

**Southwest Power Pool, Inc.
Model Development Working Group
Net Conference
June 27, 2017: 1:00 P.M. – 3:00 P.M.**

• M I N U T E S •

Agenda Item 1 – Administrative

The MDWG Chair, Nate Morris, called the meeting to order at approximately 1:06 p.m. The following MDWG members were in attendance:

MDWG Members present:

MDWG Member	Present	Proxy	Present	Company
Nate Morris	YES			Empire District Electric Company
Derek Brown	YES	Jeremy Harris	YES	Westar Energy
Jason Bentz	YES			American Electric Power
Dustin Betz	NO	Jason Hofer	NO	Nebraska Public Power District
John Boshears	YES			City Utilities of Springfield
Jerad Ethridge	YES			Oklahoma Gas & Electric
Joe Fultz	YES			Grand River Dam Authority
Wayne Haidle	YES			Basin Electric Power Cooperative
Holli Krizek	NO	Chris Colson	YES	Western Area Power Administration
Reené Miranda	YES			Southwestern Public Service
Scott Schichtl	NO	Jason Bentz	YES	Arkansas Electric Cooperative Company
Jason Shook	YES			GDS Associates
Brian Wilson	YES			Kansas City Power & Light
Liam Stringham	YES			Sunflower Electric Power Corporation
Anthony Cook	YES			Southwest Power Pool, Inc.

The following guests were also in attendance:

- Alan Burbach – Lincoln Electric System
- Aravind Chellappa – Southwestern Public Service
- Dona Parks – Grand River Dam Authority
- Chris Colson – Southwestern Public Service
- Edgardo Manansala – Midwest Energy
- Gimod Olapurayil – ITC Great Plains
- Jarrold Wolford – Northeast Texas Electric Cooperative
- John Turner – Board of Public Utilities
- Ryan Baysinger – Kansas City Power & Light
- Joe Williams – Western Farmers Electric Cooperative
- Jordan Lamb – East River Electric
- Dave Sargent, Scott Mijin – Southwestern Power Administration

Jeremy Harris – Westar Energy
Armin Sehic – Municipal Energy Agency of Nebraska
Moses Rotich, and Mitch Jackson – Southwest Power Pool

Meeting Agenda

Following the roll call audit, Nate asked the group if they had any issues or modifications to the agenda. Nate proposed that the meeting time be corrected to reflect the correct time (1:00 p.m.–3:00 p.m.)

**Motion: Jason Shook made the motion to approve the agenda as amended. Derek Brown seconded it. The motion passed unanimously.
(Attachment 1 - MDWG Meeting Agenda 20170627.docx)**

Agenda Item 2 – 2018 Series Model Selection:

Reené Miranda asked if the SPP BA models would utilize an SPP peak or member peak load. Moses Rotich answered that an SPP peak would be utilized. Reené, and a few others, questioned how the BA model (sensitivity model) stresses the system enough to meet TPL compliance since the SPP peak might be lower than the member peaks. They noted that this would be a concern for their individual compliance. Derek Brown then reminded the group that this model set was vetted by the TPITF, TWG, and MOPC, so this is the direction that SPP is headed.

John Boshears asked if the non-firm reservations deviated from what he understood the manual to say. Chris Colson asked whether the main difference between the ITP and MDWG models is the reservations. Anthony answered that the MDWG can have non-firm reservations, exploratory generation, and non-firm topology; whereas, the ITP models have all of that removed. Chris and Reené voiced concern over the “non-firm service” language since the manual only talks about expected service. Nate stated that non-firm service is designed to give members more flexibility in the future in order to cover load. Reené was concerned over using the MDWG manual for MOD-032 compliance since it states that transactions should be limited to expected firm schedules. Anthony stated that explicit language needs to be added to the procedure manual.

Chris Colson asked that the MOD matrix be revisited since there is a big emphasis on the correct type and status of projects to be included in the different model sets. Anthony Cook replied that SPP is currently discussing the matrix internally before bringing back to the MDWG for revision.

Action Item: MDWG to revisit and update the MOD matrix at a later date

Chris Colson voiced concern over the misalignment of years between the MDWG and ITP models. Moses Rotich explained that the ITP study group defined year one based on when the study is completed whereas the modeling year 1 definition is based on when the model is completed, thus the increase and misalignment in models.

For the models highlighted in red (not needed by SPP staff), discussion centered on whether entities needed them for their own internal studies. Chris Colson stated that there is no

significant difference between the 2019 Light Load and 2019 Spring dynamic model and therefore, didn't see the need for the 2019 Spring dynamic model.

Motion: Chris Colson motioned to strike the 2019 Spring Dynamic model. Jason Shook seconded the motion. With only Westar opposing, the motion passed.

Anthony asked Jeremy to submit a written reason for the opposition.

Westar's response

Westar Energy opposed the removal of the 2019 Spring MDWG Dynamics case from the 2018 Series Build because it was the only Fall/Spring Peak load case remaining in the Near-Term. Currently, when operational stability studies are required in the Fall or Spring due to abnormal switching and/or clearing time modifications (taking primary protection out of service for example), Westar modifies the Year 1 Spring dynamics case to reflect system conditions and runs the study. This typically involves minor modifications to load and generation based on the season of study as well as backing out/in transmission projects. Now, Westar will need to try to make the Winter case (67% load) look like a Spring/Fall Peak (75% load). While this change in load is pretty minor, it's just one less tool we have in our tool box to try to use to achieve a meaningful study based on the Year 0 study conditions. We are already building a Year 1 Spring case for power flow (the heavy lifting by SPP Members), so this really isn't going to save the membership anymore time during the model build. In my opinion, not enough emphasis is made on the importance of the Year 0/Operational cases in general because they do not apply to Tariff studies. However, they are used by the SPP membership and may be critical depending on the given operating condition.

