NERC and Regional Coordination Update

Mark Kuras, Senior Lead Engineer
NERC and Regional Coordination
PC – August 13, 2015
<table>
<thead>
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<th>Standards</th>
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<tbody>
<tr>
<td>BAL-002-2</td>
<td>Project 2010-14.1 Phase 1 of Balancing Authority Reliability-based Controls: Reserves</td>
<td>Comments Close</td>
<td>8/20/15</td>
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<td>Ballot Period</td>
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The purpose of this project is to ensure that BA take actions to maintain interconnection frequency with each BA contributing its fair share to frequency control.

This project is intended to address the following:

- FERC Final Rule “Mandatory Reliability Standards for the Bulk-Power System, FERC Order 693” on the NERC standard BAL-002
- Issues raised by stakeholders and compliance teams related to BAL-001-0.1a Real Power Balancing Control Performance and BAL-002-1 Disturbance Control Performance
- To ensure that when finalized, the standards associated with this project conform to the latest versions of NERC’s Reliability Standards Development Procedure
BARC 2 Periodic Review Team (PRT) recommended to revise BAL-005-0.2b and BAL-006-2. First Drafts of BAL-005-1, BAL-006-3, and FAC-001-3 are posted for comments. Revisions to existing versions include the following:

1. **BAL-005-1**: Retiring several requirements and moving/merging content of the remaining requirements. Previous version had 17 requirements, new one has 8.
2. **BAL-006-3**: No change to any requirements in BAL-006-2 except for R3, which has been moved to BAL-005-1.
3. **FAC-001-3**: No change to requirements R1-R4 of FAC-001-2. Added 3 requirements (R4-R7) as a result of moving BAL-005-0.2b R1 to FAC-001-3.

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<td>BAL-005-0.2b</td>
<td>Project 2010-14.2.1 Phase 2 of Balancing Authority Reliability-based Controls</td>
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<td>9/4/15 – 9/14/15</td>
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<td>BAL-006-2</td>
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<td>FAC-001-1</td>
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### Project 2009-02 Real-time Reliability Monitoring and Analysis Capabilities

Formal development of this project was paused in 2011 and will resume to address outstanding Federal Energy Regulatory Commission (FERC) directives and issues that were not consolidated into Project 2014-03 TOP/IRO Revisions.

Project 2009-02 was initiated in response to work done by the NERC Operating Committee's Real-time Tools Best Practices Task Force. From 2009 to 2011, a SAR drafting team developed a SAR and technical white paper to establish requirements for the "functionality, performance, and maintenance of Real-time Monitoring and Analysis Capabilities." Since that time, new TOP and IRO standards have been developed that affect the scope of this project.

Propose new or revised standard(s) that will establish requirements for the functionality, performance, and change management of real-time capabilities for RCs, TOPs, GOPs, and BAs for use by their System Operators in support of reliable system operations.

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<td>SAR</td>
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Standards Project Activity Due Date
SAR to Revise EOP-004-2 EOP-005-2 EOP-006-2 EOP-008-1 Project 2015-08 Emergency Operations

Standard Authorization Request (SAR) posted for informal comment. Specifically the SAR seeks to address the following:
1. Recommendations developed by the Project 2015-02 Emergency Operations Periodic Review Team (PRT) to revise EOP-004-2, EOP-005-2, EOP-006-2, and EOP-008-1
3. PRT recommendations of retirements to requirements under Paragraph 81 criteria

PRT Recommendations include the following:
1. EOP-004-2 – Revise the standard and attachment and retire Requirement R3;
2. EOP-005-2 – Revise the standard;
3. EOP-006-2 – Revise the standard and retire Requirements Parts R1.2, R1.3, and R1.4; and
4. EOP-008-1 – Revise the standard.

