

Meeting Notes Underfrequency Load Shedding SDT — Project 2007-01

July 28, 2008 | 11 a.m.–1 p.m. EST

1. Administrative

a) Roll Call

David Taylor welcomed the members and guests of the Standard Drafting Team for Project 2007-01 Underfrequency Load Shedding (UFLS). Those on the drafting team in attendance were:

- Dana Cabbell — Southern California Edison Co. (Chair)
- Brian Bartos — Bandera Electric Cooperative
- Larry E. Brusseau — Midwest Reliability Organization
- Gerald Keenan — Bonneville Power Administration
- Robert W. Millard — ReliabilityFirst Corporation
- Steven Myers — Electric Reliability Council of Texas, Inc.
- Philip Tatro — National Grid
- Stephanie Monzon — NERC
- David Taylor — NERC

Those on the drafting team not in attendance were:

- Paul Attaway — Georgia Transmission Corporation
- Jonathan Glidewell — Southern Company Transmission Co.
- Mak Nagle — Southwest Power Pool
- Robert J. O'Keefe — American Electric Power
- Robert Williams — Florida Municipal Power Agency

Each team member was asked to verify the information on the UFLS roster and notify David Taylor via e-mail of any corrections that should be made.

b) NERC Antitrust Compliance Guidelines

David Taylor reviewed the NERC Antitrust Compliance Guidelines with the standard drafting team. The team agreed to abide by the guidelines.

2. Action Items

David Taylor reviewed the actions that were open at the end of the March 31, 2008 conference call:

Action Items:	Status:	Assigned To:
Dana Cabbell to contact the WECC Control Work Group to inquire as to what data they have collected relative to generator trip settings during frequency excursions and report back to the UFLS SDT.	Remains Open — Dana has contacted the group and is awaiting a reply.	Dana Cabbell
Dana Cabbell volunteered to modify the draft comment form to incorporate mapping tables for each of the three standards to be eliminated in association with this project.	This action item was completed with the posting of the regional reliability standard performance elements for posting.	Dana Cabbell
Bob and Phil were tasked with proposing changes to the performance characteristics to incorporate the “annual certification” of the UFLS programs.	This action item was completed with the posting of the regional reliability standard performance elements for posting.	Bob Millard and Phil Tatro

3. Project Schedule

David Taylor reviewed the current schedule for Project 2007-01 with the standard drafting team. The discussion with FERC staff has the potential to add one or two more comment periods to the schedule which would extend the completion date further.

4. Update on NERC and FERC Staff Meeting

David Taylor provided a high level overview of the discussion held with FERC staff on July 11, 2008. In summary, FERC suggested the SDT reconsider the concept of regional standards and attempt to develop a continent-wide UFLS standard instead. FERC staff feels the use of regional UFLS standards does not meet the Commission’s policy statement nor does it fit the reasons for an exception for regional standards. Paragraphs 290 through 292 of Order No. 672 states:

290. The Commission believes that uniformity of Reliability Standards should be the goal and the practice, the rule rather than the exception. Greater uniformity will encourage best practices, thereby enhancing reliability and benefiting consumers and the economy. Congress envisioned greater uniformity in adopting section 215 and a broad cross-section of the industry supports this goal. At our November 18, 2005 technical conference, Michael Morris, the Chairman and CEO of American Electric Power, Inc., testifying on behalf of EEI, stated that: “The regional differences should be few . . . and the enforcement latitude should

be small." Tr. at 77:25-78:1 (Nov. 18, 2005). His fellow panelists, representing various sectors of the industry, agreed with his remarks.

291. The goal of greater uniformity does not, however, mean that regional differences cannot exist. We agree with WECC, NPCC, and others that section 215 of the FPA provides for exceptions from continent-wide uniformity in a Reliability Standard. Accordingly, we provide guidance on the criteria for considering such exceptions. As a general matter, we will accept the following two types of regional differences, provided they are otherwise just, reasonable, not unduly discriminatory or preferential and in the public interest, as required under the statute: (1) a regional difference that is more stringent than the continent-wide Reliability Standard, including a regional difference that addresses matters that the continent-wide Reliability Standard does not; and (2) a regional Reliability Standard that is necessitated by a physical difference in the Bulk-Power System.

292. We also recognize that greater uniformity cannot be achieved overnight. For example, a significant number of current regional standards have been developed on topics for which there is no continent-wide standard, but rather only a NERC directive that the regions develop a particular standard. Over time, we would expect that the regional differences produced under this framework will decline and a set of best practices will develop. We would expect that any ERO applicant will propose a process by which regional differences in this and other areas can be refined into a set of best practices over time. This is particularly important for the Reliability Standards that apply to regions within an Interconnection. Although we encourage the development of continent-wide best practices, we recognize that greater diversity may be appropriate as between the Interconnections than within them.

FERC also encouraged the SDT to thoroughly understand the blackout recommendation to coordinate the UFLS programs with other developments:

“7: Available system protection technologies were not consistently applied to optimize the ability to slow or stop an uncontrolled cascading failure of the power system. The effects of zone 3 relays, the lack of under-voltage load shedding, and the coordination of underfrequency load shedding and generator protection are all areas requiring further investigation to determine if opportunities exist to limit or slow the spread of a cascading failure of the system.”

“Recommendation 8b: Each regional reliability council shall complete an evaluation of the feasibility and benefits of installing under-voltage load shedding capability in load centers within the region that could become unstable as a result of being deficient in reactive power following credible multiple-contingency events. The regions are to complete the initial studies and report the results to NERC within one year. The regions are requested to promote the installation of

under-voltage load shedding capabilities within critical areas, as determined by the studies to be effective in preventing an uncontrolled cascade of the power system.

The NERC investigation of the August 14 blackout has identified additional transmission and generation control and protection issues requiring further analysis. One concern is that generating unit control and protection schemes need to consider the full range of possible extreme system conditions, such as the low voltages and low and high frequencies experienced on August 14. The team also noted that improvements may be needed in underfrequency load shedding and its coordination with generator under and over-frequency protection and controls.”

The group discussed possible alternatives for complying with FERC’s suggestions and will thoroughly discuss the various alternatives at the next face-to-face SDT meeting.

Bob Millard suggested the idea of requiring a Regional Entity to design each of the UFLS programs which could possibly be included in the delegation agreements or the ERO Rules of Procedure. David Taylor and Stephanie Monzon are to investigate Bob’s suggestion and report back to the SDT regarding alternatives for how the SDT could proceed with respect to applicability of a possible UFLS standard to Regional Entities or inclusion of UFLS language in the delegation agreements or the ERO Rules of Procedure.

5. Action Items

Dana Cabbell will review the outstanding action items and confirm assignments.

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Dana Cabbell to contact the WECC Control Work Group to inquire as to what data they have collected relative to generator trip settings during frequency excursions and report back to the UFLS SDT.	Remains Open — Dana has contacted the group and is awaiting a reply.	Dana Cabbell
David Taylor and Stephanie Monzon are to report back to the SDT regarding how the SDT should proceed with respect to applicability of a possible UFLS standard to Regional Entities or inclusion of such language in the delegation agreements or the Rules of Procedure.	New	David Taylor and Stephanie Monzon

6. Next Steps

The group discussed the next steps and agreed to further vet FERC's suggestion at the next face-to-face meeting. Stephanie Monzon will be sending out the notice for the next meeting soon.

7. Adjourn

The meeting adjourned at 1:05 p.m. EDT.