

SOUTHWEST POWER POOL, INC.

MODEL DEVELOPMENT ADVISORY GROUP MEETING

August 18, 2022

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
  - f. Previous July 27<sup>th</sup>,2022 Meeting Minutes (**Approval Item**)
2. Review of Past Action Items ..... Lottie Jones (10 mins)
3. 2022 series MDAG Model Build/Application Updates
  - a. Dynamics.....Zach Sabey/Theo Brown (15 mins)
- ~~3.4.~~ Focus Group/Task Force Updates
  - a. MDAG Focus Group .....John Turner/Becca McCann (10 mins)
  - b. Manual Task Force..... Brandon Hentschel (10 mins)
  - c. Renewable Assumptions Dispatch Task Force(**Approval Item**).....Andy Berg/  
David Duhart (15 mins)
- ~~4.1.2022 series MDAG Model Build/Application Updates~~
  - ~~a. Dynamics.....Zach Sabey/Theo Brown (15 mins)~~
5. 2023 series MDAG Model Build/Application Updates
  - a. Powerflow .....Becca McCann/Lottie Jones (15 mins)
  - b. Short Circuit .....Eric Sullivan (15 mins)
  - c. MOD-033 .....Eric Sullivan (15 mins)
6. CPPTF Common Model ..... Brandon Hentschel (30 mins)
7. Chair Solicitation..... Lottie Jones (5 mins)
8. Summary of Action Items..... Lottie Jones (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

- a. MDAG: September 22, 2022 (9:00 AM – 12:00 PM)
- b. Manual Task Force: September 8, 2022 (10:00 AM – 12:00 PM)
- c. MDAG Focus Group: September 13, 2022 (1:00 PM – 3:00 PM)

10. Adjourn..... All

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

# Attendance worksheet

## 1. Input your group's name in A1

### 2. Enter your representative information

- A. Enter the names of your rostered representatives in column A, beginning with your name (staff secretary) in row 7
- B. Enter the company name for each of the rostered representatives in column B, beginning with "SPP" in row 7

### 2. Enter your 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

### 3. Track 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 webex, 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.

# Org Report Survey worksheet

## 1. Enter member 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

## 2. Enter Yes or No to indicate the status of your scope review in L8

## 3. Enter Assessment Period in A2



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# Model Development Advisory Group

August 2021 - July 2022

<b>Name</b>	<b>Company</b>	<b>Is Current Member?</b>
<b>Alex Mucha</b>	Oklahoma Municipal Power Authority	Yes
<b>Andrew Berg</b>	Missouri River Energy Services	Yes
<b>Brianna Haug (Interim Chair)</b>	Western Area Power Administration	Yes
<b>Dustin Betz</b>	Nebraska Public Power District	Yes
<b>Holli Krizek</b>	Western Area Power Administration	No
<b>Jason Shook</b>	GDS Associates	Yes
<b>Jerad Ethridge</b>	Oklahoma Gas and Electric Company	No
<b>Jeremy Harris</b>	KCP&L and Westar, Evergy Companies	No
<b>Jerry Bradshaw</b>	City Utilities of Springfield	Yes
<b>Joe Fultz</b>	Grand River Dam Authority	Yes
<b>John Boshears</b>	City Utilities of Springfield	No
<b>Liam Stringham</b>	Sunflower Electric Power Corporation	Yes
<b>Preston Blinsky</b>	Basin Electric Power Cooperative	Yes
<b>Reené Miranda</b>	Southwestern Public Service	Yes
<b>Ryan Benton</b>	Midwest Energy	Yes
<b>Scott Rainbolt</b>	American Electric Power	Yes
<b>Scott Schichtl</b>	Arkansas Electric Cooperative Corporation	Yes
<b>Steve Hohman</b>	Omaha Public Power District	Yes
<b>Sunny Raheem</b>	SPP	No
<b>Tyler Baxter</b>	Corn Belt Power Cooperative	Yes
<b>Amine Chenaf</b>	DNV	No
<b>Andrew Howard</b>	Lincoln Electric System	No
<b>Antonio Barrera</b>	Southwestern Public Service	No
<b>Armin Sehic</b>	Nebraska Municipal Power Pool	No
<b>Becca McCann</b>	SPP	No
<b>Brandon Hentschel</b>	SPP	No
<b>Brooke Keene</b>	SPP	No
<b>John Turner</b>	Western Farmers Electric Power	Yes
<b>Bruce Doll</b>	Nebraska Municipal Power Pool	No
<b>Casey Cathey</b>	SPP	No
<b>Chris Colson</b>	Western Area Power Administration	No
<b>Conner Sweet</b>	City Utilities of Springfield	No
<b>David Duhart</b>	SPP	No
<b>David Zhong</b>	American Electric Power	No

