

**SOUTHWEST POWER POOL
MODEL DEVELOPMENT ADVISORY GROUP MEETING**

March 21, 2024 9:00 am – 12:00 pm (CST)

Conference Call

SUMMARY OF MOTIONS AND ACTION ITEMS

Action Items:

- **Action Item:** Send out notification for the meeting on the voting approval on the 15th of April.
- **Action Item:** Send out notification that MDAG is seeking an open seat for MDAG membership.
- **Action Item:** Send out SPP roadmap form for WAPA (Brianna) to complete for the Area 550 discussion.

Motions:

- **Motion:** Jason Shook motioned to approve the agenda as presented. John Vara seconded the motion. The motion passed unanimously.
- **Motion:** Jerry Bradshaw motioned to approve the February 15 2024, meeting minutes as presented. Jason Shook seconded the motion. The motion passed.
- **MOTION:** Jerry Bradshaw motioned to approve the two new MDAG members. John Vara seconded the motion. The motion passed.
- **MOTION:** Jerry Bradshaw motioned to approve opening of a new seat for MDAG membership. Tyler Baxter seconded the motion. The motion passed.

**SOUTHWEST POWER POOL
MODEL DEVELOPMENT ADVISORY GROUP MEETING**

March 21, 2024 9:00 am – 12:00 pm (CST)

Conference Call

MINUTES

AGENDA ITEM 1 – ADMINISTRATIVE ITEMS

AGENDA ITEM 1A & 1B – CALL TO ORDER AND ANTITRUST STATEMENT

MDAG Co-Chair, Brianna Haug, called the meeting to order at 9:02 a.m. (CST) with Quorum. SPP Staff Secretary, Lottie Jones, read the anti-trust statement to the group.

AGENDA ITEM 1C & 1D – ATTENDANCE AND PROXIES

The following members attended or were represented by proxy:

MDAG Member	Present	Proxy	Present	Company
Alex Mucha	Yes			Oklahoma Municipal Power Authority
Brianna Haug	Yes			Western Area Power Administration, MDAG Vice-Chair
Dustin Betz	Yes			Nebraska Public Power District
Jason Shook	Yes			GDS Associates
Jerry Bradshaw	Yes			City Utilities of Springfield
Jesse Kreutzfeldt	Yes			Missouri River Energy Services
Joe Fultz	Yes			Grand River Dam Authority
John Turner	Yes	Jordan Skillern	Yes	Western Farmers Electric Power, MDAG Chair
John Vara	Yes			Golden Spread Electric
Liam Stringham	Yes			Sunflower Electric Power Corporation
Lottie Jones	Yes			Southwest Power Pool, Inc., MDAG Secretary
Preston Blinsky	No			Basin Electric Power Cooperative
Reené Miranda	No	Antonio Barrera	Yes	Southwestern Public Service
Ryan Baysinger	Yes			Evergy
Scott Rainbolt	Yes			American Electric Power
Scott Schichtl	Yes			Arkansas Electric Cooperative Corporation
Tyler Baxter	Yes			Corn Belt Power Cooperative

Material: MAR21_Attach2 - 1c. MDAG Conference Call Attendance-03-21-2024

AGENDA ITEM 1E – AGENDA REVIEW (**APPROVAL ITEM**)

John Turner, MDAG Chair, asked the group if they had a chance to review the agenda and if the group had any modifications to the agenda.

Motion: Jason Shook motioned to approve the agenda as presented. John Vara seconded the motion. The motion passed unanimously.

Material: MAR21_Attach1- 1e. MDAG Meeting Agenda

AGENDA ITEM 1F – PREVIOUS FEBRUARY 15, 2024 MEETING MINUTES (**APPROVAL ITEM**)

Lottie Jones asked the group if they had any proposed changes for the previous February 15, 2024, meeting minutes.

Motion: Jerry Bradshaw motioned to approve the February 15 2024, meeting minutes as presented. Jason Shook seconded the motion. The motion passed.

Material: MAR21_Attach3- 1f. February 15, 2024, Meeting Minutes.docx

AGENDA ITEM 2 – REVIEW OF PAST ACTION ITEMS

Lottie Jones discussed outstanding issues highlighted in red font. Lottie walked the group through updates on action items collected at the previous session and updates for existing in-progress action items.

- Action Item 165 – In Progress – Will be discussed later in the meeting.
- Action Item 212 – In Progress – Will be discussed later in the meeting.

AGENDA ITEM 3 – MDAG MEMBERSHIP (**APPROVAL ITEM**)

MDAG Co-Chair, Brianna Haug, provided the group with an update on the MDAG membership submissions.

Timothy Sell and Nathan Davis were selected by MDAG membership and approved by SPP upper management. These members are with Liberty Utilities and ITC Holdings.

MOTION: Jerry Bradshaw motioned to approve the two new MDAG members. John Vara seconded the motion. The motion passed.

AGENDA ITEM 3A – ADDITIONAL MDAG OPEN SEAT

Jason Shook asked if the new seat will be limited to a certain member type or is it open to anyone?

SPP staff, Lottie Jones, mentioned that it is open to individuals who have experience and knowledge in one or more of the following areas:

- Model Development (Powerflow, dynamics, and/or short circuit)
- Transmission Planning
- NERC MOD and TPL Standards

MOTION: Jerry Bradshaw motioned to approve opening of a new seat for MDAG membership. Tyler Baxter seconded the motion. The motion passed.

AGENDA ITEM 4 – SCRIPT C3 UPDATE

SPP Staff, David Duhart, provided the group with an update on the Script C3 effort.

Brianna asked if exploratory generation be only in the MDAG model or in the energy model as well.

David commented that this is still to be discussed internally.

David commented based upon Jesse's question that yes this would be a third model to review; however, this would not be as robust of a model.

