

## Washington, Nevada Join 100% Clean Energy Movement New Mexico's Largest Utility Also Commits to Goal

By Hudson Sangree

Washington state lawmakers approved legislation last week requiring the state to rely entirely on zero-emission and renewable energy by 2045.

Gov. Jay Inslee, a Democratic presidential candidate who heavily promoted the effort, said he looked forward to signing [SB 5116](#) just after the state Senate voted to send it to his desk. Once that happens, Washington will become the fifth state — after Hawaii, California, New Mexico and most recently Nevada — to adopt a 100% clean energy mandate.

"On this Earth Day, I couldn't be more proud of the legislature's action to pass the country's most forward-looking clean energy bill," Inslee said in a statement April 22. "This bill will fundamentally transform Washington's energy



Washington state's clean-energy resources include the Windy Flats project in Klickitat County. | © RTO Insider

future and transition us to 100% clean energy."

Nevada Gov. Steve Sisolak signed legislation the same day to achieve a similar outcome. [SB 358](#) requires the state to produce enough carbon-free electricity by 2050 to meet all its needs and to get half its electricity from

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## PJM Stakeholders OK Financial Risk Management Task Force

By Christen Smith and Rich Heidom Jr.

VALLEY FORGE, Pa. — PJM stakeholders approved a [charter](#) on Thursday for a senior task force dedicated to implementing market rule changes in the wake of the 890 million-MWh GreenHat Energy default.



Vince Duane | © RTO Insider

"The board message is quite clear that it's not going to happen again," Vince Duane, PJM's general counsel of law, compliance and external relations, told the Markets and Reliability Committee. "If we are going to offer products that present this kind of

risk, we need to be robust and confident that we can manage the risks associated with it."

The Financial Risk Senior Management Task Force will assemble beginning May 2 to consider changes to credit and risk management requirements, market rules, membership qualifications and the stakeholder process

in response to an independent probe of the default that uncovered structural flaws. PJM wants stakeholders to form solutions and make recommendations for Tariff and Operating Agreement revisions to the MRC and Board of Managers by the end of year.

"It's not lost on any of us at PJM that this is going to be an investment of time and resources, and we want to make sure it's efficient and that we are risk-managing products that are being used and are valuable," Duane said. "If it doesn't meet that litmus test, I think we have to ask why we are doing it."

The PJM Board of Managers released the independent review of the GreenHat debacle

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**PJM DER Task Force Considers New Direction** (p.27)

**PJM Sector Whips Clash with PJM Board over Pilot Rollout** (p.28)

## NERC Standards Retirements Go to Final Ballot

By Rich Heidom Jr.

A NERC standards drafting team (SDT) has opened a [final ballot](#) on the elimination of all or parts of 18 reliability standards as Phase 1 of the organization's standards efficiency review (SER) nears its conclusion.

Ballot pool members will have until this Thursday to vote on the changes: the withdrawal of one proposed reliability standard, the complete retirement of 10 standards and the elimination of certain requirements for seven standards. ([See chart on page 4.](#))

All the proposed retirements received 88 to 99% support in segment-weighted voting in the initial ballot that closed April 12. "They all passed at pretty high percentages," observed NERC's Laura Anderson, standards developer for the SDT at a team meeting April 17.

NERC's [ballot body](#), representing its 10 industry segments, currently has 525 members.

Proposed retirements that clear a two-thirds segment-weighted threshold on the final ballot will proceed to final approval by NERC's Board of Trustees, likely at the board's May meeting. Votes from the initial ballot are automatically included in the final ballot, although voters can change their positions.

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# ERO INSIDER

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This is a preview of ERO Insider, a new publication providing exclusive coverage of NERC and the Regional Entities that form the Electric Reliability Organization. Pricing and other details will be coming later this spring. For now, email any feedback on our coverage to [EROInsider@RTOInsider.com](mailto:EROInsider@RTOInsider.com).

## NERC Standards Retirements Go to Final Ballot

*Continued from page 1*

### Pruning the Rules

The Standards Efficiency Review Retirements effort ([Project 2018-03](#)) was created to take a second look at the rules that have been created since FERC certified NERC as the electric reliability organization (ERO) in 2006.

Three teams — representing real-time operations, long-term planning, and operations planning — identified for elimination requirements that were duplicative, obsolete or that were administrative and did not provide reliability benefits. Many of the standards to be retired relate to commercial business practices governed by the North American Energy Standards Board (NAESB) Wholesale Electric Quadrant (WEQ).

NERC last month closed the comment period on Phase 2 of the SER project. The phase involves considering changes in six areas of the organization's operations and planning (O&P) and critical infrastructure protection (CIP) standards, including evidence retention time frames, moving requirements to guidance, simplifying training requirements and consolidating data exchange requirements. (See "Chair Urges Comments on Standards Efficiency Review," [NERC Standards Committee Briefs: March 20, 2019](#).)

The comments on the Phase 1 recommendations indicated how much the industry has changed since NERC became the ERO and gained enforcement authority.

For example, Black Hills Corp. said requirements 16 and 17 of standard TOP-001-4 provide no reliability benefit. The rule is intended to ensure prompt action to prevent or mitigate instability, uncontrolled separation or cascading outages.

The requirements direct transmission operators and balancing authorities to provide their system operators with authority to approve planned outages of its telemetering and control equipment, monitoring and assessment capabilities, and associated communication channels.

The requirements "don't even align with most, if not all, standard business processes," Black Hills' Maryanne Darling-Reich said. "The outage coordinator, [supervisory control and data acquisition emergency management system], IT networking and communications departments determine the impacts of all 'planned'



The project team discussed the results of the preliminary balloting on the elimination of all or parts of 18 reliability standards during a meeting at NERC's Atlanta headquarters April 17. | © RTO Insider

outages of telemetry equipment. Most system operators do not even have the technical knowledge to make a substantiated decision to delay or postpone this work."

### MOD Standards

Eight of the 18 standards proposed for retirement were from NERC's modeling (MOD) family of rules. The SDT proposed the elimination of seven of the MOD standards, including those on calculations of capacity benefit margins, transmission reliability margins and transfer capability — requirements incorporated in NAESB standards.

The [standard authorization request](#) (SAR) that initiated the SER project said that available transfer capability (ATC) and available flow-gate capability (AFC) are "commercially based values used to facilitate a market for unused transmission capacity in an open access environment and that the values do not directly

control the operation of the [bulk power system]. ... [Transmission operators] are ultimately responsible for operating the grid in a reliable manner consistent with system operating limits, not ATC/AFC values."

The team also proposed not implementing MOD-001-2, which has been awaiting FERC approval since February 2014 ([RM14-7](#)). It was intended to ensure calculations of available transmission system capability support reliability and that the methodology and data behind the calculations are disclosed to applicable registered entities.

The SAR said MOD-001-2 was not needed because although ATC and AFC values can influence real-time conditions, other standards, including subsequent improvements to TOP rules, ensure that real-time operations observe system operation limits. The "commercially based values and market related issues [regarding ATC/AFC] should not be addressed



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through NERC reliability standards,” it said.

Despite the high level of support for the retirements, there were some forceful dissents.

Duke Energy, for example, said it could not support the elimination of the seven existing MOD standards if MOD-001-2 is withdrawn.

“We disagree with the commercial-based focus that the drafting team took in the technical rationale document,” Duke’s Kim Thomas wrote. “While these MOD standards (and ATC

calculation) may have some commercial-based elements to them, they also put in place valuable boundaries that help promote consistency in how the industry calculates these values. Removing these boundaries does not promote reliability for the bulk electric system and introduces additional burden to the real-time system operator.”

Southern Co. took a similar position, saying that transferring the seven MOD standards to NAESB without enacting MOD-001-2 would

upset the “appropriate balance of addressing reliability-related concerns, while incorporating any market related issues.

“Simply stating that ATC/AFC calculations are primarily commercially focused elements and that there are mechanisms in place to address reliability in real time is an oversimplification of the ATC/AFC concept,” Southern’s Marsha Morgan wrote. “Inaccurately modeling and assessing transfer capability which considers real physical transmission limits on both the host and neighboring systems can create extremely complicated situations in real time that can unduly burden system operators.”

PJM, which was neutral on the elimination of MOD-001-2, supported the proposal to transfer the other MOD standards to NAESB, saying “reliability components of congestion management are handled amongst Eastern Interconnect parties through various established coordination processes.”

It warned against additional revisions to the NAESB WEQ rules, “especially those driven by issues unique to particular seams or between specific entities, as those issues may not be realized by other parties.”

“Therefore, blanket revisions may unnecessarily impact reliability and/or market aspects for other entities,” PJM’s Preston Walker said.

## NERC Standards Proposed for Retirement (Project 2018-03)

Standard	Proposal (R=Requirement)	Purpose
FAC-008-3	Retire R7, R8	Ensure facility ratings used in the reliable planning and operation of the Bulk Electric System are based on technically sound principles
FAC-013-2	Complete retirement	Ensure PCs perform annual assessments to identify potential future transmission system weaknesses and limiting facilities over near-term planning horizon
INT-004-3.1	Complete retirement	Ensure dynamic schedules & pseudo-ties are communicated and accounted for appropriately in congestion management procedures
INT-006-4	R3.1, R4, and R5	Ensure that responsible entities conduct a reliability assessment of each Arranged Interchange before it is implemented
INT-009-2.1	Retire R2	Ensure BAs implement the interchange as agreed upon in the interchange confirmation process
INT-010-2.1	Complete retirement	Provide guidance for required actions on confirmed/implemented interchange
IRO-002-5	Retire R1	Provide System Operators capabilities to monitor/analyze data
MOD-001-1a	Complete retirement	Ensure TSPs perform calculations to maintain awareness of available system capability and future flows on theirs and neighbors' systems
MOD-001-2	Withdrawal	Ensure calculations of available transmission system capability support reliability and underlying methodology/data are disclosed to applicable registered entities
MOD-004-1	Complete retirement	Promote consistent/reliable calculation and use of CBM to support analysis, system operations
MOD-008-1	Complete retirement	Promote consistent/reliable calculation and use of TRM to support analysis and system operations
MOD-020-0	Complete retirement	Ensure that assessments and validation of past events and databases can be performed; requires LSEs, transmission planners and resource planners to provide system operators and RCs data on interruptible demands and direct control load management
MOD-028-2	Complete retirement	Increase consistency/reliability of transfer capability calculations for short-term use by entities using Area Interchange Methodology
MOD-029-2a	Complete retirement	Increase consistency/reliability of transfer capability calculations for short-term use performed by entities using Rated System Path Methodology
MOD-030-3	Complete retirement	Increase consistency/reliability of transfer capability calculations for short-term use performed by entities using Flowgate Methodology
PRC-004-5(i)	Retire R4	Identify/correct the causes of misoperations of protection systems for BES elements
TOP-001-4	Retire R19, R22	Ensure prompt action to prevent/mitigate instability, uncontrolled separation, or cascading outages
VAR-001-5	Retire R2	Ensure voltage levels, reactive flows, and reactive resources are maintained within limits in real-time to protect equipment and reliability

### INT Standards

Also proposed for retirement are four interchange scheduling and coordination (INT) standards relating to interchange coordination, dynamic schedules, pseudo-ties and transmission loading relief procedures.

The SAR said the standards are duplicative of NAESB rules and that two of them are unenforceable because the “purchasing selling entity” is no longer a NERC registered function.

Duke also opposed the retirement of requirements 3.1, 4 and 5 of INT-006-4.

“We are not confident that this issue is adequately covered in the NAESB standards. Unlike the NERC standards which aim to promote reliability, the NAESB standards are commercially focused, and are not viewed as essential to maintaining a reliable system,” Thomas said. “We believe that not having these conditions outlined could negatively impact reliability.”

Morgan disagreed, saying requirements 4 and 5 are duplicative of the NAESB e-Tagging specifications “and are not a reliability-related task performed by a NERC registered entity.” ■

#### Abbreviations

BA: Balancing Authority | BES: Bulk Electric System | CBM: Capacity Benefit Margin | IROL: Interconnection Reliability Operating Limits | PC: Planning Coordinators | SOL: System Operating Limits | TLR: Transmission Loading Relief | TRM: Transmission Reliability Margin | TSP: Transmission Service Providers

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## FERC OKs NERC Violation Settlements

By Rich Heidorn Jr.

FERC last week accepted settlements with Duquesne Light Co. and an unnamed municipal utility in the Western Electricity Coordinating Council for violations of NERC reliability standards. The commission filed a notice Friday that it would not review the penalties, leaving NERC's settlements intact (NP19-6).

NERC reported the settlements in a spreadsheet [notice of penalty](#) on March 28.

### \$40,000 Penalty for Duquesne Light

Duquesne agreed to a \$40,000 penalty for inaccurate ratings of some substation conductors and a 138-kV circuit, violations of FAC-008-3 R6.

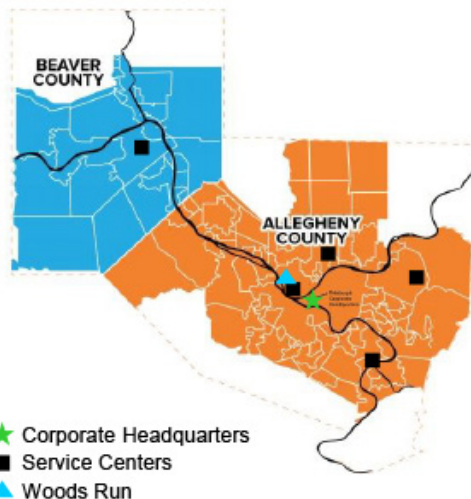
The substation inaccuracy — caused by entering an incorrect input value into one of the rating equations — resulted in a reduction of the overall facility rating for three transformers.

The violation extended for more than two years because Duquesne “lacked an effective verification control” to quickly detect and correct the error, NERC said. The company alerted regional entity ReliabilityFirst of the problem in a self-report in August 2017, after completing its mitigation plan.

NERC said the violation did not indicate a systemic issue with Duquesne's FAC-008 program because only about 3% of the company's bulk electric system (BES) transmission facilities were affected.

NERC determined the violation posed a moderate risk and could lead to equipment failure. “The risk is increased because of the long multiyear duration of the violation, but the risk is lessened (and not serious) because only one of the incorrect substation conductor ratings [was] the most limiting factor for these facilities,” NERC said. “The changes that did result in a facility ratings change did not impact the load dump ratings at any ambient temperature set but did impact the normal and emergency ratings.”

The second violation, involving the Clairton-West Mifflin 138-kV circuit, was discovered during a compliance audit in December 2017. NERC said a section of overhead stranded conductor was not shown in Duquesne's circuit map. After updating the map, Duquesne conducted a new analysis that resulted in reducing the summer 95 degrees Fahrenheit



Duquesne Light Co. serves 600,000 customers in Allegheny and Beaver counties in Pennsylvania. | *Duquesne Light Co.*

continuous rating from 932 amperes to 919 amperes.

The violation resulted in ratings reductions for three of Duquesne's 85 BES transmission circuits (4%).

Although the incorrect ratings were in place for more than three years, NERC characterized the risk as minor “because the change in rating on the 138-kV circuit was minimal: just 13 amperes.”

NERC credited Duquesne for its cooperation in the investigation but said the company's FAC-008/FAC-009 compliance history was an aggravating factor in determining the penalty.

### Muni Lacked Familiarity with NERC Standards

FERC also chose not to review NERC's settlement with an unnamed municipal utility over six violations of critical infrastructure protection (CIP) standards. NERC redacted some details of the violations and the utility's name to protect critical energy/electric infrastructure information (CEII).

NERC's filing said the utility:

- Mischaracterized cyber systems at a substation as low-impact BES cyber systems (LIBCS) that should have been considered medium-impact BES cyber systems (MIBCS). An incorrect analysis found the systems connected to only two other substations

when they were actually connected to four other transmission assets and had ties to two different entities, NERC said.

- Failed to eliminate unneeded network accessible ports from an engineering workstation in a data center.
- Failed to conduct an adequate security patch management program, including a requirement to check for new security patches every 35 days. NERC cited the entity's “lack of knowledge and understanding of CIP standards.”
- Gave five employees electronic or unsecured physical access to its MIBCS without having completed access request forms.
- Failed to identify in its baseline configuration all of its network accessible ports and security patches applied to assets.
- Failed to perform required change management activities for BES assets, electronic access control monitoring systems and physical access control systems.
- Failed to provide evidence that it removed the ability of employees to access its systems within 24 hours of a termination.

NERC imposed no financial penalties for the violations and said none of them posed a “serious or substantial risk” to the reliability of the BES. The entity is a “very small municipal power company that employs few staff and has an extremely low turnover,” NERC said. ■



# NextEra's Adjusted Earnings Beat Expectations

By Tom Kleckner



NextEra Energy officials said they expect the company to continue increasing

adjusted earnings near the top end of a previously disclosed 6 to 8% growth rate for the year.

