

SOUTHWEST POWER POOL
MODEL DEVELOPMENT ADVISORY GROUP MEETING

October 17, 2024, 9:00 am – 12:00 pm (CST)

Conference Call

SUMMARY OF MOTIONS AND ACTION ITEMS

Action Items:

- ***Action Item: Bring the approved FYAE wind dispatch to the FG to make any required manual updates ahead of the 2026 MDAG / 2027 ITP model build.***

Motions:

- **Motion: John Vara motioned to approve the agenda as amended. Nathan Davis seconded the motion. The motion passed unanimously.**
- **Motion: Jesse Kreutzfeldt motioned to approve the September 19th meeting minutes as shown on the screen. Preston Blinsky seconded the motion. The motion passed unanimously.**
- **MOTION: Nathan Davis motioned to approve John Turner to remain as the chair of the Model Development Advisory Group for the term beginning January 2025. Jesse Kreutzfeldt seconded the motion. The motion passed unanimously.**
- **MOTION: Liam Stringham motioned to approve for MDAG to utilize the 5-Year Average Enhancement (FYAE) from the RADTF in future powerflow model builds. Jesse Kreutzfeldt seconded the motion. The motion passed unanimously.**

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

October 17, 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 Vice Chair, Brianna Haug, called the meeting to order at 9:00 a.m. (CST) with Quorum. SPP Staff Secretary, Zach Sabey, 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				Oklahoma Municipal Power Authority
Brianna Haug	X			Western Area Power Administration, MDAG Vice-Chair
Dustin Betz	X			Nebraska Public Power District
Jason Shook				GDS Associates
Jerry Bradshaw	X			City Utilities of Springfield
Jesse Kreutzfeldt	X			Missouri River Energy Services
Joe Fultz	X			Grand River Dam Authority
John Turner	X			Western Farmers Electric Power, MDAG Chair
John Vara	X			Golden Spread Electric
Liam Stringham	X			Sunflower Electric Power Corporation
Mike Swan	X			Omaha Public Power District
Nathan Davis	X			Liberty Utilities
Preston Blinsky	X			Basin Electric Power Cooperative
Reené Miranda	X	Antonio Barrera	X	Southwestern Public Service
Ryan Baysinger	X			Evergy
Scott Rainbolt	X			American Electric Power
Scott Schichtl	X			Arkansas Electric Cooperative Corporation
Timothy Sell	X			ITC Holdings
Tyler Baxter	X			Corn Belt Power Cooperative
Zach Sabey	X			Southwest Power Pool, Inc., MDAG Secretary

Material: OCT17_Attach2 - 1c. MDAG Conference Call Attendance.xlsx

AGENDA ITEM 1E – 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.

John Vara referenced to correct "Previous August Meeting Minutes" to read "Previous September Meeting Minutes"

Motion: John Vara motioned to approve the agenda as amended. Nathan Davis seconded the motion. The motion passed unanimously.

Material: OCT17_Attach1- 1e. MDAG Meeting Agenda.docx

AGENDA ITEM 1F – PREVIOUS SEPTEMBER 19TH, MEETING MINUTES (**APPROVAL ITEM**)

Zach Sabey asked the group if they had any proposed changes for the previous meeting minutes on September 19th, 2024.

Motion: Jesse Kreutzfeldt motioned to approve the September 19th meeting minutes as shown on the screen. Preston Blinsky seconded the motion. The motion passed unanimously.

Material: OCT17_Attach3- 1f. September 2024 Meeting Minutes.pdf

AGENDA ITEM 2 – REVIEW OF PAST ACTION ITEMS

SPP staff, Zach Sabey, walked the group through past action items. The group agreed that Action Item 212 (MOD-033 Ratings in the EMS case) could be moved to Completed.

AGENDA ITEM 3 – MDAG CHAIR (APPROVAL ITEM)

SPP staff, Zach Sabey, informed MDAG of the MDAG Chair Nomination for John Turner.

MOTION: Nathan Davis motioned to approve John Turner to remain as the chair of the Model Development Advisory Group for the term beginning January 2025. Jesse Kreutzfeldt seconded the motion. The motion passed unanimously.

Material: OCT17_Attach4 - 3. MDAG Chair.pptx

AGENDA ITEM 4 – RENEWABLE DISPATCH PROCESS (APPROVAL ITEM)

SPP staff, Jamie Spickes, gave an overview of the new renewable dispatch process and the background behind the new numbers.

Antonio Barrera asked if the automation from this would be provided to members. Jamie mentioned that the automation would be utilized by SPP staff, but the process is more transparent and would be available for members to use.

Dustin Betz asked if the high wind or very low wind situations had been addressed. Ryan Baysinger responded that the initial look was to get a better approach set up and then these could be addressed in future efforts.

MOTION: Liam Stringham motioned to approve for MDAG to utilize the 5-Year Average Enhancement (FYAE) from the RADTF in future powerflow model builds. Jesse Kreutzfeldt seconded the motion. The motion passed unanimously.

Material: OCT17_Attach5 - 4a. Renewable Dispatch Process.pptx

AGENDA ITEM 5 – NERC UPDATES

SPP Staff, Shannon Mickens, discussed updates at the NERC level about DER and IBR activities currently on-going and where to find different reports on these topics.

AGENDA ITEM 6 – Break

AGENDA ITEM 7 – SCRIPT C3 Update

SPP Staff, Eddie Watson, walked the MDAG through the current status of SCRIPT C3.1 - C3.5.

AGENDA ITEM 8 – 2024 MDAG FOR 2025 TPL STABILITY UPDATE

SPP Staff, Zach Sabey, presented an update for the 2025 TPL Stability Models.