Tyler Baxter commented that MOD-030 has been retired as of 2/1/24.

David commented that the plan is for the MPM model to be replaced by the energy model.

Brianna asked if there will be additional review with these new energy models.

David commented that yes there will be some additional review after the ITP and MDAG models. It will be the same time allocation as the MPM models.

Brianna commented that by submitting information to both MOD and EDST this is duplicating work and putting additional strain on model builders.

Brianna voiced her concerns around multiple types of data submission.

Jason Shook echoed Brianna's concerns regarding duplicate data.

John Vara asked when these models will be built.

David commented that this work will be completed prior to the next model build cycle.

AGENDA ITEM 5 – SPP STAFF RECOMMENDATION AREA 550

SPP Staff, Lottie Jones, provided the group with an update on the Area 550 discussion.

Lottie commented that SPP staff recommends that WAPA submits the Area 550 project to the roadmap process.

AGENDA ITEM 6 – FOCUS GROUP/TASK FORCE UPDATES

AGENDA ITEM 6A – RAD TASK FORCE

SPP Staff, Darian Richards, provided the group with an update from the March RAD Task Force meeting.

Jordan Skillern asked if we are comparing operations non-firm/firm data to planning non-firm/firm data?

Dustin Betz voiced some concerns regarding the removal of the "0" data as they rely on that data to be there to check for reliability on the system.

Ryan Baysinger added some context to Dustin's question. The assumption is that there is always some level of wind available. The idea is that you are going to cut the zeros out but you will include every value above that zero.

Please attend the next RAD TF for more information on this topic.

AGENDA ITEM 7 – 2024 SERIES MODEL BUILD/APPLICATION UPDATES

AGENDA ITEM 7A – POWERFLOW

SPP staff, Darian Richards, updated the group on the 2024 series MDAG Powerflow model build.

In the future there will need to be coordination with TWG and MDAG regarding the initial final ITP models prior to seeking approval of the models.

Why are the models for ITP completed so much earlier than the MDAG models this year?

This is due to the FERC 715 filing of the models that must be completed by April 1st. SPP submits these models on behalf of the stakeholders for this FERC filing.

The ITP PF models were completed a little bit earlier this year, but the model sets were decoupled this year as part of an effort to minimize the total number of models.

Is there a specification regarding which model set must be submitted for the FERC 715 filing?

It does not appear that it is that specific and it may be possible to submit an older set of final approved models. In the past this has been the model that we have sent to FERC, and we want to make sure that we are consistent.

If there is wiggle room for the approval of the ITP cases could there be future discussion on the timeline as well as the review of the models?

SPP staff agreed.

Action Item: Include the FERC 715 filing date into the MDAG Model Build Schedule.

Recommendation to have 1 hour meeting, Monday April 15, 2024 1:30 pm CST for Finalization – MDAG Net Conference to Vote and Approve 2024 MDAG Powerflow and Short Circuit Models as Final.

AGENDA ITEM 7B – SHORT CIRCUIT

SPP staff, Eric Sullivan, updated the group on the 2024 Series MDAG Short Circuit model build.

AGENDA ITEM 7C – MOD-033

SPP staff, Eric Sullivan, updated the group on the 2024 Series MDAG MOD-033/WWE model build.

AGENDA ITEM 7D – DYNAMICS

SPP staff, Zach Sabey, updated the group on the 2024 Series MDAG Dynamic Model Build Update with the current tasks and key reminders.

AGENDA ITEM 8 – DISCUSSION OF FUTURE MEETINGS

John Turner, MDAG Chair, updated the group on upcoming meetings.

- a. RAD TF: April 24, 2024 (1:00 PM – 3:00 PM)
- b. MDAG Focus Group: April 23, 2024 (1:00 PM – 3:00 PM)
 - i. Facilitate technical discussions.
 - ii. MDAG changes (manual, schedule, etc) must be discussed in FG before being brought to MDAG.
- c. TWG: March 26, 2024 - March 27, 2024 (9:00 AM begins)
- d. MDAG: April 15, 2024 (9:00 AM – 12:00 PM)

MDAG encourages you to check out the spp.org calendar for additional information on technical topics discussed in other working groups. SPP also offers stakeholder trainings [found here](#)

AGENDA ITEM 9 – SUMMARY OF ACTION ITEMS

John Turner, MDAG Chair, and Lottie Jones, Staff Secretary, indicated the following new action item from this meeting.

- **Action Item:** Send out notification for the meeting on the voting approval on the 15th of April.
- **Action Item:** Send out notification that MDAG is seeking an open seat for MDAG membership.
- **Action Item:** Send out SPP roadmap form for WAPA (Brianna) to complete for the Area 550 discussion.

AGENDA ITEM 12 – ADJOURN

John Turner, MDAG Chair, adjourned the meeting at 11:36 a.m. (CST)

Respectfully Submitted,

Lottie Jones
Secretary

Eric Sullivan
Secretary Assistant

Attachments

MAR21_Attach1- 1e. MDAG Meeting Agenda.docx

MAR21_Attach2 - 1c. MDAG Conference Call Attendance-03-21-2024

MAR21_Attach3- 1f. February 15, 2024, Meeting Minutes.docx

SOUTHWEST POWER POOL, INC.

