# RTO Insider

Your Eyes and Ears on the Organized Electric Markets

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## FERC Opens Inquiries into Tx Incentives, ROE Policies

*By Michael Brooks*

FERC staff present the two Notices of Inquiry at the commission's open meeting March 21. | © *RTO Insider*

WASHINGTON — FERC will seek comments on how it could improve its transmission incentives and return on equity policies under two Notices of Inquiry issued Thursday.

The commission will examine whether transmission incentives "should continue to be granted based on a project's risks and challenges or ... on the benefits that a project provides," FERC said at its monthly open meeting (*PL19-3*).

Under the other inquiry, the commission will examine whether, and if so how, to change how it calculates ROEs for electric infrastructure, as well as for natural gas and oil pipelines (*PL19-4*).

"Given the complexity and scale of building new transmission projects, the decisions my colleagues and I make now will have impacts for decades to come," FERC Chairman Neil Chatterjee said. "What all this boils down to is [that] getting these policies right will be critical to ensuring the energy revolution we're currently undergoing results in more reliable services and lower prices for customers. To that end, I think the two NOIs we are issuing today are an important step toward getting our transmission policies right."

Initial comments on both NOIs are due 90 days after their publication in the *Federal Register*, with reply comments due 30 days after that.

*Continued on page 9*



## ACORE RENEWABLE ENERGY POLICY FORUM


Joe Balash, the Interior Department's assistant secretary for land and minerals management, addresses the American Council on Renewable Energy's Renewable Energy Policy Forum at the Conrad Hotel in D.C. on March 20. (p.4) | © *RTO Insider*

## PJM Stakeholders Reluctantly OK 'Fuel Security' Initiative

*By Christen Smith and Rich Heidorn Jr.*

WILMINGTON, Del. — Stakeholders on Thursday reluctantly agreed on a path forward for PJM's proposed "fuel security" initiative after about two hours of debate over whether RTO officials have already decided the outcome.

The Markets and Reliability Committee approved a compromise *problem statement* and *issue charge*, adding a requirement that PJM quantify the likelihood of scenarios that might present a risk of fuel insecurity.

Stakeholders also rejected PJM's proposal to complete work on the issue by the end of the year. Instead, stakeholders will complete their initial research by the end of August and the MRC will set a final deadline for action — if any — at its September meeting.

*Continued on page 36*



### Also in this issue:





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# In this week's issue



## Correction

An *article* in last week's newsletter on NERC's Compliance and Certification Committee meeting incorrectly described Patti Metro as the chair of the Reliability Issues Steering Committee. The chair is Nelson Peeler, chief transmission officer for Duke Energy.

## COUNTERFLOW

By Steve Huntoon

# Big Transmission Is Still Dead

*By Steve Huntoon*

Apologies to anyone awaiting my take on the Green New Deal, but I haven't figured out how to reduce a five-minute scream to writing.[1]

Please accept instead this diatribe on something only a little less preposterous — a newly announced ***HVDC transmission line*** from Mason City in northern Iowa to the ComEd zone in northern Illinois.[2]

Yes, just after I declared Big Transmission still dead last month,[3] along comes this 349-mile, 2,100-MW line that would be built underground in an existing railroad corridor at an estimated cost of $2.5 billion.

The business case is based on bringing wind generation from MISO to PJM. "We're going to beat all of PJM with cheap renewable power prices," according to the president of the independent development company proposing the merchant project.[4]

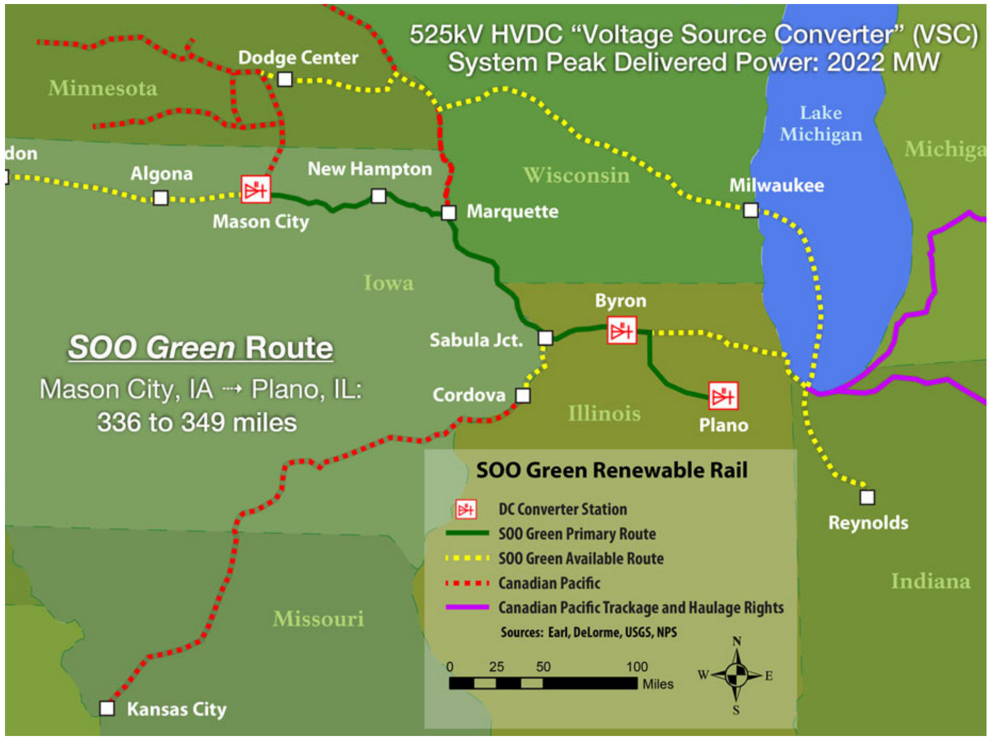
OK, where do we start? Well, let's see. Last year, the average real-time LMP at the Minnesota Hub in MISO was $26.76/MWh.[5] The average real-time LMP for the ComEd zone in PJM was $28.59/MWh.[6] The difference is $1.83/MWh. We'll come back to that number.

The all-in (pre-tax) cost of capital is estimated by Brattle/PJM for a new merchant generation project at 10%.[7] Let's use that cost of capital as a proxy for a merchant transmission project like this one.

A $2.5 billion capital cost times 10% is $250 million per year. Add annual depreciation of $50 million for a 50-year life. Generously assume transmission losses, O&M and management costs are zero. Divide the $300 million (annual cost of capital plus depreciation) by 2,100 MW times 8,760 hours in the year times a generous 50% capacity factor (9,198,000). You get $32.62/MWh.

So here's the rub. There's a $1.83/MWh difference between MISO and PJM LMPs, but the project needs an additional $30.79/MWh ($32.62/MWh minus $1.83/MWh) in order to be viable.

Why? Because no sane wind developer is going to commit to a long-term contract to pay this project $32.62/MWh for transmission service to ComEd/PJM when it can only make an additional $1.83/MWh relative to what it can get for its wind generation in MISO.




Proposed SOO Green Renewable Rail project | *Direct Connect Development Co.*

And that's just the beginning of the rub. We haven't included the costs of the "collector systems" to get 2,100 MW from wind projects scattered across Minnesota, Iowa, etc. to an HVDC converter station in Mason City, Iowa. We haven't included the costs of upgrading ComEd/PJM transmission lines in northern Illinois to absorb the 2,100 MW to be delivered by converter stations at Byron, Ill., and Plano, Ill.

Oh, and on this last item we know the costs would be staggering because PJM did feasibility studies for 2,000-MW merchant transmission projects at Byron and Plano sinks in 2016. Many 345-kV lines would be overloaded and need to be upgraded.[8] Not cheap. The project might elect not to upgrade the overloaded lines and take its chances on what would flow on an "energy-only" basis, but think about how the bottled-up energy at the converter stations would crater LMPs at those sinks. Yikes.

Big Transmission, like Generalissimo Francisco Franco, is still dead. ■

[1] My prior take on some of that in the context of the Jacobson-Clack debate can be found here: *http://energy-counsel.com/docs/Alternative-Facts-and-Global-Warming.pdf*

[2] *http://www.soogreenrr.com*

[3] *http://energy-counsel.com/docs/The-Test-of-Time.pdf*

[4] Utility Dive is playing its usual role of gee whiz cheerleader: *https://www.utilitydive.com/news/independent-developer-proposes-25b-underground-transmission-line-adding/550399/*

[5] Averages for the months, and the peak and off-peak periods, in the MISO monthly reports can be found here: *https://www.misoenergy.org/markets-and-operations/#nt=%2Fmarketsandopstype%3AMarket%20Analysis%2Fmarketanalysistype%3AMonthly%20Market%20Operations%20Reports&t=10&p=0&s=FileName&sd=desc*

[6] *http://www.monitoringanalytics.com/reports/PJM_State_of_the_Market/2018/2018-som-pjm-sec3.pdf* (page 81)

[7] *https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=15069666* (page 200, "Effective Charge Rate")

[8] *https://www.pjm.com/pub/planning/project-queues/merch-feas_docs/ab1121_fea.pdf*; *https://www.pjm.com/pub/planning/project-queues/merch-feas_docs/aa2108_fea.pdf*

## ERO INSIDER

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.

# NERC Standards Committee Briefs

### Chair Urges Comments on Standards Efficiency Review

NERC Standards Committee Chair Andrew Gallo urged committee members Wednesday to file comments on Phase 2 of NERC's Standards Efficiency Review before Friday's deadline.

Gallo made his comments after Howard Gugel, NERC senior director of engineering and standards, presented an update on the review, which is considering retiring or consolidating administrative or duplicative standards.

Howard Gugel | © *RTO Insider*

The inquiry is considering changes in *six areas* of NERC's Operations & Planning and Critical Infrastructure Protection standards, including evidence retention time frames, moving requirements to guidance, simplifying training requirements and consolidating data exchange requirements.

NERC held a *webinar* on the initiative Feb. 22 and accepted additional comments until Friday.

"I would really encourage all of the members of the Standards Committee … to please engage your folks in the process," said Gallo, director of corporate compliance for Austin Energy. "It's very rare that we [have] had opportunities to do a hard look at the standards.

"Everybody is so quick to [complain] about the standards … '[It's] administrative. It's burdensome. It doesn't really help reliability,'" he added. "Those kinds of things you hear … all the time. Here's our chance — let's use it. This is a real good opportunity for us to try and do away with some of the things that are more administrative."

### Standards Grading Process on 'Pause'

In a related matter, the committee agreed to "pause" work on the Standards Grading Process until May 2020 to avoid conflicts with other current initiatives with overlapping resources and scope.

In 2016 the SC created the Periodic Review Standing Review Team, composed of the chairs of the SC, Operating Committee, Planning Committee, a regional representative and NERC staff, to annually grade a selected set of standards.

Gugel said the initiative resulted from a charge by the Board of Trustees to develop metrics to signal whether revised standards have resulted in improvements. The 2017 review *graded* 47 requirements of eight standards.

"Given all the changes that we'll be making with the Standards Efficiency Review, and potentially changes that would [be made] in Phase 2, we thought it would be a good idea this year to put a pause on that so we can concentrate our efforts, our focus, on the efficiency review," Gugel said.

### Cyber System SAR Approved for Posting

The committee accepted a Standards Authorization Request (SAR) and authorized a 30-day comment period and 30-day drafting team nomination period to consider standard changes to accommodate use of third-party "cloud" data storage providers.

The SAR was proposed March 1 by Tri-State Generation and Transmission Association on behalf of a sub-group of the Critical Infrastructure Protection Committee (CIPC) to consider use of encryption as a security measure under NERC BES Cyber System Information (BCSI) access management rules.

The project, which was endorsed by the CIPC on March 5, would consider changes to CIP-004-6 and CIP-011-2.

"The standard should allow multiple methods for controlling access to BES Cyber System Information, rather than just electronic and physical access to the [BCSI] storage location," the SAR says. "As currently drafted, the requirement is focused on access to the 'storage location,' and therefore does not permit methods such as encryption and key management to be utilized in lieu of physical/electronic access controls."

### Functional Model Advisory Group Work Frozen

The committee agreed to direct the Functional Model Advisory Group (FMAG) to cease work pending deliberations on whether the group should continue or be eliminated to avoid confusion over registration requirements and related standards.

Created in 2014, the FMAG was tasked last year with aligning the terms and definitions in the *Functional Model* guideline with those used in NERC's Rules of Procedure. It also was asked to solicit industry input on whether it should continue its work and make "more substantive" revisions to the FM to align with industry practices, NERC said.

At its December 2018 meeting, the SC endorsed the FMAG's work on the first task but delayed publication of its report. At the same time, several SC members called for creating a small group of members from the NERC standing committees to consider next steps.

In February, the Standing Committee Coordinating Group (SCCG) agreed to form an *ad hoc* group of NERC staff, Compliance and Certification Committee leadership and SC leadership to map out plans for the FM. SC Chair Gallo instructed the FMAG to refrain from additional work until the ad hoc group makes its recommendations.

"What's happened historically is, any time a change is made to the Functional Model, there are those who think it automatically changes registration, how standards are written. So, it's caused a lot of angst," explained Charles Yeung, SPP's executive director for interregional policy. "It's only changes to the registration criteria that can change entity registration.'"

Gallo, a member of the ad hoc group, said he'd like the issue resolved quickly. "We don't want this to languish very long. The Functional Model work has been going on now for a couple of years. It's been stopping and starting and [moving in] fits and starts," he said. "That's not good for anybody."

### Revised Charter OK'd

Members approved a new committee charter, replacing the version last amended in December 2014 and reviewed and reaffirmed in December 2016. The revisions, which are mostly cosmetic or updates, were drafted by the SC Executive Committee and will be submitted to the board at its next meeting.

"I thought there were a lot of changes in here that didn't really change anything," commented Barry Lawson, associate director of power delivery and reliability for National Rural Electric Cooperative Association. "A few of the changes are substantive."

## ERO INSIDER

Section 5.1 amends the timing for selecting the committee chair and vice chair, requiring nominations about 150 calendar days before the end of the expiring terms.

Another member expressed concern about the elimination of a section mandating at least two Canadian representatives. But NERC's Gugel said the section was removed as duplicative because Canadian representation is protected in Rules of Procedure Appendix 3B.

### Modifications Within SAR Scope

The committee agreed that making modifications to IRO-008-2 and TOP-001-4 are within the scope of the Project 2015-09 system operating limits SAR.

The Standards Drafting Team (SDT) requested the committee's approval to make clarifying modifications to the two standards to ensure their consistency with proposed FAC-011-4 Requirement R6 regarding logging and reporting of system operating limits (SOL) exceedances.

The SDT is modifying FAC standards that address SOLs and interconnection reliability operating limits (IROLs).

SDT member Stephen Solis, of ERCOT, said several entities have market mechanisms for addressing projected post-contingency exceedances identified in real-time assessments and generally can mitigate them within minutes.

Solis said the revised rules would give entities up to 30 minutes to address the issue before having to report an exceedance to its reliability coordinator or transmission operator (TOP).

Under proposed FAC-011-4 R6, if a TOP's real-time assessment indicates that a contingency would cause a facility to exceed its emergency rating, it would constitute an SOL exceedance, triggering logging and other documentation requirements.

Several entities have complained that the requirement creates an undue burden for logging, communicating with the RC and creating audit-ready compliance documentation, Solis said. They said the unnecessary logging and communications would divert system operators' attention from operating the system, creating an increased reliability risk.

"We can't lower what the requirements are, but we can clarify what the requirements are," Solis said. "Solidify for everybody what is and is not an SOL exceedance.

"If you're a TOP and you see a voltage limit exceedance, you can [perform switching] in 30 seconds to a minute," Solis said. "Why [should] you then [have] to call your RC right after these normal-type operating actions that happen throughout every day?"

### Participant Conduct Policy

NERC Senior Counsel Lauren Perotti briefed the committee on NERC's new Participant Conduct Policy, which spells out acceptable (e.g., discussing issues) and unacceptable (e.g., engaging in price fixing, using NERC for commercial purposes) conduct at stakeholder meetings.

The policy will replace individual policies previously adopted by the SC and Operating Committee. It applies to all NERC standing committees.

"The whole point of us putting this together was to promote an efficient and effective use of our participants' time. NERC relies on its stakeholders to achieve its mission," Perotti said.

The rules bar members using NERC's listserv to express personal views unless they are directly related to the scope of work. "'I really hate XYZ politician' is not appropriate," Perotti said.

Perotti said that when stakeholders speak to news reporters, they should specify that they are speaking for themselves or their company and not for NERC. ■

*— Rich Heidorn Jr.*

ACORE RENEWABLE ENERGY POLICY FORUM

# ACORE Speakers: Green New Deal Advancing Climate Debate

*By Michael Brooks*

WASHINGTON — The Green New Deal — the nonbinding resolution introduced early last month by Rep. Alexandria Ocasio-Cortez (D-N.Y.) and Sen. Ed Markey (D-Mass.) calling for the U.S. to use 100% renewable energy resources by 2030 — has sparked furious debates among policymakers, experts and the national media.

There is plenty to disagree about: the resolution's merits; its feasibility; its inclusion of other goals unrelated to climate or energy, such as those regarding health care; and whether it will help, or hurt, Democrats in the 2020 elections.

But in at least one of these debates, which took place during the American Council on Renewable Energy's Renewable Energy Policy Forum last week, everyone agreed on something: The Green New Deal has put climate change to the fore of U.S. politics like never before.

"We've had more conversations about climate in the last five weeks since we introduced the Green New Deal than we've seen in the past 10 years," said Morgan Gray, Markey's legislative director.

Though the conference, which attracted about 100 renewable industry executives to the Conrad Hotel on Wednesday, featured panels on topics such as state renewable portfolio standards and integrating renewables into RTO/ISO markets, federal policy on climate change was top-of-mind for many who spoke or asked questions.

## 'Good Politics'

Jay Inslee | © *RTO Insider*

Washington Gov. Jay Inslee, one of the 14 (as of press time) major candidates to be the Democratic nominee for president, set the tone for the day with his opening keynote speech.

"I believe very strongly that defeating climate change, building clean energy [and] building renewable energy must be the number one job of the United States, because if it is not Job 1, it won't get done," said Inslee, who has made climate policy the centerpiece of his political career and campaign.

Though he stopped just short of endorsing it, Inslee said the Green New Deal has been helpful in moving climate change up the list of priorities for Congress. He noted, as many other speakers did, that climate was not even discussed during the 2016 presidential debates.

Absent from the resolution is a plan detailing how the U.S. would achieve the ambitious goals. This was a source of contention among Gray and his fellow panelists, who often freely sparred without interference from moderator Julia Pyper, senior editor at Greentech Media.

The Green New Deal "is good politics," said Alex Flint, executive director of the Alliance for Market Solutions, a conservative think tank that advocates a tax on carbon emissions. "Climate change is an increasingly important thing to voters in both parties, and we're beginning to see that. That's why the Green New Deal has resonated.

"From a policy perspective, it's completely bankrupt," he continued. "There's no actual policy: What's going to happen with FERC, the Federal Power Act? Are we going to need a new tax policy? None of that is there."

But, "and this is a good thing, it's pulled Democrats so far to the left that it has a created an opening at the center of political discourse for Republicans."

Christy Goldfuss, senior vice president of energy and environment policy for the Center for American Progress, debated with Flint about a carbon tax being the "only" solution, saying, "We are going to have to take many big steps in order to address climate change."

But she agreed that the Green New Deal "brings people to the table to figure out solutions that have bipartisan support." She noted that Democrats were able to take control of the House of Representatives by moderate candidates winning in purple districts. They will be looking for legislation they can compromise with Republicans on, she said. "Absent the Green New Deal, that would not be where we are."

## A Real Deal?

The resolution is too politically charged, with Republicans ridiculing it as a ban on airplanes and hamburgers, said Heather Reams, executive director of Citizens for Responsible Energy Solutions, another organization that advocates market-based solutions to climate change. But she also said she was pleased that it has sparked real debate over solutions to climate change.

"Republicans need to step up," Reams said. "They need to start talking about what they're for, instead of what they're against. And they need to do that, like, ASAP." The comment prompted murmurs of agreement from the audience.

"That's a wholly new statement that I haven't heard in the last 10 years," Gray said. "I think that's kind of the shift that we've seen as a result of the Green New Deal."

All of the Democratic presidential candidates who serve in the Senate are cosponsors of Markey's resolution and swiftly endorsed it as part of their campaigns, while more moderate and pragmatic members of the party have dismissed it as too ambitious. (See *House Democrats Put Climate Change Front and Center*.)

Seeking to capitalize on the division, Senate Majority Leader Mitch McConnell (R-Ky.) has planned a vote on the resolution for this week. Minority Leader Chuck Schumer (D-N.Y.) is urging his caucus to simply vote "present."

On Friday, *Politico* reported that it had obtained a draft of a "Green Real Deal" being circulated by Rep. Matt Gaetz (R-Fla.) to counter the Green New Deal. The draft acknowledges climate change as a threat to national security and says the government should promote innovation to reduce greenhouse gas emissions, but it does not set any targets for future carbon cuts. ■

From left to right: Julia Pyper, Alex Flint, Christy Goldfuss, Morgan Gray and Heather Reams. | © *RTO Insider*

## FERC & Federal News

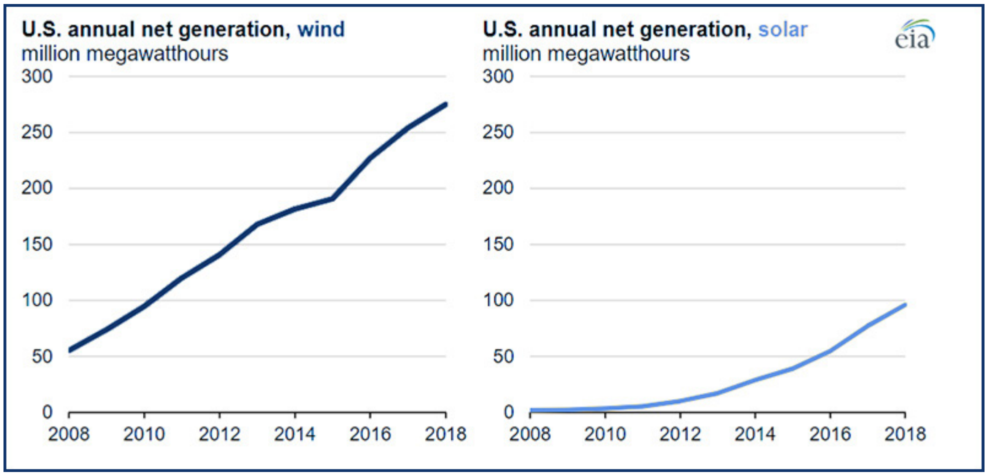
# Report: US Renewable Generation Nearly Doubled Since 2008

*By Christen Smith*

U.S. renewable electricity generation nearly doubled over the last decade, the Energy Information Administration *reported* last week.