Motion: Jason Shook motioned to strike the 2018 Summer Shoulder power flow model. Chris Colson seconded the motion. The motion passed unanimously.

**Motion: Jason Shook motioned to approve the 2018 Series MDWG / 2019 ITP model set as modified. Chris Colson seconded the motion. The motion passed unanimously.
(Attachment 2 - 2018 Series MDWG-ITP Model Selection_MDWG_Approved.xlsx)**

Agenda Item 7 – Administrative Items:

Summary of Action Items

MDWG to revisit and update the MOD matrix at a later date

Future Meetings

- The next conference call meeting will be on July 5, 2017 to focus on approving the 2018 Series Schedule.

Adjourn Meeting

Seeing no further discussion, Nate solicited a motion to adjourn the meeting.

Motion: Scott Schichtl made the motion to adjourn the meeting. Jason Bentz seconded it. The motion passed unanimously.

Respectfully submitted,
Anthony Cook
SPP Staff Secretary

Southwest Power Pool, Inc.
MODEL DEVELOPMENT WORKING GROUP
June 27, 2017

• A G E N D A •

1:00 p.m. – 3:00 p.m.

1. Administrative Items Nate Morris
 - a. Call to Order
 - b. Introductions
 - c. Proxies
 - d. Agenda Review (**Action Item**)
 - i. Meeting Materials
2. 2018 Series Model Selection (**Action Item**) Anthony Cook/Moses Rotich
3. Administrative Items Nate Morris
 - a. Summary of Action Items
 - b. Future Meeting
 - c. Adjourn

Current	Future	2018 S		
MDWG	ITP		MDWG/MMWC	
Year Definition	Year Definition	Year	Season	P
0	-1	2018	Spring	X
0	-1	2018	Summer	X
0	-1	2018	Summer Shoulder	X
0	-1	2018	Fall	X
0	-1	2018	Winter	X
1	0	2019	Light Load	X
1	0	2019	Spring	X
1	0	2019	Summer	X
1	0	2019	Fall	X
1	0	2019	Winter	X
2	1	2020	Light Load	X
2	1	2020	Spring	X
2	1	2020	Summer	X
2	1	2020	Fall	
2	1	2020	Winter	X
3	2	2021	Light Load	X
3	2	2021	Summer	X
3	2	2021	Winter	
4	3	2022	Summer	
5	4	2023	Light Load	X
5	4	2023	Summer	X
5	4	2023	Summer Shoulder	X
5	4	2023	Winter	X
6	5	2024	Light Load	
6	5	2024	Summer	
6	5	2024	Winter	
10	9	2028	Summer	X
10	9	2028	Winter	X
11	10	2029	Light Load	
11	10	2029	Summer	X
11	10	2029	Winter	

TOTALS 23
NEW TOTALS 22

Series MDWG/2019 ITP					
BR	BA	MDWG/MMWG		MDWG	
Power Flow Model		Economic	Dynamic Models	Short Circuit Models	
					X
				X	
				X	
X	X			X	X
X					
X				X	
X					
X					
X	X			X	
X					
X					
X	X			X	
X	X	X		X	X
X					
X					
				X	
				X	X
				X	
X	X				
X	X	X			
X					
				X	
				X	
X	X				
X	X	X		X	
X					

18 8 3 13 4
18 8 3 12 4

LEGEND

Model Type	Category	Data
MMWG	X	Load, Transactions, Member Disp
MDWG	X	Load, Transactions, Member Disp
ITP	X	Load, Transactions, SPP Dispatch,

- BR** Base Reliability
- BA** Balancing Authority
- Economic** Economic Model used for ITP10
- X** Not requested by any SPP group Removed by MDWG

Input
atch, Topology
atch, Topology
. Topology

2018 Series Models - MOD Data Submissions

Year	Season	Load Forecast/Profile	Transactions	Generation Profile
2018	Spring	Yes	Yes	Yes
2018	Summer	Yes	Yes	Yes
2018	Summer Shoulder	Yes	Yes	Yes
2018	Fall	Yes	Yes	Yes
2018	Winter	Yes	Yes	Yes
2019	Light Load	Yes	Yes	Yes
2019	Spring	Yes	Yes	Yes
2019	Summer	Yes	Yes	Yes
2019	Fall	Yes	Yes	Yes
2019	Winter	Yes	Yes	Yes
2020	Light Load	Yes	Yes	Yes
2020	Spring	Yes	Yes	Yes
2020	Summer	Yes	Yes	Yes
2020	Fall	Yes	Yes	Yes
2020	Winter	Yes	Yes	Yes
2021	Light Load	Yes	Yes	Yes
2021	Summer	Yes	Yes	Yes
2021	Winter	Yes	Yes	Optional
2022	Summer	Yes	Yes	Optional
2023	Light Load	Yes	Yes	Yes
2023	Summer	Yes	Yes	Yes
2023	Summer Shoulder	Yes	Yes	Yes
2023	Winter	Yes	Yes	Yes
2024	Light Load	Yes	Yes	Optional
2024	Summer	Yes	Yes	Optional
2024	Winter	Yes	Yes	Optional
2028	Summer	Yes	Yes	Yes
2028	Winter	Yes	Yes	Yes
2029	Light Load	Yes	Yes	Optional
2029	Summer	Yes	Yes	Yes
2029	Winter	Yes	Yes	Optional

Topology

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

NOTES

Non-PSSE users will be able to submit data via an excel spreadsheet provided by SPP