

Notes

Under-frequency Load Shedding SDT — Project 2007-01

July 20, 2010 | 12:00 p.m. – 5:00 p.m.

July 21, 2010 | 8:00 a.m. – 5:00 p.m.

July 22, 2010 | 8:00 a.m. – 2:00 p.m.

Indiana Municipal Power Agency (IMPA)
11610 N. College Ave.
Carmel, IN 46032

1. Administrative

Roll Call

Stephanie Monzon welcomed the members and guests of the Standard Drafting Team for Project 2007-01 Underfrequency Load Shedding

- **Robert J. O'Keefe — American Electric Power (Chair)**
- **Jonathan Glidewell — Southern Company Transmission Co. (Vice Chair)**
- Brian Bartos — Bandera Electric Cooperative
- Gary Keenan — Northwest Power Pool Corporation
- Steven Myers — Electric Reliability Council of Texas, Inc.
- Mak Nagle — Southwest Power Pool
- Brian Evans Mongeon — Utility Services (present Day 2-3)
- Tony Rodrigues — PacifiCorp
- Si Truc Phan — TransEnergie
- Scott Berry — Indiana Municipal Power Agency
- Frank Gaffney – Florida Municipal Power Agency
- Stephanie Monzon — NERC
- Philip Tatro — NERC (present Day 1-2)

Observers

Shawn Jacobs OGE (SPP)

NERC Antitrust Compliance Guidelines

Stephanie Monzon reviewed the NERC Antitrust Compliance Guidelines. It is NERC's policy and practice to obey the antitrust laws and to avoid all conduct that unreasonably restrains competition. This policy requires the avoidance of any

conduct that violates, or that might appear to violate, the antitrust laws. Among other things, the antitrust laws forbid any agreement between or among competitors regarding prices, availability of service, product design, terms of sale, division of markets, allocation of customers or any other activity that unreasonably restrains competition. It is the responsibility of every NERC participant and employee who may in any way affect NERC's compliance with the antitrust laws to carry out this commitment.

2. Process Check / Overview — Stephanie Monzon

Stephanie provided a brief summary of the process steps the drafting team will need to complete to move into recirculation ballot (or in the alternative initial ballot). Stephanie reviewed the SC action's that permit the SDT to deviate from the current standards process. The motion and approval can be found in the June 2010 SC meeting notes posted on the NERC website.

The team asked if the team decides that it wants to post for initial ballot again (as opposed to conducting a second ballot – recirculation ballot) would it be necessary to post it again for 45 days to collect comments. Stephanie indicated that since this project has been granted the ability to deviate from the process she would check with Maureen to determine what the options are for reposting for initial ballot.

3. Review of Third Posting Comments — All

Rob O. assigned questions to a sub-team for the purpose of reviewing the comments in detail to summarize the issues for discussion at the meeting. The sub-team presented the list of issues for discussion. A separate document, Summary of Comments, was created to break-down the comments received. The document breaks down the comments into three categories: 1- changes that will not be made to the standard documents 2- changes that can be made (non-contentious, low-hanging fruit) and 3- issues that require SDT discussion for resolution.

Stephanie reviewed Questions 1, 2, 3, 5, 6, 7

Rob reviewed Questions 4, 11, 13, Ballot Comments

Jonathan reviewed Questions 8, 12

Phil reviewed Questions 9, 10, 14

The following captures the issues discussed and resolution reached at the meeting:

- **Reliability Assurer: RA should be assigned responsibility for reaching concurrence within the Region on the UFLS program**
 - RA's have the voting structure to reach concurrence and governance structure to reach concurrence
 - There are currently no RA's registered

