

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

June 19, 2024, 9:00 am – 4:00 pm (CST)

June 20, 2024, 8:30 am – 12:00 pm (CST)

In-Person and Conference Call

## SUMMARY OF MOTIONS AND ACTION ITEMS

Action Items:

- **Action Item:** MDAG FG to look at a TO level (by area) instead of state level and a comparison against the current 5-yr average
- **Action Item:** Review language for MDAG Manual Version 9.0 prior to the next model build.
- **Action Item:** Review language for MDAG Manual Version 8.1 to include the Generator Retirement update in EDST instead of through the spreadsheet
- **Action Item:** *MDAG to propose a meeting date to TWG (October 2024) to add meeting date to 2024/2025 modeling schedule for ITP BR Initial Final case approval*
- **Action item:** Bring MDAG manual back to MDAG for inclusion of Attachment AJ reference and removal of seasonal line rating definition from document upon implementation of Attachment AJ to the SPP OATT

Motions:

- **Motion:** Scott Schichtl motioned to approve the agenda as presented. Ryan Baysinger seconded the motion. The motion passed unanimously.
- **Motion:** John Vara motioned to approve the May 16th, 2024; meeting minutes as presented. Nathan Davis seconded the motion. The motion passed.
- **Motion:** Mike Swan motioned to approve the MDAG Manual language updates. Jesse Kreutzfeldt seconded the motion. The motion passed unanimously.
- **Motion:** Mike Swan motioned to approve V8.0 of the SPP Model Development Procedure Manual. Ryan Baysinger seconded the motion. The motion passed unanimously.

- **Motion: Jesse Kreutzfeldt motioned to approve the 2025 MDAG / 2026 ITP Model Selection. Tyler Baxter seconded the motion. Antonio Barrera opposed the motion. The motion passed.**
- **Motion: Joe Fultz motioned to approve the 2025 MDAG / 2026 ITP Model Build Schedule with Option 2 as presented. Preston Blinsky seconded the motion. The motion passed unanimously.**
- **Motion: Scott Schichtl motioned to approve the MDAG Scope. Jesse Kreutzfeldt seconded the motion. The motion passed unanimously.**

# MINUTES

## AGENDA ITEM 1 – FACILITIES REVIEW

Evergy staff, Ryan Baysinger, covered a facilities review.

## AGENDA ITEM 2 – ADMINISTRATIVE ITEMS

### AGENDA ITEM 2A & 2B – CALL TO ORDER AND ANTITRUST STATEMENT

MDAG Vice Chair, Brianna Haug, called the meeting on June 19th to order at 9:02 a.m. (CST) with Quorum. SPP Staff Secretary, Zach Sabey, read the anti-trust statement to the group.

MDAG Vice Chair, Brianna Haug, called the meeting on June 20th to order at 8:32 a.m. (CST) with Quorum. SPP Staff Secretary, Zach Sabey, read the anti-trust statement to the group.

## AGENDA ITEM 2C & 2D – 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	Jason Menke	X	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			Western Farmers Electric Power, MDAG Chair
John Vara	Yes			Golden Spread Electric
Liam Stringham	Yes	Tanner New	X	Sunflower Electric Power Corporation
Zach Sabey	Yes			Southwest Power Pool, Inc., MDAG Secretary
Mike Swan	Yes			Omaha Public Power District
Nathan Davis	Yes			Liberty Utilities
Preston Blinsky	Yes			Basin Electric Power Cooperative
Reené Miranda	No	Antonio Berrera	X	Southwestern Public Service
Ryan Baysinger	Yes			Eergy
Scott Rainbolt	Yes			American Electric Power
Scott Schichtl	Yes			Arkansas Electric Cooperative Corporation
Timothy Sell	Yes			ITC Holdings
Tyler Baxter	Yes			Corn Belt Power Cooperative

Material: June19\_20\_Attach2-1c. MDAG In-Person Attendance.pdf

June19\_Attach3-1c. MDAG Conference Call Attendance.csv

June20\_Attach4-1c. MDAG Conference Call Attendance.csv

AGENDA ITEM 2E – AGENDA REVIEW (**APPROVAL ITEM**)

Brianna Haug, MDAG Vice-Chair, asked the group if they had a chance to review the agenda and if the group had any modifications to the agenda.

