

Meeting Notes

System Protection and Control Working Group Conference Call

October 26, 2022 | 8:00 a.m. – 5:00 p.m. Eastern
October 27, 2022 | 8:00 a.m. – 12:00 p.m. Eastern

NERC Office
3353 Peachtree Rd NE
Suite 600 North Tower
Atlanta, GA 30326

Agenda Items

Day 1:

1. Call to Order (0800)

- a. NERC Antitrust and Personal Conduct Statement
- b. Opening Remarks
- c. Introductions around the room/on the phone

Ed Ruck

Bill Crossland

2. Administrative (0815)

Bill Crossland

- a. Agenda Review/Revisions
- b. New Members David Beach, Khondakar Mostafa, and Davis Erwin
 - i. David Beach has been granted membership in the SPCWG with no objections. **He should be placed on the SPCWG and SPCWG_Plus list: Completed**
 - ii. Davis Erwin introduced himself. His willingness to participate was noted and appreciated. At this time, the application for membership was tabled until a review of the roster could take place to ensure that there was a slot available for him under the new roster. However, he is to be included as an observer and **placed on the SPCWG_Plus list.**
 - iii. Khondakar Mostafa introduced himself. His willingness to participate was noted and appreciated. At this time, the application for membership was tabled until a review of the roster could take place to ensure that there was a slot available for him under the new roster. However, he is to be included as an observer and **placed on the SPCWG_Plus list.**

3. Liaison Updates (0830)

- a. IEEE PSRC
 - i. Next meeting in Jacksonville FL the week of January 9th, 2023

Mike Thompson

- ii. Preliminary minutes to the September 2022 meeting in Nashville were not available so no report on recent activities was provided.

b. IRPS

Manish Patel

- i. Nothing new. Brought forth a SAR for PRC-004, but based on comments, the IRPS decided that instead of revising PRC-004 and are instead bringing forth a new SAR for a new standard, which was approved by the RSTC to be forwarded to the standards committee shortly. The SPCWG is asked to look for this SAR and provide comments.
- ii. Are there any discussions that can be had with regards to how solar and wind IBRs are modeled in CAPE and ASPEN. Is that a topic for the IRPS or for the SPCWG? The IRPS is more focused on operations according to Manish. It was suggested that the SPCWG might be the best group for this, with the IRPS as a partner for any projects. The biggest issue is the modeling of IBR facilities. Without good models, it's very difficult to analyze them. It was noted that newer, better models became available last year, but that it may take a while for people to update their cases to the current models, but even these new models have drawbacks. A new methodology may be needed.
 - (1) Is it a model problem where tweaks can fix the issue, or is it something where the model is up to date and you still can't produce/replicate what you saw?
 - (2) Is there a problem with getting information from the manufacturers? Control systems operate differently, and some consider them to be proprietary and refuse to share them. Can we use a "user defined model" where a "closed module" can be shared but is also one that can't be looked at by the users.
 - (3) With inverters, response is based on control system programming. Even if you have the model a manufacturer gave you, if you have a different firmware version, you might not see the response you expect.
 - (4) Are we ever going to have "accurate" models again? If not, maybe system protection needs to rely on schemes that do not rely on those models.
 - (5) Battery storage as both source and sink creates additional complexity. Some manufacturers will go out and change firmware (and thus, require changes to the models and protection systems) and not tell the host utility
 - (6) There is a paper out there that Rich Bauer mentioned by Bogdan Kasztenny regarding changes to distance protection to make them more reliable when sourced by IBRs. – [**Distance Elements for line protection applications near unconventional sources \(presented to the WPRC two weeks ago\)**](#)
 - (7) This discussion has been focusing on grid following, yet grid forming inverters are coming and that may introduce a whole new set of complications.

4. Project Updates (0850)

a. FERC 881

Bill Middaugh

- i. There are several approaches to compensate for the ambient adjusted ratings. This might include a new settings for loadability for systems that are not covered by PRC-023 but are covered by 881.
 - (1) PRC-023 does not apply to everything in 881
 - (2) There may be enough margin in the season ratings to allow for the change ambient adjusted ratings might create
 - (3) Deliverable will be a white paper or maybe a position paper to be approved/accepted by the RSTC and then they would move forward based on what is noted in that paper.
- b. PRC-019-2 **Rich Bauer**
 - i. Compliance group has developed some comments and two points were addressed. Both of these were minor. Correcting a footnote and changing the title slightly to match. The larger compliance group will vote to accept this or not at their November meeting. There were several other comments that were not deemed salient. SPCWG should know by their December meeting if it was accepted or not.
 - ii. NERC has got to fix the compliance implementation guidance process as it's very frustrating.
- c. PRC-019 SAR **Jason Eruneo**
 - i. Jason made an excellent presentation on changes that were going on with PRC-019-3 on the whys. He also noted that the Implementation Guidance for PRC-19-2
- d. Scope Document **Lynn Schroeder**
 - i. New scope will ask for a consensus instead of a vote
 - ii. For membership, right now it's looking at revising it to look at the current membership.
 - iii. If you have strong feelings on the issue, please join the Scope Document breakout session.
- 5. **Determination of Practical Transmission Relaying Loadability Settings (0915)** **All**
 - a. Project to include the review of this document and recommend any changes to make current with PRC-023-5
 - i. Is there a need to wait for a position on FERC 881 before we move ahead on this?
 - ii. This probably should have been withdrawn/archived when version 4 came out. At this time, there is a recommendation that this paper get pulled from circulation and the SPCWG await for the new version of PRC-023 is approved. After that, then any impacts that might occur from 881 can be incorporated as needed.
 - b. Selection of team lead and team will be solicited at this time
 - c. Participate in break out session to work on this project
- 6. **SPCWG Library Review (0930)** **All**
 - a. Project to review existing SPCWG Reference Library on NERC website