AGENDA ITEM 9 – FOCUS GROUP UPDATES

SPP Staff, Kristie Brown, presented the latest update for the MDAG Focus Group with a high-level preview of the next Focus Group meeting.

AGENDA ITEM 10 – 2025 SERIES MODEL BUILD / APPLICATION UPDATES

AGENDA ITEM 10A – POWERFLOW

SPP Staff, Eric Sullivan, presented an update for the 2026 ITP BR model set. Pass 3 posting will be on November 1st.

AGENDA ITEM 10B – SHORT CIRCUIT

SPP Staff, Eric Sullivan, presented an update for the 2026 ITP Short Circuit model set.

AGENDA ITEM 10C – MOD-033

SPP Staff, Eric Sullivan, presented an update for the MOD-033 model process and the Unacceptable Differences posting and review.

Reene Miranda asked if staff has created a guidance document that contains the information from the MOD-033 study. Eric responded that there is not currently a guidance document for MOD-033.

AGENDA ITEM 11 – SUMMARY OF ACTION ITEMS

Zach Sabey, Staff Secretary, indicated the following new action item from this meeting.

- ***Action Item: Bring the approved FYAE wind dispatch to the FG to make any required manual updates ahead of the 2026 MDAG / 2027 ITP model build.***

AGENDA ITEM 12 – DISCUSSION OF FUTURE MEETINGS

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

- a. MDAG: November 14, 2024 (9:00 AM – 12:00 PM)
- b. MDAG Focus Group: October 22, 2024 (1:00 PM – 3:00 PM)
- c. AARITE: October 21, 2024 (9:00 AM – 11:00 AM)
 - i. November 4, 2024 (9:00 AM – 11:00 AM)
- d. TATE TE: November 19, 2024 (1:30 PM – 3:30 PM)
- e. TWG: October 29, 2024 (9:00 AM – 3:00 PM)
 - i. October 30, 2024 (9:00 AM – 3:00 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 13 – ADJOURN

Brianna Haugh, MDAG Vice Chair, adjourned the meeting at 10:50 AM (CST)

Respectfully Submitted,

Zach Sabey
Staff Secretary

Kristie Brown
Secretary Assistant

Attachments

OCT17_Attach1- 1e. MDAG Meeting Agenda.docx

OCT17_Attach2 - 1c. MDAG Conference Call Attendance.xlsx

OCT17_Attach3- 1f. September 2024 Meeting Minutes.pdf

OCT17_Attach4 - 3. MDAG Chair.pptx

OCT17_Attach5 - 4a. Renewable Dispatch Process.pptx



SOUTHWEST POWER POOL, INC.

MODEL DEVELOPMENT ADVISORY GROUP MEETING

October 17, 2024

Conference Call

9:00 a.m. – 12:00 p.m. (CST)

AGENDA

- 1. Administrative Items.....John Turner (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 September Meeting Minutes (**Approval Item**)
- 2. Review of Past Action ItemsZach Sabey (5 mins)
- 3. MDAG Chair (**Approval Item**)Zach Sabey (5 mins)
- 4. Renewable Dispatch Process (**Approval Item**)*Jamie Spickes / Ryan Baysinger (40 mins)
- 5. NERC Updates.....Shannon Mickens (30 mins)
- 6. Break (5 mins)
- 7. Script C3 Update.....Eddie Watson (20 mins)
- 8. 2024 MDAG for 2025 TPL Stability Update.....Zach Sabey/Theo Brown (10 mins)
- 9. Focus Group UpdatesKristie 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.

- 10. 2025 series Model Build/Application Updates
 - a. Powerflow Danielle Lorenz/Eric Sullivan (15 mins)
 - b. Short Circuit Eric Sullivan/Jacob Lagrange (5 mins)
 - c. MOD-033 Eric Sullivan (10 mins)
- 11. Summary of Action Items..... Zach Sabey (5 mins)
 - a. Agenda Review – additional comments request
- 12. Discussion of Future Meetings..... John Turner (5 mins)

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

- a. MDAG: November 14, 2024 (9:00 AM – 12:00 PM)
- b. MDAG Focus Group: October 22, 2024 (1:00 PM – 3:00 PM)
- c. AARITF: October 21, 2024 (9:00 AM – 11:00 AM)
 - i. November 4, 2024 (9:00 AM – 11:00 AM)
- d. TATE TF: November 19, 2024 (1:30 PM – 3:30 PM)
- e. TWG: October 29, 2024 (9:00 AM – 3:00 PM)
 - i. October 30, 2024 (9:00 AM – 3:00 PM)

