RTO Insider

Your Eyes and Ears on the Organized Electric Markets

CAISO ■ ERCOT ■ ISO-NE ■ MISO ■ NYISO ■ PJM ■ SPP

ISSN 2377-8016 : Volume 2019/Issue 9

February 26, 2019

PJM CFO Retiring in Wake of GreenHat Default

By Christen Smith and Rich Heidorn Jr.

CFO Suzanne Daugherty will retire from PJM effective April 1. | © *RTO Insider*

PJM Chief Financial Officer Suzanne Daugherty will retire April 1 after 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.

RTO officials declined to say whether Daugherty's departure was related to the default of GreenHat Energy, saying only that it was her decision to leave. CEO Andy Ott announced Daugherty's departure in an email Wednesday.

In a brief interview, Daugherty also declined to say whether her departure was related to the GreenHat controversy. "This is the timing for when I decided to move into retirement with my husband" who retired a year ago, she said.

Daugherty said her April 1 departure will allow her to complete PJM's year-end financial reporting in March. She said she plans to do more traveling with her husband and resume volunteer work in children's health and education and has no plans to seek a new job. "This is a true retirement," she said.

GreenHat

Daugherty found herself the target of PJM members' ire over the RTO's handling of GreenHat, a small company that was able to procure 890 million MWh of FTRs — the largest FTR portfolio in PJM — while putting up only $600,000 in collateral.

The company, which listed its address as a UPS

Continued on page 28

ISO-NE Chief Sees 'Year-round' Energy Risks Coming

By Rich Heidorn Jr.

ISO-NE CEO Gordon van Welie | © *RTO Insider*

ISO-NE CEO Gordon van Welie said Wednesday that his concerns about New England's ability to keep the lights on continue to grow despite recently enacted market rule changes, predicting that energy security risks "could become a year-round concern."

The region has benefited from a milder-than-normal 2018/19 winter and has not faced the severe, lengthy natural gas shortages that marked the two-week cold spell early last year. The RTO also has implemented its Pay-for-Performance incentives and held its first capacity auction under rules intended to mitigate price suppression by subsidized resources.

But speaking at his annual *State of the Grid* press call, van Welie said the transition to a "hybrid" grid with growing distributed and renewable generation means that "eventually nearly all resources in the fleet will have some energy limitations."

In addition to limited oil and LNG supplies and just-in-time natural gas deliveries, the region will face new challenges as the shares of wind and solar generation grow. "As this contingent of energy-limited resources grows, the region's energy-security risks could become a year-round concern," he *said*. "New England's power system is operating from a strong foundation, but the vulnerabilities we've discussed in previous briefings are still here, and still growing."

The grid operator marked a milestone on April 21, 2018, a sunny day when — for the first time — net load peaked overnight because of strong solar power during mid-day.

Continued on page 16

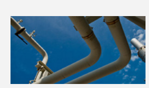
GCPA MISO SOUTH CONFERENCE

About 200 attorneys, analysts, regulators and other stakeholders attended the Gulf Coast Power Association's MISO South Regional Conference in New Orleans last week. | © *RTO Insider*

SMART ENERGY SUMMIT

Attendees at the 2019 Smart Energy Summit | © *RTO Insider*

Also in this issue:



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In this week's issue

COUNTERFLOW

By Steve Huntoon

The Test of Time

Big Transmission, Microgrids, Grid Batteries and Escape from New York

By Steve Huntoon

Three years ago I wrote skeptical analyses of Big Transmission, microgrids and grid batteries.

I thought it might be interesting to see how those analyses are holding up and add a New York note.

Big Transmission

"The Rise and Fall of Big Transmission"[1] gave the reasons why Big Transmission has never made sense. Much of it is pretty basic, such as the fact that energy is transmitted, not electrons. As Scotty said, you can't change the laws of physics.

Since that article, Clean Line Energy (remember them?) has sold off a couple pieces and seems to be otherwise winding down. Hopefully someone will write that history.

Getting a lot of hype last year was the release of a "study" led by the National Renewable Energy Laboratory claiming that huge interregional transmission projects make economic sense. [2] I put "study" in quotes because even though it was reported as a "study," it actually was a slide deck describing some future real study. A slide deck is essentially a black box because you can't tell what's going on with somewhat important stuff like input assumptions, algorithms, etc.

This study is like its predecessors that I debunked in the original article.

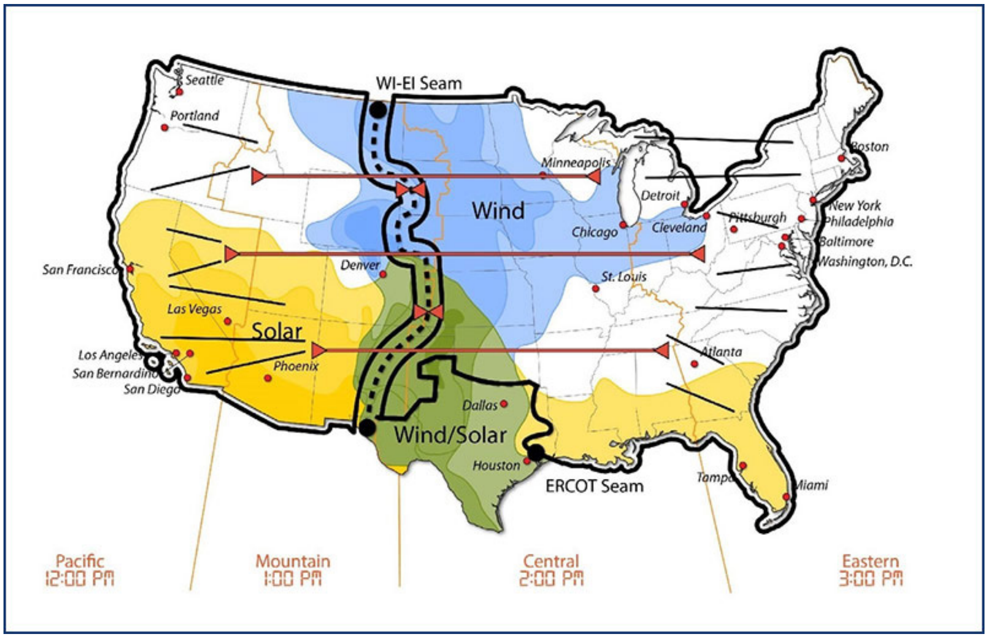
One screaming flaw is the study's claim of an estimated $14 billion cost for an HVDC transmission buildout to transmit 36 GW from west to east.[3]

Such an HVDC transmission buildout, if ever politically possible, actually would cost at least $50 billion under the least expensive Energy Information Administration estimate of HVDC cost per megawatt-mile of $700.[4] This minimum $50 billion cost is more than the study's claimed benefits.[5]

For Big Transmission, the song remains the same.

Microgrids

"Microgrids: Where's the Beef?"[6] explained



In its 2018 Interconnection Seams Study, the National Renewable Energy Laboratory's "Design 2b" envisions three HVDC transmission segments built between the Eastern and Western Interconnections, with existing facilities co-optimized with other investments in AC transmission and generation. | *NREL*

why microgrids are an inherently uneconomic throwback to the utility islands of the 19th century (yes, that century). Amusingly, some microgrid proponents are now talking about the importance of integrating microgrids into the grid,[7] which of course is what the grid itself is all about: integration.

Microgrid proposals continue to proliferate but only where subsidized by Other People's Money, which in utility parlance means utilities get enormous returns on microgrid projects that are paid for by other — non-microgrid — customers.

The acid test should be whether microgrid beneficiaries are willing to pay for the cost of the microgrid themselves. The answer is never — because people aren't dumb.

One shocking attempted raid of federal taxpayers, and the undermining of our national defense, was a study by a consultancy Noblis for the Pew Charitable Trusts urging that our nation's military bases replace individual backup generators at critical buildings with base-wide microgrids. I pointed out in a later article[8] that because 87% of base outages were cause by on-base distribution system failures that centralizing backup base generation in a microgrid would dramatically *increase* outage risk for critical buildings. Not to mention that microgrids are inherently vulnerable to cyberattack while individual building backup, typically diesel, is not internet-connected and therefore not vulnerable to such attack.

My favorite factoid remains this: The nation's "flagship" microgrid at the University of California, San Diego flunked its acid test in the Southwest Blackout of 2011. The campus shut down with the rest of San Diego.[9]

You can't make this stuff up.

Grid Batteries

"Grid Batteries: Drinking the Electric Kool-Aid"[10] debunked this continuing infatuation of our *haute couture* crowd. The newest shell game is the notion of "value stacking," which is the equivalent of saying that you can jog around the neighborhood while watching your kids at home. No, not possible.

By the way, batteries *increase* carbon emissions.[11] Two reasons: The generation used to charge batteries tends to be dirtier than the generation displaced when batteries are discharging. And there are losses from converting AC to DC, storing energy and converting back. Batteries ≠ green.

Counterflow

By Steve Huntoon

Battery boosters, realizing they can't make it on the merits,[12] have been lobbying regulators and legislators to subsidize them through procurement mandates, direct subsidies, utility rate base and other special treatment.

My favorite is New York arbitrarily deciding that 1,500 MW (oops, now 3,000 MW) of grid batteries sounded like a good, round number and putting up $265 million of Other Peoples' Money for that.[13]

Escape from New York

This is the same New York that is forcing the shutdown of the *economic* Indian Point Nuclear Plant; subsidizing *uneconomic* upstate nuclear plants; subsidizing 2,400 MW (oops, now 9,000 MW) of uneconomic offshore wind;[14] risking electric reliability in New York and New England and curtailing new natural gas home connections by blocking federally certificated natural gas pipelines;[15] paying $1,973 per public housing apartment to install LED lighting;[16] and stiffing Cheryl LaFleur,[17] a dedicated public servant, for another FERC term because Chuck Schumer didn't like a highly technical, totally correct NYISO decision.[18]

New York, you are a Green New Deal Mini-Me. Condolences.

Amazon, you got out while the gettin's good. Congratulations. ■

[1] *http://www.energy-counsel.com/docs/The-Rise-and-Fallof-BigTransmission-Fortnightly-September2015.pdf*. Big Transmission is somewhat arbitrarily defined by me as at least 250 miles of 500 kV.

[2] *https://cleanenergygrid.org/wp-content/uploads/2018/08/NREL-seams-transgridx-2018.pdf*.

[3] *https://cleanenergygrid.org/wp-content/uploads/2018/10/Seam-Study-Webinar_10_9_18_Final.pdf* (see slides 7 and 11 for three HVDC lines and the transmission capacity total of 36 GW under Design 2b, and slide 15 for the incremental capital cost of Design 2b of $13.67 billion).

[4] The cheapest HVDC cost per megawatt-mile is $700 per this EIA study, ***https://www.eia.gov/analysis/studies/electricity/hvdctransmission/pdf/transmission.pdf*** (pdf pages 33-34). $700 MW-mile x 12,000 MW each HVDC line x three HVDC lines x 2,000 miles each line = $50 billion. This does not include the enormous AC transmission facilities that would be required to accommodate the HVDC lines (i.e., inject/withdraw 12,000 MW each line from their converter stations in the middle of nowhere).

[5] The negative "Total Non-transmission Cost" of $45.16 billion on slide 15 of deck in footnote 3.

[6] *http://www.energy-counsel.com/docs/Microgrids-Wheres-the-Beef-Fortnightly-November2015.pdf*.

[7] *https://microgridknowledge.com/microgrids-islands-siemens/*.

[8] *http://www.energy-counsel.com/docs/Microgrid-Kool-Aid-and-National-Security-2017-03-14-RTO-Insider-Individual-Column.pdf*.

[9] *http://www.eenews.net/stories/1059996047*. ("The university's two 13.5-MW Trident turbines were running full-bore when power from the utility abruptly went dead. With no time to shed their load, the turbines also shut down, and the campus lost electricity.")

[10] *http://www.energy-counsel.com/docs/Battery-Storage-Drinking-the-Electric-Kool-Aid-Fortnightly-January-2016.pdf*.

[11] *https://www.vox.com/energy-and-environment/2018/4/27/17283830/batteries-energy-storage-carbon-emissions*.

[12] *https://www.greentechmedia.com/articles/read/why-is-the-texas-market-so-tough-for-energy-storage*. A long story about the Texas market that basically says batteries can't make it there because the Texas market is based on economic merit.

[13] *https://www.energy-storage.news/news/industry-reacts-positively-to-new-yorks-1500mw-energy-storage-target*.

[14] *https://www.rtoinsider.com/new-york-renewable-energy-109515/*. Gov. Andrew Cuomo claims that the offshore wind would be located in "this state." No, it would not. It would be located far outside New York's nautical boundary that is 3 miles from shore.

[15] *https://www.wsj.com/articles/gas-shortages-give-new-york-an-early-taste-of-the-green-new-deal-11550272395?mod=cx_picks&cx_navSource=cx_picks&cx_tag=contextual&cx_artPos=2#cxrecs_s*.

[16] *https://www.wsj.com/articles/1-973-leds-and-the-green-new-deal-11550274408*.

[17] *https://www.rtoinsider.com/lafleur-ferc-departure-110182/*.

[18] *https://www.poughkeepsiejournal.com/story/news/2014/07/03/molinaro-ferc-letter-reps/12193953/*.

Entergy Beats Expectations with $66M Loss

Entergy last week *reported* a fourth-quarter loss of $66 million ($0.36/share), beating analysts' expectations by 12 cents. That compared favorably with a $479 million loss for the fourth quarter in 2017 ($2.66/share).

Five analysts surveyed by Zacks Investment Research had projected a loss of 48 cents/share.

For the year, Entergy reported earnings of $849 million ($4.63/share), compared to $412 million ($2.28/share) in 2017.

In a Feb. 20 conference call with financial analysts, Entergy CEO Leo Denault said 2018 was "another successful year" and said the company is "on track" to achieve its long-term goals.

The company said its results reflected asset impairments and other expenses related to its decision to exit its Entergy Wholesale Commodities business and its four aging nuclear plants. The New Orleans-based company completed the sale of Vermont Yankee and announced agreements to sell Pilgrim and Palisades. (See *Entergy Sees Quicker Exit from Pilgrim, Palisades Nukes*.)

Indian Point, EWC's remaining unsold nuclear plant

Denault said Entergy is making progress on Pilgrim's sale to Holtec and is "actively working" toward a post shutdown sale of New York's Indian Point plant. Pilgrim will be shut down no later than May 31.

"We executed on our strategy and met major milestones in our transition to a pure-play utility. We expect 2019 will be no different," Denault said.

The company's stock price gained $3.67 after opening at $89.10 on Feb. 20, closing the week at $92.77. Entergy's stock price is up 7.8% this year through Feb. 22, slightly above the 7.3% gain by the S&P 500 Utilities index.

OG&E linemen | *OG&E*

OGE Earnings Slip, but Beat Expectations

OGE Energy, parent company of SPP member Oklahoma Gas and Electric, last week *reported* quarterly and year-end earnings of 27 cents/share and $1.48/share, respectively, down from 2017's earnings of $2.12/share and $3.10/share.

OGE's quarterly performance nevertheless beat Zacks' consensus estimate of 24 cents/share. The Oklahoma City-based company reported a fourth-quarter net income of $54.7 million, down from $295 million the year prior when it enjoyed a $198 million windfall, thanks to the 2017 Tax Cuts and Jobs Act.

OGE CEO Sean Trauschke told financial analysts during a Feb. 21 conference call that 2018 "may well be regarded as the best [operational] year in our company's history."

Trauschke pointed to strong safety numbers, the addition to its fleet of the 462-MW Mustang Energy Center and its seven gas-fired generators, the commissioning of a 10-MW solar farm, the addition of scrubbers at its two coal-fired Sooner Power Plant units, and the conversion to natural gas of two coal units at its Muskogee Power Plant.

Wall Street reacted favorably to OGE's report. The company's share price was up 2.2% following its open Feb. 21, gaining 94 cents to close the week at $42.78. ■

— Tom Kleckner

SMART ENERGY SUMMIT

Overheard at the Smart Energy Summit

Utilities Have Chance to Make Life Simple for Customers

AUSTIN, Texas — Park Associates' annual Smart Energy Summit attracted more than 100 industry representatives to the state capital, home to Silicon Hills and a vibrant technology environment.

Attendees at the 2019 Smart Energy Summit | © *RTO Insider*

Attendees participated in workshops and panel discussions on new roles for utilities as U.S. households adopt smart technologies, creating new layers of competition and complexity for home services, grid operations and energy management.

It's not just about "customer engagement" but making everything easier for the customer, agreed a panel discussing new ways utilities can expand their footprint beyond traditional energy services.

