



Southwest Power Pool, Inc.
OPERATING RELIABILITY WORKING GROUP
Net Conference

Thursday February 1st 2018 8:30 AM – 12:00 PM (CST)

• Action Items and Voting Record •

Consent Agenda Items: January 03, 2018 ORWG Meeting Minutes

Jeff Wells (Grand River Dam Authority) moved to approve the consent agenda, and Ron Gunderson (Nebraska Public Power District) seconded the motion. The motion carried without opposition or abstention.

DLR Impact Assessment

Jeff Wells (Grand River Dam Authority) moved to table the DLR Impact Assessment to a future ORWG meeting, and Mark Eastwood (City Utilities of Springfield) seconded the motion. The motion carried without opposition or abstention.

RR247 RR268 OCRTF Revisions to Operating Criteria Sections 1, 2, and 3

Ron Gunderson (Nebraska Public Power District) moved to approve RR268 OCRTF Revisions to Operating Criteria Sections 1, 2, and 3, and Jeff Wells (Grand River Dam Authority) seconded the motion. The motion carried without opposition or abstention.

RR269 OCRTF Revisions to Operating Criteria Sections 4 and 8

Ron Gunderson (Nebraska Public Power District) moved to approve RR269 OCRTF Revisions to Operating Criteria Sections 4 and 8, and Gary Plummer (City of Independence, MO) seconded the motion. The motion carried without opposition or abstention.

RR270 OCRTF Revisions to Operating Criteria Appendices

Jeff Wells (Grand River Dam Authority) moved to approve RR270 OCRTF Revisions to Operating Criteria Appendices with modifications, and Ron Gunderson (Nebraska Public Power District) seconded the motion. The motion carried without opposition or abstention.

RR271 OCRTF Revisions to the SPP RDS

Ron Gunderson (Nebraska Public Power District) moved to approve RR271 OCRTF Revisions to the SPP RDS with modifications, and Abu Elteriefi (ITC Holdings) seconded the motion. The motion carried without opposition or abstention.

Centennial and Crossroads Wind Farm RAS Removal

Jeff Wells (Grand River Dam Authority) moved to approve the removal of the Centennial and Crossroads Wind Farm Remedial Action Schemes, and Chance Myers (Western Farmers Electric Cooperative) seconded the motion. The motion carried without opposition or abstention.

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• M I N U T E S •

Agenda Item 1 – Call to Order

Chairman Allen Klassen (Westar Energy, Inc.) opened the meeting around 8:32 AM on 2/01/2018.

Agenda Item 2 – Attendance

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

Agenda Item 3 – Agenda Review

Allen Klassen (Westar Energy, Inc.) reviewed the agenda. Allen noted that the Centennial and Crossroads RAS removal items were added to the agenda.

Agenda Item 4 – Consent Agenda

Allen Klassen (Westar Energy, Inc.) discussed the consent agenda, which included the January 03, 2018 ORWG Meeting Minutes.

Jeff Wells (Grand River Dam Authority) moved to approve the consent agenda, and Ron Gunderson (Nebraska Public Power District) seconded the motion. The motion carried without opposition or abstention.

Agenda Item 5 – IBIS Study Scope

Jason Tanner (Southwest Power Pool) discussed the IBIS study scope and explained the time line and the ongoing efforts. Jason stated that he is looking for ORWG approve the study scope. Jason stated that staff has finalized contracts with vendors, and is looking to begin the project in March. Jason stated that the IBIS will perform an additional TSAT analysis of the SPP system in both PLI and PSS/e format. Jason stated that during this study a SSAT analysis will be performed to better understand the cause of identified oscillations. Jason stated we will also perform a three phase PSCAD analysis of the Wolf Creek and Waverly area. Jason explained that the last part of the study will assess the short circuit ratio (SCR) of buses to which resources are connected. Jason stated that based on the results of the study it may help us to determine additional SCR criteria for a GIA.

Agenda Item 6 – DLR Impact Assessment

Garrett Crowson (Southwest Power Pool) stated that the goal of the Dynamic Line Rating (DLR) project is to safely utilize transmission capacity that could be available through the use of DLRs. Garrett discussed the impact assessment and Ron Gunderson (Nebraska Public Power District) stated that he doesn't understand the vendor range cost estimation. Casey Cathey (Southwest Power Pool) stated that it's a standard quote practice for SPP's PMO to do +/-50% ROM and Casey suggested that members could participate in a benefits analysis. Mark Eastwood (City Utilities of Springfield) asked how many TOs use DLRs today. Garrett stated that currently we have two members using DLRs. Jeff Wells (Grand River Dam Authority) asked how we manage DLRs today, and Garrett stated that we manually override the ratings as requested by the TOP using 3 part communication. Garrett stated that currently we are looking to automate the process through this project. Jeff asked how would DLR be handled on tie lines, and Garrett stated that we would control to the most limiting rating submitted.