MODEL DEVELOPMENT ADVISORY GROUP MEETING

March 21, 2024

Conference Call

9:00 a.m. – 12:00 p.m. (CST)

AGENDA

1. Administrative Items..... Brianna Haug (10 mins)
 - a. Call to Order
 - b. Antitrust Statement
 - c. Attendance
 - d. Proxies
 - e. Agenda Review (**Approval Item**)
 - i. Acknowledgment for the posting of meeting materials
 - ii. *Agenda items may be taken out of order and could conclude earlier or later than estimated time.*
 - f. Previous February Meeting Minutes (**Approval Item**)
 - i. Update to proxy for attendance in February
2. Review of Past Action Items Lottie Jones (5 mins)
3. MDAG Membership (**Approval Item**) Brianna Haug (15 mins)
4. MDAG New Seat (**Approval Item**) Brianna Haug (15 mins)
5. SCRIPT C3 Update David Duhart (30 mins)
6. SPP Staff recommendation area 550.....Lottie Jones (15 mins)
7. Focus Group/Task Force Updates
 - a. RAD Task Force Darian Richards (30 mins)
8. 2024 series Model Build/Application Updates
 - a. Powerflow Darian Richards (30 mins)
 - b. Short CircuitEric Sullivan (30 mins)
 - c. MOD-033 Eric Sullivan (5 mins)
 - d. Dynamics Zach Sabey/Theo Brown (5 mins)

Antitrust: SPP strictly prohibits use of participation in SPP activities as a forum for engaging in practices or communications that violate the antitrust laws. Please avoid discussion of topics or behavior that would result in anti-competitive behavior, including but not limited to, agreements between or among competitors regarding prices, bid and offer practices, availability of service, product design, terms of sale, division of markets, allocation of customers or any other activity that might unreasonably restrain competition.

9. Discussion of Future Meetings Brianna Haug (5 mins)

All meeting times are represented in the central time zone. Please register for all meetings via spp.org

- a. RAD TF: April 24, 2024 (1:00 PM – 3:00 PM)
- b. MDAG Focus Group: April 23, 2024 (1:00 PM – 3:00 PM)
 - i. Facilitate technical discussions
 - ii. MDAG changes (manual, schedule, etc) must be discussed in FG before being brought to MDAG
- c. TWG: March 26-27, 2024 (9:00 AM begins)
- d. MDAG: April 15, 2024 (9:00 AM – 12:00 PM)

MDAG encourages you to check out the spp.org calendar for additional information on technical topics discussed in other working groups. SPP also offers stakeholder trainings [found here](#)

10. Summary of Action Items Brianna Haug (5 mins)

- a. Agenda Review – additional comments request

11. Adjourn All

* The approval items denoted with "*" shall be jointly developed by PC, TP, and MDAG

Antitrust: SPP strictly prohibits use of participation in SPP activities as a forum for engaging in practices or communications that violate the antitrust laws. Please avoid discussion of topics or behavior that would result in anti-competitive behavior, including but not limited to, agreements between or among competitors regarding prices, bid and offer practices, availability of service, product design, terms of sale, division of markets, allocation of customers or any other activity that might unreasonably restrain competition.

Assessment 1

Please read the a

<https://confluence.s>

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contact Emily Penne

1. Input your grou

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2. Enter Yes or No

3. Enter Assessmei

Spreadsheet

Assessment process located on Confluence before completing and submitting your spreadsheet. sppcorp.org/display/WG/MOPC#expand-AnnualAssessmentWGsAGs

Pay attention to spreadsheet's formatting! The assessments must be the same across all groups. Be careful if you copy/paste throughout the spreadsheet. You need to "drag" any formulas to new rows and may need to adjust the cell size. Contact El or Kaye McCarty for assistance.

Enter representative's name in A1 and group acronym in bottom 2 tabs.

Representative information

A. Enter the names of your rostered representatives in column A, beginning with your name (staff secretary) in row 7.

Use LAST NAME, FIRST NAME

B. Enter the company name for each of the rostered representatives in column B, beginning with "SPP" in row 7.

Use company names EXACTLY AS LISTED ON SPP.ORG: <https://www.spp.org/about-us/members-market-participants/>

C. For standing proxies, list the proxy's name and company and the company they're representing.
Example: Starnes, Heather (Healy Law Firm) proxy for Grotzinger, John | Missouri Joint Electric

Meeting details

A. Enter your meeting dates beginning in column C, row 1 and continue across the worksheet until all meeting dates are entered

B. Enter the actual duration for each meeting beginning in column c, row 2. Round to the nearest .5 hours.

C. Enter the actual number of votes taken per meeting beginning in column c, row 3. **Do not count** administrative votes such as votes to approve the agenda or adjourn the meeting. When counting consent votes, count one vote for each item under the consent topic. Do not count a consent vote as 1 if it includes multiple items.

D. Enter the total number of attendees for each meeting beginning in column c, row 4

E. Enter the meeting format for each meeting beginning in column c, row 5

Attendance at each meeting per representative

A. For yourself and each member note how the individual attended the meeting using the drop down for the cell. Options are virtual, in-person, proxy, absent or non-member. Non-member is to be used for those who were members for only part of the assessment period. If you have a member that joined or left the group during the assessment period, utilize the non-member option for all meetings in which they were not considered a rostered member of the group.

Survey worksheet

Demographic data

- A. Indicate Yes if the member is current and No if they are no longer a part of the group
- B. Enter the type of member for each representative in column D
- C. Enter the sector type for each representative in column E
- D. If a representative leaves mid assessment period add a red asterick in front of their name

to indicate the status of your scope review in L8

nt Period in A2

adsheet!

