

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

**July 24 & 25, 2019**  
**Xcel Energy Offices**  
**Denver, CO**

**• 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 21 participants, 10 in person and 11 via WebEx on day one. There were 25 participants, 9 in person and 16 via WebEx on day two. (Attendance List Attached)

Proxies

No proxies were mentioned.

Approve minutes of previous meetings

The minutes for the April 17-18, 2019 meeting were reviewed by Doug Bowman and no changes were required. The motion to approve the minutes was made by Forrest Brock and seconded by John Anderson. The group unanimously approved the minutes.

Approve agenda

The agenda for the meeting was reviewed. A few minor modifications were made. The motion to approve the modified agenda was made by Jeff Beasley and seconded by Ryan Godwin. The revised agenda was unanimously approved. (See attached)

**Agenda Item 2: Antitrust Statement**

Doug Bowman 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. All 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.

#### **Agenda Item 4: New Members**

Steve introduced new members Lynn Schroeder (SECI), David Wheeler (Xcel), and David Oswald (Liberty Utilities). Each new member gave a brief self-introduction. Steve reviewed the SPCWG page on SPP.org to ensure that the new members were listed and requested everyone review their information to ensure correctness. Steve also confirmed that the new members were added to the proper email exploders.

#### **Agenda Item 5: Vice Chair Election**

Steve Wadas reviewed the SPP Bylaws section 3.3.1 with the group. It was confirmed that Vice Chair's serve two year terms. Steve opened the floor for Vice Chair nominations. Ken Zellefrow nominated himself and Lynn Schroeder nominated John Anderson. Silent vote was performed with paper ballots in the room and emails submitted to Doug & Steve for those members on the phone. John Anderson was elected Vice Chair by simple majority.

#### **Agenda Item 6: SPCWG Scope Review & Changes (Approval)**

Kathryn discussed the required Working Group Scope changes and the group reviewed the new scope draft. Forrest recommended a few grammatical changes. A motion to approve the new scope including Forrest's revisions was made by Lynn Schroeder and seconded by Jeff Beasley and the motion was unanimously approved.

#### **Agenda Item 7: RAS Specifications Document (Approval)**

Neil Robertson presented the completed RAS specifications document (DRAFT SPP PRC-01202 Process EI) and the corresponding spreadsheet. Neil reviewed updates to the RAS specifications document that had been made since the group reviewed the document at the April 2019 SPCWG meeting. Scott Jordan also reviewed sections of the RAS specifications document, specifically pointing out language related to the Planning Coordinator functions. Neil noted that the document would be owned by SPP Staff and any changes would be presented to the SPCWG, ORWG, TWG, and RCWG. The document also will be posted on SPP.org and Neil agreed to follow up with the SPCWG and notify the group where the document will be posted. The SPCWG recommended changes be made to the document and agreed to vote on approval of the document via future email vote. See action item 130.

#### **Agenda Item 8: Oklaunion RAS Retirement (Approval)**

Ryan Godwin presented information on the retirement of the RAS, which has been targeted for the spring of 2020. It was recommended by the SPCWG that the retirement study report be forwarded to the members this quarter and approval be given at the October meeting in Kansas City. Once approved by the SPCWG, it will go to the ORWG and TWG for approval and then to the MOPC.

### **Agenda Item 9: Regional UFLS 5 Year Study Update (Discussion)**

Scott Jordan presented to the group regarding the status of the 2019 UFLS study, which is being performed by S&C Electric. Scott requested the opportunity to set up a conference call with the SPCWG members for late August to discuss the status of the UFLS design assessment. Action item 131 was taken for a follow up conference call with Scott Jordan.

### **Agenda Item 10: 'Protection in your shop' (Discussion)**

Steve introduced the topic of having a standing agenda item where different members present to the group at each meeting on specific protection related topics. This would be an opportunity to share best utility practices at each meeting. Steve volunteered to bring a topic to the October 2019 meeting and Jeff Beasley also volunteered to bring a topic related to PRC-027 to the October meeting in Kansas City.

### **Agenda Item 11: MRO Protective Relay Subcommittee – New Members (Discussion)**

Steve reviewed the new members of the MRO PRS with the group. 17 of the 19 seats have been filled. SPCWG members on the Subcommittee are Forrest Brock, David Wheeler, Ryan Godwin, and Jeff Beasley. Their next meeting is Aug. 13 and 14. Steve requested that the members bring to the SPCWG anything that would be of interest to the group. Ideas and best practices will be shared between the groups. Steve and Forrest talked about how MRO was assisting with topics like relay scheme data collection and helping their members that had large numbers of misoperations. Forrest noted that MRO is working with NERC on Cause-coding when looking at events.

