



**Southwest Power Pool
SYSTEM PROTECTION AND CONTROL WORKING GROUP and SPP UFLS
Standard Drafting Team Meeting
MINUTES
June 4, 2012
2:00 p.m. – 4:00 p.m.
Net conference**

Item 1 – Administrative:

The System Protection and Control Working Group (SPCWG) meeting was called to order at 2:00 p.m. The agenda was approved (Attachment 1 – Agenda).

Following members were available for this meeting:

Heidt Melson	: SPS
Louis Guidry	: CELE
Shawn Jacobs	: OG&E
Ken Zellefrow	: SPRM
Brent Carr	: AECC
Tim Hinken	: KCPL
Rick Gurley	: AEP
Lynn Schroeder	: WERE
Jason Speer	: SPP Staff

Other meeting attendees were:

John Pasierb	: GDS Associates
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Item 2: FERC Order 763 Position Paper

The SPP UFLS Standard Drafting Team met to discuss FERC's comments from FERC Order 763. The SDT responded to each of the sections that FERC addressed in the order. The final copy of the SPP UFLS SDT position paper is attached. (Attachment 2 – SPP Position Paper (FERC Order 763)).

The SPP UFLS SDT also put together a recommendation for the RE Trustees to continue moving forward with the SPP UFLS Regional Standard now that the NERC UFLS Standard has been approved. (Attachment 3 – SPP UFLS Recommendation)

Item 3: Closing Administrative Duties

The next face-to-face meeting is scheduled for August 1-2, 2012 in Dallas.

The net conference was adjourned at 4:00 p.m.

Respectfully submitted,

Jason Speer, Secretary

**SOUTHWEST POWER POOL
SYSTEM PROTECTION AND CONTROL WORKING GROUP and SPP REGIONAL
STANDARD DEVELOPMENT MEETING
June 4, 2011 (2:00 p.m. till 4:00 p.m.)
Net Conference**

- AGENDA -

Item 1 – Administrative

- Call to order
- Proxies
- Approve agenda

Item 2 – FERC Order 763 Position Paper

Item 3 – Closing Administrative Duties

- Next meeting place & date
 - Late June Conference Call (will send out survey)
 - August 1-2, 2012 (Dallas)
- Upcoming meeting topics
- Adjourn meeting

**Southwest Power Pool
UFLS Standard Drafting Team
Position Paper for FERC Order 763**

A. Impact of Resources Not Connected to Bulk Electric System Facilities

FERC Position: Although PRC-006-1 does not require all of the generation that is not directly connected to the bulk electric system to be included in the modeling, the subset of these resources that are required to assure that the UFLS models are sufficient to accurately predict system performance will be included.

SPP SDT Position: We agree with FERC's determination and that the amount of generation not included in the SPP UFLS program is within the accuracy of the PowerTech study performed for SPP. The SPP UFLS program requires a 30% minimum load shed, which is more than the 25% minimum required by NERC. NERC addresses the issue adequately; therefore, it is not addressed in the SPP Regional Standard (PRC-006-SPP-1).

B. Validation of Power System Models

FERC Position: The Commission accepts the comments that power system models with 100 percent accuracy are not practicable. The Commission, however, is mindful of the consequences of inaccurate power system models and their impact on an entity's ability to accurately simulate system performance. Inaccurate models can lead to invalid conclusions which can be detrimental to the analysis and operation of the bulk electric system. At a minimum, the models should accurately predict system performance during UFLS events. Although entities may take additional steps, the Commission believes that the design requirements in Reliability Standard PRC-006-1 are acceptable.

SPP SDT Position: We agree with FERC's determination that it is not possible to achieve 100% accuracy with the models but that the SPP models adequately predict system performance during UFLS events. NERC addresses the issue adequately; therefore, it is not addressed in the SPP Regional Standard (PRC-006-SPP-1).

C. Scope of UFLS Events

1. Assessments in the Absence of Island Formation

FERC Position: The Commission agrees that it would be useful to have an analysis of system frequency excursions to assess the performance of UFLS programs even in the absence of island formation. To that end, we agree that underfrequency events that result in the initializing of the UFLS set point, even in the absence of island formation, would be analyzed under provisions contained in the NERC Rules of Procedure and the NERC Event Analysis program.

SPP SDT Position: We agree with FERC's determination. NERC addresses the issue adequately; therefore, it is not addressed in the SPP Regional Standard (PRC-006-SPP-1).