- A concern is that RA's are meant to replace the RRO and it is not appropriate for a standard to apply requirements to the entity that conducts compliance assessments
- JG suggested that the team include a description of a "valid" joint assessment to replace/revise R5 and R13
- JG presented his proposal to better describe "coordination" actions in lieu of the current requirement R5 that requires PC's to reach "concurrence"
- 7/21/10: the team conducted a poll to determine level of support for the revised R5 (a "yes" vote is in support to pursue revised R5 and a "no" is to abandon the proposed approach):
 - Robert J. O'Keefe - No
 - Jonathan Glidewell - Yes
 - Gary Keenan - Yes
 - Steven Myers - Yes
 - Brian Evans Mongeon - Yes
 - Tony Rodrigues - Yes
 - Si Truc Phan - Yes
 - Scott Berry - Yes
 - Frank Gaffney - Yes
- The team refined JG's proposal for R5 and agreed to make similar changes to Requirement R13.
- **UFLS Entities includes Transmission Owners but a separate requirement R10 that applies to Transmission Owners – this is confusing.**
 - The team reviewed the rationale for this structure. The switching of elements is not a concern at the distribution level and this is why this requirement should not be applicable to the UFLS entities (that include Distribution Providers).
 - Phil pointed out that there may be scenarios where a Planning Coordinator might want a DP to switch elements
 - Because this is a minority comment (only 5 comments about this in Q12) the group decided not to make any conforming changes to the standard applicability section and to Requirement R10.
- **What is switching of elements?** Frequent comment in Q12 - The team agreed that they would add a text box next to R10 that explains why it is important to control voltage as a result of under frequency load shedding AND modify Requirement R10 to include: "switching of capacitor banks, Transmission Lines, and reactors in order to control over voltage as a result of under frequency load shedding. Phil to insert text box language for R10.
- **Should Generator Owners be included in the applicability of the standard? Issue to be included in the Webinar**
 - 11 or more negative votes total
 - the team debated and concluded that including the GO would address the comments but would most likely cause GO concern and concern

- with the redundant requirement in PRC-024 – causing problems when PRC-024 seeks approval.
- The standard drafting team will add a text box that repeats the information in the implementation plan that addresses the pre-requisite approval of PRC-024 Requirement R6. This will make sure that entities review the plan to address the interdependency. **NEED TO FIX IMPLEMENTATION PLAN IN PREEQ SECTION FROM 4.1 AND 4.2 TO 4.1 THROUGH 4.6**
 - **LSE's in Standard – Brian Evans Mongeon**
 - entities mostly within WECC commented that LSEs have UFLS equipment and should be included in the standard
 - the SDT decided that it will not include the LSE in the standard because the LSEs do not own assets. The SDT recognizes that the FM version 5 and the Statement of Compliance Registry causes confusion regarding the involvement of the LSE in UFLS programs but the SDT refers back to the NERC LSE workshop held in 2008 and the statement (**FIND WORKSHOP MATERIALS AND COPY AND PASTE STATEMENT THAT LSE DO NOT OWN ASSESTS**):
 - **Equivalent inertia method should be permitted in the standard – Phil Tatro** will look up the response in the second posting
 - The SDT will supply the same answer provided in the second posting response to this comment
 - **TO's TP's and DP's want involvement in R1's identification of island criteria and R4's schedule – general involvement in PC activities**
 - Frank Gaffney will draft a requirement like FAC-010 R3 and R4 to ensure that the UFLS entities have a say in the process
 - **One year is not enough time for PC's to complete their work**
 - The SDT agreed that one year is sufficient time and will not make changes to the implementation schedule because of the urgency to implement this standard and in addition UFLS programs exist today and will require validation to ensure that the programs meet the performance criteria. One year is sufficient time to complete a validation of existing programs.
 - **TO's and DP's are concerned that the implementation schedule does not allow enough time for compliance – which implementation schedule do they comply with?**
 - The standard drafting team added clarifying language to the implementation plan
 - The standard drafting team agreed to add an example of effective date scenarios in a text box in the standard and the implementation schedule – Si Truc and Brian M.
 - **Event assessment requirements should include a threshold**

