



Southwest Power Pool, Inc.

OPERATING RELIABILITY WORKING GROUP

Net Conference

February 2nd 2017 8:30 AM – 12:00 PM (CST)

• Action Items and Voting Record •

1. Action Item: SPP will provide a process flowchart for the compliance document sharing and approval process.
2. Action Item: Determine if providing the planning assessment to the Planning Coordinator also covers the requirement for sending to the Reliability Coordinator per IRO-017.
3. Action Item: SPP shall hold discussions with TWG about the need for policy changes associated with remedial action schemes, and determine if a joint meeting between ORWG and TWG is necessary.

Consent Agenda Items: January 04, 2016 ORWG Meeting Minutes and RR 207 Modifications to BP.

Jeff Wells (Grand River Dam Authority) moved to approve the consent agenda and Todd Gosnell (Omaha Public Power District) seconded the motion. The motion was approved without opposition or abstention.

Data Specification Updated with Rating Submission Tool Requirements

Bryn Wilson (Oklahoma Gas and Electric Co.) moved to approve the amended Data Specification Updated Document with Rating Submission Tool Requirements. Dennis Sauriol (American Electric Power) seconded the motion. The motion carried with one abstention David Pham (Empire District Electric Company)

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• M I N U T E S •

Administrative Items / Attendance / Agenda Review

Agenda Item 1 – Call to Order

Chairman Allen Klassen (Westar Energy, Inc.) opened the meeting at 8:31AM on 2/02/2017 and notified the ORWG that Vice Chairman Ron Gunderson (Nebraska Public Power District) would be facilitating the meeting due to poor reception.

Agenda Item 2 – Attendance

Jason Tanner (Southwest Power Pool) called attendance and a meeting quorum was reached.

Agenda Item 3 – Agenda Review

Ron Gunderson reviewed the agenda and noted the items that would require action.

Consent Agenda

Agenda Item 4 – For Consent Action

Ron Gunderson (Nebraska Public Power District) discussed the consent agenda items, which included the January 04, 2016 ORWG Meeting Minutes and RR 207 Modifications to BP.

Jeff Wells (Grand River Dam Authority) moved to approve the consent agenda and Todd Gosnell (Omaha Public Power District) seconded the motion. The motion was approved without opposition or abstention.

Liaison Reports

No liaison reports were submitted.

Agenda Item 5 – Data Spec update with Rating Submission Tool requirements.

Jon Langford (Southwest Power Pool) discussed the updated data specification document with rating the rating submission tool. Jon explained the changes in the spreadsheet and reviewed the requirements. Jon explained the data type requirements for each device type, and Bryn Wilson (Oklahoma Gas and Electric Co.) questioning why the model characteristics did not include current switching devices, reactive devices, buses, and load. The group decided to modify the document to include requirements for both future and current devices as Bryn suggested. Bryn also asked about the

planned schedule for implementing the requirements, and Neil Robertson (Southwest Power Pool) explained that the document would go to the RCWG, but would not be effective until after the April MOPC.

Bryn Wilson (Oklahoma Gas and Electric Co.) moved to approve the amended Data Specification Updated Document with Rating Submission Tool Requirements. Dennis Sauriol (American Electric Power) seconded the motion. The motion carried with one abstention David Pham (Empire District Electric Company)

Agenda Item 6 – Compliance Document Sharing - Written Guide, Email, FTP

Neil Robertson (Southwest Power Pool) explained the compliance document sharing, and explained a spreadsheet that contains standards with shared documents involved that would require individual TOP folders on the FTP site. Neil also provided e-mail links for TOPs to associate each document with the correct path of communication to SPP. Neil explained the structure of the FTP site, and stated that each entity would log in upload any required documents and send notification to the respective e-mail. Jeff Wells (Grand River Dam Authority) requested a flowchart for the process, and Neil stated he could provide one. Neil stated that for compliance purposes the documents and posting dates on the FTP site would be archived and maintained for a period of 5 years. Ron Gunderson (Nebraska Public Power District) asked if providing the planning assessment to the planning coordinator also covers the requirement for sending to the RC. Neil stated he would discuss with the planning coordinator and notify ORWG where to send the information too.

Action Item: SPP will provide a process flowchart for the compliance document sharing and approval process.

Action Item: Determine if providing the planning assessment to the Planning Coordinator also covers the requirement for sending to the Reliability Coordinator per IRO-017.

Agenda Item 7 – RC's Use of Pre-Contingent Load Shed.

