

## Meeting Notes Project 2007-11 Disturbance Monitoring Standard Drafting Team

September 30 – October 3, 2013

In-person meeting with ReadyTalk Web Access  
Florida Reliability Coordinating Council, Inc.  
Tampa, FL

### Administrative

#### 1. Introductions

Individuals in attendance:

Pete Heidrich, Manager of Standards for the FRCC provided a welcome and safety briefing. As the Chair of the Phase 2 of the Bulk Electric System Definition Project, he gave a short update of the Team's work and the potential consequences of not achieving the projected deadline. The meeting was brought to order by Lee Pedowicz, Chair, at 8:08 a.m. ET, Monday, September 30, 2013. Lee Pedowicz welcomed everyone and noted that the purpose of the meeting is to get the standard to posting. He further recognized that Scott Barfield has developed some good points regarding the standard; however, the Team agreed previously not to make any other substantive changes to the standard. Lee Pedowicz also thanked the Team for their work and input. Those in attendance were:

Name	Company	Member/ Observer	In-person (IP) or Conference Call/Web (W)			
			9/30	10/1	10/2	10/4
Lee Pedowicz, Chair	Northeast Power Coordinating Council	Member	IP	IP	IP	IP
Frank Ashrafi	Southern California Edison	Member	IP	IP	IP	IP
Alan D. Baker	Florida Power and Light	Member	IP	IP	IP	IP
Daniel J. Hansen	NRG Energy	Member	IP	IP	IP	IP
Tim Kucey	PSEG Fossil	Member	-	-	-	-
H. Steven Myers	ERCOT	Member	IP	IP	IP	IP
Jack Soehren	ITC Holdings	Member	IP	IP	IP	IP
Vladimir Stanisic	AESI, Inc.	Member	IP	IP	IP	IP

Name	Company	Member/ Observer	In-person (IP) or Conference Call/Web (W)			
			9/30	10/1	10/2	10/4
Ryan Quint	Bonneville Power Administration	Member	IP	IP	IP	IP
Guy Zito	Northeast Power Coordinating Council	Member	IP	IP	IP	IP
Ken Hubona	Federal Energy Regulatory Commission	Observer	W	W	W	W
Juan Villar	Federal Energy Regulatory Commission	Observer	W	-	-	-
Eric Allen*	North American Electric Reliability Corporation	Observer	W	-	-	-
Scott Barfield-McGinnis (Standard Developer)	North American Electric Reliability Corporation	Observer	IP	IP	IP	IP
William Edwards* (Legal Counsel)	North American Electric Reliability Corporation	Observer	W	-	-	-
Barb Nutter (Standard Developer)	North American Electric Reliability Corporation	Observer	IP	IP	IP	IP
Flo Haussler	PacifiCorp	Observer	W	-	-	-
Philip Winston	Georgia Power Company	Observer	-	W	-	-
Ethan Mathews	PacifiCorp	Observer	-	W	W	-
		Observer				
		Observer				

\*These attendees were present for the discussion of Item 3 of the Agenda, IEEE (Institute of Electrical and Electronics Engineers) Standards.

**2. Determination of Quorum**

The rule for NERC Standard Drafting Team (SDT or Team) states that a quorum requires two-thirds of the voting members of the SDT. Quorum was achieved as eight of the nine members were present.

3. [NERC Antitrust Compliance Guidelines and Public Announcement](#), [Standards Development Process-Participant Conduct Policy](#), and [Email Listserv Policy](#)

NERC Antitrust Compliance Guidelines and public disclaimer were read by Barb Nutter. There were no questions. Also, the attendees were reminded of the Team and Listserv policies posted on the NERC website.

4. **Review Roster**

Barb Nutter noted there have been no changes to the roster.

5. **Review meeting Agenda and its Objectives**

Barb Nutter reviewed the agenda and objectives noting that the discussion about proposed Requirement R13 would be deferred until 1:00 p.m. ET when others were available for discussion.