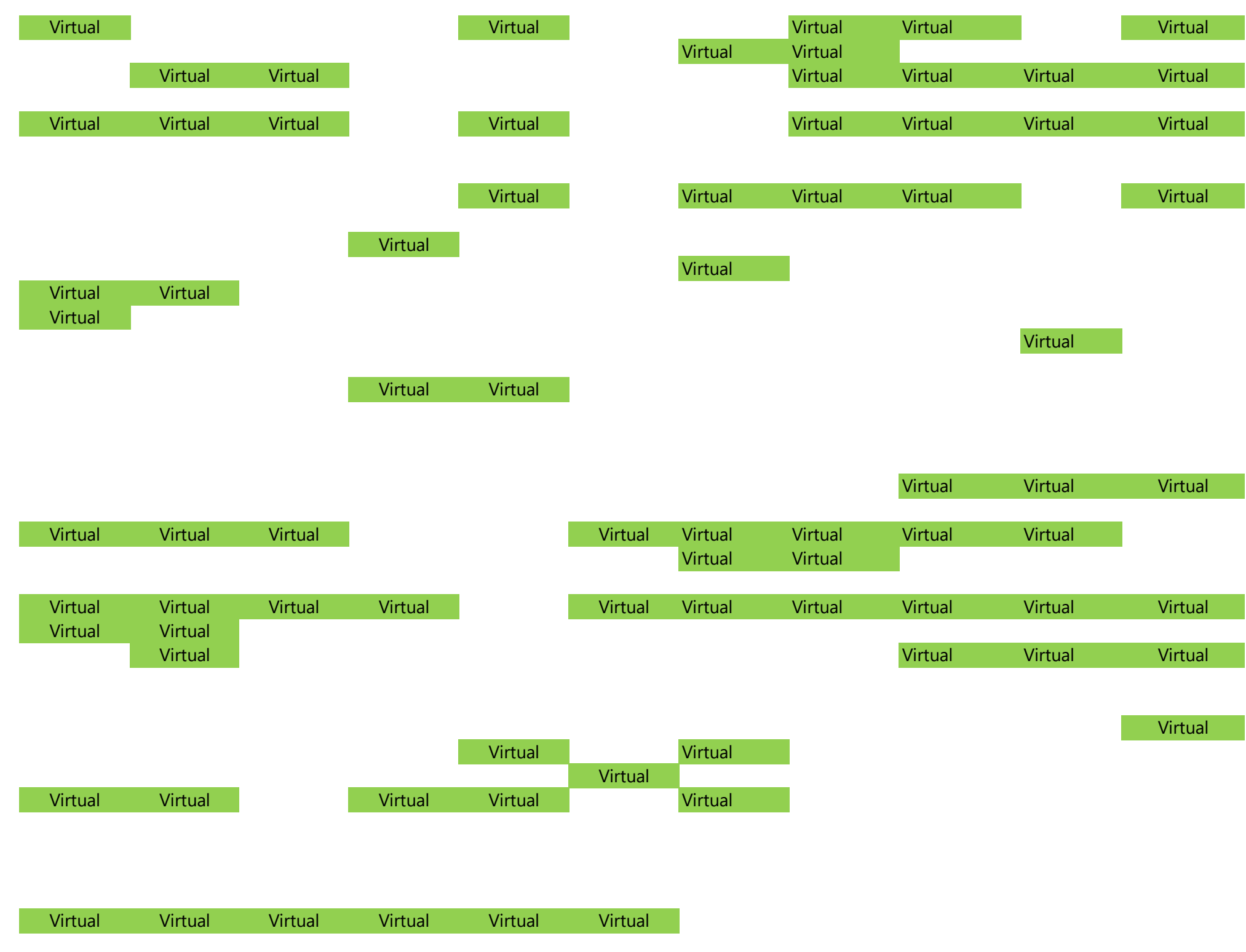
MDAG encourages you to check out the spp.org calendar for additional information on technical topics discussed in other working groups. SPP also offers stakeholder trainings [found here](#)

- 13. Adjourn..... All

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

Ryan Schmitt
Samuel Burch
Scott Holland
Scott Jordan
Scott Mijin
Seth Cochran
Shalini Gupta
Shannon Mickens
Shawn Geil
Shawna Satterwhite
Sherri Maxey
Shilpi Sunil Kumar
Shodhan Patel
Si Ngyuen
Spencer Simpson
Stan Nnadih
Steve Hardebeck
Steve Hardy
Steven Park
Sujeet Urwan
Sunny Raheem
Tanner New
Taylor Ballard
Thomas Burns
Theo Brown
Timothy Sell
Todd Chwialkowski
Tom Belshe
Tom Mayhan
Tony Green
Walt Shumate
Wayne Messina
William Holden
Xiaoyu Wang
Yasmin Sakalla
Ying Yang
Zach Andera
Zach Sabey

NMPP Energy
Southern Co
SPP
Southwestern Power Administration
DC Energy
Aper Clean Energy
SPP
Kepco
Oklahoma Gas and Electric Company
SPP
AES
Constellation
Omaha Public Power District
1898 and Co
SPP
Oklahoma Gas and Electric Company
SPP
Sunflower Electric Power Corporation
MR Energy
SPP
Sunflower Electric Power Corporation
SPP
SPP
SPP
ITS
EDF
Energy
Omaha Public Power District
SPP
Shumate & Associates
GDS Associates
SPP
Enel
Enel
Duke Energy
Burns & McDonnell
SPP



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

September 19, 2024, 9:00 am – 12:00 pm (CST)

Conference Call

SUMMARY OF MOTIONS AND ACTION ITEMS

Action Items:

- **Action Item:** *SPP staff to reach out to TWG chair and staff secretary to see if RR452 / TP Planned Project process can be brought back to the TWG*
- **Action Item:** *SPP Staff to post the updated SPP Model Development Procedure Manual v8.1 and the updated 2025 / 2026 model build scheduled to SPP.org*
- **Action Item:** *Zach Sabey to post 2024 TPL Dynamic models by 9/20 and send out a notification*

Motions:

- **Motion:** Jesse Kreutzfeldt motioned to approve the agenda. Alex Mucha seconded the motion. The motion passed unanimously.
- **Motion:** Brianna Haug motioned to approve the August 22nd meeting minutes. Preston Blinsky seconded the motion. The motion passed unanimously.
- **MOTION:** Reene Miranda motioned to approve the 2025 MDAG Meeting Schedule, including having the 2025 MDAG In-person meeting to be held in Denver, Colorado. Nathan Davis seconded the motion. The motion passed unanimously.
- **MOTION:** Brianna Haug motioned to approve the 2025 MDAG FG Meeting Schedule. Ryan Baysinger seconded the motion. The motion passed unanimously.
- **MOTION:** Reene Miranda motioned for MDAG to bring RR452 / the TO Planned Project process back to the TWG for clarification on if the data submitter can make the decision on if the project is a non-material modification.
 - **Clarification is needed around the steps for Asset Management and Applicable Design Criteria and how those are defined**

- **MDAG would also like to have a timeframe set on decision of project classification**

Brianna Haug seconded the motion. The motion passed.