Neil Robertson (Southwest Power Pool) provided a scenario where a large amount of load is located on the corner of the footprint and you don't have enough generation to serve your load. Neil asked at what point entities would entertain pre-contingent load shed. Dennis Sauriol (American Electric Power) stated at PJM they have a 115% load dump limit, and Dennis stated that once the limit is reached they begin a cascading analysis that goes through five iterations where a line is removed in each iteration to determine if the overload would cascade. Dennis stated if the overload does not cascade it is considered a local event, and pre-contingent load shed would not be considered. However, for overloads that do cascaded pre-contingent load shed would likely be used. Neil stated that SPP uses 120% as a limit to begin IROL analysis to determine if a flowgate would become potential cascading event upon contingency. Neil ask the group if the ORWG would need to consider any potential policy changes for pre-contingent load shed, and the group determined that no formal policy changes are needed.

Agenda Item 8 – Providing SPP RC Relay Settings.

Neil Robertson (Southwest Power Pool) asked the ORWG; if the SPP RC ask for relay settings could the TOP operators provide this information, or would the TOP operators have to call support staff prior to providing the information to the RC. Neil stated that this information could become important when

studies are being performed to analysis potential cascading events. Ron Gunderson (Nebraska Public Power District) explained that typically the relay limit is 150% of the load limit. Ron discussed an event that occurred in the 1980's where an EHV line tripped from service and overloaded a parallel circuit. Ron stated after 10 minutes the line sagged into the under build long before it hit the relay limit. Ron and the ORWG agreed that the emergency limit should be used when studying potential cascading events.

Agenda Item 9 – Follow-up to Previous RAS Discussions.

Neil Robertson (Southwest Power Pool) explained that, based on discussions with the TWG staff secretary, the TWG generally agrees with the ORWG concerns over the use of remedial action schemes. The TWG has discussed similar concerns at a prior TWG meeting. Neil ask ORWG members if their RAS concerns where significant enough to propose formal policy changes related to the use of remedial action schemes. The ORWG decided that formal policy changes should be considered, and join discussions should take place with TWG to determine if ORWG or TWG should drive the policy changes.

Action Item: SPP shall hold discussions with TWG about the need for policy changes associated with remedial action schemes, and determine if a joint meeting between ORWG and TWG is necessary.

Agenda Item 10 – Operational Workshop Winter/Summer Preparedness.

Casey Cathey (Southwest Power Pool) discussed the operational summer and winter preparedness workshops and asked the ORWG about extending the workshops to include a panel session of member speakers. Casey suggested that the member speakers host discussions over topics similar to topics discussed at ORWG. Casey stated that the ideas is for the operators to hear about policy items ORWG is working on. Casey asked the ORWG if this would provide benefit since the workshop would include operators. The ORWG did not express interest and stated they feel ORWG already covers this communication.

Agenda Item 11 – Jan 16 Icing event.

Derek Hawkins (Southwest Power Pool) discussed the January 16 Icing event and stated an approximated 3000MWs of forecast error heightens the need to further analysis and plan for these deviations. Derek stated that CROW de-rates do not match the level of impacts we are currently seeing. Derek explained the graph and showed the impacted number of resources, impacted capacity, outage/de-rated wind in CROW, and significant forecast error MW. The ORWG observed that it took a period of two days for the impacted capacity and forecasted error to converge, and agreed that potential policy changes may be needed for maintaining CROW de-rates. The ORWG recommend that we go to MWG and discuss this topic as it may be necessary to start from the generator source to explain the importance of CROW de-rates.

OTHER ITEMS:

Agenda Item 12– NERC Reliability Standard Activities Update.

Shannon Mickens (Southwest Power Pool) provided an update to the upcoming NERC activities. Shannon discussed project 2016-EPR-01Enhanced Periodic Review of Personnel Performance, Training, and Qualifications Standards, and stated the purpose of this project is to conduct a periodic review of a subset of Personnel Performance, Training, and Qualifications (PER) Reliability Standards. Shannon

stated that the comment period ends on 2/23/17. Shannon also discussed Project 2016-03 Cyber Security Supply Chain Risk Management and stated that the project will address directives from the Federal Energy Regulatory Commission (FERC) Order No. 829 to develop a new or modified standard to address "supply chain risk management. Shannon stated that the comment period ends on 3/6/2017. Shannon also provided notes for project 2015-08 Emergency Operations EOP-005-3 and EOP-006-3, project 2015-08 Emergency Operations EOP-004-4, and format changes to the NERC glossary of terms format. Shannon also provided ORWG with a future meeting schedule for drafting team meetings and standing committee meetings.

Agenda Item 13 – ORWG Member Topic List.

Jason Tanner (Southwest Power Pool) reviewed the list of topics for future meetings. Jason stated that we plan to discuss IROL Re-study Results, ICCP update: GMD and ICCP coverage status report, and RR Process Changes at the face to face meeting in Omaha. Jason requested the ORWG members to submit him any additional topics they would like covered.

