RTO Insider
Your Eyes and Ears on the Organized Electric Markets
CAISO ■ ERCOT ■ ISO-NE ■ MISO ■ NYISO ■ PJM ■ SPP

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NERC CEO on Leave After Arrest for Domestic Violence

By Rich Heidorn Jr.

Police photo of Gerry Cauley

NERC placed CEO Gerry Cauley on a leave of absence Saturday after he was arrested for domestic violence at his home outside Atlanta

According to local media reports, Cauley, 64, of Duluth, Ga., was briefly held Friday in the Gwinnett County jail on charges of battery/family violence, a misdemeanor.

The NERC Board of Trustees posted a notice saying it "is aware of the personal incident involving" Cauley and naming General Counsel Charles Berardesco as interim CEO.

Cauley is on a leave of absence "until further notice," the board said, adding that it is "taking steps to ensure the work of NERC continues seamlessly."

Reached by phone before the statement was posted, NERC Board Chairman Roy Thilly declined to say whether he had spoken to Cauley but said he had been released from jail.

"I don't want to discuss any further what our process is," he said. "Obviously the board is aware, and we need to proceed very deliberately and expeditiously to determine what the facts are."

Asked whether NERC was aware of any prior history of domestic abuse, Thilly said, "Not to my knowledge."

A FERC spokeswoman said the agency had no comment.

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DOE, Pugliese Press 'Baseload' Rescue at NARUC

Chatterjee to Push Interim 'Lifeboat'; Powelson, LaFleur Noncommittal

By Rich Heidorn Jr.

BALTIMORE — Department of Energy officials and FERC Chief of Staff Anthony Pugliese traveled 40 miles from the capital Monday to make their case for coal and nuclear price supports at the National Association of Regulatory Utility Commissioners' 129th Annual Meeting.

In the morning, Pugliese and Bernard McNamee, DOE deputy general counsel for energy policy, spoke at a breakfast meeting

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FERC Commissioner Cheryl LaFleur listens as Department of Energy official Scott Cunningham argues in favor of the NOPR. | *© RTO Insider*

NOPR Backers, Foes Seek Last Word at Comment Deadline (p.33)

NOPR Reply Comments Bring More Criticism of PJM Proposal

By Rich Heidorn Jr.

PJM's proposed alternative to the Department of Energy's proposed coal and nuclear price supports came under fire last week, as market monitors, regulators and other RTOs joined PJM Independent Market Monitor Joe Bowring in opposition.

PJM was harshly critical of the DOE Notice of Proposed Rulemaking, which would provide cost-of-service payments for coal and nuclear plants with at least 90 days of on-site fuel supply (RM18-1). Coal and nuclear generation is responsible for more than 50% of PJM's winter fuel mix, more than any other region in the U.S., excluding VACAR South.

Instead, the RTO called on FERC to order it and other RTOs to file price formation rule changes within 180 days. It has proposed that inflexible generators be allowed to set LMPs. CEO Andy Ott says that by increasing energy prices and creating a steeper supply curve, the change would reduce uplift and increase incentives for following dispatch instructions. (See *Critics Slam PJM's NOPR Alternative as 'Windfall'*.)

At a conference in Camp Hill, Pa., on

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Early Adopter Pa. Contemplates Potential Retreat from Competitive Markets (p.28)

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In This Week's Issue

COUNTERFLOW
BY STEVE HUNTOON

Clunker Poster Child

By Steve Huntoon

Huntoon

Are you up for a pop quiz today? OK here we go, and please no peeking ahead to the answers.

Q1. In their comments to FERC on the Department of Energy proposal, how many times did FirstEnergy and Murray Energy use the word "baseload" to refer to the generation they want subsidized?

a. 4
b. 40
c. 400

Q2. What does "baseload" mean according to DOE's Energy Information Administration, in percent of hours that a plant runs?

a. About 40% of the time
b. About 80% of the time
c. About 100% of the time

Q3. What percent of hours did FirstEnergy's W.H. Sammis coal plant, our clunker poster child, run last year?

a. About 40% of the time
b. About 80% of the time
c. About 100% of the time

Q4. In their comments to FERC, how many times did FirstEnergy and Murray Energy use the word "premature" to refer to retirement of the generation they want subsidized?

a. 17
b. 117
c. 170

Q5. How old are FirstEnergy's Sammis units slated for retirement?

a. 18 years
b. 38 years
c. 58 years

Q6. The ages of FirstEnergy's Sammis units are…

a. More than the average retirement age of coal plants for every year since 1999.
b. Less than the average retirement age of coal plants for every year since 1999.

Q7. How much would it cost consumers to subsidize the Sammis units?

a. $1 million
b. $1 billion
c. No one has the foggiest idea.

The Answers

The answer to Q1 is c, FirstEnergy and Murray Energy use the word "baseload" an amazing 400 times. Truth by repetition.

The answer to Q2 is c, about 100% of the time. The meaning of a "baseload" plant is one that "produces electricity at an essentially constant rate and runs continuously," per DOE's EIA glossary.[1]

The answer to Q3 is a, about 40% of the time. EIA data show Sammis 2016 generation as 8,112,503 MWh relative to Sammis plant capacity of 2,220 MW. So the Sammis capacity factor is 41.7% (8,112,503 MWh[2] divided by 2,220 MW divided by 8,760 hours/year).

Let's pause here to observe that FirstEnergy's Sammis plant, running about 40% of the time, cannot be a baseload plant, which by EIA definition must run about 100%. It is not even close.