Joel Miller, DTE Energy | © *RTO Insider*

"If you send someone a switch that requires a screwdriver … well, the vast portion of our population doesn't use a screwdriver. They hire someone who uses a screwdriver," said Joel Miller, a principle supervisor with DTE Energy. "Can the utility now become the homeowner's handyman? We don't know that yet."

"We have to think like Netflix; we have to think like Amazon and make the customer experience easier and easier," Tendril CEO Adrian Tuck said.

Todd Rath, Alabama Power | © *RTO Insider*

"Everybody is selling something smart … consumers have all these options," said Todd Rath, marketing services director for Alabama Power. The consumer "doesn't want 12 different apps. The opportunity for utilities is to combine all these things."

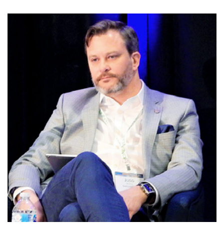
Case in point: Alabama Power's ***Smart Neighborhood*** initiative, in which the utility partners with Alabama homebuilders to build energy-efficient, smart neighborhoods. Its first neighborhood in the Birmingham suburbs integrated "high-performance homes, energy-efficient systems and appliances, connected devices and a microgrid on a community-wide scale."

"It was not an energy efficiency or microgrid project, but a living lab to understand how those things work together," Rath said.

To do so, the 62 homeowners had to all agree to a 24-month research project in which all the data would be collected. Rath said Alabama Power learned "some things are good, some things are bad."

"We think the future is going to be [distributed generation] and connecting to that DG to maximize the grid and customer experience … seamless integration," he said. "That all sounds good when you talk about it, but when you try to implement it, things come up that you're not aware of.

"I don't think we're going to out-Amazon Amazon. We're looking to advance electrification, to find a way to help customers understand the next generation of the grid," Rath said.



Judd Moritz, Simple Energy| © *RTO Insider*

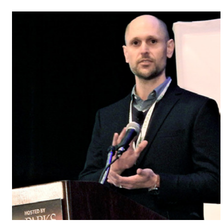
"We believe the utilities are in a great position to do so much for the customers. They just need the tools to reframe the relationship," Simple Energy's Judd Moritz said. "If you do it right, you make the utility central to every decision the customer makes. You will become one of the largest retailers of smartphone-enabled technologies in America.

"We have that trusted adviser role," Miller said. "We want to ensure we're continuing to do that."

"I don't think we're going to out-Amazon Amazon. We're looking to advance electrification, to find a way to help customers understand the next generation of the grid."

–Todd Rath, Alabama Power

Gen Z a Growing Consumer Group



Aaron Berndt, Nest | © *RTO Insider*

Aaron Berndt, the head of Central Region Energy Partnerships for Google and its Nest company, said utilities should be learning how to connect with Generation Z, so-called "digital natives" who were born in 1997 or later.

"They live and breathe technology. They're really focused on customization and personalization," Berndt said during his keynote address, noting Gen Z members represent $44 billion in buying power and are just now entering the job market.

By 2020, he said, Gen Z will be the largest consumer group in the U.S.

"There's room to grow in this area. Utilities lag other industries in digital experience," Berndt said.

SMART ENERGY SUMMIT

He said the next great change is in artificial intelligence, "which shows up to consumers through voice and voice assistance." Google has "made available" 1 billion voice-enabled devices — cars, phones, watches, TVs — over the last 18 months, Brendt said.

"It's simplifying and reshaping the way consumers engage with technology," he said.

Turning Distribution Utilities into DSOs

Ken Wacks | © *RTO Insider*

Energy-efficiency expert Ken Wacks suggested utilities embrace a new role as distribution service operators (DSOs).

"The distribution system has been static, but that is changing because distributed energy resources are proliferating at the edge of the grid," Wacks said. "We think a [DSO] is an opportunity for utilities to make money from DERs by using the equipment that is already in place and letting the customer generate and sell energy via the distribution grid to the utility or to other customers."

Wacks should know, having been appointed by the Department of Energy to four terms on the GridWise Architecture Council and contributing to its work to ensure reliable and efficient distribution of electricity while accommodating DERs.

"Utilities have to figure out how to let customers use the grid, how to price the grid and how to use equipment on the grid. Some of these equipment items today can't handle the backflow or excess energy, so that requires active management of the distribution grid and possible equipment upgrades. Intelligence in homes and buildings will help customers manage DERs and power flows to the utility or to other customers via the distribution grid," Wacks said.

Dane Christensen, NREL | © *RTO Insider*

The technologies to affect this change are emerging now, said Dane Christensen, National Renewable Energy Laboratory team lead for residential systems performance, ticking off thermostats, water heaters and batteries as examples.

"In five years, we'll see the same transformation as we did from the flip phone to the smart phone. We're trying to understand this potential of enabling other value streams," he said. "When you look at a smart home, price is not the goal of a new product. The No. 1 goal isn't to save money. It's convenience and access to data."

Shira Horowitz, Con Edison | © *RTO Insider*

New York's Consolidated Edison is on its way to becoming a DSO "the same way an RTO operates," said Shira Horowitz, the utility's demand response manager. She said the move is necessary to accommodate a high number of renewable DERs.

"We're able to balance these renewables with demand response and batteries and other dispatchable distribution resources," Horowitz said. "Demand response and some other dispatchable resources can prevent cascading failures. … Our demand response programs are used to manage the distribution system, as opposed to others using them for peak shaving or something else. We're able to respond to distribution-level contingencies and events with distribution resources."

Austin Energy's Debbie Kimberly shares a laugh with Inspire CEO Patrick Maloney. | © *RTO Insider*

Panels Discuss Value of Green Homes, Data

Several panels discussed energy-efficient, net-zero homes and their potential for storage, and what that means to grid operations.

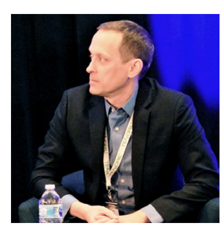
"Don't underestimate the power of the consumer," warned Austin Energy's Debbie Kimberly, the utility's vice president of customer energy solutions and corporate communications. She said an average of 4,400 homes are built every year in Austin, "fully 30%" being *Green Building* homes that increase by $35,000 in value over non-green homes.

"That was really driven by consumer preferences," Kimberly said. "It's like, 'I'd love to be able to remodel my home, if I could only get all those devices to talk to each other. I want an app to control my apps.'"

"There's a true value proposition to having a home with a true energy experience," Inspire CEO Patrick Maloney said. "You will find a set of consumers that highly value purchasing a home that feels like owning a Tesla, because no one [understands] kilowatts. If you want to have an impact on the greenhouse gas issue, zero-net homes are really a massive tool. We have to figure out how to create integrated service offerings. … I've never met a person who wanted to change their behavior willingly."

Abhay Gupta, CEO of data consultant Bidgely, said AI may provide the key to the utilities' challenge of optimizing their costs, adding revenue and "personalizing customer engagement."

"Change will happen. It's inevitable," he said. "The question is, are we going to be ready for the future? Netflix and Amazon understood what they do, but do utilities? Something has to be done about massive aggregation. If you can unravel what's happening in the home, you can get the same amount of information that Netflix gets."



Matt Johnson, EnergyHub | © *RTO Insider*

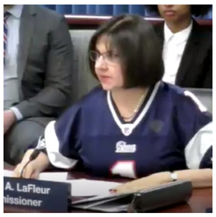
"For meter data to be valuable, we need it to become more granular," said Matt Johnson, vice president of business development for EnergyHub. "One of the things that excites us about meter data is the potential — when marketing programs to customers — of being able to take advantage of that and get that data to impact the load-management side of the equation." ■

— Tom Kleckner

FERC & Federal News

'Boring Good' Rulemaking Seeks to Clean up Order 845

By Robert Mullin



FERC Commissioner Cheryl LaFleur | *FERC*

Decked out in a New England Patriots jersey to commemorate her beloved team's Super Bowl victory, FERC Commissioner Cheryl LaFleur on Thursday also celebrated the workaday process behind a new rule clarifying the commission's 2018 directive to improve the generator interconnection process.

LaFleur said the "highly technical rule" clarifying Order 845 brought to mind former Commissioner Robert Powelson's emphasis on the importance of the commission's work doing "the boring good" (*RM17-8-001*).

"These sorts of technical rules are a big part of the way this commission is working to help adapt to all the changes in resources on the grid — particularly renewables and storage coming on, as well as changes in ownership structures of who is developing and who is doing work on the grid."

The ruling came in response to 12 requests for rehearing or clarification related to Order 845, issued last April to increase the transparency and speed of the interconnection process. (See *FERC Order Seeks to Reduce Time, Uncertainty on Interconnections*.) While the majority of the that order — originating in a request by the American Wind Energy Association — remains intact, Thursday's decision provides a bevy of updates, including the following:

- Requiring transmission providers to explain why they do not consider a specific network upgrade to be a standalone network upgrade, while also allowing them to recover option-to-build oversight costs;
- Clarifying that the order's option-to-build provisions apply to all public utility transmission providers, including those that reimburse interconnection customers for network upgrades, and that the option to build does not apply to standalone network upgrades on affected systems;
- Granting rehearing on a provision to create a surplus interconnection service process, explaining the commission did not intend to limit the ability of RTOs and ISOs to argue variations are appropriate;
- Clarifying transmission providers may use FERC's critical energy/electric infrastructure information (CEII) regulations as a model for evaluating entities that request network model information and assumptions;
- Clarifying the phrase "current system conditions" does not require transmission providers to maintain network models that reflect current real-time operating conditions of the transmission provider's system but that should reflect the system conditions currently used in interconnection studies;
- Clarifying the reporting requirements do not require transmission providers to post 2017 interconnection study metrics, with the first report expected for the first quarter of 2020;
- Granting rehearing in part to find that an interconnection customer may propose control technologies at any time at which it is permitted to request interconnection service below generating facility capacity; and
- Clarifying a transmission provider must provide a detailed explanation if it determines additional studies at the full generating facility capacity are necessary when the interconnection customer has requested service below full capacity.

FERC denied all other requests for rehearing and clarification.

Kathleen Ratcliff, FERC Office of Energy Market Regulation | *FERC*

Responding to a question from LaFleur, Kathleen Ratcliff, of FERC's Office of Energy Market Regulation, said she thought Thursday's order "balanced the interests" of interconnection customers and transmission providers and "appropriately considers" the concerns of both.

FERC Chairman Neil Chatterjee | *FERC*

"I think Order 845 was an important step forward to help improve interconnection processes and facilitate interconnection of technologies like storage. This starts the clock for [RTOs and ISOs] submitting compliance filings," FERC Chairman Neil Chatterjee said.

While acknowledging the changes announced Thursday will help transmission customers "better utilize interconnection processes and ultimately make more efficient use of existing transmission grids," Commissioner Richard Glick said, "the job is not complete."

"We still have important work to do, especially as we consider reform related to affected-systems coordination as we review each compliance filing to today's rule."

Other Rules

Under its consent agenda, FERC adopted a rule updating its regulations on when an applicant who would otherwise require commission authorization to hold an interlocking position between a public utility and financial company "need not do so" (*RM18-15*).

Under the changes, an applicant for an interlocking position between a utility and a "bank, trust company, banking association or firm that is authorized by law to underwrite or participate in the marketing of public utility securities" will not require FERC authorization when:

- The applicant does not participate in any of the utility's deliberations or decisions regarding the selection of the bank, trust company, banking association or firm to underwrite or participate in the marketing of securities for the public utility;
- The firm of which the person is an officer or director does not engage in the underwriting of, or participate in the marketing of, securities of the utility of which the person holds the position of officer or director;
- The utility for which the utility serves or proposes to serve as an officer or director selects underwriters by competitive procedures; or
- The issuance of the utility's securities has been approved by all federal and state regulatory agencies having jurisdiction.

Another rule adopted Thursday stipulates the commission will no longer review corporate mergers valued at less than $10 million (*RM19-4*). The rule will also require public utilities valued above $1 million to notify FERC regarding mergers and consolidations. The rulemaking implements Congress' direction under an amendment to Section 203 of the Federal Power Act, the commission has said. ■

FERC & Federal News

LaFleur Sides with GOP on LNG Vote as Glick Dissents

By Rich Heidorn Jr.

Democrat Cheryl LaFleur joined with FERC's two Republicans on Thursday to approve the Calcasieu Pass LNG export terminal, signaling a compromise on how to compute greenhouse gas emissions from it and other pending LNG projects (*CP15-550*).

Democrat Richard Glick, who has joined LaFleur to oppose some gas pipeline projects, dissented.

In a *press release*, FERC hailed the approval of Venture Global LNG's terminal, related pipelines and a 720-MW generation facility in Cameron Parish, La., as a "breakthrough … agreement that may provide a path forward" for the commission's review of 12 other proposed LNG export facilities.

Chairman Neil Chatterjee, who joined with Commissioner Bernard McNamee in the 3-1 vote last week, said expediting the commission's review process has been one of his priorities.

"I really appreciate the efforts of my colleagues to work together to come to an agreement on this facility. This is significant, as I anticipate we'll be able to use the framework developed in this order to evaluate the other LNG certificates that the commission is considering.

"Commissioner McNamee showed just how he got his reputation as being a 'lawyer's lawyer' through his attention to the law and work to find common ground," Chatterjee continued. "And Commissioner LaFleur was supportive of this project and constructive in working to reach our agreement."

By refusing to address pipelines' impact on GHG emissions, Glick contends, the Republicans are ignoring a 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. (See *Glick Shines Light on FERC Dispute over GHG*.)

Until someone is appointed to replace late Commissioner Kevin McIntyre, LaFleur and Glick can block gas projects with 2-2 deadlocks. That has led Chatterjee to pull gas items from the consent agenda at open meetings.

Environmental Impact

Calcasieu Pass will be able to process up to 12 million metric tons of natural gas a year. Under its 1999 Certificate Policy Statement, the commission balances the public benefits of such projects against the potential harms.

Artist's rendering of the Calcasieu Pass LNG export terminal, which will include two trains of natural gas liquefaction | *Venture Global LNG*

FERC said its final EIS concluded the project "will result in some adverse environmental impacts, but impacts will be reduced to less-than-significant levels with the implementation of applicants' proposed, and commission staff's recommended, mitigation measures."

The EIS found that operation of the terminal and its generating facility may result in emissions of up to 3.9 million metric tons per year of CO_2 equivalent, potentially increasing U.S. emissions by 0.07%. "Currently, there are no national targets to use as benchmarks for comparison," FERC said.

'Kafkaesque Approach'

In his dissent, Glick said the commission's analysis did not meet the requirements of the National Environmental Policy Act or Natural Gas Act and "effectively writes climate change out of the public interest determination entirely."

"The commission is finding that its choice not to evaluate the significance of the environmental harm caused by the project's GHG emissions supports the conclusion that the project will not cause significant environmental harm. That Kafkaesque approach is not the 'hard look' that NEPA requires," he said. "The commission's rigid refusal to monetize the harms of climate change using the social cost of carbon while simultaneously monetizing the project's long-term socioeconomic benefits — including direct, indirect and induced benefits from employment, investments and local taxes — is arbitrary and capricious."

In a concurring statement, LaFleur said, "I appreciate the work done in the final EIS to address a range of resources impacted within the identified geographic scope of the Calca-

FERC & Federal News

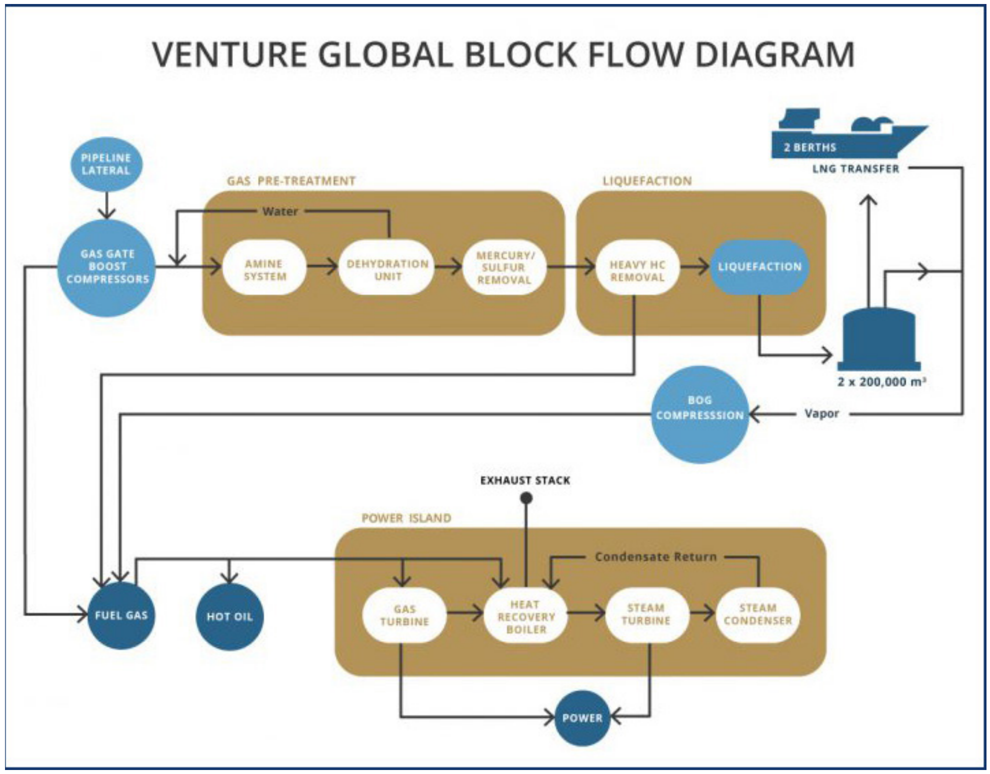
sieu Pass project. However, I disagree with the commission's failure to disclose and discuss cumulative potential direct GHG emissions associated with Calcasieu Pass project, as well as the other projects identified in the final EIS within the 50-km air region."