Solar, wind and hydroelectric resources provided 742 million MWh of electricity in 2018, up from 382 million MWh produced a decade earlier. Wind and solar generation accounted for 90% of the increase, the agency said.

Wind generation grew 80% between 2008 and 2018 to 275 million MWh, accounting for 6.5% of total electricity generation. Solar, meanwhile, exploded from just 2 million MWh to 96 million MWh, composing 2.3% of total generation last year. Utility-scale installations accounted for 69% of last year's solar output, with small-scale rooftop, customer-sited resources contributing the rest.



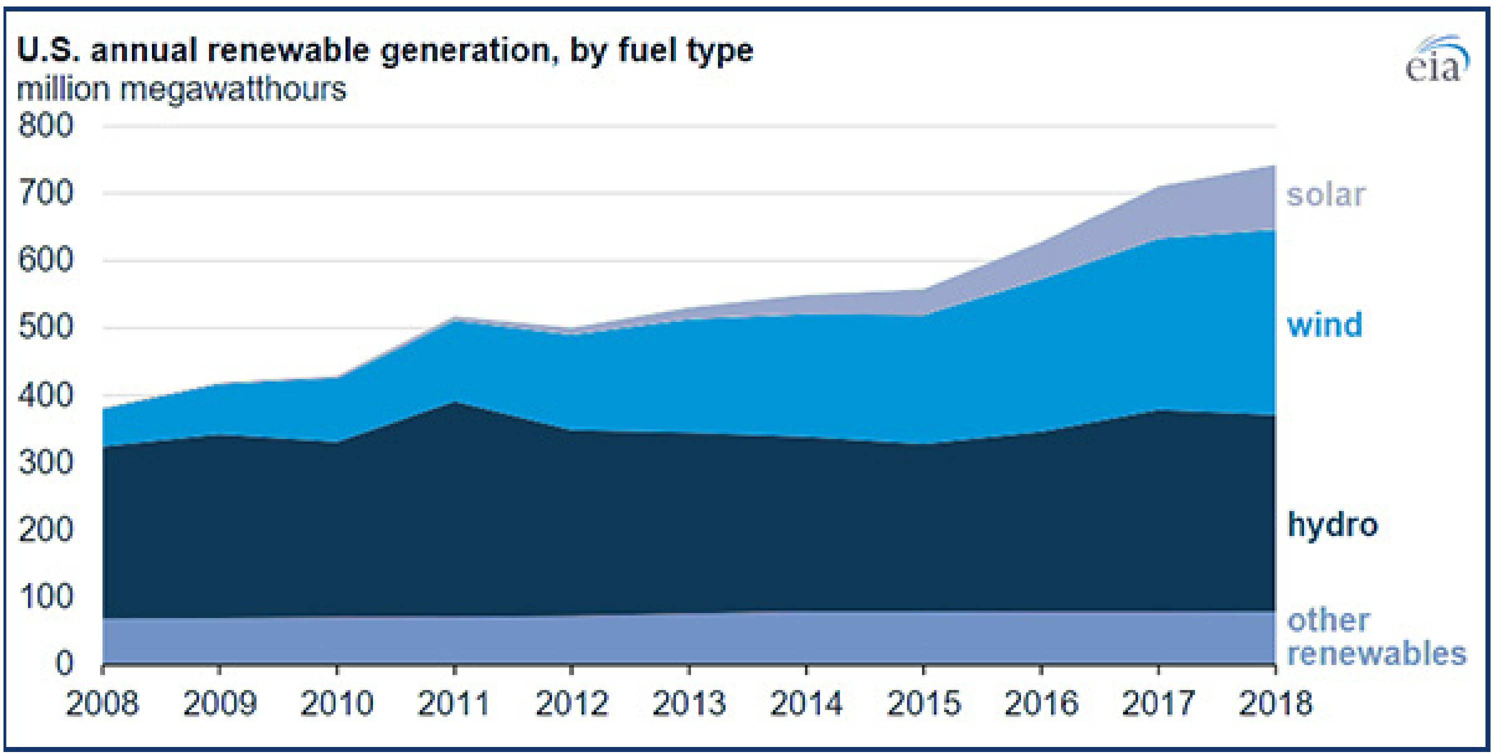

Solar and wind accounted for 90% of the increase in renewable generation between 2008 and 2018. | *Energy Information Administration*

Wind capacity jumped from 25 GW to 94 GW over the decade, while solar capacity surged from less than 1 GW to 51 GW. Conventional hydroelectric capacity increased just 2%, although output varied widely over the period based on water conditions.

EIA attributed the growth in renewables to federal policies (such as the production and investment tax credits), state-level programs (such as renewable portfolio standards) and declining costs.

"As more wind and solar projects have come online, economies of scale have led to more efficient project development and financing mechanisms, which has led to continued cost declines," the agency said.

The March 19 figures came on the heels of a March 11 EIA *report* showing that Texas, Iowa and Oklahoma added 4,000 MW of wind capacity last year, composing 60% of the new units brought online in 2018. California, Florida and North Carolina built a majority of the 4,900 MW of solar photovoltaic generation added in 2018, according to the report.




Solar, wind and hydroelectric power provided 742 million MWh of electricity in 2018, up from 382 MWh produced a decade earlier. | *Energy Information Administration*

# FERC & Federal News

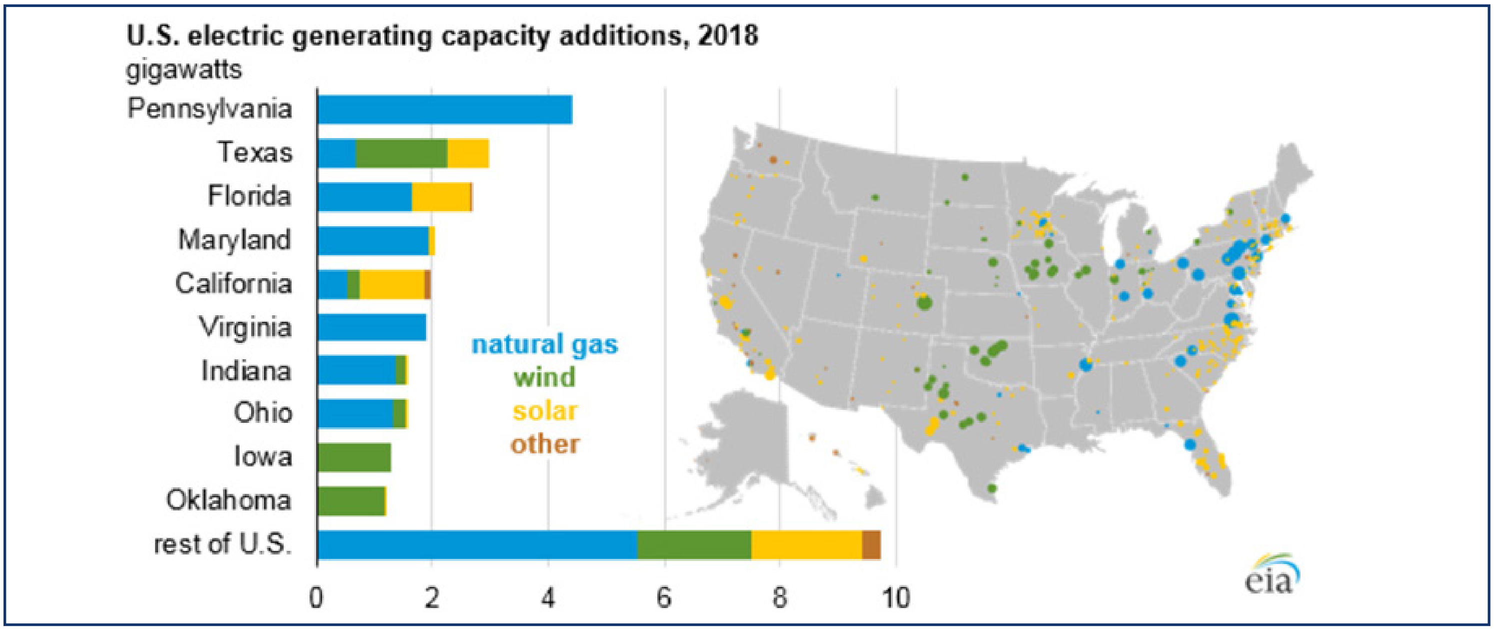
## Pennsylvania Dominates New Gas Capacity

Meanwhile, natural gas-fired generators dominated new U.S. capacity additions last year, with nearly a quarter of the 19.3 GW of new units coming online in Pennsylvania alone. Maryland, Florida and Virginia combined accounted for an additional 30% of the new gas-fired resources, EIA found. Nearly 90% of all new gas units were combined cycle, the agency said.

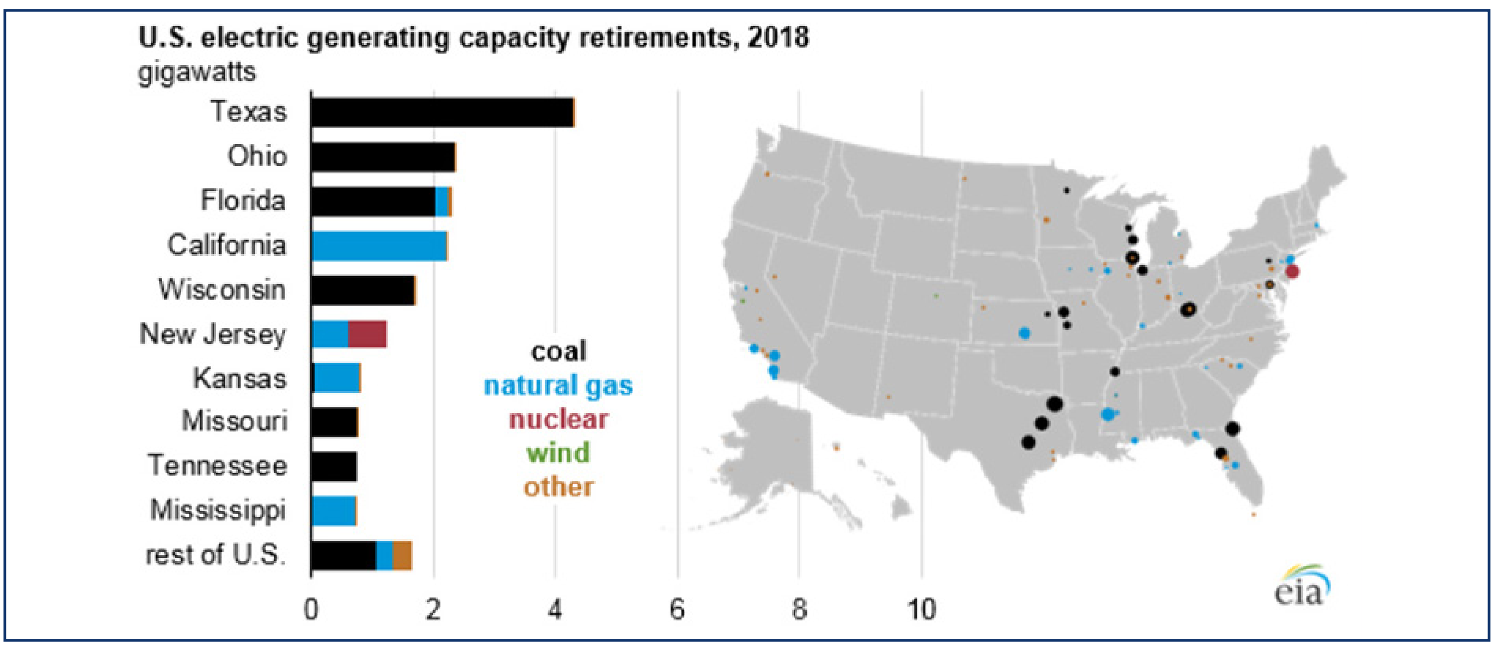
EIA said the U.S. added a total of 31,300 MWh of generation and retired 18,700 MWh in 2018. Inefficient coal plants and natural gas steam and combustion turbine units accounted for the majority of the retirements, with just one nuclear plant — Oyster Creek in New Jersey — shutting down.

The results underscore the continuing struggle of coal plants to maintain market share as state policies push developers toward cleaner, more efficient technologies. Gas-fired energy output exceeded coal for the first time in PJM, according to the Independent Market Monitor. (See *Monitor Says PJM's Capacity Market Not Competitive*.)

In December, EPA relaxed regulations on newer coal-fired plants as nationwide consumption hit its lowest point in 39 years. (See *EPA Eases Rules for New Coal Generation*.) Coal retirements for the year came in as the second most on record, according to EIA, with another 4,000 MW of capacity scheduled for retirement by the end of 2019. ■




The U.S. added 31,300 MWh of capacity in 2018. | *Energy Information Administration*




The U.S. retired 18,700 MWh of capacity, mostly coal plants, in 2018. | *Energy Information Administration*

## FERC & Federal News

# FERC Opens Inquiries into Tx Incentives, ROE Policies

*Continued from page 1*

From left to right: FERC staffers Tony Dobbins, Adam Batenhorst, David Tobenkin, Adam Pollock and Jeremy Hassler present the NOIs. | © *RTO Insider*

### Transmission Incentives

FERC noted in its transmission incentives policy NOI that 13 years have passed since it established its current policy in Order 679, after Congress in the Energy Policy Act of 2005 directed the commission "to promulgate a rule providing incentive-based rates for electric transmission for the purpose of benefiting consumers through increased reliability and lower costs of power."

"During that time, the landscape for planning, developing, operating and maintaining transmission infrastructure has changed considerably," FERC said, including issuance of Order 1000, the shift in the generation mix, the increase in the number of new resources seeking transmission service, shifts in load patterns and an increased emphasis on the reliability of transmission infrastructure.

"I believe we are really at an inflection point in the energy future of our nation, and FERC's transmission policies are going to be key to shaping that future," Chatterjee said.

Order 679 required "that each applicant demonstrate that there is a nexus between the incentive sought and the risks and challenges of the investment being made." FERC asked stakeholders whether it should stick with this "risks-and-challenges" approach, if it should be retained while also considering other factors, or if it should just be replaced entirely. The commission asked stakeholders to weigh in on other approaches, such as considering the economic and reliability benefits of a project or considering project characteristics (such as location in areas of persistent need or interregional efforts) as a "proxy" to benefits.

Commissioner Cheryl LaFleur said she was particularly interested in comments on the transmission-only company and RTO participation adders, and on the interplay between the incentives policy and Order 1000.

"I do believe there's a clear need to construct more transmission to ease the interconnection of location-constrained renewables," LaFleur said. "And I think that's evidenced by the choking interconnection queues in several of the regions, suggesting there might be transmission that's needed rather than just hundreds of interconnections, and we have to make sure the processes support that."

"It is not clear to me that in some cases the incentives we are handing out are actually incenting anything," Commissioner Richard Glick said. "If we're going to design the right approach, we need to be reasonably certain the incentives are necessary or whether the investments in question would occur anyway. In other words, we shouldn't be handing out what some people refer to as 'FERC candy' without actually achieving something beneficial in return."

### Return on Equity

The NOI on the commission's ROE policies comes in response to the D.C. Circuit Court of Appeals' 2017 ruling that remanded a FERC order setting the base ROE for a group of New England transmission owners at 10.57%. (See *Court Rejects FERC ROE Order for New England*.)

FERC set the ROE at the midpoint of the upper half of the zone of reasonableness produced by a two-step discounted cash flow (DCF) analysis. In *Emera Maine v. FERC*, the court found that FERC had failed to show how this was just and reasonable, though it did not challenge the commission's methodology. Nevertheless, in October, FERC proposed a new policy for how it would set transmission ROEs, suggesting it would no longer rely solely on the DCF method. (See *FERC Changing ROE Rules; Higher Rates Likely*.)

The NOI issued Thursday will take a much broader look at FERC's ROE policies, including whether any changes to its transmission ROE policies should be applied to interstate natural gas and oil pipelines. The commission noted that the NOI won't affect the docket it opened in October, nor other current ROE proceedings.

"The commission recognizes the potentially significant and widespread effect of our ROE policies upon public utilities," FERC said. "The importance of ROE policy for public utilities extends beyond the particular interests of the parties to the *Emera Maine* proceeding."

FERC asks more than 70 questions in the NOI. In a press release, it divided them into eight general areas:

- The role of FERC's base ROE in investment decision-making and what objectives should guide the commission's approach;
- Whether uniform application of FERC's base ROE policy across the electric, natural gas pipeline and oil pipeline industries is appropriate and advisable;
- The DCF model's performance;
- The composition of proxy groups;
- The choice of financial model used;
- The mismatch between market-based ROE determinations and book-value rate base;
- How FERC determines whether an existing ROE is unjust and unreasonable under the first prong of FPA Section 206; and
- The mechanics and implementation of the models.

"The questions we ask are extremely detailed and comprehensive, and this has been a notoriously difficult area of our work, around which to develop a consensus and sustain in court," LaFleur said. "I strongly encourage commenters to be focused and concise in their comments." She stressed that commenters need not answer every single question. ■

## FERC & Federal News

# Glick Disputes FERC 'Breakthrough' on LNG Projects

*By Rich Heidorn Jr. and Michael Brooks*

WASHINGTON — FERC Commissioner Richard Glick on Thursday rejected Chairman Neil Chatterjee's claim of a bipartisan "breakthrough" on the commission's evaluation of LNG projects, joining with fellow Democrat Cheryl LaFleur to say the panel was still ignoring the projects' impact on climate change.

On Feb. 21, a FERC *news release* celebrated the commission's 3-1 approval of the Calcasieu Pass LNG export project in Louisiana, calling it a "breakthrough … agreement that may provide a path forward" for the commission's review of 12 other proposed LNG facilities.

The release quoted Chatterjee thanking LaFleur and Republican Commissioner Bernard McNamee for joining the chairman in the majority. It made no mention of LaFleur's six-page concurrence, in which she disagreed with Chatterjee and McNamee for failing to disclose the cumulative greenhouse gas emissions from the project (*CP15-550*). (See *LaFleur Sides with Republicans on LNG Terminal as Glick Dissents*.)

Glick, who had authored a seven-page dissent, said at Thursday's monthly open commission meeting that the ruling was "anything but a breakthrough."

Although the order did acknowledge the project could produce almost 4 million tons of direct GHG emissions annually, Glick said, it ignored the impact of them on climate change and "then found that the project's environmental impacts will not be significant and that, as a result, the project is in the public's interest."

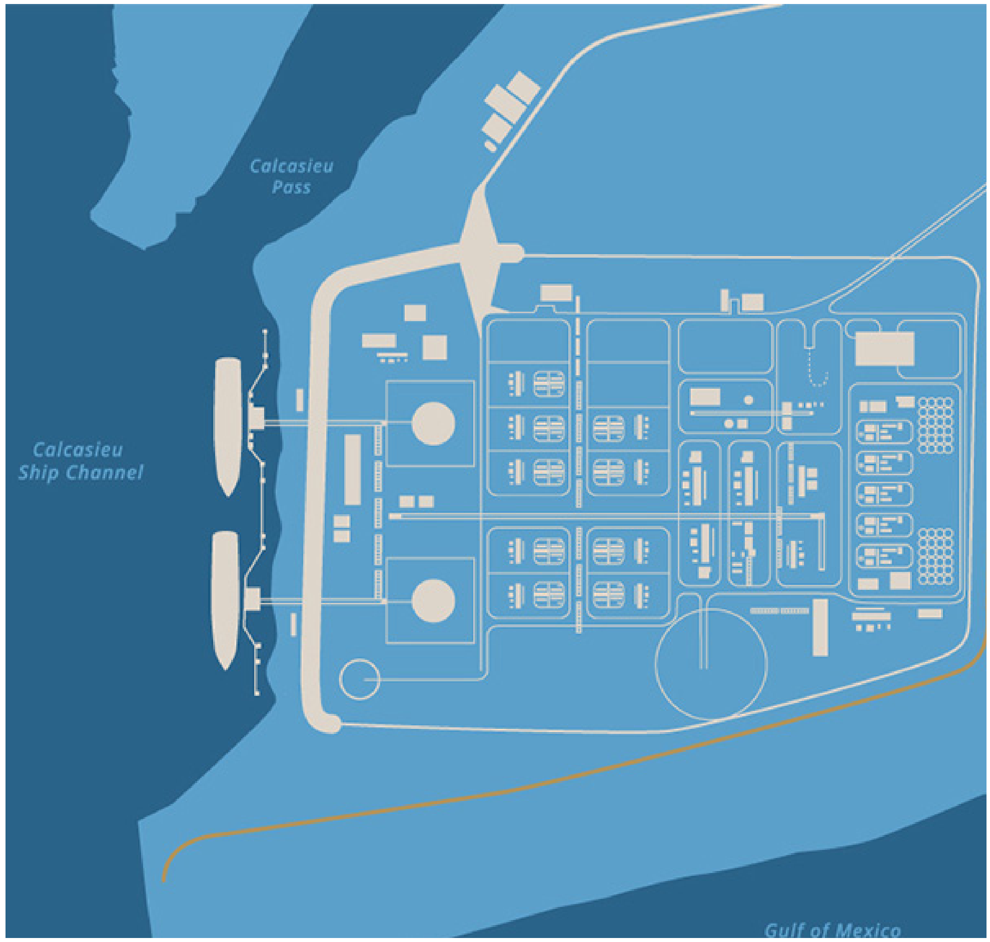
"I don't want to hear that assessing significance is too hard. The commission is called upon to do it all the time in other contexts with far less information than we have in this proceeding."

### LaFleur's Frustration

LaFleur, who has joined Glick in opposing some gas pipeline projects, wrote in her concurrence that she supported Calcasieu Pass as "not inconsistent with the public interest" based on the "governing law."

In her comments at Thursday's meeting, LaFleur repeated her frustration with the Republicans' reluctance to address GHG emissions.

"We have been treating climate impacts differently than all the other environmental impacts that we look at," she said. "We know how to




Site plan for the Calcasieu Pass LNG export project | *Venture Global LNG*

quantify, mitigate [and] consider impacts to land, water and species. We make calls on whether impacts to wetlands or to a specific species of mussels are significant. But we don't do that for climate change impacts. Instead we say we can't figure out how to do it."

She also complained about the split jurisdiction over LNG exports. While FERC permits the facilities and evaluates their direct environmental impacts, the Department of Energy decides whether the export of the fuel is in the public interest, including the consideration of upstream and downstream GHG emissions.

