



**Southwest Power Pool  
MARKETS & OPERATIONS POLICY COMMITTEE**

**Special Teleconference**

**September 12, 2018**

**-SUMMARY OF ACTIONS TAKEN-**

1. MOPC approved the ESWG ITP 2019 Assumption-Option 2



## MARKETS & OPERATIONS POLICY COMMITTEE

### Special Teleconference

September 12, 2018

### MINUTES

#### **Agenda Item 1 – Call to Order and Administrative Items**

Chair Paul Malone (NPPD) called the meeting of the Markets and Operations Policy Committee (MOPC) to order at 1:00 p.m., welcomed everyone who was in attendance and discussed the teleconference process on roll call by using the MOPC voting sheet.

#### **Agenda Item 2 –Receipt of Proxies (Attachment)**

Carl Monroe (SPP) read the list of proxies; there were 78 teleconference participants representing approximately 44 of the 97 members. (Attachments - Attendance List and Proxy Statements).

#### **Agenda Item 4- Economic Studies Working Group (Attachment)**

Juliano Freitas (SPP) presented the Economic Studies Working Group (ESWG) ITP 2019 Assumptions. Juliano discussed the Renewable Amount Scope Change, Objectives, Background, and Options 1, 2, and 3. ESWG recommends as a modification to the 2019 ITP scope that MOPC approve Option 2 to remove the wind sited at Riverside 345 kV (Tulsa area) from the study.

**Bill Grant (SPS) made a motion; seconded by Greg McAuley (OGE Trans) to approve the 2019 ITP scope modification Option 2 to remove the wind sited at Riverside 345 kV (Tulsa area) from the study. The motion passed by roll call vote of 82.1%.**

#### **Agenda Item 5 Action Items**

There were no action items were taken during today's MOPC teleconference.

#### **Agenda Item 6 Future Meetings**

Carl Monroe discussed futures meetings for the MOPC

October 16-17, 2018 Little Rock, AR  
January 15-16, 2019 New Orleans, LA  
April 16-17, 2019 Tulsa, OK  
July 16-17, 2019 Des Moines, IA  
October 15-16, 2019 Little Rock, AR

Paul Malone adjourned the meeting at 2:00 p.m.

Respectfully submitted,

Carl Monroe,  
Secretary

	First Name	Last Name	Company
	Aaron	Vander Vorst	Tradewind Energy, Inc.
	Alan	Decker	GRDA
	Alan	Myers	ITC Holdings, Inc
	Amber	Greb	SPP
	Andrew	Berg	Missouri River Energy Services
<b>Proxy</b>	Bary	Warren	Gridliance High Plains
	Bernard	Liu	Xcel Energy
<b>Member</b>	Bill	Bojorquez	Hunt Transmission
<b>Member</b>	Bill	Dowling	Midwest Energy Inc
<b>Member</b>	Bill	Grant	Southwestern Public Service-Xcel Energy
	Bill	Leung	Nebraska Power Review Board
<b>Member</b>	Bleau	LaFave	NorthWestern Energy
<b>Member</b>	Bob	Tallman	Oklahoma Gas & Electric- Electric Services
<b>Member</b>	Bradley	Hans	Municipal Energy Agency of Nebraska
<b>Member</b>	Brian	Johnson	American Electric Power-OK Transmission Co. (TU)
	Brian	Rounds	AESL Consulting
<b>Member</b>	Bruce	Walkup	Arkansas Electric Cooperative Corporation
<b>Member</b>	Burton	Crawford	KCP&L and Westar, Eergy Companies
	Calvin	Daniels	WFEC
	Carl	Monroe	Southwest Power Pool
<b>Member</b>	Carla	Holly	BP Wind Energy North America Inc. (reps-Flat Ridge 2 Wind Energy)
	Carrie	Dixon	Xcel Energy
<b>Member</b>	Carroll	Reddick	Western Farmers Electric Cooperative
	Chris	Lyons	Customized Energy Solutions
<b>Member</b>	Dale	Haugen	Mount rail-Williams Electric Cooperative
	David	Kays	OGE
	David	Ried	Bluestem Energy Solutions
<b>Member</b>	David	Mindham	ITC Holdings Corp.
	David	Bloom	Exelon
	Don	Frerking	KCP&L and Westar, Eergy Companies
	Ella	Caillouette	NorthWestern Energy
<b>Member</b>	Evan	Wilcox	American Electric Power-Southwestern Trans. Co (TU)
	Gayle	Nansel	Western Area Power Administration
	Geoffrey	Rush	Oklahoma Corporation Commission
<b>Member</b>	Greg	McAuley	Oklahoma Gas & Electric-Transmission
<b>Proxy</b>	Heather	Starnes	MJMEUC
<b>Member</b>	Holly	Carias	NextEra Energy Resources, LLC
	J.P.	Maddock	Basin Electric Power Cooperative
<b>Proxy</b>	Jack	Madden	GDS Associates (for East Texas Electric Cooperatives)
	James	Fife	Physical Systems Integration
	James M	Corboy	Calvert Advisors, LLC
<b>Proxy</b>	Jason	Doerr	Basin Electric Power Cooperative
	Jason	Davis	SPP
	Jason	Mazigian	Basin Electric Power Cooperative
	Jason	Speer	Southwest Power Pool
<b>Member</b>	Jason	Atwood	Northeast Texas Electric Cooperative
	Jason	Chaplin	Oklahoma Corporation Commission
<b>Member</b>	Jeff	Knottek	City Utilities of Springfield, MO
	Jim	Krajecki	Customized Energy Solutions, LTD
	Jody	Holland	Gridlance
<b>Member</b>	Joe	Lang	OPPD