LaFleur said she also disagreed with the exclusion of the emissions from the cumulative impacts analysis.

"I believe it would take minimal effort to disclose the direct GHG emissions for the other projects identified in … the final EIS, and include an estimate of the total annual potential GHG emissions associated with the Calcasieu Pass project and those other projects as part of our environmental review."

LaFleur's statement included a table estimating that Calcasieu Pass and 10 other LNG or gas projects within 50 km would increase national GHG emissions by almost 0.8%.

"It is clear that the liquefaction of natural gas for export has meaningful GHG consequences," she said. "I believe, at a minimum, direct GHG emissions must be disclosed and considered, both cumulatively and with respect to individual facilities." ■



Block flow diagram of the Calcasieu Pass LNG export terminal | *Venture Global LNG*

CAISO/WECC News

State Regulators to Re-examine PNM's EIM Membership

By Hudson Sangree

New Mexico's Public Regulation Commission vacated an order earlier this month that had paved the way for Public Service Company of New Mexico (PNM) to join CAISO's Western Energy Imbalance Market by the spring of 2021.

The move surprised many. The effort for PNM to join the EIM was largely uncontroversial and received unanimous support from the PRC's five elected commissioners on Dec. 20. But the commission decided to revisit its decision after Albuquerque's water agency protested the December ruling and after two new commissioners were sworn in this year.

PNM doesn't need the commission's approval to join the EIM because it does not involve the transfer of any of the company's assets and market participation is strictly voluntary.

The case (18-00261-UT) instead dealt with PNM's *request* for an order governing the accounting treatment of costs related to joining the EIM. The commission's December order authorized PNM to recover its expenses in a future rate case.

Now, however, PNM and some environmental groups worry the PRC's latest move could delay PNM's membership in the EIM for another year and cost ratepayers $10 million in projected annual benefits.

"Until a new order is issued, PNM will not undertake efforts to join the Energy Imbalance Market," Western Resource Advocates argued in an emergency motion to the PRC. "Likewise, because it takes two years of preparation to join the EIM, there is a queue to join and a deadline of April 1 in each year, unless the commission issues an order quickly. … New Mexico will lose one year of substantial economic and environmental benefits."

The Coalition for Clean Affordable Energy joined WRA in its motion, and the Natural Resources Defense Council said in a news release that the commission's action was a "step backwards" in state efforts to use more renewable energy.

PNM said in it was disappointed by the commission's move.

"PNM's decision to join the EIM was dependent on the commission's December 2018 approval," Thomas Fallgren, vice president of generation, said in a statement emailed to *RTO Insider*. "PNM has suspended all work on the Energy Imbalance Market due to today's actions. Any further delays or changes of the December order may jeopardize our ability to reap the customer benefits."

In a brief *order* Feb. 6 vacating its December ruling, the PRC did not explain the reasons for its action. It merely said it had the legal authority to rehear the case at the request of the Albuquerque Bernalillo County Water Utility Authority.

The water utility had argued that the cost-recovery decision was made too hastily by a commission that included members near the end of their terms.

"The procedural record in this case establishes that the commission only had hours to review the hearing transcript, evidence introduced into the record during the hearing, briefs filed by the [water authority], PNM and staff, and the proposed order on accounting treatment," the water utility's lawyers wrote in their brief.

"Given the time for this review and the voluminous record to review, a thorough review by commissioners of this material was impossible as a practical matter," it said. "Such a rush to judgment by departing commissioners is problematic and should not bind the present commission to an ill-advised course of action."

The water utility contended PNM should be required to file quarterly reports on its EIM benefits and shouldn't be guaranteed a return on investment, with ratepayers bearing the risk.

"It is axiomatic that the commission is the surrogate for the marketplace, and if PNM were operating in the marketplace, rather than as a regulated monopoly, it would not be guaranteed recovery of its investments," the water utility's lawyers wrote in a Jan. 17 *application* to reopen the case.

Further action by the PRC is pending. It remained unclear if the commission will hold another hearing or, as Western Resource Advocates urged, decide the case on the record before it to expedite a decision.

CAISO, which did not comment on the PRC's action, says the EIM has generated $565 million in benefits for its members since its founding in November 2014.

The EIM's *membership* consists of CAISO, PacifiCorp, Arizona Public Service, Idaho Power, NV Energy, Portland General Electric, Puget Sound Energy and Powerex. The Los Angeles Department of Water and Power, the Sacramento Municipal Utility District and four other entities, including PNM, are scheduled to join between 2019 and 2021. ■

Proponents say New Mexico's ample wind and solar power would be a valuable addition to the Western Energy Imbalance Market. | *U.S. Department of Energy*

CAISO/WECC News

CAISO Seeks More Transfers with Pacific Northwest

By Hudson Sangree

CAISO's Gary DeShazo addresses the 2019 Western Planning Regions Annual Interregional Coordination Meeting in Salt Lake City. | *© RTO Insider*

SALT LAKE CITY — CAISO is exploring ways to exchange more low-carbon electricity with the Pacific Northwest, while WestConnect is looking to absorb exports from California during times of ISO overgeneration, speakers said last week at the Western Planning Regions Annual Interregional Coordination Meeting.

WestConnect's *CAISO Export Stress Study* is intended to "test the robustness of the WestConnect transmission system in a [scenario of] high California export into the WestConnect footprint," said Charlie Reinhold, project manager with WestConnect, which oversees transmission planning in Arizona, New Mexico, Colorado and several other Western states.

The Feb. 19 *meeting* brought together stakeholders and representatives of CAISO, ColumbiaGrid, Northern Tier Transmission Group (NTTG) and WestConnect to discuss interregional coordination under FERC Order 1000. The order requires transmission providers to participate in a planning process that identifies the most cost-effective solutions to transmission needs and allocate costs based on estimated benefits.

No regional transmission needs under Order 1000 were identified in the current planning cycle, but several studies are underway in response to California's ambitious clean-energy goals. The state enacted a new law last year, SB 100, that requires investor-owned utilities, publicly owned utilities and community choice aggregators to obtain 100% of their energy from renewable and zero-carbon resources by 2045.

The new law sets renewable milestones along the way: 40 to 44% by 2024, 45 to 52% by 2027 and 50 to 60% by 2030. That means California will have to import more clean electricity — and export solar energy when it's generating too much — in the coming years. (See *Can Calif. Go All Green Without a Western RTO?*)

At the same time, natural gas generation, the state's main fossil fuel source of electricity, is expected to gradually disappear.

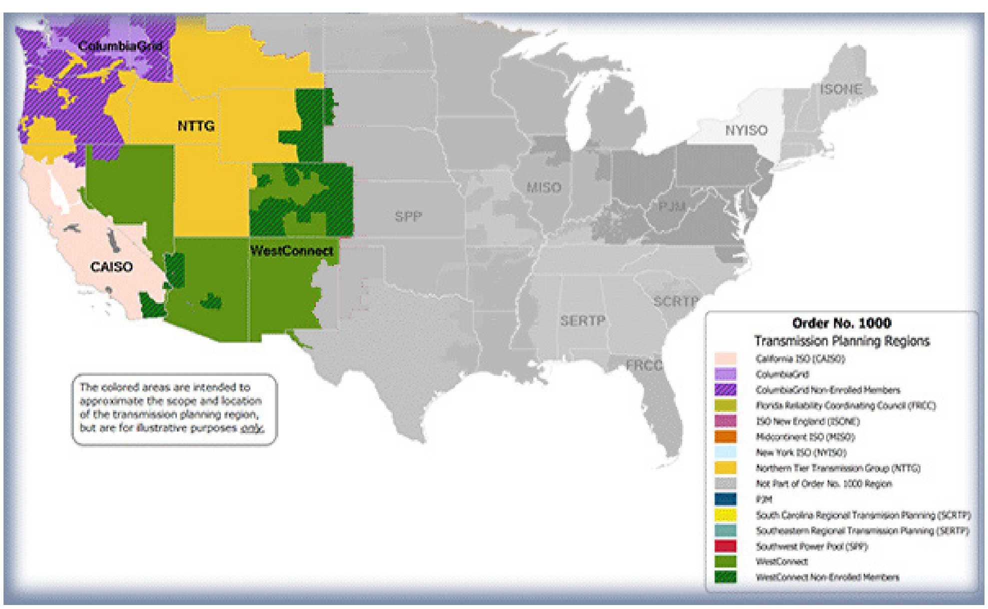
CAISO embarked on its study of north-to-south transmission after it received a *letter* in February 2018 from the California Public Utilities Commission and California Energy Commission asking it for help in planning for transmission needs as the hobbled Aliso Canyon natural gas storage facility near Los Angeles is phased out in the next 10 years and the state's gas generation diminishes.

"Phasing out Aliso Canyon usage and potential impacts on the gas-fired generation fleet need to be considered from the perspective of reliability of electricity supply to southern California more generally and the Los Angeles Basin in particular, as well as the role those resources play in providing adequate system capacity and flexibility overall," the commissions told CAISO.

At the interregional planning meeting, Gary DeShazo, regional coordination director at CAISO, said the ISO has a close working relationship with the commissions, which provide it with renewable portfolio standard and load information.

"We do a transmission plan with that information in our base case," DeShazo said.

"They've looked at it from the point of view of, 'What does it take to meet the state's greenhouse gas goals?'" he added.



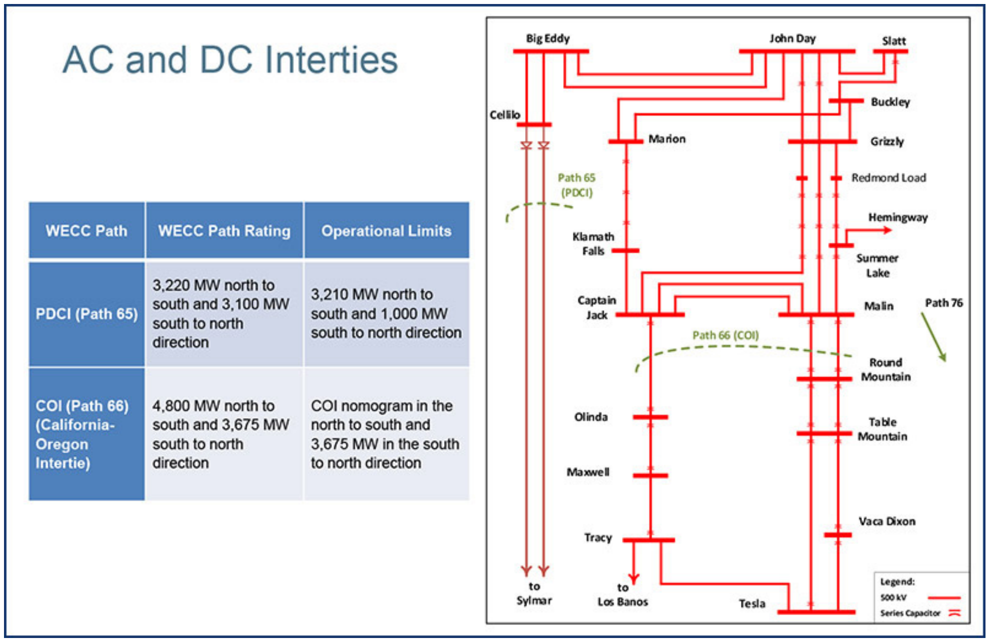
Order 1000 transmission planning regions in the West | *FERC*

CAISO/WECC News

In the letter, the commissions told CAISO: “Expanded transmission capability is an important option available to us. Clearly, increasing the transfer of low-carbon supplies to and from the Northwest can be one of the multiple puzzle pieces that we must examine to build a cumulative phase out strategy.

“Toward this end, we are requesting a specific sensitivity case be included in the 2018-2019 California ISO transmission planning process,” they wrote. “It is time-critical that we act now to evaluate key options to increase transfer ratings of the AC and DC intertie and assess what role these systems can play in displacing generation whose reliability is tied to Aliso Canyon.”

Ebrahim Rahimi, CAISO’s lead regional transmission engineer, said the effort, called the *Pacific Northwest-California Transfer Increase Informational Special Study*, involves increasing transfer capacities without major system upgrades, primarily on the main *AC and DC interties* linking the Columbia River basin to Los Angeles — and thereby the Pacific Northwest to the Desert Southwest.



Planners are studying how to increase transfers of low-carbon electricity between California and the Pacific Northwest. | *CAISO*

The retirement of California’s last nuclear generating station, Pacific Gas and Electric’s Diablo Canyon Power Plant on the central coast, will ease congestion on existing pathways, Rahimi said. CAISO is also examining whether NERC and the Western Electricity Coordinating Council might relax their standards on the physical separation of high-voltage transmission lines. ■

CAISO/WECC News

FERC Again Rejects CAISO 'Market Values' Plan

By Hudson Sangree

FERC on Thursday again rejected CAISO's proposal to change the way generators register their capabilities with the ISO, denying rehearing on a plan the commission said could allow participants to withhold electricity and exercise market power (*ER18-1169-002*).

CAISO currently requires participants to submit information about the operational and technical constraints of their generating resources in an electronic repository called the Master File.

Last year, the ISO asked FERC to allow resources to register "market values" instead of physical parameters in the Master File. It would allow a resource to register a maximum number of daily start-ups, ramp rates and other parameters that don't reflect a resource's design capability.

The ISO said the change would provide "myriad benefits" — encouraging participation by resources without capacity must-offer obligations, reducing the need for exceptional dispatch and reducing wear and tear on resources — that "manifestly outweigh the remote risk of additional market abuses."

To protect against withholding and gaming behavior, CAISO required generators to state they could start up at least twice daily to meet the ISO's steep morning and evening ramps. The ISO proposed several other additional restrictions to alleviate concerns about reliability and market manipulation.

FERC rejected the plan in June, saying the ISO's proposed safeguards were insufficient. (See *FERC Partially OKs CAISO Commitment Cost Enhancements*.)

In denying rehearing Thursday, the commission said the ISO "has not responded to our specific concern regarding the absence of any mechanism in CAISO's Tariff that could be used to mitigate a resource's physical parameters in addition to its energy bid if CAISO finds the potential for market power."

"Despite the existing safeguards, we again find that CAISO's market values proposal presents a new opportunity for market participants to exercise market power that CAISO has not sufficiently addressed," FERC said.

"Absent some form of mitigation," the commission continued, "we reiterate that allowing market participants to register desired or preferred market values for physical operating parameters may create opportunities to benefit from physical withholding by earning higher uplift payments or raising market prices.

FERC said generators should register their physical characteristics, not "market values," with CAISO to avoid withholding.

"A market participant could restrict a resource's daily start-ups or ramp rates to appear less flexible than it actually is, resulting in the market not being able to access the resource's full capacity," FERC said.

"Given these shortcomings, we find CAISO's argument that it crafted the market values proposal carefully to include restrictions that reinforce existing resource adequacy-related rules to be irrelevant," the commission concluded. ■

FERC OKs CAISO 'Load Conformance' Practices

By Hudson Sangree

FERC on Thursday approved changes to CAISO's Tariff that describe practices already employed by the ISO's system operators to balance supply and demand in the day-ahead and real-time markets (*ER19-538*).

The day-ahead market encompasses CAISO's balancing authority area, primarily in California, while the real-time market extends to seven entities across the West that participate in the ISO's Western Energy Imbalance Market.

The "load conformance" practices approved by FERC allow CAISO operators to manually adjust for conditions that the ISO's automated load-forecast system do not anticipate. In addition, a "load conformance limiter" automatically makes sure the operators' adjustments don't exceed the ramping capability of generators available at a given time.

FERC noted that the ISO's system operators balance of supply and demand to maintain system reliability and comply with NERC reliability standards "primarily through CAISO's market systems."