"I'll be disappointed if we are not able to deliver [those] financial results," CEO Jim Robo told analysts during an earnings call April 23.

The company *reported* first-quarter earnings of \$680 million (\$1.41/share), compared to \$4.43 billion (\$9.32/share) a year ago.

However, adjusting for federal tax reform and investments, NextEra reported earnings of \$1.06 billion (\$2.20/share), beating analysts' expectations. The Florida-based company's adjusted earnings a year ago were \$929 million (\$1.96/share).

Investors reacted by driving down the company's stock slightly to \$189.79/share, a 74-cent loss during the day. NextEra's share price has gained 9.2% since the year began and 17% over the past year.

Gulf Coast Power contributed 8 cents/share to earnings, following the close of its acquisition at start the quarter. (See *FERC Approves NextEra's Gulf Power Acquisition*.)

NextEra said the utility's integration "continues to progress smoothly" despite the loss of about 7,000 customers in the aftermath of Hurricane Michael. CFO Rebecca Kujawa said the utility expects 60 to 80% of those customers to return, and it has filed to recover \$350 million in restoration expenses.

The company said NextEra Energy Resources has added about 1 GW of renewable resources to its backlog, including its first co-located combined wind, solar and storage project. The wholesale supplier expects to develop

more than 6.4 GW of wind and solar projects through 2020.

NextEra's Florida Power & Light subsidiary *announced* in January a "30-by-30" plan to install more than 30 million solar panels by 2030.

Addressing NextEra's reported \$8 billion offer for South Carolina's troubled state-owned utility, Santee Cooper, Robo said he expects a decision by June. The utility was involved in a failed effort to build the V.C. Summer nuclear plant.

"I think the state realizes Santee has upwards of \$4 [billion] to \$5 billion of debt on an asset ... that is never going to generate income," Robo said. "I think the vast majority of folks in the state understand they need to address [this issue], and the key stakeholders are, I think, working hard to come to a conclusion about how the process is going to move forward. You can imagine we will continue to play in the process." ■

## Contracted Wind and Solar Development Program<sup>(1)</sup>

Wind	Location	MW	Solar	Location	MW
<b>2017:</b>			<b>2017:</b>		
Oliver III	ND	99	Whitney Point	CA	20
Golden Hills North	CA	46	Marshall	MN	62
Bluff Point	IN	120	Westside	CA	20
Cottonwood	NE	90	Distributed Generation	Various	97
	<b>Total 2017 Wind:</b>	<b>355</b>		<b>Total 2017 Solar:</b>	<b>199</b>
<b>2018:</b>			<b>2018:</b>		
Lorenzo	TX	80	Stuttgart	AR	81
Wildcat Ranch	TX	150	Pinal Central	AZ	20
Pratt	KS	243	Bluebell	TX	30
Heartland Divide	IA	103	Titan	CO	50
Minco IV	OK	130	Coolidge	VT	20
Casa Mesa	NM	50	Distributed Generation	Various	125
Torrecillas	TX	300		<b>Total 2018 Solar:</b>	<b>326</b>
Armadillo Flats	OK	247			
Blue Summit II	TX	99			
	<b>Total 2018 Wind:</b>	<b>1,402</b>	<b>2019 – 2020:</b>		
<b>2019 – 2020:</b>			Blythe III	CA	125
Burke	ND	200	New England	Various	160
Emmons-Logan	ND	300	Wilmot	AZ	100
Waymart II	PA	68	Blythe IV	CA	62
Crowned Ridge I	SD	300	Quitman	GA	150
Eight Point	NY	102	Shaw Creek	SC	75
Sky River	CA	62	Chicot	AR	100
Dodge County	MN	170	Dougherty	GA	120
Borderlands	AZ	100	Bluebell II	TX	100
Roundhouse	WY	150	Grazing Yak	CO	35
Soldier Creek	KS	300	Florida	FL	224
Blue Summit III	TX	201	Saint	AZ	100
Pretty Prairie	KS	160	Two Creeks (BOT)	WI	150
White Hills	AZ	50	Distributed Generation	Various	90
Buffalo Ridge	MN	109		<b>Total 2019 – 2020 Solar:</b>	<b>1,591</b>
Pegasus	MI	121			
Sholes	NE	160	<b>Post – 2020:</b>		
Cerro Gordo	CA	40	Point Beach	WI	100
Skeleton Creek	OK	250	Route 66	NM	50
Fort McKavett	TX	50	Dodge Flat	NV	200
Jordan Creek	IN	400	Fish Springs Ranch	NV	100
Bronco Plains	CO	300	Arlington	CA	131
Cedar Springs	WY	200	High River	NY	90
Wheatridge	OR	200	East Point	NY	50
Wheatridge (BOT)	OR	100	Proxima	CA	50
Pretty Prairie	KS	23	Bellefonte	TN	150
Contracted, not yet announced		120	Elora	TN	150
	<b>Total 2019 – 2020 Wind:</b>	<b>4,236</b>	Wheatridge	OR	50
			New England	Various	207
			Contracted, not yet announced		860
				<b>Total Post – 2020 Solar:</b>	<b>2,188</b>

| NextEra

# AEP off to 'Excellent Start' with Q1 Earnings



BOUNDLESS ENERGY™

American Electric Power said it is off to an "excellent start for 2019," beating analysts' expectations for the first

quarter and completing a deal with Sempra Energy that adds more than 700 MW of wind generation.

AEP on Thursday *reported* earnings of \$572.8 million (\$1.16/share), exceeding Zack's consensus estimate by 6 cents and beating 2018's first-quarter profits of \$454.4 million (\$0.92/share).

The Columbus, Ohio-based company began the week by *announcing* its competitive renewable subsidiary, AEP Clean Energy Resources,

had completed the purchase of Sempra Renewables for \$1.05 billion. The deal includes Sempra's 724-MW portfolio of operating wind generation, battery assets and development staff.

Asked during a conference call with financial analysts why AEP is buying, and not building, wind and solar, CFO Brian Tierney said the deal takes the company to "the next level."

"We're very selective in the assets we looked at, looking for high-quality contracted assets with creditworthy counterparties," Tierney said. "What this opportunity brought with it was a lot of wind, some battery, contracted with high-quality counterparties, but it also brought a team with it, and that team is something that we didn't organically have from

a development standpoint. So we got not just a team, but also development projects in the pipeline that we wouldn't have had otherwise."

The acquisition means AEP has now spent \$1.5 billion of the \$2.2 billion it has committed to renewable energy projects.

"We're looking at opportunities as they become available," Tierney said.

CEO Nick Akins did not participate in the call. AEP said Akins was not "feeling well," but he expects to be back at work "soon."

The company's share price rose from its \$83.52 open on Thursday to close the week at \$84.71. It is up 32.1% since reaching its nadir of \$64.11 in June. ■

— Tom Kleckner



| Sempra Energy



Sempra Renewables' Boulder Solar II project | Sempra Renewables

# Avangrid Earnings Drop on Weak Wind

By Michael Kuser



Declining wind output drove down Avangrid's first-quarter earnings by 11% compared to a year earlier, company officials said last week.

Avangrid *posted* net income of \$217 million (\$0.70/share), down from \$244 million (\$0.79/share) in the same quarter a year ago. The drop was driven primarily by a \$46 million decrease in the company's Renewables business, from \$50 million in Q1 2018 to \$4 million this year. Wind production during the period averaged 14% below 2018 levels, reflecting "the impacts of storms and severe weather," CFO Doug

Stuver said in an *earnings call* Thursday.

The drop in the Renewables business was partially offset by an \$18 million increase in the company's Corporate segment "due to favorable tax impacts," Stuver said.

Total revenue for the quarter was down by 1.2%, from \$1.865 billion in 2018 to \$1.842 billion.

CEO James Torgerson told analysts that despite the hiccup in wind output, Avangrid expects nearly 1 GW of renewables under construction to come online this year and has increased its pipeline by 1.6 GW to 15.4 GW, which includes 4.4 GW of solar.

Its Vineyard Wind offshore project, a joint venture with Copenhagen Infrastructure Partners, is on track, "with nearly 70% of the

supply chain secured," Torgerson said. The project's contracts with the electric distribution companies recently received Massachusetts Department of Public Utilities approval. "Now, we are targeting to have all 800 MW in operation by the end of 2021," he said.

With their Liberty Wind project, Avangrid and Copenhagen also submitted a bid in New York's first offshore wind solicitation, with options for 400, 800 and 1,200 MW. (See [Four Bidders Vie for NY Offshore Wind Project](#).) The New York State Energy Research and Development Authority is expected to announce the winner this spring.

The companies also submitted to Rhode Island two proposals of 200 MW and 300 MW each, with the selection of bidders expected in May. ■

## CAISO/WECC NEWS



# PG&E Departure Leaves EIM Vacancy

By Hudson Sangree

The CAISO Energy Imbalance Market's Governing Body will search for a candidate to replace former member Kristine Schmidt after she resigned earlier this month to join embattled PG&E Corp.'s board, EIM leaders said Wednesday.

Original Governing Body member Kristine Schmidt was selected on April 3 to sit on PG&E's 13-member board along with her onetime boss at FERC, former Commissioner Nora Mead Brownell, who was named chair. The board appointments are likely to be approved at PG&E's next in-person shareholder meeting, probably in June. (See [Former FERC Commissioner Brownell Named PG&E Chair.](#))



Kristine Schmidt | © RTO Insider

EIM Chair Valerie Fong said at Wednesday's Governing Body meeting that Schmidt had to

resign from the EIM because "she would be conflicted. She couldn't be on both boards." Schmidt resigned April 1, Fong said.

Governing Body members thanked Schmidt for her service and wished her well. Schmidt joined the body's teleconference briefly and also expressed her gratitude.

An EIM nominating committee will seek to fill the seat.

Also, at Wednesday's meeting, Fong and colleague John Prescott were both re-elected by the only two members allowed to vote — Carl Linvill and Travis Kavulla. Normally, Fong and Prescott would have been asked to leave the room for the vote, but they were only requested to cover their ears.



John Prescott | © RTO Insider

After extensive stakeholder input, CAISO's Board of Governors appointed the EIM's first Governing Body — which included Schmidt, Fong, Linvill and Prescott — in June 2016.

The EIM allows real-time interstate trading of electricity and has been widely hailed as a success, saving its participants an estimated \$565 million since it began in November 2014.

PG&E Corp. and its utility subsidiary Pacific Gas and Electric filed for Chapter 11 bankruptcy reorganization in January, citing the potential for billions of dollars in wildfire liability.

The company is going through a board "refreshment" process after two years of deadly and catastrophic fires. It has faced political pressure to include more utility and safety experts on its board.

PG&E on April 22 said it had reached an agreement with Blue Mountain Capital Management, a major shareholder that opposed its initial board choices. The company said it would appoint one of Blue Mountain's preferred candidates, Fred Buckman, the former CEO of Consumers Energy and PacifiCorp. Buckman will replace Richard Kelly, who resigned from the board. PG&E also said it was hiring Christopher Hart, former chairman of the National Transportation Safety Board, as a special independent safety adviser. ■

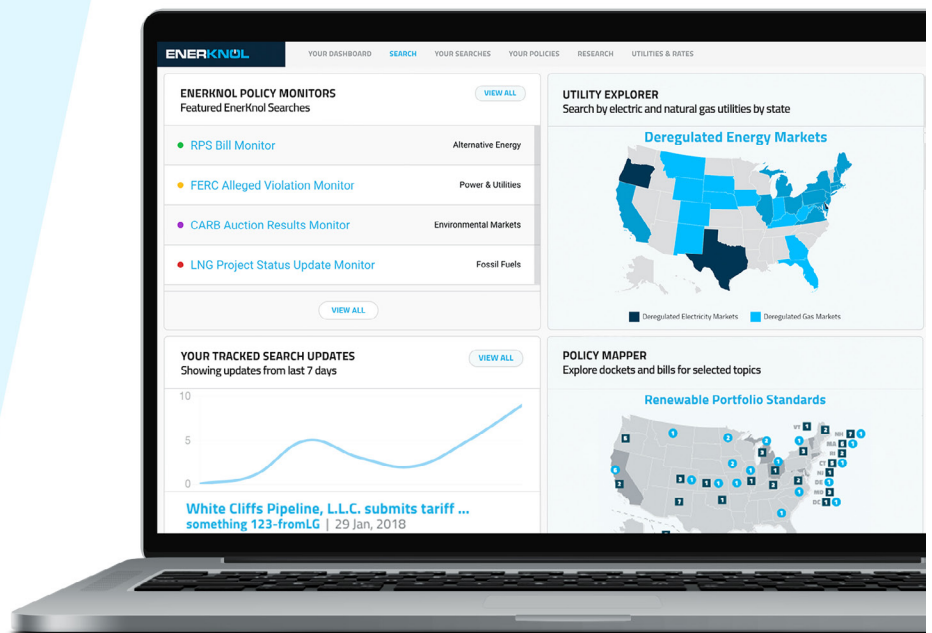
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# CAISO/WECC NEWS



## Washington, Nevada Join 100% Clean Energy Movement

Continued from page 1

non-emitting sources by 2030.

“Renewable energy is a major cornerstone of my economic development plan, and this bill will put Nevada back on the path toward renewable energy leadership on a nationwide level and continue to bring well-paying jobs to our communities,” Sisolak said in a signing statement.

Also on April 22, Public Service Company of New Mexico announced it was setting a goal of providing 100% emissions-free energy by 2040, five years ahead of the requirements set by the state’s clean-energy mandate. PNM said it was the first large investor-owned utility in the nation to establish such a goal.

“We ... realized that we were not only up for the challenge of 100% emissions-free by 2045 but thought we can actually do it five years early while maintaining reliability and affordability for customers,” PNM Resources Chairman Pat Vincent-Collawn said in a news release.

“The future is changing fast,” Vincent-Collawn said. “Here at PNM we are proud of how far we have come but know there is still so much to be done.”

The number of states, cities and corporations going all green has grown so quickly that some call it contagious.

The Sierra Club, which keeps an *up-to-date list* of state and local governments to join the movement, said this week 131 cities and counties, from Florida to Alaska, have committed to getting all their electricity from non-polluting



The Dalles Dam on the Columbia River is one of the major hydroelectric resources in Washington state. | © RTO Insider

and renewable resources and five cities – including Aspen, Colo., and Kodiak Island, Alaska – have met that goal.

The rapid spread raises concerns among utilities and regulators. During a meeting last week in Salt Lake City, many expressed concerns about having enough electricity to meet demand and maintain grid stability as fossil fuel plants retire and intermittent renewables, such as wind and solar, proliferate. (See *Westerners Wrestle with Resource Adequacy, Grid Reliability*.)

Some who spoke at the joint meeting of the Committee on Regional Electric Power Cooperation and the Western Interconnection Regional Advisory Body (CREPC-WIRAB) said

parts of the West could experience shortages soon.

Ann Rendahl, a Washington state regulator, said in the Pacific Northwest, “There’s increasing uncertainty there is sufficient resource adequacy in the next five years. ... Everyone is agreeing we’re approaching this point.”

David Mills, Puget Sound Energy’s senior vice president of policy and energy supply, said coal plants are closing, intermittent resources are saturating the market and natural gas plants, the “last backstop of reliability,” are retiring. He and other speakers urged Western states and utilities to create a centralized entity to oversee supply. ■

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## CAISO/WECC NEWS



# California Regulators Weigh PG&E's Fate

## Judges, Lawmakers Also Could Determine Utility's Future

By Hudson Sangree

The California Public Utilities Commission hosted a forum Friday where some experts urged it to break up Pacific Gas and Electric despite the challenges attending that move, while others favored keeping the troubled utility intact.

Whatever the outcome, PUC President Michael Picker said, the solution is likely to seem as bad as the problem to many people.

"It's not a question of 'out of the frying pan and into the fire,'" Picker said. "It's 'which fire are we going to pick?'"

Friday's forum was the second in a series of [public meetings](#) on PG&E held by the PUC.

State regulators and other authorities have been discussing PG&E's future with greater urgency since it filed for Chapter 11 bankruptcy reorganization Jan. 29. The utility cited billions of dollars in potential wildfire liability for its bankruptcy and said it might seek to rescind hundreds of costly power purchase agreements entered into when prices for renewable energy were higher than they are today. (See [PG&E Wants to Undo Contracts, Revamp Biz in Bankruptcy](#).)

Recent disasters blamed on PG&E have increased public and political antipathy toward the 114-year-old utility, headquartered in San Francisco.