"It's hard to do the [public interest] weighing if we're only in charge of the impact but someone else is in charge of the benefits. I think we could be well served by looking at the lifecycle of [LNG] exports and what the aggregate climate impacts are," she said.

"I don't have the authority to make that happen," she acknowledged. "In the meantime, I have to do my job, which is deal with the applications that are before us. I will continue to try to look at them case by case."

### McNamee, Chatterjee Respond

Chatterjee, who had made his opening remarks before his Democratic colleagues, did not address their comments in the open meeting.

McNamee, however, defended the commission's order, insisting it "seriously addressed" the GHG emissions.

"I think it's a disappointing thing that in this town, often if there's a disagreement about how something should be done or what the conclusions are, that some will say that it wasn't done, that they're ignoring something," he said.

"We have to look at each order separately. But we were able to show, at least here, that Washington can work," he continued. "We

## FERC & Federal News

compromised. We come together. We listen. We can get things done."

Speaking to reporters after the meeting, Chatterjee said, "I actually thought that was a model for how constructive dialogue can take place in Washington, and I want to commend all three of my colleagues for their approach to this. I echo Commissioner McNamee's sentiment: This is an example of how Washington can work."

He said LaFleur was instrumental in brokering the compromise that led to the inclusion of the emissions figures and how they compare to total U.S. emissions.

"This was a big win for her," he said. The language "was a change in a policy, a major change in policy. The commission had been approving projects in the past without the inclusion of this language. ... Commissioner McNamee and myself had to get comfortable with what the legal implications of this change would be. ...

"I was not completely comfortable with the change in our approach, and neither was Commissioner McNamee, but it was important that we negotiated in good faith with Commissioner LaFleur. And I for one view it as a significant accomplishment for her."

Chatterjee also complimented Glick for his dissent.

"While he spoke very passionately, and we may disagree in our interpretation of what the Natural Gas Act allows, I commend him for his very strong and rigorous dissent because that's the purpose of these multimember commissions. Strong dissents make the order stronger. In crafting the underlying order, we have to ensure we are dotting all our i's and crossing all our t's to account for all the arguments that he is making in his dissents."

### Litigation Risk?

LaFleur and Glick said the commission's failure to consider GHG emissions creates a risk that its orders will be overturned on appeal. They cited the 2017 D.C. Circuit Court of Appeals order that remanded FERC's approval of an environmental impact statement (EIS) for the Southeast Market Pipelines Project and a federal court *ruling* last week faulting the Bureau of Land Management's EIS on oil and gas drilling in Wyoming.

Glick said LNG developers could take steps to mitigate their GHG emissions, citing the Freeport LNG terminal, which he said "substantially reduced their greenhouse gas emissions … by employing all-electric compression motor drives. A developer can also offset emissions with emissions-free power. This isn't rocket science. So, before we pat ourselves on the back and give ourselves the good government award, we need first to do our job under the law, which in this case means not ignoring the impact a project will have on climate change." ■

## FERC & Federal News

# Chatterjee Tight-lipped on Pugliese Departure

*By Michael Brooks*


FERC Chairman Neil Chatterjee speaks to reporters after the commission's open meeting March 21. | *© RTO Insider*

WASHINGTON — FERC Chairman Neil Chatterjee on Thursday praised former Chief of Staff Anthony Pugliese, denying there had been any conflict between the two but also staying mum on the reason for his departure from the commission.

"I want to thank Anthony for his friendship, for his willingness to serve the agency and the country, and we wish him well in his future ventures," Chatterjee said at the beginning of the commission's monthly open meeting.

Pugliese announced his resignation via *Twitter* the day before, saying he was "grateful for the opportunity to serve [President Trump], [FERC] and the American people as chief of staff! Excited for my next challenge and opportunity — continuing the American model of energy for the world. Stay tuned! But first a little time for a vacation!"

Following his tweet, FERC made its own announcement, saying Pugliese's resignation was effective March 15. In a press conference after the meeting, Chatterjee told reporters that he was planning to make the announcement himself during the meeting, but "I think some of you all maybe were starting to ask questions, [which] prompted his tweet."

Chatterjee was reluctant to talk about the circumstances around the departure. But, he said firmly, Pugliese "was not asked to leave." He declined to comment on the search for a replacement.

Pugliese told *Politico* on the day of his announcement that he had been planning on leaving since Commissioner Kevin McIntyre's death in January.

A former lobbyist in Pennsylvania's capital and an unsuccessful state legislative candidate there, Pugliese had served as chief of staff since August 2017, before the arrival of McIntyre as chair in December of that year. He stirred controversy last July for remarks he made at a conference of the American Nuclear Society and on the "Breitbart Radio Show," in which he praised Trump and criticized Democratic governors for blocking pipelines.

In a letter to congressional Democrats, McIntyre defended Pugliese, saying his comments did not reflect FERC policy. After taking the role of chair because of McIntyre's ailing health, Chatterjee in late October also defended Pugliese. Both praised Pugliese's management and administrative skills. (See *McIntyre Defends FERC Chief of Staff Pugliese* and *Returning Chair Pledges to Protect FERC's Independence*.)

Asked if his relationship with Pugliese had "deteriorated," Chatterjee responded, "Look, Anthony is a personal friend of mine, and I don't agree with that characterization." He also declined to say what, if any, disagreements led to the resignation, repeating that Pugliese was a friend and that he wished him well.

### Coal, Nuke Bailout Still Alive

Chatterjee also said he had never had any conversations with the White House during his nomination process about the Trump administration's push to bail out uneconomic coal plants.

The question came in response to a *Politico* article published March 19 reporting that Trump had dropped plans to nominate former NRG Energy General Counsel David Hill to fill McIntyre's spot after pressure from Energy Secretary Rick Perry and coal company executives Joe Craft and Robert Murray. Hill, who was the Department of Energy's general counsel under President George W. Bush, has opposed the current administration's effort to support coal generators.

The article came the same day the White House published its annual economic *report*, which contained a paragraph about "the strategic need for an electricity generation reserve."

"The entire portfolio of generation assets in the United States could be eligible to be part of a reserve, with different strategic weights placed on various types of generation — for example, nuclear or coal-fired generation might provide greater resilience benefits and therefore be preferentially selected into the reserve," the report says. ■

## CAISO/WECC NEWS

# Calif. Lawmakers Reveal Growing Divisions over CCAs

*By Hudson Sangree*

A California State Senate hearing illustrated the rift over community choice aggregators, with some lawmakers warning of blackouts and one lashing the top state regulator for his alleged "hostility" toward the groups.

Scott Wiener | *California State Senate*

"Frankly, with all respect, Mr. Picker, your comments here today further bolster my belief that I don't want to see the CPUC having a greater role [regulating CCAs]," Sen. Scott Wiener told Public Utilities Commission President Michael Picker at the March 19 *hearing* of the Energy, Utilities and Communications Committee. "I think the CPUC would pretty quickly move to kill off CCAs. I'm just being super blunt."

Wiener said he thought the PUC was attempting to "double down on this hyper-centralized model that has not worked well for California" and had displayed hostility toward CCAs and distributed energy resources such as solar power.

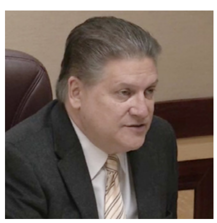
The San Francisco Democrat next took aim at Picker's testimony in a recent State Assembly hearing, where he said the commission had received 11 resource adequacy (RA) waiver requests last year from CCAs and electricity service providers (ESPs), when in fact 10 of the waivers were from ESPs, which provide electricity directly to commercial and industrial customers, and another was from one of the state's large investor-owned utilities. (See *Calif. CCAs, Decarbonization Provide Reliability Challenges*.)

Picker responded during the testy exchange with Wiener by saying, "I will apologize for the way I characterized the problem, but I will not say there's not a problem."

During his Senate testimony, and in his earlier Assembly testimony, Picker expressed concern that CCAs may be unable to meet the state's local RA requirements. Some serve areas with limited transmission capacity to import electricity, he said, and may be unable to compete for electricity from generators within their load pockets during times of high demand.

Picker said it may be necessary to designate an entity to serve as a central buyer of electricity to backstop CCAs and other load-serving entities. That entity could be an IOU, such as Southern California Edison, or an independent agency created by lawmakers. A bill, *AB 56*, to establish a central procurement entity was introduced in December.

Picker's sentiments were echoed by several lawmakers who expressed concerns about a repeat of the state's 2000/01 energy crisis, when rolling blackouts afflicted California.



Robert Hertzberg | *California State Senate*

Sen. Robert Hertzberg (D) this year introduced a bill, *SB 520*, that would authorize the PUC to develop threshold attributes for an LSE to serve as a provider of last resort if other LSEs fail to deliver electricity to retail customers. It would also instruct the commission to develop a method, such as an auction, for selecting the provider of last resort and to determine how that entity would benefit from its role.

"If the perfect storm happens, there has to be a backup plan," Hertzberg told the committee.

The state's IOUs are currently the *de facto* providers of last resort, but as customers migrate away from IOUs and the utilities become poles-and-wires companies, they may be unable to fulfill that function, he said.

Hertzberg, a veteran state lawmaker who served as Assembly speaker during the energy crisis, said lawmakers created CCAs in the early 2000s as an interim step to deliver renewable energy to local communities.

The state's first, Marin Clean Energy, launched in 2010. There are now 19 CCAs, primarily in wealthy coastal California, with a dozen more *under consideration* by city and county governments statewide. CCAs are expected to serve more than 10 million customers, or about a quarter of California's population, this year, according to the California Community Choice Association.

Hertzberg said the shift away from IOUs, the proliferation of renewable energy and other seismic shifts represent a "new world order" in terms of electricity delivery and reliability that still must be sorted out by policymakers.

"They'll continue to survive," Hertzberg said of CCAs, "but I think we're all in for a significant change to make sure we have reliability for the people of California." ■

## CAISO/WECC News

# Silicon Valley Tackles Wildfire Prevention

### *CPUC Hosts Summit Looking to High Tech to Prevent Disasters*

*By Hudson Sangree*

SACRAMENTO — The SLAC National Accelerator Laboratory occupies a sprawling site in the hills above Stanford University's main campus and uses so much electricity to run its laser and particle physics experiments that it has its own high-voltage transmission line.

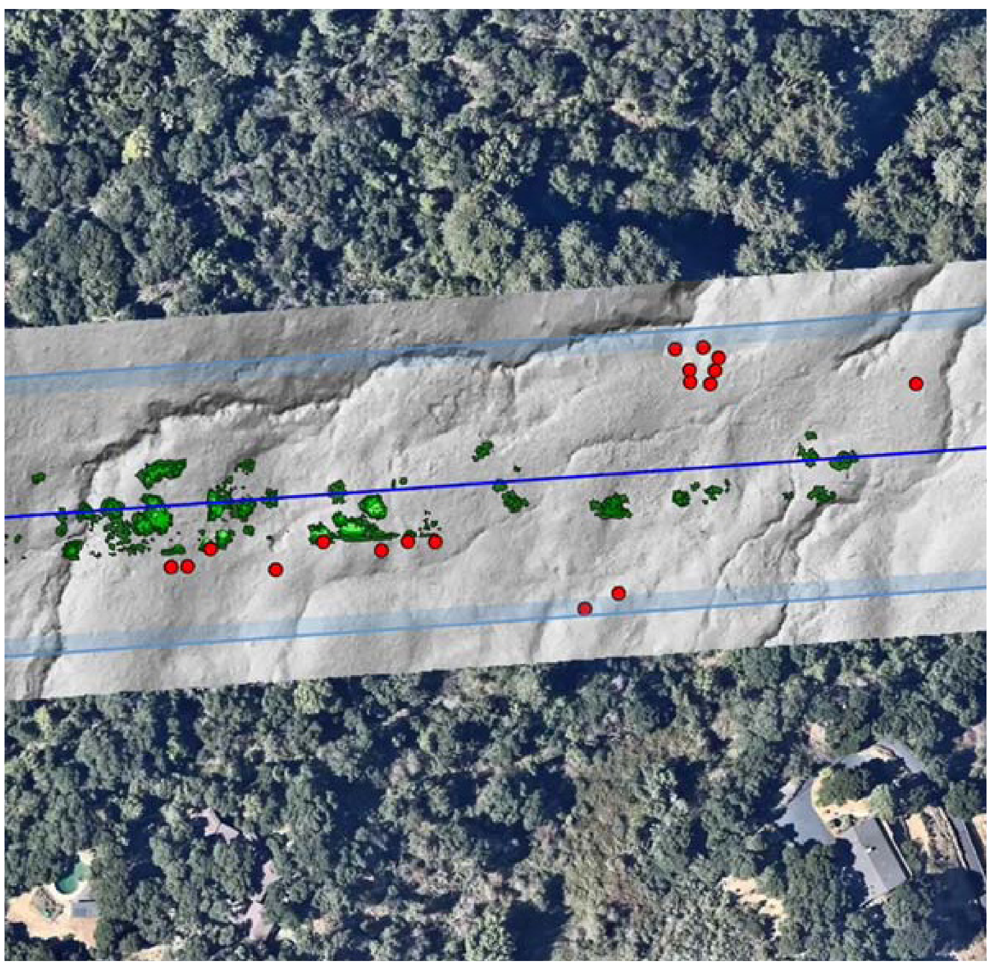
The overhead line runs through one of the wealthiest and most important parts of Silicon Valley. It's also in a high-risk fire zone of hillsides covered in tall grass, chaparral and dense tree cover. A wildfire there could be a major disaster.

To tackle that threat, SLAC has employed the latest in geospatial 3D imaging, artificial intelligence and big data to assess risks and manage vegetation around the 5-mile 230-kV line. The technology's developers say it could be applied broadly across California.

Catastrophic wildfires have been called the state's new normal, but "they don't have to be," said San Gunawardana, CEO and co-founder of Enview, a company that uses 3D analytics to protect utility infrastructure. "We need a new generation of tools to prevent and predict these events. Big data and AI are one of those tools, and they're available to us today."

Gunawardana made his remarks at the inaugural *Wildfire Technology Innovation Summit* that took place Wednesday and Thursday at California State University, Sacramento, with roughly 700 attendees. It was hosted by the Califor-

Stanford's Linear Accelerator Center is using the latest in 3D imaging and artificial intelligence to prevent its transmission line from sparking wildfires. | *SLAC*

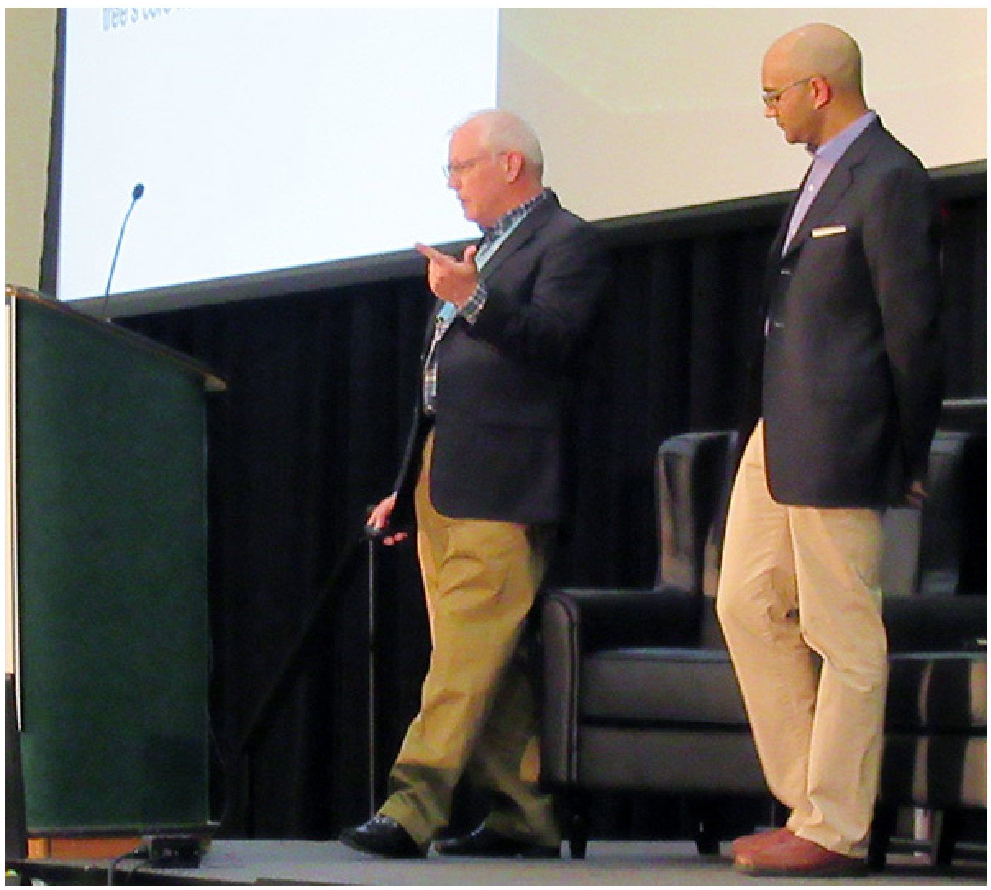


Enview, based in San Francisco, uses the latest in geospatial 3D imaging to identify potentially hazardous vegetation near power lines. | *Enview*

Sumeet Singh (right), PG&E's vice president for wildfire community safety, called for utilities to share more safety data. | © *RTO Insider*

# CAISO/WECC News

An estimated 700 stakeholders attended the inaugural Wildfire Technology Innovation Summit, convened by the California Public Utilities Commission, at California State University, Sacramento. | *© RTO Insider*



Steve Liebelt (left), a SLAC engineer, and San Gunawardana, CEO of Enview, demonstrate the high-tech methods SLAC uses to keep its transmission line from sparking fires. | *© RTO Insider*

nia Public Utilities Commission, IBM and the University of California, San Diego, among others. Sponsors included Enview, Google and Microsoft.

The two-day summit featured presentations from firefighting organizations such as the California Department of Forestry and Fire Protection (Cal Fire); utilities, including San Diego Gas & Electric, which has installed hundreds of cameras and weather stations across its service territory; and tech firms that make safety sensors, fault interrupters and monitoring software.

The summit was intended to "dramatically shift how we address the expanding climate-change challenges of drought, dry winds and vegetation," organizers wrote. "California has long been a global leader in technology innovation, and we must work together to devise the tools we need to get ahead of this issue."

Gunawardana presented the SLAC case scenario with Steve Liebelt, an engineer at the linear accelerator and part of its vegetation management team. The Enview CEO then moderated a panel discussion titled "Big Data, Advanced Analytics and Machine Learning" that included Sumeet Singh, a Pacific Gas and Electric vice president and head of its Wildfire Community Safety Program. (See *PG&E Lays out Billion-dollar Wildfire Plan*.)

State fire investigators blamed PG&E's equipment for starting 17 of the 21 Northern California wildfires of 2017, which raged through the famed wine country of Napa and Sonoma counties. The company's equipment is also suspected of starting massive fires in the Sierra Nevada foothills, including November's Camp Fire, the deadliest in state history.

PG&E and its parent company PG&E Corp. filed for Chapter 11 bankruptcy reorganization this year as they faced billions of dollars in fire liability. (See *Bankruptcy Only 'Viable' Option for PG&E, Lawyer says*.)

Singh said PG&E has 129 million trees that could potentially contact power lines in its 72,000-square-mile service territory. That territory is larger than 33 states, including Florida, and about half of it is in areas of elevated or extreme fire risk, he said.

With such vast numbers, machine learning and big data are "must have," Singh said. He called for utilities to share more safety information among themselves, as he said the nuclear power industry had done to improve its safeguards.

Elizaveta Malashenko, the CPUC's deputy executive director for safety and enforcement policy, sat on the panel with Singh. She said the last two years of increasingly large and deadly wildfires have shown that the efforts of state agencies is insufficient and that AI is needed to bolster traditional fire prevention methods.

The industry is at a crossroads, when human intelligence "cannot process the amount of information necessary to get us to the next stage of knowing what to do" to prevent wildfires, she said. ■

## CAISO/WECC News

# FERC OKs Trans Bay Cable Sale to NextEra

*By Hudson Sangree*

Despite protests from a number of cities, FERC last week approved the sale of the Trans Bay Cable, a 400-MW line that runs for 53 miles under San Francisco Bay, to NextEra Energy Transmission (*EC19-36*).

"Based on the record in this proceeding, we find that the proposed transaction will not have an adverse effect on rates," FERC wrote.

The cable's current owner is Trans Bay Cable LLC, a portfolio company of SteelRiver Infrastructure Partners of Sausalito, Calif. The Trans Bay Cable provides electric transmission between two substations owned by Pacific Gas and Electric and is under CAISO control.

Trans Bay and NextEra asked FERC to approve the deal in December. The companies did not publicly disclose the purchase price, but news reports put it at $1 billion.

The line's current rates are fixed under a settlement agreement that expires next year. In its comments to FERC, the Northern California Power Agency said NextEra should not be able to recover acquisition costs after that settlement rate expires.

The 400-MW high-voltage transmission line serves the San Francisco area. | *California State Coastal Conservancy*

Six cities in California — including Anaheim, Riverside and Pasadena — said NextEra's application failed to state how the transaction could affect rates. The city of San Francisco requested FERC to require more information from the applicants regarding acquisition costs "in order to ensure that no unlawful acquisition premium will be included in rates."


The Trans Bay Cable runs for 53 miles under San Francisco Bay, providing transmission between two PG&E substations. | *SteelRiver Infrastructure Partners*

Another intervenor, the California Municipal Utilities Association, said "that applicants have chosen to withhold key financial data from parties in this proceeding and that, without that information, parties are forced to rely upon public news reporting regarding the terms of the proposed transaction," FERC wrote. "California Municipal Utilities Association states that, given that the applicants have chosen to request confidential treatment of financial data, it is difficult to test their assertion that the proposed transaction will have no adverse effect on rates."

NextEra said it has no intention of trying to recover acquisition costs from CAISO customers via rate increases, and FERC said that even if NextEra did so, it would face a difficult test under Section 205 of the Federal Power Act to show the "the acquisition provides specific, measurable and substantial benefits to ratepayers, consistent with commission precedent."

With regard to the confidentiality concerns, FERC said intervenors can request copies of confidentially filed materials, but that so far, none has done so. ■

## ERCOT News

# GCPA to Honor Foreman with Pat Wood Star Award

*By Tom Kleckner*

Tom Foreman | *CGPA*

The Gulf Coast Power Association will honor former Executive Director Tom Foreman with its 2019 Pat Wood Power Star Award during its spring conference in Houston next month. The award is presented in recognition of the recipient's "significant contributions towards the advancement of [Texas'] competitive energy markets." Foreman retired as GCPA's executive director last year, capping a 41-year career in the utility industry. (See *GCPA's Foreman to Retire as Executive Director*.)