And this isn't some recent phenomenon due to low natural gas prices and/or renewable penetration. The EIA data show that the Sammis plant has had a poor capacity factor since *2009*.

And I haven't cherry-picked the Sammis plant. The Sammis units are the largest units that FirstEnergy has identified for future retirement to PJM.[3]

That's why Sammis is our clunker poster child!

OK, back to the answers.

The answer to Q4 is c, FirstEnergy and Murray Energy use the word "premature" an amazing 170 times.

The answer to Q5 is c, 58 years. The retiring Sammis units were built from 1959-1962, per the FirstEnergy website, and they're scheduled to retire in 2020.

The answer to Q6 is a. The average retirement age of coal plants for every year since 1999 has never exceeded 54 years.

Let's pause here to observe that the retiring Sammis units are *old*, almost as old as me. They're well past the average annual retirement ages of coal plants.

Sammis Power Plant | *Robert S. Donovan / CC BY-NC 2.0*

So there is absolutely nothing "premature" about the Sammis units retiring.

The answer to Q7 is of course, c. Nobody has the foggiest idea what it will cost consumers to subsidize the *non*-baseload, *old* Sammis units.

And the cost won't just be squandered consumer money. Keeping clunkers like Sammis around will keep out new power plants that are three times as reliable as the clunkers. Not to mention losing the environmental/public health benefits of cleaner generation.

Let us hope FERC does the right thing.

Steve Huntoon is a former president of the Energy Bar Association, with 30 years of experience advising and representing energy companies and institutions. He received a B.A. in economics and a J.D. from the University of Virginia. He is the principal in Energy Counsel, LLP, www.energy-counsel.com.

[1] https://www.eia.gov/tools/glossary/index.php?id=B

[2] https://www.eia.gov/electricity/data/browser/ (Select the "Plant level data" data set, search for Sammis, and select annual 2016 data.)

[3] http://pjm.com/-/media/planning/gen-retire/pending-deactivation-requests-xls.ashx

[4] https://www.firstenergycorp.com/content/dam/corporate/generationmap/files/W%20H%20Sammis%20Plant%20Facts.pdf

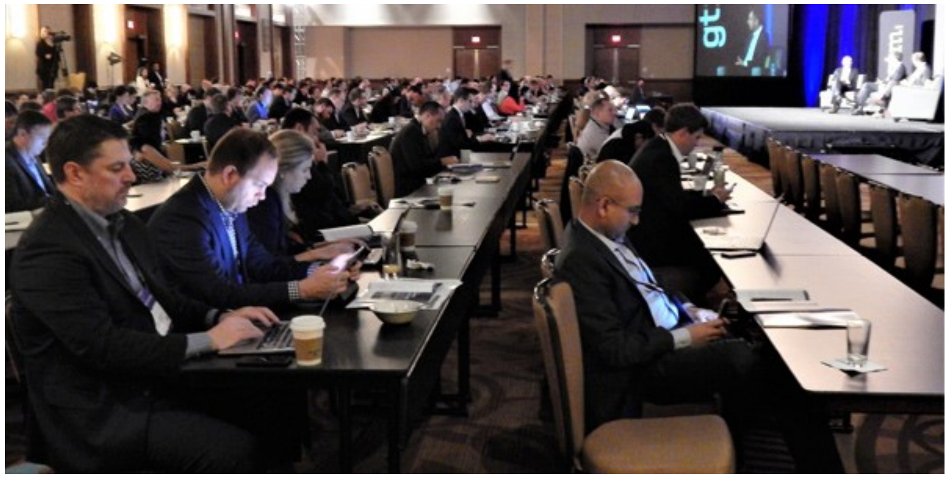
[5] http://www.powermag.com/americas-aging-generation-fleet/ (Table 2)

[6] As discussed in an earlier column, retiring units in PJM have an outage rate ("equivalent forced outage rate – demand" aka ERORd) that is *three* times the new units (14.56% versus 4.42%). http://pjm.com/-/media/committees-groups/committees/mrc/20170928/20170928-item-07-2017-irm-study-presentation.ashx (slide 7).

[7] As discussed in an earlier column, the environmental/public health damage of coal generation amounts to about $32/MWh (even before greenhouse gas impacts), relative to $1.60/MWh for natural gas generation. https://www.nap.edu/catalog/12794/hidden-costs-of-energy-unpriced-consequences-of-energy-production-and (pages 92 and 118).

U.S. Power & Renewables Summit

AUSTIN, Texas — Greentech Media's inaugural U.S. Power & Renewables Summit drew an international crowd of energy sector participants to hear from industry leaders and experts. Panel discussions and one-on-one interviews focused on renewable energy's effects on the power markets, the disruptors of today's markets, navigating uncertainty and building a new energy future.



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DOE Report Author: Identify, Pay for Resiliency Services

Energy consultant **Alison Silverstein**, who drafted the technical portions of the Department of Energy's "Staff Report on Electricity Markets and Reliability," took no credit for the department's Notice of Proposed Rulemaking asking FERC to prop up baseload coal and nuclear generators in competitive markets (RM18-1).

"The fact of the matter is, what we see in the DOE NOPR has no justification in the staff report, except for a few cherry-picked items that politicos wrote into the report," said Silverstein, who readily admits she is "not a big fan" of capacity markets. "There's a direct line from the old capacity markets to the NOPR. We ought to think what resiliency services are, and pay for that. We need to be very specific, and very clear, as to the value of what things matter for effective grid operations … and we need to pay for every one of them."