State investigators have concluded PG&E equipment started wildfires that killed at least 22 people in 2017 and 2018. Not included in that total is the Camp Fire, the deadliest in state history, which killed 85 residents and destroyed most of Paradise, a town of 27,000 in the Sierra Nevada Foothills. Investigators have yet to determine the cause of the fire, but PG&E said its equipment is likely to blame.

After "so much death and destruction," the utility faces an unprecedented turning point, said David J. Hayes, executive director of the State Energy & Environmental Impact Center at the New York University School of Law. "You're never going to have a time, I think, when the public is more supportive of extraordinary steps than you have right now," he told PUC commissioners.

Hayes and others suggested that breaking up PG&E into smaller entities could accomplish



Most of the homes in Paradise were gutted by the Camp Fire, the deadliest in California history. | © RTO Insider

several goals, including reducing the risk of cyberattacks. If attackers took down PG&E, it would eliminate gas and electric service for much of California, he noted. But "the system becomes more resilient" if PG&E is separated into smaller units, he said.

### 'Culture of Entitlement'

The arbiters of PG&E's fate go beyond the PUC. They currently include a federal bankruptcy judge and another federal judge overseeing PG&E's criminal probation in the 2010 San Bruno gas pipeline explosion that killed eight residents of a suburban San Francisco neighborhood. (See [Federal Judge to Review PG&E's Wildfire Plan](#).)

Gov. Gavin Newsom, state lawmakers and the state attorney general's office have weighed in. (See [Calif. Must Limit Wildfire Liability, Governor Says](#).) So has FERC, along with ratepayer advocates, fire victims and generators that sell electricity to PG&E. (See [Judge Puts Off](#)

[Decision in PG&E v. FERC](#).) The FBI is helping local authorities conduct a criminal investigation of PG&E's involvement in the Camp Fire, according to some [news reports](#).

At stake in all this activity is the future of the state's largest utility, which supplies electricity and gas to 16 million residents across 70,000 square miles of Northern and Central California, or about 42% of the state.

PG&E's critics contend the public's safety hangs in the balance, and that the utility's finances must not take precedence. The utility is irredeemably flawed, some say.

"No amount of incentives, CEO compensation or board member replacement can fix a company infected with a culture of entitlement," said Scott Hempling, a regulatory adviser and adjunct professor at Georgetown University Law Center.

PG&E believes it's entitled "to remain the monopoly franchisee indefinitely, no matter how

## CAISO/WECC NEWS



many rules you break, how much evidence you hide, how many felonies you commit [or] how much damage you do," Hempling told the PUC.

To stand up to PG&E, state officials must be ready to adopt alternatives to the monopoly, investor-owned utility, he said. "We need to show that 'too big to fail' is a myth."

PG&E insists it's taking safety concerns seriously and trying to change. It announced plans this month to install a new chief executive and 11 new board members out of 13, touting the new members' utility and safety experience. (See [Former FERC Commissioner Brownell Named PG&E Chair](#).)

On April 22, however, PG&E provoked more public outrage by asking the PUC to increase its return on equity — a major source of profits — from 10.25% to 16% to help pay for \$28 billion in fire safety and other upgrades over the next four years. (Southern California Edison, also blamed for deadly wildfires, recently requested that FERC approve a higher ROE for safety-related transmission line investments.)

"PG&E is proposing a \$1.2 billion increase in its currently approved cost of capital, based on a 16% return on equity," the utility said in a [news release](#). The proposed increase is meant to ensure access to capital markets and would raise an average customer's electricity bill by about 7%, it said.

"Investors must continue to play a vital role in providing the capital necessary to fund essential safety and reliability infrastructure upgrades," CFO Jason Wells said in the statement. "These investments allow PG&E to offset the upfront, immediate costs of these long-term projects to our customers."



A senior citizens community in Paradise, Calif., was destroyed by the Camp Fire in November. PG&E has said its equipment was likely to blame for the fire that killed 85 people. | © RTO Insider

Travis Kavulla, director of energy and environmental policy at the R Street Institute, a D.C. think tank, and a member of the Western Energy Imbalance Market's Governing Body, said the applications for higher returns on equity filed by PG&E and SCE would base a quarter to a third of the companies' future profits on predicted fire liabilities.

The utilities, especially PG&E, "have already made in essence an opening bid to say what amount of their profit is guided by wildfire-related risk," Kavulla said. Instead, he said, profits should be connected to measurable results.

"A significant amount of this firm's profits ... should be tied explicitly to achievement of safety outcomes rather than simply being earned as a return paid on capital investments," Kavulla said.

### IOU vs. POU

In the debate about breaking up PG&E, Bere Lindley, assistant general manager of the South San Joaquin Irrigation District, a publicly owned utility, said it would make sense for some areas of PG&E's territory to become municipal utilities. Publicly owned utilities (POUs) are governed by elected officials and responsible to customers, not shareholders, he said.

POUs have been shown, on average, to lower rates and increase reliability, he argued.

"Customers, owners and the public are the same people in the POU model. They have the same interests," Lindley said. "The POU structure provides an elegantly simple solution to align natural stakeholder interests for a monopoly business."

The Los Angeles Department of Water and

Power, the Sacramento Municipal Utility District (SMUD) and 39 other public entities provide electric service in California. LADWP — the largest POU in the country — has 3.9 million customers; the smallest POUs serve fewer than 400 residents, according to the California Energy Commission.

Currently, only San Francisco, one of the nation's wealthiest cities, is seriously considering acquiring PG&E's equipment and forming a municipal utility, Commissioner Martha Guzman Aceves said. Other communities would likely lack the means, she said, leading to disparities in electric service based on wealth.

Susan Mac Cormac, a partner at corporate law firm Morrison & Foerster, moderated the panel. She said municipal utilities don't have the resources to cover the billions of dollars in capital expenditures that PG&E likely faces to upgrade its infrastructure and cover wildfire costs. She recommended keeping the utility intact.

John Di Stasio, president of the Large Public Power Council and former CEO of SMUD, said municipal utilities often have top credit ratings and access to capital. Still, he acknowledged, local governments would face significant challenges in trying to take over from PG&E. SMUD faced difficult hurdles in attempting to annex outlying areas of Sacramento from the utility.

"This is a significant hill to climb," he said.

One example of those challenges came from Sam Weaver, the mayor pro tempore of Boulder, Colo., who participated in the PUC forum by telephone.

Boulder has spent years battling Xcel Energy, the large IOU that serves the city, to take over its poles and lines and create a municipal utility. The results of that effort remain uncertain, and Boulder will likely pursue condemnation proceedings, Weaver said.

Even if Boulder's municipalization effort ultimately fails, it may still achieve positive results in terms of rates and quality of service, he said.

Xcel committed in December to providing its customers with carbon-free energy by 2050, becoming the first large IOU to make such a pledge. The move was likely a response to Boulder's pledge to provide all-renewable energy by 2030 if it created its own utility. (See [Xcel Pledges to Go 100% Carbon Free](#).)

"It applies pressure to the [investor-owned] utility because you establish yourself as a customer, and not just as a captive ratepayer," Weaver said. ■





## Texas RE 2019 Spring Standards and Compliance Workshop Briefs

### Self-certification Changes Include Additional Time

AUSTIN, Texas — The Texas Reliability Entity has *revised* its self-certification process to make it more efficient for registered entities, staff said last week.

Self-certification is an attestation by registered entities on whether they are compliant or not with a reliability standard requirement. They can also declare that they do not own facilities subject to the requirement or that the requirement is otherwise not applicable.

Keith Smith, manager of operations and planning compliance monitoring, told attendees of Texas RE's Spring Standards and Compliance *Workshop* on Thursday that registered entities will now be given more advance notice of the process and that TRE has worked to improve the quality of information it first receives.

In previous years, registered entities were given 30 days' notice before the start of the self-certification process, with attestations due on the day the process begins. They will now be given 90 days, with submissions due 60 days before self-certification starts. That gives entities an extra 30 days of back-and-forth communication with TRE.

"We want you to provide us all the information up front, so we don't have this continuous back and forth," Smith said.

TRE's self-certification worksheets will include questions crafted to obtain "appropriate and sufficient evidence" of compliance, he said. Registered entities will also be asked to provide narratives that support the attestation and identify internal controls, helping TRE staff in understanding how the entity arrived at its attestation.

Smith hopes this will eliminate the constant clarification requests and responses during self-certification, which slows the entire process. TRE processed 12 self-certifications in 2018 and is already halfway to that number this year.

### New Systems to Improve Efficiencies

COO Jim Albright advised entities to be on the lookout for a pair of new technology systems that will be coming online over the next two years.

The Centralized Organization Registration ERO System (CORES) is scheduled to go live



Texas RE COO Jim Albright briefs entity reps on new software systems. | © RTO Insider

June 17, replacing several other systems on NERC's ERO Portal. A repository for collecting registered entity data and documentation, CORES will improve the processing of registration requests, Albright said.

TRE will host testing of the system at its office *May 16*.

Albright also discussed the new Align system, a common portal for use by NERC, regional entities and registered entities in performing their compliance monitoring and enforcement program activities. Align, which Albright called a "whole new tool for work," will be released in three stages, beginning in September. Release 2 is scheduled for the first half of 2020, with Release 3 anticipated in the second half of 2020.

The first release will enable entities to create and submit self-reports and self-logs, view and track enforcement actions, and receive and respond to requests for information.

Albright said the system will use CORES' information to align NERC and the REs' business processes, improve documentation, sharing and analysis of compliance activities, and provide "deep and broad views" of reliability across the ERO enterprise.

"We're banking on this creating efficiencies across the ERO and [allowing] us to work with other regions," said Albright, chair of the project's steering committee. "We can't share information easily now. Align will take care of that."

### TRE CEO Welcomes Attendees

TRE CEO W. Lane Lanford made a brief appearance at the workshop to welcome attendees and remind them that ERCOT's historically low 7.4% reserve margin does not mean the end times are here.

"I remember when I was at the legislature and it was a hot day. We would be hoping everything would work out alright," said Lanford, who managed legislative issues during his 12 years as the Public Utility Commission's executive director.

"The narrower reserve margins [Texas faces] doesn't mean the sky is falling or you run out with your hair on fire," he said. "It's something we hope you are preparing for. If we can help you, call on us. We all have to get there somehow."

### FBI: Cyber Crime Growing from New Software Tools

FBI Senior Special Agent Duncan Edwards gave a "non-classified" presentation on cybersecurity issues, warning attendees of the latest developments in ransomware, botnets, spoofing and dark web marketplaces.

The availability of Wi-Fi "crackers" and other software applications are driving the surge in cybercrime, Edwards said. "You don't have to be a super hacker. Like anything in life, if you can make a buck on it, why not do it?" he said.

Edwards pointed out that the weakest link in

# ERCOT NEWS



internal security measures is “human error.”

“Your training is only as good as the individual who follows the training and protocols in place,” he said.

## NERC Collecting Data on Wind Resources

NERC’s Generation Availability Data System (GADS) is expanding its collection of wind data

and is planning to add solar data, said Mark Henry, TRE’s director of reliability services.

GADS has long collected outage data and operating history on conventional generation. Filings are due 45 days after the end of each quarter.

GADS Wind is collecting similar data from wind resource owners, with a phased-in implementation through 2020. GADS began collecting data on 200-MVA resources in 2018, and those between 100 and 200 MVA started filing in 2019. All units greater than 75 MVA must begin filing in 2020, and smaller units may participate voluntarily.

GADS Solar is on the horizon, possibly in 2022, Henry said.

## TRE Budget Up 5.7% for 2020

TRE’s Board of Directors reviewed its preliminary *budget* proposal for 2020 during a Wednesday conference call. The \$13.8 million budget is a 5.7% increase over 2019’s final budget of \$13.1 million.

Personnel costs, TRE’s largest expenses, are up 4.3%, though staff’s size will remain constant for 2020. Medical benefits are increasing 14%, with a possible future increase of 20 to 25% leading staff to consider changing providers.

TRE’s operating expenses are increasing 12% because of an increase in its office rent. The entity has \$2.7 million in operating reserves.

The Member Representatives Committee will review the budget during a Friday *conference call* before it goes to the board for its final approval on May 15. The budget will be presented to FERC and NERC in late May. ■

— Tom Kleckner



Texas RE’s Spring Standards and Compliance Workshop attendees listen to a presentation. | © RTO Insider



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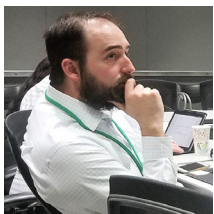


## ERCOT Briefs

### Changes Coming for ERCOT's OCN Process

AUSTIN, Texas — ERCOT staff and stakeholders are drafting potential changes to the grid operator's protocols to avoid a repeat of the late-winter cold-weather event that resulted in generation resources being forced to adjust their outage schedules. (See *ERCOT Generators Upset over Early March Weather Event.*)

Staff are currently drafting three Nodal Protocol revision requests (NPRRs) with the hopes of presenting them to the Technical Advisory Committee in May.



Ian Haley | © RTO Insider

During a Wednesday *workshop* on outage activity related to ERCOT's operating condition notice (OCN) ahead of the event, Luminant's Ian Haley shared a proposal for an "outage reliability unit commitment" (ORUC) process

— though the name is up for debate. Units subject to the ORUC wouldn't be allowed to self-commit, giving the market 24 hours to "perform."

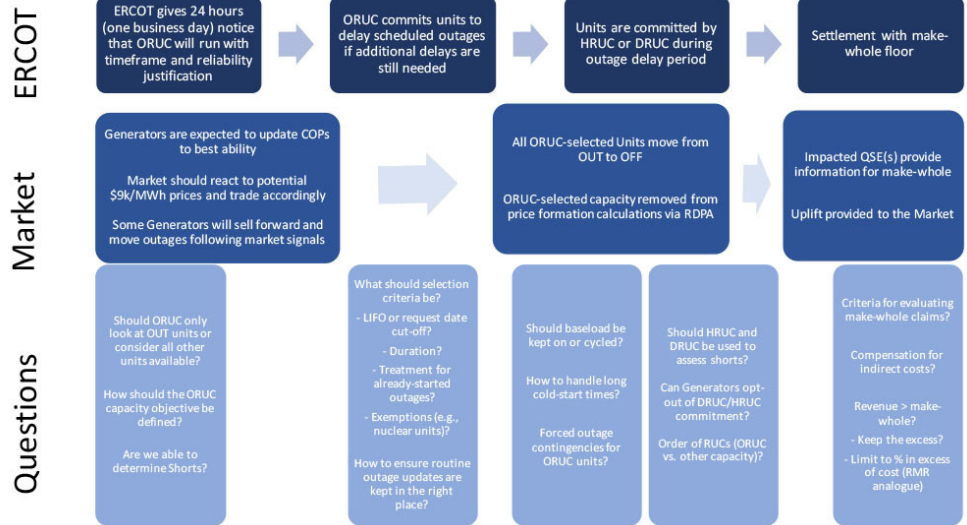
Under the proposal, ERCOT would provide 24-hour notice that it will run ORUC, along with a time frame and reliability justification. Units would be committed by the hourly and day-ahead RUC processes during the outage delay period and settled with a make-whole payment floor.

The goal is to optimize outages, Haley said. "If you're ORUC'ed, think of it as [a reliability-must-run agreement] for capacity," he said.

Luminant's ORUC process would be incorporated into *NPRR930*, which includes a pricing make-whole payment. The change requires ERCOT to use a weekly RUC that can commit resources with an approved outage. Committed units would be made whole with respect to the actual costs and cancellation of the outage. The NPRR also sets an offer floor for the resource at the systemwide offer cap.

"There are still outstanding questions, but I didn't really feel I lost the room," Haley said. "If we get into this situation again, we should all be able to look into the protocols and see how this will work."

ERCOT Senior Director of System Operations



Luminant's outage reliability unit commitment (ORUC) concept | Luminant

Dan Woodfin said the ORUC process could also be a sub-routine within *NPRR934*, which creates a new OCN type — an advance action notice — that alerts qualified scheduling entities and transmission service providers to modify their outage plans.

Staff is also developing *NPRR935*, which would require ERCOT to post wind and solar forecasts and indicate which model is being used for each of the forecasts. Market participants complained about a lack of transparency into which forecasts were being used in late February before the event.

"We know ERCOT will develop more forecasts, so I'd like [the NPRR] to say all forecasts are published," Citigroup Energy's Eric Goff said.

"We're posting the information, but I can't make anyone drink the water," Woodfin said. "We'll go back and look to see if there's a mechanism to build more flexibility into the OCN process."

ERCOT has scheduled a *second workshop* on the OCN issue for this Wednesday in order to stay on track for presenting the information to the TAC during its May 22 meeting. The workshop will take the place of an urgent Protocol Revision Subcommittee meeting that was to take up OCN issues. The PRS will meet as regularly scheduled on May 9.