At times, however, "the automated load forecast used in clearing supply bids against forecasted load and exports for CAISO's real-time market does not match actual system conditions" because of load forecast error, significant deviations in predicted wind and solar supply, and "unpredictable events like outages or weather changes," FERC said.

When operators see a mismatch between the load forecast and actual conditions in the real-time market, they can manually adjust the forecast, before the market runs, in a practice known as load conformance, FERC explained. The CAISO Tariff does not specifically describe load conformance but will include it after the revisions take effect Feb. 27, the commission said.

The revisions will also include a description of CAISO's load conformance limiter, currently absent from the Tariff. The automated system corrects for manual adjustments that are "often 'coarse' in nature because they represent operators' imprecise approximation of what they perceive to be the system need at the time based on best estimates and judgment," FERC wrote.

The third Tariff change approved by FERC is similar to the load conformance adjustments in the real-time market but applies to the residual unit commitment process in the day-ahead market.

Commenters generally supported allowing CAISO operators to make adjustments in the real-time and day-ahead markets, FERC noted. However, one commenter, Powerex, argued that frequent load conformance may be "masking" systemwide shortcomings that could impair the efficient operation of CAISO's real-time markets.

Powerex said CAISO should hold a stakeholder process to identify why the ISO is using load conformances so frequently and develop automated tools that ensure real-time conditions are accurately reflected in market processes. ■

ISO-NE News

Vermont Transco Denied Transfer Fee Cost Recovery Again

By Amanda Durish Cook

FERC on Thursday again denied Vermont Transco permission to embed transmission acquisition costs in its rate recovery through the ISO-NE Tariff.

In rejecting a rehearing request on the issue, the commission affirmed its decision last year rejecting the company's attempt to recover $639,780 from Vermont ratepayers to cover property transfer taxes, closing fees and advisory fees related to its acquisition of shares in the Highgate Transmission Facility near Quebec (*ER18-1259-001*).

Vermont Transco first filed the request for recovery in March 2018, and FERC rejected it in May.

In a 2017 filing seeking FERC approval to acquire Green Mountain Power's stake in Highgate — which was eventually granted — Vermont Transco acknowledged that "there is no mechanism in [ISO-NE's] cost-based transmission formula rate that allows the automatic pass-through" of transaction-related costs. The company promised to make a separate filing if it intended to seek any transaction-related costs that would also demonstrate "specific, measurable and substantial benefits to ratepayers."

| Vermont Transco

But the company's 2018 cost-recovery request contended that the requirement to show ratepayer benefits didn't apply because the company was not seeking to recover an acquisition premium. The company also contended it could recover the expenses from customers because service over Highgate is provided under ISO-NE's Regional Network Service rate, which relies on cost causation and beneficiary pays principles. It also noted that it never made a hold-harmless commitment on such recovery.

In denying the request, FERC pointed to Vermont Transco's previous commitment — set out in the transfer application — to demonstrate ratepayer benefits. The commission also said the company couldn't simply bypass ISO-NE's restriction on an automatic pass-through of the transaction-related costs and reminded it of its earlier promise that the transaction would not have an adverse effect on rates.

The commission added that Vermont Transco was free to file again for cost recovery provided it detailed how the recovery would benefit ratepayers. ■

ISO-NE News

ISO-NE Chief Sees 'Year-round' Energy Risks Coming

Continued from page 1

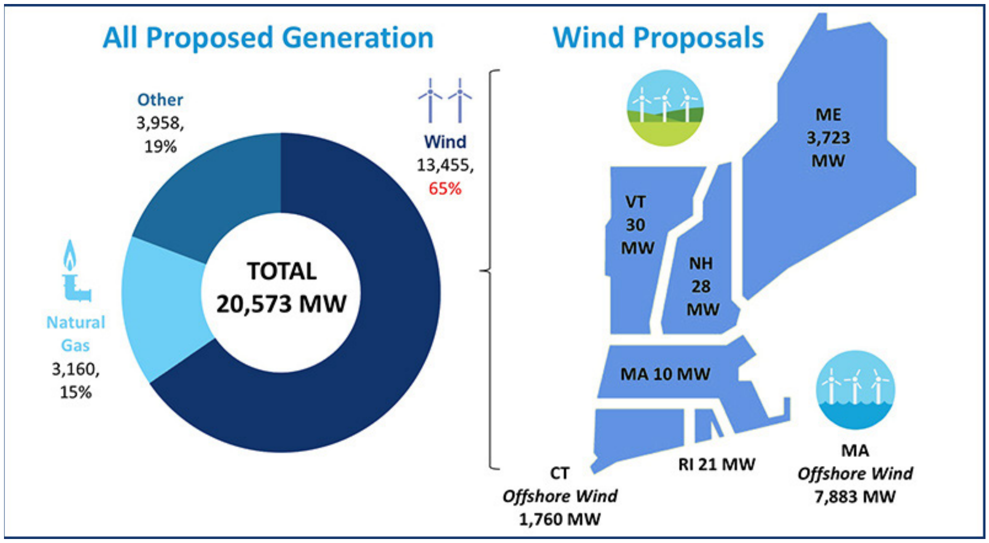
"On the other hand, clouds and snow cover prevented solar panels from reaching their seasonal potential during last year's historic 16-day cold spell, particularly during Winter Storm Grayson," van Welie said. The cold snap also exposed the limits of energy storage, which van Welie said may eventually "help manage through day-to-day variations but may not be able to charge up again to help when bad weather lasts for multiple days."

First Auction Under CASPR

Van Welie said he was pleased with the RTO's first capacity auction under its Competitive Auctions for Sponsored Policy Resources rules. The February auction made ISO-NE the first grid operator to implement a market-based mechanism to accommodate state-sponsored resources. State-sponsored Vineyard Wind won a 54-MW capacity obligation from a retiring resource in the substitution auction under CASPR.

Forward Capacity Auction 13 cleared at the lowest price in six years, with high levels of new resources, including conventional generators and renewables. Sunrun's home solar and battery aggregation project became the first in the nation to win a capacity commitment from a grid operator. (See *ISO-NE Completes FCA 13 Despite Controversy*.)

Van Welie said he expects capacity prices to rise as uneconomical resources retire and declining energy prices — a consequence of increasing renewables with no fuel costs — force generators to seek more revenue from other sources.

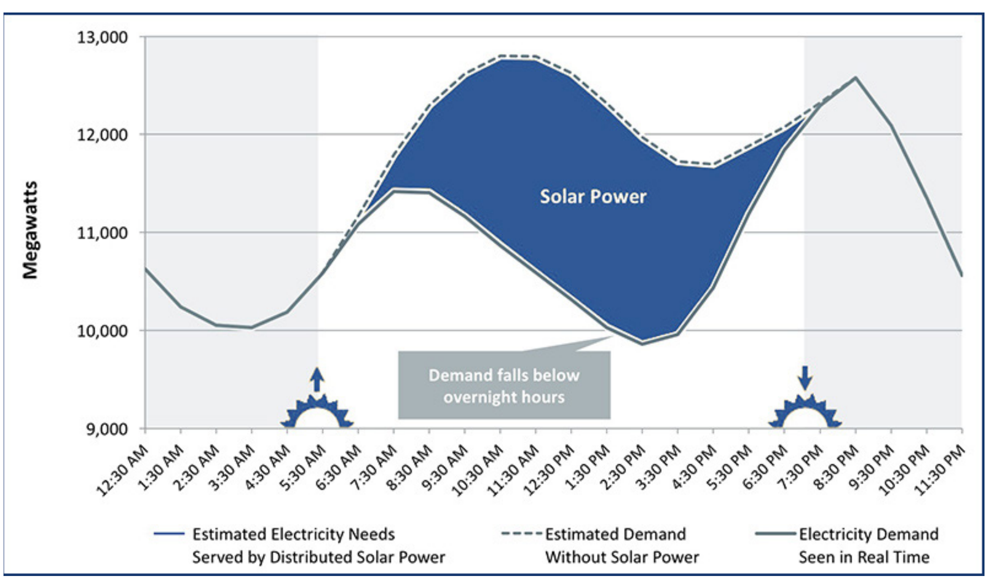


Wind power represents almost two-thirds of the proposed capacity in ISO-NE's generation queue. More than half of the proposed wind is offshore. | *ISO-NE*

ISO-NE's interconnection queue currently lists more than 150 projects totaling more than 20,000 MW, a level "we've rarely seen," van Welie said. Wind generation represents about two-thirds of the proposed new capacity, more than half of it proposed for offshore. In the past, only about 30% of capacity that enters the queue has come to fruition, however.

Van Welie said New England states' increasing renewable portfolio standards are "leading to complexities in market design as well as grid operations, thereby requiring adjustments to both."

The RTO sees pricing carbon as an "elegant" solution to eliminating out-of-market contracts for renewable resources but has been unable to persuade policymakers to adopt it. "I've been a bit of a broken record on this," said van Welie. He said the Regional Greenhouse Gas Initiative is an "excellent concept" but that its carbon prices are too low to be effective.



Record-high solar production on April 21 reduced ISO-NE's net load by more than 2,300 MW at mid-day. | *ISO-NE*

Retirements

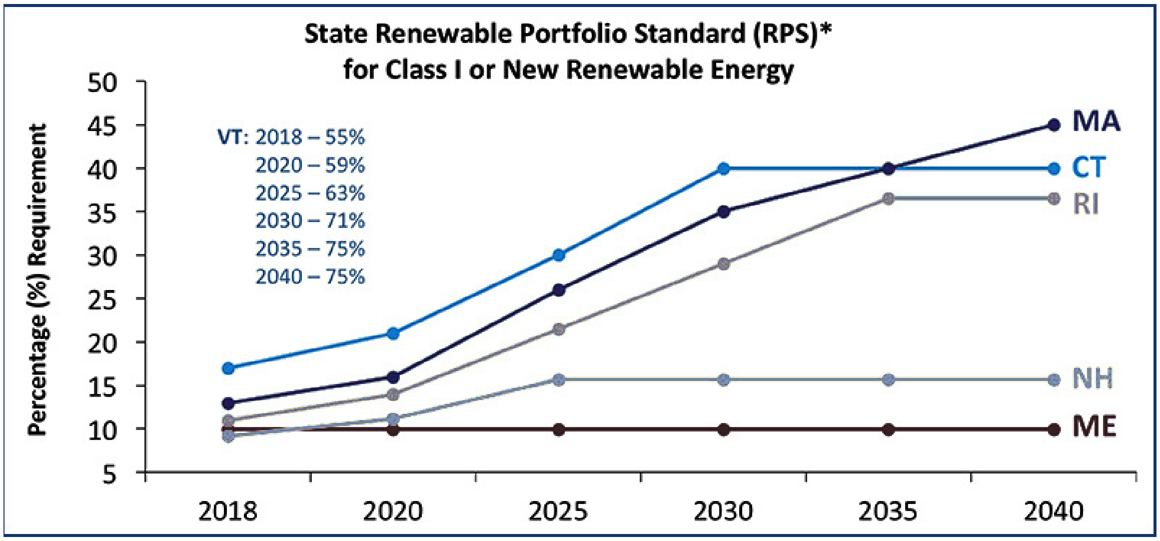
In June, New England became the first region to price active demand response resources in the daily energy market alongside generators. DR and energy efficiency have been eligible for capacity payments since the start of the capacity market in 2006. In FCA 13, more than 4,000 MW of DR and EE cleared, more than 10% of the total.

Despite the growth in demand-side resources and renewables, however, New England is facing increasing challenges from plant retirements. The retirement of the 677-MW Pilgrim nuclear plant by June "will worsen the region's energy security risks and its emissions profile," van Welie said.

ISO-NE News

The region, which will see 5,200 MW of retirements between 2013 and 2022, could face another 5,000 MW of nuclear and coal-fired generation retirements, the RTO says. The region's nuclear capacity will be reduced to 3,347 MW, with only the Millstone and Seabrook plants remaining.

The RTO is predicting a slight decrease in peak demand over the next 10 years because of EE but says the trend could reverse with the growth of electric transportation and heating. "We don't expect electric vehicles or heat pumps to have a substantial effect on regional demand in the near future," van Welie said.



ISO-NE says New England states' increasing renewable portfolio standards are "leading to complexities in market design as well as grid operations, thereby requiring adjustments to both." | *ISO-NE*

Future Initiatives

Van Welie said the RTO is "facing reality" and does not expect any new gas pipeline capacity. "We have to operate with what we have," he said, citing more transmission to deliver renewables and imports, and more oil and LNG storage as alternative answers.

The RTO hopes to make a FERC filing by March that would give it the authority to delay plant retirements needed for their fuel security. ISO-NE wants the rules in place for FCAs 14 and 15. The RTO had to revise its Tariff and develop a cost-of-service agreement last year to keep Exelon's Mystic generator operating. (See *ISO-NE Fuel Security Measures Approved* and *FERC Approves Mystic Cost-of-Service Agreement*.)

Van Welie said the RTO's Pay-for-Performance *incentives*, which took effect last June, "may not address all aspects of the region's winter energy security challenges that have continued to intensify since the incentives were developed."

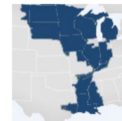
Although it provides price signals for resources when the grid is at risk, it does not tell generators of fuel supply shortages days or weeks ahead. "We don't have a regional fuel gauge that indicates how close we're getting to the bottom of the fuel tank," he said.

The RTO's long-term solution for its winter energy security concerns would expand the current day-ahead market to a multiple day-ahead construct. It will seek to co-optimize its fuel and energy supplies to ride out a seven-day outage of the largest non-gas resource on the system.

"If it's clear we have more than enough fuel for tomorrow but will run short before the end of the week, resources that can save energy for the end of the week will be properly compensated," van Welie explained.

It also would include a forward market settlement against the multiday co-optimized market. "The forward market would be seasonal in nature, roughly six months ahead of winter," he said.

The RTO opened discussions on the proposal in November and plans to provide more details in a white paper in April. It hopes for a FERC filing by November with implementation over three to five years. "This is a very complex project," van Welie said. "Probably the most complicated thing we've done in the history of the ISO." ■



MISO News

MISO Offers Reassurances on FTRs, Examines Changes

By Amanda Durish Cook

The fallout from GreenHat Energy's record default in PJM's financial transmission rights market prompted MISO officials on Wednesday to reassure members that such failures are unlikely to happen there.

"MISO doesn't believe there's as much of a risk in our market versus PJM's," MISO Director of Finance and Accounting Ross Baker said during an Advisory Committee conference call.

However, Baker acknowledged that MISO's ongoing investigation of its own practices could identify some improvements to its FTR credit calculation later this year.

In September, MISO officials said they were giving increased scrutiny to an already in-progress review of the RTO's own FTR market. At the time, the executives said MISO's FTR market was less susceptible to a default than PJM's because MISO relies on a more conservative credit calculation and requires higher collateral, preventing "thinly capitalized" parties from buying large portfolios. MISO also said it limits FTR terms to one year, while PJM allows rights for up to four years. MISO pointed out it estimates the value of transmission congestion more frequently than PJM, updating congestion estimates monthly rather than annually. (See "MISO Reviewing FTR Process," *MISO Board of Directors Briefs: Sept. 20, 2018*.)

The MISO Advisory Committee in December | © *RTO Insider*

Baker reiterated MISO's stance to the Advisory Committee on Wednesday. He said MISO's practice of not netting net auction bid prices with estimated congestion credit value for collateral requirements is a "key component for minimizing the magnitude of a default."

"We haven't identified any significant issues. … We expect we'll be able to provide an update sometime in May," Baker said of the ongoing review. "We don't believe our calculations are perfect; we believe there will be some potential improvements."

As of December, PJM's total FTR default was estimated at about $187 million; however, if FERC's rejection of PJM's requested waiver of liquidation methods is upheld, the default could climb to more than $430 million, according to the RTO. (See *PJM: FERC Order Could Boost GreenHat Default by $300M*.)

"We don't have any means of verifying [PJM's estimate]," Baker told the Advisory Committee.

Responding to a stakeholder question, Baker said he couldn't be sure whether MISO's exposure to default is nonexistent or greatly reduced compared with PJM's. "There certainly is a potential for loss, but we believe it's much less of an exposure in our market," Baker said.

He said MISO may convene a stakeholder task team to examine possible improvements to the calculation.

MISO will continue its evaluation of FTR practices as planned, concluding this year. Baker said MISO will discuss any FTR collateral requirement changes with stakeholders in regularly scheduled Market Subcommittee meetings. ■

MISO Claims up to $3.9B in 2018 Benefits

By Amanda Durish Cook

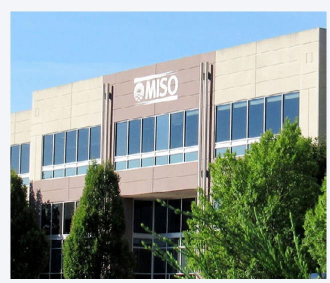
MISO estimates that it delivered between $3.2 billion and $3.9 billion in benefits to its members in 2018, the RTO said last week.