	Joel	Dagerman	Nebraska Public Power District
	John	Tennyson	City Utilities of Springfield, MO
<b>Proxy</b>	John	Knofczynski	East River Electric Power Cooperative
<b>Member</b>	John	Olsen	Westar
	Jonathan	Hayes	Southwest Power Pool
	Josephine	Daggett	Western Area Power Administration-Upper Great Plains Region
	Josh	Norton	SPP
	Joshua	Phillips	Southwest Power Pool
	Juliano	Freitas	Southwest Power Pool
	Karla	Juarez	OMPA
	Kaye	McCarty	Southwest Power Pool
	Kelsey	Allen	Southwest Power Pool
	Kenneth	Hale	City Utilities of Springfield, MO
<b>Member</b>	Kevin	Bornhoft	Corn Belt Power Cooperative
	Kirk	Hall	Southwest Power Pool
<b>Proxy</b>	Kurt	Stradley	Lincoln Electric System
	Lanny	Nickell	Southwest Power Pool
<b>Member</b>	Larry	Holloway	Kansas Power Pool
<b>Member</b>	Lisa	Szot	Enel Green Power North America, Inc.
	Liz	Gephardt	Southwest Power Pool
<b>Member</b>	Lloyd	Linke	Western Area Power Administration
<b>Member</b>	Mary Ann	Zehr	Tri-State Generation and Transmission Association, Inc.
<b>Member</b>	Melie	Vincent	Oklahoma Municipal Power Authority
	Michael	Wegner	ITC Holdings
<b>Member</b>	Mo	Awad	KCP&L and Westar, Eergy Companies
	Moses	Rotich	Southwest Power Pool
	Neeya	Toleman	Southwest Power Pool
<b>Member</b>	Paul	Malone	Nebraska Public Power District
<b>Proxy</b>	Raman	Somayajulu	Enel Green Power North America, Inc.
<b>Proxy</b>	Ray	Bergmeier	Sunflower Electric Power Corporation
	Robert	Safuto	Customized Energy Solutions
	Robert	Pick	NPPD
<b>Member</b>	Robert	Janssen	Dogwood Energy, LLC
	Rodney	Massman	Missouri Public Service Commission
	Ronald	Thompson, Jr.	Nebraska Public Power District
	Ruth	Sakya	Southwestern Public Service Company
	Shawn	Geil	Kansas Electric Power Cooperative
	Shawnee	Claiborn-Pinto	Public Utility Commission of Texas
	Sherri	Maxey	Southwest Power Pool
<b>Proxy</b>	Steve	Gaw	Wind Coalition
<b>Member</b>	Steven	Drew	NextEra Energy Transmission, LLC
	Tim	Owens	Nebraska Public Power District
<b>Member</b>	Tim	Hall	Southern Power
<b>Member</b>	Tim	Brown	GRDA
	Tom	Kleckner	RTO Insider
<b>Member</b>	Tom	Hestermann	Sunflower Electric Power Corporation
	Tony	Alexander	Southwest Power Pool
	Walter	Shumate	Shumate & Associates