- **MOTION: Reene Miranda motioned to table the RR452 language until the questions can be addressed by the TWG. Ryan Baysinger seconded the motion. The motion passed unanimously.**
- **MOTION: Nathan Davis motioned to approve the EDST Generator Retirement Language as shown on the screen. Reene Miranda seconded the motion. The motion passed unanimously.**
- **MOTION: Reene Miranda motioned to approve the MDAG Manual V8.1 as presented on the screen with the EDST Generator Retirement Language and removal of the MOD Matrix language that was tabled. Jesse Kreutzfeldt seconded the motion. The motion passed unanimously.**
- **MOTION: Scott Schichtl motioned to approve the 2025 / 2026 MDAG Schedule Update as amended. Reene Miranda seconded the motion. The motion passed unanimously.**
- **MOTION: Reene Miranda motioned to approve the 2024 MDAG Dynamics Final Model Set, contingent upon member submitted updates being applied to the cases before posting, including the updates needed for the 2024 TPL Stability Assessment. Preston Blinsky seconded the motion. The motion passed unanimously.**

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

September 19, 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 9:00 a.m. (CST) with Quorum. SPP Staff Secretary, Zach Sabey, 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	X			Oklahoma Municipal Power Authority
Brianna Haug	X			Western Area Power Administration, MDAG Vice-Chair
Dustin Betz	X			Nebraska Public Power District
Jason Shook		Anteneh Workneh	X	GDS Associates
Jerry Bradshaw	X			City Utilities of Springfield
Jesse Kreutzfeldt	X			Missouri River Energy Services
Joe Fultz	X			Grand River Dam Authority
John Turner	X			Western Farmers Electric Power, MDAG Chair
John Vara		David Mendoza	X	Golden Spread Electric
Liam Stringham	X			Sunflower Electric Power Corporation
Mike Swan		Eric Jones	X	Omaha Public Power District
Nathan Davis	X			Liberty Utilities
Preston Blinsky	X			Basin Electric Power Cooperative
Reené Miranda	X			Southwestern Public Service
Ryan Baysinger	X			Evergy
Scott Rainbolt	X			American Electric Power
Scott Schichtl	X			Arkansas Electric Cooperative Corporation
Timothy Sell	X			ITC Holdings
Tyler Baxter	X			Corn Belt Power Cooperative
Zach Sabey	X			Southwest Power Pool, Inc., MDAG Secretary

Material: Sept19_Attach2 - 1c. MDAG Conference Call Attendance.xlsx

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. Alex Mucha seconded the motion. The motion passed unanimously.

Material: SEP19_Attach1- 1e. MDAG Meeting Agenda.docx

AGENDA ITEM 1F – PREVIOUS AUGUST 22ND, MEETING MINUTES (**APPROVAL ITEM**)

Zach Sabey asked the group if they had any proposed changes for the previous meeting minutes on August 22nd, 2024.

Motion: Brianna Haug motioned to approve the August 22nd meeting minutes. Preston Blinsky seconded the motion. The motion passed unanimously.

Material: SEP19_Attach3- 1f. August 2024 Meeting Minutes.pdf

AGENDA ITEM 2 – REVIEW OF PAST ACTION ITEMS

SPP staff, Zach Sabey, walked the group through past action items.

AGENDA ITEM 3 – 2025 MDAG MEETING SCHEDULE (APPROVAL ITEM)

SPP staff, Zach Sabey, walked the group through the 2025 MDAG meeting schedule.

Reene Miranda asked for the in-person to be in Denver based on the survey results.

MOTION: Reene Miranda motioned to approve the 2025 MDAG Meeting Schedule, including having the 2025 MDAG In-person meeting to be held in Denver, Colorado. Nathan Davis seconded the motion. The motion passed unanimously.

AGENDA ITEM 4 – 2025 MDAG FG MEETING SCHEDULE (APPROVAL ITEM)

MOTION: Brianna Haug motioned to approve the 2025 MDAG FG Meeting Schedule. Ryan Baysinger seconded the motion. The motion passed unanimously.

AGENDA ITEM 5 – MDAG MANUAL LANGUAGE UPDATES

AGENDA ITEM 5A – RR452 TO PLANNED PROJECT LANGUAGE (APPROVAL ITEM)

SPP Staff, Lottie Jones, brought the language updates for RR452 TO Planned Project Language to provide the location of the TO Project Evaluation Process Request Form on the spp.org website.

Reene Miranda asked for a two week window to be added to the language for non-material change. Lottie Jones added that the RMS system has a 5-day period for responses.

Brianna Haug agreed with Reene Miranda's concern on response timing from model build perspective and getting the projects moving through to be included in the next pass.

Brianna Haug also stated that there is concern with the increasing volume of work that is being added on to a model builders perspective.

Ryan Baysinger and Dustin Betz agreed with Reene and Brianna on the concerns around amount of workload being added.

- **Action Item: SPP staff to reach out to TWG chair and staff secretary to see if the process can be brought back to the TWG**
- **MOTION: Reene Miranda motioned for MDAG to bring RR452 / the TO Planned Project process back to the TWG for clarification on if the data submitter can make the decision on if the project is a non-material modification.**
 - **Clarification is needed around the steps for Asset Management and Applicable Design Criteria and how those are defined**
 - **MDAG would also like to have a timeframe set on decision of project classification**

Brianna Haug seconded the motion. The motion passed.

MOTION: Reene Miranda motioned to table the RR452 language until the questions can be addressed by the TWG. Ryan Baysinger seconded the motion. The motion passed unanimously.