The benefits estimate is up from 2017, when MISO said it saved members from $3 billion to $3.7 billion. (See *MISO Touts $3 Billion in 2017 Savings*.) The RTO estimates its membership benefits annually through its Value Proposition study, in which it attempts to quantify the efficiency and reliability gains from its operations against non-RTO entities. MISO does not track cost savings to individual market participants.

"In a rapidly transforming industry, MISO continues to deliver technological, economic and innovative solutions that benefit our members and stakeholders," Vice President of Strategy and Business Development Wayne Schug said in a *release*.

MISO said it can trace most of its 2018 value to its "footprint diversity," which allows geographically dispersed local utilities with differing load patterns to draw on a wider range of available generating assets, allowing those utilities to significantly reduce reserve margins from 23.7% to 17.7%. That footprint diversity saved members anywhere from $2.2 billion to $2.7 billion in deferred generation investments last year, MISO officials estimate, avoiding the need for an additional 13.6 to 15.9 GW in capacity.

MISO said it also saved members $354 million to $414 million through its wind generation planning and placement efforts in 2018. Centralized economic energy dispatch saved members $282 million to $312 million, while reliability efforts saved $262 million to $285 million, the RTO said.

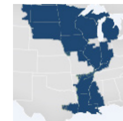


MISO's Carmel, Ind., headquarters | © *RTO Insider*

The 2018 Value Proposition accounts for MISO's $304 million in operating costs during the year. The RTO estimates it has provided its footprint a total $24.3 billion worth of cumulative net benefits since 2007.

Stakeholders last year questioned the extent of the RTO's 2017 benefits. During a call last January, one stakeholder contended that MISO should balance its estimates of members' compliance cost savings with the costs to members of attending stakeholder meetings and monitoring the RTO's FERC filings. Others pointed out that the figures assumed that the region's utilities would not otherwise be coordinating activities and reserve sharing absent an RTO. ■

MISO News



Board Cooling-off Period Still Under Debate at MISO

By Amanda Durish Cook

The MISO Advisory Committee in December | ® *RTO Insider*

MISO's Advisory Committee is still deliberating whether state regulators elected to the RTO's Board of Directors should be subject to the same "cooling-off" period requiring industry executives to wait one year after leaving a regional company before joining the board.

During a Wednesday conference call, committee Chair Audrey Penner said the discussion was "simply forward-looking" and that she had not heard of any member challenging the nomination and election of former Minnesota Public Utilities Commission Chair Nancy Lange to the board last year.

Lange's appointment to the board, made while she was finishing her term on the commission late last year, sparked stakeholder conversations over whether the one-year moratorium for executives should also apply to regulators. Members were mixed in their views, with some sectors — such as independent power producers and utilities — favoring a broader application of the rule, while others thought it should not apply. (See *MISO Members Split on Regulator Cooling-off Period*.)

A representative from MISO's State Regulatory Authorities sector said the group continues to believe that state regulators are naturally resistant to conflicts of interest.

"Their work is entirely focused on protecting the public. … We don't have material business relationships, and we take a statutory oath," Minnesota PUC Commissioner Matthew Schuerger told the Advisory Committee.

However, DTE Energy's Nick Griffin said a cooling-off period for candidates across all industry sectors "makes sense." He said the Transmission Dependent Utilities sector supports the moratorium extension to regulators in MISO states.

The board is awaiting a recommendation from the Advisory Committee as to whether it prefers expanded use of the yearlong sit-out provision. Director Thomas Rainwater, who last year chaired the Corporate Governance and Strategic Planning Committee, has said his committee will act on the Advisory Committee's recommendation.

Penner asked for more written sector opinions on the topic. The Advisory Committee will again take up the item at its next meeting on March 20 in New Orleans. ■

MISO News

MISO LMR Capacity Rules Get FERC Approval

By Amanda Durish Cook

FERC last week approved a MISO proposal requiring owners of load-modifying resources (LMRs) to provide firmer and more clearly documented commitments regarding their availability before participating in the RTO's capacity market.

The new rules represent the first piece of MISO's three-part near-term resource availability and need (RAN) initiative.

"Recent maximum generation emergency events have frequently occurred outside the summer season as generator forced outages and high-load conditions converge with planned generator outages that are typically scheduled in the spring and fall seasons. MISO contends that these spring and fall maximum generation emergency events do not align well with the obligations of LMRs, which currently are not required to serve MISO load in non-summer seasons," the RTO said in its proposal.

The new rules require an LMR to offer capacity in accordance with a seasonal availability report provided to MISO and to commit to deploying based on the shortest notification time it "can consistently meet" but no shorter than 12 hours (*ER19-650*). LMR owners must provide that information to the RTO during registration.

In return, MISO will issue scheduling instructions before an emergency occurs based on an LMR's unique notification times. The RTO has also promised to confirm or withdraw advanced scheduling instructions at least two hours prior to an expected emergency event. LMRs that acknowledge scheduling instructions will receive credit for one of the five times per year that LMRs are required to respond, regardless of whether the emergency declaration is made.

MISO control room | *MISO*

MISO said the rules will improve transparency around LMR capability and give it easier access to LMRs during emergency situations.

In approving the filing, FERC also granted a waiver of MISO's usual deadlines for LMRs to register their availability for the April capacity auction. LMRs now have until March 1 to complete registration. (See "LMR Registration Confusion," ***MISO Preliminary PRA Data up Slightly from Early Prediction***.)

A group of MISO industrial customers protested the filing, saying MISO was vague and failed to outline how the "best physical capability" and "shortest notice requirements" of LMRs would be measured and verified. Those customers also said the new availability requirements could create an "incentive for LMRs to exit the market," which could drive up capacity auction clearing prices.

But FERC said cut-and-dried availability rules wouldn't work best for LMRs, which differ in operating characteristics and limitations: "Although a specific definition would provide certainty to some LMRs, it would likely be incompatible with the capabilities and circumstances of other LMRs. Therefore, we find reasonable MISO's proposal to give flexibility to each LMR in determining its own capabilities and the type of supporting documentation it can provide for the purpose of demonstrating its capabilities." The commission also dismissed as "speculative" the claim that MISO's proposal will force LMRs to exit the market.

MISO has two other near-term filings awaiting FERC action as part of the short-term RAN project: one to subject demand response to annual capability testing, and the other to impose new generator accreditation penalties for planned outages taken fewer than 120 days in advance and during what the RTO deems "low-margin, high-risk periods." The trio of filings is aimed at immediate relief in time for spring and to buy time for in-depth solutions. MISO's Market Subcommittee and Resource Adequacy Subcommittee will work on the more involved solutions — yet unnamed — through 2020. (See ***Stakeholders Seek Slowdown on MISO RAN Project***.) ■

MISO News

Committee Considers Ways to Streamline MISO Meetings

By Amanda Durish Cook

MISO's Steering Committee is looking for ideas on how leaders of stakeholder groups can best oversee spirited discussions while sticking to schedules listed on meeting agendas.

Speaking during a Feb. 20 conference call, Chair Tia Elliott said the committee is seeking near-term solutions for managing conversations during heavily attended public meetings.

More participants are asking more questions following stakeholder meeting presentations, the RTO has found. Among the subjects sparking the interest: proposed new rules to address a growing gap in resource availability and need; a new load forecasting method; studies to determine when renewable integration will become unmanageable; and plans to incorporate storage separately into energy markets and the transmission planning process.

The committee has discussed using the "raised hand" function on the online meeting platform WebEx, as well as having participants send emails directly to the Client Relations Department during the discussions.

Reliability Subcommittee Chair Bill SeDoris said at a recent heavily attended RSC meeting, leaders gave in-person attendees priority to make comments and ask questions while compiling emails of questions to take from phone participants.

"Emails did work, but it was a little clunky," SeDoris said, noting that the RSC had two stakeholder specialists on hand to handle the high-traffic discussion.

But MISO Stakeholder Relations Specialist Alison Lane said it's unlikely the RTO can provide two specialists for every meeting.

Lane suggested stakeholders develop a "comment queue" following a presentation, where committee chairs ask those in the room to raise their hands and those over the phone to signal, allowing a specialist to compile an ordered list of stakeholders to call on.

She also said chairs might have to limit stakeholders to "one really good question" apiece instead of allowing a single stakeholder to ask multiple questions. She added that MISO and chairs must anticipate which topics on the agenda will elicit a lengthy discussion and plan accordingly.

Resource Adequacy Subcommittee Chair Chris Plante said stakeholders attending by phone are sometimes forced to interrupt conversations to ask long-awaited questions.

Elliott said the Steering Committee will consider the comment queue suggestion and noted that any process changes wouldn't likely be memorialized as a rule in the RTO's Stakeholder Governance Guide.

MISO will also host a March 18 stakeholder training on managing meetings as part of Board of Directors Week in New Orleans. Lane said the session will focus on governance rules and tips on how to successfully facilitate a meeting.

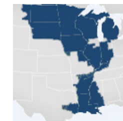
MISO Rebrands Market Roadmap

MISO also told the Steering Committee on Wednesday that it will rebrand its *Market Roadmap* list of future market improvements as the "Integrated Roadmap," which will include more research and reporting on industry trends to provide support for the RTO's reasoning behind and prioritization of proposed changes.

The roadmap will now include research focus areas and an emphasis on changes to accommodate what MISO dubs the "3Ds": demarginalization, decentralization and digitization of the electric grid. It will also include the annual publication of an insights and strategy report to explain how major trends might affect RTO operations. The first such report will be published in early March, and MISO has also tentatively planned an April 9 stakeholder workshop to discuss the report.

MISO Director of Stakeholder Affairs Joan Soller told the Steering Committee that the new design is meant to be "more inclusive" of topics that span multiple committees. ■

The MISO Reliability Subcommittee meets last year. | © *RTO Insider*



GCPA MISO SOUTH CONFERENCE

Overheard at GCPA MISO South Conference

MISO CEO John Bear | © RTO Insider

NEW ORLEANS — MISO CEO John Bear opened the Gulf Coast Power Association's MISO South Regional Conference with a recap of the RTO's strategic initiatives and the five "500-year" storms he said the region has experienced in less than four years.

"I'm not a statistician, but I think that means they're not 500-year storms anymore. This polar vortex thing … is real, and it's happening on a more frequent basis. I'll leave for debate why it's happening … but we don't really care. All we know is that it is happening and we have to deal with it."

Bear also responded to concerns he has heard from state regulators and others that MISO's costs are rising.

He said the RTO's administrative charge is still about 38 cents/MWh, "which is right with PJM, which is half [the rate] of the next RTO that's even close to us because of our scale and our ability to manage costs."

He acknowledged that MISO's transmission costs have risen but said the $5.6 billion invested as a result of the RTO's Transmission Expansion Plan will produce energy cost savings of at least a 3-to-1 ratio. "So, the energy costs are going down while the transmission costs are going up."

He also said transmission growth is essential to MISO's efforts to clear its interconnection queue. "If we don't build more transmission, it's not going to help. It's still going to be slow and, I would argue, it's going to be inefficient."

North-South Transmission

Bear said any consideration of potential transmission projects to provide more transfer capacity between MISO South and North-Central should be part of a holistic, regionwide analysis.

He said MTEP 19 will consider two different generation portfolio mixes, referring to the accelerated fleet change future and the distributed and emerging technologies scenario. "They look very different than the [portfolio] that we have today. And so, understanding how the transmission system could be optimized to operate that portfolio is the key.

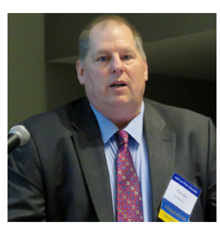
"I think we've got to study that," he added. "If there's not a benefit, and a pretty significant benefit … then we're not going to construct the transmission portfolio."

In MTEP 17, MISO conducted a "footprint diversity study" to identify transmission projects to increase connections between the regions. But the study found that none of the 35 projects considered passed the 1.25-to-1 benefit-cost criteria based on adjusted production cost benefits. (See "No Tx Coming for North-South Constraint," *MTEP 17 Proposal: 343 New Transmission Projects at $2.6B*.)

Several speakers at the conference offered different perspectives on the North-South bottleneck.

Jim Dauphinais, Brubaker & Associates | © RTO Insider

"While it's important to look at the overall MISO footprint and have solutions that work for the overall MISO footprint, the reality is … that we have an 85,000-MW system in North-Central [and] a 35,000-MW system in the South connected by a 3,000-MW shoestring," said Jim Dauphinais, managing principal for Brubaker & Associates. "And so therefore, when we have these [emergencies], they tend to be North and Central events or South events because we very quickly hit the transmission limit."



Paul Jett, GridLiance | © RTO Insider

Paul Jett, vice president of corporate development for GridLiance, said another look is warranted. Regarding the MTEP futures assumptions, he asked: "Do we have the right criteria? Are we measuring the right things? … It seems like we need to take a look at that because I think we're missing something in the cost-benefit [analysis]."

Marcus Hawkins, executive director of the Organization of MISO States, suggested the RTO should take a new look at the North-South transmission expansion incorporating the "500-year" storms that were not in the initial analysis.

Marcus Hawkins, Organization of MISO States | © RTO Insider

Hawkins said one of his group's two strategic priorities for the year is whether there is a business case for a holistic "top-down" look at transmission improvements.

"The states want to be involved in developing the assumptions that go into that business case evaluation of bigger picture transmission plans. So, our authority is to be heavily involved in that process: guide what assumptions are made, make sure the appropriate benefits are included in that sort of analysis and that [the] uncertainty of this changing resource mix is captured accurately, because the states have very different views of what the future might look like … and then, at the end of that process, [find] out if transmission is the right answer or not."

OMS' second priority is being ready to respond if FERC issues an order on distributed energy resource aggregation. The commission opened a docket on the issue (RM18-9, AD18-10) in February 2018, separating it from its rulemaking on energy storage. (See *FERC Rules to Boost Storage Role in Markets*.)

Hawkins said some states are re-evaluating their bans on aggregation of distributed energy resources "because their consumers want to be more actively involved in the MISO market — and they want it now."

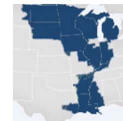
"And this millennial can relate to that," he said, sparking laughter.

LMRs Under Attack?

MISO officials repeatedly returned to the RTO's resource availability and need (RAN) initiative during the daylong conference, saying their planners can no longer worry about just meeting the peak load hour of the summer.

"We assumed, and it was correct at the time, that if we had enough generation to meet that one peak summer hour, we'd be fine the rest of the hours of the year," said Richard Doying, MISO's executive vice president for market strategy and development. "What we're finding

MISO News



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Richard Doying, MISO | © RTO Insider

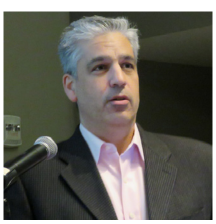
now is that's simply not the case. We really have to think about the availability of resources on an hourly basis all year long."

Indeed, Dauphinais noted that none of the three MISO South maximum generation events since 2017 occurred during the summer. They included one on April 4, 2017, "which is the least likely time of the year you'd expect to be having a problem with deliverability of power to meet load," he said.

Another occurred on Sept. 15, 2018, a Saturday. "In my 35 years of experience in this industry throughout the country, I can't remember ever having a capacity emergency declared on a Saturday," Dauphinais said. "So, we've got something unusual going on here."

Dauphinais attributed the problems to higher planned outages, the lack of quick-start (two hours or less) resources "and, possibly, the retirement of older natural gas steam units."

Last week, FERC approved one of three sets of proposed rule changes MISO has filed as part of RAN Phase 1, a requirement that load-modifying resources commit to deploying based on the shortest notification time they "can consistently meet." (See related story, *MISO LMR Capacity Rules Get FERC Approval*.)



Jeff Bladen, MISO | © RTO Insider

"We call it the best capability requirement, where — like generators — we're asking LMRs to offer to us whatever their best capability is rather than their minimum capability," MISO Executive Director of Market Development Jeff Bladen explained.

Dauphinais said industrial customers are concerned that in RAN Phase 3, which may include consideration of a seasonal capacity accreditation, MISO seems "to be ... picking on LMRs again."

"All resources need to be considered. Not [just] LMRs. Long start-time, high minimum-output, high variable-cost generators are not very different than LMRs that have a long lead time," he said.

"If there need to be changes to the market design and products addressing both reliability and efficiency, you better identify those first — before you start changing how much capacity you're going to credit the load-modifying resource or any other type of resources," Dauphinais continued.

