

**Southwest Power Pool**  
**SYSTEM PROTECTION AND CONTROL WORKING GROUP**

**April 17 & 18, 2019**  
**Southwest Power Pool Offices**  
**Little Rock, AR**

**• M I N U T E S •**

**Agenda Item 1: Administrative Items**

Call to Order and Introductions

Chair, Steve Wadas, called the meeting to order at 1pm and welcomed everyone. There were 25 participants, 16 in person and 9 via WebEx on day one. There were 24 participants, 15 in person and 9 via WebEx on day two. (Attendance List Attached)

Proxies

No proxies were mentioned.

Approve minutes of previous meetings

The minutes for the January 30-31, 2019 meeting were reviewed by Kathryn Dial and no changes were required. The motion to approve the minutes was made by Louis Guidry and seconded by Shawn Jacobs. The group unanimously approved the minutes.

Approve agenda

The agenda for the meeting was reviewed. A few items were shuffled between days to accommodate presenters. The NERC SPC item was removed since there was no meeting this past quarter. An item was added for Cody Parker to give a PMU update. The motion to approve the modified agenda was made by Louis Guidry and seconded by Jeff Beasley. The revised agenda was unanimously approved. (See attached)

**Agenda Item 2: Antitrust Statement**

Kathryn Dial provided the following SPP Antitrust Statement to the Group:

“SPP strictly prohibits use of participation in SPP activities as a forum for engaging in practices or communications that violate the antitrust laws. Please avoid discussion of topics or behavior that would result in anti-competitive behavior, including but not limited to, agreements between or among competitors regarding prices, bid and offer practices, availability of service, product design, terms of sale, division of markets, allocation of customers or any other activity that might unreasonably restrain competition”

**Agenda Item 3: Review of Past Action Items**

Kathryn Dial reviewed the past action items. Most of the open item topics were on the meeting agenda to be discussed and these action items were re-visited at the end of the meeting and several were marked as complete. Four (4) new action items were added (see attached).

#### **Agenda Item 4: Member Vacancies**

Steve introduced new members Ryan Godwin (AEP) and Chris Angland (OPPD). Chris was present at the meeting with Ryan on the webex.

Mathew Thykkuttathil will be retiring at the end of this year and indicated he would be resigning from the SPCWG. Louis Guidry notified the group that he has a new position within his company and he is resigning from the group, effective immediately. We'll be formally submitting, in the next quarter, for three new member positions, one to replace Tom Miller, one to replace Mathew Thykkuttathil, and one to replace Louis Guidry.

#### **Agenda Item 5: MRO Protective Relay Subcommittee**

Steve Wadas discussed a MRO "Notice of open seats and call for nominations" to acquire members for their PRS Subcommittee. MRO has a 3 year term limit for members. They have 10 open positions, with 2 in Kansas/Missouri, 2 in Oklahoma, and 2 in Arkansas/Louisiana/Texas. Those wishing to nominate themselves should do so by April 19. Jeff Beasley and David Wheeler have submitted self-nominations.

#### **Agenda Item 6: Rapid City DC Tie RAS**

Kathryn discussed the Master RAS list as how it compares to the Operations Op Guides. In the Master RAS spreadsheet maintained by the SPCWG, the description of the Rapid City DC Tie RAS is not up to date. The Op guide language states: "The RAS associated with the Stegall-Wayside has been removed." The language in the Master RAS will need to be revised. Mathew Stolz (BEPC) noted there will be additional changes that need to be made in 2020 with respect to the control system. Matthew submitted updated language for the Master RAS description that is consistent with the Op Guide.

Louis questioned whether we need to go over the descriptions of remaining RASs for accuracy.. Ryan Godwin with AEP confirmed the Oklaunion RAS language is correct. The group needs confirmation from WAPA on the language for the Miles City RAS. An action item was recorded for this. Forrest made a motion and Louis seconded the motion to accept the Rapid City RAS language in the updated Master SPS list. The motion was unanimously approved. Action item #125 to update the Master SPS spreadsheet was completed.

#### **Agenda Item 7: RR350**

RR350, which deletes much of the existing SPCWG owned criteria, was submitted on behalf of SPCWG and the RCWG. Kathryn discussed that all group approvals have been received. Also, MOPC approved it and has sent it on to the board for their approval. Kathryn will provide an update at the next meeting regarding the status of RR350.

