

Southwest Power Pool
SYSTEM PROTECTION AND CONTROL WORKING GROUP
MEETING

FEBRUARY 11 - 12, 2015
EXCEL ENERGY LOOKOUT CONTROL CENTER
GOLDEN, COLORADO

FEBRUARY 11 (1P.M. – 5P.M.)
FEBRUARY 12 (8 A.M. – 12P.M.)

• M I N U T E S •

Item 1a: Call to Order and Introductions

Chair, Bud Averill (GRDA), called the meeting to order at 1pm and welcomed everyone. There were 11 in-person participants and 10 teleconference participants. (Attendance List Attached).

Item 1b: Proxies

There were no proxies for this meeting.

Item 1c: Approve minutes of previous meetings (Action Item)

The minutes for the August, 20 meeting were reviewed. Minor changes were made and unanimously approved by the group.

Item 1d: Approve agenda

Bud Averill (GRDA) presented the agenda for review and asked for any additions or corrections. Two new items, “New Items for Discussion” and “RAS Review” were added to the agenda. The agenda was then unanimously approved.

Agenda Item 2: Review of Past Action Items

Doug Bowman (SPP) reviewed and updated the status of action items through # 41.

Agenda Item3: Clean Line Plains and Eastern HVDC

Bud wanted to discuss HVDC. We don't have experience with it. How do we make sure our protection systems work correctly? What are the issues associated with paralleling HVDC lines with existing AC lines. The SPP criteria doesn't address HVDC. Some resources are needed to help the group understand the implications of HVDC. An interim terminal point will be placed near the Oklahoma/Arkansas border. What are the implications of an HVDC short circuits? If someone has information on relaying and HVDC, send it to the group.

Agenda Item 4: UFLS Plan and Study Update

Harvey Scribner talked about the UFLS loads at the substation. The group agreed that it isn't feasible to account for losses for the load since it's really insignificant. Load is currently modeled at the transmission bus.

Harvey said the UFLS data has been collected. Work is now being done to populate the database. SPP should not request data from Clarksdale since their PA is MISO. Harvey and Jonathan said they are still trying to clean up the contact list.

Discussions ensued about the UFLS plan and whether SPP can tell someone to put a relay in when the entity doesn't currently have one. A statement needs to be put into the UFLS plan that addresses it.

Agenda Item 5: Misoperations

Thomas presented statistics on misoperations to include Q3-14. Correct operations are up to 92% success rate. Thomas included a slide in his presentation showing the previous 24 months of misoperations data showing category percentages of overall total of misoperations.

Louis showed the group that the method has changed for reporting generator operations in the RAPA attestation form. It was formerly included in its own column for generators, but now it is included in the voltage column. This makes your operations to misoperations look better. This is total operations that are reported. Howard Gugel noted the protection system operation definition.

Agenda Item 6: Review Minimum Design Standard Update

The group discussed the possibility of combining the Minimum Design Standard and the Estimating Form. It was determined that the MDS applies to competitive projects where the estimating form applies to projects with NTCs; therefore, they cannot be combined.

Agenda Item 7: Protection Changes Distribution List

Steve Wadas brought up the issue of SPP working group discussion regarding PRC-001 R3 and R4 and the SPP notification email list. SPP has created a distribution list to coordinate changes with SPP contacts as required by PRC-001 but does not include the notification of anyone outside SPP. The assumption is that when this list is used, this covers the neighboring BA requirement

SPP would like a "summary" statement of protection changes but not necessarily all settings. The summary is better than including settings. They could ask for data later if needed. TO's should provide a summary only for big projects or major changes but not small changes. SPP would like big change summaries if the change or addition is internal to your system or a tie line with your system.

It was asked that SPP provide some simple and general guidelines we can follow so as not to “go overboard” considering how this standard is worded so our compliance groups can rest assured we are not in violation or risking audit violations by using our reasonable engineering group interfaces.

Agenda Item 8: Charter Review

The SPCWG Charter update was approved by MOPC. The document was sent to the group and posted on the website.