### Workshops Discuss Storage, Inverter-based Resources

The OCN workshop was just one of three held

in Austin last week. Warren Lasher, ERCOT's senior director of system planning, opened an April 23 standing room-only workshop on *energy storage* by saying, "It's a great day.

"We get to talk about and identify issues, and talk about who fixes those issues," he said. "We don't have to solve them here."

Lasher said energy storage is a growing resource in the ERCOT market, with about 100 MW available now and an additional 70 MW expected before summer begins. He said another 3 GW, "maybe more," of energy storage is under study in the interconnection queue.

ERCOT sees batteries as "limited duration" resources that can charge from the grid or discharge onto it. Attendees heard presentations from staff and from E.ON Climate & Renewables North America's Andrea Bianco, who explained the various available storage technologies.

Discussion topics included how to address hybrid units, communicating resource status and desired operational constraints, reliability requirements, outage evaluation topics, and storage resources' bids and offers.

The storage workshop served as a lead-in to a Wednesday *workshop* on transmission-connected inverter-based resources. That workshop's agenda was highly technical and designed for transmission service providers, resource entities and their vendors. ■

— Tom Kleckner





# ISO-NE Planning Advisory Committee Briefs

## Economic Study Requests Focus on Wind

WESTBOROUGH, Mass. — Two of three economic study requests presented at ISO-NE's Planning Advisory Committee meeting Thursday pertained to offshore wind development, while the other concerned transmission upgrades needed to accommodate onshore wind resources in Maine.

The New England States Committee on Electricity (NESCOE) *requested* that the RTO analyze various scenarios of the integration of OSW of up to 4,000 MW by 2030 and 7,000 MW by 2035.

"We're trying to figure out the best place for these [offshore projects] to interconnect," said Dorothy Capra, NESCOE director of regulatory services.

Transmission developer Anbaric Development Partners *requested* a study to review the impacts of OSW on energy market prices, emissions and regional fuel security in 2030.

Theodore Paradise, senior vice president of transmission strategy and counsel at Anbaric, predicted there will be between 8,000 and 12,000 MW of OSW nameplate capacity in New England by 2030, not including the current 9 GW target to serve New York loads.

"One of the great things we've done in New England over the past decade or so is spend \$13 billion to \$14 billion on infrastructure ... so it looks like the system can handle the extra generation," Paradise said.

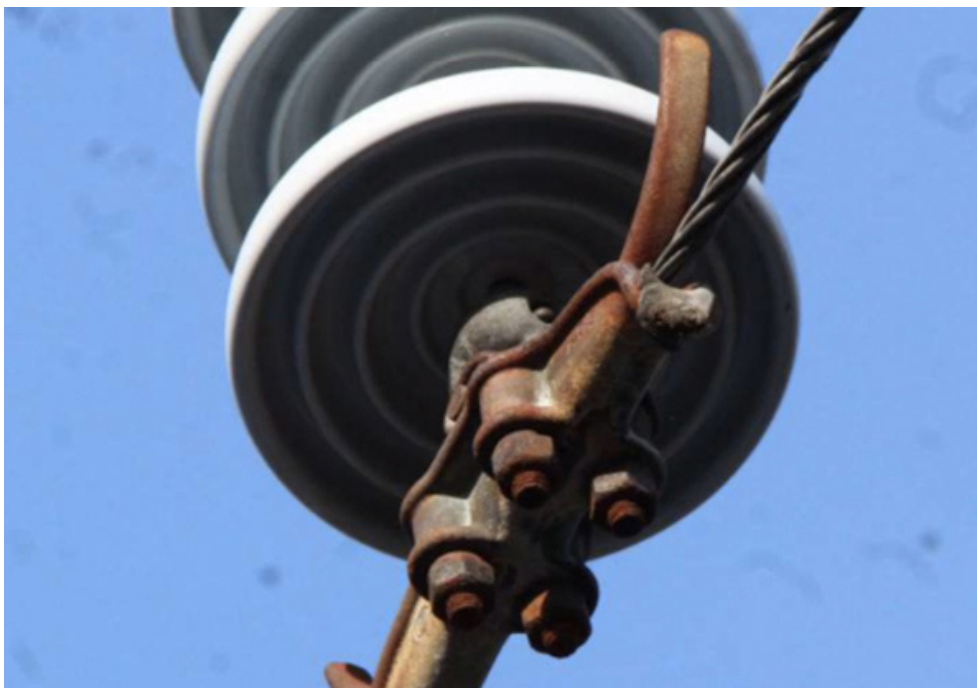
One stakeholder, however, wondered whether the industry is reaching a level of irrational exuberance, with several parties potentially relying on the same resources for reliability.

RENEW Northeast Executive Director Francis Pullaro presented a *request* to evaluate the economic impact of two conceptual alternate transmission upgrades that would increase the hourly operating limits of the Orrington South interface in Maine.

If the study shows the expected production cost savings from one of the scenarios exceeds the expected cost of the upgrade, RENEW will ask the RTO to identify the project as a possible market efficiency transmission upgrade.

## Eversource to Rebuild Conn. 69-kV Line

Eversource Energy is completely rebuilding



Eversource transmission hardware dating back to 1926. | Eversource Energy

6.1 miles of the 69-kV 667 transmission line from the Falls Village substation to the Salisbury substation in Connecticut, with completion expected by year-end.

Eversource planning engineer John Case detailed the estimated \$24 million project to replace 51 lattice towers, and one wood tower, with 18 engineered and 35 light-duty weathered steel structures. The line, designed for 115 kV, was built in 1926.

The project will also add one light-duty structure outside the Falls Village substation to improve clearances, replace steel-reinforced aluminum conductor with steel-supported aluminum conductor and replace existing shield wire with new optical ground wire.

## Final 2019 Load Forecast

ISO-NE's 2019 Capacity, Energy, Loads and Transmission (CELT) winter forecasts are slightly higher relative to last year, with the 2027 winter 50/50 gross demand forecast up about 1.1% and the net demand forecast for that year about 1.2% higher.

ISO-NE implemented monthly energy modeling for this year's forecast, rather than annual, Manager of Load Forecasting Jon Black said.

"We did that intentionally so that we could capture seasonal trends as they diverge," Black

said.

The RTO revised and updated the winter demand models, replacing dry-bulb temperature with effective temperature — to include the effect of wind on heating demand — and incorporating heating degree days as a second weather variable.

The historical weather period used to generate a probabilistic forecast was shortened from 40 to 25 years, now covering 1991-2015.

Black said the 2019 model demonstrates improved performance relative to 2018 based on a comparison of mean absolute percentage errors: 1.1% during January 2019 non-holiday weekdays from 2.2% a year earlier.

"So this is really good feedback and shows we're on the right track," Black said. "If batteries come into our market, that's not a load forecasting problem. All indicators suggest that the outlook for out-of-market batteries across the region are still too small to be a significant forecasting influence."

## Cutting Tx Review Periods to Save Time

ISO-NE will shave two months from its typically yearlong — and sometimes much longer — transmission planning process by halving the typical stakeholder review period for the Needs Assessment and Solutions Study

# ISO-NE NEWS



documents.

“Stakeholders have said the transmission planning process takes far too long,” said Director of Transmission Planning Brent Oberlin, presenting a [summary](#) of the changes.

“Previous comments from stakeholders were to automate, automate, automate ... which has been helped by a move to cloud computing,” Oberlin said.

Reducing the time for document review will provide further time savings. The RTO currently allows for 120 days of stakeholder document review in the planning process: 30 days for the draft scope of each document, followed by 30 days to review each final draft. But staff have determined that neither the Tariff nor the Transmission Planning Process Guide specify a duration requirement for the two review periods, enabling it to reduce those periods by half, in part because of redundancies within the documents.

The RTO expects to use similar time periods for stakeholder review of public policy and competitive solicitation materials generated

by ISO-NE, unless otherwise mandated by the Tariff.

## Tx Opportunity Reminder

Oberlin also *reminded* stakeholders of the qualified transmission project sponsor (QTPS) application process ahead of the release of ISO-NE’s first RFP in late 2019 or early 2020 for a competitive transmission solution based on the Boston Needs Assessment.

The RTO attempts to complete its review of QTPS applications within 90 days of the application being deemed complete, so any company planning to participate in the potential Boston RFP – or any other future competitive solution RFP – should apply soon, Oberlin said.

## Eastern Conn. 2029 Needs Assessment Scope

ISO-NE Transmission Planning Engineer Jon Breard explained the changes between the 2027 and 2029 Eastern Connecticut (ECT) [Assessments](#), noting that the RTO suspended the

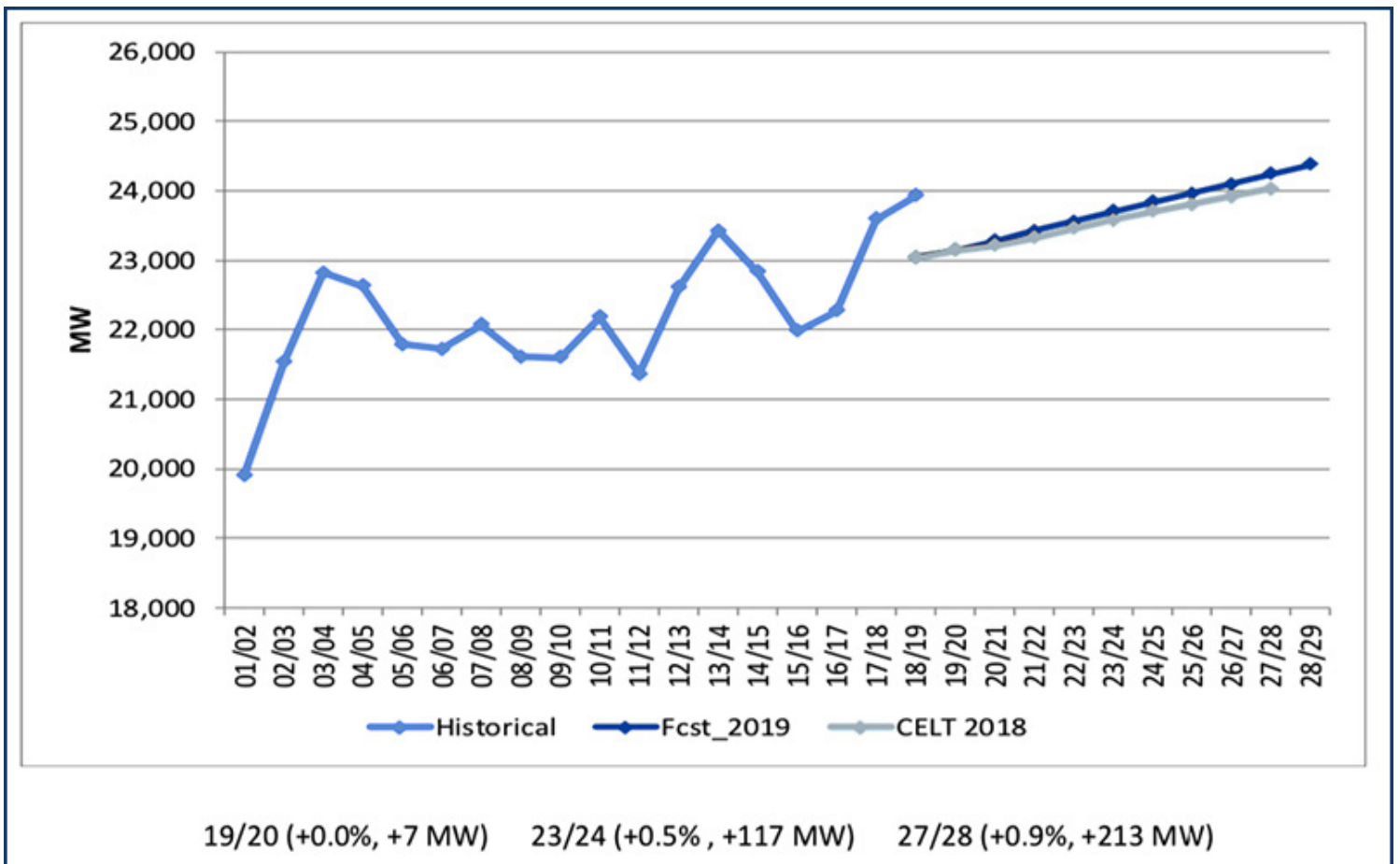
ECT 2027 Solutions Study process because of the changes in the 2019 CELT data.

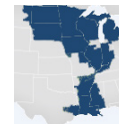
Breard said the net load being used in the 2027 Solutions Study was too high given the change in estimated load, energy efficiency and solar PV from the 2017 CELT to the 2019 forecast.

The ECT 2029 Needs Assessment notably includes a scenario to capture stakeholder feedback on the 800-MW offshore Vineyard Wind project interconnecting to Southeast Massachusetts and the 1,090-MW New England Clean Energy Connect project interconnecting to the Larrabee Road substation in Maine, both selected in state-sponsored solicitations.

Stakeholders must submit comments on the ECT 2029 Needs Assessment to [pacmatters@iso-ne.com](mailto:pacmatters@iso-ne.com) by May 12. ISO-NE will post the assessment’s intermediate study files in the second quarter and post the report in the third or fourth quarter this year. ■

– Michael Kuser





## MISO Seeking Proposals to Relieve North-South Constraint

By Amanda Durish Cook

CARMEL, Ind. — MISO is accepting proposals for projects designed to relieve its increasingly costly North-South transmission constraint, but it is still zeroing in on an approach to evaluate submissions.

During a Thursday conference call to inform stakeholders about MISO's expectations of design parameters, staff expressed hope that a viable candidate could emerge from a second round of proposals to relieve the constraint given recent changes to the RTO's own outlook and the way it values the monetary benefits of large transmission projects.

The submission window for proposals will remain open until June 21. Once ideas are submitted, MISO will perform a screening analyses through July to identify possible candidates. After performing more in-depth analysis and cost estimates, the RTO could announce a viable candidate by August.

MISO has added the Midwest-South interface as a constraint to be evaluated under its ongoing Market Congestion Planning Study (MCPS). (See [MISO Takes Second Look at North-South Constraint](#).) MISO Planning Manager Matt Ellis said the constraint was added at stakeholder request.

Ellis said the second look comes as MISO seeks to add a new benefit metric for market efficiency projects that reduce the costs of its settlement with SPP. (See [MISO MEP Cost Allocation Plan Goes to FERC](#).) Ellis said the new metric could render some project candidates more beneficial than they appeared when MISO last studied the constraint in 2017.

The transfer constraints between MISO's Midwest and South regions contributed to the RTO's September and January emergency events, CEO John Bear said at an April 23 Informational Forum. He said MISO had adequate resources during both emergencies, but transmission constraints kept it from accessing them to relieve emergency conditions. He said a project could strengthen the RTO's greatest asset: its footprint diversity. (See [MISO Claims up to \\$3.9B in 2018 Benefits](#).)

Under the MISO-SPP settlement agreement, MISO pays SPP between \$16 million and \$38 million in base annual payments based on an annual available system capacity usage factor. Beginning next February, that amount is

subject to a 2 to 4% escalation rate, depending on use.

"Fifteen years out, those payments could get pretty high," MISO Principal Transmission Planning Engineer Shane O'Brien told stakeholders.

O'Brien also said the agreement itself will soon be less certain. Starting Jan. 31, 2021, it may be terminated by any party with a year's notice. Without a replacement settlement in place, flows would be limited to MISO's original contract path.

"We could potentially have to revert back to 1,000 MW in the earlier direction," O'Brien said.

MISO has also said that growing renewable use is set to increase flows on the contract path. By 2033, the RTO has *found* that interface flows could reach 8,000 MW north to south based on data from its Transmission Expansion Plan (MTEP) futures. Using the accelerated fleet change MTEP future, MISO estimates that its annual settlement payments might reach \$70 million, although the other three futures limit costs to below \$40 million per year.

In response to stakeholder questions, Ellis said MISO would evaluate the value of avoiding emergency declarations as an additional benefit metric for a Midwest-South transmission solution, even though emergency event reduction is not a Tariff-defined benefit metric.