<b>Diego Toledo</b>	Grand River Dam Authority	No
<b>Edin Terzic</b>	Lincoln Electric System	No
<b>Eli Nyambegera</b>	Sunflower Electric Power Corporation	No
<b>Ellen Cook</b>	SPP	No
<b>Frank Favela</b>	Southwestern Public Service	No
<b>Garrick Nelson</b>	Western Area Power Administration	No
<b>Grace Bouziden</b>	Oklahoma Gas and Electric Company	No
<b>James Okenfuss</b>	Savion Energy	No
<b>Jason Menke</b>	Nebraska Public Power District	No
<b>Jeff Plew</b>	NextEra	No
<b>Jeremy Severson</b>	Basin Electric Power Cooperative	No
<b>Jesse Kreutzfeldt</b>	Missouri River Energy Services	No
<b>Joe Williams</b>	Western Farmers Electric Power	No
<b>John Mayhan</b>	Omaha Public Power District	No
<b>John Vara</b>	Golden Spread Electric	Yes
<b>Kim Farris</b>	SPP	No
<b>Kimberly Woods</b>	SPP	No
<b>Mae Cruz</b>	Southwestern Public Service	No
<b>Marc Moor (Evergy)</b>	Evergy	No
<b>McKady Kellam</b>	Evergy	No
<b>Mike Swan</b>	Omaha Public Power District	No
<b>Moses Rotich</b>	Gridliance	No
<b>Nolan Fertig</b>	SPP	No
<b>Peter Jones</b>	Savion	No

<b>Member Type</b>	<b>Sector</b>	<b>Present</b>	<b>Proxy</b>	<b>Absent</b>	<b>Percent Present</b>
Staff	RTO	8	0	1	89%
Staff	RTO	9	0	0	100%
TO	Investor Owned Utility	9	0	0	100%
TU	Cooperative	9	0	0	100%
TU	Cooperative	0	0	0	N/A
TO	Cooperative	7	0	2	78%
TU	Municipal	#REF!	#REF!	#REF!	N/A
TO	State	4	0	0	100%
TO	Cooperative	9	0	0	100%
TO	State	8	1	0	100%
TO	Investor Owned Utility	0	0	0	N/A
TO	Federal	8	1	0	100%
TO	State	7	1	1	89%
TU	Investor Owned Utility	7	2	0	100%
TU	Municipal	7	0	2	78%
TU	Investor Owned Utility	8	1	0	100%
TU	Investor Owned Utility	8	1	0	100%
TU	Cooperative	9	0	0	100%
TO	Cooperative	1	0	0	100%
TO	Cooperative	7	1	1	89%





**Annual Assessment Totals****Average Length of Meetings (hrs) 3****Number of Votes Taken 36****Average Overall Attendance 61****Total Meetings this Assessment 12****Live 1****Teleconference 11****Scope Reviewed No****Transmission Owner(s) 7****Transmission User(s) 6****Director(s) 0****Investor Owned Utility 4****Cooperative 5****Municipal 1****State 2****Federal 1****Independent Power Producer / Marketer 0****Independent Transmission Company 0****Large Retail 0****Alt Power / Public Interest 0****Small Retail 0**

# MDAG MINUTES

July~~ne~~ 27, 2022

## SOUTHWEST POWER POOL MODEL DEVELOPMENT ADVISORY GROUP MEETING

Tri State Offices, Hub Thompson Conference Room  
1100 West 116th Avenue  
Westminster, Colorado 80234

July~~ne~~ 27, 2022 9:00 am – 4:00 pm (MDT)

Face-to-Face/Conference Call

## SUMMARY OF MOTIONS AND ACTION ITEMS

### Action Items:

- Dynamic model testing for battery storage (Brandon, Zach, Reene)
- SPP operations to present on how 90/10 load changes are reviewed. What is expected from stakeholders on results from the seasonal operational assessments? (Brandon)
- Mothball discussion with MTF (Brandon)
- Have the MDAG FG develop a GO onboarding checklist. Utilize existing training materials within the checklist. (Becca and Sunny)
- Follow up with Siemens Staff on MOD visibility for a GO user group for all TOs. (Becca)
- MDAG FG start building out a scope for the pilot case and discuss internal SPP impacts for area changes (Becca and Lottie)
  - Data validation (e.g. DocuCheck)
  - How do transactions, interchange, slack assumption
- Upload new schedule and manual (Lottie, Taiquera, Brandon, Communication)
- Finalize RAD discussions with MDAG FG for formal recommendation as part of MDAG August meeting (David)
- Add additional compiler information for the dynamic initialization doc (Zach)
- Short circuit wind machine id conversion check with MDAG FG for ASPEN/CAPE (Eric)