"LMRs and other resources should not have their capacity accreditation degraded if they do not provide a new product that MISO needs. Instead ... MISO should create a separate market for that product if it's truly needed and have resources compete to provide that. And that includes demand response. ... Demand response is not the cause of the problem here. It is one of the solutions."

Independent Market Monitor David Patton | © RTO Insider

MISO Independent Market Monitor David Patton said most LMRs were unable to help during the April 2017 and January 2018 maximum generation events because their notification times were longer than two hours. He disagreed that new products are needed, calling instead for improving reserve demand curves to ensure effective shortage pricing.

"I haven't seen any evidence we need any new products. ... If you have good shortage pricing, the folks that can start in two hours get paid, and the folks that can't don't get paid," he said. "With all due respect to the LMRs, that 12-hour LMR is almost worthless."

On the other hand, Patton said, MISO could offer "very attractive prices" for industrial LMRs that can respond to emergencies.

He said many cogeneration units in MISO South "would really be good 30-minute reserve providers. And when we're short of 30-minute reserves, they would get paid even when we're not deploying them — which means they wouldn't even have to cut their load, but they would get paid $500 to $1,000/MW depending on how it's priced."

Bladen said improving shortage pricing is one aspect of the RTO's "all-of-the above solution set."

"There's no silver bullet answers. It's not just addressing outage coordination," he said. "It's not just addressing the emergence of emergency LMRs as a major element of our operating fleet. It's not just addressing scarcity pricing. But it's really all of the above."

Bladen challenged Dauphinais' contention that there is no chance for LMRs to earn additional compensation under the rules approved last week.

"To the extent that there's a view that there's a premium product that's being asked for, certainly nothing stops the LMR resource owners [from offering] to sell at a premium price," Bladen said.

"We want to adapt our markets to reflect a changing set of requirements. The need for flexibility is different today and likely tomorrow than it was yesterday. And the reason we haven't addressed it previously is because the need was emerging rather than upon us."

'Highest Use' for Storage?

GridLiance's Jett said his company thinks MISO's proposals on storage as a transmission asset (SATA) are a good "first step," but he wants to ensure cost allocation rules put transmission owners and non-TOs on an "equal platform." (See *MISO Opens Storage Proposals to All Tx Project Types*.)

"I've been around MISO a long, long, long time and lived through every one of the cost allocation discussions, so I understand all the issues from both sides — three sides, four sides. It's tough to figure that out," Jett said.

CEO Bear said that while MISO's transmission queue has been flooded with wind and solar projects, "one thing we haven't seen in the queue is storage."

In addition to participating in stakeholder discussions on SATA rules, MISO staff is working to determine the "best, highest use" for the technology, Bear said.

Batteries might be most valuable as quick-response resources that help MISO operators balance the system around its growing wind and solar generation, rather than "trying to store energy in them," Bear said.

"MISO's footprint is so big and so diverse, it actually is the ultimate storage device," he said. "But as we move forward, that may change as the capabilities and the technologies of storage or batteries change.

"We've almost internally forced ourselves as a company to calling them batteries, as opposed to storage, just because we don't want to presuppose what the best use of them might be." ■

— Rich Heidorn Jr.

MISO News

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MISO Pondering Fast-track Process for 'Shovel-ready' Generation

AWEA: Queue Design not Working for Renewables

By Rich Heidorn Jr.

NEW ORLEANS — MISO is considering a fast-track process for "shovel-ready" generation projects in response to criticism that its rules don't work for renewables, which now represent almost 90% of the RTO's interconnection queue.

"It's going to have to go through a lot of stakeholder discussion, but I'm optimistic we can come up with something to help out people that are really ready," Vikram Godbole, MISO's director of resource utilization, told the Gulf Coast Power Association's MISO South conference last week.

Godbole made his remarks during a panel discussion on the RTO's efforts to eliminate its interconnection backlog — a consequence, he said, of rising requests by solar and wind developers seeking to beat the phaseout of federal tax credits.

MISO has about 70 GW in its three-step definitive planning phase, up by more than 10 times the 5 GW in 2012. Wind projects account for 31.6 GW, with solar almost equal at 31 GW. Most of the remainder is gas (7.1 GW). Solar represents 83% of the 10.3 GW of interconnection requests in MISO South.

Godbole said the growth is been largely driven by the end of the wind production tax credit in 2020 and the reduction of the current 30% solar investment tax credit. In 2022, the solar credit will *drop* to 10% for commercial and utility projects and be eliminated for residences.

He said the RTO has been unable to accurately predict how much capacity developers will add to the queue. MISO's high-end estimate for the 2018 cycle was about 25,000 MW. "And you know what happened? We got about [35,000 MW]," he said.

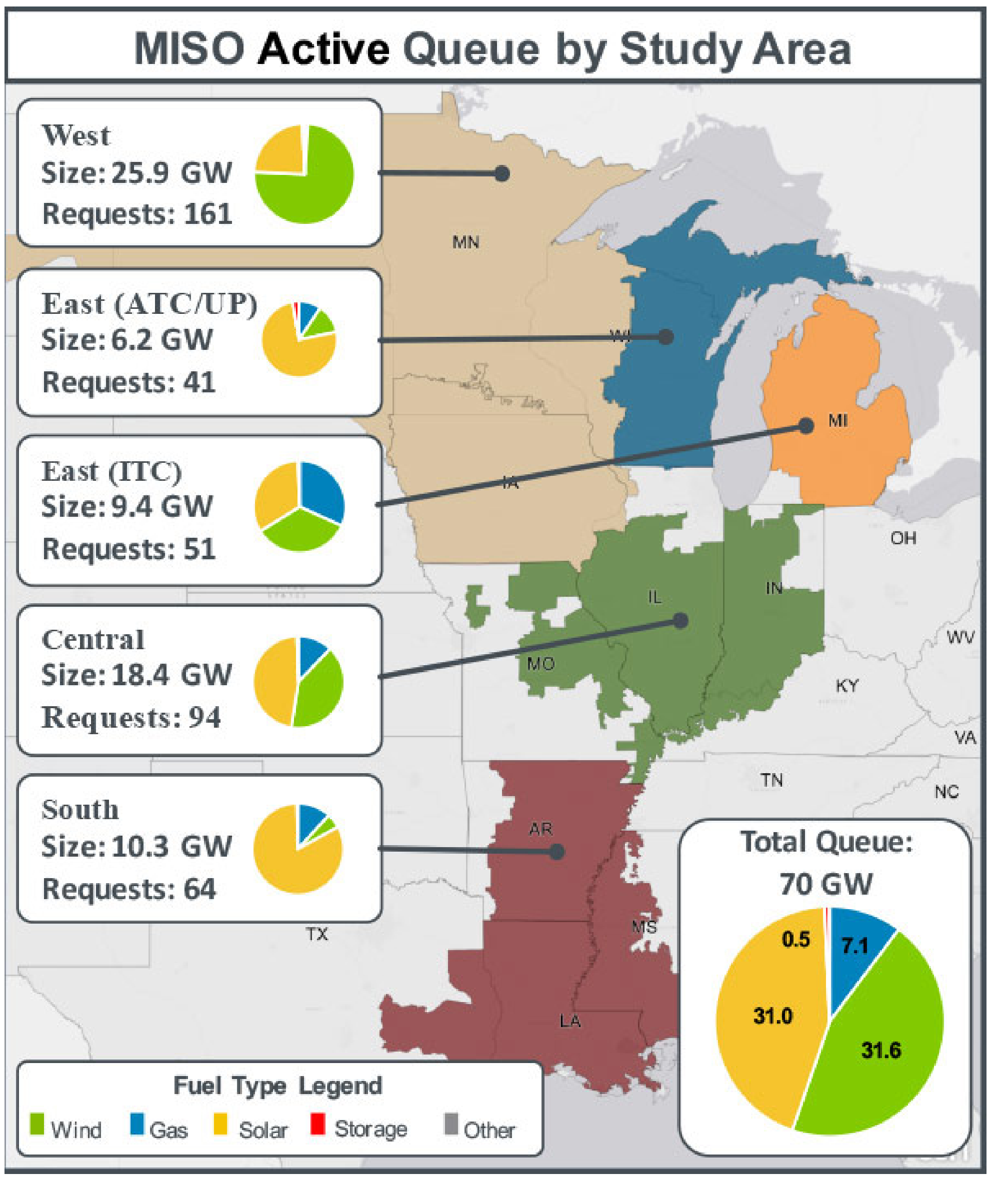
Betsy Beck, director of electricity markets and transmission policy for the American Wind Energy Association, told the conference that wind developers appreciate MISO's efforts to address the queue problems.

But she said the RTO's "incremental" changes may be insufficient to address problems caused by the transition to renewable generators from large fossil fuel plants that take years to permit and build.

"We can build a wind or solar farm in a matter of months not years," she said. "The process that we've built for one generation type just isn't working anymore for generation that's fundamentally very different. … I just wonder, going into the future, at what point we need to stop and take a step back and say — instead of incremental changes — do we need to kind of start over?"

The length of the interconnection process — now averaging 505 days — is forcing wind developers to file their interconnection requests before they have complete plans and understand all their vulnerabilities, she said. When projects fall out of the queue, they can

Continued on page 26



Wind and solar projects represent almost 90% of MISO's interconnection queue. Solar projects are more than 80% of the nameplate capacity proposed in MISO South. | *MISO*

GCPA MISO SOUTH CONFERENCE

Industrials Challenge Entergy Louisiana Fleet Additions

By Rich Heidorn Jr.

Attorney Randy Young | *© RTO Insider*

NEW ORLEANS — Entergy Louisiana CEO Phillip May says his company's electric rates are among the lowest in the nation. Attorney Randy Young, who represents a group of industrial customers in the state, says his clients can do better.

Entergy and the Louisiana Energy Users Group (*LEUG*) will eventually make their competing cases to the Louisiana Public Service Commission. On Thursday, May, Young and others previewed the debate at the Gulf Coast Power Association MISO South Regional Conference.

At issue is Entergy's proposal to spend $10 billion to $12 billion to address a 7,000-MW capacity deficit Entergy Louisiana forecasts through 2038.

Of the total shortfall, 5,800 MW is from generation deactivations while only 750 MW is from projected load growth. As a result, Young said, costs will increase much faster than sales, which LEUG consultant Brubaker & Associates says would increase base rates by at least 50%.

Young said industrial customers should be given the option of purchasing from the wholesale market or using combined heat and power (CHP) generation to serve their needs, which he said would decrease the shortfall, potentially saving money for Entergy's remaining captive ratepayers. He'd also like a new tariff that gives industrials the option of choosing interruptible service, real-time pricing and a market-based standby service, under which customers pay for capacity and energy based on MISO clearing prices.

Young's position was echoed by Devin Hartman, CEO of the Electricity Consumers Resource Council (ELCON), a D.C.-based group that represents large industrial electric consumers nationwide.

Hartman, who joined May in the final panel of the conference, said his members want to take advantage of falling energy prices and flat load growth. "When you have supply-side shifts or demand-side shifts in the electric industry, you're going to see markets respond very differently than a regulated, cost-of-service process will," he said. "Overwhelmingly we've seen upward pressure [on rates] in most regulated states for end-use consumers across classes, whereas we've seen downward pressure for the most part in the market states."

Failing that, he said, regulators should ensure state procurements for new generation are truly competitive and not gamed by incumbent utilities.

RTO Insider Editor Rich Heidorn Jr. (left) moderated a panel discussion with Entergy Louisiana CEO Phillip May (right) and Devin Hartman, CEO of the Electricity Consumers Resource Council. | *© RTO Insider*

Hartman said industrials' interest in direct market access is most pronounced in regulated states in an RTO. "MISO is going to be one of the next ground zeroes, I think, for this going forward," he said.

While some advocates for residential consumers have reservations about retail choice, Hartman said, "You've seen [commercial and industrial customers] just say, 'Give us the markets. We don't need to have our hands held anymore. We don't need a paternalistic approach.'"

With generation trending toward low-marginal-cost renewables, "it becomes more and more important to make sure that we're injecting more accountability mechanisms and competitive forces to drive more efficient procurement and entry [and] exit of resources in the overall electricity sphere," Hartman said.

Entergy Responds

May responded that "unregulated states are paying substantially more than the regulated states" and that Louisiana has "some of the lowest rates in the country." According to the Energy Information Administration, Louisiana had the cheapest residential electric rates and sixth-lowest industrial rates in November 2018, the *most recent data* available. A recent *survey* by LEUG found Entergy Louisiana's industrial rates were the eighth-lowest among 30 Southeastern utilities.

May said LEUG's projection of a 50%-plus increase in rates must be put in context. "If rates go up 50% [though 2038], that's 2.5 to 3% annually. Base rates for industrial customers are about half [of residential rates], so maybe 1.5% [annually] … which is about the rate of inflation.

"I can tell you we want to provide the lowest-cost electricity we can to those industrial customers because they are competing on a global stage, and we intend to continue to be competitive so we can attract that load and have them continue to be successful."

With the planned opening of the St. Charles Power Station in June and the Lake Charles Power Station in June 2020, Entergy Louisiana will have replaced about half of its older capacity with more efficient natural gas units since 2004.

MISO NEWS

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LEUG made its proposal in a docket *opened* by the Louisiana PSC to consider alternatives to integrated resource plans filed by Entergy Louisiana, Entergy Gulf States, Cleco Power and Southwestern Electric Power Co. (*S-34426*).

The commission held two technical conferences in 2017 and received written comments earlier this month in response to a Dec. 14 staff report on the issue. LPSC spokesman Colby Cook said no timeline has been set for commission action.

A View from Arkansas

Ted Thomas, Arkansas Public Service Commission | © *RTO Insider*

Arkansas Public Service Commission Chair Ted Thomas, who appeared on an earlier panel with Young, said he would consider an equivalent to the LEUG proposal in Arkansas, but he would "match it with a … program that gave residential [customers] as much of an opportunity to change their behavior as the commercial people do."

"We need low rates for our industrial customers to compete and provide jobs. But the area between [New Orleans] and the boot heel of Missouri — if you draw a circle around that [Mississippi] river — is the most protracted area of poverty in this entire country. And we can't shift costs over to them," he said.

Thomas said his "end goal" in Arkansas is "a grid that is plug-and-play with respect to all existing and new technologies, that serves as a platform for an apples-to-apples price comparison and provides price visibility for all technologies with respect to capacity, energy and ancillary services. … It's a challenging goal because then you'd want some way to compare the price of, say, a rooftop solar installation with an interruptible tariff. You want competition across the whole thing."

To get there, Thomas said, third parties need to have the same access as incumbent utilities to automated meter data "under the right privacy restrictions."

"If you don't have data access, you don't have a level playing field, and if there's not a level playing field, your entrepreneurs and innovators won't come and play and there will be no innovation," he said. "A second key issue is aggregation. If you're going to have data access and you want to represent customers, you have to put them in a group. If you don't have data access and aggregation, you're not going to get the consumer involvement that you need to have a consumer-driven innovation the way that we've seen in telecom and other areas.

"There's only so many utility nerds out there … most of them are probably sitting in this room," Thomas continued. "We need a killer app to automate demand response, to automate the consumer to have a consumer-driven system." ■

MISO Pondering Fast-track Process for 'Shovel-ready' Generation

AWEA: Queue Design not Working for Renewables

Continued from page 24

force restudies that often increase costs for projects behind them.

Beck said renewable growth is being driven not just by the phaseout of subsidies but also by corporate buyers inking power purchase agreements based on low costs. "The problem is not going away," she said.

In November, FERC repeated its refusal to modify MISO's interconnection rules, rejecting requests from wind developers who said the RTO was moving too slowly for them to meet the PTC deadline. (See *FERC Again Denies MISO Wind Developers' Queue Complaint*.)

Godbole said that while the RTO has made progress in reducing the backlog in its North and Central regions, it is still seeking ways to reduce that in the West. "We are making progress. We are getting through these cycles as quickly as possible. And our hope is at some point we'll catch up. If it's this year, that would be awesome." ■

Vikram Godbole, MISO, and Betsy Beck, AWEA | © *RTO Insider*

PJM News

FERC Rejects PJM's Gas Pipeline Contingency Proposal

By Christen Smith

FERC said last week that PJM's proposal for reimbursing generators for fuel-switching costs and for penalties incurred when gas pipelines fail lacked specificity and clarity.

In a ruling issued Feb. 19, FERC rejected the stakeholder-approved mechanism submitted for inclusion in PJM's Operating Agreement and Tariff that would have implemented a process for market sellers seeking cost recovery for certain gas contingencies associated with fuel-switching instructions from the RTO (*ER19-664*.)