AGENDA ITEM 5B – EDST Generator Retirement Language (APPROVAL ITEM)

SPP Staff, Kristie Brown, presented a language change to the MDAG manual to remove outdated verbiage regarding the Generator Planned Retirement data. The old language referenced the submittal process via a spreadsheet on Globalscape. After an EDST update, the retirement date is now maintained in the application and can be updated by the changeset process. Reene Miranda recommended slight changes to the proposed language.

MOTION: Nathan Davis motioned to approve the EDST Generator Retirement Language as shown on the screen. Reene Miranda seconded the motion. The motion passed unanimously.

AGENDA ITEM 6 – MDAG MANUAL VERSION 8.1

AGENDA ITEM 6A – MDAG MANUAL VERSION 8.1 (APPROVAL ITEM)

SPP Staff, Zach Sabey, presented the recently approved EDST Generator Retirement language for the new MDAG Manual v8.1

MOTION: Reene Miranda motioned to approve the MDAG Manual V8.1 as presented on the screen with the EDST Generator Retirement Language and removal of the MOD Matrix language that was tabled. Jesse Kreutzfeldt seconded the motion. The motion passed unanimously.

AGENDA ITEM 6B – 2025 / 2026 SCHEDULE RE-APPROVAL (APPROVAL ITEM)

SPP Staff, Zach Sabey, presented the updated schedule to show MDAG Manual v8.1 as the reference manual.

Jordan Skillern brought up a comment to correct the pass references on rows 21 and 30.

MOTION: Scott Schichtl motioned to approve the 2025 / 2026 MDAG Schedule Update as amended. Reene Miranda seconded the motion. The motion passed unanimously.

- **Action Item: SPP Staff to post the updated SPP Model Development Procedure Manual v8.1 and the updated 2025 / 2026 model build scheduled to SPP.org**

AGENDA ITEM 7 – BREAK

AGENDA ITEM 8 – 2024 MDAG DYNAMICS FINAL MODEL SET (APPROVAL ITEM)

SPP Staff, Zach Sabey, provided an update on the 2024 MDAG Dynamics Model Build.

Reene Miranda asked if the updates required for the 2024 TPL Stability Assessment could also be applied to the 2024 MDAG Final models.

MOTION: Reene Miranda motioned to approve the 2024 MDAG Dynamics Final Model Set, contingent upon member submitted updates being applied to the cases before posting, including the updates needed for the 2024 TPL Stability Assessment. Preston Blinsky seconded the motion. The motion passed unanimously.

AGENDA ITEM 9 – 2024 TPL DYNAMICS UPDATE

SPP Staff, Zach Sabey, provided an update on the 2024 TPL Dynamics Model Build.

Nathan Davis asked for clarification on the very large fault impedance. Liam Stringham commented that it is actually applying a very large admittance and not an impedance.

John Turner asked if other values between $-2E9$ and $-2E6$ were tested. Zach Sabey recommended John attend the TATETF call to provide his feedback on the values that are used for faults.

Reene Miranda asked if the MDAG procedure manual does not call for a re-vote, is there any need for MDAG to vote.

John Turner agreed that if the vote isn't required, a comment period would be a better path forward.

- **Action Item: Zach Sabey to post 2024 TPL Dynamic models by 9/20 and send out a notification**

AGENDA ITEM 10 – FOCUS GROUP UDATES

SPP Staff, Kristie Brown, presented updates for the September Focus Group Meeting. Each voting entity should have representation at the meeting for final discussion on the improvements to the 5-year average calculations. The calculation criteria will be up for approval at the October 17 Meeting.

AGENDA ITEM 11 – 2025 SERIES MODEL BUILD / APPLICATION UPDATES

AGENDA ITEM 11A – POWERFLOW

SPP Staff, Danielle Lorenz, presented an update on the 2025 MDAG / 2026 ITP powerflow model builds.

Eric Jones asked if the Dispatch workbook has been posted. Hugh Benfer said that the workbook previously had confidential information in it so it has not been posted, but with the new EIA dispatch process, SPP staff would need to verify if it can be posted now or not.

AGENDA ITEM 11B – SHORT CIRCUIT

SPP Staff, Jacob Lagrange, gave an update of the 2025 MDAG / 2026 ITP short circuit model build.

AGENDA ITEM 11C – MOD-033

SPP Staff, Zach Sabey, provided an update on the MOD-033 model build.

Reene Miranda asked if corrections are needed for the planning models if those can be submitted to MOD. Zach Sabey said the corrections can be provided to MOD for planning model updates and to the SPP Operations group if the operations model needs to be corrected.

AGENDA ITEM 12 – SUMMARY OF ACTION ITEMS

Zach Sabey, Staff Secretary, indicated the following new action item from this meeting.

- **Action Item: SPP staff to reach out to TWG chair and staff secretary to see if the process can be brought back to the TWG**
- **Action Item: SPP Staff to post the updated SPP Model Development Procedure Manual v8.1 and the updated 2025 / 2026 model build scheduled to SPP.org**
- **Action Item: Zach Sabey to post 2024 TPL Dynamic models by 9/20 and send out a notification**

AGENDA ITEM 13 – DISCUSSION OF FUTURE MEETINGS

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

- a. MDAG: October 17, 2024 (9:00 AM – 12:00 PM)
- b. MDAG Focus Group: September 24, 2024 (1:00 PM – 3:00 PM)
 - i. MDAG voting member please have representation at the next meeting
 - 1. RADTF - 5 Year Average Enhancement.pptx
- c. AARITF: October 7, 2024 (9:00 AM – 11:00 AM)
- d. TATE TF: October 8, 2024 (1:30 PM – 3:30 PM)
- e. TWG: September 24, 2024 (9:00 AM – 3:00 PM)
 - i. September 25, 2024 (9:00 AM – 3:00 PM)
- f. CPPTF: October 1, 2024 (9:00 AM – 4:00 PM)