Agenda Item 9: Criteria Review

The SPCWG has reviewed and documented the criteria changes that will be needed. What is the status? Jonathan Hayes noted that the changes will need to go through SPP’s “Revision Request Process” which has yet been rolled out. When this process appears, a form will need to be completed. The SPCWG will need to review the previously completed spreadsheets and fill out the form and submit.

Agenda Item 10: RAS Review

Shawn questioned whether the removal of an SPS was required when its purpose is no longer valid. It was determined that it was the individual company’s decision to make. The TWG didn’t support a policy on how long to leave them in.

Agenda Item 11a: New Item for Discussion – Nominations for new Members

Doug Bowman noted that he will be sending a request for nominations for two (2) new SPCWG members. The revised charter allows for new members to be TOs or TUs. Hopefully two new members will be on board before the next SPCWG meeting in May.

Agenda Item 11b: New Item for Discussion – UFLS Voltage Issue

Matthew Thykkuttathil discussed frequency issues that could cause voltage collapse before the UFLS operation occurs. He pointed to the NERC 1987 Florida Event, for which he provided a paper. This was the result of large induction motors. He noted that approximately 50% of the load in KS is induction motors. The recent UFLS study observed voltage issues in WAPA. Matthew suggested that when the next UFLS study is done, additional focus needs to be placed on voltage issues, especially in KS.

Agenda Item 11c: New Item for Discussion – Vice Chair

It was noted that we do not have a Vice Chair at this time. Since Louis Guidry (Cleco) was next on the list, the group nominated and approved him as Vice Chair.

Agenda Item 12: Discussion of Future Meetings

The group discussed meetings for 2015 and decided the following meeting dates for 2015

- i. Feb 11 & 12, Denver
- ii. May 6 & 7, Little Rock

- iii. Aug 12 &13, Dallas
- iv. Nov 4 & 5, Kansas City

Agenda Item 13: Review of Action Items and Closing Remarks

Doug Bowman reviewed the captured action items.
The meeting was adjourned.

Respectfully Submitted,

Douglas Bowman
SPCWG Staff Secretary

ATTENDANCE

Company	Last Name	First Name	Attending	In attendance
Grand River Dam Authority	Averill	Edwin (Bud)	In Person	√
Grand River Dam Authority	Beasley	Jeffrey	In Person	√
Southwest Power Pool	Bowman	Doug	In Person	√
FERC	Gugel	Howard	In Person	√
Western Farmers Electric Cooperative	Brock	Forrest	In Person	√
Sunflower Electric Power Corporation	Condict	Gary	In Person	√
American Electric Power	Gurley	Rick	In Person	√
ITC Transco	Miller	Tom	In Person	√
Xcel Energy	Melson	Heidt	In Person	√
Southwest Power Pool	Teafatiller	Thomas	In Person	√
Sunflower Electric Power Corporation	Thykkuttathil	Mathew	In Person	√
American Electric Power	Burford	Bret	Net Conference	√
AECC	Carr	Brent	Net Conference	√
Southwest Power Pool	Scribner	Harvey	Net Conference	√
Southwest Power Pool	Hayes	Jonathan	Net Conference	√
Cleco Power LLC	Guidry	Louis	Net Conference	√
Kansas City Power & Light Company	Halling	Allen	Net Conference	√
Westar Energy	Magill	Matt	Net Conference	√
Empire District	David	Oswald	Net Conference	√
Oklahoma Gas & Electric	Jacobs	Shawn	Net Conference	√
Nebraska Public Power District	Wadas	Stephen	Net Conference	√

