NERC
NORTH AMERICAN ELECTRIC RELIABILITY COUNCIL

NERC SPCTF Supplemental Assessment Addressing FERC Order 693 Relative to:

- **PRC-005-1 — Transmission and Generation Protection System Maintenance and Testing**
- **PRC-008-0 — Underfrequency Load Shedding Equipment Maintenance Programs**
- **PRC-011-0 — UVLS System Maintenance and Testing**
- **PRC-017-0 — Special Protection System Maintenance and Testing**

May 17, 2007

A Technical Review of Standards

Prepared by the

System Protection and Controls Task Force

of the

NERC Planning Committee

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This report was approved by the Planning Committee on June 7, 2007, for forwarding to the Standards Committee.

Introduction and Summary

On March 8, 2007, the SPCTF issued a technical review report on Reliability Standards:

- PRC-005-1 — Transmission and Generation Protection System Maintenance and Testing
- PRC-008-0 — Underfrequency Load Shedding Equipment Maintenance Programs
- PRC-011-0 — UVLS System Maintenance and Testing
- PRC-017-0 — Special Protection System Maintenance and Testing

Within that report, the SPCTF included a summary of the Federal Energy Regulatory Commission's (FERC) October 20, 2006 Notice of Proposed Rulemaking for adoption of NERC Standards (Docket Number RM06-16-000). The Federal Energy Regulatory Commission has since promulgated Order 693, in which they approved PRC-005-1 as mandatory and enforceable, and provided specific direction regarding needed changes.

At their March 2007 meeting, the Planning Committee endorsed the SPCTF technical report and an associated Standards Authorization Request (SAR) developed by the SPCTF to modify PRC-005-1 and consolidate the other protection equipment maintenance standards into a single standard. That SAR and the report have been presented to the NERC Standards Committee for consideration, but no action has yet occurred.

This report supplements the observations from the March 8, 2007 technical report on PRC-5, PRC-008, PRC-011, and PRC-017 with FERC's Order 693 determinations regarding those standards.

FERC Order 693 on PRC-005-1 — Transmission and Generation Protection System Maintenance and Testing

In Order 693, FERC presented considerable discussion regarding PRC-005-1. Their discussion completely revolved around the operating-time-horizon issues that were also included in the March 8, 2007 SPCTF assessment of PRC-001-0. These issues were also introduced within the FERC October 20, 2006 Notice of Proposed Rulemaking for adoption of NERC Standards (Docket Number RM06-16-000).

Commission Determination

The following is the determination portion of FERC Order 693 regarding PRC-005-1.

¶1475 For the reasons stated in the NOPR, the Commission approves Reliability Standard PRC–005–1 as mandatory and enforceable.

¶1476 In addition, for the reasons discussed in the NOPR, the Commission directs the ERO to develop a modification to PRC–005–1 through the Reliability Standards development process that includes a requirement that maintenance and testing of a protection system must be carried out within a maximum allowable interval that is appropriate to the type of the protection system and its impact on the reliability of the Bulk-Power System. We further direct the ERO to consider FirstEnergy's and ISO–NE's suggestion to combine PRC–005–1, PRC–008–0, PRC–011–0, and PRC–017–0 into a single Reliability Standard through the Reliability Standards development process.

SPCTF Conclusion and Recommendation

SPCTF has made similar comments on these and many other issues in its review of the NERC Maintenance Reliability Standards PRC–005–1, PRC–008–0, PRC–011–0, and PRC–017–0, and agrees with FERC's determination. The SPCTF recommends that those changes be made in consolidating the Standards.

FERC Order 693 on PRC-008-0 — Underfrequency Load Shedding Equipment Maintenance Programs

Discussion of PRC-008 in Order 693 included two supporting comments to the Commission's position on testing of UFLS systems (from FirstEnergy and Entergy), and a comment from APPA requesting the ERO to determine whether or not this standard is needed.

Also, the ISO/RTO Council and others commented that the approval and enforcement of PRC-008-0 be linked to the approval of PRC-006-0, which directs the regions to develop and maintain a regional UFLS program requiring specific elements.

Commission Determination

The following is the determination portion of FERC Order 693 regarding PRC-008-0.

¶1491. FirstEnergy and Entergy agree with the Commission's proposed directive, whereas APPA suggests that the need for the proposal should be established first via the Reliability Standards development process.