Garrett explained the cost estimate and stated that the range included multiple options and that is the reason for the large range. Jeff asked what was driving the differences in the cost range. Garrett stated that it was SPP custom applications vs vender applications. Allen Klassen stated that due to time constraints he would recommend tabling this discussion until a future date.

Jeff Wells (Grand River Dam Authority) moved to table the DLR Impact Assessment to a future ORWG meeting, and Mark Eastwood (City Utilities of Springfield) seconded the motion. The motion carried without opposition or abstention.

Agenda Item 7 – RR268 OCRTF Revisions to Operating Criteria Sections 1, 2, and 3

Neil Robertson (Southwest Power Pool) stated that the Operating Criteria Review Task Force (OCRTF) is a joint effort between ORWG and RCWG to perform a wholesale review of SPP Operating Criteria with an emphasis on removing antiquated language and modernizing remaining language. In many cases, the current SPP Operating Criteria contains many redundancies with NERC Reliability Standards. Some portions of SPP Operating Criteria were written approximately two decades ago resulting in a need to modernize the language. Neil stated that this Revision Request represents the culmination of the OCRTF's efforts in revising SPP Operating Criteria Sections 1, 2, and 3. Neil explained that the RRs were broken up into 4 RR based on secondary WGs. Neil explained the redline changes within the revision request.

Ron Gunderson (Nebraska Public Power District) moved to approve RR268 OCRTF Revisions to Operating Criteria Sections 1, 2, and 3, and Jeff Wells (Grand River Dam Authority) seconded the motion. The motion carried without opposition or abstention.

Agenda Item 8 – RR269 OCRTF Revisions to Operating Criteria Sections 4 and 8

Neil Robertson (Southwest Power Pool) explained the objective to RR269 and discussed the needed changes to section 3.1. Neil explained that an additional RR will likely be submitted to adjust the current language for satellite phones. Neil explained the communication protocols and communication data sections and stated that 5.3 is the language from RR162. Steve Gaw (The Wind Coalition) asked if moving the RR162 language impacts future adjustments. Neil explained that the document adjustments just change the section number and is still in the body of criteria.

Ron Gunderson (Nebraska Public Power District) moved to approve RR269 OCRTF Revisions to Operating Criteria Sections 4 and 8, and Gary Plummer (City of Independence, MO) seconded the motion. The motion carried without opposition or abstention.

Agenda Item 9 – RR270 OCRTF Revisions to Operating Criteria Appendices

Neil Robertson (Southwest Power Pool) explained the objective of RR270 and stated that appendix OP3 will become OP1. Neil explained the use of capitalized terms, and explained the lead times for CROW outages. Neil stated that this RR also proposes the creation of the stand-alone 'SPP Reliability Coordinator Outage Coordination Methodology' using the current content of Appendix OP-2 as the basis. Neil stated that the creation of the stand-alone 'SPP Reliability Coordinator Outage Coordination Methodology' will further ensure consistency in using stand-alone documents where necessary to meet certain requirements in NERC Reliability Standards. The ORWG made one grammatical change to the Revoked definition in section 4 Outage Status Changes that added "y" to the word "any".

Jeff Wells (Grand River Dam Authority) moved to approve RR270 OCRTF Revisions to Operating Criteria Appendices with modifications, and Ron Gunderson (Nebraska Public Power District) seconded the motion. The motion carried without opposition or abstention.

Agenda Item 10 – RR271 OCRTF Revisions to the SPP RDS

Neil Robertson (Southwest Power Pool) discussed the objective to RR271 and explained the language changes for the generator operator within the SPP RC or BA area. Neil stated that this RR is proposing a number of clarifications and enhancements to the currently effective SPP RDS. Neil stated that this RR will result in requirements that are more understandable and straight forward from a compliance demonstration perspective. Neil made changes to the document to remove system protection scheme (SPS) and replaced it with remedial action schemes (RAS).

Ron Gunderson (Nebraska Public Power District) moved to approve RR271 OCRTF Revisions to the SPP RDS with modifications, and Abu Elteriefi (ITC Holdings) seconded the motion. The motion carried without opposition or abstention.