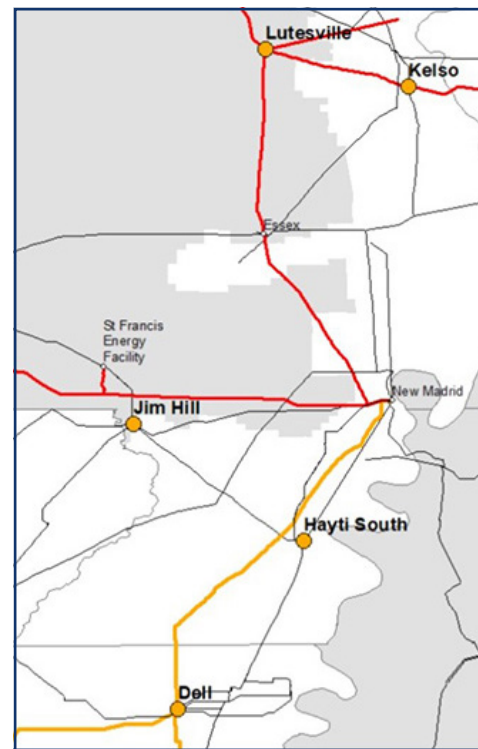
### Design Criteria

The RTO has said proposed projects must terminate on either side of the footprint at facilities owned by MISO transmission owners. However, solutions can have midpoints outside of the MISO system, O'Brien said. Transmission solutions can either increase capacity beyond MISO's current regional directional transfer limits or eliminate portions of the contract path.

Transmission solutions can also address other transmission constraints in addition to the North-South interface to increase the overall benefits of a project and increase the odds of approval.

"Certainly, if folks are able to provide other benefits in addition to increasing capacity between the regions, that will make a project more beneficial," O'Brien said.

However, MISO is not yet discussing how the



MISO North-South interface region | MISO

costs of projects might be allocated.

WPPI Energy's Steve Leovy asked if MISO would consider a transmission solution that might be shared with the neighboring Tennessee Valley Authority.

While Ellis said MISO would not foreclose on considering such an idea, he reminded stakeholders that it's more difficult to evaluate hypothetical agreements against a solution wholly owned by a MISO member.

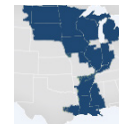
"We'd have to have some sort of more assurances. What that looks like, I don't know," Ellis said.

Missouri Public Service Commission economist Adam McKinnie asked how MISO's special project submission window might interact with its ongoing interregional coordinated system plan (CSP) with SPP.

"I just don't want people to have to submit projects twice," McKinnie said.

Ellis said any projects submitted under the CSP will be evaluated separately by the RTOs first. In the unlikely scenario that a North-South transmission project also qualifies as an interregional project, it will not be overlooked, he said. ■





# MISO Looks to Get Better Read on Wind

By Amanda Durish Cook

CARMEL, Ind. — MISO is seeking to fine-tune its forecasting of wind generation as it faces the prospect of immense volumes of new capacity coming onto its system by 2023.

Speaking at an April 23 wind forecasting workshop, MISO forecast engineer Blagoy Borissov said the event was a “first step” in the RTO’s attempt to be transparent about its forecasting procedures and how it can improve the process.



Blagoy Borissov |  
© RTO Insider

“The timing for us is right to start having a conversation about wind forecast accuracy,” Borissov said. “In just four short years, we’re going to go from 19,000 MW to 29,000 MW of wind generation.”

He also pointed to the frequency of MISO setting new wind output records: The latest, 16.3 GW, was set on March 15.

The RTO predicts it will have more than 22 GW of wind in its system by the end of the year, rising to 29 GW by 2023. It had just 5 GW when it began its wind forecasting process in 2008.

Borissov stressed that the accuracy of MISO’s intermittent forecasts is imperative to ensuring that committed generation can meet expected load. When forecasted wind gener-

ation doesn’t materialize, the RTO must make additional commitments.

Under current practice, market participants can employ their own wind forecasts or rely on MISO. The RTO’s short-term wind forecast is updated both hourly and during every dispatch interval using five independent weather prediction models and detailed unit information that owners submit. The RTO uses the hourly forecast to satisfy must-offer requirements in the day-ahead market, while it uses the five-minute forecast for dispatch.

Where wind generators create their own forecasts, MISO incorporates that data into its models instead of filling in its own. If a resource owner fails to update its wind forecasts at least every 30 minutes, MISO reverts to using its own data in the forecast.

But MISO said it sometimes receives inaccurate forecast data from wind operators, hampering predictions of the actual generation capability of wind units.

“It definitely impacts how our wind forecasts are produced,” MISO forecasting engineer Dorsana Desai said.

Comparisons have shown that MISO’s forecasts are more accurate than those of operators, Desai said. The RTO creates standby forecasts for wind units even when they elect to furnish their own forecast data.

Market participant forecasts also suffer from a positive bias, with unit operators tending to over-forecast their generation. MISO also said

it sometimes receives imprecise commercial operation dates from wind operators, compounding forecast inaccuracies.

MISO will begin performing a quarterly study to identify forecasting inaccuracies, Desai said, and email unit operators that repeatedly forecast output outside of a band of reasonableness determined by the RTO.

For its part, MISO is working to improve a time lag in its forecast algorithm, Desai said.

The forecasting workshop is in part a response to the RTO’s most recent maximum generation event, in which an inaccurate wind forecast contributed to an emergency declaration. During the Jan. 30 event, wind generation stayed well above its 2.3-GW capacity requirement that day based on Planning Resource Auction clearing. However, the RTO’s wind forecast had predicted many more wind offers into the market.

Wind output during the morning peak was about 4 GW below forecast as the worst of the cold struck the Midwest. It averaged 4.3 and 4.7 GW on Jan. 30 and 31, respectively, compared with about 13 GW for the two days prior to the event. MISO said the missed wind forecast was likely because the RTO did not factor in extreme weather cutoffs. (See [MISO Details ‘Uncertainty’ Behind Winter Max Gen Event.](#))

“MISO has never experienced these extremely cold temperatures with the amount of wind generation we have today,” Ron Arness, the RTO’s director of central region operations, explained at a Market Subcommittee meeting in March.

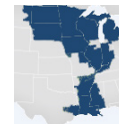
In response, MISO is seeking to update the operational details of wind units by reaching out to generation owners to learn what might have changed. It will also evaluate how extreme events affects wind forecasting.

“Some of these wind units were registered eight, 10 years ago. ... Maybe the information we got from the wind farms is no longer accurate,” Desai said, adding that wind operators could have since installed new technology that might affect operation of their units. She said MISO plans to reach out to all wind operators.

Beyond that, MISO is also examining using entirely new models or research to alter its wind forecasting process. Desai said such changes would represent a long-term effort, and stakeholders shouldn’t expect a major proposal any time soon. ■



| Madison Gas and Electric



# MISO Stakeholders Weigh Restoration Pricing Options

By Amanda Durish Cook

A new MISO task team last week kicked off an effort to develop a scheme to compensate resources that deliver restoration energy in the event that the RTO's wholesale market ceases to function.

"There's no Tariff provisions for compensation during an islanding event," MISO Director of Market Services John Weissenborn explained at the first meeting of the Compensation for Restoration Energy Task Team on April 22. He noted that MISO's black start and NERC recommendation-based schedules are insufficient to cover all generation as it comes back online.

Stakeholders said having a restoration pricing structure in place may prevent yearslong legal battles over compensation following blackout conditions.

MISO has yet to make any decisions but is considering implementing either a dollar-per-megawatt filed rate or recovery based on verifiable costs. Multiple stakeholders said they preferred the latter over the former.

Weissenborn asked stakeholders to think about how an islanding event would interrupt the day-ahead market and how MISO might measure the imbalance and compensate afterward. He also pointed out the RTO would have to confer with state regulators to assess the implications of having a new rate schedule in place.

MISO would likely rely on an after-the-fact settlement to compensate resources, Weissenborn said, adding that the task team should examine how current settlement rules might apply to a restoration pricing structure and how normal settlements would resume after an event.

The system would not be able to price nodes within an area experiencing an islanding event, Weissenborn said, asking stakeholders to think about whether they would want to come up with a nodal price per load.

MISO has said it would complete all billing with no expectation that local balancing authorities calculate settlements. However, stakeholders asked how the RTO would ensure that prices are separated down to the LBA.

The RTO may use a five-year-old white paper on the subject as a starting point for the pricing structure. (See [Old Analysis Could Guide MISO](#)



John Weissenborn | © RTO Insider

*Restoration Pricing Effort*.) In that paper, MISO proposed using either 110% of a FERC-approved rate or a \$100/MWh price, whichever is greater. As FERC-filed rates include start-up costs, the RTO said a real-time revenue sufficiency guarantee would not apply.

Weissenborn said using a static, filed rate would be "a relatively simple solution," and MISO could use the \$100/MWh figure as a pricing floor. "We would have a filed rate, and we can come up with an output to multiply by," he said. But he added that pricing should ensure that generators recover start-up costs, which are amortized over commitment periods in MISO's usual energy pricing.

He also said that many generation owners and MISO staff involved in the 2013 white paper are no longer participating in the RTO. Using the white paper as a basis for a pricing structure without knowing the reasons behind the proposal might prove tricky when making a case to FERC, he said.

## 'Extreme Event'

The task team will also have to consider how resource owners would establish eligibility for the new rate schedule, Weissenborn said.

Xcel Energy's Kari Hassler said MISO might "glean" some aspects of pricing from recent emergency events. In the most recent maximum generation emergency in late January, emergency pricing floors defaulted prices to above \$600/MWh.

"This is going to be more an extreme event,"

Hassler reminded staff, saying a \$100/MWh figure was probably too low considering the extraordinary circumstances of a system blackout and islanding.

Entergy's Al Ralston said he remembered hurricanes that hit the company's service territory in 2005 and 2008, causing "thousands of megawatts unable to be served" after several generators, substations and transmission went down. He said in those cases, Entergy — not yet a MISO member — used bilateral agreements to negotiate prices after the fact.

"We wanted to have prices that allowed generators to recover their legitimate costs and, at the same time, didn't allow generators to gouge the load," Ralston said. He asked MISO to devise a "reasonably" straightforward pricing method that would achieve both goals.

However, he also said plants must sometimes be evacuated or are difficult to reach because of flooding. He asked MISO about costs in excess of normal operations, such as to feed and board plant operators. He also warned that a restoration event can sometimes take weeks, and MISO may not want a static price in place that allows generators to make unchecked profits.

"This is not something that just happens and it's over in a day," Ralston said.

"I do agree with you. We have to have a good balance," Weissenborn said as he took notes.

Stakeholders also suggested MISO put rules in place to create a temporary stakeholder group following a restoration event to educate resources on what they can and cannot submit in a verifiable cost-based offer. Some also suggested MISO's Independent Market Monitor could work to verify offers after a restoration event.

Weissenborn also asked stakeholders to keep in mind that MISO would not be in control of dispatch as the system is restored.

"I think the harsh reality is we're not energizing resources based on economic decisions as we restore the system. It's based on 'let's start getting load back,'" Weissenborn said.

Ralston said the characterization was "exactly right."

The task team will meet two more times, *including* this Wednesday, before presenting a pricing recommendation to the Market Subcommittee. ■

# MISO NEWS



## MISO Foresees Summer Emergency, LMR Use

By Amanda Durish Cook

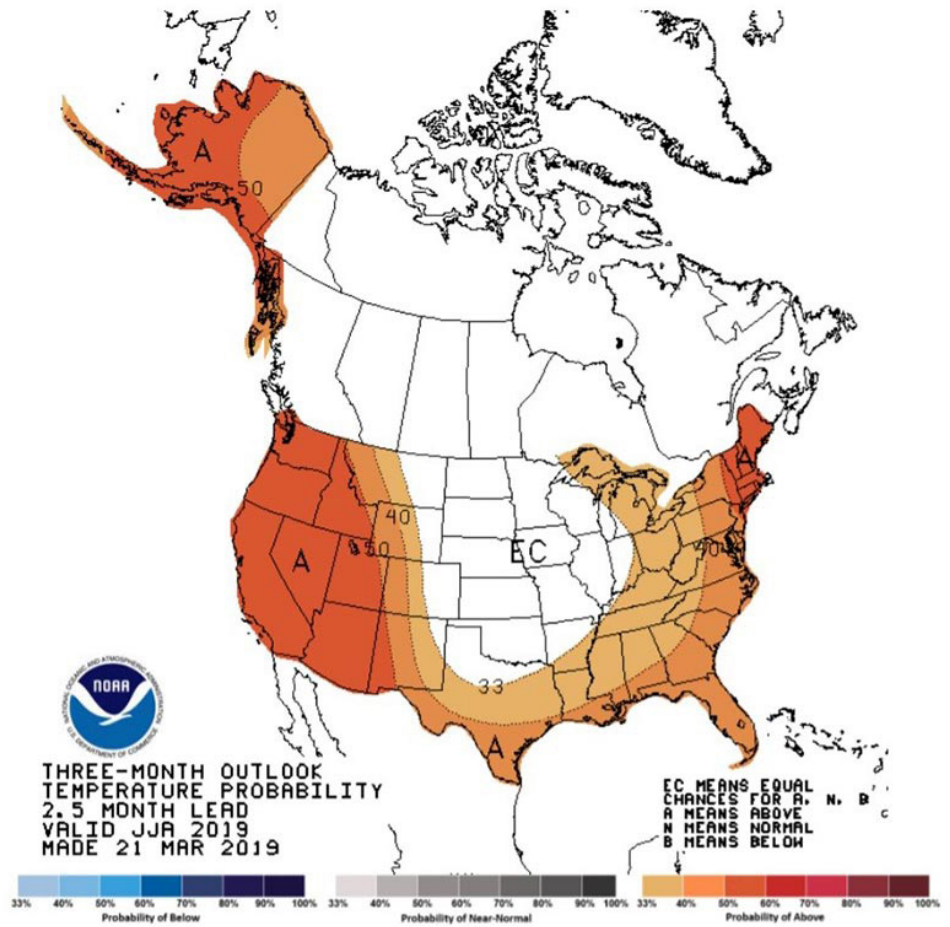
CARMEL, Ind. — MISO expects to call on load-modifying resources (LMRs) this summer despite its own estimates that it will have about 149 GW of total projected capacity on hand to cover a predicted 125-GW seasonal peak.

During an annual summer readiness *workshop* April 23, Resource Adequacy Coordination Engineer Eric Rodriguez said MISO says there is a 70% probability that it will have to declare an emergency in order to access 12 GW of LMRs in summer. The RTO will face challenges if it experiences a large number of resource outages coupled with high load.

Using data from the National Oceanic and Atmospheric Administration, MISO is expecting above-normal temperatures for its South region and the eastern portion of the footprint. Rodriguez said the summertime projections are “fairly typical.” The RTO expects July and August to contain the most risk.

The 125-GW peak demand forecast is nearly identical to the prior two planning years. MISO requires a 146-GW reserve margin requirement this planning year, which it expects to exceed by nearly 3 GW — both in line with last summer’s forecasts. Last year, summer load peaked at 121.6 GW on June 29, while load averaged at 86.6 GW over the season. MISO’s all-time, 127-GW summer peak occurred on July 20, 2011.

CEO John Bear said the adequate supply projection doesn’t mean MISO is “off the hook” with respect to challenging summer circumstances. However, the RTO was able to



NOAA summer prediction map | NOAA

effectively manage recent emergency events in September and January because of its focus on preparation, he said.

Additionally, MISO’s coordinated seasonal

assessment found nothing out of the ordinary for the upcoming summer. The assessment simulates unlikely system contingencies to detect potential voltage and thermal issues on the system. Engineer Benny Relucio said the RTO unearthed nothing for which it doesn’t already have mitigation measures in place.

MISO’s planning also assumes a near- or slightly below-average hurricane season, producing only two to three storms considered Category 3 or higher. The RTO expects the ongoing El Nino to produce more wind shear and cooler-than-average water temperatures in the Atlantic Basin, limiting hurricane activity.

“This means good news for MISO, bad news for hurricanes,” said Michael Carrion, of the RTO’s real-time operations team.

MISO will continue to conduct weekly summer readiness drills and periodic hurricane preparedness drills with market participants through late May. ■



Eric Rodriguez | © RTO Insider





# More Details Divulged on New NYISO Carbon Pricing Study

By Michael Kuser

RENSSELAER, N.Y. — Third-party consultant Analysis Group is putting the finishing touches on a NYISO study examining the impacts of pricing carbon into New York's wholesale electricity markets.

The study will augment the Brattle Group [report](#) process that concluded in December.

"There are lots and lots of unknowns," Sue Tierney, a senior adviser with Analysis Group, said April 23 as she presented the ISO's Installed Capacity/Market Issues Working Group with an [update](#) on the new study. Tierney expects to release the technical report and an executive summary for policymakers at the end of May.

Couch White attorney Michael Mager, who represents Multiple Intervenors, a coalition of large industrial, commercial and institutional energy customers, asked whether Analysis Group would be redoing or revising Brattle's analyses or simply accepting and building off the results. He noted that Brattle had concluded that increases in energy market prices from carbon pricing would lead to a dollar-for-dollar reduction in future renewable energy credit prices, an assumption he thought overly optimistic. He asked whether Analysis Group would be revisiting that type of conclusion by Brattle or incorporating it into its own analyses.