**Agenda**

1. **Conference Survey Feedback** – Barb Nutter provided the Team feedback from the two surveys submitted by attendees of the two technical conferences provided to industry stakeholders concerning disturbance monitoring. Overall, the feedback was positive and the information revealed the importance to communicate the Drafting Team’s credentials, knowledge, and expertise prior to conducting the meeting. According to the survey, the Team was successful in communicating this, and the consideration of the input of stakeholders.

2. **Book of Flowgates** – Ryan Quint provided the Team a synopsis of the NERC’s “Book of Flowgates.”

Steve Myers was concerned that the standard says that “all Flowgates must be covered.” Specifically, ERCOT does not use the Flowgate terminology, but the proposed Requirement R6 does. Instead, ERCOT uses “major transmission interfaces.” The following questions were posed:

- a. Where do we document this information/what does industry need to know?
- b. How is it applied/relevant to the Team’s decisions?

3. **IEEE Standards** –Bill Edwards provided the team information regarding the copyright issues regarding the use of IEEE standards within the proposed standards. NERC does not have the appropriate licensing for sharing an IEEE standard among team members. The Federal Energy Regulatory Commission (FERC) has used IEEE standards in other work, for example Order No. 733. Eric Allen provided input on the use of the IEEE COMFEDE, COMTRADE, and COMNAME interoperability standards which relate to R13, Parts 13.3, Sequence of Events Recording (SOER), 13.4, Fault Recording (FR) and Dynamic Disturbance Recording (DDR), and 13.5, File Naming. The discussion revealed that SOER will most likely be a simple table based file (e.g.,

spreadsheet) and would not need the added complexity of COMFEDE. In contrast, based on Eric Allen's recommendation, the Team agreed that COMTRADE and COMNAME should remain in the standard. This was based on the fact that recorded data needed to be supplied in a format that would facilitate analysis in an expeditious manner without having to translate to other formats. It is reasonable for entities to subscribe to or purchase the necessary standard(s). Dan Hansen noted that an entity does not necessarily have to purchase a standard, but merely require it in the equipment purchased. Barb Nutter noted that Howard Gugel (NERC – Director of Standards Development) recommended that the IEEE standard reference should be added to the reference section of the standard which the SDT agreed to.

Scott Barfield noted that the Team should consider not using “and its successors” as a means to allow (i.e., require) the most current IEEE standard to be used. Alan Baker asked why that was a concern and Scott Barfield responded that an IEEE standard change could lead to an instance of non-compliance and IEEE changing the requirement for data exchange outside the standards process; which provides for industry input, vetting, and approval.

#### **4. Documents Team needs to finalize for November posting:**

##### **a. Draft PRC-002-2**

##### **i. Requirements**

1. R1 – Scott Barfield provided feedback on R1. The phrase “establish a list” lends itself to meaning a one-time event. Also, the word “list” may be perceived as administrative. The intended performance of R1 is to identify buses for SOER and FR equipment. The list is the evidence produced. The Team considered the input and revised the standard accordingly.
2. R2 – Lee Pedowicz asked Scott Barfield what questions industry might raise about “owners.” Scott Barfield noted that industry might question the use of “notify the owners of those Elements” meaning that the generic use of “owners” is not definitive and believed the SDT is inferring that the Generator Owner which is the other one applicable asset “owner” in the proposed standard. Ryan Quint disagreed that the “owners” includes other functions to be notified, such as a Distribution Provider (DP) or Load Serving Entity (LSE). The Team was concerned that the DP and LSE have no Reliability Standard obligation to install data recording at bus locations because they are not applicable to the proposed standard. It was theorized that these DP and LSE functions would be very small entities that own BES Elements that

would not be impactful to reliability. The SDT agreed to let industry stakeholders comment on the matter and provide suggestions.