Aaron	Doll	Member	The Empire District Electric Company	
Aaron	Pupa	Member	Midwest Gen, LLC.	
Adam	Graff	Member	Heartland Consumers Power District	
Al	Tamimi	Member	Sunflower Electric Power Corp	Ray Bermeier
Andrew	Rosenlieb	Member	Entergy Asset Management	
Becky	Turner	Member	Plains and Eastern Clean Line LLC & Grain Belt Express Clean Line	
Bill	Bojorquez	Member	Hunt Transmission Services	
Bill	Dowling	Member	Midwest Energy, Inc.	
Bill	Grant	Member	Xcel Energy (SWN Public Service Co)	
Bleu	LaFave	Member	Northwestern Energy	
Bob	Burner	Member	Duke American Transmission Co. (DATC) & Duke Energy Transmission Holding Co. (DETHCO)	
Bob	Tallman	Member	OG&E Electric Services	
Bobby	Ferris	Member	Lea County Electric Cooperatives	
Brad	Hans	Member	Municipal Energy Agency of Nebraska	
Brett	Kruse	Member	Calpine Energy Services, L.P.	
Brian	Johnson	Member	AEP OK Transmission Co.	
Bruce	Walkup	Member	Arkansas Electric Cooperative	
Burton	Crawford	Member	KCP&L GMO	
Carla	Holly	Member	Flat Ridge 2 Wind Energy	
Carl	Monroe	Staff Secretary	Southwest Power Pool	
Carroll	Reddick	Member	Western Farmers Electric Cooperative	
Cheryl	Bredenbeck	Member	Xcel Energy Southwest Transmission Co	
Chris	Giles	Member	Tri-County Electric Coop	
Chris	Hendrix	Member	Walmart, Inc.	
Courtney	Mehan	Member	Tenaska Power Services Co.	
Dale	Haugen	Member	Mountrail-Williams Elec. Coop	
Daniel	Kuehn	Member	Cielo Wind Services	
David	Lazos	Member	El Paso Marketing Co.	
David	Mindham	Member	ITC Great Plains	
David	Raatz	Member	Basin Electric Power Coop.	Jason Doerr
Denise	Buffington	Member	Kansas City Power & Light & Transource Energy & Transource MO & Prairie Wind Transmission LLC	Mo Awad
Dennis	Florum	Member	Lincoln Electric System	Kurt Stradley
Eddy	Reece	Member	Rayburn Country Electric Coop	
Eric	Hixson	Member	Central NE Public Power & Irrigation District., The	
Evan	Wilcox	Member	AEP Southwestern Trans. Co.	
Greg	McAuley	Member	OGE Transmission	
Gregory	Coco	Member	Cleco Power	

Gregory	Pakela	Member	DTE Energy Trading	
Harshi	Panchal	Member	XO Energy SW, LP	
Holly	Carias	Member	NextEra Energy Resources	
Jason	Atwood	VICE-CHAIR	Northeast Texas Electric Coop.	
Jeff	Knottek	Member	City Utilities of Springfield, Missouri	
Jennifer	Vosburg	Member	NRG Louisiana Generating	
Jerry	Ohmes	Member	Board of Public Utilities (KC, KS)	
Jim (James)	Edwards	Member	East River Electric Power Cooperative	John Knofczynski
Jim	Jacoby	Member	AEP-Public Service Co of OK	
Jimmy	Wever	Member	Public Service Comm. of Yazoo City, MS	
Joe	Lang	Member	Omaha Public Power District	
John	Brodbeck	Member	EDP Renewables North America	Steve Gaw
John	Grotzinger	Member	MO Joint Municipal Elec. Utility Comm.	Heather Starnes
John	Olsen	Member	KGE-Westar Energy	Mo Awad
Josh	Martin	Liaison Member	SPP Board of Directors	
Julian	Brix	Liaison Member	SPP Board of Directors	
Ken	Meringolo	Member	Competitive Power Ventures	
Kenneth	Weber	Member	Harlan Municipal Utilities	
Kevin	Bornhoft	Member	Corn Belt Power Cooperative	
Larry	Holloway	Member	Kansas Power Pool	
Les	Evans	Member	Kansas Electric Power Coop	
Lisa	Szot	Member	Enel Green Power North America	Raman Somayajulu
Lloyd	Linke	Member	Western Area Power Administration- Upper Great Plains Region	
Lucy	Johnston	Member	Luminant Energy Co.	
Mark	McCulla	Member	Entergy Services, Inc.	
Mary Ann	Zehr	Member	Tri-State Generation & Trans Assoc, Inc.	
Melie	Vincent	Member	Oklahoma Municipal Power Authority	
Michael	Shook	Member	City of Coffeyville	
Mo	Awad	Member	Westar Energy	
Natasha	Henderson	Member	Golden Spread Electric Cooperative	
Noman	Williams	Member	Gridliance High Plains, LLC	Bary Williams
Paul	Lampe	Member	City of Independence, MO	
Paul	Malone	CHAIR	Nebraska Public Power District	
Philip	Pauls	Member	Cargill Power Markets LLC	
Phyllis	Bernard	Liaison Member	SPP Board of Directors	
Randy	Porter	Member	Crocker Wind Farm, LLC	
Resmi	Surendran	Member	Shell Energy North America	
Richard	Ross	Member	American Electric Power-SWEPCO	
Rob	Janssen	Member	Dogwood Energy, LLC	
Robert	Priest	Member	Clarksdale Public Utilities (City of Clarksdale)	