## MDAG MINUTES

July 27, 2022

### Motions:

- **Motion: Scott Schichtl motioned to approve the presented agenda. Alex Mucha seconded the motion. The group did not voice concerns during the discussion of the motion. The motion passed unanimously.**
- **Motion: John Turner motioned to approve the June 16, 2022, meeting minutes as presented. Scott Schichtl seconded the motion. The group did not voice concerns during the discussion of the motion.**
- **Motion: Scott Schichtl motioned to approve the MDAG manual language. Renee Miranda seconded the motion. The group did not voice concerns during the discussion of the motion.**
- **Motion: Steve Hohman motioned to approve the MDAG schedule as modified. Preston Blinsky seconded the motion. The group did not voice concerns during the discussion of the motion.**

# **MDAG MINUTES**

July~~ne~~ 27, 2022

## **Southwest Power Pool MODEL DEVELOPMENT ADVISORY GROUP MEETING**

June 16, 2022 9:00 am – 12:00 pm (CT)

Conference Call

## **MINUTES**

### **AGENDA ITEM 1 – ADMINISTRATIVE ITEMS**

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

SPP MDAG Chair, Brianna Haug, called the meeting to order at 9:01 a.m. (MDT) with Quorum.  
SPP Staff Secretary, Lottie Jones, read the anti-trust statement to the group.

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### AGENDA ITEM 1C & 1D – ATTENDANCE AND PROXIES

The following members attended or were represented by proxy:

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

# MDAG MINUTES

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In Person Attendance		
First	Last	Company
Antonio	Barrera	Xcel Energy Services
Preston	Blinsky	Basin Electric Power Cooperative
Mae	Cruz	Xcel Energy
Dylan	Fate	Tri-State Generation and Transmission
Martin	Green	AEP
Brianna	Haug	Western Area Power Administration
Josh	Hesselbein	Arkansas Electric Cooperative Corporation
Lottie	Jones	Southwest Power Pool
Jesse	Kreutzfeldt	Missouri River Energy Services
Becca	McCann	SPP
Reené	Miranda	Xcel Energy Services, Inc.
Alex	Mucha	Oklahoma Municipal Power Authority
Sunny	Raheem	Southwest Power Pool
Zach	Sabey	Southwest Power Pool
Scott	Schicht	Arkansas Electric Cooperative Corporation
David	Zhong	AEP
Chris	Gilden	Tri-State Generation and Transmission

**Material:** JULY27\_Attach2- 1c. MDAG Conference Call Attendance-7-27-2022.xlsx

## MDAG MINUTES

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

Brianna Haug asked the group if they had a chance to review the agenda and if the group had any modifications to the agenda.

Per the note at the bottom of the agenda, Lottie added an asterisk to the manual and the model build schedule indicating that identified items were jointly developed by PC, TP, and MDAG.

**Motion: Scott Schichtl motioned to approve the presented agenda. Alex Mucha seconded the motion. The group did not voice concerns during the discussion of the motion. The motion passed unanimously.**

**Material:** JULY27\_Attach1- 1e. MDAG Meeting Agenda

### AGENDA ITEM 1F – PREVIOUS JUNE 16, 2022 MEETING MINUTES (APPROVAL ITEM)

Lottie Jones asked the group if they had any proposed changes for the previous June 16, 2022, meeting minutes.

The group reviewed the meeting minutes and did not voice any additional changes

**Motion: John Turner motioned to approve the June 16, 2022, meeting minutes as presented. Scott Schichtl seconded the motion. The group did not voice concerns during the discussion of the motion.**

**Material:** JULY27\_Attach3- 1f. June 16, 2022, Meeting Minutes.docx



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### AGENDA ITEM 2 – REVIEW OF PAST ACTION ITEMS

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

- Action Item 176 – Still In-Progress (Do batteries as a load affect any internal studies? Can we do a transient stability study in advance of adding batteries to the models?) Brandon Hentschel/David Duhart/Zach Sabey to follow up with Renee Miranda.
- Action Item 177 – Still In-Progress (RAD dispatch group) Andy and David to present today.
- Action Item 178 – Moved to Completed (MDAG will not be producing a 90/10 load model.)
- Action Item 179 – Moved to Completed (See above notes)
- Action Item 180 – Still In-Progress (Requesting additional clarity regarding the definition. More discussion to be had on the topic at a future MDAG meeting.)
- Action Item 181 – Still In-Progress (Presenting this topic today.)

### AGENDA ITEM 3 – TASK FORCE UPDATES

#### AGENDA ITEM 3A – MANUAL TASK FORCE (APPROVAL ITEM)

#### AGENDA ITEM 3AI – MDAG MANUAL V6.0

Brandon Hentschel presented the topics from the previous manual task force meeting mainly pertaining to 90/10 load forecasting.

Version 6.0 of the manual has been posted to spp.org. A comparison to Version 5 has been posted on Globalscape as well. Future MTF topics include: defining mothballed, unit retirement, and further discussion on the modeling of attachment AB generators.

There was minor discussion around previous MDAG manual comparison. SPP reviewed the manual posting process which is to compare previous manual to pending manual then post on GlobalScape for each version update.