¶1492. We disagree with ISO/RTO Council and others that approval or enforcement of PRC–008–0 is linked to approval of PRC–006–0. PRC–008–0 requires that a ''transmission provider or distribution provider with a UFLS program (as required by its Regional Reliability Organization) shall have a UFLS equipment and maintenance testing program in place.'' PRC–006–0 requires each regional reliability organization to develop, coordinate and document a UFLS program that includes specified elements. Again, we proposed to neither approve nor remand PRC–006–0 because it applies to a regional reliability organization and the Commission was not persuaded that a regional reliability organization's compliance with a Reliability Standard can be enforced as proposed by NERC. That is not the case with PRC–008–0, which applies to transmission owners and distribution providers. Since PRC–008–0 is an existing Reliability Standard that has been followed on a voluntary basis, transmission owners and distribution providers are aware whether they are required to have a UFLS program in place. We approve PRC–008–0 as mandatory and enforceable because it requires entities to have equipment maintenance and testing of their UFLS programs. As stated in the Common Issues section, a reference to an unapproved Reliability Standard may be considered in an enforcement action, but is not a reason to delay approving and enforcing this Reliability Standard. The Commission expects that the program results will be sent to the Regional Entities (instead of the regional reliability organizations) after they are approved.

¶1493. The Commission approves Reliability Standard PRC–008–0 as mandatory and enforceable. In addition, the Commission directs the ERO to develop a modification to PRC–008–0 through the Reliability Standards development process that includes a requirement that maintenance and testing of a protection system must be carried out within a maximum allowable interval that is appropriate to the type of the protection system and its impact on the reliability of the Bulk-Power System.

SPCTF Conclusion and Recommendation

The SPCTF agrees with the Commission's determination on PRC-008-0. Existing UFLS systems must be maintained regardless of the status of PRC-006; the maintenance & testing of the UFLS is independent of the development of a regional UFLS program or the individual requirements for the program. SPCTF made similar comments on these and many other issues in its March 2007 technical review of NERC Maintenance Reliability Standards PRC–005–1, PRC–008–1, PRC–011–0, and PRC–017–0.

The SPCTF recommends incorporation of FERC's and the SPCTF's proposed changes in modifications to PRC-008-0.

FERC Order 693 on PRC-011-0 — UVLS System Maintenance and Testing

Discussion of PRC-011 in Order 693 included two supporting comments of the Commission's position on testing of UVLS systems (from FirstEnergy and Entergy), and a comment from APPA requesting the ERO to determine whether or not this standard is needed.

Commission Determination

The following is the determination portion of FERC Order 693 regarding PRC-011-0.

¶1515. The Commission approves Reliability Standard PRC–011–0 as mandatory and enforceable. In addition, we direct the ERO to develop modifications to the Reliability Standard through the Reliability Standards development process as discussed below.

¶1516. The Commission disagrees with APPA that the decision whether a modification is needed should be established first by the ERO in its Reliability Standards development process. Our direction identifies an appropriate goal necessary to assure the reliable operation of the Bulk-Power System. The details should be developed through the Reliability Standards development process.

¶1517. The Commission believes that the proposal is presently part of the process. The Commission approves Reliability Standard PRC–011–0 as mandatory and enforceable. In addition, the Commission directs the ERO to submit a modification to PRC–011–0 through the Reliability Standards development process that includes a requirement that maintenance and testing of a protection system must be carried out within a maximum allowable interval that is appropriate to the type of the protection system and its impact on the reliability of the Bulk-Power System.

SPCTF Conclusion and Recommendation

The SPCTF agrees with the Commission's determination on PRC-011-0. SPCTF has made similar comments on these and many other issues in its review of the NERC Maintenance Reliability Standards PRC–005–1, PRC–008–0, PRC–011–0, and PRC–017–0.

The SPCTF recommends incorporation of FERC's and the SPCTF's proposed changes in modifications to PRC-011-0.

FERC Order 693 on PRC-017-0 — Special Protection System Maintenance and Testing

Commission Determination

The following is the determination portion of FERC Order 693 regarding PRC-017-0.

¶1546. The commenters agree with the Commission's proposed directive on a maximum allowable interval for maintenance and testing of protection system equipment and we conclude that such a modification is beneficial. However, we agree with APPA's view on our second proposed directive assuming that the documentation is requested by either the regional reliability organization or NERC. Therefore, we will modify our direction to require that the documentation be routinely provided to the ERO or Regional Entity and not only when it is requested.

¶1547. The Commission approves Reliability Standard PRC–017–0 as mandatory and enforceable. In addition, the Commission directs the ERO to develop a modification to PRC–017–0 through the Reliability Standards development process, that includes: (1) a requirement that maintenance and testing of a protection system must be carried out within a maximum allowable interval that is appropriate for the type of the protection system and (2) a requirement that documentation identified in Requirement R2 shall be routinely provided to the ERO or Regional Entity.

SPCTF Conclusion and Recommendation

The SPCTF agrees with the Commission's determination on PRC-011-0. SPCTF has made similar comments on these and many other issues in its review of the NERC Maintenance Reliability Standards PRC–005–1, PRC–008–0, PRC–011–0, and PRC–017–0.

The SPCTF recommends incorporation of FERC's and the SPCTF's proposed changes in modifications to PRC-017-0.

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