

**Supply Adequacy Working Group
KCPL Offices - 1KC-02 North Auditorium**

Kansas City, MO.

September 24th and 25th, 2019

Day 1: 8:00AM - 5:00PM

Day 2: 8:00AM - 12:00PM

• A G E N D A •

Day 1

Member Attendance

Aaron Castleberry	Oklahoma Gas & Electric
Aaron Ramsdell	Basin Electric Power Coop.
Adam Graff	Heartland Consumers Power District
Bennie Weeks	SPS (Xcel Energy Services)
Brad Hans	Municipal Energy Agency of Nebraska
Brian Berkstresser	Liberty Utilities
Douglas Jasa	KCPL and Westar, Evergy Companies
Eric Alexander	GRDA
Ernesto Perez	GDS Associates, Inc.
Jim Jacoby	American Electric Power
Jodi Knuston	WAPA
Jon Iverson	Omaha Public Power District
John Varnell	Tenaska
Kenny Hale	City Utilities of Springfield, MO
Natasha Henderson	Golden Spread Electric Cooperative
Phillip Schaeffer	Western Farmer Electric Cooperative
Rob Janssen	Dogwood
Tom Hestermann	Sunflower Electric Power Corporation
Thomas Saitta	Kansas Municipal Energy Agency
Traci Bender	Nebraska Public Power District
Walt Cecil*	Missouri PSC

* CAWG Liaison Member

Day 2

Member Attendance

Aaron Ramsdell	Basin Electric Power Coop.
Adam Graff	Heartland Consumers Power District
Bennie Weeks	SPS (Xcel Energy Services)
Brad Hans	Municipal Energy Agency of Nebraska
Brian Berkstresser	Liberty Utilities
Douglas Jasa	KCPL and Westar, Evergy Companies
Eric Alexander	GRDA
Ernesto Perez	GDS Associates, Inc.
Jim Jacoby	American Electric Power
Jodi Knuston	WAPA
Jon Iverson	Omaha Public Power District

John Varnell	Tenaska
Kenny Hale	City Utilities of Springfield, MO
Natasha Henderson	Golden Spread Electric Cooperative
Phillip Schaeffer	Western Farmer Electric Cooperative
Rob Janssen	Dogwood
Tom Hestermann	Sunflower Electric Power Corporation
Thomas Saitta	Kansas Municipal Energy Agency
Traci Bender	Nebraska Public Power District
Walt Cecil*	Missouri PSC

* CAWG Liaison Member

Day 1 Administrative Items

- Brans Hans call the meeting to order at 8:00 a.m.
- Roll Call and Introductions.
- August 26th and 27th meeting minutes were approved.
- The draft agenda reviewed and unanimously approved. The motion to approve made by Phil Schaeffer and seconded by Brian Berkstresser.

ELCC Solar Study Report (Approval Item)

Chris Haley gave an overview of the ELCC solar report, which contained no changes from the August meeting where it was reviewed by the SAWG. Once approved, the ELCC solar report will be posted on the SPP website and the results of the study will be presented at a MOPC educational session.

Motion: Tom Hestermann made the motion to approve the report as is and seconded by Jim Jacoby.

The motion passed, with two abstentions (GRDA and Tenaska).

ELCC Wind and Solar Accreditation Whitepaper (Approval Item)

Chris Haley reviewed the member and staff submitted redlines to the existing wind and solar whitepaper. Each member that submitted comments was given an opportunity to explain their comments and stance. Once the redlines were covered, he stepped into a review of the whitepaper that was discussed on the September 20 net conference that introduced the members to the new 3 tiered process for solar. This process was also adopted in the whitepaper was sent out to the SAWG on the 23rd. There was discussion on how the 20% floor for solar was established and that it was based off of the solar ELCC study results. There was also quite a bit of discussion on what percentage made sense for wind and the group settled on 35%. There were several edits made the load shape and hours section of the whitepaper, which was the center of most of the discussion time. Curtailments will be added back in to the hourly data.

ELCC, or some other determined methodology will be used for addressing the accreditation of all conventional generation in the footprint. This effort will begin in early 2020.

Whitepaper will go to MOPC in October for approval, CAWG in November and the BOD and RSC in January 2020.