Saying that the energy markets are not facing a market problem, but a "glut," Silverstein said the "best cure for over-capacity is retirements."

"If we can clear out some of the inefficient plants sucking away money, we can see whether it's a price-formation problem or too many plants lowering the revenue share for everyone," she said. "The reason so many coal and nuclear plants are retiring — and they should be — is not renewables and it's not regulations. They are old plants. They've done their job, they've made money, they've paid their dues, and it's time for them to move on. It's not a tragedy for the market as a whole; it's a transition. It's what should happen, enabling a more nimble market to occur."

Speaking on the same panel, **Keith Collins**, executive director of SPP's Market Monitoring Unit, said the lack of retirements in the face of "tremendous growth" in wind energy and other renewables, has led to complaints from generating resources not having sufficient revenues and thermal resources self-committing outside the market.

"All these pressures are causing prices to be distorted," he said. "We're looking for solutions to keep resources around, when the signals are saying we don't need these resources."

Collins called for further developments to find value in ramping products, as he said CAISO and MISO are currently doing.

"When you think of the LMP, it takes into account the spatial elements of congestion. Ramp is the time element," Collins said. "Even today, if you look at the five-minute prices, you see signals being sent. A ramping product can better capture that value, and do it in a technologically neutral way."

"We're trying to make the market mechanics work harder than they should be," Silverstein said, agreeing with Collins. "We're trying to pile way too much into energy prices. If we want ramping, by God, let's have ramping. If we want cycling, by God, let's have cycling — but let's pay for it. Let's stop trying to make the energy price so complicated. We should be saying, 'These are the 10 products we need. For these five, you must be able to deliver them in return for being interconnected to the market.'"

Bay Says 'Healthy' Reserve Margins Disprove DOE's NOPR

When a former FERC chairman appears at a conference amid a proposed rulemaking, naturally he will be asked his opinion.

Norman Bay, who resigned from FERC in February after the Trump administration replaced him with Commissioner Cheryl LaFleur, did not hold back. He made it clear he doesn't believe the grid is facing a reliability threat and said the commission could be taking a legal risk in propping up coal and nuclear baseload plants.

"That's the problem … the [DOE] recommendation does not support the problem," Bay said. He made a note of the generally positive RTO/ISO winter assessment reports made during FERC's October open meeting. (See *New England, SoCal Gas Supplies Top FERC Winter Concerns*.)

"The reserve margins are healthy across the U.S. In some of markets and ISOs, the reserve margins are well above what they need to be," Bay said. "A reasonable argument could be made that there's not too little capacity, but too much, which is suppressing revenues for other resources in the markets. The DOE's own study said system reliability was adequate. The month before, NERC said reliability was strong.

"Where's the record of support for this proposal, and how do you get to 90 days of sup-

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U.S. Power & Renewables Summit

Continued from page 4

ply?" he asked. "I think there's a real legal risk for FERC to adopt the rulemaking in its current format. How does FERC deal with the discrimination against resources? FERC has prudently in the past been revenue-neutral, and not picking winners and losers in the marketplace."

Bay said the NOPR could wind up being rolled into the commission's examination on the effect of state policies on wholesale markets and price formation.

"There are some measures FERC could adopt that would be constructive," he said, referring to proposed rulemakings on uplift allocation and fast-start resources. "This amounts to no-regret measures."

Vistra Energy Exec Responds to Recent News

Anthony Maselli, vice president of development and strategy for Vistra Energy, addressed recent events involving his company: the announced $1.7 billion acquisition of Dynegy and the closure of three coal plants with about 4 GW of capacity. (See *Vistra Energy Swallowing Dynegy in $1.7B Deal* and *ERCOT OKs Luminant Coal Retirements*.)

"The Dynegy situation is working out. It will be months and months before closing," he said. Dynegy's assets mean Vistra's portfolio would now be participating in five markets (CAISO, ERCOT, MISO, PJM and SPP) instead of just Texas, Maselli noted.

"It will be dramatic change," he said.

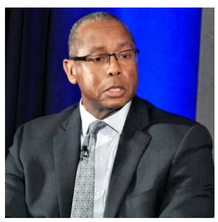
Maselli saw less drama in the retirements. "While retirements are something we had to announce, they're not the end all, be all. I don't think the world is cratering around a 1,500-MW reduction retirement," he said, referring to ERCOT's recent approval of two smaller coal plants.

The Texas grid has had record-low prices the last two years, and with ample resources to handle the latest retirements, the effect on prices could be relatively minimal.

"There hasn't been significant scarcity pricing in the last six years. I'm very hopeful that after all the market reform we've endured since the unforgettable summer of 2011, that this summer will be a good dress rehearsal for scarcity pricing," said Shell Energy's **Greg Thurnher**.

"The most recent retirements moved the needle with respect to forwards, which I think was a very natural market response," he said. "We have some faith that ERCOT will remove impediments from a transmission perspective, to make every megawatt deliverable from an economic perspective. If forwards are indicative of the price volatility we can anticipate next summer, then those who have fast and flexible resources will be tremendously rewarded."

AEP Sees a Bright Future with Wind, Solar Energy



American Electric Power Executive Vice President **Charles Patton** recalled when his company merged with Central and South West in 2000, it resulted in the "largest coal burner in the Western Hemisphere," with a fuel mix consisting of 90% coal.