Do not copy, paste or insert rows because
it will break the row numbers in the formulas. Please

Model Development Advisory Group

Name	Company	Meeting Date(s)		
		1/18/2024	2/15/2024	3/21/2024
		2	2	3
		2	3	5
		64	58	60
		Virtual	Virtual	Virtual
Name	Company			
Lottie Jones (Staff Secretary)	SPP	Virtual	Virtual	Virtual
Eric Sullivan (Asst. Staff Secretary)	SPP	Virtual	Virtual	Proxy
John Turner (Chair)	Western Farmers Electric Power	Virtual	Virtual	Proxy
Brianna Haug (Vice Chair)	Western Area Power Administration	Virtual	Virtual	Virtual
Alex Mucha	Oklahoma Municipal Power Authority	Virtual	Virtual	Virtual
Dustin Betz	Nebraska Public Power District	Virtual	Virtual	Virtual
Jason Shook	GDS Associates	Virtual	Proxy	Virtual
Jerry Bradshaw	City Utilities of Springfield	Virtual	Virtual	Virtual
Jesse Kreuzfeldt	Missouri River Energy Services	Virtual	Virtual	Virtual
Joe Fultz	Grand River Dam Authority	Virtual	Virtual	Virtual
John Vara	Golden Spread Electric	Virtual	Proxy	Virtual
Liam Stringham	Sunflower Electric Power Corporation	Virtual	Virtual	Virtual
Nathan Davis	Liberty Utilities	Non-Member	Non-Member	Virtual
Preston Blinsky	Basin Electric Power Cooperative	Virtual	Virtual	Absent
René Miranda	Southwestern Public Service	Virtual	Virtual	Proxy
Ryan Baysinger	Eversy	Virtual	Virtual	Virtual
Scott Nainbolt	American Electric Power	Virtual	Proxy	Virtual
Scott Schichtl	Arkansas Electric Cooperative Corporation	Virtual	Virtual	Virtual
Steve Hohman	Omaha Public Power District	Virtual	Non-Member	Non-Member
Timothy Sell	ITC Holdings	Non-Member	Non-Member	Virtual
Tyler Baxter	Com Belt Power Cooperative	Virtual	Proxy	Virtual
Name	Company			
Adam Mummert	Burns & McDonnell			
Adam Nmlili	Oklahoma Gas and Electric Company	Virtual		Virtual
Adam Schieffer	OPPD	Virtual		
Afsihin Salehian	SPP			
Adam Schieffer	OPPD			
Ala Wadi	Liberty Utilities	Virtual	Virtual	Virtual
Amine Chenaf	DNV			
Andrew Berg	Missouri River Energy Services			
Andrew Howard	Lincoln Electric System	Virtual		Virtual
Angeliki Dimopoulos	ITC			Virtual
Anteneh Workneh GDS	GDS		Virtual	
Antonio Barrera	Southwestern Public Service	Virtual	Virtual	Virtual
Amin Selic	Nebraska Municipal Power Pool		Virtual	
Aster Amahatston	Nebraska Municipal Power Pool			
Ben Hammer	WAPA			
Becca McCann	SPP			
Ben Mitchell	SPP			
Blake Poole	Eversy			
Bobby Gray	Liberty Utilities	Virtual		Virtual
Brandon Hentschel	SPP			
Brenda Harris	OXY			
Brian Johnson	AEP			
Bronke Keene	SPP			
Bruce Doll	Nebraska Municipal Power Pool			
Calvin Coates	Kansas Power Pool		Virtual	Virtual
Casey Cathey	SPP			
Cassandra Stuber	AEP	Virtual		
Chan Lee	Savion	Virtual		Virtual
Charles Costello	Siemens			
Cho Wang	American Electric Power	Virtual		
Chris Colson	Western Area Power Administration			
Chris Davis	SPP			
Chris Gidlen	Tri State			
Chris Rich	Oklahoma Gas and Electric Company	Virtual		
Clarence Campbell	SPS			
Claire Vigassaa	Burns & McDonnell			
Conner Sweet	City Utilities of Springfield	Virtual	Virtual	
Curtis Miller	Western Farmers Electric Power			
Dale Reinhold	Hastings Utilities			
Damien Burbage	AEC			
Danielle Borg	Sunflower Electric Power Corporation	Virtual	Virtual	Virtual
Danielle Lorenz	SPP	Virtual	Virtual	Virtual
Darian Richards	SPP	Virtual	Virtual	Virtual
David Bromberg	Pearl Street Technologies			
David Duhart	SPP	Virtual		Virtual
David Mendoza	Grand River Dam Authority	Virtual	Virtual	Virtual
David Zhong	American Electric Power	Virtual	Virtual	Virtual
Dee Edmondson	SPP	Virtual	Virtual	Virtual
Derek Brown	Eversy			
Devon Peltson	National Grid Renewables			
Diego Toledo	Grand River Dam Authority	Virtual	Virtual	Virtual
Douglas Bowman	SPP			
Dona Parks	Grand River Dam Authority	Virtual	Virtual	
Donald Hargrove	Oklahoma Gas and Electric Company			
Dustin Mosehr	Liberty Utilities			
Dylan Fate	Tri State			
Dylan Haas	Eversy	Virtual	Virtual	Virtual
Ebrahim Rezaei	American Electric Power			
Eddie Watson	SPP	Virtual	Virtual	Virtual
Edin Terzic	Lincoln Electric System			
Eli Nyambegeera	Sunflower Electric Power Corporation			
Elijah Salinas	LES		Virtual	Virtual
Elen Cook	SPP			
Eric Jones	Omaha Public Power District			Virtual
Erin Cathey	SPP			
Erik Voice	Salem Electric			Virtual
Estevan Padilla	SPP			
Frank Savala	Southwestern Public Service			
Garrick Nelson	Western Area Power Administration			
Gary Boerger	Oklahoma Gas and Electric Company			
Gavin Novotny	Eversy			
Geahagne Debale	Missouri River Energy Services			Virtual
Glen Kallely	City Utilities of Springfield			
Grace Bouziden	Oklahoma Gas and Electric Company			Virtual
Hannah Mason	Light Source BP			
Harriet Walsh	Orsted			
Hugh Bentler	SPP	Virtual	Virtual	Virtual
Humberto Branco	Savion	Virtual		
James Okenfuss	Savion Energy			
Jamie Spickes	SPP	Virtual	Virtual	Virtual
Jason Menke	Nebraska Public Power District			
Jason Maaiglan	Basin Electric Power Cooperative		Virtual	
Jeff Knottak	City Utilities of Springfield			
Jeff McDiarmid	SPP			
Jeff Plew	NextEra			
Jeffrey Taylor	ITC			
Jens Boemer	EPRI			
Jerad Ethridge	Oklahoma Gas and Electric Company			
Jeremy Severson	Basin Electric Power Cooperative			
Joe Williams	Western Farmers Electric Power			
Joe Huber	Basin Electric Power Cooperative			
Joey Schepel	Basin Electric Power Cooperative			
John Boshears	City Utilities of Springfield			
John Mayhan	Omaha Public Power District			Virtual
John Varnell	Tenaska			
John Wilson	Southern Current LLC			
Jon Fidrych	Tri State			
Jon Langford	Orsted			
Jonah Montgomery	Eversy			
Jonathan Aus	East River			
Jordan Stillern	Western Farmers Electric Power	Virtual	Virtual	Virtual
Jose Cardova	EPRI			
Josh Hesselbein	Arkansas Electric Cooperative Corporation	Virtual	Virtual	Virtual
Joshua Pilgrim	SPP			
Josie Dagggett	WAPA			
Juliano Freitas	SPP			
Justin Helt	1890 and Company			
Kadeem Brown	AEP			
Kalun Kelley	WFEC			
Kelsey Allen	SPP			
Kim Grogan	Eversy			
Kristie Brown	SPP	Virtual	Virtual	Virtual
Kristen Darden	SPP			
Larry Brusseau	Com Belt Power Cooperative			
Liz Gephardt	SPP			
Logan Janssen	East River			
Logan Peterson	Minnkota			
Luke Zahner	Kepeco			
Marc Cruz	Southwestern Public Service	Virtual		Virtual
Marc Moor	Eversy	Virtual	Virtual	Virtual
Margaret Kristian	National Grid Renewables			
Martin Green	American Electric Power			
Martin Mangold	Siemens	Virtual		
Mason Favazza	SPP			
Matthew Alvarado	IUB			
McKady Kellam	Eversy			
Miah Archambault	Enel			
Michael Bowman	City Utilities of Springfield			
Michael Ray	SPP			
Michael Ward	Siemens	Virtual		
Mike Swan	Omaha Public Power District	Virtual	Virtual	Virtual
Moses Rotich	Gridliance			
Mostafa Saadighzadeh	SPP			
Nathan Davis	Liberty Utilities	Virtual	Virtual	
Nathan McNeil	Midwest Energy			
Nicholas Hoelzeman	Eversy			
Nicole Hicks	WAPA			
Nitin Kushwaha	National Grid Renewables			
Neeva Toleman	NextEra			
Neil Smith	Com Belt Power Cooperative		Virtual	
Nolan Fertig	SPP			
Pallab Datta	Eversy	Virtual		Virtual
Paul Voyk	Omaha Public Power District			Virtual
Peter Jones	Savion		Virtual	Virtual
Phil Westby	BEPC			
Prajakta Pawar	Quantia Technology			
Rakib Rahman	Eversy			
Ransome Egunjobi	Enel			
Richard Miner	Liberty Utilities			Virtual
Ryan Benton	Oklahoma Gas and Electric Company			
Ryan Schmitt	INMP Energy	Virtual		
Scott Holland	SWPA		Virtual	Virtual
Scott Jordan	SPP			
Scott Mjijn	Southwestern Power Administration	Virtual	Virtual	Virtual
Seth Cochran	DC Energy			
Shalini Gupta	Apex Clean Energy			
Shannon Mickens	SPP			
Shawn Geil	Kepeco			
Shawna Satterwhite	Oklahoma Gas and Electric Company			
Sherril Maxey	SPP			
Shigaj Sunil Kumar	AES	Virtual	Virtual	
Shodhan Patel	Constellation	Virtual		
Spencer Simpson	1898 and Co			
Steve Hardebeck	Oklahoma Gas and Electric Company			
Steve Purdy	SPP			