- PRC-009 is enforceable and contains no threshold for events assessment and this proposed standard should be consistent with the currently approved standard PRC-009 Requirement R1.
- **Standard does not ensure interconnection coordination**
 - To the extent that PC's identify islands that cross regional boundaries (R1) the proposed standard requires inter-regional coordination of their UFLS programs between PC's
- **Modify Curves in Attachment 1 & 2**
 - The team reviewed Phil's input and decided that they would not modify the curves because it would cause confusion rather than clarify the issues raised during the posting. The team decided to combine the curves into one attachment.
 - The team decided to include a text box that explains the vertical lines – this should clarify commenters' issues with the curve
 - As a result of this discussion the team debated the time required to run the simulation. While this has been discussed in the past the team thought that the requirements – R3 part 3.1 and 3.2 indicate that the simulation must be run for 60 seconds. As a result of this confusion the team decided to modify requirement R3 parts 3.1 and 3.2. the team eliminated part 3.2 by combining parts 3.1 and 3.2 into one sub-part.
- **Eliminate the Volts / Hz requirement**
 - The team considered Phil's consideration and decided to keep the requirement.
 - Gary provided examples that indicate the requirement is needed in the West.
 - The field test suggestion is not an option at this point because we are trying to complete the standard and not refine the requirements. A field test should be conducted at the beginning of the drafting process and not at the end of the development process. The field test would add many months to the development process of the standard.
- **Combine 3.3.2/3.3.3, 4.2/4.3, and 4.5/4.6**
 - The team agreed to keep the requirement as is – this is in line with Phil's recommendation
- **Expand the Generation Facilities for which Modeling of UF/OF Trip Settings and Monitoring V/Hz is Required of the Planning Coordinator**
 - Because the comments on this issue did not appear on the no comments in the ballot the team decided to keep the requirement as is considering that lowering the threshold without having compelling technical justification will lead to strong opposition. Also, several team members disagreed that modeling the smaller resources would not be impactful and did not agree that making a change to the standard.
- **Use of the Phrase “Directly Connected to the BES”**

- The team agreed with Phil's recommendation to keep the words as is in the standard to maintain consistency with the Statement of Compliance registry.
- **Exelon's comments**
 - The team agreed that the comments did not warrant a change to the standard. The team agreed with Phil that we would handle their comments by responding to their concerns in the consideration of comments report.
- **Remove reference to "control" under UFLS entities applicability since it implies operational awareness or oversight responsibilities**
 - This is consistent with the Statement of Compliance registry. In addition, the recommendation made by the commenter is not consistent with the team's understanding of the UFLS entities' role
 - The team will not make this change.
- **Insert "manual" in R3 and R5 of EOP-003**
 - The team did not insert manual in front of load shedding rather inserted the words "excluding UFLS" to emphasize that the load shedding plans do not include UFLS. The team did not want to interpret the remaining requirement by assuming that the load shedding referred to is manual u-f load shedding and automatic uvls.
- **Modify purpose statement to clarify that the scope of standard is manual load shed only.**
 - The team decided to not accept this recommendation because they have made conforming clarifying changes to the requirements to clarify that ufls is not included in the load shedding activities. Also, the changes to the purpose statement cannot be made because the standard contain automatic uvls requirements.
- **Modify purpose to clarify role of TOP and BA – they have the ability to authorize manual load shed**
 - The team decided to not accept this recommendation because they have made conforming clarifying changes to the requirements to clarify that ufls is not included in the load shedding activities. Also, the changes to the purpose statement cannot be made because the standard contain automatic uvls requirements.
- **R4 – should be modified to reflect that only UVLS is being addressed.**
 - The team made the recommended modification. Another comment received indicated that power flows are not needed to come up with a UVLS program and the "power flow" reference in R4 should be deleted. The team did not agree that power flows are not needed in determining a UVLS program and decided to keep it in the Requirement.

Open Items – To be discussed by the SDT:

1. Xcel Energy: **Wants term “island” in NERC Glossary.**
2. ATC / Manitoba Hydro / MRO: “...**other affected Planning Coordinators” too vague**
 - a. Suggested text: Each Planning Coordinator shall coordinate with all other Planning Coordinators, portions of whose footprint falls within an identified island, on UFLS design assessment results before design assessment completion for those islands that span two or more Planning Coordinator footprints.
3. Some Regional Entity footprints are very un-amenable to being studied as islands and some modification of boundaries is necessary. (can be fixed by a footnote)
4. What to do about what a PC would do with non-registered small DPs.
5. MidAmerican wants 2 years each for R11 event assessment and R12 design assessment with exception requests allowed. MH, MRO wants more time also, suggests link to event investigation team schedule.