"We are not going back and trying to tweak their results and see what we can find," Tierney said. "You and the Brattle Group and the other stakeholders have already spent months on that, and it's a standalone work. We're going to be using Brattle data to run slightly different analyses ... all of which are hypothetical, 'what-if' analyses."

"We're saying, 'If you did this, what would the price impact be?'" Tierney said. "We'll be looking at direct and indirect economic impact and induced effects. Going to the dynamic effects, a carbon price works in tandem with other New York policies to accomplish the state's environmental goals."

## Carbon Context

Since her initial presentation last month, Tierney received comments from several stakeholders, including the Long Island Power Authority, which she said had a number of questions on carbon pricing policy designs, implications of a carbon price and beneficial



NYISO's discussion around carbon pricing has prompted the question of whether any fossil fuel generation—like the Big Allis plant pictured—will ever again be built or re-powered in the New York City area.

electrification. (See [Analysis Group Presents NY-ISO Carbon Pricing Study Plan](#).)

Large consumers, such as Multiple Intervenors, wanted to know more about the implications of an incremental carbon price on business location decisions, she said, or the extent to which the study would be examining where firms should invest. She said the study would not try to guess what a carbon pricing scheme might mean for manufacturers deciding whether to stay or make more investments in the state; instead, it would use NOx and SOx emissions data to calculate particulate emissions and health impacts.

While the comments submitted so far will eventually be posted for all stakeholders to read, they are not yet available; however, a sense of some stakeholders' positions can be gleaned from related proceedings.

In discussing Brattle's estimates of the impacts of a carbon pricing mechanism on wholesale market and consumer prices, Tierney said that she wanted to talk about customer bill impacts in addition to price impacts.

"New York's economy is very efficient in terms of electric energy use, more efficient than Alabama, for example, even though the latter's prices are lower than in New York. So we don't want to look just at price impacts; we also want to look at bills," Tierney said.

Mager said large industrial customers look at rates, not bills, while Erin Hogan, representing

the New York Department of State's Utility Intervention Unit, said it was not fair to compare Alabama and New York because "they don't have our heating load."

Tierney replied that she made that comparison to highlight a point: "It's just to illustrate that we will talk about both rates and bills. Some people discuss rates only, which is also a distortion."

The new analysis will address the possible application of NYISO buyer-side mitigation to resources receiving RECs and zero-emission credits and other potential revenue streams outside ISO markets.

In describing how the Analysis Group might approach discussion of any direct — or indirect — relationship between the adoption of a carbon price and any action by FERC, Tierney refused to guess how the commission would act on concerns regarding the entry of out-of-market resources, the potential exercise of market power, or the potential risks and cost implications of changes in buyer-side mitigation in New York.

"We don't know where FERC is going on this or even who's going to be on the commission," Tierney said.

## Draft 2019 Master Plan

Ryan Patterson, NYISO capacity market design

*Continued on page 22*



## NYISO Management Committee Briefs

### New DER Market Design Approved

RENSELAER, N.Y. — NYISO's Management Committee on Wednesday approved proposed Tariff revisions that would create a path for aggregated distributed energy resources to participate in the ISO's wholesale market.

James Pigeon, the ISO's manager of distributed resource integration, presented the new **construct**, which would entail electrically mapping each individual DER facility to local transmission nodes to incent location-specific DER investment. It would also authorize entities to provide meter services to aggregations within the DER participation model and reliability-based demand response programs.

When the Business Issues Committee recommended the new design on April 17, several stakeholders expressed concerns about issues such as mitigation and the terms for dual participation, which would allow DERs that

participate in the wholesale market to also provide services to another entity, such as a utility or host facility. (See *NYISO Business Issues Committee Briefs: April 17, 2019*.)

In response to those concerns, Pigeon offered a draft Tariff **clarification** on dual-participation DERs, with one phrase highlighted as new: "In accordance with ISO procedures, the ISO has the authority to determine schedules and/or dispatch for these resources."

NYISO also agreed to stakeholder requests to add language to the FERC filing letter clarifying that the ISO is the ultimate authority over such dual-participation resources.

"A definition [of DER] is one thing stakeholders wanted, so we added that" as well, Pigeon said.

The Tariff would define a DER as a:

- Facility comprising two or more resource types behind a single point of interconnection with an injection limit of 20 MW or less;

or

- Demand-side resource; or
- Generator with an injection limit of 20 MW or less.

All DERs must be electrically located in the New York Control Area and capable of responding in real time to NYISO dispatch instructions.

The state Public

Service Commission earlier this month ruled on what constitutes appropriate compensation for the capacity value of distributed energy resources (VDER) (Case *15-E-0751; 15-E-0082*). (See *NYPSC Refines Value Stack, Boosts Community DG*.)

### SRE Penalty Provisions Delayed

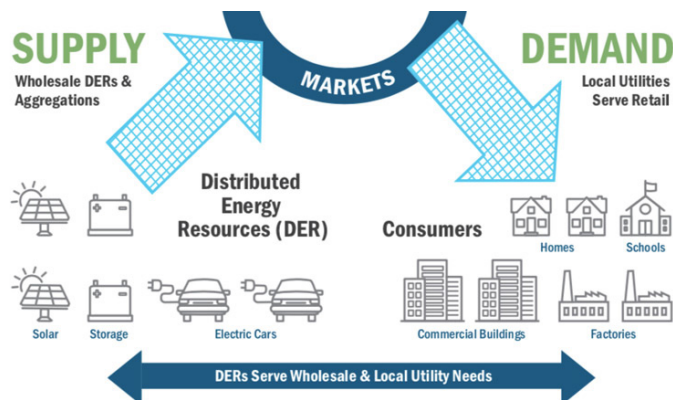
The MC delayed considering a new external supplemental resource evaluation (SRE) **penalty** scheme to improve the ISO's ability to call on external resources that have sold into its markets, mainly because of implementation concerns raised by the Market Monitoring Unit.

The changes would take effect in the third quarter, which led one stakeholder to ask whether NYISO will consider fast-tracking the measure, given its importance and complexity. Interim CEO Rob Fernandez, who said he pulled the item from the agenda, affirmed that the ISO would.

Under the new proposal, any external resource that fails to meet delivery criteria would be subject to the penalty, which is equal to 1.5 times the applicable spot price multiplied by the number of megawatts of shortfall and the percentage of the SRE call hours to which a supplier fails to respond.

External capacity suppliers would not be subject to the penalty if their failure to deliver is beyond their control. The ISO would calculate deficiencies monthly, using the total number of SRE call hours in a given month that the resource could be available and the total megawatt shortfall in that month. ■

— Michael Kuser



| NYISO

## More Details Divulged on New NYISO Carbon Pricing Study

Continued from page 21

associate, presented the working group with an initial **draft** of the ISO's 2019 Master Plan, a single document intended to provide a road-map for future capacity market enhancements.

NYISO last year created the first master plan at the request of stakeholders, with each project grouped into one of three initiatives discussed in the ISO's 2019-2023 *Strategic Plan*, including grid reliability and resilience, efficient markets, and new resource integration.

Mike DeSocio, the ISO's senior manager for

market design, asked what stakeholders want from this year's master plan.

Troutman Sanders attorney Stu Caplan, representing NY Transmission Owners, said some factors were outside the control of the ISO.

"It could be a FERC compliance filing or something that requires interim attention, such as a market exploitation that must be corrected," he told *RTO Insider* in an email. "The simple point is, stakeholders appreciate updates from the ISO."

Caplan asked Patterson if it would be feasible

to provide a semiannual update for those projects that enter the plan outside of the project prioritization process.

"Yes, that's the point here," Patterson said.

"I don't want to suggest that the only way to get a project in is by putting it through the project prioritization process," DeSocio said.

The ISO will release and discuss an updated draft on May 22, issue a final draft Aug. 27 and release the final Master Plan in December in conjunction with the 2020 Business Plan. ■

# PJM NEWS



## Load Interests Endorse PJM-IMM Must-offer Proposal

By Christen Smith

VALLEY FORGE, Pa. — Load interests last week backed a joint proposal from PJM and the Independent Market Monitor that would strip capacity interconnection rights (CIRs) from generators seeking must-offer exceptions without a plan to become capable of meeting Capacity Performance requirements.

The Markets and Reliability Committee approved the proposal in a sector-weighted vote of 3.74 to 1.26 on Thursday, with unanimous support from both electric distributors and end-use customers. The two sectors shot down PJM's original plan to take CIRs from resources after a three-year period of lost CP capability that was approved by 79% of the Market Implementation Committee in November, as well as an alternative from Exelon that would have allowed capacity resources to switch voluntarily to energy-only status and disallowed PJM to force such a switch.

The PJM-Monitor proposal requires existing capacity resources not offered in three consecutive auctions to change to energy-only status. A resource receiving a must-offer exception must also file a plan showing how it will become able to satisfy CP requirements in order to retain capacity status or else forfeit its CIRs. The requirement would be effective with the 2023/24 delivery year. Resources would be granted exceptions for no more than two auctions.

"The main motion would permit hoarding of CIRs inappropriately," Monitor Joe Bowring said. "We continue to believe the compromise



Jason Barker and Sharon Midgley | © RTO Insider

we worked out with PJM makes the most sense."

The votes represent an about-face for stakeholders, who threw 61% support behind Exelon's plan at the March 6 MIC meeting. Only 35% preferred the PJM-Monitor plan at the time. (See [Showdown Set on PJM Must-offer Exceptions](#).)

"We realize the CIR issue has been very charged, but the conversation has lacked data and facts," said Sharon Midgley, Exelon's director of wholesale development. "The PJM-IMM proposal would create an unlevel playing field."

Traditional generation owners balked at the notion that resources exempted from the must-offer requirement, including renewables, don't face the same possibility of losing CIRs.

David "Scarp" Scarpignato of Calpine called the rules "discriminatory" and warned PJM of moving forward with the package, noting it would exacerbate problems in the future.


"PJM itself should be weary of putting forth a proposal like that," he said. "I don't think you are supposed to put forward discriminatory rules, and these are very discriminatory. This is a critical issue to us, and quite frankly it's becoming more and more apparent in the stakeholder process that some resources get preferred treatment."

Stu Bresler, PJM's senior vice president of operations and markets, argued that the disparity is a result of the market rules created by stakeholders and ultimately approved by FERC.

Susan Bruce, representing the PJM Industrial Customer Coalition, suggested the MIC continue discussion about CIR inequities in future meetings. Staff agreed to review the original problem statement and issue charge for further Manual 18 revisions and return to the May 15 MIC meeting with a path forward. The PJM-Monitor proposal has not yet been scheduled for endorsement by the Members Committee. ■

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# PJM Stakeholders OK Risk Management Task Force

Continued from page 1

in March. The report concluded naive staff and weaknesses in the RTO's credit rules allowed the small trading company to amass the largest portfolio of financial transmission rights in PJM history without the financial resources to cover its losses. The latest estimates suggest the default will cost members up to \$430 million. (See [Report: 'Naive' PJM Underestimated GreenHat Risks](#) and [PJM: FERC Order Could Boost GreenHat Default by \\$300M.](#))

CEO Andy Ott told the Market Implementation Committee on April 10 he will oversee organizational and procedural changes within the RTO but will rely on stakeholders to guide the process for market rule changes. Some of those internal changes include hiring a chief risk officer and replacing CFO Suzanne Daugherty, who retired before the release of the board's report. The search for both is ongoing, Ott said Thursday.

Stakeholders endorsed the charter with just two objections and three ostensions. But several stakeholders expressed concerns about moving forward with the overhaul without the guidance of a CRO or CFO, noting the report's recommendation to incorporate expert knowledge into the reforms.

The MRC delayed a vote on two proposals to allow surety bonds as a form of collateral until PJM hires the CRO and CFO. (See "Surety Bonds," [PJM MRC/MC Preview: April 25, 2019.](#))

"I think there are serious questions that should be reviewed," said Susan Bruce, on behalf of the PJM Industrial Customer Coalition. "Maybe the answers become obvious. We have a responsibility to make sure that all of the products are delivering a value for this physical market. Retail customers shouldn't end up being the insurance or backstop for products that aren't delivering value."

Greg Poulos, executive director of the Consumer Advocates of PJM States, mentioned his members' interest in investigating the role of surety bonds, forfeiture rules and other FTR product specifics.

"Having the CRO in place is a critical component of leading these things ... their perspective on surety bonds would be very helpful," he said.

## 'Action Plan'

Later Thursday, Ott gave the Members



PJM CEO Andy Ott addresses the April 25 MRC meeting as board member Charles Robinson, right, listens. | © RTO Insider

Committee a briefing on his "[action plan](#)" for responding to the default, which includes the creation of two new departments (Markets Risk Modeling, and Market Analytics and Surveillance); the realignment of the Law, Compliance and External Relations Division "to improve communication and coordination"; and the creation of a Risk Oversight and Markets Surveillance Committee to be chaired by the CRO with executive-level representation from Finance, Markets and Legal.

Ott said his goal is for PJM to improve its ability to identify "changes in behavior" by market participants to prevent future defaults. "I, for one, want my organization to get better," he said.

The RTO would seek input from the Independent Market Monitor on tracking market participants' positions, he said, but the IMM would not be involved in evaluating players' credit and collateral.

Bruce Bleiweis of DC Energy questioned giving IMM Monitoring Analytics a role, saying market participants had warned the Monitor that GreenHat's FTR position was "growing dramatically auction after auction. Yet we're

still where we are today."

"You have no idea what went on, so don't draw conclusions about things you don't know," Monitor Joe Bowring responded to Bleiweis. "It is our job ... to monitor all parts of the market."

Bowring said the default resulted from the failure to assess the risk posed by the interaction of GreenHat's increasing positions and its "gaming" of the RTO's credit requirements by adding FTRs in the opposite direction of its existing positions.

Greg Carmean, executive director of the Organization of PJM States Inc., said the RTO should consider whether it should take on a "financial regulator role" or whether it should allow another entity to sell FTRs and other financial products. If PJM retains the responsibility, he said, it should ensure that the cost of the expanded staff is borne by the "cost causers."

Ott acknowledged PJM may rethink its "can-do culture," which has led the RTO to take on new duties at stakeholders' requests. "We can't be all things to all people," he said. ■



## Carbon Pricing Steers Discussion on PJM's Future

By Christen Smith

PHILADELPHIA — Stakeholders agree PJM's future likely involves carbon pricing, but they lack consensus on how the RTO will manage as many as 13 different state policies within the wholesale market over the next decade.

Stu Bresler, PJM's senior vice president of operations and markets, said Wednesday that the RTO views its role in implementing external pricing as advisory and supplemental to state-enacted rules. Given the breadth of PJM's territory, however, it's not clear what such a system would look like or how varied it might be.

"I don't think PJM has the authority to implement a carbon price," Bresler said. "If state policymakers decide to price carbon in their jurisdiction, we could make it relatively simple as long as it's systemwide and still achievable — but more complicated — if it's only some states."

Bresler's comments came during Raab Associates' Energy Policy Roundtable in the PJM Footprint, where panelists discussed what the PJM market might look like in 2030. They talked about their respective priorities on ensuring grid reliability, fuel security and resilience, and anticipating future technologies and integrating more renewable resources. Carbon pricing, however, dominated the conversation.

"We've reached an equilibrium where the natural gas units are no longer going to push coal retirements, and carbon emissions will increase," said Ralph Izzo, CEO of Public Service Enterprise Group. "PJM must put in an external price marker ... or it will become an irrelevant wholesale power market."

In New Jersey, home to PSEG headquarters, the Board of Public Utilities on April 18 approved \$300 million worth of zero-emission credits for its three nuclear reactors that struggle to profit at low wholesale prices set by polluting fossil fuels. Nuclear power provides more than a third of New Jersey's emissions-free energy and remains vital to achieving the state's ambitious clean energy goals, regulators said. (See [NJ Approves \\$300M ZECs for Salem, Hope Creek Nukes.](#))

Pennsylvania lawmakers likewise continue talks on a pair of bills that would create the largest nuclear subsidy program in the country, while legislatures in Illinois, New York and Connecticut have approved their own nuclear



Panelists discuss the future of PJM's wholesale markets during a Raab Associates' Energy Policy Roundtable in Philadelphia. | © RTO Insider

subsidies. Executives at Exelon and FirstEnergy say the programs prevent premature retirements of reactors that provide clean, reliable energy 24/7, 365 days a year, despite a market design that doesn't appropriately reimburse them for such service. (See [Nuke Talks Continue in Pa. Assembly.](#))

"Many states probably have many questions beyond just, 'What will the cost on carbon be?' or 'What happens to all the revenues?'" said Morris Schreim, senior adviser of the Maryland Public Service Commission on issues relating to PJM and FERC. "These could include, 'Will our environmental policies be overtaken by for-profit utilities and other entities?' Or, 'Who will have jurisdiction over the air we breathe?' Keep in mind, [Regional Greenhouse Gas Initiative] states never gave up their rights to a regional entity. Success in 2030 will be ensured if the answers to these questions stay within the realm of state policymakers."