Action Items

	Action Item	Date Originated	Status	Comments
1.	Frank Bristol will work with Rick Gurley and AEP staff on his proposed option #1 scheme for Dempsey Ridge Wind Farm based on the SPCWG's conclusion that it would not be a Special Protection System.	5/8/2013	Complete	Has been handed to AEP Planning group
2.	Jay Caspary will attend the May 20, 2013 RCWG meeting to gain approval and/or guidance on the SPP UFLS Plan	5/8/2013	Complete	Approval obtained
3.	Send out a request for a conference call after feedback from RCWG meeting on May 20, 2013	5/8/2013	Complete	
4.	Send the Misoperations Report to committee members prior to SPCWG meeting for their review.	5/9/2013	Complete	Thomas T. Presented to SPCWG on 8/7/13
5.	Include the Misoperations Report as a standing Agenda Item	5/9/2013	Complete	
6.	Begin to look into the root causes of why SPP has a higher number of communication failures	5/9/2013	Complete	Will include this as subtopics under misops (See action items 12 and 18)
7.	Jason Speer to send the Southwestern Public Service Frequency Excursion event data to Harvey Scribner to work on any modifications if needed or additions of the Request for UFLS Event Data	5/9/2013	Complete	Harvey assembling UFLS data request form for future use. The will be included in the UFLS process document
8.	Follow-up with MDWG Chair and Staff Secretary in regards to the MDWG short circuit cases to determine a solution for the modeling issues between PSS/E cases and differences when converted to Aspen	5/9/2013	Complete	Discussed at 8/7/13 SPCWG meeting
9.	Develop a format or template for entities to use if they were to experience an UFLS event	5/9/2013	Complete	See action item 7
10.	Develop a format or template for entities to use for UFLS relay settings – Annually	5/9/2013	Complete	See action item 7
11.	Revise the SPS spreadsheet to include a category column. Send the NERC SPS document, which includes the proposed SPS definition, so that the SPS owners can categorize at the November SPCWG meeting.	8/7/2013	Complete	

12.	At the November SPCWG meeting, analyze past misoperations and categorize the communications failures using subcauses in the NERC Misoperations Task Force report. Begin with Q2 2013 and work back in time.	8/7/2013	Complete	Each representative will work on their own comm. misops before the February 2014 meeting. Include item aa 18 below.
13.	Invite BES Definition Drafting Team member, for the November SPCWG meeting, to present on the work they are doing. LS/DB	8/7/2013	Complete	Presented at November meeting
14.	Provide the NERC lessons learned url to the members as part of the minutes. DB	8/7/2013	Complete	
15.	Compliance department to formally send new UFLS plan and date requirements to the members. JS	8/7/2013	Complete	
16.	Determine if coordination with MISO can be worked out to obtain mutual consent concerning delaying the adjusted UFLS boundaries until 2015. HS	8/7/2013	Complete	Those entities formerly within SPP UFLS that are now under the MISO RTO will no longer be under SPP's UFLS Plan
17.	Determine how SPP deals with model corrections between model builds. DB	8/7/2013	Complete	
18.	Members to bring ideas to the November SPCWG meeting for a checklist that will assist in reducing misoperations due to communication problems,	8/7/2013	Complete	Combined with action item 12
19.	Need someone to do a presentation on GMD in a future meeting. DB	9/6/13	Complete	D.B.presented at the 2/5,6 mtg
20.	Set up conference call to work towards a charter for a short circuit task force and deliver at next meeting DB	9/6/13	Complete	Conference call produced an edited white paper for presentation at the 2/5,6 mtg
21.	Send out strategic plan to SPCWG and request comments by mid March.	2/5/2014	Complete	
22.	Members to collect actual fault data, simulate in his own model, and send both sets of info to D.B. to validate SPP short circuit models by Feb 19, 2014	2/5/2014	Complete	SPS and NPPD data provided
23.	DB to discuss with MDWG on possibility of re-activating Short Circuit task force	2/5/2014	ongoing	SPCWG designees will be put on the agenda for the November MDWG meeting
24.	DB to forward updated criteria spreadsheet to Jonathan Hayes (JH) and SPCWG members.	2/6/2014	complete	No responses

