

SOUTHWEST POWER POOL, INC.
SYSTEM PROTECTION AND CONTROL ADVISORY GROUP MEETING

May 11, 2021 1:00PM - 5:00PM CDT
May 12, 2021 8:00AM - 12:00PM CDT

Net Conference

SUMMARY OF MOTIONS AND ACTION ITEMS

MOTIONS:

- On May 11, 2021, the SPCAG approved the Thunderhead RAS, given the following conditions, taking the place of any previously approved motions:
 - Require agreement between NPPD, WAPA, and Invenergy on compliance responsibilities.
 - Contingent on execution of the GIA including the identified network upgrades and the timeline for installation and completion.
 - Maximum of a two year time frame of being in-service, with the implementation of the RAS to begin no more than two years prior to the expected in-service date of the "R-Line" or other contingency project.
 - Programming of the relay setting files will match the presented parameters of the design, and that these settings files will be provided to the SPP, via the SPPRAS@spp.org email address. Upon receipt, this will be provided to the SPCAG.

ACTION ITEMS:

- #158: SPP Staff took an action item to reach out SPP Staff responsible for Short Circuit Modeling to determine their availability for the upcoming August meeting.
- #159: SPP Staff took an action item to poll the SPCAG for preference on two day meetings vs one day meetings. SPP Staff will also inquire about the current travel availability of the group in reference to the scheduled face-to-face meeting in November.

**SOUTHWEST POWER POOL
SYSTEM PROTECTION AND CONTROL ADVISORY GROUP MEETING**

**FEBRUARY 9, 2021 1:00PM - 5:00PM
FEBRUARY 10, 2021 8:00AM - 12:00PM
NET CONFERENCE**

MINUTES

AGENDA ITEM 1 – ADMINISTRATIVE ITEMS

AGENDA ITEM 1.A. – CALL TO ORDER

SPCAG Chair John Anderson called the meeting to order at 1:03 p.m. The attendance list for both days is being included in the attachments.

AGENDA ITEM 1.B. – PROXIES

There were no proxies.

AGENDA ITEM 1.C. – APPROVE AGENDA

Doug Bowman requested his and John Anderson's agenda items (#4 and #5) be moved to later in the agenda to better align with his schedule. Those items became agenda items 9 and 10. A motion to approve the modified May 11-12, 2021 agenda was made by Ken Zellefrow, Shawn Jacobs seconded. The motion passed unopposed.

AGENDA ITEM 1.D. – APPROVE MINUTES OF FEBRUARY 9-10, 2021 AND APRIL 19 MEETINGS

A motion to approve the February 9-10, 2021 and April 19, 2021 meeting minutes, as submitted, was made by Jeff Beasley, Chris Angland seconded. The motion passed unopposed.

AGENDA ITEM 1.E. – ANTITRUST STATEMENT

Trey Rosel read the SPP Antitrust Statement.

AGENDA ITEM 1.F. – REVIEW OF PAST ACTION ITEMS

Trey Rosel reviewed the past action items. Action item 149, in regards to minimum transmission design standards for competitive upgrades, is being reviewed and edited by the Minimum

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Design Standard Task Force. Doug Bowman has provided the latest copy to the SPCAG for their feedback. Action item 152, in regards to the Thunderhead RAS, is a topic on the agenda for this meeting. Tom Kay is looking for an approval of the schematics provided. There was no update for action item #155. Action item #156 is in progress. Jeff Beasley has taken the Three Terminal Line Whitepaper to the TWG and is on the agenda for the upcoming ORWG and GIUF meetings. He will be returning to the TWG in July for their feedback.

AGENDA ITEM 2 – THUNDERHEAD RAS (SCHEMATICS APPROVAL)

Tom Kay with Invenenergy provided the group with an update on the progress the Thunderhead RAS has made through the stakeholder working groups. The TWG conditionally approved the Thunderhead RAS on August 4, 2021. The ORWG conditionally approved the Thunderhead RAS on May 6, 2021. Invenenergy has requested and been granted a waiver by FERC to enable their consideration of an alternate Point Of Interconnection should the Holt substation site be delayed indefinitely. Tom presented the conditional approvals of the TWG and ORWG. Tom then reviewed the previously approved motion of the SPCAG. For specifics on these approvals, see Tom’s presentation in the meeting materials. At the request of Lynn Schroeder, Allan Caspe, an engineer for NEI, assisted Tom Kay in walking through the Thunderhead RAS schematics. Lynn made a motion to conditionally approve the Thunderhead RAS. Ken Zellefrow seconded the motion. The motion passed without opposition or abstention. The details of the motion can be found in the Summary of Motions and Action Items section above.

AGENDA ITEM 3 – WINTER WEATHER EVENT UPDATE

Yasser Bahbaz with SPP provided a presentation detailing the events and SPP’s planning and response in regards to the winter weather event that affected the SPP footprint during February of 2021. Yasser’s presentation can be found in the meeting materials.