Kristin Munsch, deputy director of the Illinois Citizens Utility Board and president of the Consumer Advocates of PJM States, encouraged the RTO to take a more direct role rather than leaving it all to a "one-size-fits-all

market design."

"What I'd like to see PJM do is move from accommodating state policy to enabling it," she said. "PJM in 2030 absolutely needs to think about how you enable this market."

Izzo said an effective carbon price would drive onshore wind development and transmission expansion, while reducing the need for nuclear subsidies and crushing demand for rooftop solar — the most expensive of all renewable resource technologies, he said. More fossil fuel plants would likely retire, Bresler added.

PJM's Markets and Reliability Committee endorsed a [problem statement](#) and [issue charge](#) on Thursday about implementing carbon pricing in the RTO. The effort will likely take more than two years, and it will consider ways to balance the concerns of states uninterested in enacting the policy. (See [PJM Members Welcome Carbon Pricing Talks.](#))

"Dialogue is always important," Schreim said of the effort. "An open stakeholder process could identify ways to provide value in meeting consumers' needs that have never been considered before." ■





# Big Prospects for Offshore Wind in PJM

By Christen Smith

PHILADELPHIA — New research suggests that offshore wind farms offer huge potential for capacity gains in PJM's footprint — but it will take a significant buildout of transmission to unlock that possibility.

University of Delaware professor Willett Kempton said a hypothetical buildout along the Eastern Coast from New Jersey to North Carolina could add approximately 80 GW to the grid.

"If we are going to do carbon-free generation, this is a really large resource that could do that," he said while presenting his *findings* at Raab Associates' Energy Roundtable in the PJM Footprint on Wednesday. "It would add 44% to today's generation mix and it can all be carried to shore using only today's transmission equipment."

Kempton and his co-author, Elpiniki Apostolaki-Iosifidou, analyzed the impact of building an HVDC system with nine points of interconnections. The researchers estimated the system would have a 50% capacity factor, resulting in a 40-GW output on average. The conservative capacity estimates could be boosted through improved weather forecasting, more access to storage technology and PJM rule revisions, Kempton said. The new gigawatts would account for 43% of total PJM capacity, he said.

Other panelists said PJM must proceed with caution when planning such systems, noting the many pitfalls that come with securing proper permits, navigating seafloor access and



Clint Plummer | © RTO Insider

attracting transmission developers.

"It's a complex regime," said Clint Plummer, head of U.S. market strategies and new projects for Orsted. "There's opportunity for savings and reliability benefits by getting transmission policy on this right. There are real problems if it's not done right."

Norway-based Orsted bills itself as the world's largest developer of offshore wind, with 5.6 GW of operational farms in the U.S., Europe and Taiwan. He said mistakes in Germany's planning process taught developers that an integrated and streamlined approach to construction and operation works best, though it costs more upfront.

"Germany's segmented approach didn't work well because grant awards were mismatched between transmission and generation," he said. "There were hundreds of millions of dollars of cost that accrued to us as developers of offshore wind ... and then the transmission wasn't there. We were basically paying the mortgage on that wind farm without any income coming in."

One way to mitigate the costly risks of building an offshore wind networked transmission system is to secure permits before specific facilities are procured through state requests for proposals and ensure planning of every aspect before construction begins, said Theodore Paradise, senior vice president of transmission strategy and counsel at Anbaric. This means accounting for the unique challenges of the seafloor, including ocean trenching and navigating the limited points of onshore interconnection.

"Permitting can take significant time," Paradise



Cynthia Holland | © RTO Insider

said, noting that securing those components ahead of time could be used as a "de-risking" tool. "It's important you do it the right way."

State legislatures in Maryland, New Jersey and Virginia have set goals of procuring a combined 6,700 MW of wind power over the next decade. So far, developers have contracted for less than 6% of those targets.

Cynthia Holland, director of federal and regional policy for the New Jersey Board of Public Utilities, said the state's push to 3,500 MW of wind will make significant progress over the next five years. Bids for 1,100 MW have already been received, with a second 1,200-MW solicitation planned for summer 2020 and third scheduled for July 2022.

The first round of wind farms will likely use generation lead lines that connect onshore, though the BPU remains open to using networked transmission systems or HVDC lines for future projects.

Ken Seiler, PJM's executive director of planning, said the RTO sees significant potential and benefits to the grid in offshore wind, but it remains hesitant about building transmission without committed generation. PJM staff is working with stakeholders to examine this process in further detail in the Merchant Transmission and Offshore Wind Task Force. (See "PC Moves Forward on Offshore Interconnection Rights," *PJM PC/TEAC Briefs: Feb. 7, 2019.*)

"We recognize the interest and we recognize the value of offshore wind," he said. "Build it and they'll come" — we aren't sure that's the best approach for integrating offshore wind with the existing grid." ■



Willett Kempton | © RTO Insider

# PJM NEWS



## PJM DER Task Force Considers New Direction

By Christen Smith

PJM wants stakeholder feedback about whether its Distributed Energy Resource Ride Through Task Force should pivot in a new direction.

Susan McGill, manager of interconnection analysis, said on April 23 that staff will poll members of both the task force and the Planning Committee in order to build a solutions package at its next meeting. The leading question, she said, asks stakeholders how comprehensive proposed rules for ride-through settings should be, given the varied landscape of PJM’s 13-state territory.

“Originally, the thought was that PJM will develop a standard set of settings we would use across the PJM footprint,” she said. “But there’s a lot of facilities that don’t fall under FERC jurisdiction, and we wouldn’t have any authority to enforce those settings.”

PJM said DERs — including solar, battery storage, combined heat and power plants, and some wind turbines — currently function on settings designed to respond to unexpected system malfunctions that disrupt power flow. Some sources “ride through” the event, providing much-needed reliability, while others “trip-off” to prevent system damage. Solar panels and other DERs also can’t tell the difference between a transmission fault and a distribution fault, causing inappropriate responses and overstressing the system.

The task force has been considering ways to fix this problem — even going so far as to bring in federal experts to help develop new standards



PJM wants stakeholder feedback about whether its Distributed Energy Resource Ride Through Task Force should pivot in a new direction.

— but McGill said stakeholder feedback so far has been limited. (See [DOE Lab to Join PJM DER Integration Effort](#).)

She said the poll will help PJM decide what should be developed by the task force:

- Standard settings that should be used consistently for all DER facilities across the PJM footprint;
- Standard settings that should be used for all FERC-jurisdictional DER facilities across the

PJM footprint; or

- Recommendations that can be used when the local electric distribution company does not have a standard.

“Some transmission owners are already working standards to fit their unique distribution facilities,” McGill said.

Members will have a week from receipt to answer the poll. Staff will review the answers and use the results to construct a package of standards at the task force’s May 21 meeting. ■

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## PJM NEWS



# PJM Sector Whips Criticize Board over Private Meeting Program

By Christen Smith

VALLEY FORGE, Pa. — Sector whips chastised the PJM Board of Managers on Thursday for privately agreeing to a meeting with a select few transmission owners as part of a pilot program intended to foster better dialogue with stakeholder groups.

Marji Philips, director of federal and RTO services for Direct Energy, told the Members Committee that an April 12 letter from the board with vague details of its intent to test out annual meetings with individual sectors blindsided whips, who knew nothing about the pilot, despite being tasked with coordinating roles.

In its letter, the board said it will organize 90-minute meetings with senior executives from each individual sector to discuss areas of specific interest at a high-level perspective. Three board members will attend, while whips will choose which executives to send for the

closed sessions. The board held its meeting with the Transmission Owner sector on April 23.

Philips said sector whips on April 22 learned from PJM staff that the board's "quick" decision was in response to recommendations in the report on GreenHat Energy, released late last month, that identified internal cultural issues as contributing to the financial transmission rights trader's default.

Based on *feedback* given to the whips, Philips said stakeholders generally approved of the idea itself but complained about being left out of the decision-making process entirely, with no transparent communication as to when, why and how the board came to its consensus. They also questioned whether the April 23 session counted as the TO sector's pilot meeting.

"Because of the way it was laid out, it looked like an insensitivity that comes with the culture of arrogance," Philips said. "I'm just being bru-

tally honest with you."

Board member Charles Robinson said he and his colleagues considered the issue carefully, weighing concerns about code of conduct and board independence, before agreeing to the meeting and, ultimately, the pilot program. Board members also worried that a prolonged stakeholder process would slow down approval of a pilot program. "When we decided to go forward, it was largely to address concerns about the degree to which we listen to stakeholders," Robinson said. "We could enhance communication in this fashion without sacrificing the codes of conduct. In our view, this was not a 'trade off.' We will never trade off on our core obligation to the markets and this organization."

Adrien Ford, sector whip for the Electric Distributor sector, said the letter suffered from inconsiderate wording, even if its conclusions "may have been sound."

"When there is a lack of full understanding and transparency into what went down, then one will make up a story as to what went down," she said. "And that doesn't help build trust."

PJM CEO Andy Ott took responsibility for the rollout. "I'll take ownership that we could have done it better," he said. "We could have met with the sector whips. In retrospect, it was disrespectful."

Katie Guerry, vice president of regulatory affairs in North America for Enel X, said that while the sector meetings are "a good thing to do," she worries that the current structure will create a distraction by the potential infighting between members who are vying to get the first crack at the PJM board.

"We asked to be included in the process addressing concerns from the report at the beginning; instead it now seems we are being told what the solutions are that will make us happy, before the process even starts," she said. "The misstep of implementation and execution is exactly why we previously asked to be involved from the get-go rather than be told after the fact."

Philips said sector whips will continue discussions with other members about what level of transparency to expect from the private meetings moving forward. Ott said in the letter that the board will evaluate the effectiveness of the meetings after one pilot round and consider Manual 34 revisions to memorialize the practice. ■



PJM whips want more transparency from the Board of Managers as they begin to privately meet with individual sectors. | © RTO Insider

## PJM NEWS



# PJM MRC/MC Briefs

## Denise Foster Takes over as MRC Chair

VALLEY FORGE, Pa. — Denise Foster, PJM's vice president of state and members services, chaired her first Markets and Reliability Committee meeting on Thursday, replacing retired CFO Suzanne Daugherty.



Denise Foster | © RTO Insider

Foster came to PJM not once, but twice throughout her two-decade career as an attorney and consumer advocate: first in 2000 as counsel and regulatory affairs manager, and again in 2009 as her current role managing members services, a position that has evolved as PJM's membership has swelled.

Foster prides herself on building relationships and encouraging positive discourse. "I want to ensure that everyone's voice is heard, and

that the information needed is presented and discussed so good decisions may be made," she said in a PJM [press release](#) April 23. "We are first, people, and second, business representatives."

## Load Interests Block FTR Rule Changes

The Electric Distributor and End-Use Customer sectors blocked a proposed revision to PJM's rules about when financial transmission rights profits should be forfeited.

All but one of the voting members in both sectors rejected the joint plan developed by Exelon, NextEra Energy and VECO Power Trading and approved by stakeholders at the Market Implementation Committee in November. The proposal would replace the RTO's existing "penny test" for a threshold of FTR flows of 10% or more across a constraint.

"Stakeholders like Exelon have stopped participating both in virtual activity and FTR markets

[at the same time] because existing rules are over burdensome," said Sharon Midgley, director of wholesale market development for Exelon. "The current FTR forfeiture rule is too restrictive for competitive suppliers, prevents legitimate business activities and increases costs to customers."

"We're a large load-serving entity," Exelon's Jason Barker added. "This is increasing risk premiums. It's another example of over-mitigation in PJM's markets."

Stakeholders deferred a vote on the plan at the December MRC after some expressed fear it could unintentionally create exploitable market loopholes. (See "FTR Forfeiture Rule Deferred," [PJM MRC/MC Briefs: Dec. 20, 2019.](#))

The Independent Market Monitor also expressed reservations about changing the status quo. It has argued that the penny test is better at catching manipulative behavior. (See "FTR Forfeiture Proposal Endorsed," [PJM MRC Briefs: Nov. 7, 2018.](#))

A second FTR rule change that would adjust calculations to account for on-peak and off-peak FTRs was endorsed by acclamation. (See "First Read on Change to FTR Forfeiture Calculations," [PJM MRC Briefs: March 6, 2019.](#))

## Carbon Pricing Talks Move Forward

PJM will soon assemble a task force dedicated to studying the impacts of carbon pricing throughout the RTO's 13-state footprint.

Stakeholders approved the [problem statement](#) and [issue charge](#) in a sector-weighted vote of 3.92 to 1.08 on Thursday. The new group will report findings to the MRC over the next 18 months.

"I think it's important to get the ball rolling, but this isn't a fast-track item," said Michael Borgatti of Gabel Associates.

Borgatti presented a first read of the problem statement and issue charge at the March 21 MRC that would task stakeholders with creating rules to address carbon leakage and help states meet greenhouse gas reduction policies. Borgatti made the presentation on behalf of the Independent Energy Producers of New Jersey, which includes NextEra and PSEG Power.



Michael Borgatti | © RTO Insider



PJM's Markets and Reliability Committee meets in Valley Forge, Pa., on April 25. | © RTO Insider



## PJM NEWS



Dana Horton, of American Electric Power, and Chuck Dugan, of East Kentucky Power Cooperative, two utilities with substantial coal-fired generation, opposed the initiative.

"If we were talking about a nationwide carbon adder, we'd be all in," said Horton, who said he feared the initiative could lead to higher prices for AEP customers in states that have not joined Illinois and New Jersey in approving nuclear subsidies. "But we disagree that this is the right time to do this."

Dugan echoed Horton's sentiments. "We're a state that's a coal state," he said. A carbon adder "is not required, and we are very busy in the stakeholder process [with other issues]. We should hold off."

Marji Philips of Direct Energy, however, said Borgatti's proposal is the "best solution to deal with externalities that the states say PJM is not dealing with."

"Ohio's going to have a [zero-emission credit] program soon if their utilities have their way," she added, referring to legislation *under debate* in the state legislature.

### RTEP Removal Language Vote Deferred, Again

After a bit of procedural skirmishing, members

agreed to delay a vote on LS Power's proposal to amend Manual 14B for another 60 days while stakeholders continue talks about the intersection of supplemental and regional project planning.



Sharon Segner | © RTO Insider

Sharon Segner, vice president of LS Power, offered the revisions at the January MRC after expressing concern over the growing number of supplemental projects languishing in the Regional Transmission Expansion Plan.

Supplemental projects are proposed by TOs and are not required for compliance with PJM's reliability, operational performance or economic criteria.

Segner's proposed language specifies that a transmission owner's supplemental project "will generally be removed from the RTEP" following a final order by a state siting agency rejecting the project. A special session of the Planning Committee has been meeting over the last 60 days to review a variety of legal issues related to FERC Orders 890 and 1000 — meetings that PJM staff said are narrowing their differences. (See "LS Power will Seek 2nd

Deferral on Transmission Replacement Language," *PJM PC/TEAC Briefs: April 11, 2019*.)

When Segner *presented* specific topics for the special PC session to discuss during the deferral period — including possible Operating Agreement revisions — Chair Foster intervened.

"Adding all these items to the discussion that has been assigned to the lower committee is out of order," she said. "The expansion [into OA revisions] is what I particularly take issue with."

Segner argued against Foster's interpretation of committee rules, noting that any revisions to rules relating to Order 1000 need inclusion in the OA, per FERC precedent. After nearly an hour of debate with other stakeholders about the appropriate scope of the motion, she agreed to proceed with only the 60-day deferral.

"I request in the minutes for today it is specifically outlined that in 60 days, when this issue comes back before the MRC, if a friendly amendment that reflects OA language that is germane to the main motion is offered, I may deem it as friendly," Segner said. ■

—Christen Smith

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# Pennsylvania Joins US Climate Alliance

By Christen Smith

Pennsylvania joined the U.S. Climate Alliance this week after releasing its own action plan to achieve a 26% reduction in statewide greenhouse gas emissions by 2025.