Motion: Traci Bender (NPPD) seconded by Jon Iverson (OPPD) motioned to approve the whitepaper subject to cleanup and numbering verification (equation examples).

The motion passed. (15 yes, 3 no and 2 abstentions)

Straw Poll: Use of the 3 tiered approach for wind

- The motion passed. (13 yes, 3 no and 4 abstentions)

Straw Poll: 35% (For wind Tier 1 % of LRE peak load)

- The motion passed. (10 yes, 5 no and 3 abstentions)

Straw Poll: 40% (For wind Tier 1 % of LRE peak load)

- The motion failed. (6 yes, 9 no and 3 abstentions)

Deliverability Study Results Overview

Alex Crawford gave an overview of results and notified the group that the results would be posted in the Engineering Database Submission Tool (EDST) on October 1.

SPP Strategic Plan Discussion

Chris Haley overviewed the SPP Work Plan and there was a push for including the NCP vs CP discussion with the Winter Reserve Margin effort. Brad stated that a small task force will be created to address the testing requirements under section 7.1 of the Planning Criteria. Please send your nominations to Chris Haley.

Day 2 Administrative Items

- Brans Hans call the meeting to order at 8:01 a.m.
- Roll Call and Introductions.

The draft agenda reviewed and unanimously approved

Generator Retirement Process Overview

Kirk Hall gave an overview of the planning Generator Retirement Process. There was much discussion around timelines, and how reliability must run units will be addressed in the study. The SAWG will be involved in the process going forward, if only from and informational notification prospective.

EEA Presentation

Ricky Finkbiener gave a presentation the reviewed the EEA event and actions taken leading up to and during the event. There was a lot of questions and discussions around market prices during an EEA event and how economics are impacted, comparing outage rated to the old LBA outage rates and looking at how summer accreditation results compare to the ecomax. There was more discussion, but these were the main highlights.

Operations Presentation

Garrett Crowson gave a presentation on the Generation Assessment Process (GAP), which performing more analysis on generation outage planning and available capacity. The objective is to determine if an available outage margin threshold should be implemented to protect reliability and decrease risk. There was a lot of discussion around wind and how all wind compares across the footprint, not just firm wind registered in the market. SAWG also asked in staff was planning on taking any of these real time data points and running additional sensitivities for the 2019 LOLE study, at this time staff is not expecting to perform additional analysis outside of the approved scope.

Garrett did not have time to cover the Uncertainty Response Team (URT) portion of the presentation, but will present this at the October Net Conference.

Chair Nomination (Approval Item)

Chris Haley presented with the nomination that Brad Hans continue as the chair of the SAWG for another two-year term.

Motion: Approve Brad Hans nomination continuing as Chair of the SAWG.

Rob Janssen made the motion; it was seconded by Natasha Henderson. The motion passed unanimously.

Brad Hans adjourned the meeting at 12:00 p.m.