4. Develop Action Plan – All

The SDT created an action plan for the remaining work including scheduling conference calls to complete the work prior to recirculation ballot; however, the SDT had to complete the work to post for a rebalot by 7/24/10 and as a result expedited the action plan below and deferred several items in the plan.

ACTION PLAN (as of meeting but addressed in an expedited fashion 7/23-7/24):

14 issues that require SDT discussion

1. For issues that resulted from Phil’s review – Phil will email the team pro’s and con’s by 7/22/10 - Team will inform Phil of resolution **by 7/22/10 COB - Complete**
2. The team will schedule two conference calls for next week to complete discussion on the issues- **Complete**
 - a. 7/26 3-5 eastern
 - b. 7/29 1-4 eastern – DETERMINE RECIR GO/No-GO or RECIR DATE
3. Phil’s Issue #4: Connected at the BES – Phil requested assistance with responding to the comment if we decided to keep the standard as is. Frank volunteered to help Phil work on a response to comments. - **Complete**
4. R13 – Jonathan will revise R13 to match the structure of R5 - **Complete**

Pre-requisite documents for Recirculation Ballot

5. Mapping document – Frank - **Complete**
6. Standard - Frank
 - a. Requirements – Frank - **Complete**
 - b. Measures – Stephanie - **Complete**

- c. VRFs / VSLs – Stephanie - **Complete**
- d. Variance + Graph – Si Truc - **Complete**
- e. Graphs – Phil Tatro - **Deferred**
- 7. Implementation plan – Jonathan - **Complete**
- 8. Consideration of comments report – Stephanie - **Complete**
 - a. Rob (Q4, 11, 13) to Stephanie by COB Monday 7/26
 - b. Phil (Q9, 10, 14) to Stephanie by Wednesday morning 7/28
 - c. Jonathan (Q8, 12) Stephanie by COB Monday 7/26
 - d. Stephanie (Q1-3, 5-7) will compile and distribute first pass to team by COB 7/28
 - e. Team will review and provide any comments **DIRECTLY** to the person assigned the question by noon August 2nd. Comments received and modifications to the responses will be provided back to Stephanie by COB August 2nd.
- 9. Ballot comments – Rob will respond to comments that are not covered by responses already drafted for the consideration of comment reports – Stephanie assign colors by 7/23/10. Insert responses after the consideration of comments has been completed (after August 2nd). - **Complete**
- 10. Next in-person meeting – Baltimore – Brian Evans Mongeon to check if CPS will host (preferable Inner Harbor area)
 - a. **October 7 – 8am -5pm**
 - b. **October 8 – 8am – noon**
- 11. Stephanie will work on the webinar logistics by Tues. July 27th - **Deferred**
- 12. Rob will draft a slide deck for the webinar to be reviewed during the conference call on Thurs. **Deferred**

PR Action Plan

Webinar

August 9th 11-12 eastern - **Deferred**

Individual Outreach – any revelations to be reported at the next conference call

Cal ISO - Gary

PJM – Stephanie (Tom) / Rob (Mark)

NPCC Entities (NY ISO) – Si Truc / Brian M.

MRO and MRO entities – Brian M.

WECC entities (not RE) - Gary

MISO - Scott

SRC members – Steve M. (potentially hold conference call on 8/5 with SRC – Steve to confirm with SRC)

SERC entities – Jonathan

SPP entities – Shawn

FRCC entities – Frank

ERCOT – Steve

5. Action Items

Stephanie Monzon will review the action items:

Action Items:	Status:	Assigned To:
See action plan		

6. Next Steps – Review 2010 Schedule

Date	Location	Comments
July 20-22, 2010	IMPA	Review Comments Third Posting Revise Standard
August 12, 2010 1-4pm eastern	Web-conference	Second Ballot Comments
August 17, 2010 1-3pm eastern	Web-conference	Second Ballot Comments
October 7-8, 2010 8-5pm eastern 8am – noon	In Person Meeting	Baltimore, MD (Inner Harbor)

7. Adjourn