Fast forward to today, when coal accounts for 47% of AEP's fuel capacity and renewables make up 13%. The Ohio-based company has announced a $4.5 billion wind farm project in the Oklahoma Panhandle, and said during its most recent earnings call that it plans to add 8.4 GW of wind and solar by 2030.

"I will confess, there was a time I did not believe I would have publicly stated that you would be able to interject or intermingle renewables to the extent we've been able to," said Patton, who is responsible for the corporation's external affairs. "If you were a utility guy, that wasn't something that you necessarily believed would be possible to the degree it is today. We see even more possibilities as we move toward the future, but you still have to get the regulators on board."

Patton recalled when the renewable industry would intervene in AEP rate cases and ask the company to move faster.

"The reality is, when you're a regulated utility, you're not the one calling the shots," he said.

Patton said AEP realizes the future of its remaining coal plants is "limited," even after "we spent more money making them compliant with EPA standards than it took to build them in the first place." Many of AEP's units are scheduled to retire around 2040, he said.

And in their place?

"Everything we look at tells us wind and solar are good," Patton said, referring to their prices. "They're very good with [tax credits], they're good without. With or without the tax credits, we see wind and solar in our future. We can put that $4.5 billion project into rate base and actually lower customer rates, because of the [credits]."

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Wood Mackenzie's Clare Magee (right) facilitates a panel on the Texas market, featuring (left to right) Shell Energy's Greg Thurnher, ERCOT's Cheryl Mele and Vistra Energy's Tony Maselli | *© RTO Insider*

U.S. Power & Renewables Summit

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Actions in DC Creating Problems for Renewables

Participating on a panel discussing changing market fundamentals, Amy Francetic, senior vice president with generation and energy storage developer Invenergy, said a House Republican tax bill that would cut the wind production tax credit by more than a third only adds to instability in the market. (See *GOP Tax Bill Would Trim PTC, Drop Credit for EVs*.)

"The wind and solar industries had a deal that's been agreed upon," Francetic said. "We agreed upon a phaseout. The industry has spent the last year, meeting all the leaders in Congress. 'Don't worry, we had a deal. We won't change it.' Then lo and behold, the tax plan had a reduction in the PTC. … It sends a message to the industry and halts financing. There's really no good reason for it."

All is not lost, Francetic said, pointing to continued technological advances.

"What we have going for us is that physics is on our side. The physics of the equipment area is producing cheaper and cheaper prices. [The advancements] are not going to stop."

Todd Glass, a partner with the California-based Wilson Sonsini Goodrich & Rosati law firm, agreed with Francetic, saying what is happening in D.C. isn't helping the industry.

"We continue to design markets that allow for competition, price signals and innovation," he said. "The deregulation craze that's going on in the EPA is doing more damage in the long run than anything else."

Besides, the markets are working, said Thomas McAndrew, a founder of Texas distributed energy provider Enchanted Rock. As evidence, he pointed to the Vistra plant retirements.

"ERCOT is shifting from the old model to the new model," he said.

The Digital Grid of the Future

A panel of "out-of-the-box" thinkers took on how best to integrate renewables in a regulated industry that moves slower than the world around it.

"The entire structure enables the incumbents," said Kerinia Cusick, cofounder of the Center for Renewables Integration. "At the same time, they're hampered by a regulatory structure that requires them to go through a two-to-three process to approve any changes they want to make. But the technology's already moved on. It's already changed.

"It makes it hard to work in that environment. Our entire structure is one of who's got the money to lobby, who's on all these boards of directors and governance. A lot of the incumbents have been fat and happy, but they're not so fat and happy right now."

Sanjeev Addala, GE Renewable Energy's chief digital officer, said renewable energy itself is "ripe for transformation."

"We're creating an economic digital system for the new industry," Addala said. "How do we collect all the data and apply analytics to improve their performance? Next-level artificial intelligence is putting the computing resource at the wind-farm level, so you understand the forecast and the analytics right at the edge.

"In the future, the grid is going to become very autonomous," he predicted. "Wind farms could become a self-loading system, with everything talking to each other."

"I've heard all this hype about smart homes, but I wonder when the solar system on my roof will be smart enough to communicate with my home system," said the Environmental Defense Fund's **Lenae Shirley**. "That way, when a cloud passes over, I will be able to keep my demand flat. That's why digitization is so important."

— Tom Kleckner

CAISO NEWS

Wildfires Color California PUC Utility Decisions

By Jason Fordney

SAN FRANCISCO — Utilities are dealing with several wildfire-related proceedings at the California Public Utilities Commission, which is exploring taking a larger role in responding to natural disasters and emergencies.

The commission Nov. 9 unanimously approved a series of emergency protections for electric ratepayers affected by the wildfires, but it delayed until Nov. 30 a decision on whether San Diego Gas & Electric (SDG&E) will be a permitted to recover costs from fires occurring a decade ago.

Up to 30 separate fires raged in Northern California in October, prompting PUC President Michael Picker to discuss an increased role for the commission in responding to such events, such as sending out recovery teams to help residents.

"There seems to be more effective things we can do as people move into recovery," Picker said. "I am curious to see whether we can institutionalize this in a more formal way."

The commission's decision requires utilities to waive deposits for residents re-establishing residential electric and gas service and stop billing homes that cannot receive service. It also disallowed disconnections for nonpayment and extended payment options, among other protections.

"It's not as if this is the only catastrophe that we are going to have to respond to," Picker added. "They are clearly increasing more in frequency and severity." The PUC also heard about widespread loss of telephone service during the emergency because of power outages and structural damage.