**Motion: Scott Schichtl motioned to approve the MDAG manual language. Renee Miranda seconded the motion. The group did not voice concerns during the discussion of the motion.**

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**Material:** JULY27\_Attach4- 3.MDAG Manual v6.0.docx

## AGENDA ITEM 4 – MOD-026 SAR

Lottie Jones updated the group on MOD-026-2 the project failed balloting at 26.56% and presenting additional details via posted material. Lottie directed any additional question to Shannon Mickens smickens@spp.org.

## AGENDA ITEM 5 – INTER-ENTITY SHORT CIRCUIT MODEL

Eric Sullivan presented on the inter-entity short circuit model white paper. Eric provided an overview of the white paper, recommendations, timeline, update, and next steps. Recommendations are centered on improvements of the accuracy related to updating inter-entity short circuit models. The next date for discussion around the white paper will be at next RSTC meeting in September. Currently, the group has incorporated the RSTC comments and will coordinate with NERC staff to get the document onto the future RSTC meeting agenda for final approval.

There was a minor discussion, that included the below question in which SPP responded. What is the path forward and will MDAG be involved in future discussions? SPCAG will be adding a project to the roadmap process in order to add additional short circuit models in ASPEN and CAPE.

## AGENDA ITEM 6 – OPEN DISCUSSION TOPICS

### AGENDA ITEM 6A – 90/10 LOAD FORECASTING

Brandon Hentschel started this open discussion off letting the group know that SPP operations is developing a procedure for how they are going to handle the 90/10 load forecasting. They currently use a state estimator model and not a 50/50 load forecasting model. They will review if the load can be up scaled for 90/10 load forecasting.

There is no longer a need by FERC to present a 90/10 load forecast. Operations can lead the work this year; however, there was a FERC NOPR for performing this in extreme weather conditions.

Action item: SPP operations to present on how 90/10 load changes are reviewed. What is expected from stakeholders on results from the seasonal operational assessments?

### AGENDA ITEM 6B – GIA MODELING

Brianna Haug led this open discussion presenting background on this topic. Brianna stated the problem behind why this is being discussed, a GO created an additional path that should not

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have been added to the model and had to be caught and corrected by the TO prior to completion of the model.

They should request the update so that it can be vetted prior to being added to the model.

This topic was a carryover from MDAG FG, Becca McCann joined the conversation providing the next steps that she gathered from the FG stating the plan from the June MDAG FG meeting was to create a sample case in order to try out the radical case idea presented by Brianna Haug.

Discussion:

How can members see these projects in MOD? Could all GOs be put into one group in MOD so that all TOs have the ability to see them as well? *SPP response:* The GO would be their own group in this case.

Can GOs have their own bus number range outside of the current TO ranges? *SPP response:* If it is left in the TO range you are able to see all generation within a particular zone.

What groups would be impacted by this change? *SPP is bringing this topic back internally, this follow up will be included in the MDAG FG materials*

*SPP response:* Consider letting GOs have access to this data validation as well as the TOs.

What is the current onboarding process for GOs with SPP? If there is not one, does one need to be created to help the GOs better understand the expectations? *SPP response:* SPP currently ties the GIA agreement to the MOD-032 process to catch-up the GOs initially. A checklist would help with this process as well.

This discussion will be taken offline to the next MDAG FG meeting in August. A pilot case will be considered including a checklist for GOs.

### AGENDA ITEM 7 – 2023 MODELING SCHEDULE AND MODEL SELECTION

Lottie Jones presented the schedule changes including the PSSE V35.3 change, updating the manual version to 6.0, as well as the removal of the 90/10 load forecast note at the bottom of the schedule.

**Motion: Steve Hohman motioned to approve the MDAG schedule as modified. Preston Blinsky seconded the motion. The group did not voice concerns during the discussion of the motion.**

**Material:** JULY27\_Attach5- 7.2023 Modeling Schedule and Model Selection.xlsx

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### AGENDA ITEM 8 – CPPTF UPDATE & SCRIPT C3 COMMON MODEL SET GUIDANCE

Sunny presented the recommendations and updates from SCRIPT and the CPPTF. Please see material posting for recommendations and update details (*8. CPPTF Update & SCRIPT C3 Common Model Set Guidance*). For the C3 Common Model Set Sub-Recommendations, MDAG will be primary for the following recommendations, C3.1 and C3.5, also presenting the expected deliverables for each sub recommendation. Next steps include: SPP Staff to create initial C3.1 & C3.5 straw proposal for August MDAG meeting discussion, MDAG to review and provide feedback for initial straw proposals, develop high-level coordination plan with secondary groups, and communicate any initial concerns to CPPTF, staff to continue introducing guidance documents to applicable stakeholder groups

Discussion:

Who are the CPPTF members? *SPP response:* The members are very diverse including TOs, MDAG membership, TWG membership, ESWG membership, and several people from other working groups.

Anyone with questions or comments can reach out to Brandon Hentschel or Sunny Raheem.