## **Agenda Item 8: NERC & MRO Standards Technical Rationale Update**

Shannon Mickens presented on numerous items:

1. NERC Participant Conduct Policy – The Policy notes that participants should be professional at NERC meetings, WebEx’s, etc. and should not pass CEII information around unless approved. Participants should ask “can we share this information?” Participants should not speak on behalf of NERC and NERC can ask participants to leave if it deemed they are not in compliance. The NERC participant conduct policy is in the meeting materials
2. MIDASWG – The MIDASWG will be implementing a uniform approach to reporting misoperations and other related reliability data. Shannon provided some of the MIDASWG activities. Q1 was posting of the functional draft of data reporting instructions. Louis noted April 30 is the release for public comment. They will be requesting PC approval at the June 2019 meeting. Shannon and Louis encouraged everyone to be aware of these dates and provide input. Consistent reporting is the goal
3. NERC SPCS - The SPCS agenda included PRC-019, which is written for traditional synchronous generation and PRC-023. They are trying to put SARs together for these standards and put in front of the NERC committees. PC leadership will take a look at the SARs and provide feedback and recommendations. Conflicts between the SARs were noted as well. Current initiatives are for PRC-019 to draft SAR and Implementation Guidance and for PRC-023 to draft the SAR. The SPCS plans to present to the PC at the June meeting and hope to receive approval to move the SARs to the next level with the Standards Committee.
3. SPIDERWG - System Planning Impacts from Distributed Energy Resources Working Group. Scope is to focus on modeling, planning, and analysis with respect to DERs.
4. Reliability Guideline - DER Model DER\_A is the dynamic model. The PC suggested the SPIDERWG work with the Load Modeling Task Force (LMTF). The PC did not approve the guideline for 45 day posting.
5. Transmission-Connected Dynamic Reactive Resources - White Paper
6. Future SARS - MOD 025, MOD 026, MOD 027, MOD 032, MOD 019, and MOD 024.
7. Effective Standard TPL-007-3 - Geomagnetic Storms, will go into effect July 1, 2019.

## **Agenda Item 9: Event Analysis**

Alan Wahlstrom discussed the EAWG and its purpose when it was in effect. Since the EAWG has disbanded, SPP is developing its own internal process for looking at events. The program is emphasizing situational awareness, lessons learned, and system event analysis. Alan asked for help from the SPCWG in looking into system events since the group can definitely add value. The group agreed that Alan was welcomed to bring issues when he needs SPCWG input...

Alan requested that if members are submitting an event to their RE, they are requested to add [SPPRCSA@spp.org](mailto:SPPRCSA@spp.org) to the distribution for general awareness. The email address is the SPP compliance department and they may forward to SPP Operations.

Kathryn sent the SPP link to the Events to the members.

### **Agenda Item 10: January 11, 2019 EI Oscillation Event**

Alan discussed this event. The oscillation was at .25Hz and was an inter-area oscillation. This is near a known frequency mode of about .22 Hz. The event caused swings of about 300MW on two tie lines coming out of Florida and about 100 amp swings on a 765kV line. A malfunctioning intercept valve in the turbine of a Florida plant that was slamming shut every 4 seconds, exciting the .22Hz mode, caused the oscillation. The oscillations were from Florida to the North U.S. in the Eastern Interconnection.

### **Agenda Item 11: Multi-Terminal Line Paper**

Jeff discussed the white paper that was put together by Jeff and Rick. Michael Fleck provided comments and changes and the group discussed the edits. The group decided the Generation Interconnection (GI) group should look into tariff language as it might resolve the issue. An action item was given to Kathryn and Doug to reach out to Steve Purdy. The white paper will be re-visited after the GI group has had a chance to visit the issue.

### **Agenda Item 12: PMU Update**

This agenda item was added during the meeting. Cody Parker, Manager of Operations, visited the group to talk about what SPP is doing with PMUs. Phase I of the SPP Synchrophasor Project has been completed, which allows synchrophasor data to be analyzed. The EPG tool allows SPP to visualize and analyze the data. RR340 has been submitted to require new generator owners to provide a PMU at the transmission interconnection substation. RR340 was approved at the April MOPC.