### **Agenda Item 12: NERC SPCS Update (Discussion)**

Forrest talked about the meetings that will be held by NERC on potential impacts that inverter-based generation may have on the various PRC standards. The next meeting of the SPCS will be held at MRO on August 26 and 27 and then a MIDASWG on August 28 and 29.

### **Agenda Items 13: MIDASWG & other NERC Updates (Discussion)**

Doug Bowman presented material on behalf of Shannon Mickens concerning MIDASWG, SPCS, and Reliability Staff updates. Steve asked about whether Jim Williams should provide any updates with respect to Operations.

### **Agenda Item 14: Miles City DC Tie Update (Discussion)**

Gayle Nansel (WAPA) confirmed that the description for the Miles City DC Tie RAS is consistent with the current design of the RAS.

### **Agenda Item 15: Event Analysis Topic (Discussion)**

Alan Wahlstrom (SPP) presented cases of substation fires which have recently been points of interest for regulatory agencies. Case 1 included multiple breakdowns of communication and protocols between substation workers, corporate leadership, and the fire department. Lessons learned were discussed.

### **Agenda Item 16: Multi-Terminal Line Paper (Discussion)**

The action item regarding following up with SPP GI department was discussed. SPP GI determined that there is no existing tariff language which limits new interconnections from interconnecting such that a multi-terminal line is created. Jeff Beasley and Michael Fleck discussed the updated paper they have been working on. Michael's comment was that there was a NERC paper already on this so the SPCWG's paper should be more high level. Jeff and Michael will provide two papers, one less detailed that will refer to the NERC paper, and one more detailed. He will present this to the group at the next meeting.

### **Agenda Item 17: Misoperation Tool (Discussion)**

Steve asked the members about their use of the tool and how they thought it should be used in the future. He and Forrest went through an example.

### **Agenda Item 18: PRC-024 Review (Discussion)**

Austin White talked about his question as per his recent email:

*“During a review of PRC-024, power supply found a possible discrepancy between the eastern interconnection “No-Trip” boundary for underfrequency and the SPP recommendation for step 4 islanding. The SPP recommendation was 58.5Hz with a minimum 2 second delay, which is how we have all our step 4 relaying configured. In the attached example step 4 is drawn in dark blue. Should the step 4 settings be revised to be outside the boundary defined in PRC-024? Should we even have step 4 enabled anymore? With the SPP market it is highly unlikely that load and generation would ever be balanced enough to sustain an island in our system. Should we move to a single SPP-wide island instead? Please consider adding this topic to a future SPCWG meeting.”*

A new set point is possible, however, should the islanding avoid that no-trip zone as well? Noted that 58.5 Hz at 2 seconds is in the no-trip zone. CAS group will provide guidance to Austin on this issue. (see action item 133)

### **Agenda Item 19: 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
  - January 15,16, 2020 Dallas, AEP Office
  - April 15,16 , 2020 Omaha, NE, TBD
  - July 15,16, 2020 Denver, Xcel Office
  - October 14,15, 2020 Tulsa, AEP Office

### **Agenda Item 20: Closing Administrative Duties**

#### **Summarize Action Items**

Doug Bowman summarized the action items. All previous action items were closed and 7 new open action items were added (Action Items attached).

Discuss upcoming meeting topics

No discussion

Adjourn meeting

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

**Respectfully Submitted,**

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

## **SPCWG ATTENDANCE: July 24 & 25, 2019**

1	Steve Wadas, Chairman	Nebraska Public Power District	In person	In person
2	Mimi Xavier	Colorado PUC	In person	In person
3	John Anderson	Evergy	In person	In person
4	Lynn Schroeder	Sunflower Electric Power Corporation	In person	In person
5	Jeff Beasley	Grand River Dam Authority	In person	In person
6	Tim Smith	RAI	In person	N/A
7	Ryan Godwin	American Electric Power	In person	In person
8	David Wheeler	Xcel Energy	In person	In person
9	Forrest Brock	WFEC	In person	In person
10	Doug Bowman	Southwest Power Pool	In person	In person
11	Alan Wahlstrom	Southwest Power Pool	N/A	Webex
12	Michael Fleck	ITC Holdings	N/A	Webex
13	Johnathan Hayes	Southwest Power Pool	N/A	Webex
14	Charles Hendrix	Southwest Power Pool	N/A	Webex
15	Austin White	Oklahoma Gas and Electric Co.	N/A	Webex
16	Garrick Nelson	Western Area Power Administration	N/A	Webex
17	Gayle Nansel	Western Area Power Administration	N/A	Webex
18	Allen Halling	Evergy	Webex	Webex
19	Ken Zellefrow	City Utilities of Springfield	Webex	Webex
20	Jeff McDiarmid	Southwest Power Pool	Webex	Webex
21	Scott Jordan	Southwest Power Pool	Webex	Webex
22	David Oswald	Liberty Utilities	Webex	Webex
23	Neil Robertson	Southwest Power Pool	Webex	Webex
24	Kathryn Dial	Southwest Power Pool	Webex	Webex
25	Ben Hammer	Western Area Power Administration	Webex	Webex
26	Sing Tay	Oklahoma Gas and Electric Co.	Webex	Webex
27	John Boshears	City Utilities of Springfield	Webex	N/A
28	Jeremy Severson	Basin Electric (BEPC)	Webex	N/A