Agenda Item 11/12 – Centennial and Crossroads Wind Farm RAS Removal

Kevin Ma (Oklahoma Gas and Electric Co.) explained that in 2012 OG&E installed a RAS on the Centennial wind farm to limit the output to protect the Woodward District 138kV to Wind Farm Switching Station transmission line. This line would overload for the loss of the 345kV Northwest to Tatonga or the 345kV Tatonga Woodward District EHV line, therefore Centennial wind farm output had to be curtailed in order to allow it to go into service. Kevin stated that according to SPP criteria RAS's are meant to be temporary and with the build out of several transmission projects in the northwest area of Oklahoma the Centennial RAS is no longer needed. Kevin stated that in 2010 OG&E installed a RAS on the Crossroads wind farm to limit the output to alleviate stability issues in the area due to the Crossroads Wind Farm addition to the system. The stability study was performed by Siemens Energy Inc. revealed the stability issue for the loss of the 345kV Northwest to Tatonga or the 345kV Tatonga to Woodward District EHV line, therefore Crossroads Wind Farm had to be curtailed to allow it to go into service. Kevin stated that due to the completion of the 345kV Woodward District EHV to Thistle double circuit transmission line and several other transmission projects in the northwest area of Oklahoma the Crossroads RAS is no longer needed.

Jeff Wells (Grand River Dam Authority) moved to approve the removal of the Centennial and Crossroads Wind Farm Remedial Action Schemes, and Chance Myers (Western Farmers Electric Cooperative) seconded the motion. The motion carried without opposition or abstention.

Agenda Item 13 – IRO-018 and TOP-010 RTCA Data Quality

Chad Hankins (Southwest Power Pool) discussed the RTCA data quality and explained the solution quality data available via ICCP. Chad explained some of the points offered such as has the state estimator solved within the last 15 minutes, and has the contingency analysis completed within the last 20 minutes. Chad explained the company specific indicators available upon request, and he asked ORWG if the group had any additional information they would like to receive via ICCP. Chad stated that he could work with individual TOP's if more granular data is needed. Chad explained that the SPP ICCP Handbook will be updated to include information about new solution quality data points, and the timeline for implementation depends mostly on ICCP model upload schedule. Chad stated that model uploads typically occur twice a month, so the time from the requested points to be available in ICCP should not be more than about two weeks.

Agenda Item 14 – Macomber Map

Jeff Parker (Southwest Power Pool) explained that internal testing has been completed and the Macomber map server is operational. Jeff stated that SPP is ready to begin member client connectivity testing. Jeff explained how to gain access to the replicated data server and the Macomber map. Jeff explained that some data feeds may not be active and should be treated as non-operational data. Jeff explained that this test is to confirm connectivity. Jeff explained the data feed timing for RTCA and STCA and stated that if WebEx training was needed he would be willing to set it up.

Agenda Item 15 – MWTG Update

Casey Cathey (Southwest Power Pool) provided an update to the MWTG project and stated that internally a list of potential RR's is being reviewed. Casey stated that Neil will be leading the RR efforts from the reliability perspective, and that ORWG may need to consider a Mountain West RC/BA Task Force once documents are signed. Keith Carmen (Tri-State G&T) discussed some differences between the west and east regarding unscheduled flows. Casey stated that SPP will be holding public meetings regarding RC services in the west outside MWTG BA.

Other Items:

Agenda Item 16 – ORWG Member Topic List

The ORWG Member was provided as part of the meeting materials, but was not discussed.

Agenda Item 17 – Jan 17 Operating Day Events

Kathryn Dial (Southwest Power Pool) stated that on January 17, 2018 central and southern US experienced abnormally cold weather with record winter loading for SPP & MISO South. Kathryn stated that high wind was experienced that caused transmission SOL exceedances, and heavy transfers of MISO flow across SPP transmission (North to South) was observed. John Stephens (City Utilities of Springfield) stated that this was not a 1 in 100 year event, and Casey Cathey (Southwest Power Pool) stated he agrees. Kathryn discussed the wind differences between SPP and MISO and explained the ORCA flow violation. Casey explained the ORCA agreement and stated that 3000MW's is the limit, and while reviewing the charts Steve Gaw (The Wind Coalition) stated that it seems like a violation of the agreement. Casey stated that there are those that agree with Steve, and he stated SPP is having serious conversations with MISO in this regard.

Agenda Item 18 – Review of Open and Closure Pending Actions

The action item list due was provided in the meeting material packet, but was not reviewed due to time constraints.

Agenda Item 19 – New Action Items

SPP staff reviewed the two new action items with the ORWG.

Agenda Item 20 – General Q&A/Open Forum

Agenda Item 21 – Meeting Schedule

- a. 3/1/2018 WebEx (Thurs) 0830-1200
- b. 4/4 – 4/5/2018 Face-to-Face (Tulsa, Oklahoma) (GRDA) – CONFIRMED
- c. 5/3/2018 WebEx (Thurs) 0830-1200
- d. 5/30 – 5/31/2018 Face-to-Face (Little Rock)(SPP) - CONFIRMED
- e. 6/27 – 6/28/2018 Face-to-Face (Denver, CO) (Tri State) – CONFIRMED
- f. 8/1 - 8/2/2018 Face-to-Face (Denver, CO) (Tri State) - CONFIRMED
- g. 9/6/2018 WebEx (Thurs) 0830-1200
- h. 10/3 – 10/4/2018 Face-to-Face (Little Rock, AR) (SPP) – CONFIRMED
- i. 11/1/2018 WebEx (Thurs) 0830-1200
- j. 12/6/2018 WebEx (Thurs) 0830-1200

Agenda Item 23 – Adjournment

Chairman Allen Klassen (Westar Energy, Inc.) adjourned the ORWG at 12:01 PM (EDT) on 2/01/2018.