These topics will be added to the next MDAG meeting as well.

### AGENDA ITEM 9 – DATA FORMATS IN PSSE V35

#### AGENDA ITEM 9A – .RAW/.SEQ FILE DATA FORMAT

Becca McCann presented the data format changes to the raw and sequence files in PSSE V35.3. The new fields in PSSE v35 are inserted and set to the PSSE default values for existing data records. Several data types have moved the regulated NODE field to be next to the regulated/controlled BUS fields. *Please review presentation to review data changes in detail.* Please note that MOD file using PSSE v35 need to use new PSSE 35 data order and new fields – can be left blank to default values. Also, MOD does not support the .rawx file type which is a new file type available in PSSE V35.3. MOD will only accept the .raw file type at this time so this will not change from the current process. The new MOD config file presented in June has the new ratings header. Noting that SPP staff will use PSSE V35.3 for the next dynamics model build.

### AGENDA ITEM 10 – DYNAMICS DEMONSTRATION

Zach Sabey provided a dynamics demonstration where he reviewed dynamic files, run flows, and folder locations as a refresher for the group. *Please see pdf in meeting material for further detail.* In a future MDAG FG meeting, there will be an overview of how to re-compile in MyCompile34 or in PSSE Environment Manager. Any re-dispatching would require a re-compile. The only reason that we compile is for user-written models; however, we want to make sure that everything

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initializes correctly. The plan is to get rid of this compiling in the future. To help with understanding, SPP staff will add additional compiler information for the dynamic initialization document

### AGENDA ITEM 11 – LUNCH

### AGENDA ITEM 12 – RENEWABLE ASSUMPTIONS DISPATCH TASK FORCE

David Duhart and Andy Berg presented topics covering the current and future dispatch approach from the RAD Task Force.

In February the TWG decided on some new dispatch levels to be used in DISIS. These levels did not have a firm backing. This is when it was decided to look into the data, forming RAD. This approach was used to holistically look at wind dispatch first and then this can be used to look at other as well. After presenting on the future dispatch approach developed in RAD TF, discussion began surrounding next steps.

With the information that we have today, what recommendation would we be proposing to TWG? *SPP response:* The original intent was to create a real-world basis for why we supply the data that we do today. We should have a methodology for how we do this in DISIS as well.

One recommendation is to give wind factors for the different areas and groups for DISIS. Some of these factors may be different from area to area as well. Several members were on-board with this granular approach to providing the data for DISIS.

Is there a comparison using the historical data versus the way that wind is dispatched in the DISIS now? *SPP response:* This comparison has been done and there will be a slide for it at the TWG. The data that we currently provide now and the data from operations are very similar. The peak cases from February were pretty similar to the 50/50 load forecast levels; however, it is much closer to the 90/10 load forecast data. There is a significant opportunity to get more granular data such as data by area from SPP operations. DISIS uses a low wind scenario (10/90) as well so the answer may involve that information as well as 50/50 and 90/10 load forecasting.

What do we think that the final result is going to look like at this point? Are we going to consider only dispatching those with firm transmission service? *SPP response:* The wind dispatching will still be performed by SPP.

What percentage of wind has firm transmission service? *SPP response:* We do not know at this time but this information will be provided at the next MDAG meeting.

This topics will be added to the next MDAG and MDAG FG meeting.

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### **AGENDA ITEM 13 – 2022 SERIES MDAG MODEL BUILD/APPLICATION UPDATES**

#### **AGENDA ITEM 13A – DYNAMICS**

Zach provided an update on the current dynamic model build covering completed, in progress, and future task. As an extra reminder, Dynamics v35 model build would begin January 2023

### **AGENDA ITEM 14 – 2023 SERIES MDAG MODEL BUILD/APPLICATION UPDATES**

#### **AGENDA ITEM 14A – POWERFLOW**

Becca provided an update on the current powerflow model build covering completed, in progress, and future task. As it relates to generation dispatch, there is no change from the previous model build.

#### **AGENDA ITEM 14B – SHORT CIRCUIT**

Eric covered the upcoming short circuit due dates with the group, reminding the group to review max-fault exceptions file.

#### **AGENDA ITEM 14C – GMD**

Eric reviewed the upcoming GMD schedule with the group, first date will be in September which is indicated on schedule.

#### **AGENDA ITEM 14D – MOD-033**

Eric went through the MOD-033-2 validation process and steps for the upcoming member review of the report. There is an issue with wind generation data when converting from PSSE to ASPEN with regards to a code of W1. This issue will be brought to the next MDAG FG meeting for further discussion and discussed with ASPEN at the next SPCAG meeting as well.

### **AGENDA ITEM 15 – MMWG**

Lottie provided a verbal update on the previous MMWG meeting including the request for an IDEV update from membership. The PSSE V35.3 testing was presented by Dr. Wang at the Summer MMWG and not yet decided which version of PSSE V35 we will be using for the next build.