"Acting quickly to protect consumers that have been affected by these tragic fires is very important," said Commissioner Liane Randolph, highlighting the suspension of customer referrals to collection agencies.

Commissioner Martha Guzman-Aceves noted that utilities "are already acting on many of these under their own discretion," and "it is one of those positive incidences where everyone is working towards the same end."

Commissioner Carla Peterman suggested

Smoke from the wildfires off the California coast

exploring a set of standard protections and memorandum accounts to track costs. She also thought protections for small businesses and institutions should be explored.

"These are quick responses — we may need to do much more," Commissioner Clifford Rechtschaffen added.

At the meeting, the PUC also temporarily waived the regulatory requirement that Pacific Gas and Electric charge affected customers for electric service related to wildfires. The utility asked for permission to waive the cost of estimated installation and remove costs to provide temporary power. It will instead include the costs in a future application under its Catastrophic Event Memorandum Account.

PG&E Fights Wildfire Lawsuits

PG&E is already fending off legal action related to the most recent fires. The utility on Nov. 9 asked the Judicial Council of California for a stay of 15 lawsuits by residents regarding fires that occurred within 12 counties. The company said that preliminary investigation shows that one blaze, the Tubbs fire, could have been caused by utility equipment installed by a third party not named in the suits.

"Although plaintiffs have rushed to file complaints while the fires are still burning, the reality is that no one knows what caused any of the fires," PG&E said. "For the fires that cause can be determined, the cause could be a variety of factors."

It said the fires had many different locations, causes and damages.

"Plaintiffs' effort to lump the fires together, both in their complaints and with respect to coordination, is an attempt to diminish their burden of proof with respect to causation," PG&E said.

PG&E Files to Close Diablo Canyon

The commission is due to vote next month on whether to allow PG&E to retire the Diablo Canyon nuclear power plant in San Luis Obispo by 2025.

The PUC's interim chief administrative law judge, Anne Simon, issued a proposed decision on Nov. 8 allowing the utility to retire the 2,240-MW plant and collect about $1.8 billion in costs from ratepayers. About $1.3 billion of that amount is to implement energy efficiency measures to replace the plant's capacity.

PG&E first filed with the commission in August 2016 to retire the plant, submitting a proposed settlement between the utility, San Luis Obispo County, several local cities and environmental groups regarding the closing of the facility. (See *PG&E Files Diablo Canyon Shutdown Request*.)

The company proposes to close both units at the plant upon the expiration of their licenses: Nov. 2, 2024, for Unit 1 and Aug. 26, 2025, for Unit 2. The utility said there is less need for the plant because of new energy efficiency, distributed generation, renewable generation and customers moving to community choice aggregators and direct access.

"In fact, PG&E believes that the continued operation of Diablo Canyon beyond 2025 would exacerbate overgeneration, requiring curtailment of renewable generation," Simon said in the decision. "PG&E's analysis indicates that there is no need to replace Diablo Canyon in order to maintain system reliability."

The proposed decision found that electricity procurement to replace the capacity should be obtained through the state's integrated resource planning proceeding.

PG&E has requested approval to procure three tranches of greenhouse gas-free resources to partially replace the plant's output; retention, retraining and severance for Diablo Canyon employees; and recovery of other costs.

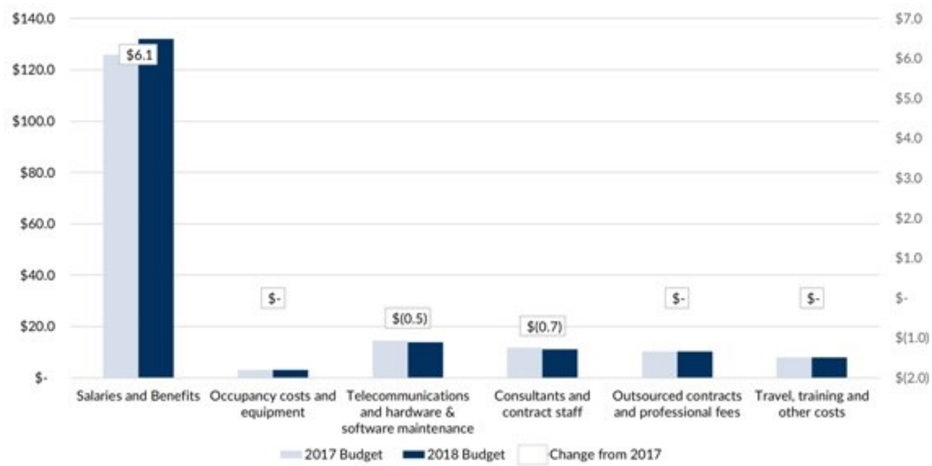
CAISO NEWS

CAISO Seeks Bump in Spending, Revenue Requirement

By Jason Fordney

Increased labor costs from the expanding Western Energy Imbalance Market (EIM) helped push up CAISO's 2018 revenue requirement by $1.9 million to $197.2 million, but growing EIM revenues will offset some of the costs, the ISO said last week.

CAISO is taking comments on its proposed 2018 budget, which calls for $217.4 million in total outlays, up 1.4% from this year. The spending package includes 14 new full-time positions, along with raises, promotions and benefit increases. Offsetting the costs are a projected $3.4 million increase in revenues, including a projected $2.6 million growth in EIM proceeds.