**Motion: Scott Schichtl motioned to approve the agenda as presented. Ryan Baysinger seconded the motion. The motion passed unanimously.**

Material: JUNE19\_Attach1 - 2e MDAG Meeting Agenda

AGENDA ITEM 2F – PREVIOUS MAY 16<sup>TH</sup>, MEETING MINUTES (**APPROVAL ITEM**)

Zach Sabey asked the group if they had any proposed changes for the previous meeting minutes on May 16<sup>th</sup>, 2024.

**Motion: John Vara motioned to approve the May 16th meeting minutes as presented. Nathan Davis seconded the motion. The motion passed unanimously.**

Material: JUNE19\_Attach3 - 2f. May 16, 2024 Meeting Minutes

### AGENDA ITEM 3 – REVIEW OF PAST ACTION ITEMS

SPP staff, Zach Sabey, discussed outstanding issues, which are highlighted in red font. Zach 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 – WAPA will be submitting an update to the SPP Roadmap process for further review.

### AGENDA ITEM 4 –MDAG MANUAL UPDATES (APPROVAL ITEM)

SPP staff, Zach Sabey, discussed the changes to the MDAG manual including updating the NERC unacceptable model list.

OPPD staff, Mike Swan, commented regarding the name for the dynamic model build list and a correction to the manual language to match the “Guidelines for SPP MOD-032 Dynamic Models.”

**MOTION: Mike Swan motioned to approve the MDAG Language as presented. Jesse Kreutzfeldt seconded the motion. The motion passed unanimously.**

### AGENDA ITEM 5 – MDAG MANUAL V8.0 (APPROVAL ITEM)

SPP staff, Zach Sabey, discussed the changes to the MDAG Manual Version 8.0 including the modified language around FERC Order 881 and the recently approved dynamic model language.

Mike Swan asked if the Attachment AJ language has been approved in the tariff yet? Lottie is requesting this information and will provide an update later in the meeting.

Mike and Lottie commented that the Attachment AJ language was presented by Brandon Hentschel and Chris Colson in a previous 2023 MDAG meetings and FG group meetings.

SPP staff, Sherri, mentioned that RR565 has an Attachment AJ filing from July 2023, and we filed a compliance file on 2/16 with a status of accepted so it should be updated. This means that it is just a matter of updating the tariff. The FERC effective date is July 12<sup>th</sup> of 2025.

Lottie mentioned that the language is in the FERC filings under ER22-2339.

AECC staff, Josh Hesselbein, asked if the language should read ambient temperatures or conditions.

MDAG Chair, John Turner, mentioned that the AAR calculations are performed by the TO.

Zach mentioned that this language has been approved by the AARITF members back in April.

WAPA staff, Chris Colson, mentioned that this discussion has been ongoing for the past year and the FERC filing has been approved for July 12<sup>th</sup>, 2025.

GDS associates staff, Jason Shook, commented that the Attachment AJ language is unlikely to change at this point and he would be comfortable with adding the effective date to the footnote.

Brianna had a concern regarding placing the effective date in the manual. If the models are approved prior to the effective date, are they still in compliance with the footnote. Chris commented that the definition is what will be effective on that date and this language already exists in the manual so this data should still be submitted by data submitters.

John Turner asked if it would be possible to reference the FERC order as well in the footnote since it is already effective? Chris mentioned that the concept here comes July 12<sup>th</sup>, 2025, SPP needs to grant service based upon the ratings data in the models so this data must be accurate prior to this date and for the previous model build. We must be compliant come that date.