"Throughout his long career in the Texas power market, Tom Foreman has been a thoughtful, inclusive, creative and loyal friend to so many of us," said the award's namesake, former FERC Chairman Pat Wood III. "Under his leadership, the GCPA has grown to its largest and most diverse membership in history. Tom Foreman is an exemplary Power Star."

Foreman (left) chats with former SPP Chair Jim Eckelberger at GCPA's 2017 Spring Conference. | © *RTO Insider*

Foreman served as the organization's third executive director from 2013-2018. During his tenure, GCPA launched its emPOWERing Women program and expanded the organization's geographic reach with conferences for electric markets in states and countries bordering Texas that are evolving competitively. The association will hold its fourth Mexico Electric Power Market Conference on June 6 in Mexico City. GCPA also donated approximately $500,000 to universities during Foreman's tenure.

"Tom has done an outstanding job by expanding into other regions, establishing the emPOWERing Women program and growing the scholarship program," said Kim Casey, who succeeded Foreman as executive director.

Foreman began his career at Gulf States Utilities in Beaumont, Texas. He consulted in Austin before spending 23 years with the Lower Colorado River Authority, followed by his six-year stint with GCPA. He holds bachelor's and master's degrees in engineering from the University of Texas at Austin.

Wood, who also chaired Texas' Public Utility Commission under Gov. George W. Bush, will be on hand to help present the award during GCPA's 33rd annual *Spring Conference* April 16-17. ■

## ISO-NE News

# ISO-NE Planning Advisory Committee Briefs

### Regional System Plan Update

WESTBOROUGH, Mass. — Ten transmission upgrades have been placed in service in New England since October, ISO-NE transmission planning engineer Jon Breard told the RTO's Planning Advisory Committee on Thursday during a Regional System Plan (RSP) project list *update*.

Another 32 asset condition projects have been completed since then, most of them Eversource Energy structure replacement work. An additional 51 new asset condition projects were put on the list for approval — mostly by Eversource — with one project in Rhode Island, seven in New Hampshire, 13 in Massachusetts and the remainder in Connecticut.

One stakeholder asked why the RTO lists a number of Southeastern Massachusetts/Rhode Island (SEMA/RI) projects not yet under construction yet.

Eversource's Robert Andrew replied that the proposal and board review process for a transmission project is long. "Once we get a project on the list, we start to do design work, local outreach, go through the state siting approvals, etc. — and those state approvals can be appealed," he said.

RTO staff expect to post a draft RSP19 for review by July 8, receive comments from the PAC by July 24, and post a summary of comments and preliminary response on Aug. 6. A public draft should become available at the end of August ahead of a public meeting in Boston on Sept. 12.

### Natural Gas Sendout Records

The U.S. this winter set a new natural gas sendout record of about 150 Bcf on Jan. 30, but most New England local distribution companies reported new all-time peaks on Jan. 21, Tom Kiley, CEO of the Northeast Gas Association, *told* the PAC.

Algonquin Gas Transmission hit a new system peak on Jan. 21 and its second-highest peak on Jan. 22, Kiley said, noting the pipeline ran 41 days at peak capacity over the winter — which is why the NGA supports new infrastructure development. Tennessee Gas Pipeline set a new systemwide throughput record on Jan. 30, and Iroquois Pipeline set a new peak physical delivery day on Feb. 1.

Four natural gas utilities in Massachusetts have instituted moratoria on new gas hookups because of supply limitations, he said.

"Consolidated Edison of New York just set a moratorium on new connections in parts of Westchester County, and that's a big deal in an area of strong growth, with developers relying on having gas for their commercial, residential and industrial projects," Kiley said, citing a New York Times *story* that day on the cutoff.

Regarding LNG, Kiley cited a March 12 report by the U.S. Energy Information Administration showing that estimated deliveries from New England LNG facilities rose from about 360 MMcfd on Jan. 19 to more than 700 MMcfd on Jan. 21.

He said there were strong volumes this winter on key delivery days from Exelon Generation's Everett LNG facility and from Canaport LNG in New Brunswick. In addition, an offshore facility owned by Excelerate Energy — Northeast Gateway — made its first deliveries into the New England system in two years and achieved record sendout on Feb. 1.

EIA this winter launched a new *website* showing key New England daily data on electricity, natural gas and petroleum systems, Kiley said.


LNG ship Excalibur docked in Everett, Mass., this winter during a snowstorm. | *© RTO Insider*

### Draft CELT Summer Peak Forecast Model Revised

ISO-NE will likely boost its annual long-term energy and demand forecast based on a projection for slightly stronger economic growth in New England compared with last year's outlook. The forecast will be included in the RTO's 2019 Capacity, Energy, Loads, and Transmission (CELT) report.

The *draft* 2019 annual energy and summer peak forecast predicts 2027 gross annual energy will be about 3% higher than last year's CELT, while the summer 50/50 peak demand forecast and summer 90/10 forecasts for that year will be down by about 1.8% and 3.2%, respectively, according to Jon Black, ISO-NE load forecasting manager.

The gross load forecast does not include reductions from behind-the-meter solar (BTM PV) and energy efficiency. For gross energy modeling, the RTO abandoned annual models and instead developed separate monthly energy models to better capture shifts in seasonal trends, Black said.

Compared with last year, the 2027 draft net annual energy forecast — which includes BTM

# ISO-NE News

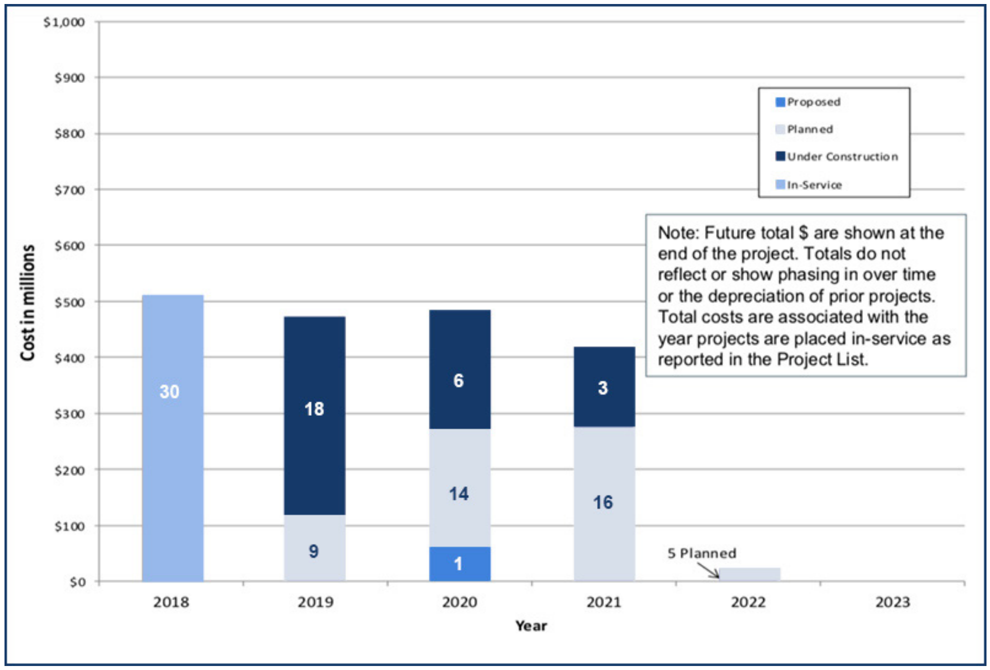
PV and EE — is about 4.6% higher, with the summer 50/50 and summer 90/10 forecasts about 2.3% and 3.9% lower, respectively.

"You might have multiple years without any weather extremes," Black said, referring to the 90/10 peak load forecasts.

The draft 2027 BTM PV forecast is approximately 1% lower than last year's CELT, while the EE forecast is relatively unchanged.

Last year the RTO predicted that BTM PV would reduce last summer's peak energy use by 633 MW in both 90/10 and 50/50 peak conditions. Actual BTM PV peak reductions in August 2018 ranged from 518 MW on Aug. 6 to 1,055 MW on Aug. 7.

"It would be a stroke of luck if it hit 633 [MW] exactly," Black said. "We're just trying to use one value. ... The way we came up with that peak load reduction was we analyzed BTM PV performance during a sample of historical peak days and calculated the reductions as a function of PV penetration." To address demand forecast performance issues identified last summer, the RTO incorporated cooling degree days as a second weather variable in its modeling in addition to a weighted temperature humidity index. It also shortened from 40 years to 25 years the historical weather period used to generate the probabilistic forecast.




Investment of New England transmission reliability projects by status through 2023 | *ISO-NE*

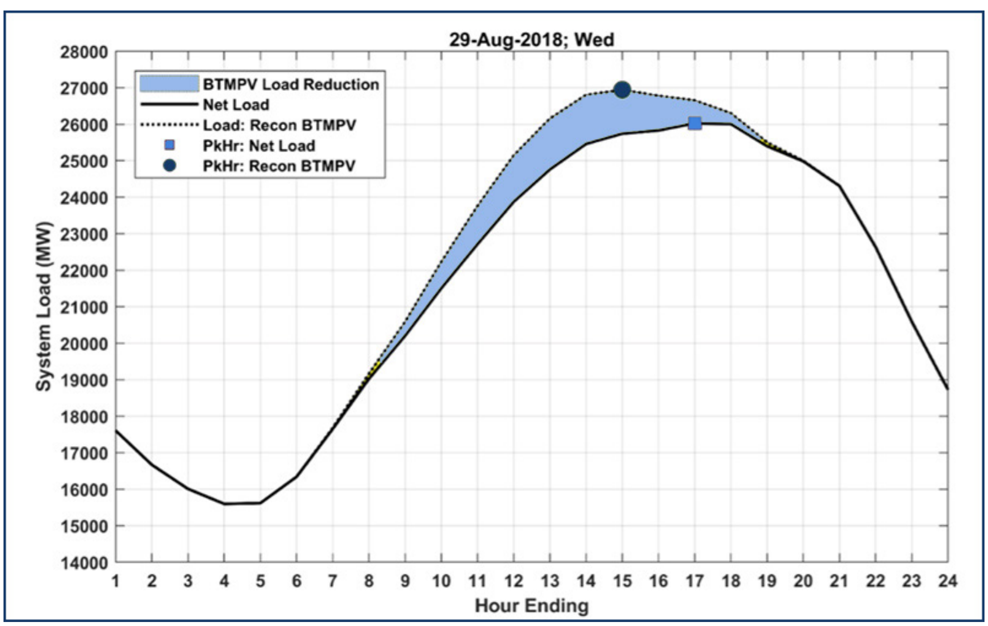
## Tx Guide Clarifies Load Definitions

Brent Oberlin, ISO-NE director of transmission planning, *clarified* the loads to be assumed in minimum, light and shoulder levels in the Transmission Planning Technical Guide (TPTG), which became a source of confusion after the minimum load level was revised downward in November 2017. The RTO will now reverse that change.

Based on the trend of historic hourly loads, ISO-NE in 2017 reduced the minimum load level from 8,500 MW to 8,000 MW; additionally, a revision was made to ensure paper mill loads were included in the 8,000 MW total. Those industrial loads had previously been modeled separately because their nonconformance to the typical load cycles is important given their relative size and location.

The TPTG currently describes the mill load as being part of the 8,000 MW of New England load, but it's not clear what should be assumed if retirement of a mill with load less than 320 MW is considered. Under current practice, planners could infer that the rest of New England load is scaled up to keep the total 8,000 MW, which in effect says the remaining customers will consume more electricity to keep the total the same.

Oberlin said the TPTG will now be modified to model the system with 7,680 MW minimum load plus the mill load. This prevents the non-mill load in New England from changing based on the assumption of the mill loads. Because the light- and shoulder-load level sections are similar, "we're going to flip all three of them back to the way minimum load was described three years ago," he said.




Graph of last summer's peak day shows BTM PV peak reduction is the difference between the peak after BTM PV is reconstituted and the peak net of BTM PV. | *ISO-NE*

## Needs Reflect Declining Net Load

The RTO has *updated* its Needs Assessments to reflect forecasts that continue to show a significant reduction in the net load to be served and a changing resource mix, Oberlin said.

The latter was evidenced in last month's Forward Capacity Auction 13, which saw Killingly Energy Center (632 MW) receive a capacity

# ISO-NE News

supply obligation. As a result of the substitution auction, Pawtucket Power (54 MW) will retire and Vineyard Wind received an obligation for 54 MW. In addition, the 48-MW Schiller 4 plant in New Hampshire and Maine's Yarmouth 1 and 2, each 50 MW, delisted for the second year in a row, indicating potential retirement to grid planners.

FCA 13 was the first auction run under the Competitive Auctions with Sponsored Policy Resources (CASPR) rules, which established a secondary substitution auction. (See *ISO-NE Completes FCA 13 Despite Controversy*.)

The Needs Assessment is aimed at avoiding unnecessary spending on transmission projects. Oberlin noted that eliminating a portion of the proposed transmission upgrade in Eastern Connecticut has the potential to save the region more than $20 million.

Additional study continues to delay much-needed transmission upgrades, but the RTO is trying to strike a balance between moving forward and ensuring that ratepayers' money is not spent unnecessarily, he said.

The biggest impact on most study areas is the change in forecasts, with Western and Central Massachusetts also affected by the change in resources, which will impact energy flows from west to east. One significantly impacted area is SEMA/RI, which will see the retirement of Pawtucket Power and the addition of Vineyard Wind, which is being modeled for both 54 MW and 160 MW.

## FCA 14 Tx Transfer Capabilities

Updates to transmission transfer capabilities and capacity zone development for next year's FCA 14 are being driven by SEMA/RI Reliability Project upgrades and large generation retirements in the east, *said* Al McBride, the RTO's director of transmission strategy and services.

The planned upgrades include a new 115-kV switching station, a 345/115-kV autotransformer and several other 115-kV upgrades, all of which should be completed by the end of 2021, which will increase the import transfer capability of SEMA/RI.

Large generation retirements in the area include Brayton Point, Pilgrim and Mystic 7.

The RTO evaluated transfer capabilities of the SEMA/RI Import and West-East interfaces to examine the impact of the reliability upgrades and generation retirements, including performing steady-state thermal and voltage analyses.

Brayton Point demolition underway in February 2019; implosion of the cooling towers is targeted for April 27. | *Brayton Point Commerce Center*

Any major retirements received for the FCA 14 capacity commitment period will be considered in the capacity zone formation process.

The RTO's clustering methodology has enabled the significant backlog of interconnection requests to move forward in Maine, with the first cluster of more than 600 MW proceeding through the queue. (See *6 Projects for ISO-NE's 1st Clustered System Impact Study*.)

A 1,200-MW external elective transmission upgrade (ETU) is also proceeding through the system impact study process, but with more than 6,200 MW of nameplate interconnection requests, enough new capacity exists in the study process for the Maine zone to become export-constrained, McBride said.

## EIPC Frequency Response Update

ISO-NE Lead Engineer Steven Judd chairs the Eastern Interconnection Planning Collaborative (EIPC) Frequency Response Task Force, formed in 2017 at the request of NERC to adjust EIPC planning to test the Eastern Interconnection's inertial and frequency response because of changes in the resource mix.

Judd said reduced inertia because of increased penetration of nonsynchronous generation (wind and solar, new HVDC imports and battery storage) prompted the need for improved frequency responsive simulation models.

The task force *developed* recommendations for improved frequency modeling: generator gross maximum power ratings; generator governor modeling; frequency responsive dynamics files; and the need for a new low inertia/minimum load library case.

NERC also expressed concern with potential exposure to under-frequency load shedding (UFLS) events, and the need to establish the trending of interconnection frequency response over time.

The task force recommends that NERC's Multiregional Modeling Working Group (MMWG) consider creating a new library case to better reflect a historically low inertia/minimum load time period for long-term power flow and transient stability models.

Currently, the best option available for a frequency response study is the five-years-out Spring Light Load (SLL) case, which does not match recorded historical minimum inertia recorded for the Eastern Interconnection, Judd said. ■

*— Michael Kuser*

# ISO-NE News

## NEW ENGLAND ELECTRICITY RESTRUCTURING ROUNDTABLE

# Overheard at the 161st New England Electricity Restructuring Roundtable

## *New England Markets in Fundamental Shift*

Cheryl LaFleur | © *RTO Insider*

BOSTON — FERC Commissioner Cheryl LaFleur kicked off her farewell tour with reflections on electricity markets in New England and around the country, NERC CEO Jim Robb shared concerns about fuel security, and a panel of experts discussed the challenges confronting the industry.

Attendees heard that and more at the 161st New England Electricity Restructuring Roundtable hosted by Raab Associates on Friday. Following is some of what we learned during the event.

### Attributes over Volume

LaFleur, who announced in January that she will leave the commission between the end of her term June 30 and the end of the year, offered her insights into the changes on the horizon. (See *LaFleur Announces Departure from FERC*.)

"I am seeing lots of evidence from all over the country, in organized markets and outside organized markets, that a fundamental shift is underway in how we procure and pay for electricity," she said.

"Back in the vertically integrated days ... we took it for granted, and many times we still do, that energy is priced on volume," LaFleur said. "Aside from a few ancillary services that were co-optimized at a lower price, everything was volumetric, and it worked as long as the cost curves were that way. Well, there's a lot of evidence that the cost curves are not going to look that way in the future."

With persistently low gas prices, even in New England, zero-marginal-cost renewables coming online, and distributed energy and demand-side resources changing the load curves, the industry can't assume that resources are going to make money on volume, and that peaks are going to set the prices at which resources make money, she said.

"Across all the markets and regions, what we're seeing is people ... paying for attributes rather than volume in the energy markets, in the capacity markets and in the ancillary services markets," LaFleur said.

"The trouble is, an attribute is a slippery thing" and can encompass anything from stockpiling coal to pricing carbon; from flexible ramping to scarcity pricing, storage or fuel security, she said.

"And it's in the capacity markets too, where we have Pay-for-Performance; Capacity Performance; seasonal capacity," LaFleur said. "I'm starting to think if we're not going to pay on volume, how are we going to pay? And this is fundamental. ... Most of the money is in the energy market. How we pay for energy is going to determine what we get and how we pay to keep the lights on."

The "cut-across issue" for LaFleur is jurisdictional, where the federal government does some things and the states do others.

"We understand what's interstate, and we have jurisdiction over the ISO rates, and then the states have their jurisdiction, but then here are resources connecting behind the meter at the distribution level that operate like wholesale resources," she said in response to a question about DERs.

"It's really easy to say, 'Oh, we should have more cooperation with the states,' but it's really hard to figure out how to do that in this space because our system was set up as if we knew the difference between central station wholesale and distributed [resources]," LaFleur said. "So, [there is] a lot to work through, but ... I think it's way more an opportunity than a challenge. It could be, to use an overused word, transformative."

### 'A Lot to Celebrate,' but...

New England has benefited from ISO-NE's creativity in dealing with fuel security, *said* Robb, who has been at the helm of NERC for nearly a year after leaving the chief role at the Western Electricity Coordinating Council.

"There are really three hotbeds of issues in reliability around the country," Robb said. "The first one is California ... the epicenter of the issues around an integration of large-scale solar into the system. ... Whoever thought we'd have too much generation on peak?"

Jim Robb | © *RTO Insider*

Until the Aliso Canyon gas storage facility came in service, it was not clear what a growing balancing role the natural gas system was playing in response to the surge in solar capacity, and how that system was being stressed by fast-ramping gas-fired plants pulling gas off the network faster than it could be replaced, Robb said.

"The other area is Texas, which is really testing all of our patience on the question of capacity adequacy and reserve margin," Robb said. "They're operating at about a 7 to 8% reserve margin going into the summer. They put great faith in the market signals that they're sending to the operators and to the plants online. They made it through a very hot summer last year, so there's something in the soup that we're starting to understand about what kind of reserve margins are really necessary."

The third area is New England, and "from an environmental perspective there's a lot to celebrate," Robb said. "You have substantially repositioned your fleet to a much lower carbon footprint than it was 20 or 30 years ago to meet environmental objectives and have managed to keep the lights on.

"The shift away from on-site fuel — large coal, nuclear and petroleum — to resources that are dependent on weather and just-in-time delivery of fuel really changes the risk profile," he said. "The issue up here is not one of capacity adequacy; it's one of energy adequacy and, importantly, fuel adequacy to serve load."

Robb looked at the dramatic oil consumption during last winter's sever cold snap — when generators burned as much oil in two weeks as they normally do in a year — and asked what would have happened if the cold snap had lasted another day.

Oil supplies at plants around New England declined rapidly over the two-week cold spell as gas prices spiked and dual-fuel plants switched

# ISO-NE News

## NEW ENGLAND ELECTRICITY RESTRUCTURING ROUNDTABLE

to oil, but the RTO avoided serious reliability issues thanks to LNG shipments. (See *FERC, RTOs: Grid Performed Better in Jan. Cold Snap vs. 2014*.)

"You guys are a day away from a load-shedding event," Robb said.

### Getting Late

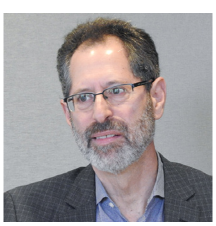
Dan Dolan | © *RTO Insider*

Where the NERC CEO sees the region's glass as being half-empty, Dan Dolan, president of the New England Power Generators Association, said he "would argue that we passed the stress test [and] came through the most severe cold snap in 100 years with gas in the system at the end."

"The open market has been extraordinarily successful at dispatch of least-cost resources," Dolan said.

However, he *pointed* to the increasing trend of states procuring energy contracts and estimated that state-sponsored resources will compose more than half of the region's energy production by 2027.

Dolan cited *research* by Joe Cavicchi of Compass Lexecon, commissioned by NEPGA, that says New England's much-needed fast-ramping resources require capital investment — and that generators believe the market signals get mixed in a half free, half state-controlled market.



Jonathan Raab | © *RTO Insider*

Jonathan Raab of Raab Associates, who conducted the roundtable, asked if the wholesale markets are at a tipping point, and if so, how New England can prepare for the world 10 years from now.

"It's later than you think," said Katie Dykes, commissioner of the Connecticut Department of Energy and Environmental Protection.

"We hear from those who have been in this market for quite some time that there's a lot of volatility, uncertainty, marginal earnings and even from the [perspective of the] status quo, it's not a market that a lot of people are feeling comfortable continuing to invest in," Dykes said.