### **Agenda Items 13 and 14: SPS UFLS Study Update**

Charles Hendrix discussed the upcoming UFLS study. S&C Electric was selected to do the study. PJM had good things to say about their capability. Information to begin the study will be sent to S&C by the end of this week. The project is on-schedule. During the July SPCWG meeting, the CAS group will provide an update. The summer 2019 peak case will be evaluated. Charles asked for approval. Forrest Brock motioned to approve the study project and Jeff Beasley seconded. The motion was unanimously approved.

### **Agenda Item 15: RAS Specification Document**

Neil Robertson presented on the draft PRC-012-2 Process Document that the RC and PC have put together. Neil focused on section 2, which includes RC responsibilities. In the future the proposer will be responsible for passing judgement on whether its proposal is indeed a RAS or not. If there is confusion on the proposer's part, they can reach out to the RE for guidance. The RC will review all new RAS submittal. The SPCWG will provide a formal recommendation to the RC on how to proceed with the review and approval of the RAS. Neil will add more information on what will be required of each working group, i.e., SPCWG, TWG, ORWG. Charters will also be evaluated to determine if language needs to be added. Neil went through the remainder of the document and explained the RC and PC responsibilities. In order to

perform proper RAS studies, Scott Jordan noted the PC will need data such as contingencies, etc. Request for this data will be made at the proper time. The document will be finalized and approved by the working groups by the end of 2019, and taking effect in 2020.

### **Agenda Item 16: Misoperation Tool Roll-out**

Louis Guidry talked about the tool that the group rolled out last year. Louis talked to NERC about incorporating it into the MIDAS DRI, however, he notes that EPRI declined letting it go out to everyone. Louis said he reverted to the paper copy. Louis walked the group through the flowchart to show how a misoperation is determined. Louis asked the SPCWG to review the flowchart. He will be working with NERC to get it released.

### **Agenda Item 17: EPRI PSET Tool Update**

Steve noted that NPPD and WAPA are working with the tool to do more analysis. The tool can go through contingencies to check coordination. A few bugs are being worked out. NPPD is slowly working with the tool but other things have taken precedent.

### **Agenda Item 18: Discussion of Future Meetings (Proposed Meeting Dates)**

- Future Meeting Dates and locations
  - July 24,25 Denver, CO, Xcel Office
  - October 16,17 Kansas City, KCPL Office

### **Agenda Item 19: Closing Administrative Duties**

#### Summarize Action Items

The action item list was updated to reflect three (3) new open action items and these were summarized by Kathryn Dial (Action Items Attached).

#### Discuss upcoming meeting topics

Steve asked for future topics. Jeff will provide and MRO subcommittee update. Miles City DC Tie RAS to be reviewed.

#### Adjourn meeting

Forrest made a motion to adjourn the meeting and Shawn seconded, and the meeting was adjourned.

**Respectfully Submitted,**

**Douglas Bowman**  
**SPCWG Staff Secretary**

## SPCWG ATTENDANCE: April 17 & 18, 2019

	Name	Company	Day 1	Day 2
1	Steve Wadas, Chairman	Nebraska Public Power District	In person	In person
2	Mathew Thykkuttathil	Sunflower Electric Power Corporation	In person	In person
3	Chris Angland	Omaha Public Power District	In person	In person
4	David Oswald	Liberty Utilities	In person	In person
5	Neil Robertson	Southwest Power Pool	In person	In person
6	Shawn Jacobs	Oklahoma Gas and Electric Co.	In person	In person
7	John Anderson	Evergy	In person	In person
8	Lynn Schroeder	Sunflower Electric Power Corporation	In person	In person
9	Louis Guidry	Cleco	In person	In person
10	Shannon Mickens	Southwest Power Pool	In person	In person
11	Jeff Beasley	Grand River Dam Authority	In person	In person
12	Kathryn Dial	Southwest Power Pool	In person	In person
13	Doug Bowman	Southwest Power Pool	In person	In person
14	Jason Tanner	Southwest Power Pool	In person	N/A
15	Charles Cates	Southwest Power Pool	In person	N/A
16	Alan Wahlstrom	Southwest Power Pool	In person	N/A
17	Jonathan Hayes	Southwest Power Pool	Webex	N/A
18	Jeff Rooker	Southwest Power Pool	N/A	Webex
19	Ryan Godwin	American Electric Power	Webex	Webex
20	Allen Halling	Evergy	Webex	Webex
21	Ken Zellefrow	City Utilities of Springfield	Webex	Webex
22	Michael Fleck	ITC Holdings	Webex	Webex
23	Bill Shultz	Southern Company	Webex	Webex
24	Matthew Stoltz	Basin Electric Power Cooperative	Webex	Webex
25	David Wheeler	Xcel Energy	Webex	Webex
26	Jeff McDiarmid	Southwest Power Pool	Webex	Webex
27	Charles Hendrix	Southwest Power Pool	N/A	In person
28	Scott Jordan	Southwest Power Pool	N/A	In person