Ryan	Thomas	Member	Tex-La & ETEC	Jack Madden
Steve	Drew	Member	NextEra Energy Transmission, LLC	Holly Carias
Steven	Ver Mulm	Member	Northwest Iowa Power Cooperative	
Terry	Wolf	Member	Missouri River Energy Services	
Tim	Brown	Member	Grand River Dam Authority	
Tim	Hall	Member	Southern Power Co	
Tom	Hestermann	Member	Sunflower Electric Power Corp. (Mid-Kansas Electric, Inc.)	
Tom	Meland	Member	Central Power Electric Cooperative, Inc.	Jason Doerr
Tom	Saitta	Member	Kansas Municipal Energy Agency	
Tracy	Golden	Member	Northeast NE Public Power District	
		Member	Acciona Wind Energy	
		Member	Boston Energy Marketing & Trading	
		Member	Dynegy Marketing & Trading	
		Member	Exelon Generation Co.	
		Member	Lafayette Utilities System (City of Lafayette)	
		Member	Louisiana Energy & Power Authority	
		Member	Mercuria Energy America, Inc (formerly Noble Americas Gas & Power Corp)	
		Member	NextEra Energy Transmission Southwest, LLC	
		Member	WPX Energy Marketing LLC (formerly Williams Power)	

**Recommendation:**

**RECOMMENDATION APPROVED:**

**YES**

**82.1%**

Enter a "1" in the voting column

**MEMBERS VOTING**

<b>Transmission Owners</b>			
	<b>Y</b>	<b>N</b>	<b>A</b>
Basin Electric Power Cooperative	1		
Empire District			
Grand River Dam Authority	1		
Kansas City Power & Light	1		
Kansas City Power & Light - GMO	1		
Kansas Gas & Electric (Westar)	1		
Mid-Kansas Electric Company	1		
Midwest Energy	1		
Nebraska Public Power District	1		
Oklahoma Gas & Electric	1		
Omaha Public Power District			
Public Service Co. of Oklahoma (AEP)			
Southwestern Public Service (Xcel Energy)	1		
Sunflower Electric Power	1		
SW Electric Power Company (AEP)	1		
Western Area Power Administration - UGP	1		
Western Farmers Electric Coop	1		
Westar Energy	1		
<b>Total</b>	<b>15</b>	<b>0</b>	<b>0</b>
<b>Percentage Approving:</b>			
	<b>100.00%</b>		
<b>For SPP membership as of:</b>	<b>97</b>		
	<b>7/17/2018</b>		
<b>Load Weighted Vote</b>			
<b>#REF!</b>			

<b>Transmission Users</b>			
	<b>Y</b>	<b>N</b>	<b>A</b>
Acciona Wind Energy, LLC			
AEP Southwestern Transmission Company, Inc			
AEP Oklahoma Transmission Company, Inc.	1		
Arkansas Electric Cooperative Co.			
Board of Public Utilities (KC, KS)			
Boston Energy Trading & Marketing, Inc.			
Calpine Energy Services			
Cargill Power Markets			
Central Nebraska Public Power & Irrigation District, The			
Central Power Electric Cooperative, Inc.	1		
Cielo Wind Services, Inc.			
City of Clarksdale, MS-Clarksdale Public Utilities			
City of Coffeville, KS			
City of Lafayette, LA-Lafayette Utilities System			
City Power & Light, Independence, MO			
City Utilities, Springfield, MO	1		
Cleco Corporation			
Corn Belt Power Cooperative	1		
CPV Renewable Energy Company, LLC			
Crockett Wind Farm, LLC			
Dogwood Energy			1
DTE Energy Trading, Inc.			
Duke -American Transmission Co. LLC			
Duke Energy Transmission Holding Company LLC			
Dynegy Marketing & Trading			
East River Electric Power Cooperative	1		
East Texas Elec Coop	1		
EDP Renewables North America LLC.			1
EI Paso Merchant Energy			
Enel Green Power North America, Inc.			1
Energy Asset Management			
Energy Services			
Exelon Generation Company, LLC			
Flat Ridge 2 Wind Energy, LLC			1
Grain Belt Express Clean Line, LLC			
GridLiance High Plains LLC			1
Golden Spread Electric Coop	1		
Harlan Municipal Utilities			
Heartland Consumers Power District			
Hunt Transmission			1
ITC - Great Plains			1
Kansas Electric Power Coop			
Kansas Municipal Energy Agency			
Kansas Power Pool	1		
Lea County Electric Cooperative, Inc.			
Lincoln Electric System			
Louisiana Energy & Power Authority			