PJM's filing would have become effective Dec. 21 and allowed generators to request cost recovery from FERC across nine different categories: park-and-loan service charges; overrun charges; exceeding maximum daily quantity; exceeding minimum/maximum storage balance; imbalance cash-out charges; disposal of gas and related products costs; other gas balancing costs; start-up costs; and alternate fuel costs.

FERC described PJM's definition of "penalty" — costs that are designated as such in the pipeline or local distribution gas company tariff and imposed by the applicable pipeline or company — as "unreasonably narrow and unsupported." The commission said pipeline tariffs delineate between penalties and the RTO's proposed categories in different ways, meaning what appears to be relevant fuel-switching costs for one pipeline could be considered a penalty for another. The commission also faulted PJM for not including events that might trigger fuel-switching directives in its Tariff and for lacking established procedures for dealing with such contingencies through existing market design.

"Continuous communication and coordination between the RTO, the gas pipeline operator and the relevant generation owners can be critical to ensure the reliable operation of both systems," FERC concluded in its ruling. "Given this lack of clarity, PJM's proposal does not reasonably ensure that coordination occurs prior to a generator's switching to an alternate pipeline."

FERC rejected PJM's proposal for compensating generators for costs associated with fuel-switching orders. | *Entergy*

The D.C. Office of the People's Counsel crafted the rules and compensation plan detailed in the filing after earning a majority of stakeholder support at the December meeting of the Markets and Reliability Committee. (See "Gas Pipeline Contingencies," *PJM MRC/MC Briefs: Dec. 6, 2018*.)

The supermajority vote signaled a major victory for load interests who were opposed to the Calpine-authored plan endorsed at the Market Implementation Committee in November. That proposal would have developed a formula for cost recovery to be filed with FERC that did not include pipeline penalties. (See "Gas Pipeline Contingencies," *PJM Market Implementation Committee Briefs: Nov. 7, 2018*.)

Jeff Shields, a PJM spokesperson, said Friday that staff are still considering next steps.

"We continue to believe that this is an important issue to resolve and is another step in improving gas-electric coordination," he said. "We are evaluating the order and our options for working with stakeholders to rectify the issues FERC found with our filing." ■

PJM News

PJM CFO Retiring in Wake of GreenHat Default

Continued from page 1

store in Coronado, Calif., was owned by two traders who previously gained notoriety as participants in J.P. Morgan Ventures Energy Corp.'s scheme to manipulate the CAISO and MISO markets between 2010 and 2012. PJM's failure to respond promptly to warnings from other FTR traders allowed GreenHat's $10 million loss in 2017 to balloon to more than $100 million by the time the company defaulted in June 2018. (See *Doubling Down – with Other People's Money*.)

At the Market Implementation Committee meeting on Feb. 6, Daugherty told members that a FERC order to rerun the July 2018 FTR auction to liquidate GreenHat's positions could add $250 million to $300 million to the $186 million the RTO had earlier projected the default would cost members. (See *PJM Won't Act on FTR Order Before Stay Ruling*.)The Board of Managers is expected to issue a report on its investigation of the GreenHat debacle in about a month.

Stay Request Filed

On Thursday, PJM filed a motion for a stay on the commission's order until the commission acts on the RTO's planned request for rehearing and clarification (*ER18-2068*).

PJM said the commission ordered rerunning of the August planning period balance FTR auction "without recognition that the results of every auction conducted subsequently likely would be inconsistent — as to FTR paths, megawatt quantities and ownership — with the revised August auction results."

The RTO said the order runs "headlong against the commission's policy against rerunning markets, and its emphasis on avoiding upsetting market participant reliance on settled markets."

It said rerunning the auction would likely require multiple market participants to post 10 or 20 times as much collateral, pushing some of them in default. It also could give some FTR holders "a free option to retroactively extinguish unprofitable FTRs," harming others.

20-year Career

Daugherty, who also holds the titles of treasurer and senior vice president, joined PJM in 1998 and became an integral part of the organization, ultimately managing the Business Planning & Analysis Department and serving as controller, liaison to the president and, most recently, as chair of the Markets and Reliability Committee.

In an email announcing Daugherty's departure, Ott praised her for establishing the *stated rate plan*, leading the Advanced Control Center project and the Women's Employee Resource Group.

"We are grateful for Suzanne's countless contributions to PJM," he said in the email to stakeholders. "Her relentless focus on driving excellence has helped solidify our reputation as a leading provider of reliable grid operations."

In 2018, the Philadelphia Media Network — publisher of *The Philadelphia Inquirer, Philadelphia Daily News* and *Philly.com* — *honored* Daugherty with its inaugural *Influence of Finance Award* for her contributions to PJM as both its longest serving and first female CFO in the organization's 90-year history.

"It has been my honor and privilege to serve PJM's employees and members for more than two decades," Daugherty *said* in a press release Wednesday. "I am proud to have been part of such an outstanding team doing extremely important work, and I know PJM will continue to forge ahead with innovation, integrity and outstanding service to its members."

Daugherty told employees about her decision to leave PJM on Feb. 19.

Ott assured stakeholders Daugherty's retirement will not impact day-to-day operations or execution of PJM's long-term strategy. The RTO said it "has already begun to review its succession plans and will transition Daugherty's responsibilities in the coming weeks." ■

PJM News

PJM Extends Planning Window After FERC Approvals

By Christen Smith

PJM will extend the submission window for long-term transmission planning projects an additional two weeks to account for market efficiency rule changes. | © *RTO Insider*

PJM will extend the submission window for long-term projects an additional two weeks to account for recent transmission planning rule changes approved by FERC.

"We are not expecting significant changes, but we are expecting some changes, so we felt it right to extend the window," PJM's Brian Chmielewski told a special meeting of the Transmission Expansion Advisory Committee on Wednesday.

FERC earlier this month approved PJM's revisions to its market efficiency planning rules, effective Feb. 13. (See ***FERC OKs PJM's Market Efficiency Rule Changes***.) The updates impact section 1.5.7 of the RTO's Operating Agreement that would exclude from market efficiency planning — with exceptions — generation either with only an executed facilities study agreement (FSA) or with an executed interconnection service agreement (ISA) under suspension (***ER19-562***).

A second ruling issued Feb. 19 accepts PJM's changes to its evaluation of economic-based enhancements as part of its Regional Transmission Expansion Plan, ensuring the benefit/cost ratio for projects proposed in the current year — as opposed to those with delayed in-service dates — will be an "apples-to-apples" comparison (***ER19-80***).

The rule changes come near the tail-end of the long-term transmission planning window opened in November, which accepts proposals capable of reducing future congestion. (See ***PJM Market Efficiency Rules Could Slip Deadline***.) Chmielewski said extending the submission window will not affect the market efficiency planning cycle, with final review by the TEAC and the board ***scheduled*** for December.

Revised Benefit/Cost Ratio

In the Feb. 19 ruling, PJM won its bid to revise the benefit/cost ratio to ensure projects with delayed in-service dates only receive analysis within the existing 15-year planning horizon. Under previous rules, the RTO said it spent considerable time developing *ad hoc* projections for years beyond the current cycle, resulting in "risky" and "unreliable" modeling.

FERC agreed with PJM's argument that "limiting the time frame over which benefits are calculated for market efficiency projects with in-service dates beyond the RTEP year would address concerns regarding the additional risk of using more speculative benefit estimates for projects with farther out in-service dates."

The new calculation factors the present value of the total annual enhancement benefit for the 15-year period starting with the RTEP year — defined as the current year plus five — minus benefits for years when the project is not yet in service, divided by the present value of the total enhancement cost for the same 15-year period.

"Thus, under this proposal, if a proposed market efficiency project has an in-service date that extends beyond the RTEP year, benefits and costs (i.e., revenue requirements) would be evaluated over the same time frame used for projects with an in-service date of the RTEP year, which would be for a shorter period than under the current calculation," FERC concluded.

ITC Mid-Atlantic Development and NextEra Energy filed a joint protest Oct. 31 arguing the calculation favors smaller, more incremental market efficiency projects and incumbent transmission owners with the ability to propose small-scale upgrades to their own systems. The Independent Market Monitor seconded protesters' concerns in a separate filing, noting PJM didn't provide sufficient evidence to suggest their new calculation wouldn't encourage developers to "game" the system.

PJM said it reviewed 13 projects from the 2016/17 planning window with in-service dates beyond the RTEP year and found that benefit/cost ratios for 11 improved under the changes. The RTO acknowledged several methods exist to levelize project evaluations — each with pros and cons — but prefers its proposed method because it eliminates ad hoc projections for out years.

"We find PJM's proposal to use the same 15-year planning period for evaluating all projects to be just and reasonable, given that the data for periods outside of the planning period are less accurate," FERC ruled. "PJM has made a filing to align its benefit/cost analysis with its planning horizon, and we find that proposal just and reasonable as it establishes a level playing field upon which competing market efficiency projects may be evaluated." ■

PJM MRC/MC Briefs

Both the PJM Markets and Reliability and Members committees held their meetings Thursday via conference call because of a snowstorm that hit the East Coast the day before. The meetings had originally been scheduled to be held in Wilmington, Del.

Markets and Reliability Committee

Transmission Replacement Vote Deferred Until April MRC

The MRC on Thursday *agreed* to delay a vote on revised transmission planning rules until April by a sector-weighted vote of 3.73 to 1.27, with the Transmission Owners sector opposed.

Sharon Segner, LS Power | © *RTO Insider*

Sharon Segner of LS Power asked for a deferral to accommodate further discussion on the *language* her company crafted for Manual 14B: PJM Region Transmission Planning regarding how supplemental projects are added or removed from the Regional Transmission Expansion Plan. The proposal specifies that a transmission owner's supplemental project "will generally be removed from the RTEP" if it is rejected by a regulatory agency.

The RTO has suggested a review of the entire process at the Planning Committee in response to LS Power's proposal. Segner told the MRC that the delay would allow extra time for the PC — through regular or special meetings — to discuss the process in detail, including its relation to FERC Orders 890 and 1000. (See "Holistic Review of RTEP Removal Suggested," *PJM PC/TEAC Briefs: Feb. 7, 2019*.)

Segner first presented the proposal during the Jan. 24 MRC meeting as a friendly amendment to a proposal from American Municipal Power to increase transparency of supplemental project planning. PJM accepted most of AMP's proposal, but it rejected one section that it called an overreach of the RTEP. This seemingly rendered LS Power's amendment moot, but Segner successfully moved to delay any action on it until Thursday's meeting. (See *PJM Rebuffs Stakeholders on Supplemental Projects*.)

NextEra Energy offered a friendly *amendment* to the LS Power proposal that would require PJM to remove supplemental projects with incomplete siting permit applications from the RTEP. If PJM discovers an RTEP project that would eliminate the need for the proposed supplemental, the RTO would inform all applicable committees and regulatory agencies. Segner said the amendment will become part of the PC discussions in March and April.

Stakeholders Urge Slower Timeline on Fuel Security

Stakeholders told PJM their 12-month timeline for addressing potential fuel security threats and accompanying market rule changes is too "aggressive."

PJM's Mike Bryson solicited feedback from the MRC on a first reading of a *problem statement* and issue charge centered on ensuring grid reliability during times of extreme stress.

In November, PJM released an eight-page summary of a study 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 *PJM Begins Campaign for Fuel Security Payments*.)

Bryson said PJM would schedule a vote on the problem statement for the March 21 MRC, with a task force recommendation by September and a FERC filing in December.

"I think it's prudent for PJM to put a timeline out there," Bryson said. "I don't want to go to the opposite extreme and say it's open ended."

PJM drafted the problem statement as part of a three-phased approach for ensuring the resilience of its generation portfolio. Staff completed the Phase 1 analysis in December, saying that while no imminent risk currently exists, the RTO should explore proactive, market-based mechanisms for retaining or procuring fuel-secure resources.

A multitude of stakeholders said that while they appreciated PJM's work on the issue, the timeline Bryson presented was far too short, saying there needed to be more discussions before any recommendation came before the committee.

Paul Sotkiewicz, E-Cubed Policy Associates | © *RTO Insider*

Paul Sotkiewicz, president of E-Cubed Policy Associates, went further with his criticism.

"What you have done is shown there isn't an issue here," said Sotkiewicz, representing Elwood Energy, a 1,350-MW gas-fired generator in Illinois. "I think that's very important for policymakers to see there is no problem. … We are talking about making market design changes when there is absolutely no evidence that there is a problem with market design."

He encouraged other stakeholders "not to go down the road" but instead pursue a market-based analysis.

PJM staff gave stakeholders a March 7 deadline for submitting feedback on the problem statement, with an updated draft to be released March 14.

Manual Changes Endorsed

Stakeholders approved the following manual changes:

Manual 14B: Transmission Planning Process: Cover-to-cover periodic review. Includes changes to

PJM News

section 1A on critical energy/electric infrastructure information (CEII).

Manual 14D: Generator Operational Requirements: Added *requirements* to section 7.1.1 regarding generator real power control associated with FERC Order 842, which requires new generators seeking interconnections to be equipped to provide primary frequency response. The new rules apply to generators that entered the PJM transmission queue on or after Oct. 1, 2018. (See *FERC Finalizes Frequency Response Requirement*.)

Manual 12: Balancing Operations: Cover-to-cover periodic review with *updates* to section 3 regarding primary frequency response per FERC Order 842. The changes were endorsed by the Operating Committee on Feb. 5 over the opposition of FirstEnergy and Duke Energy. FirstEnergy challenged the manual's formula for judging primary frequency response performance. (See "Utilities Question Primary Frequency Response Calculation," *PJM Operating Committee Briefs: Feb. 5, 2019*.)

Members Committee

Calculator Vote Placed in 'Parking Lot'

The MC agreed to postpone a vote on whether to force PJM to accept opportunity costs calculated by the Independent Market Monitor until a member requests it.

Bob O'Connell of Panda Power Funds had proposed Operating Agreement *changes* last August if PJM refused to accept the Monitor's calculator in determining generators' cost-based energy offers.

The proposal passed the MRC in August, which incentivized the RTO and the Monitor to work toward a *deal*, announced the following month.

Bob O'Connell, Panda Power Funds | © *RTO Insider*

The MC had postponed a vote at its September meeting to give PJM and the Monitor time to put the new process in effect. (See "PJM, Monitor Come to Agreement on Opportunity Cost Calculator," *PJM MRC/MC Briefs: Sept. 27, 2018*.) Under the agreement, the Monitor will explain its inputs and logic to PJM to demonstrate that the unit-specific opportunity costs are compliant with the OA.

O'Connell said the unusual motion puts the issue in a "procedural parking lot," giving members flexibility to bring up the issue on short notice in case PJM suddenly decided the Monitor's calculator was no longer valid. Stu Bresler, PJM senior vice president of operations and markets, said staff supported the motion.

Stakeholders to Consider Retiring Wilmington as Meeting Site

Members will vote next month on a proposal by Katie Guerry of Enel X to move all MRC and MC meetings to PJM's Conference and Training Center in Valley Forge, Pa., instead of splitting them between there and The Chase Center on the Riverfront in Wilmington, Del.

PJM had held all its meetings in Wilmington until it opened the center in 2012, where it began holding lower committee meetings and some MRC/MC meetings. The RTO had historically been centered around the I-95 corridor, and the city was deemed a good midpoint, Dave Anders, director of stakeholder relations, explained to the committee.

Guerry said that the Valley Forge location provides stakeholders cost efficiencies, as they have access to PJM staff and resources while they are there.

Virtually all stakeholders who spoke expressed reluctant support for the proposal, saying that while Valley Forge is harder to get to because of a lack of public transit options, the facility provides a far better meeting experience. Several noted that there are often technical difficulties at the Chase Center — the RTO's meeting site in Wilmington — with unreliable wireless connections causing delays in voting.

Several others noted that ride-sharing services such as Uber have made up for the lack of public transportation in the area.

Stakeholders were prepared to approve the proposal immediately Thursday, but Guerry said she wanted to give PJM meeting planners time to review the RTO's contract with the Chase Center, as well as give any on-the-fence members time to think about the issue. ■

— Christen Smith and Michael Brooks

PJM News

TOs Back PJM Decision on Supplemental Projects

By Christen Smith

Transmission owners told PJM last week that its rules for supplemental projects satisfy the RTO's obligation as a regional planner, despite protests from dissatisfied load interests.

Executives from a dozen TOs sent a *letter* to the Board of Managers on Thursday applauding the way staff addressed stakeholder concerns while implementing revisions to Manual 14B: PJM Region Transmission Planning.

The TOs said the current manual language reflects months of compromise by stakeholders and demonstrates PJM's willingness to increase transparency at every stage of the Attachment M-3 process approved by FERC.

"This has resulted in a process that harmonizes the presentment of baseline and supplemental projects such that there is minimal difference between the two presentments beyond the PJM board's approval of baseline projects," the letter reads.

