

Meeting Notes Project 2013-03 (Geomagnetic Disturbance) Standard Drafting Team

February 18, 2014 | 1:00 p.m. – 5:00 p.m. ET

February 19, 2014 | 8:00 a.m. – 5:00 p.m. ET

February 20, 2014 | 8:00 a.m. – 12:00 p.m. ET

NERC Headquarters
Atlanta, GA

Remote participants:

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Administrative

1. Introductions

The chair called the meeting to order at 1:00 p.m. EST, February 18, 2014. Participants were:

Members			
Name	Company	Name	Company
Frank Koza, Chair	PJM Interconnection	Randy Horton, Vice Chair	Southern Company
Donald Atkinson	Georgia Transmission Corporation	Emanuel Bernabeu	Dominion Resource Services, Inc
Kenneth Fleischer	NextEra Energy	Luis Marti	Hydro One Networks
Qun Qiu	American Electric Power	Antti Pulkkinen (remote)	NASA GSFC
Mark Olson	Standards Developer		

Observers			
Name	Company	Name	Company
Patti Metro	NRECA	Regis Binder	FERC
Ed Dobrowolski	NERC	Brady Walker	NERC
Mary Agnes Nimis (Remote)	FERC	Darnez Gresham (Remote)	Midamerican Energy
Scott Miller	MEAG Power	Justin Kelly (Remote)	FERC
Michael Gandolfo (Remote)	FERC	Tyler Giles	MISO
Ben Engelby (Remote)	ACES	Luis Leon (Remote)	Otter Tail Power Co
Adina Mineo (Feb 19)	NERC		

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 8 of 8 total members participated.

3. NERC Antitrust Compliance Guidelines and Public Announcement

NERC Antitrust Compliance Guidelines and public announcement were reviewed by Mark Olson. There were no questions raised. Participant conduct policy was reviewed.

4. Administrative and Safety

Building evacuation plan, emergency procedures, and office layout were reviewed by Mark Olson.

Agenda

- Chair Introductory Remarks.** Frank Koza welcomed the drafting team and observers. He reviewed the agenda.
- Benchmark GMD Event** – The revised initial draft of the benchmark GMD event whitepaper was presented by Luis Marti. Emanuel Bernabeu presented interim results of extreme value statistics analysis of the storm data. Regis Binder asked if the geomagnetic latitude scaling factor (alpha) is valid for the averaged data; an action item was taken for Antti Pulkkinen to review the data. The team is considering using 5% increments for alpha scaling factors instead of the 1% increments due to the lack of granularity with this data. Tyler Giles suggested adding an equation to the whitepaper so that alpha could be calculated. Action items were taken to improve the clarity in the draft, further substantiate the data analysis technique, and improve charts and graphs.

3. **Draft Transformer Assessment whitepaper-** Luis Marti reviewed the whitepaper. Regis Binder asked how age or condition of the transformer is factored into the thermal limit used in the whitepaper. Luis Marti stated that it was only appropriate to provide guidance because this would be a subject for engineering Judgment. Randy Horton added that the equipment manufacturer could be contacted to help with criteria but the standard would not be able to provide a specific requirement. The team determined that the manufacturer GIC capability curve provided in the whitepaper should be changed because it does not appear to have reasonable values although it is peer reviewed and published. Luis Marti will develop a sample curve. Action items were taken to improve the clarity and format of the draft.
4. **Initial draft planning standard.** The drafting team reviewed the initial draft standard TPL-007.
 - a. Requirement R1 was modified to make it clear that two models were needed: one for load flow (existing) and one for GIC calculations. The team discussed the many elements that may not be readily available, and may need to be estimated using engineering judgment. Regis Binder asked if capacitor bank trips were being addressed in the standard. The team agreed that the table was worded properly so that a planner would have to remove reactive compensation devices from the model that it determined were susceptible to outage during a GMD event.
 - b. Unnecessary subparts were removed from Requirement R2. The team determined that the Corrective Action Plan part should be separated into its own requirement, allowing it to be phased in appropriately during the implementation plan.
 - c. Requirement R3 (Corrective Action Plan) was added. The team discussed ways to bias CAP away from load shedding and determined that the distribution and review process contained in the requirements is satisfactory.
 - d. It was determined that a requirement to establish stability criteria was not needed; the standard does not call for stability analysis or contingency analysis.
 - e. The drafting team agreed that the standard should apply to owners and operators of the 200 kV network and above for the same reasons as found in the stage 1 whitepaper.
 - f. VRFs and VSLs were reviewed and action item was taken to update them based on changes made to the requirements.
5. **Implementation Plan was reviewed.** A revised implementation plan was developed to balance urgency, complexity, and availability data, tools, and models.
6. **Communications Plan was reviewed.** The drafting team prepared an agenda for the Mar 18-19 GMD TF meeting and assigned presentation responsibilities.
7. **Reviewed Next Steps for Stage 2**
 - a. Due to the amount of analysis needed for the Benchmark whitepaper the drafting team determined that April would be too soon for a posting. Alternatives were discussed, including posting the standard (only) for comment. Mark Olson will develop alternative schedule.

8. Adjourn

- a. The meeting adjourned at 12:00 p.m. EST on February 20, 2014