Steven Park
Sunny Raheem
Tanner New
Thomas Burns
Theo Brown
Timothy Sell
Todd Chwialkowski
Tom Balala
Tom Mayhan
Tony Green
Walt Shumate
William Holden
Xiaoyu Wang
Yasmin Sakalla
Ying Yang
Zach Andera
Zach Sabey

Sunflower Electric Power Corporation
SPP
Sunflower Electric Power Corporation
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ITS
EDF
Energy
Omaha Public Power District
SPP
Shumate & Associates
SPP
Enel
Enel
Duke Energy
Burns & McDonnell
SPP

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Model Development Advisory Group

August 2023 - August 2024

Name	Company	Is Current Member?	Member Type	Sector	Present	Proxy	Absent	Percent Present
Alex Mucha	Oklahoma Municipal Power Authority	Yes			3	0	0	100%
Brianna Haug (Vice Chair)	Western Area Power Administration	Yes			2	1	0	100%
Dustin Betz	Nebraska Public Power District	Yes			3	0	0	100%
Jason Shook	GDS Associates	Yes			3	0	0	100%
Jerry Bradshaw	City Utilities of Springfield	Yes			3	0	0	100%
Jesse Kreutzfeldt	Missouri River Energy Services	Yes			2	1	0	100%
Joe Fultz	Grand River Dam Authority	Yes			3	0	0	100%
John Turner (Chair)	Western Farmers Electric Power	Yes			3	0	0	100%
John Vara	Golden Spread Electric	Yes			3	0	0	100%
Liam Stringham	Sunflower Electric Power Corporation	Yes			2	1	0	100%
Lottie Jones (Staff Secretary)	SPP	Yes			3	0	0	100%
Preston Blinsky	Basin Electric Power Cooperative	Yes			2	0	1	67%
Reené Miranda	Southwestern Public Service	Yes			2	1	0	100%
Ryan Baysinger	Eversource	Yes			3	0	0	100%
Scott Rainbolt	American Electric Power	Yes			2	1	0	100%
Scott Schichtl	Arkansas Electric Cooperative Corporation	Yes			3	0	0	100%
Steve Hohman	Omaha Public Power District	Yes			1	0	0	100%
Tyler Baxter	Corn Belt Power Cooperative	Yes			2	1	0	100%