3. R3 – Scott Barfield noted to the Team that Project 2010-5.1 – Protection Systems: Phase 1 (Misoperations) used the term “BES interrupting device” rather than “circuit breaker.” The SDT confirmed that the use of “circuit breaker” was the preferred equipment designation for PRC-002-2.
4. R4 – NERC staff that previously reviewed the standard questioned the use of “they own” in the sub-parts. The TO and Generator Owner (GO) applicable functions in this Requirement imply ownership of the facilities. Scott Barfield recommended moving the reference to the main requirement if it was important for clarity. The Team decided to omit the reference entirely.
5. R5 – A question was raised if the lowercase term “fault” was intended to be the NERC Glossary term. The Team agreed the intention was to use the generic definition of fault and not the NERC Glossary term.
6. R6 – Scott Barfield noted that Requirement R6, like Requirement R1, was establishing a list rather than identifying buses. The SDT concurred and made a similar revision as in Requirement R1 to change the performance to “identify BES Elements” which will result in a list to be used as evidence. A concern was raised that Part 6.1 was using the NERC Glossary term “Load” where the term “Demand” was more correct. The term “Load” pertains to customers or end-use and “Demand” pertains to measured megawatts (MW). The SDT replaced “Load” with “Demand.” An additional concern was raised about using the subject word “major” in sub-Part 6.1.4. Although the Team recognized this may be an issue, it was retained as is.
7. R7 - There was no significant discussion.
8. R8 – The Team discussed the technical aspects of the requirement. Scott Barfield raised several questions regarding clarity. First, Part 8.1 it was not clear if the Team was referring to a single phase (i.e., type or quantity) voltage to be measured. The Team revised the wording to “one” phase-to-neutral. For Part 8.4, the concern was that the requirement implies the applicable entity may end up being required to have multiple frequency measurements at one location. The Part read that the criteria for frequency would be applied to all Elements for the location, which is not needed. The Team disagreed that the Part was requiring that specifically.
9. R9 – The Team made editorial revisions to the requirement. A question was raised about what phase is applicable in Part 9.2. Does it have to be the same phase as the

current? The SDT agreed it could be any two phases; therefore, the SDT inserted the word “any” to clarify the intent.

10. R10 – There appeared to be confusion about how Parts 10.1 and 10.2 connected with the Requirement. The Team added text to clarify that the Parts were intended to apply to DDR that was not continuous.
  11. R11 – The Team made editorial edits to the Requirement.
  12. R12 – The Team made editorial edits to the Requirement.
  13. R13 – The Team revised Part 13.3 based on the input of Eric Allen. The SDT decided to remove the IEEE COMFEDE file formatting from the standard and only require a comma separated value (.CSV) format for providing a SOER. Also, the Team removed from Part 13.5 the “or its successors” from the IEEE reference C37.232 because this would have the potential to inadvertently result in an instance of non-compliance if the entity did not know the IEEE standard had changed. Also, having such criteria within the requirement would remove it from the stakeholder process and proper vetting.
  14. R14 – Scott Barfield provided feedback regarding the requirement to return the equipment to service. The issue is the performance that is required to return the equipment to service. The performance need is to have the ability to restore the recording ability. The Team modified the requirement to initiate the performance based “the discovery of a failure” and the two possible responses were to (1) restore the ability within 90 calendar days, and if not, the entity must notify its Regional Entity accompanied by a Corrective Action Plan (CAP) within the 90 calendar days. The Team concurred and made the changes; however, upon further discussion, the Team wanted to allow the entity an additional amount of time (i.e., 30 calendar days) to prepare the CAP. The Team could not reach consensus on how to write the performance. Scott Barfield noted that the multiple dates would lead to unfavorable industry feedback due to the compliance risk and suggested moving the 90 calendar days to the main requirement and simplify the two bullet options. Additionally, he asked if the goal is to incentivize the entity to make the repair within 90 calendar days and the disincentive to do a CAP. The Team agreed the preferred action is to return the recording ability to service.
- ii. Measure – Barb Nutter provided the Team a review of the guidance for developing good Measures. The following is a synopsis of the SDT’s work regarding Measures:

1. M1 – Minor rewording to conform with the Requirement R1 revision. Eliminated the use of “identified” and added “in accordance with Attachment 1...” Also added “(electronic or hardcopy)” for the acceptable types of evidence.
2. M2 – The SDT added “dated” to comport with the use of a time period in Requirement R2. Also added “(electronic or hardcopy)” for the acceptable types of evidence.
3. M3 – The Team discussed at length the evidence for this measure. The concern was how to demonstrate the circuit breaker owner has SOER. The Team reached consensus that SOER specifications (or configurations) or the recordings themselves could serve as evidence of SOER. Corrected the Requirement reference from R1 to R2 and added “(electronic or hardcopy)” for the acceptable types of evidence.
4. M4 – The Team was concerned about the use of “derivations” in the Measure with regard to Requirement R4 using SOER where derivations would not necessarily be useful proving compliance. Also added “(electronic or hardcopy)” for the acceptable types of evidence.
5. M5 – The Team cleaned up the measure to have it better align with the parts of the requirement. The entity can use configurations for 5.1 and 5.3 and device specifications for 5.2; however, the recording itself may also demonstrate compliance, so the Team added that as a measure as well.
6. M6 – The Team revised the measure M6 to comport with the Requirement R6 changes and to include the missing language to address Part 6.2 (5 year review).
7. M7 – The Team drafted language for the measure.
8. M8 – The Team cleaned up the measure, properly aligning the references with the correct requirement, and adding clarity that there are two acceptable components of evidence. For example, evidence may include specifications and configuration files of equipment or actual data recordings which would be an output of the equipment or derivations.
9. M9 – The Team cleaned up the Measure, properly aligning the references with the correct requirement and adding clarity that there are two acceptable components of evidence. For example, evidence may include specifications and configuration files of equipment or actual data recordings which would be an output of the equipment or derivations.
10. M10 – The Team used wording that inferred that evidence could be “samples” implying that evidence would not be the actual artifacts demonstrating compliance.

The Team removed the words “sample” and also added “(electronic or hardcopy)” for the acceptable types of evidence.

11. M11 – The Team drafted language for the measure.
  12. M12 – The Team clarified the measure and clarified that there are two acceptable components of evidence. For example, evidence may include specifications and configuration files of equipment or actual data recordings which would be an output of the equipment.
  13. M13 – The SDT clarified the measure and clarified that there are three acceptable components of evidence. For example, evidence may include data transmittals, device specifications and configuration, or actual data recordings.
  14. M14 – The Team used wording that inferred that evidence could be “samples” implying that evidence would not be the actual artifacts demonstrating compliance. The Team removed the words “sample” and also added “(electronic or hardcopy)” for the acceptable types of evidence. Additionally, the SDT clarified in the measure that there are three acceptable components of evidence. For example, evidence may include reports that indicate the discovery of a failure, documents that demonstrate the date recording was restored, or the report to the Regional Entity including the CAP.
- iii. Attachment 2 – The Team revised the draft for Attachment 2 – Sequence of Events Recording (SOER) Data Format. There was discussion about the time description column, and it was decided that the column would be “offset.” If the time was UTC, the value would be zero and if a local offset was used it would specify the hour (e.g., -6).
  - iv. VSL – Barb Nutter provided the Drafting Team a review of the guidance for developing good Violation Severity Levels.
    1. VSL R1 – Ryan Quint was concerned that having only a Severe VSL for identifying the bus locations according to Attachment 1 does not provide any gradation. For example, if one out of a hundred was wrong it would be a Severe violation. The Team was split concerning the clarity of the VSL. Lee Pedowicz called for a vote that yielded by simple majority that the Team was satisfied with the VSL as written.
  - v. Rationales – The Team went through each of the proposed rationale boxes for the associated requirements. Many of the proposed rationales were restatements of the requirement and provided little benefit to the reader of the technical reasons for the requirement. The Team members proposed alternatives for each rationale which

resulted in shorter and succinct information on concerning the technical basis for the requirement.