# AGENDA

Southwest Power Pool, Inc.  
SYSTEM PROTECTION AND CONTROL WORKING GROUP

July 24-25, 2019  
Xcel Energy Offices, Denver, CO

• A G E N D A •

1. Administrative Items ..... Steve Wadas
  - a. Call to Order
  - b. Proxies
  - c. Approve minutes of April 17-18, 2019 meeting
  - d. Approve agenda
2. Antitrust Statement ..... Doug Bowman
3. Review of Past Action Items ..... Doug Bowman
4. New Members ..... Steve Wadas
5. Vice Chair Election ..... Steve Wadas
6. RAS Specifications Document (Approval) ..... Neil Robertson
7. SPCWG Scope Review & Changes (Approval) ..... Kathryn Dial
8. Oklaunion RAS Retirement (Approval) ..... Ryan Godwin
9. Regional UFLS 5 Year Study Update (Discussion) ..... Charles Hendrix, Scott Jordan
10. 'Protection in your shop' (Discussion) ..... Steve Wadas
11. MRO Protective Relay Subcommittee – New Members (Discussion) ..... Steve Wadas
12. NERC SPC Update (Discussion) ..... Forrest Brock
13. MIDASWG & other NERC Updates (Discussion) ..... Doug Bowman
14. Miles City DC Tie RAS Update (Discussion) ..... Gayle Nansel
15. Event Analysis Topic (Discussion) ..... Alan Wahlstrom
16. Multi-Terminal Line Paper (Discussion) ..... Jeff Beasley
17. Misoperation Tool (Discussion) ..... Steve Wadas
18. Discussion of Future Meetings (Proposed Meeting Dates) ..... Steve Wadas
  - a. 2019 Dates and Locations
    - i. October 16,17 Kansas City, KCPL Office
  - b. 2020 Dates and Locations Determination (Discussion)
19. Closing Administrative Duties ..... Steve Wadas
  - a. Summarize Action Items
  - b. Discuss upcoming meeting topics
  - c. Adjourn meeting

# ACTION ITEMS

Working Group Action Items				
Action Item	Date Originated	Action Item	Comments	Status (Not Started, In Progress, Closure Pending, On Hold, 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.	Gayle Nansel (WAPA) provided an update at July 2019 SPCWG meeting.	closed
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)	Steve Purdy reply: There is nothing I know of that requires interconnections to be connected to breaker stations. However, I've never seen one that wasn't. The Transmission Owners determine generally what is required for an interconnection at a line tap and they have the ability to require a breaker station or not to.	closed
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	closed
129	07/24/19	Neil Robertson will notify SPCWG members where the new RAS process document will be posted		In Progress
130	07/24/19	Neil Robertson will modify the RAS checklist spreadsheet to reflect SPCWG recommendations concerning working group requirements.		In Progress
131	07/24/19	Neil and Kathrine will make recommended changes to the RAS document and spreadsheet and then request approval from the SPCWG via email. Deadline for email vote is August 15.		In Progress
132	07/25/19	Kathrine will work with Scott Jordan to set up a conference call with the SPCWG in late August to provide status update for the UFLS study.		In Progress
133	07/25/19	Michael and Jeff will provide two (2) three-terminal line papers, one less detailed that will refer to the NERC paper, and one more detailed. He will present this to the group at the next meeting.		In Progress
134	07/25/19	Charles and Scott (CAS) to discuss the OGE islanding question as per the Austin White email and provide SPP guidance.		In Progress
135	07/25/19	Steve and Jeff will present on "Protection in Your Shop" at the October meeting in Kansas City		In Progress