Action Item Review

Agenda Items 18/19 – Summary of Action Items

See Page 1 Action Item list.

Agenda Items 20 – Q&A/Open Forum

Casey Cathey (Southwest Power Pool) reminded the ORWG to make reservations for the Omaha meeting before the February 8, 2017 hotel block cutoff.

Agenda Item 21 – Meeting Schedule

- a. 3/1-3/2/2017 Face-to-Face (Omaha, Nebraska) – CONFIRMED
- b. 4/4/2017 WebEx (Tues) 0830-1200
- c. 5/3 – 5/4/2017 Face-to-Face (Little Rock) – CONFIRMED
- d. 6/1/2017 WebEx (Thurs) 0830-1200
- e. 6/28 – 6/29/2017 Face-to-Face (TBD) – Discussion
- f. 8/3/2017 WebEx (Thurs) 0830-1200
- g. 9/7/2017 WebEx (Thurs) 0830-1200
- h. 10/4 – 10/5/2017 Face-to-Face (Sacramento, CA) (CALISO) – TENTATIVE
- i. 11/2/2017 WebEx (Thurs) 0830-1200
- j. 12/7/2017 WebEx (Thurs) 0830-1200

Agenda Item 18 – Adjourn

Vice Chairman Ron Gunderson (Nebraska Public Power District) adjourned the ORWG at 11:56 AM (CST).

Respectfully Submitted,

Casey Cathey
Secretary

		Name	Status	Company
x	1	Allen Klassen, Chairman	M	Westar Energy
x	2	Ron Gunderson, Vice Chairman	M	Nebraska Public Power District
x	3	Jim Useldinger	M	South Central MCN
x	4	Paul Lampe	M	City of Independence, MO
x	5	Kyle McMenamin	M	Xcel Energy
A	6	Laurie Gregg	M	Lincoln Electric System
P	7	Allan George	M	Sunflower Electric Power Corporation
x	8	Jeff Wells	M	Grand River Dam Authority
x	9	John Stephens	M	City Utilities of Springfield
x	10	Todd Gosnell	M	Omaha Public Power District
x	11	Bryn Wilson	M	Oklahoma Gas and Electric Co.
x	12	Dennis Sauriol	M	American Electric Power
x	13	David Pham	M	Empire District Electric Company
x	14	Matthew Stoltz	M	Basin Electric Power Cooperative
x	15	Chance Myers	M	Western Farmers Electric Cooperative
x	16	Craig Speidel	M	Western Area Power Administration
x	17	Abu Elteriefi	M	ITC Holdings
x	18	Jay Patel	M	Kansas City Power & Light
x	22	Tanner New	P	Proxy for Allan George
x	19	Tim Hooker	G	Grand River Dam Authority
x	20	Gary Plummer	G	City of Independence, MO
x	21	Robert Safuto	G	Customized Energy Solutions
x	23	Mark Eastwood	G	City Utilities of Springfield
x	24	Sing Tay	G	Oklahoma Gas & Electric
x	25	Ben Hammer	G	Western Area Power Administration
x	26	Marty Paulk	G	Cleco
x	27	Lee Anderson	G	Lincoln Electric System
x	28	John Allen	G	City Utilities of Springfield
x	29	Jason Mazigian	G	Basin Electric Power Cooperative
x	30	Kevin Ma	G	Oklahoma Gas and Electric Co.
x	31	John Boshears	G	City Utilities of Springfield
x	32	Dave Millam	G	Kansas City Power & Light
x	33	Gayle Nansel	G	Western Area Power Administration
x	34	Kevin Foflygen	G	City Utilities of Springfield
x	35	Baryaley Sharwani	G	Western Area Power Administration
x	36	Jamie Hajek	G	NorthWestern Energy
x	37	Chris Lyons	G	Customized Energy Solutions
x	38	Mark Ahlstrom	G	NextEra Energy Resources, WindLogics
x	39	Keith Carman	G	Tri-State Generation and Transmission
x	40	Ron Thompson	G	Nebraska Public Power District
x	41	Neal Faltys	G	Omaha Public Power District
x	42	Tom Mayhan	G	Omaha Public Power District
x	43	Robert Hirchak	G	Cleco
x	44	Jeff Knottek	G	City Utilities of Springfield
x	45	Mike Wech	G	Southwestern Power Administration
x	46	Ken Quimby	S	Southwest Power Pool
x	47	Jason Tanner	S	Southwest Power Pool
x	48	Neil Robertson	S	Southwest Power Pool
x	49	Casey Cathey	S	Southwest Power Pool
x	50	Derek Hawkins	S	Southwest Power Pool
x	51	Shannon Mickens	S	Southwest Power Pool
x	52	Jon Langford	S	Southwest Power Pool