Katie Dykes | © *RTO Insider*

"Our failure to plan proactively [for natural gas supply constraints] ... has exposed our ratepayers to the exercise of market power by those generators who do have the ability to provide fuel-secure resources," she said. (See *Exelon to Push for Laws, Rules to Boost Profitability*.)

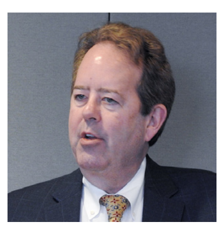
The retreat at the federal level on the need to address climate change has injected further uncertainty for those who would like to move forward with market-based approaches to valuing carbon reduction, she said.

Connecticut has long-term contracts approved or pending for 52% of the state's energy demand, including 13% for non-nuclear resources needed to meet its renewable portfolio standard, Dykes said.

"If we're paying a capacity payment to resources for availability for an entire year, for resources that we know don't have access to pipeline gas to be able to run year-round, I think some further refinement on what that market is designed to procure is important," Dykes said.

To the extent that states are seeking to meet their planning objectives for environmental policy around carbon, the more that those products can have resource adequacy and fuel security benefits will also be helpful, she said.

### Inflection Point



Mark Karl | © *RTO Insider*

"We are with our capacity markets nearing an inflection point where we need to figure out exactly what our resource adequacy construct needs to be going forward," *said* Mark Karl, ISO-NE vice president for market development.

As he did in December, Karl said the RTO's long-term solution for energy security has three components: multiday-ahead markets, a new ancillary service integrated into that market and a new, voluntary forward seasonal auction. (See *Fuel Security the Focus at ISO-NE Consumer Liaison Meeting*.)

"I should be clear it's not just about fuel; it is about energy security," Karl said.

The RTO's enhanced storage participation rules go into effect April 1, with a second phase coming in the second half of this year, and staff are working on a third phase, he said. (See *FERC Accepts ISO-NE Storage Tariff Revisions*.)

In addition, the RTO prepared an interim proposal for compensating generators for fuel security, which it plans to file this month with FERC, with or without stakeholder endorsement. (See *ISO-NE Steady on Fuel Plan Despite NEPOOL Rebuff*.)

Paul Hibbard | © *RTO Insider*

The Analysis Group's Paul Hibbard, former chairman of the Massachusetts Department of Public Utilities, *said* the desire to reduce energy sector carbon emissions is the biggest market factor of all.

With various state policies being enacted, "how do the markets provide the resources needed to maintain reliability, particularly during winter months?" Hibbard asked. "That's what makes this so incredibly difficult.

"There's really very little opportunity for resources to earn sufficient revenues through energy markets when you look five or 10 years out, but we still have to maintain reliability during those winter months," he said.

When the Pilgrim nuclear plant and the remaining oil and coal units retire, the system will become "a lot more peaky" from a gas supply perspective, he said. "What really changes here is that the consumption of natural gas power plants for electricity spikes in the winter ... so it really increases our reliance, particularly for power sector reliability, on LNG over the course of the 25 or 50 coldest days of the year."

Add electrification and "things get really scary, because now pipelines can't even meet total demand for gas for over 100 days in the year," Hibbard said. "It's this combination of what the states are trying to do to meet carbon-reduction goals, and the feedback that has on the electric system, that makes the challenges so incredibly important when thinking about this transition over the next 10 years." ■

## MISO News

# MISO: Winter Emergency Another Signal for Grid Ops Change

By Amanda Durish Cook

David Patton (left) and Richard Doying | © *RTO Insider*

NEW ORLEANS — MISO's most recent maximum generation emergency is yet another portent of its increasing need to rethink grid operations, executives told the Board of Directors last week.

Although it was better managed than the January 2018 MISO South emergency, the event demonstrates how the RTO has come to rely on intermittent resources subject to weather conditions and demand-based resources, which require a maximum generation event to access.

MISO Executive Director of Market Operations Shawn McFarlane said the Jan. 30 event in the Midwest seemed like a repeat of the extreme cold conditions a year ago.

Independent Market Monitor David Patton called the "highly regionalized" event an almost a mirror image of last year's cold.

This time, however, McFarlane said MISO avoided the need for emergency purchases and was able to stay within the contractual limits of its transmission contract path while still accessing Southern capacity. The RTO estimated that both scheduled and voluntary load modifications, paired with school and business closings, reduced demand by 3 GW or more during the event.

Patton said MISO was able to effectively manage congestion during the event because of improved management of its market-to-market constraints with SPP and PJM.

### Wind Forecast Lapse

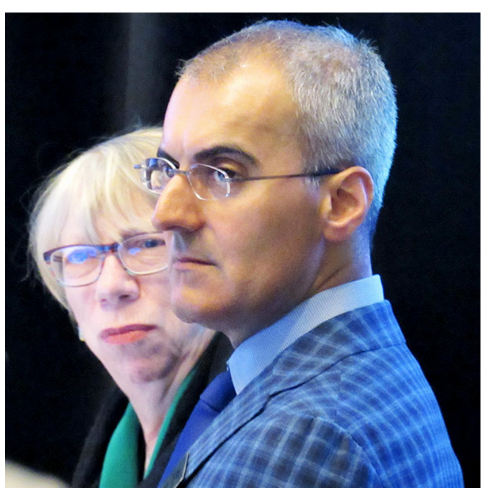
But executives admitted a blind spot when it came to the RTO's wind generation forecasting that day.

Last month, MISO pledged more study into generation cutoffs in extreme temperatures and how to account for voluntary load curtailments in load forecasting. It has said that "an earlier-than-expected drop in wind output increased insufficiency risk" early Jan. 30. Wind output during the morning peak was about 4 GW below MISO's forecast as the worst of the cold struck the Midwest. (See "MISO Researching Generation Cutoffs, Voluntary Load Curtailment," *MISO Reliability Subcommittee Briefs: Feb. 27, 2019*.)

Additionally, MISO said failed starts from conventional generation, uncertainty around the load forecast and risk of more outages contributed to the decision to call up about 2.5 GW worth of load-modifying resources (LMRs). Unplanned outages reached 29 GW on Jan. 30.

Patton said MISO's emergency offer pricing, which defaulted prices to above $600/MWh, was adequate to incent response. In fact, he said, it was even higher than needed because MISO's extended locational marginal pricing couldn't model accurately when to ramp up other online resources to displace emergency megawatts.

"Did you get that in the minutes?" MISO President Clair Moeller joked in response. Patton has long panned MISO's emergency pricing as too low to properly rouse resources into action.



Barbara Krumsiek and Baljit Dail | © *RTO Insider*

Director Barbara Krumsiek commended the RTO for keeping some less-than-economic units on to cover the failed starts of other generation. She said MISO's commitment to public safety during the dangerous cold rightly eclipsed a focus on economics.

But she asked if the RTO's lack of foresight on the cold weather wind cutoffs was a "new revelation" or simply an extreme temperature anomaly, unlikely to be repeated.

McFarlane said that while some turbines have cold weather packages, others must shut off to avoid blade damage, and MISO lacked insight on the specifics. Unfortunately, he said, wind generation in MISO North is clustered where the cold was the most extreme: Minnesota and western Iowa.

"We were relying on our [2014] polar vortex experience … and we expected 1 GW to drop off," he said.

McFarlane said MISO has since instituted a general temperature cutoff assumption for wind generation. He said it will now hold conversations with wind operators to figure out more precise cutoff assumptions.

Director Baljit Dail asked if the emergency illustrates a need to rethink emergency preparedness altogether.

"Should we be thinking differently about the loss-of-load and reserve margin?" Dail asked.

Moeller said MISO's ongoing research into resource availability and flexibility is just that — an investigation into loss-of-load risk in every hour of every day as opposed to an an-

# MISO News

nual peak. None of MISO's last three maximum generation events has occurred in the summer.

A bright spot, McFarlane said, is that half of MISO's 12 GW in LMRs will be available in two hours or less in the upcoming planning year, thanks to FERC's approval of rules requiring those resources to provide lead times they can consistently meet. Historically, only about 3 GW of LMRs were ready within two hours, McFarlane said. (See "LMR Registration Steady Despite New Requirements," *LSE Load Forecast Documents Incomplete, MISO says*.)

"That will help significantly as we deal with tight conditions going forward," he said.

Patton commended the better LMR response time. He said LMRs with up to eight-hour lead times are essentially "worthless" in an emergency.

"But in our LOLE [loss-of-load expectation] study, we model them as if they're available," he said.

MISO's average *winter* load was 77.8 GW from December 2018 through February 2019, with a 101-GW peak occurring Jan. 30. The RTO said that except for extreme cold at the end of January, footprint temperatures were in line with historic norms over winter, which drove down load and congestion. As a result, prices averaged $28.41/MWh, a 6% decrease over the same time last year.

## Evolving Resources, Evolving Operations

Richard Doying, executive vice president of market development strategy, said continued turnover in the resource stack and renewables growth will mandate operations changes in MISO.

"You've got a combination of factors that gives rise to changes in … grid operations," Doying said, adding that "once upon a time," it was much easier to dispatch the system.

"Some of these effects are already hitting us today," Doying said in reference to MISO's string of off-peak emergency events. "That flexibility is needed today … [and] we're already seeing the consequences of these trends."

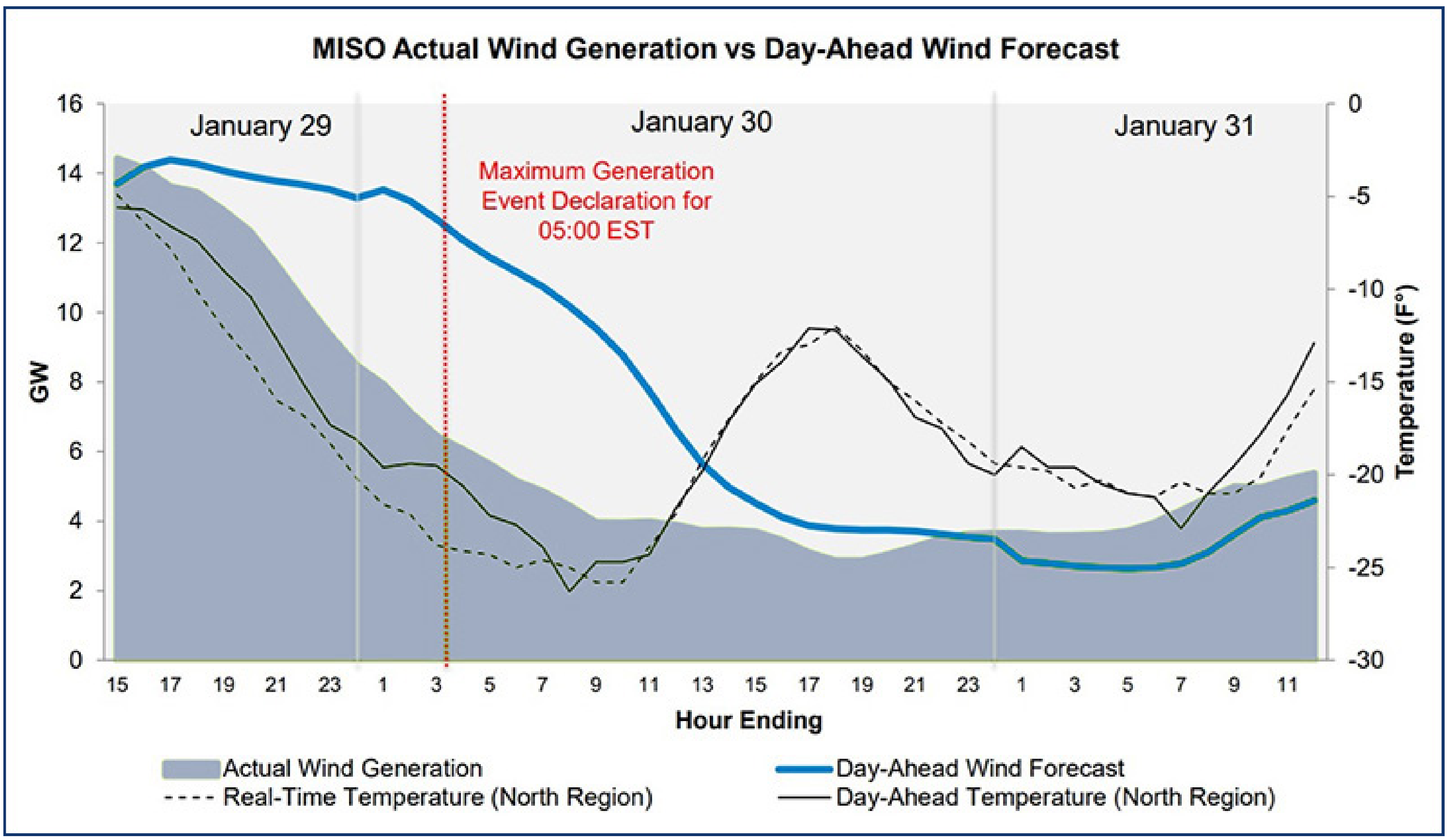
To adapt, Doying said MISO has identified three areas of work: increasing the deliverability and availability of resources, bettering system flexibility, and improving its visibility of distributed energy resources.

"We know that there will have to be adjustments made to the market, but exactly what those are, we don't yet know," Doying said. He said the many possible solutions will be put to the stakeholder process. Fixes could include scarcity pricing, a 15-minute day-ahead market, more storage integration efforts, modeling smart inverters in planning, and collaboration with distribution operators so MISO can see DER contributions.

Dail asked if MISO was studying whether consumer costs could increase as it changes its market in response to trends.

"We've got [members] in economic distress," he said.

Doying said MISO's exploration of trends and grid response doesn't include price effects but offered that market changes needed to maintain reliability would also maintain efficiency. ■




| MISO

## MISO News

# New Task Team to Review MISO Board Rules

*By Amanda Durish Cook*

NEW ORLEANS — MISO's Advisory Committee on Wednesday created a task team to continue exploring whether to extend a one-year "cooling-off" period to state regulators before they apply to serve on the RTO's Board of Directors.

The new team will also examine other aspects of the board's makeup and required qualifications, including whether the yearlong moratorium — currently applicable to industry participants appointed to the board — should be scrapped altogether.

Advisory Committee Chair Audrey Penner said the committee could recommend that the board amend its bylaws in MISO's Transmission Owners Agreement to adopt any improvements identified by the team. FERC must ultimately approve any bylaws changes and neither MISO nor its board is under any obligation to act on Advisory Committee recommendations.

The committee has been discussing the issues since last fall, when Nancy Lange, then chair of the Minnesota Public Utilities Commission, was nominated to fill a seat on the board. RTO stakeholders ultimately elected Lange, though some said they would have been more comfortable if she had observed the one-year moratorium required of other company executives. At the time, some pointed out that Lange had been making decisions about the grid in a MISO state that overlapped with her board member training. (See *Board Cooling-off Period Still Under Debate at MISO*.)

"Welcome to our dysfunctional family," Penner joked to Lange in opening the Wednesday meeting.

MISO Director Nancy Lange listens at the Advisory Committee meeting March 20. | © *RTO Insider*

Lange now sits on the board's System Planning Committee, which is charged with overseeing MISO's annual transmission planning processes and spending.

"I've been on the other end of the MTEP [MISO Transmission Expansion Plan] in a way. I've seen the tussles … dreams that go into MTEP," Lange said before a March 19 introductory presentation on the plan.

At the Wednesday meeting, Penner said there remains a "divergence of opinion" on whether the cooling-off period should apply to regulators. Some committee members have gone so far as to say the moratorium is no longer necessary.

Not all are sold on that idea.

"You could have a regulator denying a rate case on a Friday, and then deciding their transmission package on a Monday," said Transmission Dependent Utilities sector representative Kevin Van Oirschot, of Consumers Energy.

But Wisconsin Public Service Commissioner Mike Huebsch said he stepped into that very situation as he switched from state representative to state regulator without a significant break in between roles. As a state representative, Huebsch said he argued passionately against the Badger Coulee high-voltage transmission line. By the time he was a Wisconsin regulator, he *voted* in favor of the line.

"It ended up going through my dad's backyard, and I had to sign an affidavit saying I hadn't talked to him about it over Thanksgiving," Huebsch laughed, making the point that industry disagreements don't have to follow individuals into new professional roles.

Huebsch said today's transparency, especially in social media, means that the cooling-off period is an "archaic idea that's no longer necessary." He said any whiff of impropriety can now be widely shared on Twitter within minutes.

### C-suite vs. Engineers

Some committee members also contend the board could benefit from more members with technical industry expertise. MISO *bylaws* currently dictate that six directors have corporate leadership experience in either board governance, finance, accounting, engineering or utility laws and regulation; another should have transmission system operation experience; another, transmission planning experience; and the final, experience in commercial

Missouri PSC Commissioner Daniel Hall (left) and Wisconsin PSC Commissioner Mike Huebsch | © *RTO Insider*

markets and trading.

"You could fill this with six C-suite people and three engineers," Huebsch observed.

Power Marketers sector representative Barry Trayers, of Sempra Energy Trading, said it seems that part of each quarterly in-person Advisory Committee meeting in front of the board is spent explaining MISO operations to new board members unfamiliar with the workings of the RTO.

Penner also said she's heard concerns that only two stakeholders are permitted on MISO's Nominating Committee, which vets and selects board candidates for stakeholder voting. The group is currently composed of two stakeholder seats and three director seats.

Missouri Public Service Commissioner Daniel Hall, who served on last year's Nominating Committee, said he would have found value in "at least one more" Advisory Committee member contributing to the group's decisions.

Independent Power Producers sector representative Mark Volpe, of the Coalition of Midwest Power Producers, said the Nominating Committee is an anomaly among entities with boards of directors because directors outnumber stakeholders and could in theory decide a candidate's fate by themselves.

The Advisory Committee does not yet have volunteers to serve on the board process task team. Although task team membership would be voluntary, Penner said she would likely limit sectors to one representative apiece.

Meanwhile, the Advisory Committee *appointed* Minnesota Public Utilities Commissioner Matt Schuerger and Transmission Owners sector representative Jeff Dodd, Ameren's director of transmission policy, to sit on this year's Nominating Committee. ■

## MISO News

# MISO Planning Committee to Reconsider non-TO Storage as Tx

*By Amanda Durish Cook*


Nick Griffin | © *RTO Insider*

NEW ORLEANS — MISO's somewhat befuddled Steering Committee on Wednesday instructed the Planning Advisory Committee to revisit the possibility of non-transmission owners operating storage-as-transmission assets (SATA).

In developing draft SATA rules, MISO had decided only registered TOs should own first-generation SATA to avoid introducing complexities around cost recovery. (See "No non-TO Authorization," *MISO Floats Draft Storage-as-Tx Rules*.) The PAC decided to route DTE Energy's February proposal that non-TOs be able to own and operate SATA to the Steering Committee, where it would be reassigned as a new stakeholder issue.

Speaking at a March 20 Steering Committee meeting, DTE's Nick Griffin said his company doesn't believe MISO's proposal as written is fair to non-TO entities that own storage that could become non-transmission alternatives. He said the RTO is requiring non-TOs to take storage through the interconnection queue while TOs can simply submit their projects to the Transmission Expansion Plan study process — two different treatments for the same assets that will serve the same function.

"DTE is simply looking for equitable treatment in storage as a transmission asset," Griffin said.

"Our feeling on this is that the DTE proposal is a much greater question that has to be answered for storage as transmission," MISO Director of Planning Jeff Webb said. "This deals with cost recovery questions under the Tariff for assets that are neither transmission nor market assets. It's a rather different question than fitting storage into existing transmission rules under the Tariff."

Webb said MISO's proposal is aimed at a scalable solution that can soon address SATA. He said the RTO has no objections to addressing DTE's proposal, provided it's handled separately from near-term development of SATA rules.

While the Steering Committee sent the topic back to the PAC, members debated whether the new issue submission would have gone before them at all if the stakeholder process had been properly followed. Some criticized PAC leadership for deciding to discontinue discussion and deem DTE's request as out-of-scope without taking a vote from members.

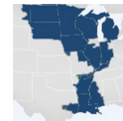
Steering Committee Chair Tia Elliott said the rejection and reroute of the topic was a "gray area." She was surprised the topic came from the PAC only for reassignment to the same committee as a separate issue.

Webb said MISO and stakeholders agreed before drafting the SATA rules they would not address non-transmission alternatives nor create an entirely new cost allocation as a part of the SATA policy development.

"What we're trying to do is squeeze batteries under the existing Tariff structure," Webb said. "This seems a bit like a collateral attack on the scope of this, and it's a little late in the game. Since it seeks a new form of cost treatment, it felt like a largely different issue. … We know how to recover transmission assets; we don't know how to recover non-transmission alternatives that are not in the market."

As it stands, discussion on how non-TOs might recover transmission rates for their storage assets will be taken up in future PAC meetings. ■

## MISO News



# FERC Rejects MISO Plan to Strengthen Queue Requirements

*By Amanda Durish Cook*

FERC last week rejected MISO's proposal to impose more stringent site control requirements and increase the milestone payments for interconnection customers, while saying it could also be persuaded to accept the plan with certain revisions.

The commission found MISO didn't adequately demonstrate its proposals were reasonable and not unduly discriminatory, even though it agreed more stringent site control requirements and higher milestones could help reduce speculative and duplicative projects. Still, the commission did offer guidance on how a reworked proposal might gain approval (*ER19-637*).

"We recognize that the filing represents a significant undertaking by MISO and its stakeholders to accomplish the important objective of preventing a large volume of speculative, non-ready projects from entering [Phase 1 of the definitive planning phase] and subsequently withdrawing from the queue, creating adverse effects for other interconnection customers," the commission said.

MISO had proposed interconnection customers follow one of two courses. They could either demonstrate 100% site control 90 days prior to the start of entering the definitive planning phase (DPP) of the interconnection queue or provide supporting documents and a $10,000/MW cash deposit (capped between $500,000 and $2 million) only if "regulatory limitations prohibit the procurement of site control." (See *MISO to File Queue Changes Before Year-end*.) The DPP is the last three-part stage of studies, cost impacts and assessments that generation projects must scale before being granted interconnection.

MISO currently requires interconnection customers to either demonstrate 75% site control or provide a $100,000 cash deposit in lieu of demonstrating site control at the time of queue application. RTO staff have long characterized the requirements as too lax to deter unready projects, instead using the early DPP to "test multiple interconnection project concepts."

The RTO also proposed to change the first milestone payment from a $4,000/MW fee to 10% of the average network upgrade cost from the last three DPP cycles. It said the averages would be footprint-wide.