Annual Assessment Totals	
Average Length of Meetings (hrs)	2
Number of Votes Taken	10
Average Overall Attendance	61
Total Meetings this Assessment	3
Live	0
Teleconference	3
Scope Reviewed	
Transmission Owner(s)	0
Transmission User(s)	0
Director(s)	0
Investor Owned Utility	0
Cooperative	0
Municipal	0
State	0
Federal	0
Independent Power Producer / Marketer	0
Independent Transmission Company	0
Large Retail	0
Alt Power / Public Interest	0
Small Retail	0

Model Development Advisory Group

Meeting Cost(s)	\$
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MAJOR INITIATIVES ADDRESSED BY THE GROUP

1

2

3

MAJOR PENDING INITIATIVES BEFORE THE GROUP

1

2

3

SOUTHWEST POWER POOL
MODEL DEVELOPMENT ADVISORY GROUP MEETING

February 15, 2024 9:00 am – 12:00 pm (CST)

Conference Call

SUMMARY OF MOTIONS AND ACTION ITEMS

Action Items:

- **Action Item:** If a TO does not have the seasonal ratings completed and identified by the approval date of the 2025 models, and later updates the ratings in the models to the correct seasonal rating; will this later change to the ratings now be considered a Material Modification moving the facility into a material modification type study?
- **Action Item:** As TOs develop their processes to comply with FERC 881 seasonal ratings for planning models, how is SPP going to address any reduction to facility ratings that were issued an NTC, where the new rating is below the rating in the NTC, because of FERC 881? Will SPP issue a new NTC, to comply with the rating in the original NTC value? The other option is that SPP complete a full study and reset NTC rating values if there are no impacts to the facility with the new FERC 881 rating.
- **Action Item:** What is the intent of item 6 in the manual language? Is it intended to apply to the tertiary line of a three-winding transformer. – Check with Chris Colson regarding the language.
- **Action Item:** Is TWG requiring seasonal ratings for long-term planning? Is there a disconnect between MDAG and TWG? Does this language need to be reviewed by TWG? Can some additional time be added to the schedule for these updates and the information that is required to be entered into MOD? – Check this language against what has been presented to TWG.
- **Action Item:** Review the inter-area transfer tab to ensure that the data is in there properly.
- **Action item:** Review the DC profile and system intact data project for GRDA to ensure that it is incorporated. Notify AQ staff as well regarding AQ project notification.

Motions:

- **Motion: Jesse Kreutzfeldt motioned to approve the agenda as presented. John Vara seconded the motion. The motion passed unanimously.**
- **Motion: Jerry Bradshaw motioned to approve the January 18 2024, meeting minutes as presented. Joe Fultz seconded the motion. The motion passed.**

- **Motion: There is no motion to approve the updated MDAG Manual Language today as more discussion is required in the MDAG Focus Group and TWG.**
- **Motion: Jerry Bradshaw motioned to approve the MDAG open seats. Jesse Kreutzfeldt seconded the motion. The motion passed.**

**SOUTHWEST POWER POOL
MODEL DEVELOPMENT ADVISORY GROUP MEETING**

February 15, 2024 9:00 am – 12:00 pm (CST)

Conference Call

MINUTES

AGENDA ITEM 1 – ADMINISTRATIVE ITEMS

AGENDA ITEM 1A & 1B – CALL TO ORDER AND ANTITRUST STATEMENT

MDAG Chair, John Turner, called the meeting to order at 9:02 a.m. (CST) with Quorum. SPP Staff Secretary, Lottie Jones, read the anti-trust statement to the group.

AGENDA ITEM 1C & 1D – ATTENDANCE AND PROXIES

The following members attended or were represented by proxy:

MDAG Member	Present	Proxy	Present	Company
Alex Mucha	Y			Oklahoma Municipal Power Authority
Brianna Haug	Y			Western Area Power Administration, MDAG Vice-Chair
Dustin Betz	Y			Nebraska Public Power District
Jason Shook	N	Anteneh Workneh	Y	GDS Associates
Jerry Bradshaw	Y			City Utilities of Springfield
Jesse Kreuzfeldt	Y			Missouri River Energy Services
Joe Fultz	Y			Grand River Dam Authority
John Turner	Y			Western Farmers Electric Power, MDAG Chair
John Vara	Y	David Mendoza	Y	Golden Spread Electric
Liam Stringham	Y			Sunflower Electric Power Corporation
Lottie Jones	Y			Southwest Power Pool, Inc., MDAG Secretary
Preston Blinsky	Y			Basin Electric Power Cooperative
Reené Miranda	Y			Southwestern Public Service
Ryan Baysinger	Y			Evergy
Scott Rainbolt	N	David Zhong	Y	American Electric Power
Scott Schichtl	Y			Arkansas Electric Cooperative Corporation
Tyler Baxter	N	Neil Smith	Y	Corn Belt Power Cooperative

Material: FEB15_Attach2 - 1c. MDAG Conference Call Attendance-02-15-2024

AGENDA ITEM 1E – AGENDA REVIEW (**APPROVAL ITEM**)

John Turner, MDAG Chair, asked the group if they had a chance to review the agenda and if the group had any modifications to the agenda.

Motion: Jesse Kreutzfeldt motioned to approve the agenda as presented. John Vara seconded the motion. The motion passed unanimously.