Zach mentioned that the dynamics model build will be moved to PSSE V35 in January.

For now we will continue using SPP CMLD data instead of full eastern interconnection CMLD data due to PSSE constraints.

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### AGENDA ITEM 16 – EDST

Taiquera Jones presented a video that walks through an EDST new bus walk around. This is a current defect, and SPP staff will update users on next steps.

### AGENDA ITEM 17 – DISCUSSION OF FUTURE CHAIR

Brianna asked the group if there is anyone that would like to take over as MDAG chair while she acts as the interim chair. MDAG membership encouraged and praised Brianna Haug for stepping up and mentioned that practice of the group is for the vice chair to fill the role.

### AGENDA ITEM 18 – SUMMARY OF ACTION ITEMS

1. Dynamic model testing for battery storage (Brandon, Zach, Reene)
2. SPP operations to present on how 90/10 load changes are reviewed. What is expected from stakeholders on results from the seasonal operational assessments? (Brandon)
3. Mothball discussion with MTF (Brandon)
4. Have the MDAG FG develop a GO onboarding checklist. Utilize existing training materials within the checklist. (Becca and Sunny)
5. Follow up with Siemens Staff on MOD visibility for a GO user group for all TOs. (Becca)
6. MDAG FG start building out a scope for the pilot case and discuss internal SPP impacts for area changes (Becca and Lottie)
  - a. Data validation (e.g. DocuCheck)
  - b. How do transactions, interchange, slack assumption
7. Upload new schedule and manual (Lottie, Taiquera, Brandon, Communication)
8. Finalize RAD discussions with MDAG FG for formal recommendation as part of MDAG August meeting (David)
9. Add additional compiler information for the dynamic initialization doc (Zach)
10. Short circuit wind machine id conversion check with MDAG FG for ASPEN/CAPE (Eric)

### AGENDA ITEM 19 – DISCUSSION OF FUTURE MEETINGS

- MDAG: August 18, 2022 (9:00 AM – 12:00 PM)
- Manual Task Force: August 11, 2022 (10:00 AM – 12:00 PM)
- MDAG Focus Group: August 9, 2022 (1:00 PM – 3:00 PM)

## MDAG MINUTES

July 27, 2022

- SPCAG Meeting: August 9, 2022 (10:00 AM – 5:00 PM)

### AGENDA ITEM 20 – ADJOURN

Brianna Haug adjourned the meeting at 2:53 p.m. (MDT).

Respectfully Submitted,

Lottie Jones  
Secretary

### Attachments

JULY27\_Attach1- 1e. MDAG Meeting Agenda.docx

JULY27\_Attach2- 1c. MDAG Conference Call Attendance-7-27-2022.xlsx

JULY27\_Attach3- 1f. June 16, 2022, Meeting Minutes .docx

JULY27\_Attach4- 3.MDAG Manual v6.0.docx

JULY27\_Attach5- 7.2023 Modeling Schedule and Model Selection.xlsx



## **MDAG MINUTES**

August 18, 2022

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

August 18, 2022 9:00 am – 12:00 pm (CST)

Conference Call

## **SUMMARY OF MOTIONS AND ACTION ITEMS**

### Action Items:

- Review the CPPTF common model flow chart and bring it back to the September meeting.
- Include the RAD TF discussion in the next MDAG meeting in September in order to come up with a recommendation.

### Motions:

- Andy Berg motioned to approve the presented agenda with updates. John Turner seconded the motion. The group did not voice concerns during the discussion of the motion. The motion passed unanimously.
- Mae Cruz motioned to approve the July 27, 2022, meeting minutes as presented. Steve Hohman seconded the motion. The group did not voice concerns during the discussion of the motion.

# **MDAG MINUTES**

August 18, 2022

## **Southwest Power Pool MODEL DEVELOPMENT ADVISORY GROUP MEETING**

August 18, 2022 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**

SPP MDAG Chair, Brianna Haug, called the meeting to order at 9:09 a.m. (CST) with Quorum.  
SPP Staff Secretary, Lottie Jones, read the anti-trust statement to the group.

## MDAG MINUTES

August 18, 2022

### AGENDA ITEM 1C & 1D – ATTENDANCE AND PROXIES

The following members attended or were represented by proxy:

MDAG Member	Present	Proxy	Present	Company
Tyler Baxter	No	Larry Brusseau	Yes	Corn Belt Power Cooperative
Jerry Bradshaw	Yes			City Utilities of Springfield
Ryan Benton	No			Midwest Energy
Andrew Berg	Yes			Missouri River Energy Services
Dustin Betz	Yes			Nebraska Public Power District
Preston Blinsky	No			Basin Electric Power Cooperative
Joe Fultz	No	Dona Parks	Yes	Grand River Dam Authority
Brianna Haug	Yes			Western Area Power Administration
Steve Hohman	Yes			Omaha Public Power District
Reené Miranda	No	Mae Cruz	Yes	Southwestern Public Service
Alex Mucha	Yes			Oklahoma Municipal Power Authority
Scott Rainbolt	No	Martin Green	Yes	American Electric Power
Scott Schichtl	Yes			Arkansas Electric Cooperative Corporation
Jason Shook	Yes			GDS Associates
Liam Stringham	Yes			Sunflower Electric Power Corporation
John Turner	Yes			Western Farmers Electric Power
Lottie Jones	Yes			Southwest Power Pool, Inc., MDAG Secretary
John Vara	Yes			Golden Spread Electric
Ryan Baysinger	Yes			Evergy