	JH to forward to compliance reps and RCWG for review by each entity to determine if included as part of a compliance plan by any individual entity			received
25.	Areas requiring further investigation within the criteria spreadsheet will be reported on by next meeting by Louis Guidry.	2/6/2014	complete	
26.	The group will fill in misoperation subcause categories provided in the spreadsheet that TTeafatiller sent out on 2/5. Set up webcast for end of February to go through submittals	2/6/2014	complete	
27.	HS to get a copy of the scope of work for UFLS study to the members	5/28/2014	complete	
28.	HS to post UFLS plan revision for a 15 day review by the spcwg and the rcwg and will schedule a conference call for capture of comments	5/28/2014	complete	
29.	The members will review misoperation subcauses due to added category and return with comments by June 6	5/29/2014	complete	
30.	DB to clean up and add info based on item 29, add new graphs and send out to members for comment by June 13 requesting comments by June 20. Final version to be completed June 30 in time for MOPC background material submittal.	5/29/2014	complete	
31.	JH to send email to members with request for response to review recommendations for removing certain sections of the criteria. Members to respond to Jonathan Hayes by June 13.	5/29/2014	complete	
32.	DB to send out doodle poll to members for date of next meeting	5/29/2014	complete	
33.	Investigate short circuit data issues. Bud Averill and AEP representative to attend next MDWG meeting to discuss. Coordinate findings with TWG and TPL Task Force.	8/20/2014		Bud, Doug, and Rick to meet with MDWG to determine path forward
34.	Members to continue to send in short circuit events for analysis	8/20/2014		DB to discuss with SPP staff concerning MOD 33-1 and support needed in analyzing cases
35.	DB will email the whitepaper to everyone and post to SPCWG website	8/20/2014	complete	Completed 8/22
36.	Mike Hughes and Thomas Teafatiller will work on how to implement an SPCWG review of	8/20/2014	complete	Review will occur as requested or

	misoperations before it goes to NERC each period			as required by the RE.
37.	DB will send misoperation spreadsheet columns that are sent to NERC to everyone	8/20/2014	complete	Provided 8/21
38.	Mike Hughes will get the NERC presentation on misoperations to DB for the next SPCWG meeting	8/21/2014	complete	Provided 8/21
39.	Mike Hughes and Thomas Teafatiller will look into normalizing the data on the monthly misoperation presentations	8/21/2014	complete	Thomas will provide starting Q1 Meeting 2015
40.	Kevin Perry will work with Shaun Jacobs and Lynn Shroeder to determine how wind farms would be classified and weighted on the new CIP-002-V5.	8/21/2014	complete	Issue forwarded to NERC
41.	RG,DB,and BA to put together meeting dates for 2015	8/21/2015	complete	
42.	DB to forward charter revision to MOPC for approval	11/11/2014	complete	Charter revision was approved
43.	HS to forward UFLS study to the SPCWG for review by 11/30/14. He will set up call to discuss comments.	11/11/2014	complete	
44.	TT to get the most recent 24 months of misoperations data for analysis with respect to incorrect settings/logic/design	11/12/2014	complete	
45.	LS to follow up with the transmission forum to see what they have in terms of misoperations data related to item 44.	11/12/2014		Forrest to take take on SPCS since Lynn is no longer available. Tom Miller to check with John Zipp for available data
46.	DB to discuss UFLS Plan Entity definition change with HS	11/12/2014		
47.	LS will look into CCVT minimum requirements for the MDSTF	11/13/2014	complete	
48.	HS and JH to revise UFLS plan to include language about entities not participating in the SPP load shedding program to include them based on the study.	2/11/2015		
49.	TT to follow up on getting the definition of protection system operation for the misoperation report to the group. Also will forward new misops spreadsheet.	2/11/2015		
50.	DB to check with Michael Deselle to see if the scorecard has been developed.	2/11/2015		

51.	Each member to go through new misops spreadsheet (that will be sent out by TT) to determine subcauses. We will put it all together at the next face-to-face meeting in May.	2/11/2015		
52.	BA and DB to discuss merging the Minimum Design Standard and Estimating Guide with the MDSTF and the PCWG	2/11/2015		
53.	Lonnie Lindekugel to let us know their thoughts about what they do and do not want to see concerning protection system changes	2/12/2015		
54.	DB to distribute request for nominations for two SPCWG members	2/12/2015		
55.	JH to check with Jason Smith on status of criteria changes that were suggested by the SPCWG	2/12/2015	complete	
56.	BA and DB to discuss path forward on getting criteria changes into the new SPP process	2/12/2015		
57.	DB to talk to HS about voltage issues in the UFLS study and include in next study	2/12/2015		
58.				