2. Coordination of Assessments and Results

FERC Position: The Commission expects planning coordinators to work in good faith including, as appropriate, use of third parties to resolve disputes concerning event assessments. If the Commission finds that these disputes are not being resolved, the Commission may consider adoption of an appropriate process to ensure resolution of the disputes.

SPP SDT Position: We agree with FERC's determination. NERC addresses the issue adequately; therefore, it is not addressed in the SPP Regional Standard (PRC-006-SPP-1).

3. Assessment Timeline for Completion

FERC Position: The Commission is persuaded that two years to complete design assessments pursuant to Reliability Standard PRC-006-1 is appropriate. Two years is a reasonable maximum allowable time for completion of design assessments. However, we agree that efforts should be made to complete assessments of less complex events before the two-year maximum allowable period.

SPP SDT Position: We agree with FERC's determination. NERC addresses the issue adequately; therefore, it is not addressed in the SPP Regional Standard (PRC-006-SPP-1).

D. Generator Owner Trip Settings Outside of the UFLS Program

FERC Position: The Commission is persuaded to take no action to require compensation for generation losses outside of the UFLS set points. Reliability Standard PRC-006-1 is an improvement because it requires planning coordinators to consider generators that trip outside of the UFLS set points when modeling and designing UFLS programs. We are persuaded by NERC's comments that it is appropriate for planning coordinators to consider generators that trip outside of the UFLS set points when designing UFLS programs, but it is inappropriate for planning coordinators to determine whether mitigation is necessary and who will be responsible for providing mitigation.

SPP SDT Position: SPP received clarification from NERC on the comments that were the basis for FERC's position. According to NERC's original comments on the NOPR, "...it is not appropriate for a Reliability Standard to prescribe how the Planning Coordinator will determine whether mitigation is necessary or who would be responsible for providing the mitigation. This approach provides Planning Coordinators with flexibility in developing UFLS programs." FERC misunderstood NERC's comments when they determined that "...it is inappropriate for Planning Coordinators to determine whether mitigation is necessary and who will be responsible for providing mitigation."

NERC filed a motion for clarification from FERC on this subject. This motion can be found starting on page 5 of this document.

We agree with NERC's original comments on the NOPR that it is not appropriate for the NERC Standard to prescribe how the Planning Coordinator will determine whether mitigation is necessary and who would be responsible for providing the mitigation.

For this reason, SPP addresses this topic in requirements R7, R8, and R9 of the SPP Regional Standard (PRC-006-SPP-1).

E. UFLS Program Coordination with other Protection Systems

FERC Position: Reliability Standard PRC-006-1 provides an adequate level of coordination between the UFLS program and specific protection systems and controls that NERC identifies as part of, or could impact, the UFLS program.

SPP SDT Position: We agree with FERC's determination. SPP's UFLS study by PowerTech verifies that SPP coordinates with protection systems.

Planning Coordinators are required to coordinate expected generation performance during under frequency events and generator trip settings under PRC-006-1. The SPP Regional Standard makes this a

requirement for generator coordination. Furthermore, PRC-006-SPP-1 requires coordination with other protection systems in terms of frequency, time duration and voltage level.

F. Identification of Island Boundaries

FERC Position: The Commission accepts NERC's clarification of the level of consent required between planning coordinators to adjust island boundaries under Reliability Standard PRC-006-1, Requirement R2.3. As stated in the NOPR, we believe that the reliability of the bulk electric system benefits from entities basing their studies on physical characteristics, as allowed in PRC-006-1, as opposed to hewing to artificial boundaries. It is important to coordinate adjustments in island boundaries to ensure that no part of the bulk electric system is inadvertently left unstudied. However, nothing in PRC-006-1 precludes entities from conducting additional assessments based on any island boundaries they wish to analyze.

SPP SDT Position: We agree with FERC's determination. The SPP UFLS program was designed with the entire Planning Coordinator area formed as a single island.

G. Automatic Load Shedding and Manual Load Shedding

FERC Position: We find that there is an adequate level of coordination between UFLS and manual load shedding. We are persuaded by NERC's comments that the term "additional load" in Reliability Standard EOP-003-2, Requirement R6, includes resources allocated to manual load shedding that are not included in the UFLS program. UFLS and manual load shedding programs are developed separately and have separate purposes. As such, to avoid insufficiencies in available load if manual load shedding is needed after UFLS has been activated, UFLS and manual load shedding programs cannot be planned to shed the same load.