# AGENDA



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**SYSTEM PROTECTION AND CONTROL WORKING GROUP**  
**April 17-18, 2019**  
**SPP Office, Little Rock, AR**

• A G E N D A •

1. Administrative Items ..... Steve Wadas
  - a. Call to Order
  - b. Proxies
  - c. Approve minutes of January 30-31, 2019 meeting
  - d. Approve agenda
2. Antitrust Statement..... Doug Bowman
3. Review of Past Action Items ..... Doug Bowman
4. Member Vacancies..... Steve Wadas
5. MRO Protective Relay Subcommittee..... David Wheeler and Steve Wadas
6. Rapid City DC Tie RAS Update..... Kathryn Dial
7. RR350 Planning Criteria Section 8 Changes..... Kathryn Dial
8. NERC & MRO Standards Technical Rationale Update..... Shannon Mickens
9. Event Analysis..... Alan Wahlstrom
10. January 11, 2019 EI Oscillation Event..... Alan Wahlstrom
11. Multi-Terminal Line Paper..... Jeff Beasley
12. PMU Update..... Cody Parker
13. 2019 UFLS Design Assessment Update & Proposed Scope Document Change (Approval)... Charles Hendrix, Scott Jordan
14. Regional Under Frequency Load Shedding 5 Year Study Update..... Charles Hendrix, Scott Jordan
15. RAS Specifications Document..... Scott Jordan, Neil Robertson
16. Misoperation Tool Roll-out..... Louis Guidry
17. EPRI PSET Tool Update..... Adrian Kelly / Steve Wadas
18. Discussion of Future Meetings (Proposed Meeting Dates)..... Steve Wadas
  - a. 2019 Dates and Locations
    - i. July 24,25 Denver, CO, Xcel Office
    - ii. October 16,17 Kansas City, KCPL Office

*Relationship-Based • Member-Driven • Independence Through Diversity*

*Evolutionary vs. Revolutionary • Reliability & Economics Inseparable*

19. Closing Administrative Duties)..... Steve Wadas
- a. Summarize Action Items
  - b. Discuss upcoming meeting topics
  - c. Adjourn meeting

*Relationship-Based • Member-Driven • Independence Through Diversity  
Evolutionary vs. Revolutionary • Reliability & Economics Inseparable*



# ACTION ITEMS

Working Group Action Items				
Action Item	Date Originated	Action Item	Comments	Status (Not Started, In Progress, Closure Pending, On Hold, Closed)
121	01/30/19	Kathryn to send out request for nominations for two, maybe three new member slots to be filled.		closed
122	01/30/19	Shannon to look into whether REs or MRO will be doing the same type technical rational documentation.	yes technical rationale will be the same	closed
123	01/31/19	Steve will discuss three terminal line recommendation with Travis Hyde to get his opinion. Steve will report to the group at next meeting.		closed
124	01/31/19	Kathryn to submit RR provided by John and Forrest for criteria 8 revisions on behalf of the SPCWG		closed
125	04/17/19	Update MASTER SPS Spreadsheet regarding Rapid City DC Tie changes. Matthew Stolz to update description.		closed
126	04/17/19	Kathryn and Doug to reach out to WAPA regarding an update on the Miles City DC Tie. Bob Soper as the SPCWG WAPA representative.		Not Started
127	04/18/19	Kathryn to follow up regarding whether current SPP Tariff language restricts new GI's from interconnecting such that a multi-terminal line is created. (Steve Purdy)		In Progress
128	04/18/19	Kathryn to send out requests for nominations for three new member slots to be filled.	Notice sent out 4/22/19	In Progress