Comments Close 8/19/15
**Project 2007-06.2 Phase 2 of System Protection Coordination**

In conjunction with Phase 1, the project proposes to retire PRC-001-1.1(ii) as indicated below:

1. Retire R2, R5, and R6 as the objectives are addressed by other TOP/IRO standards
2. Incorporate R1 into proposed Reliability Standard TOP-009-1
3. R3 and R4 addressed by PRC-027-1

Draft 1 of TOP-009-1 posted for comment. Applicable to BAs, TOPs, and GOPs and has 3 requirements as indicated below:

1. R1, R2, and R3 are applicable to TOPs, BAs, and GOPs, respectively, and require the entities to ensure that personnel responsible for Reliable Operation of the respective area have knowledge of operational functionality and effects of Composite Protection Systems and Remedial Action Schemes....
**Standards**

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<td>PRC-027-1</td>
<td><strong>Project 2007-06 System Protection Coordination</strong></td>
<td>Ballot</td>
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<td>Retirement of PRC-001-1.1(ii)</td>
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PRC-027-1 Draft 6 posted for comment. In conjunction with Phase 2 of the project, PRC-001-1.1(ii) will be retired. This project address requirements R3 and R4 of PRC-001-1.1 (ii) while the rest are either being retired or incorporated into TOP-009-1. PRC-027-1 Draft 6 contains the following requirements:

1. R1 mandates that an entity establish a process for developing new and revised Protection System settings for BES Elements to operate in the intended sequence during Faults; and stipulates certain attributes that must be included in the process.
2. R2 mandates that an entity periodically perform Protection System Coordination Studies and/or compare existing Fault current values to established Fault current baselines for Protection Systems applied on BES Elements that are identified as being affected by changes in Fault current. The applicable Protection System functions are identified in Attachment A.
3. R3 mandates that an entity utilize the process established in accordance with Requirement R1.
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<td>PRC-005-3</td>
<td><strong>Project 2007-17.4 PRC-005 FERC Order No. 803 Directive</strong>&lt;br&gt;Addresses FERC Order No. 803 directive “direct that, pursuant to section 215(d)(5) of the FPA, NERC develop modifications to PRC-005-3 to include supervisory devices associated with auto-reclosing relay schemes to which the Reliability Standard applies…”&lt;br&gt;Draft 1 of PRC-005-6 posted for comment. Revisions include:&lt;br&gt;1. Added supervisory relays, associated voltage sensing devices, and associated control circuitry to definition of Automatic Reclosing&lt;br&gt;2. Minor wording changes in requirements/measures</td>
<td>Initial Ballot&lt;br&gt;Comments Close</td>
<td>9/4/15 – 9/16/15&lt;br&gt;9/16/15</td>
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<td>MOD-031-2</td>
<td>Project 2010-04.1 MOD-031 FERC Order No. 804 Directives</td>
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First Draft of MOD-031-2 posted for comment. The project will modify the language in R3 to clarify certain obligations to provide data to the Regional Entity and will also address the FERC directive to consider the compliance obligations of an applicable entity upon receipt of a data request that seeks confidential information. Changes made to R3 to address both these issues.
NERC Standards Subject to Future Enforcement

- October 1, 2015
  - CIP-014-1 - Physical Security
  - COM-001-2 - Communications
  - PRC-006-2 - Automatic Underfrequency Load Shedding

- January 1, 2016
  - FAC-001-2 - Facility Interconnection Requirements
  - FAC-002-2 - Facility Interconnection Studies
  - NUC-001-3 - Nuclear Plant Interface Coordination

- April 1, 2016
  - PRC-005-3 - Protection System and Automatic Reclosing Maintenance
  - PRC-005-3(i) - Protection System and Automatic Reclosing Maintenance (wdisp gen)
NERC Standards Subject to Future Enforcement

- **July 1, 2016**
  - BAL-001-2 - Real Power Balancing Control Performance
  - COM-002-4 - Operating Personnel Communications Protocols
  - MOD-025-2 - Verification and Data Reporting of Generator Real and Reactive Power Capability and Synchronous Condenser Reactive Power Capability
  - MOD-031-1 - Demand and Energy Data
  - PER-005-2 - Operations Personnel Training
  - PRC-004-4 – Protection System Misoperation Identification and Correction;
  - PRC-019-1 - Coord of Gen Unit or Plant Capabilities, Voltage Regulating Controls, and Protection
  - PRC-019-2 – Coord of Gen Unit or Plant Capabilities, Voltage Regulating Controls, and Protection
  - PRC-024-1 - Generator Frequency and Voltage Protective Relay Settings
  - PRC-024-2 – Generator Frequency and Voltage Protective Relay Settings

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