SPP SDT Position: Manual load shedding is not addressed in the SPP standard and we believe that if entities comply with the EOP standard pertaining to manual load shedding then there is no problem. The SPP Criteria 7.3.3 also addresses this coordination. We agree with FERC's determination.

H. Elimination of Requirements for Balancing Authorities in EOP-003-2

FERC Position: The Commission accepts the elimination of requirements for balancing authorities in Reliability Standard EOP-003-2. NERC states in its comments that "all activities required for UFLS programs in the existing standards are incorporated into PRC-006-1, and are assigned to the Planning Coordinator," and that balancing authorities will still be made aware of UFLS programs in order to "be familiar with the purpose and limitations of protection system schemes applied in its area," as stated in Reliability Standard PRC-001-1, Requirement R1. To that end, the Commission believes that the comments address the questions raised in the NOPR regarding the elimination of balancing authority responsibility for Requirements R2, R4, and R7 of EOP-003-2.

SPP SDT Position: We agree with FERC's determination. NERC addresses the issue adequately; therefore, it is not addressed in the SPP Regional Standard (PRC-006-SPP-1).

I. Violation Risk Factors and Violation Severity Levels

FERC Position: The Commission directs the ERO to modify the language of the Lower VSL for Reliability Standard PRC-006-1, Requirement R8 and the Medium VRF for PRC-006-1, Requirement R5.

SPP SDT Position: We agree with FERC's determination.

J. Implementation Plan and Effective Date

FERC Position: The Commission approves the implementation plan and effective dates of Reliability Standards PRC-006-1 and EOP-003-2. We agree that there is a reliability gap given the lack of mandatory requirements for providing generator trip settings, which will continue until draft Reliability Standard PRC-024-1 is approved. The Commission, however, also agrees that the gap is limited because the information mandated by PRC-024-1 is already supplied through mutual cooperation between utilities. To ensure that any gap pending implementation of PRC-024-1 remains limited, the Commission encourages the current practice of voluntarily sharing generator trip settings between entities to continue.

SPP SDT Position: We agree with FERC's determination that a reliability gap is created given the lack of mandatory requirements for providing generator trip settings. This gap will be removed when the SPP Regional Standard is approved, which requires Generator Owners to provide trip settings to the Planning Coordinator to allow the PC to design the UFLS plan per the NERC requirements.

**UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION**

**Automatic Underfrequency Load Shedding and)
Load Shedding Plans Reliability Standards)**

Docket No. RM11-20-000

**MOTION OF THE
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION
TO CORRECT THE RECORD**

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June 6, 2012

Pursuant to Rule 212 of the Rules of Practice and Procedure of the Federal Energy Regulatory Commission (“FERC” or “Commission”), 18 CFR § 385.212 (2011), the North American Electric Reliability Corporation (“NERC”) respectfully submits this limited motion to correct the record in regard to the Commission’s Final Rule in this proceeding issued on May 7, 2012.¹

NERC is not seeking rehearing of Order No. 763 — NERC believes Order No. 763 correctly approved Reliability Standards PRC-006-1 (Automatic Underfrequency Load Shedding) and EOP-003-2 (Load Shedding Plans). NERC does respectfully request, however, that the Commission correct the record regarding the Final Rule with respect to Order No 763’s characterization of comments filed by NERC in this proceeding.

FERC issued a Notice of Proposed Rulemaking (“NOPR”) on October 20, 2011.² In the NOPR, FERC requested comments in response to the following:

P 43. “We agree that planning coordinators should consider generators that trip prior to underfrequency set points when developing their UFLS programs. The Commission seeks comments from the ERO and other interested persons on how generation losses outside of the UFLS set points (i.e., generators having trip settings prior to the UFLS underfrequency set points) should be accounted for in UFLS programs (e.g., generator owners who trip outside of the UFLS set points could procure load to shed to account for the loss in generation).”

NERC filed comments in response to FERC’s NOPR, stating that “[w]hile requiring the Planning Coordinator to account for generators that trip prior to underfrequency set points when developing their UFLS programs is appropriate, it is not appropriate for a Reliability Standard to prescribe how the Planning Coordinator will determine whether mitigation is necessary or who

¹ *Automatic Underfrequency Load Shedding and Load Shedding Plans Reliability Standards*, 139 FERC ¶61,098 (Order No. 763) (May 7, 2012).