Respectfully Submitted,

Chris Haley

Secretary

September 24th Webex Attendance

<i>Scott Aclin - SPP</i>	<i>saclin@spp.org</i>
<i>Vince Vandaveer - SPRM</i>	<i>vince.vandaveer@cityutilities.net</i>
<i>Kenny Hale (SPRM)</i>	<i>kenny.hale@cityutilities.net</i>
<i>Robert Pick (NPPD)</i>	<i>rjpick@nppd.com</i>
<i>Joe Helms</i>	<i>j.helms@rainbowenergy.com</i>
<i>Jerry Tielke</i>	<i>Jerry.Tielke@mrenergy.com</i>
<i>Jason Chaplin (OCC)</i>	<i>jason.chaplin@occeemail.com</i>
<i>Mitch Williams</i>	<i>mitchw1962@gmail.com</i>
<i>Tom Hestermann</i>	<i>thestermann@sunflower.net</i>
<i>Cindy Ireland (AR PSC)</i>	<i>cireland@psc.state.ar.us</i>
<i>Jason Mazigian (BEPC)</i>	<i>jmazigian@becpc.com</i>
<i>Jerry Bradshaw (SPRM)</i>	<i>jerry.bradshaw@cityutilities.net</i>
<i>Katie Southworth</i>	<i>katie.southworth@emvenergy.net</i>
<i>Chris Haley</i>	<i>chaley@spp.org</i>
<i>John Tennyson (SPRM)</i>	<i>john.tennyson@cityutilities.net</i>
<i>Ashley Gibbons (SPS)</i>	<i>ashley.gibbons@xcelenergy.com</i>
<i>D Diaz</i>	<i>ddiaz@stonepigman.com</i>
<i>AJ</i>	<i>amber.joyce@mdu.com</i>
<i>Julie Tackett (WFEC)</i>	<i>j_tackett@wfec.com</i>
<i>Jim Fehr (NPPD)</i>	<i>jrfehr@nppd.com</i>
<i>Mandy Meadors</i>	<i>mandy.meadors@duke-energy.com</i>
<i>Heather Starnes (MJMEUC)</i>	<i>heather@healylawoffices.com</i>
<i>Brandon McCracken</i>	<i>b_mccracken@wfec.com</i>
<i>Matt Welch (GSEC)</i>	<i>mwelch@gsec.coop</i>
<i>Bennie Weeks</i>	<i>bennie.weeks@xcelenergy.com</i>
<i>Jeff Knottek</i>	<i>jeff.knottek@cityutilities.net</i>
<i>Clifford Franklin</i>	<i>cfranklin@sunflower.net</i>
<i>Ron Chartier(SECI)</i>	<i>ronc@sunflower.net</i>
<i>David Sonntag (WFEC)</i>	<i>d_sonntag@wfec.com</i>
<i>Marisa Choate</i>	<i>mchoate@spp.org</i>
<i>Garrett Schilling (BEPC)</i>	<i>gschilling@becpc.com</i>

<i>Brian Hurst (GRDA)</i>	<i>bhurst@grda.com</i>
<i>Jodi Knutson (WAPA)</i>	<i>jknutson@wapa.gov</i>
<i>Chad Campbell</i>	<i>chad.campbell@engie.com</i>
<i>Eric Alexander (GRDA)</i>	<i>ealexander@grda.com</i>
<i>Calvin Daniels (WFEC)</i>	<i>calvin.daniels@wfec.com</i>
<i>Aaron Ramsdell</i>	<i>aramsdell@bepc.com</i>
<i>Joel Berger</i>	<i>jberger@ces-ltd.com</i>
<i>Steve Gaw</i>	<i>rsgaw1@gmail.com</i>
<i>Jon Sunneberg</i>	<i>jmsunne@nppd.com</i>
<i>Serhat Guney (SPP MMU)</i>	<i>eguney@spp.org</i>
<i>Ashlyn Johnson</i>	<i>ajohnson@spp.org</i>
<i>Tim Owens (NPPD)</i>	<i>tjowens@nppd.com</i>
<i>Tom Butz</i>	<i>butzt@powersystem.org</i>
<i>Walt Cecil</i>	<i>walt.cecil@psc.mo.gov</i>
<i>Woody Lally</i>	<i>welally@aep.com</i>
<i>NWPS</i>	<i>Ella.Caillouette@northwestern.com</i>
<i>Phillip Schaeffer (WFEC)</i>	<i>phillip.schaeffer@wfec.com</i>
<i>Lee Elliott</i>	<i>lelliott@spp.org</i>

September 25th Webex Attendance

<i>Ricky Finkbeiner (SPP)</i>	<i>rfinkbeiner@spp.org</i>
<i>Robert Tallman (OG&E)</i>	<i>tallmarj@oge.com</i>
<i>Walt Cecil</i>	<i>walt.cecil@psc.mo.gov</i>
<i>Matt Welch (GSEC)</i>	<i>mwelch@gsec.coop</i>
<i>Derek Sunderman</i>	<i>dsunderman@savionenergy.com</i>
<i>Heather Starnes (MJMEUC)</i>	<i>heather@healylawoffices.com</i>
<i>Phillip Schaeffer (WFEC)</i>	<i>phillip.schaeffer@wfec.com</i>
<i>David Sonntag (WFEC)</i>	<i>d_sonntag@wfec.com</i>
<i>Jodi Knutson (WAPA)</i>	<i>jknutson@wapa.gov</i>
<i>Mitch Williams</i>	<i>mitchw1962@gmail.com</i>
<i>NWPS</i>	<i>Ella.Caillouette@northwestern.com</i>
<i>Bennie Weeks (XCEL/SPS)</i>	<i>bennie.weeks@xcelenergy.com</i>
<i>jim jacoby (AEP)</i>	<i>jwjacoby@aep.com</i>
<i>Eric Alexander (GRDA)</i>	<i>ealexander@grda.com</i>
<i>Jerry Tielke (MRES)</i>	<i>jtielke@mrenergy.com</i>
<i>Kenny Hale (SPRM)</i>	<i>kenny.hale@cityutilities.net</i>
<i>D Diaz</i>	<i>ddiaz@stonepigman.com</i>