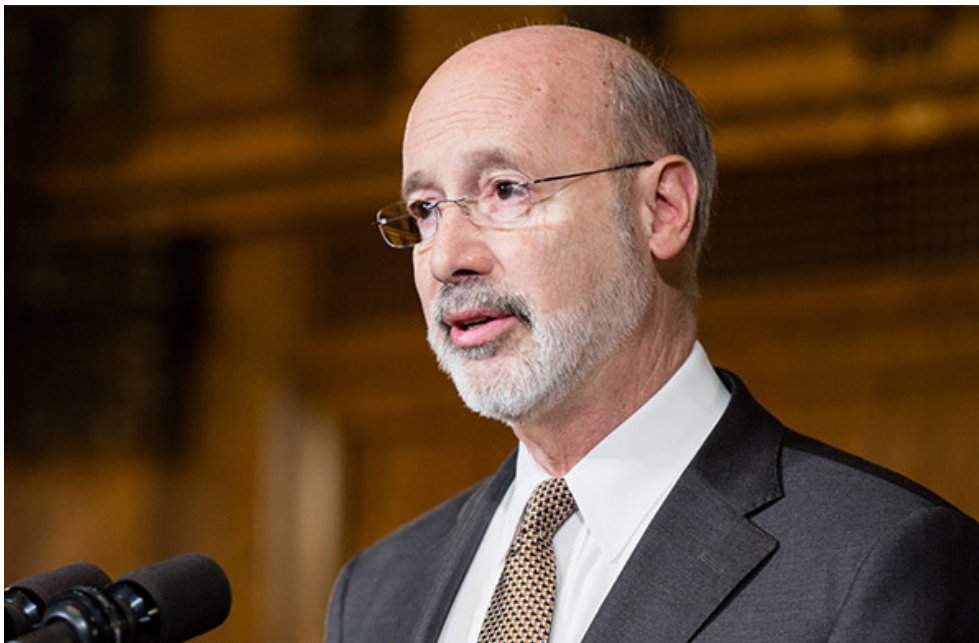
The alliance was established in 2017 after President Trump withdrew the U.S. from the [Paris Agreement](#), a global initiative to limit the increase in global temperature to below 2 degrees Celsius above pre-industrial levels. Since then, 24 states — including six in PJM — have supported the alliance's efforts to implement environmental policies that target carbon emissions and promote use of clean energy resources.

"With the federal government turning its back on science and the environment, I am proud to join with states that are leading the way towards new climate solutions and taking concrete actions to reduce greenhouse gas emissions," Pennsylvania Gov. Tom Wolf said in a [statement](#). "States like Pennsylvania must take action to reduce greenhouse gas emissions and protect our communities, economies, infrastructures and environments from the risks of a warming climate."

In January, Wolf signed an executive order committing the state to reducing its GHG emissions by 26% over the next seven years compared to 2005 levels and setting an additional target of 80% by 2050. On Monday, the administration released a third update to the state's decade-old [Climate Action Plan](#) that identified 15 steps capable of reducing carbon emissions by 21% by 2025, including investing in renewable energy resources, boosting the use of electric vehicles and incentivizing green building projects.

"Perhaps the biggest recommendation of the Climate Action Plan is that a team effort is needed to reduce greenhouse gas emissions in Pennsylvania," Department of Environmental Protection Secretary Patrick McDonnell said. "Government leaders must lead by example, and businesses, farms, community organizations and citizens can all make a difference to fight climate change."

Julie Cerqueira, executive director of the alliance, applauded Wolf's proactive approach to climate change and said, "We look forward to supporting the governor's wide range of climate priorities like promoting solar energy and decarbonizing its power grid while creating



Gov. Tom Wolf made Pennsylvania the 24th state to join the U.S. Climate Alliance on Monday.

new, good jobs in the clean energy industry."

## 'Small Window'

Wolf's announcement coincides with the introduction of two bills designed to increase targets for renewables in the state's Alternative Energy Portfolio Standards (AEPS) law. The 2004 mandate requires electricity providers to buy 18% of their power from 16 renewable resources divided among two "tiers" by 2021.

State Rep. Carolyn Comitta (D) and Sen. Art Haywood (D) sponsored companion proposals, [House Bill 1195](#) and [Senate Bill 600](#), earlier this month that would boost the usage requirement of Tier 1 renewable resources from 8% to 30% by 2030. The plans also dedicate 7.5% of that target to in-state grid-scale solar and 2.5% to distributed solar generation, and asks the Public Utility Commission to study the benefits of an energy storage program.

"I am proud to join the calls for modernizing the Alternative Energy Portfolio Standards," Comitta [said](#) on April 17. "Our state has already made important investments in alternative and clean-energy technologies, but we must do more. Adjusting our electrical energy requirements to 30% by 2030 will solidify our path to reducing our carbon footprint and advance Pennsylvania toward becoming a national energy leader."

The Clean Power PA Coalition threw its sup-

port behind the bills in a statement on Thursday and urged legislators to support proposals to limit carbon emissions.

"Scientists tell us we have a small window of time left in order to prevent the most catastrophic impacts of climate change beyond the dangerous impacts we are already experiencing," the coalition said. "With leadership from Gov. Wolf and the General Assembly, we can build on the strong commitments that have already been made and couple them with equally strong policies that will create jobs and keep our families healthy."

Meanwhile, state Republicans lead discussions on another plan to prop up aging nuclear reactors with subsidies from a newly created third tier in the AEPS. The House Consumer Protection Committee met for a third time on Monday to discuss the merits of House Bill 11 with executives from across the energy industry, where divisions between nuclear power and fossil fuels run deep. (See [Nuke Talks Continue in Pa. Assembly](#).)

It's unclear if the legislature will pass HB 11 — or the similar SB 510 (See [Pa. Lawmakers Introduce 2nd Nuke Subsidy Bill](#)) — before Exelon begins shuttering Three Mile Island in June. While the state's action plan calls for policies that would keep TMI and the state's four other nuclear facilities from closing down, Wolf has not yet signaled support for either bill. ■



## Company Briefs

### SPP Hits 67% Wind Penetration

SPP set a new wind penetration record April 27, generating 67.3% of its energy from wind sources during the early morning hours — 15.1 GW of the 22.5 GW total load. SPP also set a record for renewable energy penetration (71.4%) at the same time. SPP's previous penetration records came on April 21, when wind accounted for 66.5% of SPP's generation and renewables for 70%.

Bruce Rew, SPP's vice president of operations, said the RTO projected wind penetration numbers over 70% for every weekend in April, "but transmission constraints came into play." Speaking before SPP's joint quarterly stakeholder briefing Monday, Rew reminded his audience, "A year ago, I predicted there was a good chance we could hit 70%."

SPP's record for wind peak remains 16.4 GW, set Dec. 20, 2108. SPP currently has 21 GW of wind capacity registered in the market, Rew said.

### Reuters: Pipeline Operator Noble Midstream for Sale



Noble Midstream Partners, a pipeline operator controlled by

U.S. oil and gas exploration and production company Noble Energy, is up for sale, people

familiar with the matter told *Reuters* last week.

The decision to seek to sell Noble Midstream comes at a time when oil and gas companies are coming under intense pressure from shareholders to direct their focus on core operations to maximize returns and minimize expenses.

Noble Midstream provides crude oil, natural gas, and water-related midstream services in the DJ Basin in Colorado and the Delaware Basin in Texas. It is a master limited partnership, which has fallen out of favor with the oil and gas industry in the last couple of years, as it often failed to meet its targeted returns, and corporate tax reform lessened its financial benefits.

More: [Reuters](#)

### Xcel Beats Q1 2018 Earnings



Xcel Energy last week

reported favorable first-quarter earnings, saying strong margins in electricity and natural gas services boosted profits by 8%.

The Minneapolis-based company's earnings were \$315 million (\$0.61/share), compared to \$291 million (\$0.57/share), a year ago.

"We are making great strides toward our ambitious vision to deliver 100% carbon-free electricity to customers by 2050 and

have already reduced carbon emissions to our customers by 38% since 2005," CEO Ben Fowke said in a statement.

More: [Xcel Energy](#)

### Ford Invests \$500M in EV Start-up Rivian



Ford Motor Co. is investing \$500 million in Plymouth-based electric vehicle

start-up Rivian Automotive to co-develop an all-new battery EV for Ford's portfolio.

The partnership, touted as saving both companies money on developing an all-new vehicle, is the latest partnership Ford has reached as part of CEO Jim Hackett's "re-design" of the Dearborn automaker. As part of the deal, Joe Hinrichs, Ford president of automotive, will join Rivian's seven-seat board, though the privately held Rivian remains an independent company.

The announcement of the partnership came just days before Ford announced that the U.S. Department of Justice had opened an investigation into the company's emissions certification process. Kim Pittel, Ford vice president for environment and safety engineering, said an internal investigation that began February into whether its vehicles have worse gas mileage and emit more pollutants than their labels state will continue.

More: [The Detroit News](#); [Detroit Free Press](#)

## Federal Briefs

### We Energies Latest Utility to Leave UARG



Milwaukee-based We Energies has left the Utility Air Regulatory Group, joining 10 other utilities that have departed the powerful D.C. lobbying

organization.

We Energies spokesman Brendan Conway said the utility made the decision "late last week or early this week" to end its membership with UARG. Membership is no longer needed because of the utility's generation reshaping program, Conway said.

UARG often represents electric utilities in lawsuits against EPA, as it did in 2014 when it challenged the agency's ability to regulate

greenhouse gas emissions. The utilities' departures this month follow the opening of an investigation by the House Energy and Commerce Committee into the relationship between UARG, EPA officials and power companies. UARG is run by the lobbying firm Hunton Andrews Kurth, where current EPA Assistant Administrator for Air and Radiation Bill Wehrum was a partner.

More: [Wisconsin Public Radio](#)

### FERC to Hold Closed Meeting on 'Personnel Issues'

FERC commissioners have voted to hold a meeting Wednesday that will be closed to the public, according to a notice issued by the commission last week.

"Discussions are likely to involve disclosure

of matters related solely to the internal personnel rules and practices of the commission," General Counsel James Danly said in his certification of the decision, citing law that provides for exemptions for mandatory open meetings.

The commissioners, their assistants, FERC Secretary Kimberly Bose, Danly and members of Danly's staff are expected to attend. "Other staff members from the commission's program offices who will advise the commissioners in the matters discussed will also be present," according to the notice.

More: [FERC](#)

### Graham: GOP Developing Climate Change Legislation

Congressional Republicans are developing



legislation to introduce next year that could serve as the GOP framework for addressing climate change, according to Sen. **Lindsey Graham** (R-S.C.).

The language will likely center on energy

efficiency, natural gas use and technology to clean up coal-fired power plants, Graham told reporters last week at a banquet sponsored by EarthX, an Earth Day event in Dallas. The bill is meant to highlight the perceived problems with the Democrats' Green New Deal proposal, which Republicans have labeled as costly and bad for business.

"We owe it to the country to have an alternative to the Green New Deal," Graham said. "We're going to sit down with the president and see if we can unveil a bill for 2020 that would be good for the environment and good for business."

More: [E&E News](#)

## State Briefs

### ARIZONA

#### APS, Fluence Investigating Explosion at Storage Facility

Fluence has dispatched a team of experts to help Arizona Public Service determine what caused an explosion at one of its grid-scale battery facilities. The explosion on April 19 left four firefighters injured with chemical burns.

Firefighters responded to a call after smoke was seen rising from APS' McMicken Energy Storage facility in the city of Surprise. According to *The Arizona Republic*, the firefighters were inspecting the facility's lithium-ion batteries when there was an explosion.

Ravi Manghani, director of energy storage at Wood Mackenzie Power & Renewables, cautioned that it's "extremely early and premature to jump to conclusions" as to what happened.

More: [Greentech Media](#)

#### ACC Rejects Renewable Contract Length Mandate



The Corporation Commission last week rejected a move to require utilities to purchase power from qualifying renewable energy facilities under contracts of

at least 15 years and delayed a decision until formal hearings are held.

Commissioner Andy Tobin proposed the amendment to the state's rules governing utility contracts under the federal Public Utility Regulatory Policies Act. The state's conforming rules, adopted in 1981, do not specify a minimum length for PURPA contracts.

State utilities have asked the commission to limit PURPA power purchase agreements to two years, subject to renegotiation, arguing that longer fixed-price contracts would

force the utilities and their ratepayers to needlessly pay more for power. Hearings on the utilities' requests are scheduled to start in mid-November, with a decision by the commission not expected until 2020.

More: [Arizona Daily Star](#)

### CALIFORNIA

#### PUC Votes Unanimously to Allow PG&E Rate Hikes



The Public Utilities Commission voted unanimously to allow Pacific Gas and Electric to increase its rates by \$373 million, equating to an average boost of \$3.50/month for individual

customers.

The extra funds will be used to pay for PG&E's costs for nine fire, wind and rain events in 2016 and 2017 to restore power, repair facilities and trim trees, remove trees, and clear brush from underneath power lines to prevent future outages and fires.

This approved increase does not include any damage from the fires of 2018, which will generate its own emergency rate request. It is also unrelated to the \$1.2 billion in increased return on equity the utility recently *requested*. (See related story, [California Regulators Weigh PG&E's Fate](#).)

More: [KTUU](#)

#### LA County Sues SCE to Recover \$100M+ in Costs from Woolsey Fire



SCE

Los Angeles County filed a lawsuit against Southern California Edison last week to recover costs in connection with last year's devastating Woolsey Fire.

The fire forced the evacuation of more than 200,000 people in Los Angeles and Ventura counties and burned more than 96,000 acres.

The county said it incurred more than \$100 million in costs and damages in connection with the fire, including fire suppression, emergency response, recovery efforts and loss of tax revenue.

The cause of the fire remains under investigation.

More: [CNBC](#)

### INDIANA

#### IURC Rejects Vectren's Gas Plant Proposal



The Utility Regulatory Commission rejected a Vectren proposal

to build an 850-MW natural gas-fueled power plant to replace its aging coal-burning A.B. Brown Generating Station.

In denying the new power plant, which was projected to cost \$781 million, the commission cited the potential financial risk to customers who would be stuck paying for it over a 30-year period in a time when the energy industry is rapidly evolving.

However, the commission did give Vectren approval for an estimated \$95 million in additional environmental controls and work to one of the generating units at its F.C. Culley power plant in Warrick County.

More: [Evansville Courier & Press](#)

#### Pruitt Lobbying Effort Summarily Rejected



last week.

Former EPA Administrator **Scott Pruitt's** foray into state lobbying was roundly rejected by both the legislature and the state's Chamber of Commerce

Pruitt was hired by RailPoint Solutions to pressure lawmakers into inserting language in the state budget that would have blocked



utilities from shutting their remaining coal plants and placing a moratorium on new generation purchases by utilities. The House of Representatives had already voted down the proposal, and Speaker Brian Bosma said it was too late to revive it.

Meanwhile, the chamber's 50-member energy committee unanimously rejected Pruitt's campaign. "Not one person we've talked to or heard from — except for Scott Pruitt and RailPoint — thinks the moratorium will benefit ratepayers," chamber President and CEO Kevin Brinegar said. "The ... explanation provided by Pruitt did not sway our energy policy committee (comprised of representatives of member companies from around the state) or our thinking that the moratorium is simply a bad idea."

More: [The Associated Press](#); [Reuters](#)

## MICHIGAN

### EV Fees Would Soar Under Whitmer's Roads Plan

Registration fees for electric and plug-in hybrid vehicles in the state could skyrocket



and become the costliest in the nation under a proposal by Gov. **Gretchen Whitmer** to fund state road repairs.

Surcharges for registering a pure-electric passenger car would increase to \$360/year, up from \$130. Surcharges on plug-in hybrids would leap to \$150 from \$47.50. That is on top of registration fees, which depend on individual car values. All told, owners of EVs would likely spend more than \$500/year on registration if the tax passed.

The fees would raise roughly \$3 million of Whitmer's \$2.5 billion plan, which would also increase the gasoline tax to 45 cents/gallon, the country's highest.

More: [Bridge Michigan](#)

## MINNESOTA

### House Passes Bill for 100% Carbon-free Electricity by 2050

The House of Representatives passed an energy and economic development bill



that would put the state on a path to 100% carbon-free electricity by 2050 and expand opportunities for low-income families and rural communities to participate in the state's successful community solar program. The bill passed the House in a 74-59 vote and now moves to the Senate.

Xcel Energy, the state's largest utility, has set a path toward getting 100% of its energy from carbon-free sources by 2050. Major corporations in the state have also committed to eliminate fossil fuels for electricity.

More: [Vote Solar](#); [MPR News](#)

# If You're not at the Table, You May be on the Menu

RTO Insider is the only media "inside the room" at RTO/ISO stakeholder meetings. We alert you to rule changes that could affect your business — months before they're filed at FERC. Plus we monitor the news at FERC, EPA, CFTC, Congress, federal and state courts, and state legislatures and regulatory commissions.

If what's happening on the grid impacts your bottom line, you can't afford to miss an issue.



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