² *Automatic Underfrequency Load Shedding and Load Shedding Plans Reliability Standards*, 137 FERC ¶61,067 (October 20, 2011).

would be responsible for providing the mitigation.”³ In Order No. 763, FERC summarized these comments by stating that NERC said “it is appropriate for planning coordinators to consider generators that trip outside of the UFLS set points when designing UFLS programs, but *it is inappropriate for planning coordinators to determine whether mitigation is necessary and who will be responsible for providing mitigation*” (*emphasis added*).⁴ This characterization of NERC’s comments is inaccurate.

NERC believes Order No. 763 takes certain statements made by NERC out of context, which could potentially affect the Commission’s assessment of pending and future regional standards addressing underfrequency load shedding or future versions of the continent-wide standard. NERC said in its NOPR comments that it is not appropriate for a Reliability Standard to prescribe *how* the Planning Coordinator will determine whether mitigation is necessary or who would be responsible for providing the mitigation, not *if* the mitigation is necessary. These are two completely different issues.

NERC apologizes if its comments were less than clear on this point. NERC did not intend to say that it is inappropriate for Planning Coordinators to determine whether mitigation is

³ See, *Comments of the North American Electric Reliability Corporation in Response to Notice of Proposed Rulemaking*, Docket No. RM11-20-000, December 23, 2011.

⁴ See, Paragraphs 58 and 58 of Order No. 763 (*emphasis added*):

50. NERC, EEI, TAPS, Dominion, FRCC and EPSA oppose requiring generator owners to procure load to shed for generators that trip outside of the UFLS set points. NERC states that it is appropriate for planning coordinators to consider generators that trip outside of the UFLS set points when designing UFLS programs, *but it is inappropriate for planning coordinators to determine whether mitigation is necessary and who will be responsible for providing mitigation*.

58. Based on the comments, the Commission is persuaded to take no action to require compensation for generation losses outside of the UFLS set points (i.e., generators having trip settings prior to the UFLS underfrequency set points). Reliability Standard PRC-006-1 is an improvement because it requires planning coordinators to consider generators that trip outside of the UFLS set points when modeling and designing UFLS programs. We are persuaded by NERC’s comments that it is appropriate for planning coordinators to consider generators that trip outside of the UFLS set points when designing UFLS programs, *but it is inappropriate for planning coordinators to determine whether mitigation is necessary and who will be responsible for providing mitigation*. For these reasons, we take no action to modify the Reliability Standard.

necessary and who will be providing mitigation. On the contrary, the Planning Coordinator is one of the functional entities with responsibility for maintaining the reliability of the bulk power system. One of the Planning Coordinators' responsibilities is to ensure that UFLS programs meet the performance characteristics defined in the standard. The approach in the standard provides Planning Coordinators with needed flexibility in developing UFLS programs based on the conditions and circumstances within their Planning Coordinator areas. Planning Coordinators must have access to all tools at their disposal to implement successful underfrequency load shedding programs.

For these reasons, NERC respectfully requests that the Commission correct the record to accurately reflect NERC's comments filed in this docket.

Respectfully submitted,

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CERTIFICATE OF SERVICE

I hereby certify that I have served a copy of the foregoing document upon all parties listed on the official service list compiled by the Secretary in this proceeding.

Dated at Washington, D.C. this 6th day of June, 2012.

/s/ Holly A. Hawkins
Holly A. Hawkins
*Attorney for North American Electric
Reliability Corporation*

Southwest Power Pool UFLS Standard Drafting Team Recommendation

The SPP UFLS SDT agrees with NERC that PRC-006-1 provides the “last resort” for Bulk-Power System preservation; and the reliability of the system is top priority. We also agree that the planning coordinator should be assigned this responsibility.

The SPP UFLS SDT believes the current approved NERC Standard (PRC-006-1) is an “improvement” but does not adequately address issues that the SPP SDT believes needs to be mandatory requirements and not voluntary.

The SPP UFLS SDT developed the SPP Regional Standard (PRC-006-SPP-1) in order to...

- a. serve as the SPP UFLS plan, which is a requirement of the NERC Standard (PRC-006-1).
- b. mitigate the reliability gap that is created until NERC PRC-024 is approved.

The SPP UFLS SDT recommends submitting PRC-006-SPP-1 to NERC.