Chris offered an alternate footnote option to further clarify the questions mentioned above.

The room asked if there is a possibility for Attachment AJ to change and John Turner clarified that this language has been submitted twice already so it is unlikely to change in the future.

Mike Swan mentioned that if it is just a matter of the language being added to the OATT then it alleviates the concern from OPPD.

John Turner commented that it would be easy to put the defined terms in the footnote as a temporary measure until Attachment AJ is effective.

AECC staff, Scott Schichtl, commented that he is comfortable with including the definition into the manual on the basis that this language will be static and will not change.

AEP staff, David Zhong, asked if the definition is just for lines or includes transformers as well. Brianna commented that this is just for lines and transformers have their own language.

SPP staff, William Holden, asked if we need to pull in additional definitions for Transmission Line Rating, Transmission Provider, and Transmission Service from the tariff. Nathan commented that these additional definitions should be included as well, or a reference should be included. Chris commented that a quick path forward is to uncapitalize transmission line rating.

LES staff, Andrew Howard, asked if it is possible to keep the footnote for tracking purposes and Brianna commented that we would already be reviewing the language for Version 9.0.

Evergy staff, Ryan Baysinger, asked if we can have a standing action item to review this language as well.

**MOTION: Mike Swan motioned to approve V8.0 of the MDAG Manual with the language as presented. Ryan Baysinger seconded the motion. The motion passed unanimously.**

**Action item: Revisit Seasonal Line Ratings before July 2025 to ensure Attachment AJ is referenced**

#### AGENDA ITEM 6 – PSSE VERSION

SPP staff, Hugh Benfer, updated the group on the PSSE V35.3 to PSSE V35.6 migration including changes, testing, and next steps.

#### AGENDA ITEM 7 – 2025 / 2026 MODEL SELECTION (APPROVAL ITEM)

SPP staff, John O'Dell and Lottie Jones, presented the current proposed 2025 MDAG/2026 ITP Model Selection.

Brianna asked if the CPP specific models will be in addition or part of the current model build. Lottie commented that the CPP transition models will be the same as the ITP models that will be built during this cycle.

Every staff, Derek Brown, mentioned that for the CPP transition piece, these models will be utilized as base cases for the CPP transition study and if they must deviate from the ITP process/procedure, there will need to be a waiver for those cases.

Lottie Jones commented that the asterisk/footnote language can be updated to read "The incremental 20-year models will be outlined in the CPP Transition Study scope."

Andrew Howard commented that the CPP will use whatever models they like so can we keep that on the ITP model selection so that we do not limit their efforts.

SPS staff, Antonio Barrera, asked for the reasoning behind removing the Light Load (LL) cases for the ITP BR Powerflow model set.

Derek commented that there is limited value today in finding projects related to the Light Load (LL) models the way that the models are defined today. This may change in the future as models are utilized more like they are in the Market Economic Models (MEM). A shoulder model may be better utilized where there is high renewables penetration.

Antonio commented that the Light Load (LL) models are valuable for their area and the load interconnection portion of their system. Derek replied that these discussions are valuable for the CPP discussion. Antonio recommended leaving the Light Load (LL) models in until TWG can review the models and their usefulness.

Sherri mentioned that these changes were vetted internally with no issues mentioned.



Lottie offered a method to review the necessary data without the Light Load (LL) models.

**MOTION: Jesse Kreutzfeldt motioned to approve the 2025 MDAG/2026 ITP Model Selection as presented. Tyler Baxter seconded the motion. Antonio Barrera opposed the motion. The motion passed.**

SPS formally opposed the SPP 2025MDAG/2026ITP model selection due to the Light Load seasonal model not being considered in the ITP BR model series. SPS firmly believes that these models are needed for SPP to study in their processes, especially for load interconnection requests and the ITP assessment, as much of the current and future requests related to oil & gas and data center load do not scale down during the light load scenarios.