<i>Ron Chartier</i>	<i>ronc@sunflower.net</i>
<i>Chris Haley</i>	<i>chaley@spp.org</i>
<i>Serhat Guney (SPP MMU)</i>	<i>eguney@spp.org</i>
<i>Jason Mazigian (BEPC)</i>	<i>jmazigian@bepec.com</i>
<i>Garrett Schilling (BEPC)</i>	<i>gschilling@bepec.com</i>
<i>Ashley Gibbons (SPS)</i>	<i>ashley.gibbons@xcelenergy.com</i>
<i>Calvin Daniels (WFEC)</i>	<i>calvin.daniels@wfec.com</i>
<i>Cindy Ireland (AR PSC)</i>	<i>cireland@psc.state.ar.us</i>
<i>Jason Chaplin (OCC)</i>	<i>jason.chaplin@occ.ok.gov</i>
<i>Jerry Bradshaw (SPRM)</i>	<i>jerry.bradshaw@cityutilities.net</i>
<i>Tim Owens (NPPD)</i>	<i>tjowens@nppd.com</i>
<i>Ashlyn Johnson</i>	<i>ajohnson@spp.org</i>
<i>Jonathan Hathhorn (INDN)</i>	<i>jhathhorn@indepmo.org</i>
<i>Adrienne Blaine</i>	<i>adrienne.blaine@wfec.com</i>
<i>Woody Lally</i>	<i>welally@aep.com</i>
<i>Marisa Choate</i>	<i>mchoate@spp.org</i>
<i>Steve Gaw</i>	<i>rsgaw1@gmail.com</i>
<i>Brian Hurst GRDA</i>	<i>bhurst@grda.com</i>
<i>Kirk Hall</i>	<i>khall@spp.org</i>

SEPTEMBER 24th SAWG MEETING SIGN IN

CHRIS HALEY	SPP
Walt Cecil	MOPSC
Tom Sautta	KMEA
Brian Berkstesser	Liberty
Larry Hillman	KPP
John Vranek	NEASKA
TOM HESTERMANN	Sunflower
Natasha Henderson	Golden Spread Electric Cooperative
Kenny Hale	SPRM
Jon Iversen	OPPD
Phil Schaeffer	WFEC
Traci Bender	NPPD
BRAD HANS	MEAN
Alex Crawford	SPP
Derek Sunderman	Savion
Jim Jacoby	AEP
ARON RAMSDALL	BEPC
Luke Haner	OPPD
Colton Kennedy	OPPD
DOUG JASA	Energy
Aaron Castleberry	OL+E
Ernesto Perez	ETEC/NEEC
Rob Janssen	Agwood Energy
Jonathan Hathorn	Independence Power & Light
Nico Ciccone	Nextera
Adam Graff	HCPD
Charles Hendrix	SPP Staff

SEPTEMBER 25th SAWG MEETING

CHRIS HALEY	SPP
Walt Cecil	MOPSC
Tom Sautta	KMEA
Brian Berkstesser	Liberty
Mark Barber	KEPCO
Larry Hillman	KPP
JOHN VRANEK	NEASKA
TOM HESTERMANN	Sunflower
Doug JASA	Energy
KENNY HALE	SPRM
Jon Iversen	OPPD
Traci Bender	NPPD
BRAD HANS	MEAN
Alex Crawford	SPP
Phil Schaeffer	WFEC
ARON RAMSDALL	BEPC
Luke Haner	OPPD
Colton Kennedy	OPPD
Aaron Castleberry	OL+E
Ernesto Perez	ETEC/NEEC
Rob Janssen	Agwood Energy
Nico Ciccone	Nextera
Adam Graff	HCPD
Charles Hendrix	SPP Staff