AGENDA ITEM 4 – NERC SPCWG UPDATE AND LESSONS LEARNED

Lynn Schroeder presented an update from the February 24th, 2021 and April 15, 2021 SPCWG meetings. More details about the topics covered in the NERC SPCWG meetings can be found in Lynn’s presentation in the meeting materials. Lynn reviewed the latest NERC Lessons Learned including: Transient Induced Misoperation: Approach I (Control Circuit Transient Misoperation of Microprocessor Relay), Transient Induced Misoperation: Approach II (Loss of Protection during Severe Lightning Event), Battery Energy Storage System Cascading Thermal Runaway, and Catastrophic Failure of 345 kV Oil Filled Metering Current Transformer in a Transmission Substation.

SPCAG Chair John Anderson adjourned the meeting at 4:49 p.m. on Tuesday, May 11.

SPCAG Chair John Anderson called the meeting to order at 8:01 a.m. on Wednesday, May 12.

AGENDA ITEM 5 – SPP NERC UPDATE

Shannon Mickens from SPP gave a NERC standards update, including the NERC SPIDERWG sub-group and FERC Order 2222-A. The SPIDERWG Studies sub-group (S4) discussed the status and readiness of the Developing UFLS Programs with Increasing DER Penetration guideline to engage the RSTC at their June meeting. The SPIDERWG voted, and approved, the document to move forward. The group will be requesting authorization to post the document for a 45 day comment period. The SPIDERWG Coordination sub-group (C6) discussed the latest comments received in reference to the NERC Standards Review and DER White Paper (on a sub-group level). The C6 leadership also discussed the findings and alterations from the initial draft of the document. Once alterations have been made to the White Paper, the sub-group leadership plans to seek approval from the overall SPIDERWG to present to the RSTC in the near future. The sub-group leadership led discussion focused on an initial draft of a whitepaper pertaining to FERC Order 2222-A. For more details, Shannon's materials can be found in the meeting materials.

AGENDA ITEM 6 – MRO PRS MEETING UPDATE

Bob Soper of WAPA presented an update from the February 16, 2021 MRO PRS meeting. Bob's presentation, including some MIDAS reporting updates and Misoperations Data, can be found in the meeting materials.

AGENDA ITEM 7 – PRC-002-2 PROCEDURE REVIEW

John Anderson and Nick Stueve provided a presentation on Evergy's PRC-002 Procedure Positive Observation from their MRO Audit. The observation was in reference to PRC-002-2 R1.1. Nick walked through the positive feedback received from MRO and screen shots of the PRC-002-2 Procedure. The biggest takeaway is the benefit of including the specific details needed to complete the procedure. The level of detail of this particular procedure would allow an individual with little to no experience on the subject to complete the procedure and arrive at the same results as an individual with many years of experience.

AGENDA ITEM 8 – INTER-ENTITY SHORT CIRCUIT MODEL

Lynn Schroeder presented the NERC SPCWG inter-entity short circuit model sub-team outline for updating inter-entity short circuit models. MRO, in parallel with the SPCAG, shares some of the concerns for short circuit model coordination. The sub-team was tasked with creating a technical reference that the industry could use for assistance. The outline has been created and, if approved in June, the technical reference document will be added to the sub-teams work list. The outline focused on methods, challenges, and data verification for updating inter-entity short circuit models. The SPCAG then discussed the next steps in potentially developing a whitepaper highlighting the current issues seen with short circuit model coordination between SPP and the entities utilizing those models. Steve Wadas suggested having SPP short circuit modeling staff

attend the next SPCAG meeting so that we can discuss their process and how do the MOD standards impact this process.

AGENDA ITEM 9 – MINIMUM DESIGN STANDARD TASK FORCE UPDATE

Doug Bowman provided an update on the Minimum Design Standard Task Force. At the request of the Transmission Owner Selection Process Task Force (TOSPTF) working through the PCWG, the Minimum Design Standard Task Force reconvened to update the Minimum Transmission Design Standards for Competitive Upgrades. The MDSTF is targeting the October MOPC for approval of the Minimum Transmission Design Standards for Competitive Upgrades.

AGENDA ITEM 10 – MINIMUM TRANSMISSION DESIGN STANDARDS FOR COMPETITIVE UPGRADES REDLINE

John Anderson and Doug Bowman walked the SPCAG through the latest revision to the Minimum Transmission Design Standards for Competitive Upgrades redline, seeking comment from the group. Doug will be bringing a final draft back to the SPCAG during our August meeting for comment with plans to take to the October MOPC meeting. At the request of the group, Trey made comments and edits throughout the document. The document will be sent out to the group following the meeting for further comment.

