantula, Sr. Analyst
Planning Committee
September 15, 2016
<table>
<thead>
<tr>
<th>Standards</th>
<th>Project 2016-01 Modifications to TOP and IRO Standards</th>
<th>Activity</th>
<th>Due Date</th>
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<tbody>
<tr>
<td>IRO-002-5 TOP-001-4</td>
<td>SDT modified TOP-001-3 and IRO-002-4 to address reliability concerns from FERC Order 817. These concerns relate to i. Monitoring non-BES facilities ii. Redundancy and diverse routing of data exchange capabilities iii. Testing of alternate or less frequently used data exchange capability</td>
<td>Ballot and Comments</td>
<td>10/14/2016</td>
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<td>Revisions to IRO-002-5 since last posting i. Updated rationale for R1 and R2 ii. Updated testing frequency of primary Control Center data exchange capabilities from monthly to 90 calendar days (R3), in line with R21 of TOP-001-3</td>
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<td>Revisions to TOP-001-4 since last posting i. Revised rationale and measures for R10, R19, R20, R22, and R23</td>
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NERC Standards Subject to Future Enforcement

- October 1, 2016
  - FAC-003-4 - Transmission Vegetation Management
  - MOD-031-2 - Demand and Energy Data
- January 1, 2017
  - IRO-010-2 – Reliability Coordinator Data Specification and Collection (R1 and R2)
  - TOP-003-3 – Operational Reliability Data (All Requirements but R5)
NERC Standards Subject to Future Enforcement

- EOP-004-3 – Event Reporting
- EOP-010-1 – Geomagnetic Disturbance Operations (Requirement 2)
- EOP-011-1 – Emergency Operations
- FAC-010-3 - System Operating Limits Methodology for the Planning Horizon
- FAC-011-3 - System Operating Limits Methodology for the Operations Horizon
- IRO-001-4 – Reliability Coordination – Responsibilities
- IRO-002-4 - Reliability Coordination — Monitoring and Analysis
- IRO-008-2 – Reliability Coordinator Operational Analyses and Real-time Assessments
- IRO-010-2 – Reliability Coordinator Data Specification and Collection (R3)
- IRO-014-3 — Coordination Among Reliability Coordinators
- IRO-017-1 — Outage Coordination
- MOD-029-2a – Rated System Path Methodology
- MOD-030-3 – Flowgate Methodology
NERC Standards Subject to Future Enforcement

- April 1, 2017 (continued)
  - PRC-010-1 – Undervoltage Load Shedding
  - PRC-015-1 - Remedial Action Scheme Data and Documentation
  - PRC-016-1 - Remedial Action Scheme Misoperations
  - PRC-017-1 - Remedial Action Scheme Maintenance and Testing
  - PRC-023-4 - Transmission Relay Loadability
  - TOP-001-3 – Transmission Operations
  - TOP-002-4 – Operations Planning
  - TOP-003-3 – Operational Reliability Data (R5)

- April 2, 2017
  - PRC-004-5(i) - Protection System Misoperation Identification and Correction
  - PRC-010-2 – Undervoltage Load Shedding
NERC Standards Subject to Future Enforcement

- July 1, 2017
  - MOD-033-1 - Steady-State and Dynamic System Model Validation

- January 1, 2018
  - PRC-026-1 – Relay Performance During Stable Power Swings (R1)

- July 1, 2018
  - MOD-026-1 – Verification of Models and Data for Generator Excitation Control System or Plant Volt/Var Control Functions (Requirements R2, 2.1–2.1.6)
  - MOD-027-1 – Verification of Models and Data for Turbine/Governor and Load Control or Active Power/Frequency Control Functions (Requirements R2, 2.1–2.1.5)

- January 1, 2020
  - PRC-026-1 – Relay Performance During Stable Power Swings (R2-R4)