**Material:** AUG18\_Attach2- 1c. MDAG Conference Call Attendance-8-18-2022.xlsx

## MDAG MINUTES

August 18, 2022

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

Brianna Haug asked the group if they had a chance to review the agenda and if the group had any modifications to the agenda.

Lottie updated the agenda moving the dynamics update before the MDAG FG update and making the RAD topic an approval item as well.

**Motion: Andy Berg motioned to approve the presented agenda with updates. John Turner seconded the motion. The group did not voice concerns during the discussion of the motion. The motion passed unanimously.**

**Material:** AUG18\_Attach1- 1e. MDAG Meeting Agenda

### AGENDA ITEM 1F – PREVIOUS JULY 27, 2022 MEETING MINUTES (APPROVAL ITEM)

Lottie Jones asked the group if they had any proposed changes for the previous July 27, 2022, meeting minutes other than updating the dates to say July instead of June.

The group reviewed the meeting minutes and did not voice any additional changes

**Motion: Mae Cruz motioned to approve the July 27, 2022, meeting minutes as presented. Steve Hohman seconded the motion. The group did not voice concerns during the discussion of the motion.**

**Material:** AUG18\_Attach3- 1f. July 27, 2022, Meeting Minutes.docx

## **MDAG MINUTES**

**August 18, 2022**

### **AGENDA ITEM 2 – REVIEW OF PAST ACTION ITEMS**

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

- Action Item 176 – In-Progress – SPP to follow-up.
- Action Item 177 – In-Progress – to be discussed during the RAD discussion.
- Action Item 180 – Completed – taken to MTF and updated by Brandon during the last MTF meeting in August. Lottie asked the group if this needs to be included in manual revision 6.1 or if it can wait until revision 7. This topic will be discussed further in the MTF agenda item.
- Action Item 182 – In-Progress – some testing was performed by Zach Sabey on the one battery that we have in the model and tried to initialize the case but ran into an issue with the exciter model. More work will need to be performed in order to make negative generation for a battery work in a model.
- Action Item 183 – Marked as Completed – update shown in red in the action item spreadsheet.
- Action Item 184 – In-Progress – to be discussed in the MTF agenda item.
- Action Item 185 – Completed – moved to the September MDAG FG meeting.
- Action Item 186 – In-Progress – pending an email response from Seimens.
- Action Item 187 – Completed – update shown in red in the action item spreadsheet.
- Action Item 190 – Completed – posted on spp.org.
- Action Item 191 – In-Progress – to be discussed later on in the agenda.
- Action Item 192 – In-Progress – will be posted with the dynamics final models in September.
- Action Item 193 – In-Progress – will be included as an update in the September MDAG FG meeting.

### **AGENDA ITEM 3 – 2022 SERIES MDAG MODEL BUILD/APPLICATION UPDATES**

#### **AGEMDA ITEM 3A - DYNAMICS**

## **MDAG MINUTES**

**August 18, 2022**

SPP staff, Zach Sabey, updated the group on the latest 2022 dynamics model build. Reviewing completed, in progress, and future dynamic task. After the successful dynamics update, there were brief discussion around some questions related to the current dynamics build. SPP staff, Zach Sabey, notified the groups that only first tier entities loads are applied, and that NERC standards indicate that motor D is to be disabled for now for CMLD data. SPP staff also mentioned an issue with the DSUSER .dll file. Staff encouraged data submitters to contact them if they experience issues while utilization models or data submission.

### **AGENDA ITEM 4 – FOCUS GROUP/TASK FORCE UPDATES**

#### **AGENDA ITEM 4A – MDAG FOCUS GROUP**

SPP staff, Becca McCann, updated the group on the August MDAG FG meeting. There is a new proposal for how to model GIA (put GOs with PPA so that they no longer come from the host but from the new area). There will be a pilot case from everyone to review in Q3/Q4 of 2022, to participate in feedback in order to successful benchmark this effort. RAD task force also presented in the focus group, that will be later discussed in the meeting. SPP staff, Zach and Brandon, also presented topics: Dynamic model changes and CPPTF common model updates. Future MDAG focus group topics will discuss the GIA proposal as well as onboarding checklist for the GOs and the short circuit discussion for an ASPEN/CAPE conversion.