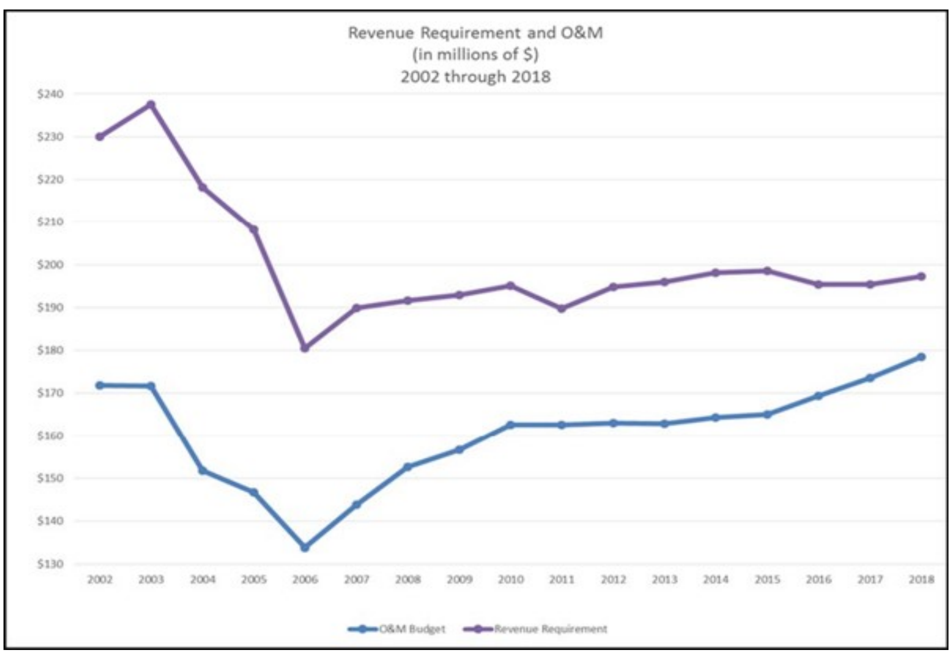


| CAISO

The ISO left its revenue requirement unchanged last year despite a 2% spending increase. (See CAISO Board OKs 2017 Budget with Steady Revenue Requirement.)

"That is almost entirely being driven by EIM," CAISO Chief Financial Officer Ryan Seghesio said of the new employee positions during a Nov. 7 conference call. "We see some needs to add some headcount, particularly in the technology space, to help the EIM market. The good news there is that it gets offset from some EIM revenue." The proposal would bring the ISO's total number of budgeted employees to 614, according to his presentation.

The operations and maintenance budget, which refers to costs of ongoing operations, grew by about 3% to $178.5 million, including the 14 new positions. Debt service — principal and interest payments — remains flat at about $16.9 million. Collection of capital was lowered by $2 million to $22 million to help absorb some of the operations and maintenance increase, he said. Transmission volume is expected to increase slightly to 241 TWh.



| CAISO

Capital and project requirements are budgeted at $18 million. CAISO listed dozens of proposed projects for 2018, divided into market and operational excellence; technology improvements; customer service; and grid evolution readiness and regional innovation opportunities.

EIM administrative charges are projected to grow by 56%, or $2.6 million, to about $7.4 million, because of increased participation. Fees for forecasting intermittent renewables are also projected to grow by 52%, or $1.1 million, to about $3.2 million because of new resources coming online.

But the costs of conducting studies of large interconnection projects are projected to decrease by $700,000, or 37%, to $1.2 million, CAISO said. The ISO recovers its revenue through the grid management charges paid by market participants.

CAISO in the budget proposal also discussed its goals, including aggregating distributed energy and clean resources, citing 21,000 MW of renewables that are connected to the grid.

"The ISO is closely coordinating and collaborating with generators, utilities, transmission owners, energy regulators and diverse stakeholder groups, developing a grid and

Continued on page 9

CAISO NEWS

FERC Settlement Cuts Barclays Market Manipulation Fine

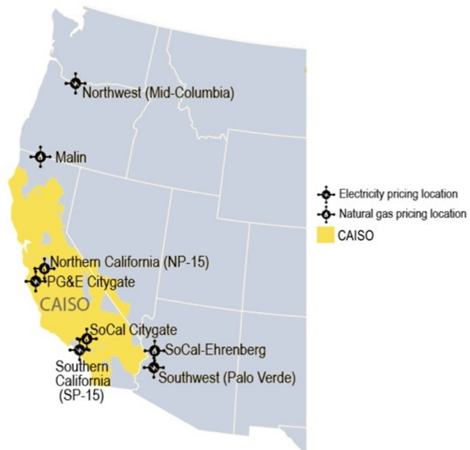
By Robert Mullin

FERC last week agreed to sharply reduce the penalty Barclays Bank must pay to settle claims that it manipulated Western electricity markets a decade ago.

The commission approved a settlement agreement requiring the U.K.-based company to pay $105 million in penalties after company traders engaged in a two-year scheme to influence physical power prices at certain trading hubs in the West in order to benefit from their positions in financial swaps covering those same markets (IN08-8). The illegal trades occurred from November 2006 to December 2008, and involved the Mid-Columbia, NP-15, SP-15 and Palo Verde delivery points.

The agreement represents a significant comedown for FERC, which in July 2013 levied a record $470 million fine against Barclays, which included a requirement that the bank disgorge nearly $35 million in profits from the scheme. Those proceeds were to be paid into the low-income home energy assistance programs (LIHEAPs) of Arizona, California, Oregon and Washington. Former FERC Chairman Norman Bay was director of the commission's Office of Enforcement at the time.