MISO has said the proposal would speed up the queue by encouraging stalled projects to withdraw earlier in the process. The queue currently takes a little more than 500 days to complete, which MISO says is because of a "marked increase in the number and volume of interconnection requests … over the past two years."

| MISO

### The Shortcomings

FERC said MISO's proposed language that project owners demonstrate "exclusive use" site control conflicts with a Tariff section that allows interconnection customers to submit "multiple interconnection requests for a single site" and a policy that requires customers to submit separate requests for generating units that use multiple fuel sources. FERC pointed out the two-application policy applies to co-located generating facilities paired with a storage device.

"We find it unclear from MISO's filing how interconnection customers would be able to meet MISO's 'exclusive use' standard for such a generating facility. … It appears that these provisions are in conflict," FERC said, suggesting MISO clear up how it interprets exclusive use site control for facilities that operate with multiple primary fuel sources.

The commission also said MISO didn't describe what it expects from third-party analysis provided by an interconnection customer that wants to secure less land than the RTO requires. MISO's acres-per-megawatt requirement differs based on fuel type, and it proposed that deviations from the land limits would have to be supported with a third-party analysis.

The commission also said MISO did not justify "the variable nature and calculation" of its proposed milestone payment on several fronts. It said the inconsistent payment average diminishes accounting certainty for interconnection customers, unfairly burdens projects in sub-regions where network upgrade costs are traditionally lower, ignores the fact that upgrade costs can vary widely across each study cycle and unfairly relies on using the costs of only preliminary network upgrades "that may not actually be built."

Finally, the commission said MISO's plan to shorten the window for withdrawing projects to get full refunds on the two subsequent milestone payments wasn't appropriate when considering its proposed increase to the first milestone payment. FERC also said MISO didn't consider that its recent removal of the first affected system analysis in the first phase of the DPP keeps interconnection customers in the dark a little longer on network upgrade costs. (See *MISO Plan to Reduce Queue Studies Gets FERC Nod*.)

"MISO's proposal would require interconnection customers to post at-risk milestone payments without knowledge of potential affected-system impacts that may alter their network upgrade cost estimates," FERC said.

FERC added it might find a shortened refund window reasonable "under the appropriate circumstances."

MISO's queue proposal is linked with another, newer proposal to further accelerate the DPP by cutting the respective number of days throughout the three phases. (See "Measures to Accelerate Existing DPP," *MISO Details Fast-track Queue Options*.) MISO staff this month had said they were relying on the increasing site control deposits and milestone fees to make for less complicated DPP modeling because of fewer late project dropouts, thus cutting the number of days other projects spend in the queue. ■

## MISO News

# FERC Backs Cleco on Tax Rate Calculations

*By Amanda Durish Cook*

FERC last week dismissed a Louisiana city's complaint that Cleco Power collected $6.7 million in excess revenue last year because its rates did not immediately reflect the 2018 federal corporate income tax cut (*EL19-6*).

The city of Alexandria's October complaint asked FERC to require Cleco to flow back to transmission customers excess accumulated deferred income tax (ADIT) collected from January to May 2018.

But FERC on Thursday said the city filed its complaint too late and in the wrong docket. But even without the procedural deficiencies, the commission said, it would not have granted Alexandria's request because Cleco's rates use historical test year costs as a "reasonable proxy" for rate collections and there is no true-up mechanism to ensure recovery of actual costs.

Cleco's annual transmission revenue requirement (ATRR) is based on a rate year of June 1 through May 31. Cleco used the 35% federal income tax rate in its May 31, 2017, ATRR update for its 2017 rate year and replaced it with the 21% in its filing for the 2018 rate year.

Alexandria contended that because the lower tax rates took effect Jan. 1, 2018, Cleco over-collected its transmission rates by $6.7 million for the last five months of the 2017 rate year, with the city overpaying by $271,000. It called the amount "a permanent windfall" to Cleco.

The company responded that it "would be a violation of the approved historical test year approach" if it included cost increases or decreases that occurred outside the test year.

Cleco also said Alexandria was seeking to "cherry-pick" a single declining cost in its transmission formula rate, while ignoring other costs that increased. For example, Cleco said its transmission wages increased by 13% in 2017 because of additional hires but that it did not attempt to recover the increased costs in the ATRR until the 2018 rate year.

FERC agreed: "Due to this nature of Cleco's transmission formula rate, Cleco may under-collect or over-collect various costs during a given rate year."

MISO requires all transmission owners' rates return or recover excess or deficient ADIT from customers as a result of tax law changes. But FERC said that requirement doesn't speak to the precise timing of when the new rates must take effect.

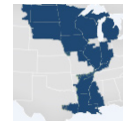
"Cleco's template calculates a single ATRR for the entire rate year. There is no provision in Cleco's template for a partial year ATRR calculation, nor is there a provision to calculate the ATRR for a given rate year using two different federal corporate income tax rates," FERC said. "The change in the federal corporate income tax rate that took effect on Jan. 1, 2018, was unknown when Cleco prepared the annual update for the 2017 rate year."

Additionally, FERC pointed out that there is no provision in Cleco's rate rules that it must recalculate ATRR if a tax change takes place during a rate year.

The commission also said Alexandria failed to file its challenge in time under Cleco's rate rules. Alexandria submitted its informal challenge with Cleco after the Jan. 31, 2018, deadline and its formal challenge with FERC after the April 15, 2018, deadline. "Further, Alexandria did not file the formal challenge in the same docket as Cleco's informational filing of its 2017 annual update" (ER18-999), FERC said. ■

Alexandria, La. | *Alexandria Office of the Mayor*

## MISO News



# FERC Approves MISO Pseudo-tie Rule Changes

*By Robert Mullin*

| © RTO Insider

FERC last week approved Tariff revisions intended to relieve costs for MISO resources pseudo-tying into PJM despite criticism the changes don't go far enough in easing their financial burdens (*ER19-34*).

The new MISO Tariff provisions are the second phase of a joint MISO-PJM effort to facilitate the flow of pseudo-tie transactions between the RTOs by relieving redundant congestion costs. The need for the rule changes arose as a growing number of MISO generators sought to meet PJM's requirement that external resources establish pseudo-ties to participate in its capacity market.

Last July, FERC approved amendments to the MISO-PJM Joint Operating Agreement that eliminated most overlapping congestion charges applied to pseudo-tie transactions by improving alignment of the RTOs' market-to-market settlement procedures and increasing day-ahead coordination (*ER18-136-003, ER18-137-003*). The commission also approved PJM's Phase 2 revisions, which modified its Tariff to provide rebates for deviations from day-ahead commitments and removed the remaining overlapping congestion charges not addressed by Phase 1 (*ER18-1730*). (See ***FERC OKs MISO-PJM Double Charge Fix for Pseudo-ties***.)

MISO's Phase 2 revisions update the RTO's Tariff to include pseudo-tie transactions in "the types of interchange schedules that a market participant must report on and coordinate with the transmission provider." They also add "language that allows pseudo-tie transactions to utilize day-ahead virtual transactions to align the transmission usage charges and available congestion hedges" — that is, financial transmission rights. MISO said the revisions clarify that participants with pseudo-tied resources can use the day-ahead market to hedge against real-time congestion.

Another provision ensures that pseudo-tied resources out of MISO are charged for administrative costs in the same manner that market participants with physical transactions are charged by altering the billing formula underpinning those costs.

In approving the Tariff revisions, the commission noted Tilton Energy and other stakeholders have argued that MISO's assessment of any administrative fees for pseudo-tie transactions violates the RTO's Tariff, an issue being contested in other FERC proceedings (EL16-108; EL17-29 and EL17-54 against MISO; and EL17-31 and EL17-37 against PJM).

"Our finding here is that the reduction of the administrative charges is just and reasonable, and the question of whether MISO is authorized under its Tariff to assess these administrative charges will be addressed in the orders on the MISO/PJM pseudo-tie congestion complaints against MISO," the commission wrote.

The commission said those proceedings also were the appropriate venue for addressing American Municipal Power and Dynegy's objection to MISO's continued practice of subjecting pseudo-tied resources to transmission usage charges.

"Whether the commission ultimately determines that the MISO's assessment of transmission usage charges on pseudo-tied resources is unauthorized under the MISO Tariff does not affect the currently existing right of market participants with pseudo-tie transactions to use virtual transactions," the commission said.

FERC also rebuffed Tilton and AMP's contention that MISO should implement a rebate mechanism similar to that of PJM in order to ensure all overlapping congestion charges are eliminated.

"Based on PJM's and MISO's representations in their Phase 1 revisions and Phase 2 revisions proceedings, and the absence of evidence to the contrary, the RTOs have demonstrated that the congestion overlap has been eliminated," FERC found.

The commission did direct MISO to amend its proposed revisions to clarify that pseudo-tie transactions are not technically included in interchange schedules, despite using language indicating they should be treated as such with respect to coordination with MISO. ■

# More Work Needed for MISO, SPP on Transparency, FERC Says

## *PJM Order 844 Compliance Approved*

*By Tom Kleckner and Rich Heidorn Jr.*

FERC on Thursday ordered MISO (*ER18-2397*) and SPP (*ER18-2318*) to make additional Tariff changes to comply with the transparency requirements of Order 844 while approving PJM's filing (*ER18-2401*).

Order 844, issued in April 2018, requires RTOs and ISOs to submit monthly reports detailing their uplift payments and operator-initiated commitments. The commission said that existing reporting practices were insufficiently transparent and caused unjust and unreasonable rates. (See *FERC Orders RTOs to Shine Light on Uplift Data*.)

### MISO Order

The commission disagreed with MISO's decision to exclude price volatility make-whole payments from its zonal uplift and resource-specific uplift reports.

"We understand MISO's argument to be that price volatility make-whole payments are not classified as uplift in Order No. 844 because they are not triggered by a specific reliability need. However, we disagree that such a narrow definition of uplift was implied by the statement in Order No. 844 that 'uplift payments reflect the portion of the cost of reliably serving load that is not included in market prices.'"

The commission said the payments — intended to maintain resources' incentives to follow dispatch signals and operator instructions — are uplift "because they provide economic incentives to resources to operate in a manner consistent with system needs at costs that are 'not included in market prices.'"

It also directed MISO to replace the word "uplift," which is not a defined term in the Tariff, with terms describing types of uplift that are defined, such as the day-ahead revenue sufficiency guarantee credit.

The commission agreed with MISO's decision to use local resource zones (LRZs) — which are used to settle charges under the RTO's resource adequacy process — for reporting purposes. But it said the RTO needs to explain how it will account for uplift paid to imports.

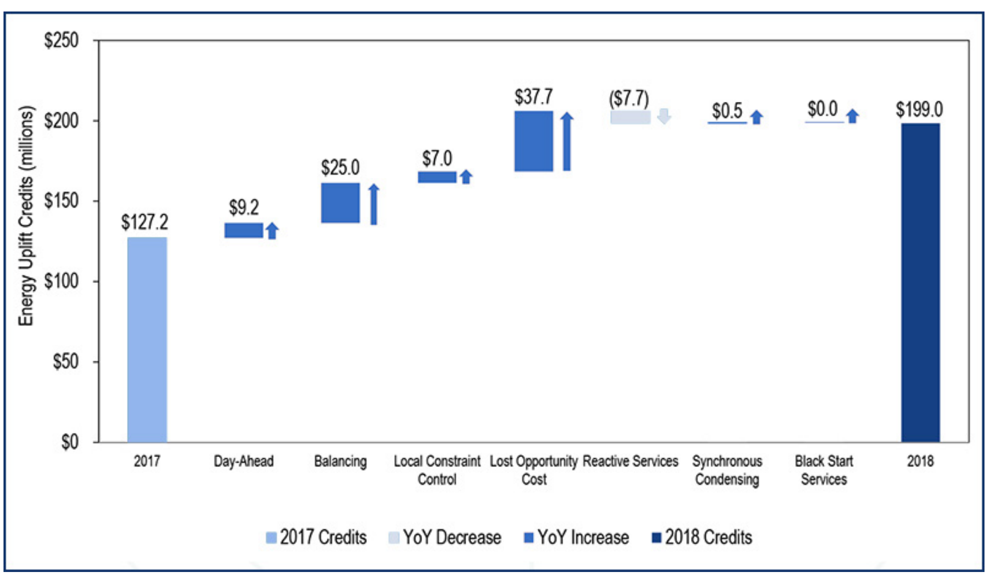
"We direct MISO to explain on compliance whether the commercial pricing nodes associated with imports are located within LRZs and how it intends to report uplift associated with an import if its commercial pricing node does not exist within a LRZ," FERC said.

The commission also ordered MISO to amend its Tariff to include "as soon as practicable" similar language to describe the notice issued to market participants for temporarily changing transmission constraint penalty factor (TCPF) values.

FERC rejected a request by the Louisiana Energy Users Group and Texas Industrial Energy Consumers to require MISO to report by categories in its resource-specific uplift report. The industrial users contended that aggregating all uplift payments by resource does not provide enough information about the resource locations to address day-ahead voltage and local reliability (VLR) problems in MISO South.

The groups said the 90-day delay in releasing resource-specific data would protect competition and individual market participants.

FERC agreed with MISO that reporting on categories was not required by Order 844 for the resource-specific report.




PJM 2018 energy uplift credits changes by category, and change from 2017 | *Monitoring Analytics*

### SPP Order

The commission accepted part of SPP's compliance filing but rejected other parts and directed it to make a further compliance filing within 30 days.

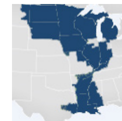
FERC found that the RTO's proposed changes to its zonal uplift report partially complied with Order 844 requirements in that SPP would compile and post make-whole payments categorized by settlement area within 20 days of a month's end. FERC also accepted a proposal to divide the report by settlement area, saying it "conforms to the commission's definition of 'transmission zone' and provides an appropriate level of geographic granularity."

But FERC said SPP's filing didn't specify what uplift categories it would report "and thus does not reflect all the uplift that SPP intends to report in compliance." The commission said the proposed Tariff language indicated the report would be broken out by day, and it directed SPP to include the uplift types it will report and to note the report will be broken out by day in the compliance filing.

The commission said SPP's proposed changes to the resource-specific uplift report also only partially complied with Order 844 because specific uplift categories would not be included in the report, leaving it incomplete. It directed the RTO to modify its Tariff changes to include resource-specific uplift categories.

While FERC agreed with many of the changes to SPP's operator-initiated commitment report, it said the report did not meet requirements to include all commitments made for a reason other than to "minimize the total production cost of serving load." The RTO

## MISO News



contended that its reliability unit commitment processes minimize total production costs, but the commission disagreed, pointing to SPP Tariff and protocols that "make clear" that RUC processes minimizing total commitment costs are only a subset of total system production costs.

The commission directed SPP to revise its Tariff to include in the report commitments made under its day-ahead, short-term and intraday RUC processes. It found that SPP's proposal to average the economic minimum across the commitment period does not comply with Order 844, saying the plan "provides less transparency into the size and timing of a system need."

FERC also found that SPP's Tariff revisions to TCPFs did not comply with requirements to enumerate any procedures by which factors may be temporarily changed. The commission said SPP conducts an annual review to consider changes to the factor values, but that the process does not address the "temporary, potentially intraday changes to those values."

"Accordingly, we direct SPP to … clarify whether it temporarily changes its transmission constraint penalty factors," the commission said, ordering SPP to revise the Tariff to include the procedures for temporarily changing those values and show its intention to provide notice to market participants as soon as practicable.

### PJM Order

The commission approved PJM's compliance filing with few substantive changes.

It rejected the Independent Market Monitor's claim that PJM's proposal to identify demand resources and economic load response participants by number, not name, did not comply with Order 844. The Monitor said the names of these resources are not confidential because they are publicly available through the Energy Information Administration and that demand resources should not be able to mask their identity when other participants are transparent.

The Advanced Energy Management Alliance countered that the Monitor's recommendation would compromise competitive information, noting curtailment service providers' investments in identifying and recruiting customers.

The commission ruled that PJM's proposal to report the identification number of demand resources and their location "provides the same level of geographical granularity as there would be if PJM used specific resource names."

The commission differed with the RTO's interpretation that the definition of operator-initiated commitment is limited to new commitments that are brought online from an offline status.

FERC agreed that PJM does not need to report commitment extensions ordered to minimize total production costs during periods of price volatility. But it said "manual adjustments by PJM to increase or decrease the amount of committed capacity, or to extend the commitments of units that are currently running beyond the hour for which they were committed by PJM's [security-constrained economic dispatch] software (i.e., a process to minimize total production costs), must be included in the operator-initiated commitment report, if those commitments are made for noneconomic reasons."

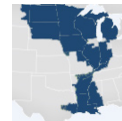
The commission also rejected the Monitor's request to require that PJM report the end time as well as the start time of operator-initiated commitments. It also rejected the Monitor's request to require PJM to disclose operator-initiated commitments cleared before the day-ahead market closes, calling it "a collateral attack" on Order 844.

"In the Notice of Proposed Rulemaking, the commission considered including day-ahead must-run generation in the definition of operator-initiated commitments. However, after considering concerns that day-ahead must-run generation clears the day-ahead market on the basis of reliability and economics, the commission modified the definition to explicitly exclude these commitments," FERC said. "The IMM did not seek rehearing on the definition of operator-initiated commitments."

The Monitor also sought clarification that no rules prohibited it from reporting uplift data itself.

"While Order No. 844 does not apply to market monitors, we find that the IMM is not precluded from continuing to report uplift data … in the IMM's State of the Market reports, to the extent this information does not violate the confidentiality provisions of the Tariff and Operating Agreement," FERC said. ■

## MISO News



# Stakeholders Mixed on MISO Seams To-do List

By Amanda Durish Cook

NEW ORLEANS — Stakeholders last week gave MISO leadership mixed signals on what they expect from seams policy, though they generally agreed the RTO shouldn't strive for exacting consistency in how it deals with different neighbors.

For some, the conversation also dredged up memories of when PJM, not SPP, was a source of seams policy frustration.

In opening the quarterly "hot topic" discussion during MISO Board Week on Wednesday, moderator Kevin Gunn, energy attorney and former chairman of the Missouri Public Service Commission, urged sector representatives to speak freely about what they'd prefer in seams relationships.

"I don't want to say this is a safe space because the press is here," Gunn joked.

MISO today has markedly different seams relationships with PJM versus SPP.

The Organization of MISO States (OMS) and SPP's Regional State Committee (RSC) have been meeting since mid-2018 to discuss interregional coordination, which has never produced a major transmission project, frustrating some stakeholders and causing market inefficiencies.

MISO has said there may be "philosophical differences" on either side of the seam.

OMS and the RSC recently released a joint white paper on the seams issues and have asked Potomac Economics — MISO's Independent Market Monitor — and SPP's Market Monitoring Unit to conduct analysis to monetize some of the issues. (See *MISO, SPP Monitors to Conduct Seams Analysis*.)

The MISO-PJM seam is a different matter. The RTOs have created a new smaller interregional project type called targeted market efficiency projects (TMEPs) and have approved two rounds of transmission projects and upgrades in two years. (See *MISO, PJM Endorsing 2 TMEPs for Year-end Approval*.)

However, MISO and SPP staff and stakeholders recently recommended performing a coordinated system plan study this year, which could result in the RTOs' first-ever interregional project. (See *MISO, SPP Seek Coordinated Plan in 2019*.) The two plan to study six possible sites, an effort that still requires approval by their Joint Planning Committee.

Daniel Hall | © *RTO Insider*

Missouri PSC Commissioner Daniel Hall, one of the regulators spearheading the recent OMS-RSC collaboration, expressed optimism regarding the MISO-SPP seam. He pointed to the RTOs' proposed revisions to their Joint Operating Agreement that would do away with a joint model requirement, eliminate a $5 million cost threshold for projects, add avoided costs and adjusted production cost benefits to project evaluation, and make CSP studies a more regular occurrence. A FERC filing is expected later this month.

"Those changes are significant from our perspective," Hall said. "I want to applaud MISO for working with SPP."

Alcoa's DeWayne Todd, representing MISO's Eligible End Use Customer sector, reminded the audience that several interregional projects are ultimately deemed not worthy after cost analyses and quantification of benefits. He cautioned against stakeholders using interregional project approvals as a benchmark for successful seams.

"It's very easy to say, 'There should be more interregional projects.' Well, should there be?" Todd asked.

Tia Elliott | © *RTO Insider*

Independent Power Producers sector representative Tia Elliott, of Cleco Cajun, said MISO and stakeholders usually don't work quickly unless outside pressure exists from regulators, FERC or other entities.

"When OMS and [the Organization of PJM States Inc.] began working together a few years ago, we saw results," Elliott said, adding that MISO could be prompted into action now that OMS and the RSC are working together.

Director Baljit Dail reminded stakeholders that a decade ago, MISO's seams with PJM were a source of frustration.

"The first seams discussion I sat in on was about PJM, and there was a lot of angst in the room — a lot. And now it seems like that has been substituted for concerns about SPP," Dail said. "There has been enormous progress, and we should recognize this."

Dail said that about 11 years ago, as he sat in on one MISO discussion on PJM seams, he jotted a note : "It takes two to tango." He asked stakeholders if they think MISO is doing enough outreach and compromise with its neighbors.

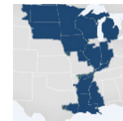
"I think SPP has been more willing than MISO to roll up their sleeves and look for projects. To some extent, I think MISO needs to catch up," Hall responded.

"I don't want to give anyone the impression that our sleeves aren't rolled up as high as they should be," MISO CEO John Bear said. He said the seam is still encumbered by rate pancaking and transmission scheduling issues that must be resolved before some proposed projects can show economic benefits.

Kevin Gunn urges candidness at the March 20 hot topic discussion. | © *RTO Insider*

*Continued on page 33*

## MISO News



# MISO Seeking Multiple Vendors for Market Platform Redesign

*By Amanda Durish Cook*

NEW ORLEANS — MISO will attempt to divide its ongoing market platform replacement into a series of smaller agreements with vendors rather than one large contract with an outside party — a move that could affect the project's timeline.

The RTO says the move will avoid overreliance on any single vendor, and that it is continuously evaluating possible impacts to the timeline and scope of the platform redesign. It had planned to begin to move its system from a server-based platform to the cloud in 2020. (See *New MISO Platform Headed to the Cloud*.)

MISO Vice President of Market System Enhancements Todd Ramey last week said the RTO can "lean on" its legacy platform system a little longer than originally anticipated if necessary. It was planning for a complete swap-out by 2023, under some pressure from existing platform vendor General Electric, which originally said it would also end IT support for the platform around that time.