At January's Markets and Reliability Committee meeting, PJM rejected two paragraphs in a set of revisions that stakeholders approved for inclusion in Manual 14B. (See *PJM Rebuffs Stakeholders on Supplemental Projects*.)

The paragraphs came from an American Municipal Power *proposal* — designed to address load interests' concerns — that said supplemental projects "should be based on written articulable criteria, models and guidelines that are measurable and, to the extent available, quantifiable (e.g., asset replacement prioritization) so stakeholders can replicate TO planning decisions and validate their proposed solutions." AMP cited the transparency principles in FERC Order 890, saying TOs should disclose asset-specific condition assessments and the criteria and models supporting supplemental projects.

PJM staff opted against incorporating the revisions, saying the disputed text is an "overreach" of the RTO's Regional Transmission Expansion Plan, which is limited to studies of load flows, short circuits and stability.

The TOs backed the RTO's stance, saying "PJM correctly determined that certain suggested changes went beyond and/or were not consistent with the FERC orders, and that stakeholders were advancing positions through manual changes that FERC had already rejected.

"What must be considered is that PJM and the PJM TOs have the ultimate responsibility for 'keeping the lights on,'" the letter concludes. "This consideration must be weighed when planning processes are modified."

Load interests struck an entirely different tone in their Feb. 8 *letter* to the board, chastising PJM for failing to thoroughly vet the necessity of supplemental projects, which are managed by TOs and not deemed necessary for compliance under the RTO's reliability, operational performance or economic criteria (See *Load Interests Blast PJM for Inadequate Transparency*.)

In a separate *letter* to the board Feb. 11, the American Public Power Association and the Transmission Access Policy Study Group said PJM's refusal to incorporate AMP's language lacks "compelling justification." ■

Transmission owners sent a letter to PJM's Board of Managers supporting how staff implemented revisions to supplemental project planning rules. | *Entergy*

PJM News

Monitor Asks FERC to Cut PJM Capacity Offer Cap

Market Power Alleged

By Christen Smith

PJM's Independent Market Monitor asked FERC last week to order changes to the RTO's Capacity Performance assumptions, saying the current rules allow sellers to exercise market power.

PJM Independent Market Monitor Joe Bowring | © *RTO Insider*

The Monitor said PJM's default market seller offer cap (MSOC) has been inflated by the "unreasonable and unsupported" expectation of 30 performance assessment hours (PAHs) annually. As a result, the Monitor said, it has been prevented from effective mitigation of market power, able to subject only a small number of very high offers to unit-specific cost review.

"The public cannot rely on … auctions using the current default MSOC to ensure just and reasonable capacity market prices," the Monitor said in its complaint, filed Thursday (*EL19-47*).

Unit-specific MSOCs are supposed to be based on avoidable costs and the opportunity cost of taking on a CP obligation, with its expectations of bonus payments or penalties for performance during an emergency. (The time span for measuring performance was changed from PAHs to five-minute performance assessment intervals (PAI) in compliance with FERC Order 825 in 2018.)

"Given that the … the actual expected number of PAH (PAI) in the energy market is a very small number close to zero, the opportunity cost is below the net avoidable cost of most resources, and therefore the competitive offers of most CP resources are not based on the opportunity cost of taking on a capacity performance obligation," the Monitor said.

Auction 'not Competitive'

In August, the Monitor concluded that ratepayers were overcharged by $2.7 billion (41.5%) in the 2018 Base Residual Auction because of economic withholding encouraged by the inflated MSOC. (See *IMM: PJM 2018 Capacity Auction was 'Not Competitive.'*)

In October, the Monitor warned PJM it would "circle back" to the issue after the Members Committee rejected Tariff *revisions* altering the existing calculation. (See "Market Seller Offer Cap Balancing Ratio," *PJM MRC/MC Briefs: Oct. 25, 2018*.) RTO staff said they believed no further investigation of the issue was required.

The rejected proposal was one of four advanced through the stakeholder process after PJM reported its first load shed event since implementing PAIs as part of the CP overhaul in 2015. (See "PAI Fallout," *PJM Market Implementation Committee Briefs: June 6, 2018*.)

The incidents occurred May 29 after a transmission line and a transformer at the Jackson Road substation in American Electric Power's transmission zone tripped out of service. With three other transmission lines offline for maintenance, the outage caused concerns about being able to deliver power in a section of northwestern Indiana.

A PAI is triggered when PJM determines a supply reliability issue exists and provides credits for generators that overperform their capacity commitments and penalties for those who underperform. No credits or penalties were assessed in this incident.

PJM's Inaction 'Misses the Point'

During stakeholder discussions, the Monitor suggested using 60 PAIs or five PAHs — compared with the current 360 PAIs/30 PAHs — in calculating a more appropriate seller cap. While other members disagreed with the suggestion, the Monitor is more concerned with PJM's decision to drop the issue entirely.

The Monitor said "PJM misses the point" in asserting that it has no basis for changing the rule after the failure of the stakeholder vote.

It described the RTO's opposition as "inconsistent" with existing analysis, noting most resources using the default MSOC offered below that number in BRAs.

"The failure of stakeholders with divergent financial interests to agree on this issue is not evidence supporting the continued use of a number of PAI (PAH) that was excessive when it was introduced and which evidence shows is even more excessive now," the filing reads. "The failure to act is effectively support for the excessive MSOC." ■

Company Briefs

ITC Promotes Midwest President Tanner

Krista Tanner, president of ITC Midwest, began her new position as senior vice president and chief business unit officer for parent company ITC Holdings last week.

Tanner will remain president of Midwest while also being responsible for the strategic direction, customer service, local government and community affairs, and financial performance for her company and ITC's three other operating subsidiaries: ITC Great Plains, ITC Transmission and Michigan Electric Transmission Co.

"Krista's leadership and track record exemplify ITC's focus on delivering value for customers," ITC President and CEO Linda Apsey said. "This appointment strengthens ITC's emphasis on the performance of our business units as the foundation for operational excellence as we work to modernize electrical infrastructure."

More: *ITC Holdings*

Siemens to Supply Motors for Eviation Airplanes

Israeli startup Eviation Aircraft and Siemens announced last week that they will jointly develop propulsion systems for the Alice, Eviation's nine-passenger all-electric regional commuter plane.

Eviation plans to debut the Alice at the Paris Air Show in June. The company says it will be capable of flying nine passengers at 253 mph up to 650 miles on a single charge from

its 900-kWh lithium-ion battery pack.

"By utilizing Siemens' advanced motor technology, Alice is further established as a front-runner for high-performing zero-emission electric aviation," Eviation CEO Omer Bar-Yohay said in a statement. "We are thrilled to collaborate with Siemens to develop the first fully operational all-electric regional commuter."

More: *Greentech Media*

Ford Signs PPA with DTE for 500 GWh of Wind

Ford Motor Co. last week signed a power purchase agreement with DTE Energy to supply its Dearborn Truck Plant, where it produces the top-selling F-150, and the Michigan Assembly Plant, where it makes the new Ford Ranger, with 100% wind-generated electricity.

The agreement, for about 500 GWh of wind energy, was made through DTE's MIGreenPower program, the utility's voluntary renewable energy program for large corporate and industrial customers. DTE plans to build and purchase new wind projects to complement its current 13 facilities in order to meet the agreement.

DTE's facilities will also power Ford's Research and Engineering Campus in Dearborn, Mich., and Michigan Central Station, a historic train station that Ford is renovating.

More: *Crain's Detroit Business*

FERC OKs FirstEnergy Sales to Affiliates

FirstEnergy's merchant unit can sell power to two affiliate utility companies after winning competitive solicitation processes, FERC ruled Thursday. The commission said the auctions — conducted using rules set by Pennsylvania and Maryland regulators — met federal guidelines for thwarting affiliate abuse.

In January 2018, West Penn Power requested bids for five tranches of residential service for a 12-month term and five tranches for a 24-month term. FirstEnergy Solutions won one 12-month "bid block" for West Penn's residential load beginning June 1, 2018.

Separately, FES won a 2016 solicitation by affiliate Potomac Edison to provide one 12-month bid block and one 24-month bid block of residential standard offer service, also beginning June 1, 2018.

More: *ER18-809*; *ER18-810*

Federal Briefs

Documents Show Extent of Wehrum's Work Against Regs

Documents obtained by *Politico* reveal never-before-disclosed details of how extensively Hunton Andrews Kurth — former employer of EPA Office of Air and Radiation Assistant Administrator **Bill Wehrum** — worked to coordinate the nation's biggest coal-burning power companies' strategy against the Obama administration's environmental regulations.

Politico obtained 26 pages of briefing materials distributed to members of an umbrella group of utilities Wehrum represented while at the firm, formerly called Hunton & Williams. Known as the Utility Air Regulatory Group, the secretive organization included 25 power companies and six industry trade groups. The materials were marked "CONFIDENTIAL ATTORNEY-CLIENT COMMUNICATION" and outlined goals for a meeting of the group's policy committee. The group agreed to pay the firm a total of $8.2 million in 2017 alone, according to the documents.

Wehrum convened his power plant industry clients on June 22-23, 2017, at his law firm's D.C. offices to lay out a roadmap for attacking the very policies he now oversees, the documents show.

More: *Politico*

Moderate Dems Plan to Introduce National RPS

Sen. Tom Udall (D-N.M.) and **Rep. Peter**

Welch (D-Vt.) plan to introduce legislation in their respective houses of Congress that would set a national 30%-by-2030 renewable portfolio standard.

The bills would represent a moderate alternative to the Green New Deal resolution introduced earlier this month that calls for 100% zero-emission power in 10 years.

Congressional Republicans say top-down requirements should be avoided and stay in states' hands, and any such legislation would not likely pass the GOP-controlled Senate. But House Democrats may also snub the legislation in favor of the GND, which is extremely popular among the party's progressive wing.

More: *Bloomberg Environment*

White House to Examine if Climate Change an Emergency

President Trump is preparing to establish a panel to examine whether climate change affects national security — despite existing reports from his own government and the U.N. showing that global warming is a growing threat.

According to a White House memo dated Feb. 14 obtained by *The New York Times*, White House staff members have drafted an executive order to create a 12-member committee, which will include an adviser, **William Happer**, whose views are sharply at odds with the established scientific consensus that carbon dioxide pollution is dangerous for the planet.

The memo casts doubt on multiple scientific and defense reports concluding that climate change poses a significant threat to national security, saying they "have not undergone a rigorous independent and adversarial peer review to examine the certainties and uncertainties of climate science, as well as implications for national security."

More: *The New York Times*

State Briefs

ARKANSAS

Co-ops Name Interim CEO to Replace Highley

Bill Conine, CEO of Petit Jean Electric Cooperative, was named the interim president and CEO of Arkansas Electric Cooperative Corp. and Arkansas Electric Cooperatives Inc. last week.

For now, he replaces Duane Highley, who recently accepted a position as CEO of Tri-State Generation and Transmission Cooperative. The AECC and AECI board of directors have launched a nationwide search for the next CEO.

More: *El Dorado News-Times*

CALIFORNIA

SoCalGas Joins Pro-gas Coalition

Sempra Energy's Southern California Gas has joined an organization trying to "rally support" for gas as state policymakers and environmental groups push to phase it out.

According to the organization, Californians for Balanced Energy Solutions, "There are powerful organizations that are working to take away your right to choose affordable natural and renewable gas." Its members include real estate agents, agriculture groups and labor unions.

The move is in response to the release of a plan from environmentalists, local governments and electric utilities — including Edison International's Southern California Edison — to cut the state's building emissions by 40% by 2030 and adopt zero-emission building codes for homes by 2025.

More: *Bloomberg*

LOUISIANA

NOLA City Council Fines Entergy $5M for Astroturfing Scandal

The New Orleans City Council last week passed a resolution to impose a $5 million fine on Entergy four months after an independent investigation concluded that the company "knew or should have known" that one of its subcontractors was paying actors to support its proposed power plant at council meetings.

But the council also withdrew proposed resolutions to rescind its approval of the plant and restart the hearing process for it.

The resolution requires Entergy to file an application if it "becomes aware of the possible need" for expenditures on the plant that put the total cost above $211 million. The council will then have to review the spending and find it to be prudent before Entergy can recover those costs.

More: *The Lens*; *The Advocate*

MASSACHUSETTS

State House Speaker Proposes $1B Environmental Grant Program

Rep. Robert DeLeo (D), speaker of the state House of Representatives, has proposed a sweeping $1 billion environmental grant program that, over the next decade, would fund municipal efforts to build renewable energy infrastructure and invest in climate resilience programs.

DeLeo said the funding would continue the state's dedication to combating climate change while giving each city and town the flexibility to make locally driven decisions.

The proposal, referred to as the GreenWorks Resilient Communities Investment Plan, would allocate the $1 billion over 10 years. Communities would apply for grants through the Executive Office of Energy and Environmental Affairs to fund the installation of solar facilities, electric vehicle charging stations, resilience infrastructure and more.

More: *State House News Service*

MICHIGAN

Whitmer Issues New Executive Order After Legislature Rejection

Gov. Gretchen Whitmer (D) issued a new

executive order last week to reorganize the Department of Environmental Quality, after her first attempt was rejected by the Republican-controlled Legislature.

The new order leaves in place — for the time being — two industry-dominated review panels that can overrule department decisions on the issuing of environmental rules and permits and have been derided by environmental critics as "polluter panels."

Whitmer said the two panels will remain in place while she awaits a requested opinion from Attorney General Dana Nessel (D) on their legality.

More: *Detroit Free Press*

MINNESOTA

Metro Transit Takes its 1st Electric Bus out for a Spin

The Minneapolis-St. Paul area's Metro Transit last week rolled out its first electric bus for a ceremonial around-the-block test drive ahead of its official June debut.

The environmentally friendly electric bus is one of eight that will fuel the $37 million C Line, a rapid bus route that is slated to begin service June 8. The 9-mile line will connect the Brooklyn Center Transit Center with downtown Minneapolis, mostly through the city's North Side.

The transportation sector is the No. 1 contributor to greenhouse gas emissions in the state, with heavy-duty vehicles like buses playing a major role. Metro Transit hopes to gradually electrify its fleet of rapid and regular buses with the purchase of 19 new 40-foot electric buses, which will begin to arrive in 2020.

More: *Star Tribune*

MONTANA

GOP Lawmakers Rally Behind 'Save Colstrip' Bill

The state Senate Energy Committee last week voted 9-4 to advance a bill that would allow NorthWestern Energy to buy a larger share of the troubled Colstrip power plant and pass all future costs onto customers without question.

Only one Democrat sided with the committee's eight Republicans to support the bill. Sen. **Tom Richmond (R)**, the bill's author, says it would allow NorthWestern to buy for $1 ownership shares from Colstrip's five other owners. The company's customers would then be obligated to cover all its future costs related to the power plant, meaning Colstrip costs would remain on their bills even after the power plant closed.

"This bill represents an opportunity to establish more low-cost reliable coal power onto NorthWestern Energy's system, and it represents, as we all know, an effort to keep Colstrip generating and keep Colstrip 3 and 4 running at or near capacity; they are a valuable asset to Montana," Richmond said.

More: *Billings Gazette*

OKLAHOMA

ALJ Rejects Move Questioning OG&E's Plant Upgrade Costs

The Sierra Club last week tried unsuccessfully to convince an administrative law judge at the Corporation Commission to require Oklahoma Gas and Electric to prove its 2016 decision to install scrubbers at its Sooner Plant coal-fired units was prudent.

The organization argued that the hearing considering the utility's pending rate increase request, which includes a request to recover costs for the upgrades, shouldn't be allowed to proceed without information about those costs. The ALJ denied the request.

The current case, filed Dec. 31, asks the commission to allow the utility to boost its rates by $77.6 million per year (4.4%). The company is seeking the request in part to recover $534 million it spent to install the coal scrubbers at Sooner and $75 million it spent to convert two other coal units at its Muskogee power plant from coal to natural gas. Beyond recovering those costs, the rate increase also would give the utility an improved return on equity, better depreciation rates and compensation for costs it incurred to dismantle aging plants.

More: *The Oklahoman*

WASHINGTON

Legislators Propose Carbon Tax as Part of Transportation Funding

OG&E

State lawmakers last week proposed a carbon fee as part of a transportation funding package, the third major attempt at limiting the atmosphere-warming gas through such a policy since 2018.

At $15/ton, the fee would raise about $7.9 billion over the next 10 years, part of a $17.1 billion fee-and-bond package unveiled by Senate Transportation Committee Chairman Steve Hobbs (D).

The package also includes a 6-cents/gallon fuel tax increase and would fund projects including highway maintenance and the state ferry system. It would also fund federally mandated culvert replacement projects, expected to cost $3.5 billion alone according to Hobbs' estimate.

More: *The Associated Press*