Material: FEB15_Attach1- 1e. MDAG Meeting Agenda

AGENDA ITEM 1F – PREVIOUS JANUARY 18, 2024 MEETING MINUTES (**APPROVAL ITEM**)

Lottie Jones asked the group if they had any proposed changes for the previous January 18, 2024, meeting minutes.

Motion: Jerry Bradshaw motioned to approve the January 18 2024, meeting minutes as presented. Joe Fultz seconded the motion. The motion passed.

Material: FEB15_Attach3- 1f. January 18, 2024, Meeting Minutes.docx

AGENDA ITEM 2 – REVIEW OF PAST ACTION ITEMS

Lottie Jones discussed outstanding issues highlighted in red font. Lottie walked the group through updates on action items collected at the previous session and updates for existing in-progress action items.

- Action Item 164 – In Progress – Area 550 – There is an in the agenda today for this topic.
- Action Item 211 – In Progress – Attachment AJ/FERC Order 881 Language – There is an approval item in today's agenda for this item.

AGENDA ITEM 3 – MDAG MANUAL LANGUAGE (**APPROVAL ITEM**)

SPP staff, Lottie Jones, presented the updated MDAG manual language to the group regarding FERC Order 881 and Attachment AJ.

John Turner summarized the updates from Chris Colson (WAPA) and noted the affect the MDAG members.

Michael Swan asked if the manual language change will need to be done by a certain time. John commented that the idea is to have the language updated prior to the 2025 MDAG model build.

William Holden mentioned that the Attachment AJ language has been filed by FERC and accepted; however, there is no draft copy out there at this time. For the operational horizon (10 days and closer), the Attachment AJ language is there to ensure that the ratings are updated and correct. The effective date of Attachment AJ is July 2025. If an alternate rating is implemented at a facility, this must be written and provided to SPP.

Reene Miranda voiced his concerns regarding providing the requested seasonal ratings by July 2025. If the rating changes are significant enough, could it be considered a material modification and have to go through the material modification process? When is this data to be provided?

John commented that if the language is approved, the models could be approved conditionally so that if there are members that do not meet the requirements the first year the models will still be approved until the following model build cycle.

Michael addressed similar concerns to Reene and submitted the below action item.

Action Item: If a TO does not have the seasonal ratings completed and identified by the approval date of the 2025 models, and later updates the ratings in the models to the correct seasonal rating; will this later change to the ratings now be considered a Material Modification moving the facility into a material modification type study?

John asked if the ratings could be submitted up until July 1st 2025 or would they need to be entered for the MDAG 2025 model build (July 2024).

Lottie commented that we could address the updates with post-processing idevs in the March 2025 time frame.

This comment addressed Michael and John's concerns.

Ryan Baysinger asked if bullet point 6 is intended to apply to the tertiary line of a three-winding transformer. John mentioned that this would need to be addressed by Chris as he assisted with the manual language.

Action Item: What is the intent of item 6 in the manual language? Is it intended to apply to the tertiary line of a three-winding transformer. – Check with Chris Colson regarding the language.

Dustin Betz commented that he understood the language to have enough flexibility to adjust the seasonal line ratings.

Action Item: As TOs develop their processes to comply with FERC 881 seasonal ratings for planning models, how is SPP going to address any reduction to facility ratings that were issued an NTC, where the new rating is below the rating in the NTC, because of FERC 881? Will SPP issue a new NTC, to comply with the rating in the original NTC value? The other option is that SPP complete a full study and reset NTC rating values if there are no impacts to the facility with the new FERC 881 rating.

MOTION: There is no motion to approve the updated MDAG Manual Language today as more discussion is required in the MDAG Focus Group and TWG.

AGENDA ITEM 4 – MDAG OPEN SEATS (APPROVAL ITEM)

MDAG Chair, John Turner, requested a motion to open up two additional seats for MDAG membership so that this can be presented to MOPC.

MOTION: Jerry Bradshaw motioned to approve the MDAG open seats. Jesse Kreutzfeldt seconded the motion. The motion passed.

AGENDA ITEM 5 – MDAG 2023 EFFECTIVENESS SURVEY

MDAG Chair, John Turner, presented the MDAG 2023 Effectiveness Survey to the group including the averages for each area as well as the comments.

Brianna Haug commented that the meeting minutes are to cover the broad strokes of the meeting topics and discussion and are not intended to capture every comment.

AGENDA ITEM 6 – AREA 550 DISCUSSION

AGENDA ITEM 6A – TWG REVIEW

AGENDA ITEM 6B – OPEN MDAG DISCUSSION

WAPA staff, Brianna Haug, updated the group on the Area 550 discussion. She mentioned that she has received no comments and is currently looking to present the topic for approval during the March MDAG meeting.

What are the group's thoughts on this being an approval item at the next MDAG meeting?

Lottie Jones mentioned that SPP staff is comfortable with the language and John Turner mentioned that he is comfortable with the language as well as it is currently optional.

Brianna is going to bring it to the next MDAG meeting for approval.

AGENDA ITEM 7 – 2024 SERIES MODEL BUILD/APPLICATION UPDATES

AGENDA ITEM 7A – POWERFLOW

SPP staff, Lottie Jones, updated the group on the 2024 series MDAG Powerflow model build.

Lottie discussed an issue with MOD that led to bus names reverting back to old bus names and creating duplicate bus numbers. This issue will be resolved for the next model build pass.

Brianna asked if idev updates can still be applied to the ITP BR models. Hugh Benfer commented that yes they can still be applied to the ITP BR models for the next pass.

Joe Fultz mentioned that they have submitted a project for a capacitor bank upgrade but it was not applied to the last powerflow model build. This is for the Farmland cap bank. Lottie mentioned that this project has been identified and applied to the latest powerflow model build.