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AGENDA ITEM 13 – ADJOURN

John Turner, MDAG Chair, adjourned the meeting at 11:34 AM (CST)

Respectfully Submitted,

Zach Sabey
Staff Secretary

Kristie Brown
Secretary Assistant

Attachments

SEP19_Attach1- 1e. MDAG Meeting Agenda.docx

SEP19_Attach2 - 1c. MDAG Conference Call Attendance.xlsx

SEP19_Attach3- 1f. August 2024 Meeting Minutes.pdf

SEP19_Attach4- 3. 2025 MDAG Meeting Schedule.pptx

SEP19_Attach5- 4. 2025 MDAG Focus Group Meeting Schedule.pptx

SEP19_Attach6- 5b. EDST Generator Retirement Language.pptx

SEP19_Attach7- 6a. SPP Model Development Procedure Manual v8.1.docx

SEP19_Attach8- 6b. 2025 MDAG – 2026 ITP Powerflow Short Circuit GMD Model Build
Schedule.pdf



MDAG CHAIR 2025-2026

*Working together to responsibly and economically
keep the lights on today and in the future.*



SouthwestPowerPool



SPPorg



southwest-power-pool

RECOMMENDATION

- MDAG approve John Turner to remain as the chair of the Model Development Advisory Group for the term beginning January 2025.



RADTF 5-YEAR AVERAGE ENHANCEMENT (FYAE)

RYAN BAYSINGER / JAMIE SPICKES



OBJECTIVES

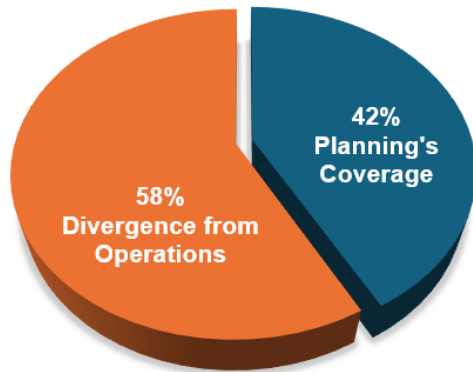
- RADTF Purpose
- Divergence of Wind Data
- Solution
 - Data Analysis
 - Results
 - Comparator
- Conclusion

PURPOSE

- Enhance 5-year average calculation methodology
- Enhance confidence in calculations
- Enhance process transparency
- Enhance automation
 - Minimize SPP staff resource requirements

DIVERGENCE OF WIND DATA

- In the past Operational Benchmarks, SPP has noticed that Wind Representation in the Planning Models is diverging from Operational Data over the years.

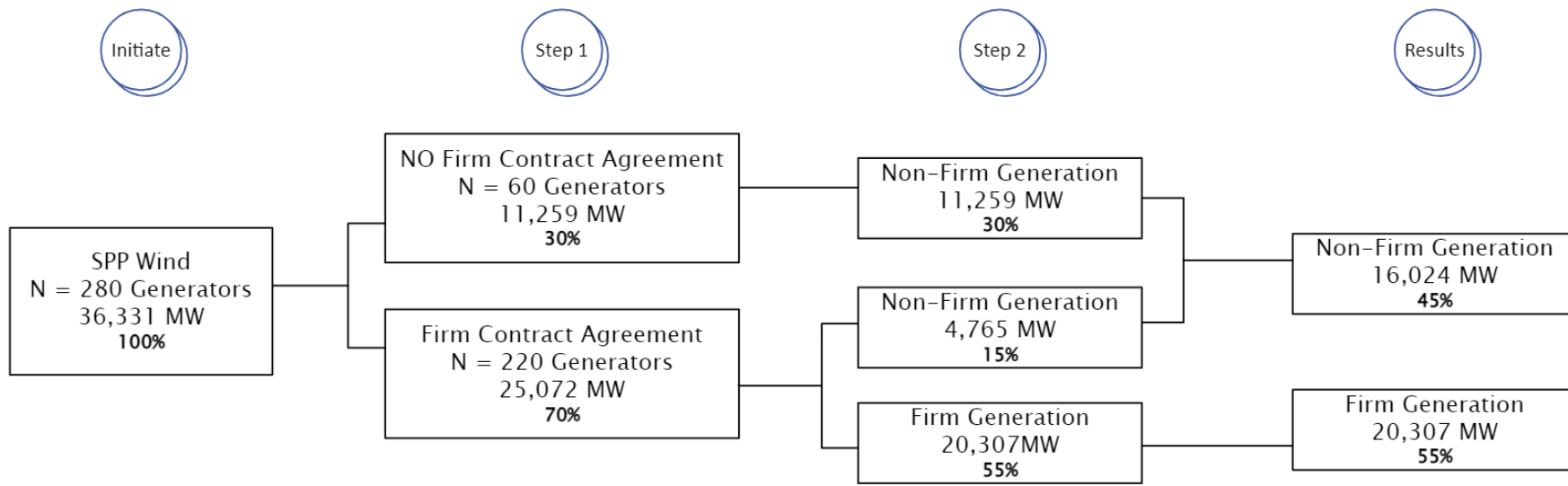


Year	Operational Wind	Planning Model	Difference	Percent Divergence
2023	12,726	5,348	7,378	0.58
2022	7,994	3,832	4,162	0.52
2021	9,338	5,149	4,189	0.45
2020	14,102	4,274	9,828	0.70