However, GE is now willing to support the existing platform through 2030 at no additional costs to MISO, Ramey said. He said MISO and GE have "proactively negotiated an annual cost to run the existing platform until 2030 in advance should it be needed."

"So quite a bit more runway if we need to do that," Ramey said during a Board of Directors meeting Thursday.

Director Barbara Krumsiek half-jokingly asked for assurances that it won't take until 2030 for a complete replacement.

"We're working hard to make sure we can make the transition much sooner," said Ramey, adding that MISO's goal is to stick to its original timeline. He stressed that the RTO has not yet found any reason to extend use of the legacy platform and hasn't made any such decision.

The multi-contract move will negate MISO's earlier plans to reveal a chosen single vendor at the beginning of 2020 after finishing an evaluation of alternatives to GE.

MISO will provide its next update on the platform redesign to the board in June. Ramey said staff are already training members on how to work on the new platform.

Noting that cybersecurity was one of the reasons MISO cited for moving to a new platform, Director Thomas Rainwater asked RTO executives to include an update on how they will bolster cybersecurity measures if they prolong the use of the legacy system.

At a March 19 meeting of the board's Technology Committee, Director Baljit Dail asked if GE might have any expectations of a single, large contract. MISO Executive Director of Market Development Jeff Bladen said GE was in agreement about moving forward with a series of smaller agreements. ■

# Stakeholders Mixed on MISO Seams To-do List

*Continued from page 32*

John Bear | *© RTO Insider*

Multiple stakeholders said it would be helpful for MISO to place some timelines and deadlines on certain goals.

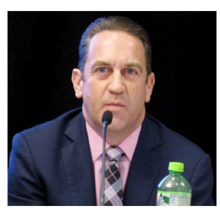
"At the end of the day, we're looking for mutually beneficial projects that will solve problems … but we're not necessarily seeing these problems go away," said Arkansas Assistant Attorney General Christina Baker, of MISO's Public Consumer Advocates sector.

### MISO-SPP TMEPs?

Hall asked why MISO and SPP couldn't create the same TMEP-style project type that MISO and PJM have.

"It's not hard to find the projects. You have to look for market-to-market congestion costs, look if that cost of the project is covered by the congestion savings over the four years. … It's a pretty simple concept," Hall said.

He said he's heard that some MISO transmission owners are critical of TMEPs with SPP, and he asked why.



Jeff Dodd | *© RTO Insider*

Transmission Owners sector representative Jeff Dodd, director of transmission and RTO policy for Ameren, responded that MISO's less mature seam with SPP has not yielded enough historical congestion data to be a foundational basis for projects.

Hall said study by the RTOs' market monitors will focus on whether TMEPs can be cost-effective and include a cost analysis of the regional contract path between MISO North and MISO South on SPP transmission.

Although it's too early to confirm, he said, the regulatory organizations might forward the analysis to FERC to open a technical docket on solutions.

"I think the analysis might show that there's a host of targeted market efficiency projects that could or should be built," Hall said.

### Question of Consistency

Director Theresa Wise asked if the RTOs in the Eastern Interconnection would be better off functioning as one large, consistent RTO with aligned markets.

"I'm a mathematician, so I often think of big networks as a way to optimize things," she said.

But Cleco's Elliott said there's conflict even within MISO's 10 stakeholder sectors on how to handle seams relationships. "If we can't come to an agreement on how to handle this internally, how are we going to do this with external parties?"

Several stakeholders said they didn't think MISO requires the same seams policies with SPP as it does with PJM.

"A lot of the sectors said consistency wasn't important across seams — that it was actually an impediment," moderator Gunn observed. "This was one of the most fascinating things to see: advocating for inconsistency or even saying consistency wasn't important."

Director Thomas Rainwater said there's a difference between advocating for absolute seams policy consistency and adjusting policies to produce similar outcomes. He said he preferred the latter approach. ■

## NYISO News

# FERC Accepts NYISO RMR Compliance Filing

*By Michael Kuser*

FERC on Thursday conditionally approved NYISO's deadlines for completing final market power reviews for deactivating generators (*ER16-120-007*).

NYISO submitted the proposal in response to a commission directive in April 2018 as part of the ISO's larger plan to revise its reliability-must-run rules. (See ***FERC Orders Deadline on NYISO Market Power Reviews***.)

The commission found the ISO's two proposed timelines "appropriately work back from a generator's proposed deactivation date, recognizing the flexibility generators have in proposing deactivation dates." It also noted the ISO's proposal "focuses on ensuring the accuracy of final physical withholding determinations at deactivation."

FERC, however, also found that the proposal "fails to strike the appropriate balance between the needs of the deactivating generator for 'transparency and certainty' and NYISO's need to ensure that the data and assumptions underlying the final physical withholding determinations are not 'too far removed from a generator's actual deactivation date.'"

FERC instead said the ISO's proposed alternative in its answer to a protest by the Independent Power Producers of New York "better strikes this balance, allowing deactivating generators to timely plan their deactivations while giving NYISO adequate time to perform its physical withholding determinations and base them on 'market conditions close to the time of deactivation.'"

As a result, NYISO must submit a further compliance filing that requires it to provide a deactivating generator final physical withholding determinations at least 60 days before the deactivation date specified in the generator's updated notice to the ISO, which the resource owner must submit 90 days before the specified deactivation date.

### Time Issues

NYISO's Market Monitoring Unit supported the filing, saying it would leave the ISO better positioned to perform its evaluation based on market conditions that are close to the time of deactivation.

The Monitor also agreed with proposed "irrevocable action or inaction" rules, which require generators to make irrevocable deactivation-related decisions well ahead of shutdown, saying the provisions properly allow the ISO to apply reasonable judgment to consider and classify deactivation decisions as practicably irreversible even when they are not strictly irreversible.

The commission declined IPPNY's request for clarification around those rules, saying "we believe that NYISO should have discretion to, in consultation with the Market Monitor, consider the facts and circumstances on a case-by-case basis to determine what events will have an irreversible consequence."

FERC similarly disagreed with IPPNY's assertion that requiring generators to deactivate no more than five days before and 10 days after their specified date is unreasonable.

The commission said NYISO's proposal addresses its "concern that the final market power review 'may be less effective with data and assumptions too far removed from a generator's actual deactivation date.' In addition, IPPNY fails to recognize that deactivating generators have the flexibility to choose their actual deactivation date when they request a final physical withholding determination." ■

The 2,480-MW Ravenswood Generating Station in Queens, N.Y.

## PJM News

# PJM Mulls Options for August Capacity Auction

*By Christen Smith*

Neal Fitch, NRG Energy | © *RTO Insider*

Wilmington, Del. — PJM on Thursday offered stakeholders four options for navigating its upcoming capacity auction, noting that each comes with risks and uncertainties.

"We are in a bit of quandary," said Stu Bresler, PJM's vice president of operations and markets. "There really are no obvious good answers as to how we can move forward at this point. I think it falls into the lesser of two evils category."

Bresler's comments come on the heels of PJM's filing with FERC urging guidance for the Aug. 14 Base Residual Auction, given a previous commission decision that the RTO should revamp its minimum offer price rule (MOPR) to address price suppression resulting from rising state subsidies for renewable and nuclear power (*ER18-2222*). PJM filed changes in October and had hoped for a FERC response by March 15 to no avail. (*See PJM to FERC: Hurry Up with Auction Guidance*.)

"Absent from any other order from FERC in this regard, we are obligated to follow the Tariff," Bresler told the Markets and Reliability Committee on Thursday.

### The Choices

Bresler presented the four paths PJM staff identified as viable and solicited feedback from the MRC on each of them, including:

- Move forward with existing rules and accept the possibility that FERC will retroactively apply new rules, forcing PJM to rerun the August BRA.


Stu Bresler, PJM | © *RTO Insider*

- File a waiver with FERC to delay the BRA until closer to the May 2020 auction, noting FERC has no timeline for ruling on such a request.
- File a request for FERC to confirm existing rules for the interim, eliminating the risk of re-rerunning the auction after the commission decides on the MOPR. Bresler noted this option has very little chance of success.
- Present an alternative interim rate in a Section 205 filing that would sunset after the August BRA, eliminating the risk of having to re-execute the auction at a later date. This type of filing bakes in a 60-day timeline for FERC to issue guidance but may require stakeholders to follow a "parallel path" in case FERC denies the filing.

Bresler said staff will return to the April 10 meeting of the Market Implementation Committee with its agreed-upon path forward.

"I don't think there's a drop-dead date [for delaying the auction]," he said. "But with some of these other options, the sooner the better."

### Stakeholders Torn

The anxiety expressed by stakeholders at the March 6 MIC meeting carried forward into Thursday's MRC, with representatives across the board abandoning hope of a short-staffed FERC offering guidance anytime soon. (See *Capacity Market Sellers Anxious Over Uncertain Auction Rules*.) The commission has been down to only four members since Commissioner Kevin McIntyre died early this year after a battle with cancer. (See *FERC's McIntyre Loses Cancer Battle*.)

"One of the things we keep going back to is the uncertainty of when actual action will be taken," said Neal Fitch, of NRG Energy, noting a fifth commissioner — capable of breaking any deadlocked rulings — has yet to be named. "We think it's right to move along with an auction in August … simply because we have no idea when FERC will act."

Others argued that delaying the auction until next spring remained the only prudent choice and appeared unconvinced by PJM's assessment that FERC is unlikely to force the RTO to re-execute the auction under new rules. The commission in January ordered PJM to rerun the July 2018 FTR auction to liquidate GreenHat's FTR positions, which could add $250 million to $300 million to the already $186 million projected cost to members from the default. Last month, the RTO requested a stay of that ruling. (See *PJM Won't Act on FTR Order Before Stay Ruling*.)

Carl Johnson, representing the PJM Public Power Coalition, argued delaying the auction could impact the market negatively.

"Without any guidance from FERC, you're shooting in the dark," he said. "I think the idea of putting together some interim [Section] 205 [filing] bridge to justness and reasonableness might have some attraction." ■

## PJM News

# PJM Stakeholders Reluctantly OK 'Fuel Security' Initiative

Continued from page 1

Members also added language to the issue charge to consider the market responses to conditions that could lead to fuel insecurity and assess whether the current market construct is sufficient to cure the problem.

The compromise was approved by acclamation with one objection.

### 'Stress Test'

Critics have complained the initiative is yet another effort to provide additional compensation to coal and nuclear generators, following failed efforts by President Trump and Energy Secretary Rick Perry.

PJM issued a study last year that showed the RTO could face outages under extreme winter weather, gas pipeline disruptions and "escalated" resource retirements. The study, which evaluated more than 300 winter scenarios, was a "stress test … intended to discover the tipping point when the PJM system begins to be impacted," the RTO said. (See *Full PJM Study Makes Case for Fuel Security Payments*.)

Marji Philips

Marji Philips of Direct Energy said PJM's proposed December 2019 filing deadline was "suspicious."

Philips said she agreed on the need for an end date but said the 2019 target "tells me it's not going to be a meaningful process."

Bob O'Connell of Panda Power Funds said a "fundamental flaw" in PJM's proposal is that its analysis made no effort to quantify the risk of the dire scenarios it outlined. He disputed the RTO's claim that all of its scenarios are "plausible."

"Many of us … believe that the risk of some of these scenarios is a decimal point, six zeroes and a one," he said.

O'Connell also disputed PJM's assertion that it

Bob O'Connell

has not identified any solution.

He cited an *interview* PJM CEO Andy Ott recently gave to Bloomberg in which he said the region's gas units have 30 to 40 hours of backup fuel and that "what we need them to keep is about five days."

"That sounds like a solution to me," O'Connell said. "What's left for the stakeholders is just fighting over how to pay for it."

Tim Horger

PJM's Tim Horger said later that incorporating a probabilistic analysis would be "challenging."

"I don't know if it's feasible," he said.

Jim Wilson, a consultant to state consumer advocates, also expressed skepticism about such an analysis. "Probabilistic analyses usually rely on historical data. [The fuel security analysis] is based on events that have never occurred," he said, citing an example of a terrorist attack on a natural gas pipeline.

"I don't think we should focus a lot of effort on this … because it will necessarily rely on speculative assumptions," he said.

Philips and David "Scarp" Scarpignato of Calpine questioned the value that fuel-secure nuclear plants bring the RTO when they often shut down in advance of a major storm.

Jason Barker of Exelon said the issue of nuclear shutdowns is irrelevant.

"It mixes reliability analysis and PJM's request

Jason Barker

to address fuel security," he said. "If this [inquiry] becomes too broad, we're setting ourselves up for failure."

Paul Sotkiewicz, PJM's former chief economist, said the RTO's study predicted load shed could result from an "inordinate amount" of plant retirements but failed to consider how the market would respond to so many plant closures.

"None of that analysis has been done," he said. "The current market design may be able to handle this under Capacity Performance."

### Ott Interview

In the interview on Bloomberg's "*Commodities Edge*" show, Ott said the initiative should determine the cheapest way to provide the security of natural gas plants with five days of backup fuel.

"What the vulnerability is … the gas units keep about 30 to 40 hours of onsite fuel. What we need them to keep is about five days. So the point is there's got to be an infrastructure build if we're going to use those resources as firm fuel supply resources. … Either larger on-site fuel storage, or we buy more fuel trucks to say they're on standby essentially to deliver fuel more dependably in the winter.

"The other alternative, of course, is to say what's that money spend, and is it cheaper than to keep the nuclear plant or keep the coal plant? … It's going to be an economic decision, and the best technology will win."

Ott said PJM expects 18,000 MW of coal retirements over the next five years and could sustain as much as 30,000 MW. "If it gets beyond that, we start to look at what are the alternatives?

"A gradual transition we can easily deal with over time. What folks are worried about, and what the U.S. federal government is worried about, is if there going to be an abrupt change." ■

## PJM News

# PJM Members Welcome Carbon Pricing Talks

By Christen Smith and Rich Heidorn Jr.

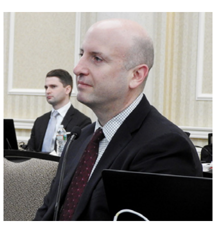
Michael Borgatti | © RTO Insider

WILMINGTON, Del. — PJM stakeholders appear ready and willing to explore carbon pricing in the RTO — a prospect that concerns utilities in coal-heavy states.

Michael Borgatti of Gabel Associates presented a first read of a *problem statement* and *issue charge* at the Markets and Reliability Committee meeting Thursday 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 Energy and PSEG Power.

"Acknowledging the reality that some folks are pursuing these policies and others aren't is not an indictment or an endorsement of either of those positions," he said. "The conversation is being had whether we want to or not. We are not policymakers here. What we should do is consider options to make sure pricing reflects the difference between [those] pursuing these policies and those that are not."

Many stakeholders expressed support for the initiative and said they looked forward to engaging in the process. Borgatti said he expected the initiative would take one to two years to consider policy changes.



Greg Poulos | © RTO Insider

"It's one of those discussions that are in the hallways and the back of the room," said Greg Poulos, executive director of the Consumer Advocates of PJM States. He said he supported the initiative, "so we can have a discussion in the front of the room."

Gary Greiner of Public Service Electric and Gas also expressed support. "We agree it's the right time to be in this, with [the Regional Greenhouse Gas Initiative] showing its head in New Jersey and Virginia.

In December, New Jersey Gov. Phil Murphy's administration *proposed* rules to rejoin RGGI, which the state left in 2012 under Gov. Chris Christie. One proposal would set the state's initial carbon dioxide cap for electric generation at 18 million tons in 2020 — when the return would be effective — declining by 3% annually through 2030. A second proposed rule concerns how the state would spend proceeds from the $CO_2$ allowance auctions. The comment period on the proposals closed Feb. 15.

Earlier this month, Virginia Gov. Ralph Northam *vetoed* legislation that would have prevented his state from joining RGGI. Northam is pushing for the state to join the pact next year.

Only two PJM states, Delaware and Maryland, are currently RGGI members.

The problem statement refers to leakage concerns — changes to generator dispatch decisions that occur when energy offers from some resources reflect the cost of carbon while others do not. In addition to RGGI, it noted that New York and Canada are implementing carbon pricing.

Load interests expressed concern over the complexity and impact of carbon pricing given the diversity of climate policies in the 13-state RTO's footprint.

Susan Bruce | © RTO Insider

"This is such a tricky issue because I think there are chicken-and-egg-type problems associated with it," said Susan Bruce, representing the PJM Industrial Customer Coalition. "One concern right now ... with the amount of change that's occurring, we don't know what we don't know at this point in time, and that's layering on an additional level of uncertainty."

Carl Johnson of the PJM Public Power Coalition said the language in the problem statement suggests there's already a solution for the issue.

"If the carbon price is zero and you don't have leakage, then you don't have to do anything," he said. "If we are talking about just leakage, then I think we are fine. But if we start considering other issues, like resource adequacy, I can understand the hesitancy from nonparticipating states."

American Electric Power's Dana Horton noted that his company has many coal-fired generators and serves states that have not adopted aggressive climate policies. "We're ... concerned about what this might do to our customer base and their costs," he said. "We have lots of reservations."

Borgatti responded that the initiative is intended to ensure appropriate pricing in states with and without climate policies. "We're talking about creating an option that the states don't have today," he said.

Stu Bresler | © RTO Insider

PJM's Stu Bresler called the problem statement and issue charge "fortuitous." The RTO issued a *white paper* in 2017 that explored ways to implement carbon pricing on a regional or subregional basis.

"I feel like the problem statement and issue charge is an ideal forum for feedback for what we can work into our process," he said. "We support engaging stakeholders in this discussion because we were going to do this anyway." ■

## PJM News

# PJM MRC/MC Briefs

### Wilmington to be Retired as Meeting Site

PJM's Markets and Reliability Committee meets at the Chase Center in Wilmington, Del., on March 21. | © *RTO Insider*

WILMINGTON, Del. — The city will be retired as the meeting site for the Markets and Reliability and the Members committees, PJM stakeholders agreed Thursday with a sector-weighted vote of 3.74 to 1.26.

Katie Guerry of Enel X first proposed relocating future meetings to PJM's Conference and Training Center in Valley Forge, Pa., at the Feb. 21 Members Committee meeting, noting the center provides stakeholders cost efficiencies, as they have access to PJM staff and resources while there. (See "Stakeholders to Consider Retiring Wilmington as Meeting Site," *PJM MRC/MC Briefs: Feb. 21, 2019*.)

MC Chair Chuck Dugan, of East Kentucky Power Cooperative, said notice of when the location change will take effect will be given to members in the coming weeks. "We have some contracts to cancel," he explained, referring to the Chase Center on the Riverfront, the current venue for meetings in the city.

### Emotional Farewell for CFO Suzanne Daugherty

PJM CFO Suzanne Daugherty listens as colleagues praise her 20 years of service. | © *RTO Insider*

Members presented PJM CFO Suzanne Daugherty with a signed plaque of recognition and gratitude for her two decades of service at the RTO just days before her anticipated retirement.

During her last time serving as chair of the MRC, Daugherty tearfully bid farewell to members, saying she's "enjoyed working with every single one of you."

PJM staff and members alike commended Daugherty for her commitment to the RTO over the years and said they were sorry to see her leave.

"They say where you stand on a particular issue depends on where you sit," said Stu Bresler, senior vice president of operations and markets. "With respect to where Suzanne stood, it was equally consistent. The direction was always 'Do the right thing,' and the remainder of the conversation was 'How do we get there?'

"If you are looking for a role model … it'd be challenge to find anyone better than Suzanne Daugherty," he added.

Daugherty announced in February she would retire on April 1 after 20 years with PJM. The decision follows months of recriminations by stakeholders over credit policies that allowed a small trading shop to default on more than $100 million in financial transmission rights losses. (See *PJM CFO Retiring in Wake of GreenHat Default*.) She never connected her announcement to the GreenHat Energy fallout, rather saying she timed it to coincide with her husband's retirement.

The Board of Managers' report on PJM's handling of the GreenHat incident is expected to be released this week.

### Fix for Deficiency Cure Periods OK'd

Stakeholders unanimously approved a quick fix to prevent transmission customers from falling out of the interconnection queue because of minor errors.

They endorsed revisions to *Manual 14A: New Services Request Process* and the Open Access Transmission Tariff that would give customers 10 days to fix minor errors in their requests, no matter whether they submit their application on the first or last day of the new services request window. (See "Quick Fix for Queue Filing Errors Endorsed," *PJM PC/TEAC Briefs: Feb. 7, 2019*.)

The change will be effective with queue AF1, which opens April 1.

### Manuals Endorsed

The MRC endorsed the following manual changes:

B. *Manual 13: Emergency Operations*: Updates *language* to align with both NERC EOP-004-4 and OE-417 reporting requirements in Attachment J, relating to disturbance reporting.

C. *Manual 20: Resource Adequacy Analysis*: Cover-to-cover periodic *review* includes minor grammatical corrections and updated language to reflect implementation of Capacity Performance. Removes references to demand resource factor and deletes sections 5 and 6, which relate to demand response reliability target analysis procedures and limited-availability resource constraint procedures, respectively.

D. *Manual 37: Reliability Coordination*: Periodic cover-to-cover *review* that includes minor grammatical updates and annual changes to transmission owner designations. Adds PJM's Reliability Plan to attachment A and updates appendix D to include AMP Transmission as a TO. ■

*— Christen Smith*

## SPP

# SPP on Track for WECC RC Certification

By Tom Kleckner

SPP Vice President of Operations Bruce Rew last week said that he "feels pretty confident" the RTO will meet its first major target in providing reliability coordination services to 12% of the Western Interconnection's load.

During a Wednesday meeting of the Western Reliability Executive Committee (WREC) in Tucson, Ariz., Rew said SPP is "doing well" in preparing for the certification process, which begins with the Western Electricity Coordinating Council's on-site certification visit Aug. 13.

Rew said staff are updating and creating new procedures to include the Western footprint. He told the WREC the procedures will not be shared with customers, but a summary of methodologies will be provided.

SPP is updating and validating its system model, using Peak Reliability's as a benchmark. Peak has provided RC services in WECC since 2011 but it will wind down operations at the end of the year.