#### **AGENDA ITEM 9 – 2026 / 2026 MODEL BUILD SCHEDULE (APPROVAL ITEM)**

SPP staff, John O'Dell and Lottie Jones, presented the current proposed 2025 MDAG/2026 ITP Model Build Schedule.

**Action Item:** Provide the final date for the 2025 ITP model build approval and add it to the schedule once it has been identified.

GRDA staff, Joe Fultz, asked about the tool that SPP had mentioned in the last meeting and if that tool will be ready for the next model build. Hugh commented that the new tool will not be available for this next model build; however, Powerflow Checker is on Globalscape and can be used for this upcoming model build cycle.

Joe Fultz asked if we added anything to the schedule regarding the FERC 715 reporting and the models associated with that filing. Lottie commented that this has been added to the schedule.

SPP can provide an MDAG recommendation for their date of the approval of the previous model build (2025 ITP) models to the TWG.

**MOTION: Joe Fultz motioned to approve the 2025 MDAG/2026 ITP Model Build Schedule Option 2 as presented. Preston Blinsky seconded the motion. The motion passed unanimously.**

**Action Item: Follow up with TWG to have meeting late February / mid-march for ITP BR approval**

#### **AGENDA ITEM 10 – MDAG SCOPE (APPROVAL ITEM)**

**MOTION: Scott Schichtl motioned to approve the. Jesse Kreutzfeldt seconded the motion. The motion passed unanimously.**

#### **AGENDA ITEM 11 – NETWORK MODEL MANAGER**

SPP staff, Lottie Jones, gave an overview on Network Model Manager (NMM) and the roadmap SPP is on. SPP has not started testing NMM but will do some testing this year. Will be utilized side-by-side with MOD to ensure data is accurate for both systems during transition.

### **AGENDA ITEM 13 – MDAG INITIATIVES**

SPP staff, Zach Sabey, shared the MDAG major initiatives with the group and in openly addressed format.

Brianna mentioned that this is a live list that can be updated as more initiatives become known.

The group did not voice any concerns over the listed initiatives.

### **AGENDA ITEM 14 – GENERATOR CAPABILITY CURVES – GCAP**

Evergy staff, Marc Moor, gave an overview of reactive capability curves and how Evergy is addressing the capability curves. Examples of 2 conventional machines were provided.

Andrew Howard asked if a different GCAP should be provided for Summer vs Winter. Marc said you certainly could do that, but it shouldn't differ that much between the two cases for the general amount of machines.

Brianna Haugh asked what defines a "small unit". Marc said municipal generators are probably a good setting, somewhere below 20MW. Brianna followed up with how much MVAR capability is lost when using GCAP. Marc responded that could be up to 50%, but it is all dependent on what MW value is generating.

Mike Swan asked if Evergy is seeing any reduction/change in voltage overall from implementing this. Marc said yes they have, because of very highly dispatched units that are theoretically "over-dispatched" by their MVA value. Mike followed up with "did Evergy see any differences in ACCC or other PSSE simulations". Marc said it is currently only done with Evergy system, so they haven't noticed any major differences in simulation time.

### **AGENDA ITEM 15 – EDST UPDATE**

SPP staff, Kristie Brown, gave an overview of updates for EDST. This included notifying MDAG of the new Generator Retirement entry that will be added into EDST.

Brianna mentioned that the MDAG manual will be updated so that the retirements column will not be in a spreadsheet anymore.

Kristie commented that pass 1 update will be through the spreadsheet and pass 2 forward will be done by EDST.

Lottie mentioned that we would update the schedule and then have a new version of the schedule and manual to be approved (ex. 8.1 will be the new version of the manual).

## **AGENDA ITEM 16 – MOD-033 WALKTHROUGH**

SPP staff, Eric Sullivan, updated the group on the current MOD-033-2 study as well as the proposed changes to the unacceptable criteria.