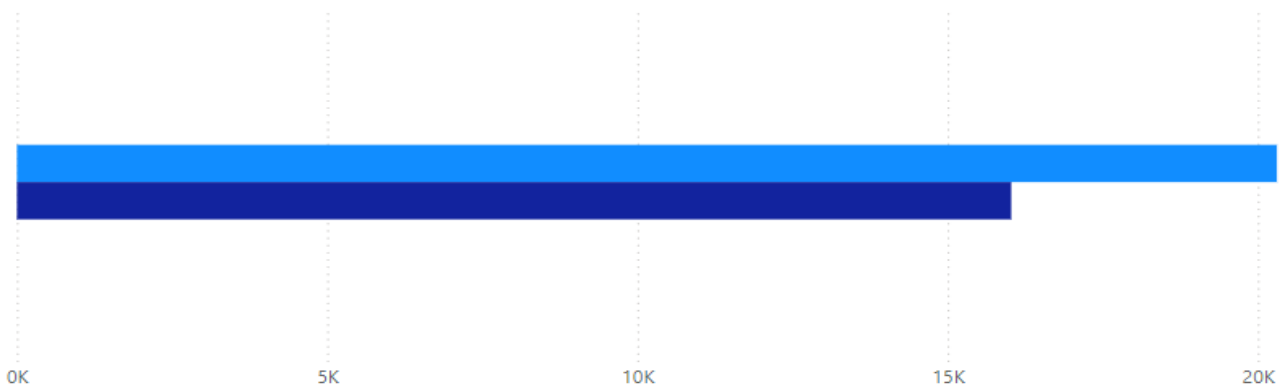
60%

40%

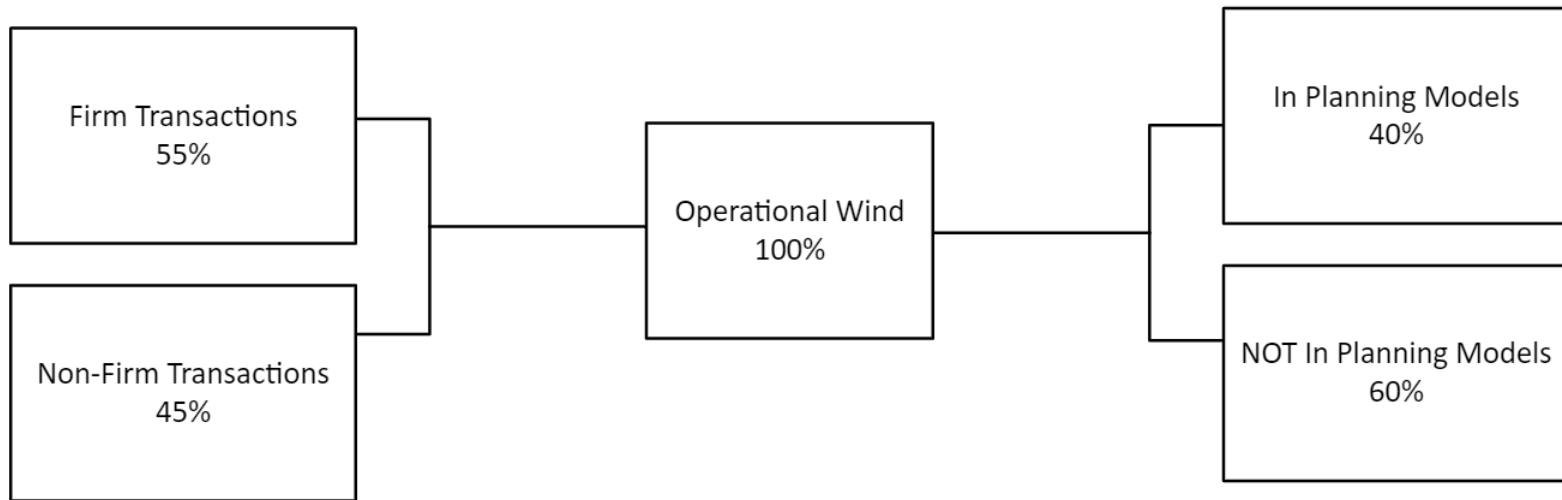
SPP WIND GENERATION FIRM V. NON-FIRM CAPACITY IN MW



● Sum of Firm ● Sum of Non-Firm



SPP WIND GENERATION OPERATIONS V. PLANNING



5-YEAR AVERAGE ENHANCEMENT (FYAE) APPENDIX A

- For previous 5 years, gather all hours of SPP daily system Load Peaks; identify top 25% of load peaks per season
- Of these hours, gather renewable plant output
- Take mean value of gathered outputs per renewable plant
- Use replacement data as necessary for plants without sufficient data

DATA DESCRIPTION

- SPP Historical Wind & Load Generation
- 2019-2023
- Seasonal Top 25% of daily peak load hours
- Firm generators exclusively
- Capacity Factor = Hourly Actual / Capacity
 - $0 \leq \text{Capacity Factor} \leq 1$

DATA CONTENT

TOTAL NUMBER OF OBSERVATIONS = 99,441

Season	N	%
Summer	34,699	34.89
Winter	32,841	33.03
Spring	17,827	17.93
Fall	14,074	14.15
SUM=	99,441	100

YEARS	%
2019	15.98
2020	10.44
2021	13.71
2022	37.17
2023	22.71

MONTHS	%
1	12.04
2	12.71
3	2.69
4	3.36
5	14.57
6	4.98
7	14.37
8	14.4
9	0.9
10	7.94
11	6.22
12	5.83

DAYS	%
Sun	7.37
Mon	14.37
Tues	16.65
Wed	16.16
Thurs	18.22
Fri	18.56
Sat	8.67

HOURS	%
6	0.47
7	21.79
8	8.12
9	1.86
10	0.45
14	0.23
15	3.25
16	37.33
17	16.94
18	6.42
19	3.16

ID	%
AEPW	4.75
BEPC-SPP	8.22
EMDE	1.88
GRDA	0.87
INDN	0.43
KACY	0.12
KCPL	3.13
MIDW	2.17
NPPD	8.91
OKGE	21.8
OPPD	1.29
SPS	16.87
SUNC	7.31
WAPA	5.66
WERE	11.25
WFEC	5.36