Respectfully Submitted,
Jason Tanner, Secretary



**Operating Reliability Working Group
Meeting Attendance: 2/1/2018
M=Member, G=Guest, S=SPP Staff, P= Proxy**



Day 1		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	Gary Plummer	M	City of Independence, MO
P	5	Kyle McMenamin	M	Xcel Energy
x	6	Laurie Gregg	M	Lincoln Electric System
x	7	Allan George	M	Sunflower Electric Power Corporation
x	8	Jeff Wells	M	Grand River Dam Authority
x	9	Todd Gosnell	M	Omaha Public Power District
P	10	Bryn Wilson	M	Oklahoma Gas and Electric Co.
x	11	Chris Shaffer	M	American Electric Power
x	12	David Pham	M	Empire District Electric Company
x	13	Matthew Stoltz	M	Basin Electric Power Cooperative
x	14	Chance Myers	M	Western Farmers Electric Cooperative
x	15	Craig Speidel	M	Western Area Power Administration
x	16	Abu Elteriefi	M	ITC Holdings
x	17	Jay Patel	M	Kansas City Power & Light
x	18	Mark Eastwood	M	City Utilities of Springfield
x	19	Keith Carman	M	Tri-State G&T
x	24	Bob Cochran Proxy for Kyle McMenamin	P	Xcel Energy
x	30	Kevin Ma proxy for Bryn Wilson	P	Oklahoma Gas and Electric Co.
x	20	John Stephens	G	City Utilities of Springfield
x	21	Jeff Knottek	G	City Utilities of Springfield
x	22	Ron Thompson	G	Nebraska Public Power District
x	23	Shannon Coleman	G	Nebraska Municipal Power Pool
x	25	Carrie Dixon	G	Xcel Energy
x	26	Gayle Nansel	G	Western Area Power Administration
x	27	Chris Colson	G	Western Area Power Administration
x	28	Mark Buchholz	G	Western Area Power Administration
x	29	Tanner New	G	Sunflower Electric Power Corporation
x	31	Hermes	G	Oklahoma Gas and Electric Co.
x	32	James Thomas	G	Oklahoma Gas and Electric Co.
x	33	Don Hargrove	G	Oklahoma Gas and Electric Co.
x	34	John M Hare	G	Oklahoma Gas and Electric Co.
x	35	Steve Hardebeck	G	Oklahoma Gas and Electric Co.
x	36	Travis Hyde	G	Oklahoma Gas and Electric Co.
x	37	Jeremy Severson	G	Basin Electric Power Cooperative
x	38	Jason Mazigian	G	Basin Electric Power Cooperative
x	39	Keeth Works	G	Southwestern Power Administration
x	40	Steve Gaw	G	The Wind Coalition
x	41	Chris Lyons	G	Customized Energy Solutions
x	42	Jim Krajecki	G	Customized Energy Solutions
x	43	Tom Mayhan	G	Omaha Public Power District
x	44	Neil Faltys	G	Omaha Public Power District
x	45	John Boshears	G	City Utilities of Springfield
x	46	John Allen	G	City Utilities of Springfield
x	47	Ryan Kirk	G	American Electric Power
x	48	Mike Anderson	G	American Electric Power
x	49	Jim Jacoby	G	American Electric Power
x	50	Warren Rust	G	Colorado Springs Utilities
x	51	Paul Morland	G	Colorado Springs Utilities

x	52	Jason Tanner	S	Southwest Power Pool
x	53	Casey Cathey	S	Southwest Power Pool
x	54	Neil Robertson	S	Southwest Power Pool
x	55	Chad Hankins	S	Southwest Power Pool
x	56	Jeff Parker	S	Southwest Power Pool
x	57	Garrett Crowson	S	Southwest Power Pool
x	58	Kathryn Dial	S	Southwest Power Pool
x	59	Margaret Q. Adams	S	Southwest Power Pool
x	60	Will Tootle	S	Southwest Power Pool
x	61	Jerry Stone	S	Southwest Power Pool
x	62	Jon Langford	S	Southwest Power Pool
x	63	Cody Parker	S	Southwest Power Pool
x	64	Hagen Boehmer	S	Southwest Power Pool