**MARKETS & OPERATIONS POLICY COMMITTEE  
Special Teleconference  
September 12, 2018  
Wednesday 1:00p.m. - 2:00p.m. CDT**

**• A G E N D A •**

**ADMINISTRATIVE ITEMS**

- 1. Call to Order and Administrative Items .....Paul Malone (10 minutes)
- 2. Receipt of Proxies .....Carl Monroe (1 minute)
- 3. Review of Agenda ..... Paul Malone (1 minute)

**SPP MOPC WORKING GROUPS & TASK FORCES**

- 4. ITP 2019 Assumptions

**IMPORTANT REMINDER**

If desired; parties voting No or Abstain send comments to Carl Monroe by COB Friday

**SUMMARY OF ACTION ITEMS**

- 5. Action Items.....Carl Monroe (2 minutes)

**FUTURE MEETINGS**

- 6. Future Meetings..... Paul Malone (1 minute)
    - January 15-16, 2019 New Orleans, LA
    - April 16-17, 2019 Tulsa, OK
    - July 16-17, 2019 Des Moines, IA
    - October 15-16, 2019 Little Rock, AR
- (1) - Background Material Included



HELPING OUR MEMBERS WORK TOGETHER  
TO KEEP THE LIGHTS ON... TODAY AND IN THE FUTURE.

# Renewable Amount Scope Change

MOPC

# Objectives

Review wind level and siting adjustment options to address the recent announcement to cancel Wind Catcher

Determine best option to include in the 2019 ITP scope

# Background

- 7/26/2017 - 2,000 MW Wind Catcher project announced
- 9/13/2017 - ESWG discusses 2019 ITP renewable expansion plan
- 9/28/2017 - ESWG continues 2019 ITP renewable expansion plan discussion
- 10/4/2017 - ESWG approves total SPP wind levels for 2019 ITP

Wind Totals (GW)	2024	2029
Future 1	25	26
Future 2	29	32

- 1/16/2018 - MOPC approves the 2019 ITP Scope, including wind levels
- 5/31/2018 - ESWG approves renewable siting plan, including wind sited in Tulsa area
- 7/26/2018 - Public Utility Commission of Texas rejects Wind Catcher proposal
- 7/27/2018 - AEP announces cancellation of Wind Catcher

# Options

1. Move forward with no model changes but perform additional analysis during portfolio development
2. Remove the wind sited in Tulsa area, reducing the wind levels modeled in SPP by that amount
3. Relocate wind from the Tulsa area site to other wind sites, keeping the same levels of wind modeled in SPP

# Option 1 - Move forward with no model changes

- Utilize Tulsa area site as proxy for other wind generation that may be requested in area
- Perform additional analysis on drivers of potential projects in Tulsa area and facilitate additional stakeholder vetting during project screening and portfolio development
  - 360 additional resource hours
  - Risk of reduced stakeholder support about validity of study results
  - Increases stakeholder engagement and time commitment
  - Risk to on-time completion, mitigation of delays has not yet been determined



# Option 2 - Remove the wind sited in Tulsa area from the models

- Removing the wind sited in Tulsa area will reduce the amounts of wind in the two futures by corresponding amount in the models
- Does not require additional analysis or stakeholder vetting of the portfolios, like Option 1 does
- Staff mitigation work would keep DPP window on schedule to open 1/8/19
  - 215 additional resource hours already incurred
  - Staff proceeded with this option in order to mitigate any schedule delays
  - No expected risk to final completion

# Option 3 - Relocate wind at the Tulsa area site to other sites

- Relocate Tulsa area wind to next ranking sites according to approved wind ranking criteria
- Wind amounts will remain the same for the two Futures as originally scoped
- Does not require additional analysis or stakeholder vetting of the portfolios, like Option 1 does
- Will require additional model adjustments and stakeholder vetting of the new sites and adjusted models
  - 480 additional resource hours
  - Six-week schedule delay
  - Will delay the DPP window opening
  - Risk to on-time completion, mitigation of delays has not yet been determined

# ESWG Recommendation

- As a modification to the 2019 ITP scope, ESGW recommends MOPC approve Option 2 to remove the wind sited at Riverside 345 kV [Tulsa area] from the study