Reene Miranda indicated that the inter-area transactions is no longer captured in the planning models. The information comes from the EDST firm transfers data and would be added to the Inter-area Transfer tab of each seasonal model, where the sum of the inter-area transfers would be the interchange value capture in the Area Tab of the power flow models. Reene indicated it is important information in trying to validate TO area load against their generation + transfers in areas with one slack bus and multiple TOs. Lottie mentioned that the transactions are still being captured though they are not posted during the ITP BR model build. Lottie indicated discussion outside the meeting would take place.

Action Item: Review the inter-area transfer tab to ensure that the data is in there properly.

Joe Fultz mentioned an AQ load addition that was put into the P5 ITP BR powerflow models. Is there an issues where MOD would read ahead of the update? Hugh mentioned that he will reach out to transmission services to see how this data is added for taps/mutual lines.

David Zhong will be sending an email with his question.

Eddie spoke to the group regarding the MOD issues as well as the inter-area data. Reene mentioned that in the past they used to include the inter-area transfers so that they could get their slack bus within limits. Joe mentioned that it may be that this data is not included in the ITP BR models though they may be included in the MDAG models due to dispatching.

Eddie commented that we can review how this data is incorporated into the models and bring it back to the group. Joe commented that it may be possible to include the transactions even with an economic dispatch. This can be reviewed further as well. Hugh mentioned that everything is netted into one value. This will be purely economic.

Reene asked if any violations would be left into the models because of the ECDI (economic dispatch). Is SPP including these violations for the MMWG model build? Lottie mentioned that these would be corrected prior to the MMWG model build. Is there correlation between MDAG and Base Reliability models? Hugh mentioned that they are 99% similar topology wise (minus the system intact MOD file). In ITP BR models you cannot dispatch exploratory topology or generation to ITP BR models but it can be dispatched in MDAG models. The MDAG and ITP cases are very similar otherwise. ITP is looking at primarily firm service and upcoming projects. Data for the ITP BR models is being pulled from EDST and all of the firm transaction data is being added into the models. This is one number as opposed to the individual transfers.

Peter Jones (via chat) - Is there documentation on how the Area Interchange (not the inter-area transfer) is calculated? Hugh mentioned that this can be found in the MDAG manual (see comment from Lottie).

Lottie Jones (via chat) - System Intact Alteration projects are the main difference. "Changes to the transmission model necessary to correct basecase system intact voltage (e.g., to conform to MMWG voltage criteria), thermal criteria violations, or other basecase condition modifications (e.g., addition of an exploratory generating unit which provided resource for shortfall)."

Lottie mentioned that the difference between MDAG and ITP related to the inter-area transfer tab relates to how the data is incorporated into the models. Reene asked if these could be added to the ITP models and Lottie mentioned that she can check into this for a future update.

Action item: Review the DC profile and system intact data project for GRDA to ensure that it is incorporated. Notify AQ staff as well regarding AQ project notification.

AGENDA ITEM 6B – SHORT CIRCUIT

SPP staff, Eric Sullivan, updated the group on the 2024 Series MDAG Short Circuit model build.

Marc Moor mentioned that during review of the short circuit models it was noted that some of the transformers had LPC settings from powerflow. How are taps set in the short circuit model?

Marc Moor commented that there were some strange issues at the seams with the Ameren model. This can lead to duplications and is something to be mindful of in the next pass.

AGENDA ITEM 6C – MOD-033

SPP staff, Eric Sullivan, updated the group on the 2024 Series MDAG MOD-033/WWE model build.

AGENDA ITEM 6D – DYNAMICS

SPP staff, Zach Sabey, updated the group on the 2024 Series MDAG Dynamic Model Build Update with the current tasks and key reminders.

Marc Moor commented to review gen type J data in the models as there have been issues noted around this type of data. This data may have to be retired in the future or be noted as unacceptable. Zach commented that there is a lot of discussion with WECC to retire the gen type J model. Future updates will be given during the MDAG Focus Group meeting.

Reene commented his interest in the issues with the gen type J model.

AGENDA ITEM 8 – DISCUSSION OF FUTURE MEETINGS

John Turner, MDAG Chair, updated the group on upcoming meetings.

- a. RAD TF: February 21, 2024 (1:00 PM – 3:00 PM)
- b. MDAG Focus Group: February 20, 2024 (1:00 PM – 3:00 PM)
 - i. Facilitate technical discussions
 - ii. MDAG changes (manual, schedule, etc) must be discussed in FG before being brought to MDAG
- c. TWG: February 27, 2024 - February 28, 2024 (9:00 AM begins)
- d. MDAG: March 21, 2024 (9:00 AM – 12:00 PM)

MDAG encourages you to check out the spp.org calendar for additional information on technical topics discussed in other working groups. SPP also offers stakeholder trainings [found here](#)

AGENDA ITEM 9 – SUMMARY OF ACTION ITEMS

John Turner, MDAG Chair, and Lottie Jones, Staff Secretary, indicated the following new action item from this meeting.

- **Action Item:** If a TO does not have the seasonal ratings completed and identified by the approval date of the 2025 models, and later updates the ratings in the models to the correct seasonal rating; will this later change to the ratings now be considered a Material Modification moving the facility into a material modification type study?
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- **Action Item:** Review the inter-area transfer tab to ensure that the data is in there properly.
- **Action item:** Review the DC profile and system intact data project for GRDA to ensure that it is incorporated. Notify AQ staff as well regarding AQ project notification.

AGENDA ITEM 12 – ADJOURN

John Turner, MDAG Chair, adjourned the meeting at 11:10 a.m. (CST)

Respectfully Submitted,

Lottie Jones
Secretary

Eric Sullivan
Secretary Assistant

Attachments

FEB15_Attach1- 1e. MDAG Meeting Agenda.docx

FEB15_Attach2 - 1c. MDAG Conference Call Attendance-02-15-2024

FEB15_Attach3- 1f. January 18, 2024, Meeting Minutes.docx