Barclays challenged the penalty in federal court, and last week's settlement indicates the bank largely prevailed in its nearly five-year legal battle with FERC. Under the terms of the agreement, the bank will pay just $70 million in civil penalties, though it must still relinquish its profits from the scheme, just over half of which will be directed to the LIHEAPs. The company and its traders did not admit nor deny committing any violations against the commission's anti-manipulation rules.



Intercontinental Exchange price hub locations | *EIA*

"The commission concludes that the agreement is a fair and equitable resolution of the matters concerned and is in the public interest, as it reflects the nature and seriousness of the conduct and recognizes the specific considerations stated [in the order] and in the agreement," FERC wrote in its decision to approve the order.

One critic of the settlement strongly disagreed with FERC's take.

"FERC's action is an outrage and sends a clear signal to market manipulators: Crime will now pay," Tyson Slocum, director of Public Citizen's energy program, said in a statement.

Slocum said the "egregious" settlement did not occur in isolation but instead points to a broader development in which FERC "may be getting soft on rule-breakers." As evidence, he cited the recent appointment of General Counsel James Danly, who previously served on the legal team defending Dynegy in market manipulation case brought by Public Citizen (EL15-70). One of Danly's former law partners has written articles "attacking" Bay's enforcement actions and appointment as chair, Slocum pointed out.

"Consumers have benefited from FERC's aggressive enforcement of wrongdoers," Slocum said. "The evisceration of the Barclays settlement, when combined with key staffing decisions at FERC, may signal that the days of tough enforcement on banks, hedge funds and other energy traders may be coming to an end."

Slocum called for Congress to hold an oversight hearing on FERC operations to ensure that consumers are protected from energy market manipulation.

David Applebaum, an attorney who previously served as director of investigations in the Office of Enforcement, told Bloomberg that FERC's move was "inevitable" after a federal judge in September ruled the agency had waited too long to bring its case against Ryan Smith, one of the Barclays traders involved in the scheme. Smith, along with fellow traders Karen Levine and Daniel Brin, initially faced penalties of $1 million each, while their manager, Scott Connelly, was ordered to pay $15 million.

"I think once the Smith decision came out, it was inevitable that FERC would have to reduce its damages and civil penalties significantly," Applebaum said.

Levine, Brin and Connelly were covered under last week's settlement.

FERC declined to comment.

CAISO Seeks Bump in Spending, Revenue Requirement

Continued from page 8

market structure that encourages distributed energy resources," CAISO said. "Following a tariff filing and regulatory approval (which is expected in early 2018), entrepreneurs and utilities will be allowed to bundle, or aggregate, DERs such as energy storage, so that any extra energy can participate in the ISO wholesale market just like a utility-scale generator."

Comments on the budget proposal are due on Nov. 14, with a vote by the Board of Governors set for Dec. 13-14.

FERC in September approved the entry of Canadian power marketing firm Powerex into the EIM. (See *FERC Approves Powerex EIM Agreement*.) That company, along with Idaho Power, will begin operating in the market next April. The commission also earlier this month granted existing members PacifiCorp and NV Energy the ability to charge market-based rates in the market. (See *PacifiCorp, NV Energy Gain EIM Market-Based Rate Authority*.)

CAISO NEWS

CAISO Urged to Broaden ESDER Phase 3

By Jason Fordney

CAISO is facing pressure from some stakeholders to broaden the scope of its latest effort intended to increase the participation of energy storage and distributed energy resources in its market.

The ISO is in the beginning stages of its Energy Storage and Distributed Energy Resources (ESDER) Phase 3 initiative, kicked off in September with an issue paper that will be developed into a straw proposal. (See *CAISO Load-Shifting Product to Target Energy Storage*.) Participants in the effort include companies such as eMotorWerks, Stem, investor-owned utilities and the California Energy Storage Alliance.

ESDER Phase 2 unearthed several issues for Phase 3, most which are touched on in the issue paper. Based on stakeholder input, CAISO is proposing that the latest initiative cover rule changes that would relax limitations on how demand response can participate in the market, as well as the integration of distributed resources, microgrids and electric vehicle charging infrastructure. The effort could also explore "multiple-use applications" for energy storage, which recognize the ability of those resources to provide services and receive revenue from more than one entity at a time, such as at the wholesale, transmission and distribution levels.

In a Nov. 6 conference call, the ISO asked stakeholders to prioritize among a list of six topics listed in the issue paper regarding changes to demand response rules, which provide a point of market entry for distributed resources. Those topics include how to handle challenges such as setting start-up and minimum/maximum load costs, dealing with variability of weather-sensitive DR, refining DR aggregation rules and others.

CAISO representatives at various points in the call indicated they do not want to delve too deeply into one particular focus area of the initiative, which includes many complex challenges in implementing new technologies and market products.

But Robert Anderson — chief technology officer for Olivine, a DR and DER services company — urged the ISO not to require commenters to choose among the six topics for the DR portion of the initiative, but instead cover them all.

"When is ESDER Phase 4?" Anderson asked rhetorically. "The question is: 'When do we get another chance at this?' I am very optimistic that you guys can take on a lot more than you think." Instead of a slower approach to the proposals, "maybe we can get through them very quickly, and get them done and get them behind us," he said.

Margaret Miller of Customized Energy Solutions said the microgrid sector is not well-represented in the stakeholder process, and there are a lot of unanswered questions as to how microgrids will participate in wholesale markets.