Updates to the unacceptable criteria will be brought to MDAG for approval during the August MDAG meeting.

## **AGENDA ITEM 17 – DYNAMICS DATA REVIEW PROCESS**

SPP staff, Zach Sabey, updated the group on the dynamics data review process as well as any noticeable changes and updates.

Joe Fultz asked if staff could recommend a model type for a hydro machine to use for dynamics studies.

Marc Moor commented that GENSAL or GENSAE (whichever one is not unusable) that would be the best one to use at this time. There is currently a lot of push to move to the GENQEC model as well. If what you had before is not on the unacceptable list go back to that.

Brianna commented that they have converted all their GENTYPEJ units to GENQEC without any major issues.

## **AGENDA ITEM 19 – SCRIPT C3 UPDATE**

SPP staff, Lottie Jones, provided the group with a refresher of the SCRIPT C3 initiatives, the recommendations, as well as the status of each recommendation.

Brianna asked how the dispatch information will be handled under the C3.4 recommendation. Lottie mentioned that this will be handled through EDST that is viewable by everyone.

Brianna asked why not just bring generator dispatch back to MOD with BLG dispatch files. Lottie does not know of a clean way to track this dispatch through MOD and it will be cleaner to pull this information from EDST.

For WAPA, ITP still submits BLG files through MOD. Lottie mentioned that this information is still downloaded from EDST and placed into a workbook so that process would not change.

Will all data options be in EDST as well or will data have to be submitted to both MOD and EDST? Lottie mentioned that the change is that there will no longer be a spreadsheet for the data for dispatch. Hugh mentioned that seasonal changes would still be put into EDST or under the device control profile.

## **AGENDA ITEM 20 – 2025 ITP SHORTFALL**

SPP staff, Hugh Benfer, lead a discussion on shortfall in the 2025 ITP BR models.

Joe Fultz mentioned that the SPP projected load forecast is a lot higher than most according to the SAWG than the presentation. Hugh mentioned that modeling has not yet seen 5% year over year load growth in the ITP benchmarking.

Hugh mentioned that there is a unique opportunity to affect load levels in a positive way with things such as future generation and the items listed in slide 7 of the presentation.

Hugh mentioned that if it is in the queue then it is non-firm generation which means that we are beyond firm generation with the current load amounts. This requires going out into the GI queue to find future generation to put into service.

Brianna commented that if the shortfall is to the extent that we cannot solve our models could it be possible that loads could be rejected in the future. Hugh commented that this is possible, but we could still study the load as informational only.

Ryan Baysinger asked if we have considered using non-firm service windfarms to help with the load; however, when this was presented to TWG they did not like the idea of even increasing firm wind due to the lack of reliable generation. The push was to lean more towards thermal units.

John Vara asked if SPP will only consider thermal units that are past a decision point or if more are still in consideration. Hugh mentioned that they are using units like Gaines and Pioneer IV as they did last year to stick to the areas that are experiencing shortfall.

## **AGENDA ITEM 22 – 2024 SERIES MDAG MODEL BUILD/APPLICATION UPDATES**

### **AGENDA ITEM 22A – DYNAMICS**

SPP staff, Zach Sabey, updated the group on the current 2024 Series MDAG Dynamics Model Build.

Mike Swan commented that the key dates should read as 2024 and not 2023.

### **AGENDA ITEM 22B – MOD-033**

SPP staff, Eric Sullivan, updated the group on the current 2023-2025 MOD-033-2 Powerflow model build.

## **AGENDA ITEM 23 – 2025/2026 SERIES MODEL BUILD/APPLICATION UPDATES**

### **AGENDA ITEM 23A – POWERFLOW**

SPP staff, Lottie Jones, updated the group on the 2025/2026 series model build and application updates.

#### **AGENDA ITEM 23B – SHORT CIRCUIT**

SPP staff, Eric Sullivan, updated the group on the 2025/2026 series model build.