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RESULTS (MW)

Hourly Actual					MEAN VALUE	Capacity Factor				
Average	Fall	Spring	Winter	Summer	TO	Summer	Winter	Spring	Fall	Average
46.71	42.31	61.33	47.34	35.86	AEPW	0.27	0.38	0.46	0.35	0.37
40.11	41.37	43.61	42	33.46	BEPC-SPP	0.33	0.44	0.46	0.44	0.42
45.99	46.05	49.06	53.14	35.7	EMDE	0.21	0.33	0.31	0.29	0.29
41.14	40.29	50.13	37.11	37.03	GRDA	0.38	0.38	0.51	0.41	0.42
5.45	5.51	5.87	5.31	5.1	INDN	0.34	0.35	0.39	0.36	0.36
9.79	9.69	10.49	10.68	8.28	KACY	0.33	0.43	0.42	0.39	0.39
67.30	74.49	75.13	68.57	50.99	KCPL	0.26	0.39	0.39	0.43	0.37
22.50	20.19	25.41	23.12	21.28	MIDW	0.43	0.46	0.51	0.4	0.45
44.92	52.65	48.71	45.04	33.27	NPPD	0.3	0.44	0.43	0.47	0.41
54.05	49.19	70.48	50.92	45.62	OKGE	0.31	0.36	0.48	0.35	0.38
43.02	47.95	46.57	44.58	32.97	OPPD	0.3	0.43	0.43	0.45	0.40
42.04	37.66	55.74	42.58	32.19	SPS	0.2	0.3	0.37	0.25	0.28
62.05	54.71	77.27	61.19	55.03	SUNC	0.36	0.4	0.5	0.36	0.41
44.13	45.06	50.46	44.37	36.61	WAPA	0.34	0.44	0.49	0.45	0.43
52.42	50.75	62.09	52.27	44.55	WERE	0.34	0.4	0.46	0.39	0.40
38.26	35.39	50.49	35.89	31.27	WFEC	0.29	0.35	0.48	0.35	0.37
41.24	40.83	48.93	41.51	33.70	AVERAGE	0.31	0.39	0.44	0.38	0.38

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COMPARATOR DEFINED

- In Planning's 5-year average, every generator (with firm service) is averaging ≈ 32 MW per generator.
- Average capacity ≈ 96.53 MW
- $32 / 96.53 = 33\% = \text{comparator}$

MEAN COMPARISON (MW)

Mean Capacity Factor (CF)				Mean CF Minus Comparator				
Fall	Spring	Winter	Summer	TO	Summer	Winter	Spring	Fall
0.35	0.46	0.38	0.27	AEPW	-0.06	0.05	0.13	0.02
0.44	0.46	0.44	0.33	BEPC-SPP	0	0.11	0.13	0.11
0.29	0.31	0.33	0.21	EMDE	-0.12	0	-0.02	-0.04
0.41	0.51	0.38	0.38	GRDA	0.05	0.05	0.18	0.08
0.36	0.39	0.35	0.34	INDN	0.01	0.02	0.06	0.03
0.39	0.42	0.43	0.33	KACY	0	0.1	0.09	0.06
0.43	0.39	0.39	0.26	KCPL	-0.07	0.06	0.06	0.1
0.4	0.51	0.46	0.43	MIDW	0.1	0.13	0.18	0.07
0.47	0.43	0.44	0.3	NPPD	-0.03	0.11	0.1	0.14
0.35	0.48	0.36	0.31	OKGE	-0.02	0.03	0.15	0.02
0.45	0.43	0.43	0.3	OPPD	-0.03	0.1	0.1	0.12
0.25	0.37	0.3	0.2	SPS	-0.13	-0.03	0.04	-0.08
0.36	0.5	0.4	0.36	SUNC	0.03	0.07	0.17	0.03
0.45	0.49	0.44	0.34	WAPA	0.01	0.11	0.16	0.12
0.39	0.46	0.4	0.34	WERE	0.01	0.07	0.13	0.06
0.35	0.48	0.35	0.29	WFEC	-0.04	0.02	0.15	0.02
0.38	0.44	0.39	0.31	AVERAGE	-0.02	0.06	0.11	0.05

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CONCLUSION

5-YEAR AVERAGE ENHANCEMENT (FYAE) APPENDIX A

- For previous 5 years, gather all hours of SPP daily system Load Peaks; identify top 25% of load peaks per season
- Of these hours, gather renewable plant output
- Take mean value of gathered outputs per renewable plant
- Use replacement data as necessary for plants without sufficient data

REPLACEMENT DATA QUALIFICATIONS

- If a unit does not have greater than or equal to 25% of the daily system load peaks included in the analysis (at top 25% of peak load) then:
 - Determine seasonal state average firm capacity factor by taking mean value of all outputs
 - Multiply this average by the p-max (capacity) of the unit to determine MW output

BENEFITS

- Makes the 5-year average a more data driven approach
 - Streamline data integration
- Saves staff time with automation
- Provides transparency & repeatability of process
- Serves as platform for future enhancements

RECOMMENDATION

- Utilize the 5-Year Average Enhancement (FYAE) from the RADTF in future powerflow model builds
 - This will start with the 2026 MDAG / 2027 ITP model set

Questions / Comments ?