- b. Jeff Iler will lead this team, 3-5 participants will be solicited at this time
 - i. Phil Winston, Jeff Iler, James Hanson, Khondakar Mostafa
 - (1) ACTION ITEM: ask for 3 volunteers to review the documents that were found by NERC Staff to see if they were still applicable to today's system/regulatory era.
- c. Participate in break out session to begin work on this project

7. SPCWG Website Development (0945)

All

- a. Project to move content from existing SPCS web page to new SPCWG webpage and work with NERC to layout the new content and develop process to update content periodically
- b. Team lead and 3-5 members of this group will be solicited
 - i. Sandy, Ed, Manish Patel, Bill Crossland,
- c. Participate in break out session to begin work on this project

8. Break (1000)

9. TPL-001 Footnote 13 (1015)

PG&E

- a. A question from PG&E on whether a single point of failure for wiring to trip coils exists for TPL-001. Determination if SPCWG should create recommendations via a white paper (team to be established if yes)

After discussion, it was decided that the best way forward was to create a SAR. While the SPCWG would require a justification (white paper), SARs can be submitted by individuals in a much more expedited fashion. At that point, the Standards Committee may decide they can (or can't) move the SAR forward, they might reach out to the appropriate technical committee, in this case, the RSTC. Then, the RSTC might refer the SAR to the SPCWG.

There is also the point that this would be posted for comment and that could help to draw in industry support.

The SPCWG came to a consensus that a SAR generated by the entity concerned to address the issues raised may be the best way to resolve the concerns.

Lunch (1130)

10. Breakout Sessions (1230)

- a. SPCWG Scope Document **Lynn Schroeder**
 - i. After discussion David Penney moved to approve this scope document and provide it to the RSTC. It was seconded and approved.
- b. FERC 881 Recommendations **Bill Middaugh**
 - i. Once a position paper is developed, then there will need to be a document clarification on the issue to help them understand what the standard is that they will be held to.
- c. SPCWG Technical Library Review **Jeff Iler**

- d. SPCWG Website Development **Manish Patel**
- e. Loadability Document Review **TBD**

11. Break (1500)

12. Breakout Session Report/Discussions (1515) All

13. Day 1 Adjourn (1700) All

Day 2:

14. Opening Remarks/Agenda Overview (0800) Bill Crossland

15. NERC Standards and 61850 (0810) Eric Udren

- a. A discussion item from a WECC entity on the impacts of 61850 architecture will have on the NERC Protection System definitions and the standards that reference them. Eric will guide this discussion and add insight where needed for reference. Determination if SPCWG should create recommendations via a white paper (team to be established if yes)

After discussion, it was determined that the SPCWG wait on Brian’s team to see if their work will solve the issue.

This will be added to work plan. Lynn S. will create a scope document and send it to Bill and Ed.: Done. A group will be formed after Brian’s team is done with their work to create a white or position paper.

16. Break (1000)

17. PRC-025 Issues with Wind (1015) Rich Bauer

- a. Rich received a question on this topic for our consideration
 - i. There is general consensus that the load tap changer requirement does not make sense. That said, this seems to be the first time that someone has complained about it.
 - ii. ACTION ITEM: SPCWG to create a one page brief on the PRC-025 issue, and a second one page brief on the overbuild scenario so that these can be provided to the standard review teams.

18. Future Meetings (1100) All

SPCWG and Subgroup Meeting Dates	Time (Eastern Prevailing Time)	Location
October 26,2022 October 27, 2022	8:00 a.m. – 5:00 p.m. 8:00 a.m. – 12:00 p.m.	Atlanta hybrid
December 8, 2022	1:00 – 4:00 p.m.	WebEx
February 9, 2023	1:00 – 4:00 p.m.	WebEx
April 13, 2023	tbd	Atlanta or NERC DC office
June 8, 2023	tbd	tbd
August 10, 2023	tbd	tbd

SPCWG and Subgroup Meeting Dates	Time (Eastern Prevailing Time)	Location
October 12, 2023	tbd	tbd
December 14, 2023	1:00 – 4:00 p.m.	WebEx

**Ensure future meetings do not conflict with US or Canadian holidays*

19. Roundtable (1115)

All

- a. Manish proposed that we create a white paper on PRC-024 voltage drop issue.
 - i. Consensus is that Manish will create a scope and once that is complete, a TF will be created to work on that project
- b. TPL-007 GMD – has anyone experienced challenges when evaluating what relays will trip based on studies? Is there value creating an industry guide? *ACTION ITEM: Place on next meeting agenda.*

20. Adjourn (1200)

Bill Crossland