#### **AGENDA ITEM 23C – GMD**

SPP staff, Eric Sullivan, updated the group on the 2025 series GMD model build.

#### **AGENDA ITEM 24 – MDAG FG UPDATE**

Ryan Baysinger updated the group on the 5-Year Average Enhancement project previously known as the RADTF.

SPS staff, Reene Miranda, asked if the process revolved the entire SPP regional level (footprint)?

Ryan Baysinger mentioned that the state-based breakdown was performed to make it more generic for presentation.

Hugh mentioned that we could compare our previous 5-year average to the enhancement to see the difference.

Restraint includes data filtering including removing the bottom 1% of wind farms.

The data is presented in a meters per second format.

**Action Item:** Review data at the TO level to see if the percentages change from the State level to the TO level.

This discussion will be a target for the next model build to allow time for MDAG approval.

Ryan Baysinger commented that there is a level of variability in the 5-year average and there are times when the wind farms may not output a lot when you would expect them to output more.

This discussion will be brought to the MDAG FG in the future.

#### **AGENDA ITEM 25 – Y1 / Y10 LIGHT LOAD DISCUSSION**

SPP staff, Zach Sabey, continued the discussion on the Y1/Y10 light load topic from the previous focus group meeting back to MDAG for their review and thoughts.

Reene commented that he is not comfortable with removing any models and/or cases now.

Zach mentioned that by the time he receives the Y1 model from MMWG, the season is already over so that the data is not usable.

## AGENDA ITEM 27 – NODE BREAKER

Ryan Baysinger and Andrew Howard both commented that PSSE has crashing issues when trying to load the node-breaker data. They also commented that the software has not caught up to the data point, so some of the assessment items are still lacking.

## AGENDA ITEM 28 – NERC UPDATES

SPP staff, Shannon Mickens, gave an update to the group on current NERC activities related to FERC Order 901..

## AGENDA ITEM 29 – SUMMARY OF ACTION ITEMS

Brianna Haug, MDAG Vice-Chair and Zach Sabey, Staff Secretary, indicated the following new action items from this meeting:

- **Action Item:** MDAG FG to look at a TO level (by area) instead of state level and a comparison against the current 5-yr average
- **Action Item:** Review language for MDAG Manual Version 9.0 prior to the next model build.
- **Action Item:** Review language for MDAG Manual Version 8.1 to include the Generator Retirement update in EDST instead of through the spreadsheet
- **Action Item:** *MDAG to propose a meeting date to TWG (October 2024) to add meeting date to 2024/2025 modeling schedule for ITP BR Initial Final case approval*
- **Action item:** Bring MDAG manual back to MDAG for inclusion of Attachment AJ reference and removal of seasonal line rating definition from document upon implementation of Attachment AJ to the SPP OATT

## AGENDA ITEM 30 – DISCUSSION OF FUTURE MEETINGS

Brianna Haug, MDAG Vice Chair, updated the group on upcoming meetings.

- a. MDAG: August 22, 2024 (9:00 AM – 12:00 PM)
- b. MDAG Focus Group: July 23, 2024 (1:00 PM – 3:00 PM)
- c. AARITF: July 1, 2024 (9:00 AM – 11:00 AM)
- d. TATE TF: July 16, 2024 (1:00 PM – 3:00 PM)
- e. TWG: June 25, 2024 (8:00 AM – 5:00 PM)
- f. CPPTF: August 07, 2024 (8:00 AM – 5:00 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 31 – ADJOURN**

Brianna Haug, MDAG Vice Chair, adjourned the meeting on June 19<sup>th</sup> at 3:48pm (CST)

Brianna Haug, MDAG Vice Chair, adjourned the meeting on June 20<sup>th</sup> at 10:38am (CST)

Respectfully Submitted,

Zach Sabey  
Staff Secretary

Kristie Brown  
Secretary Assistant

### **Attachments**