# Justification for Option 2

- Assumptions about appropriate SPP wind levels to be studied originally included an expectation that Wind Catcher would be built, thus it is appropriate to remove it and reduce the wind levels to be studied by a corresponding amount now that the Wind Catcher project has been canceled
- This option incurs least study costs, reduces expected stakeholder vetting time, and is most likely to facilitate timely study completion
- A project portfolio resulting from the study performed under the recommended modified scope is expected to receive a higher degree of stakeholder support



**Southwest Power Pool, Inc.**  
**ECONOMIC STUDIES WORKING GROUP**

**Recommendation to the Markets and Operations Policy Committee**

**8/24/2018**

**2019 ITP Scope Modification**

**Organizational Roster**

The following persons are members of the Economic Studies Working Group:

Alan Myers (Chair), ITCGP	Tim Owens, NPPD
Randy Collier, CUS	Jeremy Severson, BEPC
Natasha Henderson, GSEC	Bradley Schwartz, Hunt Trans. Services
Jody Holland, GHP	Anita Sharma, AEP
Leon Howell, OGE	Kurt Stradley, LES
Jon Iverson, OPPD	Al Tamimi, SEPC
Bethany King, EMDE	Michael Watt, OMPA
Gayle Nansel, WAPA	Bennie Weeks, Xcel Energy Service
John Olsen, KCPL & Westar, Evergy	

**Background**

In October 2017, the Economic Studies Working Group (ESWG) approved a recommended amount of wind generation levels to be included in the 2019 ITP Scope. The wind levels approved are noted in the table below:

<b>Wind Totals (GW)</b>	<b>2024</b>	<b>2029</b>
<b>Future 1</b>	25	26
<b>Future 2</b>	29	32

The approved wind levels were based upon discussion at the ESWG starting in September 2017 and carrying over through three separate meetings. Discussion regarding wind levels for the 2019 ITP Assessment included integrated resource plan announcements. This discussion also occurred after the public announcement from AEP regarding the 2,000 MW Wind Catcher project, known to be interconnecting in the Tulsa area. The Markets and Operations Policy Committee approved the 2019 ITP Scope during its regularly scheduled January meeting in 2018.

Staff and stakeholders continued to develop the assumptions for the 2019 ITP economic models for the siting milestone. The wind siting criteria developed by staff and approved by the ESWG led to a siting plan that included amounts up to 2,000 MW of wind generation to be interconnected in the Tulsa area. The renewable siting plan included the following wind resource amounts at Tulsa area and was approved by the ESWG on May 31, 2018.

<b>MW Sited</b>	<b>2024</b>	<b>2029</b>
<b>Future 1</b>	855	1357
<b>Future 2</b>	2000	2000

During the Generation Outlet Facilities milestone, staff learned that the point of interconnection of the projected wind resource previously sited at the Tulsa North 345 kV station had moved to a different location in the SPP Generator Interconnection (GI) Queue. This led staff to question the location of the wind originally sited at Tulsa North 345 kV. On July 26, staff made a presentation to the ESWG recommending the siting of (up to) 2,000 MW of wind at Tulsa North 345 kV station be moved to Riverside 345 kV station (south of Tulsa) based on the latest information in the GI Queue. Due to the siting process relying on GI Queue information specifically for wind resources, the recommendation was made in an effort to remain as consistent to the queue as possible<sup>1</sup>, and, due to the status of the study at that time, the change could be accommodated with little to no impact on schedule and resources. The ESWG approved staff’s recommendation to re-site the generation from Tulsa North 345 kV to Riverside 345 kV. That same day, staff learned that the Public Utility Commission of Texas rejected the proposed Wind Catcher project. The following day AEP announced the cancellation of the Wind Catcher project.

Upon the project’s cancellation by AEP, numerous stakeholders reached out to SPP staff to discuss the ramifications of the project’s cancellation on the 2019 ITP Assessment. Staff determined its best course of action was to develop options to address the Wind Catcher cancellation and discuss with the TWG and ESWG during their regularly scheduled face-to-face meetings in August.

**Analysis**

Staff developed 3 options to address this issue to the 2019 ITP to account for the cancellation of the Wind Catcher project for discussion with the ESWG. . The three options were as follows:

- Option 1: Move forward with no model changes, additional analysis during portfolio development
- Option 2: Remove the wind sited at Tulsa area from the study, reducing the amount of wind
- Option 3: Replace the Tulsa area site with other wind sites, keeping the same amount of wind

Option 1 considers the utilization of the Tulsa area station as a proxy for other wind generation in the area regardless of the cancellation of the Wind Catcher project. During discussion with the ESWG, staff communicated that the *initial* impact on resources and the schedule would be minimal, however, additional analysis and both internal (SPP staff) and external (SPP stakeholders) vetting during the project screening and portfolio development milestones, would require the largest overall additional effort of the three options.