AGENDA ITEM 11.A. – SUMMARIZE ACTION ITEMS

Trey Rosel reviewed the open action items covered above in agenda item 1.F. A new action item was added for SPP staff to reach out to SPP Staff responsible for Short Circuit Modeling to determine their availability for the upcoming August meeting. An additional action item was added for SPP Staff to poll the SPCAG for preference on two day meetings vs one day meetings. SPP Staff will also inquire about the current travel availability of the group in reference to the scheduled face-to-face meeting in November.

AGENDA ITEM 11.B. – DISCUSSION OF FUTURE MEETINGS

2021 Dates and Locations Determination

- 8/10-11/2021 (Net Conference)
- 11/9-10/2021 (Denver, Xcel)

2022 Meeting Dates

Travel Availability for Face-to-face Meeting

NERC Lessons Learned

SPP NERC Update

MRO PRS Update (Bob Soper)

Minimum Transmission Design Standards for Competitive Upgrades

Jeff Beasley to update group feedback from Working Groups on Three Terminal Line Whitepaper

Short Circuit Modeling discussion with SPP Staff

Protection in Your Shop

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AGENDA ITEM 11.C. – ADJOURN MEETING

John Anderson adjourned the meeting at 12:08 p.m. on Wednesday, May 12.

Respectfully Submitted,

Trey Rosel

SPCAG Staff Secretary

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SUMMARY OF ATTACHMENTS

Agenda (pg. 8)

Attendance List (pg. 9-10)

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AGENDA

1. Administrative Items:
 - a. Call to Order..... John Anderson
 - b. Proxies
 - c. Approve agenda
 - d. Approve minutes of February 9-10, 2021 and April 19 meetings
 - e. Antitrust Statement.....Trey Rosel
 - f. Review of Past Action Items
2. Thunderhead RAS (Schematics Approval).....Thomas Kay (1 Hour)
3. Winter Weather Event.....CJ Brown (1.5 Hours)
4. NERC SPCWG Update and Lessons Learned..... Lynn Schroeder (30 Mins)
5. SPP NERC Update.....Shannon Mickens (30 Mins)
6. MRO PRS Meeting Update..... Bob Soper (30 Mins)
7. PRC-002-2 Procedure Review.....John Anderson (30 Mins)
8. Inter-Entity Short Circuit Model.....Lynn Schroeder (30 Mins)
9. Minimum Design Standard Task Force Update.....Doug Bowman (15 Mins)
10. Minimum Transmission Design Standards for Competitive Upgrades Redline...John Anderson
11. Closing Administrative Duties:
 - a. Summarize Action Items.....Trey Rosel
 - b. Discuss upcoming meeting topics..... John Anderson
 - 8/10-11/2021 (Net Conference)
 - 11/9-10/2021 (Denver, Xcel)
 - c. Adjourn meeting John Anderson

Attendance:

Name	Role	Company	5/11/21	5/12/21
John Anderson	SPCAG Chair	Evergy	✓	✓
Chris Angland	SPCAG Vice Chair	OPPD	✓	✓
Steve Wadas	SPCAG Member	NPPD	✓	✓
Bob Soper	SPCAG Member	WAPA	✓	✓
David Oswald	SPCAG Member	Liberty Utilities	✓	✓
David Wheeler	SPCAG Member	Xcel Energy	✓	✓
Forrest Brock	SPCAG Member	WFEC		
Jeff Beasley	SPCAG Member	GRDA	✓	✓
Ken Zellefrow	SPCAG Member	City Utilities	✓	✓
Lynn Schroeder	SPCAG Member	Sunflower	✓	✓
Ryan Godwin	SPCAG Member	AEP		
Shawn Jacobs	SPCAG Member	OG&E	✓	✓
Trey Rosel	SPCAG Staff Secretary	SPP	✓	✓
Jeff McDiarmid		SPP	✓	✓
Louis Guidry		CLECO		✓
Marc Gomez		SWPA	✓	✓
Randy Van Allen		Midwest Energy	✓	✓
Shannon Mickens		SPP	✓	✓
Tom Kay		Invenergy	✓	
Matt Boersema		WFEC	✓	✓
Doug Bowman		SPP	✓	✓
Michael Fleck		ITC Holdings		✓
Ben Hammer		WAPA	✓	
Robert Gray		Liberty Utilities	✓	✓
Zachary Johnston		OPPD	✓	✓
Chuck Clanahan		Dept. Homeland Security	✓	✓
Dane Rogers		OGE	✓	✓
Jeremy Severson		Basin Electric	✓	✓
Nick Stueve		Evergy	✓	✓
Yasser Bahbaz		SPP	✓	
Tyler Baxter		Corn Belt	✓	✓
Allan Caspe		NEI	✓	

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Scott Jordan		SPP	✓	
Douglas Jackson		GRDA		✓
William Holden		SPP		✓

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