vi. Guidelines and Technical Basis

- a. Dan – R1
- b. Alan – R3
- c. Vlad – R4
- d. Ryan- R6, R10
- e. Frank – R11
- f. Ryan | Lee – R12
- g. Jack R13
- h. Lee - Introduction

**b. Implementation plan**

1. The Team considered general consideration of the factors affecting the implementation of the standard. Barb Nutter presented the Team the PRC-025-1 Implementation Plan as a guide for consideration of the factors the generator relay loadability Team considered for Generator Owners as a primer for discussion. The Team considered whether to consider all factors collectively for all applicable entities, or by functions. For example, those that affect the Generator Owner and those affecting the Transmission Owner. Ryan Quint suggested the Team create an outline of the key points rather than modifying another standard's implementation plan. The Team agreed. Discussion of these factors led to concerns about how the implementation plan dealt with the time periods to become compliant. The Team was split over whether to use a staggered implementation. Scott Barfield asked how the Team is measuring the percent complete, as in by bus location or Element. The Team agreed that it would be by bus from the list that is generated.

**c. Comment Form for posting**

- i. The Team reviewed and made minor changes to the questions. It was agreed to include the MVA Template with the posting and not to add a question for R13.

**d. Mapping Document (PRC-018-1 to PRC-002-2 & PRC-002-1 to PRC-002-2)**

- i. Barb developed, Steve, Marisa, and Lee reviewed and Lee developed notes
- ii. The Mapping Document was not reviewed at the meeting

## 5. Develop industry webinar (to be held during comment period)

- a. Webinar will be performed via web-conference – this is not an in person meeting
  - i. Barb will be at NPCC for webinar. Anyone is welcome to come to NPCC.

## 6. Comment period potential dates

- a. November 4 – December 18
  - i. Potential webinar dates
    - 1. November 12, 13, or 14
- b. November 18 – January 2
  - i. Potential webinar dates
    - 1. December 10, 11, or 12

## 7. Other

Guy Zito joined the Team activities as the NERC Standards Committee (SC) – Project Management Oversight Subcommittee (PMOS) representative. He provided an update to the Team about the recent concerns about NERC posting a significant number of standards and other activities for industry stakeholder review. The SC tasked the PMOS to consider a way to stagger the standard postings to assist industry with review and feedback. The proposed pattern is to have two standards postings end per week (e.g., on a Monday and Wednesday). The Standards Process Manual (SPM) allows the Drafting Team to extend a posting (e.g., 45-day) to prevent multiple postings ending on or near the same day. Lee Pedowicz is concerned that when a standard is ready that it would be held until a slot is ready which could lead to waning interest.

Guy Zito also provided an update on the Cost Effective Analysis Process (CEAP). The CEAP received feedback from the NERC System Protection and Control Subcommittee (SPCS) regarding disturbance monitoring. The goal is to post the CEAP questions with the standard because it is the first time the cost of equipment will be assessed. It is the first time this will be done in hopes to obtain metrics to help with decision making.

Guy Zito asked what the largest risk group is to the standard. Jack Soehren noted that the Generator Owner function is most economically driven. Guy Zito suggested reaching out to the North American Generator Forum.

## 8. Next Steps

- a. Post Standard and supporting documents
- b. Finalize industry webinar
- c. Dry runs of industry webinar
- d. Present industry webinar

## 9. Assignments

- a. Ryan Quint – Provide write-up on Flowgates
- b. Barb Nutter – Assign team member to reach out to the North American Generator Forum (NAGF)
- c. Barb Nutter – Check with Compliance about Regional dispensation due to manufacturers not being able to meet demand for equipment.
- d. Barb Nutter – Determine if the team can pre-record the presentation for playback and then do a live Q&A.

## 10. Future Meeting(s) - TBD

## 11. Adjourn

- a. The meeting adjourned at 11:30 a.m. Thursday, October 3, 2013.