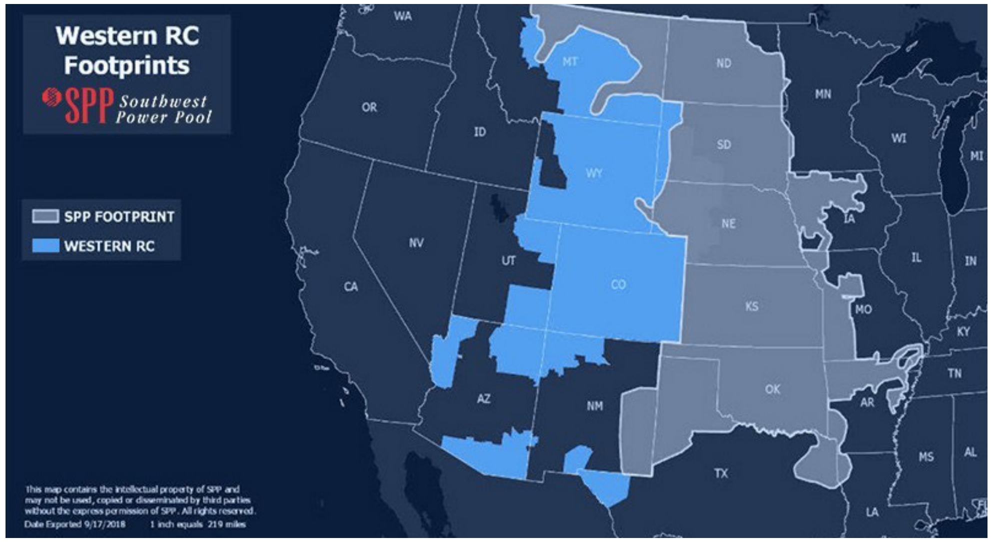
SPP and CAISO, which will serve as RC for almost three-quarters of the region's load, will begin coordinating their models with each other "shortly," Rew said. The new RCs will coordinate modeling updates on a monthly basis, he said. (See *CAISO RC Wins Most of the West*.)

SPP staff are also working with the RTO's Congestion Management and Seams Task Force to identify a "consistent and agreed-upon" congestion management approach between SPP West transmission owners and balancing authorities. The approach includes a redispatch methodology for congestion within the SPP West RC.

SPP is scheduled to go live with its RC services Dec. 3. It announced in September it had signed RC contracts with more than a dozen Western entities.

The WREC met following a two-day meeting by the Western Reliability Working Group, which spent much of its time discussing SPP's communications processes, coordination among reserve sharing groups and emergency operations preparedness.

SPP staff encouraged new members to sign up for NERC's *GridEx V* on Nov. 13 and 14, in which the RTO will participate as a player. Staff said more than 200 employees, including senior officers, will participate in the biennial exercise, which tests response to and recovery from simulated cyber and physical attacks. GridEx IV, in 2017, had more than 6,500 participants from 450 organizations. ■

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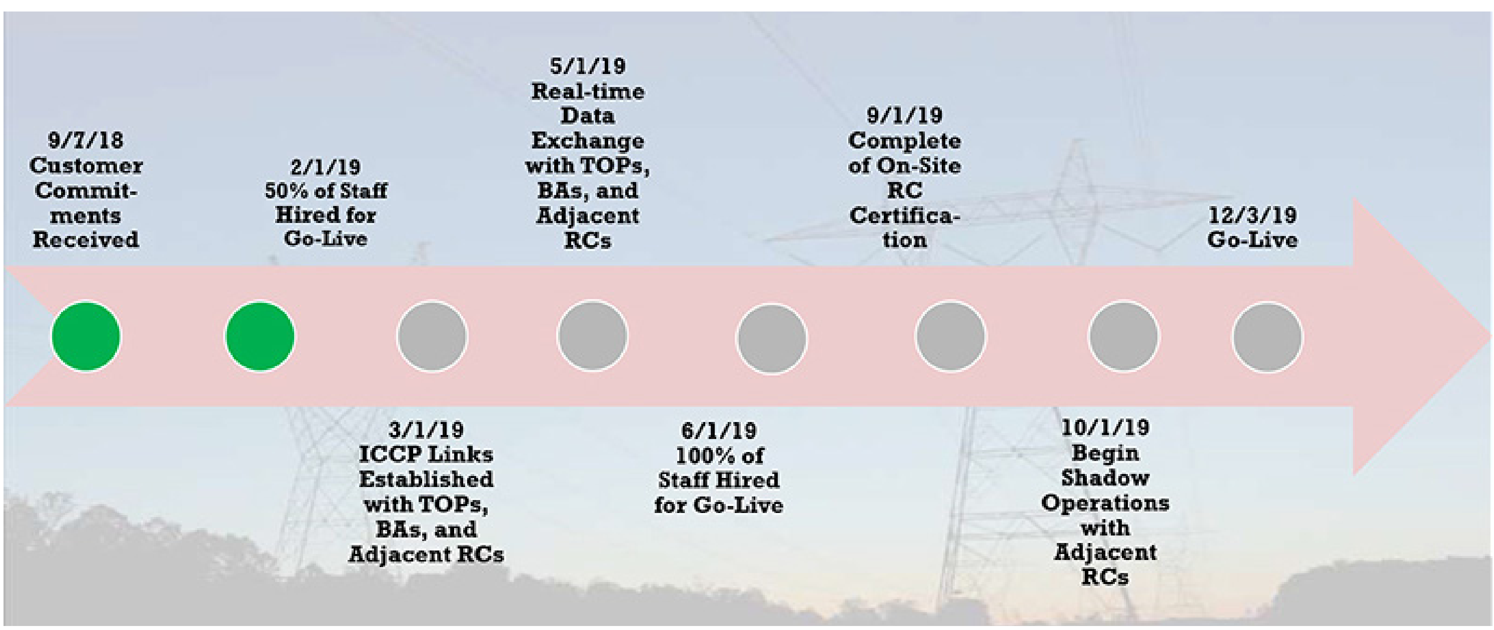



SPP's timeline for launching its RC services | *SPP*

## SPP

# FERC Denies KEPCo Complaint Against Westar Energy

*By Tom Kleckner*

FERC last week denied Kansas Electric Power Cooperative's complaint that Westar Energy had twice violated its generation formula rate (GFR) in assessing its own rates and federal income tax reduction (*EL19-17*).

In its Federal Power Act Section 206 complaint, KEPCo alleged that Westar failed to reflect the reduction in the federal corporate income tax rate that went into effect on Jan. 1, 2018, in the utility's rates paid and calculated under the GFR. KEPCo also asserted that Westar improperly included about $551,000 associated with Westar's settlement of a personal injury lawsuit in the GFR's annual update in 2018.

The complaint filed last November included a list of informal challenges to the 2018 update. It maintained Westar should have corrected the overstated tax expense from Jan. 1 to May 31, 2018, as a mistake, charging that the company used the improper corporate tax rate for the 2018/19 contract year.

The co-op asked the commission to order Westar to recalculate the GFR, exclude the settlement's $551,000 from the 2018 update and provide refunds with interest.

Westar responded by saying that it believed all charges in the 2018 update were appropriate. Westar asserted that KEPCo failed to demonstrate how the GFR as a whole is unjust and unreasonable.

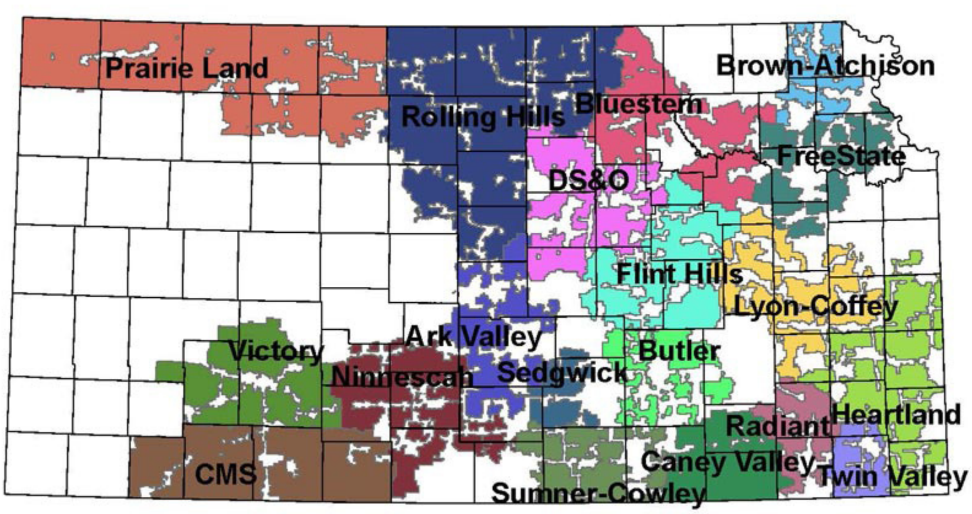
FERC found that Wester correctly applied its historical test year methodology in the 2018 update, applying a 35% federal corporate tax rate in calculating the GFR from Jan. 1, 2018, through May 31, 2019. The commission pointed out the update was properly based on 2017 costs, including the 35% tax rate in effect in 2017.

The commission relied on precedent set in a recent decision in which Duke Energy also had a cost-based tariff that followed a historical test year methodology and applied the 35% tax rate in its 2018 annual update. FERC dismissed a wholesale transmission customer's attempt to apply a lower income tax rate because it found the utility "correctly used the federal corporate income tax rate in effect in 2017 in preparing the 2018 annual update."

In that proceeding, the commission said it "generally requires that formula rate inputs be calculated on a synchronized basis over the same test period … [using] the federal corporate income tax rate in effect during the historical test year period, absent a contrary statement in the filed rate."

"No such contrary statement exists in Westar's GFR," the commission said.

FERC said KEPCo provided little support for its argument that the GFR's tax component is an exception to the historical test year approach. "The lack of an explicit requirement in Westar's GFR one way or the other on the correct federal corporate income tax rate favors use of the prior year rate, consistent with the historical test year methodology," the commission said.




KEPCo's member co-ops | *KEPCo*


ITC Holdings' headquarters in Novi, Mich. | *ITC Holdings*

FERC made a similar decision last week in case involving a Louisiana city's complaint against Cleco Power. (See related story, *FERC Backs Cleco on Tax Rate Calculations*.)

The commission did not address Westar's inclusion of "certain expenses in the injuries and damages account," as KEPCo withdrew its challenge.

### Commission Denies Reduction of ITC Great Plains Adder

FERC last week also denied the Kansas Corporation Commission's request that a previously awarded transmission-only company (transco) adder for ITC Great Plains be reduced, pending the KCC filing a Section 206 complaint (*ER09-548*).

The KCC in December filed a motion requesting FERC direct ITC to show cause why the adder in its overall return on equity should not be reduced from 100 to 25 basis points, given the commission's findings in a docket involving Consumers Energy.

In that proceeding, FERC found that three ITC Holdings subsidiaries in MISO (International Transmission Co., Michigan Electric Transmission Co. and ITC Midwest) were no longer fully independent and that a recent merger had reduced, but not eliminated, their level of independence as transcos. The commission said a 25-basis-point transco adder was appropriate for the subsidiaries.

However, FERC said ITC Great Plains' transco adder was granted in a 2015 order that became final when no party appealed the order on rehearing. The commission noted that if a party believes that "changed circumstances warrant a revisiting of previously granted transmission incentives," that party should file a Section 206 complaint. ■

# Company Briefs

## Duke Seeking $225M more per Year from SC Customers

Duke Energy's two South Carolina electric utilities want to charge customers a combined $225 million more per year to cover costs for infrastructure improvements, new power plants, the cleanup of coal ash and a nuclear project that never got started.

South Carolina's Public Service Commission held a hearing on Thursday in the hopes of deciding whether Duke Energy Carolinas and Duke Energy Progress get their wish. It is the first major energy case handled by the PSC since it allowed Dominion Energy to take over SCANA late last year.

The case will have a large impact on roughly 761,000 Duke electric customers. The monthly bill for an average Carolinas customer could increase by more than $14/month, while customers with Progress could see their monthly costs jump by more than $17/month.

More: *The Post and Courier*

## Canadian CO2 Removal Firm Secures Finance to Expand

Canada-based Carbon Engineering has exceeded its financing target, which will enable it to deploy its first commercial operation to remove carbon dioxide directly from the air, it said last week.

Founded in 2009, Carbon Engineering developed technology that captures $CO_2$ directly from the atmosphere and converts it into low-carbon fuels for transport and for use in enhanced oil recovery.

The company announced it had completed an equity financing round of $68 million, the largest private equity investment made into a direct-air capture company to date. The company's target was $60 million.

More: *Reuters*

## GE Sells 650 MW of Renewable Energy Assets to Enel

General Electric has sold 650 MW of joint-venture-owned renewable energy projects, less than two months after trumpeting an expansion of its renewables arm.

The sale involved seven projects belonging to Enel Green Power North America Renewable Energy Partners, an equally owned joint venture between Enel Green Power North America and GE Capital's Energy Financial Services, GE's energy investing arm.

GE's joint venture partner bought the assets, which had an enterprise value of around $900 million, for $256 million, Enel announced last week.

More: *Greentech Media*

## Skilling Planning Comeback After Prison Release

Former Enron CEO **Jeffrey Skilling** is seeking to return to the energy business just weeks after being released from federal prison for his role in one of the biggest corporate scandals in history.

Skilling, who served more than 12 years in prison for his 2006 conviction on fraud, conspiracy and insider-trading charges, has been meeting with former Enron executives and others, *The Wall Street Journal* reported.

Sources said Skilling is seeking to build a digital platform connecting investors to oil and gas projects and has met with individuals with expertise in cryptocurrency, blockchain and software development. Lou L. Pai, once head of Enron's energy-services unit, has agreed to invest in the venture, the paper reported.

More: *The Wall Street Journal*

## Report: Banks have Invested $1.9T in Fossil Fuels Since 2015

Thirty-three global banks have invested a combined $1.9 trillion in fossil fuel companies since 2015, according to a report released last week by groups including the Sierra Club and Honor the Earth. The report says that banks are dropping huge amounts of money into the fossil fuel industry even as they promise investments in sustainability and "clean financing."

Of the banks analyzed, the report ranked JPMorgan Chase as the top investor "by a wide margin." According to the findings, the bank invested about $195.7 billion between 2016 and 2018, while Wells Fargo, which ranked second, invested about $151.6 million. Four of the top five investors were banks based in the U.S.

More: *Greentech Media*

# Federal Briefs

## Perry Announces New Loan Guarantees to Plant Vogtle

Energy Secretary Rick Perry last week announced nearly $4 billion in new loan guarantees to the owners of Plant Vogtle's two nuclear reactors in Georgia.

Perry, Agriculture Secretary Sonny Perdue and Georgia Gov. Brian Kemp were on hand to watch as a massive 130-foot diameter cap weighing nearly 1.5 million pounds was slowly maneuvered by crane and then lowered to cap the containment vessel

for Vogtle Unit 3. Southern Co. CEO Tom Fanning, whose Nuclear Solutions Co. is overseeing the construction, said the unit is 75% complete and by year's end will be 90% finished, and ready for fuel to be loaded into it in 2020. The nearby Unit 4, which is still missing much of its containment vessel, is scheduled to go online the following year.

The three owners of the plant are guaranteed up to $12 billion, the Energy Department said: Georgia Power up to $1.67 billion, Oglethorpe Power up to $1.6 billion and MEAG Power up to $414.7 million.

More: *The Augusta Chronicle*

### Navajo End Bid to Buy Plant, Mine

The coal-fired Navajo Generating Station will close this year as planned after the tribe-owned Navajo Transitional Energy Co. last week ended its long-shot bid to acquire it and the nearby Kayenta Mine, which supplies the plant.

Negotiations with the power plant owners came to a halt recently over who ultimately would be responsible for cleanup. The owners wanted the energy company to take on any known or unknown liabilities for the plant, but the Navajo Nation declined. With that and a decision from a Navajo Nation Council committee not to support the acquisition, the energy company called it quits.

The power plant owners cited cheaper prices for natural gas in deciding to close the power plant. An earlier bid by two companies to own and operate the plant fell through because they couldn't get anyone to commit to buying the power.

More: *The Associated Press*

### TVA Long-term IRP Boosts Solar, Cuts Coal

The Tennessee Valley Authority expects to boost the electricity it gets from solar resources by 4 to 9 GW over the next two decades while cutting the share of power generated by burning coal, according to proposals included in a new long-term integrated resource plan being prepared by the utility.

The amount of the energy shift from coal to solar sources depends upon a variety of economic, regulatory and consumer practices. But in all 30 of the different approaches analyzed by TVA for the future in its draft IRP for 2040, renewable energy is projected to increase and coal generation will decline.

TVA has already shut down its John Sevier, Widows Creek, Colbert and Allen fossil plants, and it plans to shut down its Paradise and Bull Run coal plants in the next three years.

More: *Times Free Press*

# State Briefs

## ILLINOIS

### ComEd Testing Self-powered Streetlights

Commonwealth Edison has installed 30-foot-tall light structures at two Chicago high schools that will draw no power from the electric grid. Instead, the off-grid lamps are equipped with a small wind turbine, solar panels and enough batteries to store five nights worth of power. The base cost is $11,000 before shipping and installation.

Known as remote power units, the lights are not meant to replace traditional streetlights. But officials say they can act as a complement to grid-connected lights and be useful during power outages. The towers can also serve as power sources, as they are internet-connected and have USB outlets for charging cellphones.

ComEd installed the streetlights in a partnership with New York-based Aris Wind.

More: *Energy News Network*

### Bill Seeks to Avoid 'Cliff' in Renewable Development

Lawmakers are considering a bill that would significantly increase the state's renewable energy targets and increase funding for renewable energy.

The Path to 100 bill would increase the state's renewable portfolio standard to almost 40% by 2030 and is meant to encourage the development of utility-scale solar and wind energy to help avoid an expected "cliff" in solar development.

The bill would raise the cap on the amount utilities can increase rates to pay for renewable energy. The cap currently stands at 2% but could go up to 4%. The bill would also spur the creation of 6,000 MW of utility-scale solar, 6,500 MW of utility-scale wind, 5,000 MW of distributed solar and 2,400 MW of community solar, proponents say. Backers also say that over 20 years, the bill would create 21,000 jobs, $2.8 billion in new property taxes from developments and $1.95 billion in payments to landowners.

More: *Energy News Network*

## INDIANA

### IURC Approves Vectren's 50-MW Solar Project

The Utility Regulatory Commission last week approved Vectren's plan to build a 50-MW universal solar array in eastern Spencer County. The solar farm will be located near Troy on 300 acres and consist of roughly 150,000 solar panels. The project is part of Vectren's plan to lower its emissions by 60% by 2024.

Construction is slated for later this year, and the project is expected to be fully operational by 2020.

More: *WEHT*

## MARYLAND

### Two Major Energy Bills Hang in the Balance

The Senate last week passed a bill 33-13 that would require the state to use 50% renewable energy for electricity by 2030, but it faces uncertain waters in the House of Delegates.

Meanwhile, the House has passed a bill 83-51 that would change the way electric and gas utilities set their annual rates by allowing for different ways to calculate ratepayer costs. The heavily lobbied measure seemed like it was on a glide path through the Senate, but it has steadily picked up opposition, including from Attorney General Brian Frosh last week.

In a letter to Sen. Delores Kelley (D), chair of the Finance Committee, where the legislation is under consideration, Frosh called it "premature" and said it "could result in unreasonably increased energy costs to consumers." He joins the state's Public Service Commission and Office of People's Counsel in their opposition to the bill.

More: *Maryland Matters*

# MISSOURI

## PSC Approves Grain Belt Express

After years of rejection, the Public Service Commission last week unanimously approved Clean Line Energy Partners' Grain Belt Express transmission project.

The PSC's approval recognizes the project as being in the public interest and allows the developer the right to use eminent domain as needed to construct the line. The project's sale to Invenergy is pending.

Last year, an appeals court judge said the commission "erred" in its controversial legal interpretation that it was unable to approve the line without first attaining assent from individual counties the project would pass through. That sentiment was echoed in a July ruling from the state Supreme Court, which remanded the matter to the PSC.

More: *St. Louis Post-Dispatch*

## Ameren Outlines Investment to Reduce Outages in Ladue Area

Ameren Missouri is spending $2.5 million to replace electric poles and add smart grid technologies to help reduce power outages in Ladue, Frontenac, Rock Hill and Brentwood. The project is part of Smart Energy Plan efforts to enhance reliability and provide cleaner energy, Robert Schnell, a supervising engineer with Ameren Missouri, told the Ladue City Council and Mayor Nancy Spewak last week.

The project will start in April and conclude in October. Upgrades will include modernized equipment to more rapidly detect and isolate outages, reducing the number of outages and speeding power restoration when they do occur. The equipment is also expected to better withstand severe weather.

The overall Smart Energy Plan includes more than 2,000 electric infrastructure upgrade projects over the next five years throughout the state.

More: *St. Louis Post-Dispatch*

# MONTANA

## PSC Backs Bill to Bailout Colstrip

Going against the recommendations of its staff, the Public Service Commission voted 3-1 to support Senate Bill 331, which would allow NorthWestern Energy to pass certain operating costs of Colstrip Unit 4 on to ratepayers without commission review. The bill will help NorthWestern purchase an additional part of the plant and keep it operating into the future.

Colstrip Units 1 and 2 are scheduled to be shut down by 2022, but Units 3 and 4 currently have no shutdown date.

Under SB331, if NorthWestern buys an additional 150 MW for $1, the company can recover up to $40 million in operating costs over the next five years from ratepayers. It also says if the plant is closed before 2042, NorthWestern can charge ratepayers for all of the plant's remaining depreciation and cleanup costs, which would be $267 million, or about $721/customer, if the plant closed in 2027.

More: *KPAX*

# NEVADA

## NV Energy Calls for Higher Exit Fees on Departing Companies

NV Energy said unless it is allowed to impose higher impact fees on departing businesses, it will lose millions of dollars, cripple expected electric demand for decades and likely result in higher costs for residential customers.

The claim came in a 29-page "alternative impact analysis" submitted by the utility as part of the South Point Hotel and Casino's application to leave its electric service. In the filing, the utility said if all pending exit applications are approved, its expected electric load would not recover for up to two decades, and the loss of revenue would mean other customers would pay higher power costs.

NV Energy had not opposed exit applications filed by its major customers but saw a record 10 companies file to leave the company in 2018.

More: *The Nevada Independent*

# NEW MEXICO

## Lujan Grisham Signs 100%-by-2045 RPS Bill

**Gov. Michelle Lujan Grisham** last week signed sweeping energy legislation that calls for the state's investor-owned utilities to get 100% of their power from carbon emission-free sources by 2045.

The previous RPS required that 20% of the state's electricity come from renewable sources by 2020. The bill signed last week raises that threshold to 50% by 2030 for IOUs and rural electric cooperatives. IOUs would then be required to get 80% by 2040. Co-ops would have until 2050 to reach the 100% requirement.

The bill also sets up a system for financing the Public Service Company of New Mexico's closure of a coal power plant in the Four Corners and creates job training programs for the renewable energy industry while extending assistance to laid off coal workers.

More: *Santa Fe New Mexican*