Option 2 includes the removal of the wind sited at the Tulsa area site from the approved renewable amounts noted in the scope. The approved wind totals would be modified based upon the table below:

<b>Wind Totals (GW)</b>	<b>2024</b>	<b>2029</b>
<b>Future 1</b>	24.2	24.6
<b>Future 2</b>	27	30

Due to the removal of accredited wind, adjustments to the conventional resource plan would be necessary for some areas to meet reserve margin requirements. For F1, one 216 MW combustion turbine<sup>2</sup> would be needed starting in the 2024 study year. The combustion turbine would be located in the Upper Missouri Zone (UMZ) at the Roundup 345 kV station and allocated to seven separate areas, including UMZ, WERE, OG&E, SPS, OPPD, WFEC, and AEP. For F2, the individual CTs sited at SPS’ Plant X 115 kV station (100% SPS ownership) and AEP’s Oneta 345 kV station (ownership to AEP, OG&E, and CUS) would be commissioned in 2024 rather than 2029, as approved in the conventional resource plan.

<sup>1</sup>Staff reviewed the GI Queue and found no other GI requests had moved to different Points of Interconnection.

<sup>2</sup> The 216 MW combustion turbine is a prototype resource approved by the ESWG.

Option 2 was staff's recommendation to the ESWG based upon the knowledge that this option would be the smallest impact to schedule and results, even though it requires a scope change that must be approved by the MOPC. However, no additional resources would be required.

Option 3 requires no changes the approved wind amounts and no need to update the 2019 ITP Scope. However, the removed capacity at the Tulsa area station would be replaced with wind sited at alternate locations, as noted in the table below.<sup>3</sup>

<sup>3</sup> Amounts in yellow indicate an addition of capacity in the corresponding future and study year. Amounts in italics indicate a lesser capacity was included in the approved renewable resource plan, but would be increased in Option 3.

Site	Future 1 (MW)		Future 2 (MW)	
	2024	2029	2024	2029
Clinton Junction - Weatherford Southeast 138kV	9.8	9.8	9.8	9.8
Woodward EHV 345kV	200	200	200	200
Wessington Springs 230kV	3.4	3.4	3.4	3.4
Viola 345kV	129	129	129	129
Terry Road 345kV	250	250	250	250
Hilken 230kV	6.6	6.6	6.6	6.6
Ranch Road 345kV	152	152	152	152
Minco 345kV	100	100	100	100
Breckinridge 138kV	3.8	4.5	4.5	4.5
Johnston County 345kV		304	304	304
Hitchland 345kV		359	359	359
Gracemont 345kV		250	250	250
S1399 161kV		10.5	10.5	10.5
Ranch Road 345kV		76.4	200	200
Cottonwood Creek-Marshall Tap 138kV			200	200
Beaver County 345kV			300	300
Woodward EHV 345kV			341	341
Woodring 345kV			250	250
Mooreland Windfarm 138kV			150	150
Mathewson 345kV			663	998
Belle Plain 138kV				125
Hugo-Sunnyside 345kV				200
Badger-Woodward 345kV double circuit				400
Sooner-Woodring 345kV				251
Clark-Thistle 345kV double circuit				150
Optima 345kV				200
Buffalo Flats 345kV				25
Moore 345kV				428
West Gardner 345kV				285

Under Option 3, 342.4 MW of wind capacity initially commissioned in F1 2029 would be accelerated to F1 2024. Wind capacity initially added only in F2 would be added to F1, 512.2 MW in F1 2024 and an additional 844.8 MW in F1 2029. 2000 MW of wind capacity initially commissioned in F2 2029 would be accelerated to F2 2024. For F2 2029, one site would be increased from 61.4 MW and eight additional sites totaling 1938.6 MW would be selected for wind additions.

Staff believes 360 hours will be required for additional analysis needed to support Option 1 during the later milestones of solution development, grouping, optimization, and portfolio consolidation. These additional hours would be spent on additional production cost analysis and internal/external vetting of solutions/results. Due to this additional work and vetting, this introduces the potential risk to on-time completion of the overall study and raises questions regarding the validity of the study. Option 1 does not require a Scope change.



Option 2 required an additional 215 hours of work to mitigate a three-week schedule delay. Staff proceeded with Option 2 work following the ESWG vote to allow the DPP window to remain on schedule to open 1/8/2019, and no expected risk to final completion.