#### **AGENDA ITEM 4B – MANUAL TASK FORCE**

SPP staff, Brandon Hentschel, provided an update of the August MTF meeting. The definition of mothballed was discussed and Brandon is going to the topic back to the September meeting to gain consensus if the definitions would be added to manual revision 6.1 or if it can wait until manual revision 7. Brandon discussed the impacts of MOD-026-2, which will replace MOD-026-1 and MOD-027-1. After internal discussion as it relates to NERCs stance on this, NERC has moved out this topic for now and SPP will follow up with members once we have next steps from NERC on MOD-026-2. There was also discussion around the MOD Matrix, in an updated manual staff would like to add it as a table to replace the current screenshot. SPP staff, Hugh Benfer, also included that he would to have a clear definition for material modifications in the current manual.

#### **AGENDA ITEM 4C – RENEWABLE ASSUMPTIONS DISPATCH TASK FORCE (APPROVAL ITEM)**

MDAG RAD TF chair, Andy Berg, updated the group on the RAD task force discussion. Reviewing highlights from what was originally presented in the July MDAG to allow for member refreshing on the topic, discussion begin around the proposed renewable assumptions. RAD TF made the group aware that the presented values were picked during the RAD task force and denote the best fitting data (closest data) to the negotiated values.

## **MDAG MINUTES**

**August 18, 2022**

TWG chair joined the discussion clarifying that the original intent was to have the MDAG group make their recommendation as the modelers and then present this to TWG for approval.

SPP staff, Juliano, mentioned that GI would like more time with the modeling staff and MDAG MTF before presenting this information for approval to the TWG. Is there a plan to implement this first to the ITP/MDAG models before adding this to the DISIS models? Derek mentioned that this would likely be implemented in the DISIS models first and then to the ITP/MDAG models afterwards. Andy mentioned that we already have an approach for the MDAG models so this need is not immediate for those models. RAD TF and MDAG to come up with a proposal first. Sunny concluded the discussion by recommending that we also review how to update the data when we get variances (update annually or waiting until the data passes some kind of threshold).

RAD TF chair, Andy, mentioned that the next step of the recommendation is to revise it to be more specific. This will be brought back to the September MDAG FG meeting and a future RAD TF meeting.

### **AGENDA ITEM 5 – 2023 SERIES MDAG MODEL BUILD/APPLICATION UPDATES**

#### **AGENDA ITEM 5A – POWERFLOW**

SPP staff, Lottie Jones, updated the group on the 2023 MDAG powerflow model build and upcoming dates. Also reviewing completed, in progress, and future powerflow task. Staff is currently building models and will perform case quality checks for posting on 9/9/2022.

#### **AGENDA ITEM 5B – SHORT CIRCUIT**

SPP staff, Eric Sullivan, updated the group on the 2023 MDAG short circuit model build and upcoming dates. Max-fault exception file template submitted for member review and due back by 9/2/22, with the build starting 3 days later.

#### **AGENDA ITEM 5C – MOD-033**

SPP staff, Eric Sullivan, updated the group on the MOD-033 East project and timeline.

### **AGENDA ITEM 6 – CPPTF COMMON MODEL**

SPP staff, Brandon Hentschel, updated the group on the CPPTF common model discussion.

There was discussion around non-firm service being added to the common model set, SPP staff mentioned that it depends on the reason for non-firm service. Additional discussion revolved around how SPP would feed MMWG models into the common models. SPP staff mentioned that we would use the latest information provided from the MMWG models.

## **MDAG MINUTES**

**August 18, 2022**

Brandon is going to consult with the group to see if he needs to fix the path for the MMWG models and bring it back to the September MDAG meeting.

### **AGENDA ITEM 7 – CHAIR SOLICITATION**

Lottie has sent out an email for chair solicitation that is due back by August 25<sup>th</sup>. Any nominations can be sent to either Lottie Jones or Brianna Haug via email.

### **AGENDA ITEM 8 – SUMMARY OF ACTION ITEMS**

1. Review the CPPTF common model flow chart and bring it back to the September meeting.
2. Include the RAD TF discussion in the next MDAG meeting in September in order to come up with a recommendation.

### **AGENDA ITEM 9 – DISCUSSION OF FUTURE MEETINGS**

- MDAG: September 22, 2022 (9:00 AM – 12:00 PM)
- Manual Task Force: September 8, 2022 (10:00 AM – 12:00 PM)
- MDAG Focus Group: September 13, 2022 (1:00 PM – 3:00 PM)

### **AGENDA ITEM 10 – ADJOURN**

Brianna Haug adjourned the meeting at 11:09 a.m. (CST).

Respectfully Submitted,

Lottie Jones  
Secretary

Attachments

AUG18\_Attach1- 1e. MDAG Meeting Agenda.docx

AUG18\_Attach2- 1c. MDAG Conference Call Attendance-8-18-2022.xlsx

AUG18\_Attach3- 1f. July 27, 2022, Meeting Minutes .docx