Option 3 requires rework due to reopening of completed milestones, additional stakeholder vetting and approvals, and rework on current milestones estimated to be 480 hours. However, the schedule impact would ultimately be a six-week delay, putting the overall on-time completion in jeopardy. While Option 3 would not require a Scope change because the previously approved renewable amounts are maintained, MOPC approval of a Section 9.3 change may be required at a later date to obtain additional resources to ensure the study is completed on time.

The ESWG voted to approve Option 2 with 8 votes in favor, 6 votes against, with 2 members abstaining. Those votes against the motion were: Alan Myers, John Olsen, Brad Schwarz, Tim Owens, Kurt Stradley, and Jody Holland. The individuals abstaining from voting for the motion were: Bethany King and Natasha Henderson.

After the meeting, some ESWG members provided the following information to provide additional insight for the MOPC to consider.

#### Voted in favor

Randy Collier (CUS)

*City Utilities supports the ESWG motion to remove wind capacity sited at Riverside in the 2019 ITP model. The Wind Catcher project was ~2 GW of wind and its cancellation should be factored into the 2019 ITP model. Reduction of the projected wind totals used and reduction of the wind accreditation amounts related to Wind Catcher allow for a more accurate model of the current situation (cancellation of Wind Catcher). Since the Wind Catcher cancellation is publicly acknowledged and there is sufficient time to incorporate this change into the 2019 ITP model, City Utilities is supportive of changing the 2019 ITP model per Option 2.*

#### Voted against

Kurt Stradley (LES)

*It seems after the lengthy discussion that Option 3 would be the best choice, due to the fact it would leave the assumptions previously approved intact on the amounts of wind to be included in the two Futures for the 2019 ITP. Option 3 would remove proxy wind (Wind Catcher) sited at Riverside and redistribute that wind to the other SPP sites as shown in the presentation materials, using the siting criteria previously approved. Option 3 would be more straight forward avoiding revisions to the 2019 ITP scope and having MOPC expedite the process to approve the scope change.*

Tim Owens (NPPD)

*After considering the discussion during the ESWG meeting, I voted no on the motion to proceed with Option 2 to address the recently announced cancelation of the Wind Catcher project, because I believe that Option 3, also presented during the meeting, was a better choice from both a technical and risk perspective. Unlike Option 2, Option 3 would have left the previously approved assumptions regarding projected wind development for the two Futures in the 2019 ITP intact. These assumptions were developed and approved without specific consideration of the Wind Catcher project. Option 3 would have removed proxy wind capacity currently sited at Riverside and redistributed it to other locations in the SPP footprint using the approved siting*

*criteria, as described in the presentation materials. If the wind sited at Riverside is considered to be a proxy for Wind Catcher, then this approach seems to more appropriately express the original intent of the two Futures, than does Option 2. Option 3 would also have avoided the need to change the 2019 ITP scope and would therefore have eliminated the schedule risk associated with requesting expedited action by the MOPC to approve the scope change, which will be required for Option 2.*

Brad Schwarz (Hunt Transmission Services)

*I voted no on Option 2 due to the ad hoc MOPC vote that would be required and I thought Option 1 allowing the stakeholder project vetting process would work better than rushing through a vote on Option 2.*

Alan Myers (ITCGP)

*ITC voted no regarding the option to replace the 2000 MW of wind interconnected at Riverside in the 2019 ITP study with CT's in other locations for the following reasons:*

- 1. The change may set an unfortunate precedent for future ITP studies when unexpected changes occur during a study period. It was the intention of the TPITF to minimize these type of changes in order to be able to have the benefit of producing results every year.*
- 2. Elimination of 2000 MW of wind is not consistent with the approved future definitions and we would prefer that the original values, which represented a compromise among stakeholders, be maintained.*
- 3. Other options were discussed which appeared to ITC to better address the issue.*

John Olsen (KCPL and Westar, Evergy Companies)

*Evergy voted no on the motion to replace the wind generation with conventional generation because the motion reduces the total wind generation in the previously approved Futures. Evergy prefers that we maintain the approved levels of wind generation in the two Futures. The ESWG could have approved alternate wind sites per the siting guidelines and could have done so without additional cost or impact to the ITP schedule.*

Although the recommendation comes from the ESWG, this topic was brought to the TWG prior to the ESWG discussion due to the groups' related purviews. The TWG requested a straw poll be conducted on all options to inform the ESWG discussion; no members voted in favor or option 1, 13 members voted in favor of option 2, and 5 members voted in favor of option 3.

### **Recommendation**

The ESWG recommends the MOPC approve Option 2

**Approved:** Economic Studies Working Group 8/15/2018  
8 in favor, 6 against, 2 abstentions

**Action Requested:** Approve recommendation