"There are decisions made today that could unduly limit those microgrids from participating," she said, calling for policy guidance in ESDER 3 or elsewhere. "Otherwise, we are continuing to address these on a one-off basis."

CAISO External Affairs Officer Peter Colussy said microgrids are being studied in other processes. ESDER 3 is aimed at looking at different technologies and platforms to provide various services, not focusing too much on one technology, he said.

"We are not trying to focus on microgrids here," Colussy said.

The CAISO Board of Governors in July approved ESDER Phase 2, which is still pending approval by FERC. (See *New CAISO Rules Spell Increased DER Role*.) That initiative developed a set of alternative energy usage baselines to assess the performance of proxy demand resources, which are DER aggregations of retail customers. It also developed new rules that distinguish between charging energy and station power for storage resources, and created a net benefits test for DR resources that participate in the Western Energy Imbalance Market (EIM).

ERCOT NEWS

Exelon Giving up 4 of 5 Plants to Lenders in Chapter 11 Filing

By Michael Brooks

Exelon will relinquish four Texas natural gas plants to its lenders and pay $60 million to keep a fifth plant in the latest response to what the company called "historically low power prices" in the state.

The plans were detailed in a Chapter 11 bankruptcy filing Nov. 7 by ExGen Texas Power, Exelon's merchant generation business in Texas, and in an 8-K filing by Exelon. It follows Vistra Energy's announcements last month that it would retire 4,100 MW of coal-fired generation in the state.

Exelon said it made the bankruptcy filing to offload most of a $675 million loan due in September 2021. "Pending a competitive bidding process," the company said in a statement, it will pay $60 million to lenders to keep its 1,265-MW Handley Generating Plant in Fort Worth.

"Lenders have agreed to exchange the debt they currently hold in EGTP's other four plants for equity in the plants, effectively taking ownership of these facilities," Exelon said.

The 738-MW Wolf Hollow facility in Granbury, Texas, is one of the four power plants in the state Exelon will sell as part of the bankruptcy of its ExGen Texas Power subsidiary. | *GE Power*

The company told the Securities and Exchange Commission that it expects a pre-tax gain of $125 million to $200 million in the fourth quarter off the sale. It had recorded pre-tax impairment charges of $418 million in the second quarter of 2017 and $40 million in the third quarter for the plants.

The other four plants are the 738-MW Wolf Hollow combined cycle facility in Granbury; the 510-MW Colorado Bend combined cycle in Wharton; the 808-MW Mountain Creek steam boiler in Dallas; and the 156-MW simple cycle facility in La Porte.

The company has been seeking to sell its Texas fleet since at least March, when Reuters reported that it had hired a debt restructuring adviser to help it evaluate its options. This followed a January decision by Moody's Investors Services to downgrade EGTP's debt from B2 to Caa1.

Exelon's stock closed at $41.27/share last Tuesday, up 1.45% from the day before.

Independent Market Monitor Beth Garza told ERCOT's Board of Directors last month that the Vistra retirements will result in higher prices and lower capacity margins, citing two years of "clearly unsustainably low prices with high reserve margins." (See *ERCOT IMM: 'Fat and Happy' Times Ending with Coal Closures*.)

ERCOT OKs Luminant Coal Retirements

By Tom Kleckner

ERCOT last week approved Luminant's proposal to dispose of nearly 2,300 MW of coal-fired generation capacity in Texas.

The ISO's reliability assessments determined that none of the four units at the company's Big Brown and Sandow plants was "required to support ERCOT transmission system reliability."

Luminant, the generation subsidiary of Vistra Energy, announced the retirements of both plants last month. (See *Vistra Energy to Close 2 More Coal Plants*.)

ERCOT said the Texas grid is undergoing "significant change," with new technologies "changing the role that some older generation resources play in grid and market operations." The ISO said lower natural gas prices have been reducing revenues for all generators in recent years, and wind and solar resources continue to flood the market.

Big Brown power plant | *Vistra Energy*

As of Oct. 30, ERCOT has nearly 48 GW of new generation projects under study, and more than 21 GW of new projects have interconnection agreements. That includes more than 10 GW of proposed gas-fired projects, 2 GW of utility-scale solar and more than 8.7 GW of wind projects.

ERCOT has said it will have almost 81 GW of total capacity available this winter, more than enough to meet a projected peak of more than 61 GW. It will update the expected reserve margins for 2018 and the next several years in the next Capacity, Demand, and Reserves Report, scheduled for Dec. 18.

The Public Utility Commission of Texas has also directed the ISO to study and consider the appropriate level of reserves needed to maintain reliability while minimizing costs in its energy-only market.

Big Brown's two units date back to the early 1970s and are capable of 1,150 MW of output. Vistra has said it is exploring a sale of the site north of Houston, but the plant will be shut down if it hasn't been sold by Feb. 12, 2018.

Sandow's units date back to 1981 and 2009 and have 1,137 MW of capacity. They will be closed Jan. 11.

Combined with the earlier retirement of Monticello's three coal units, Luminant will have shuttered 4,167 MW of coal capacity by early next year — more than half of its 8,000 MW of available capacity. The company has only two coal plants left: Martin Lake (2,250 MW) in East Texas and Oak Grove (1,600 MW) in the southern part of the state.

New England-Canada Business Council Annual Conference

Canada, New England Talk Energy Infrastructure

By Michael Kuser

BOSTON — New England's transition to a clean energy future may depend more on new transmission lines from Canada than on new or expanded natural gas pipeline capacity, panelists said at a regional energy conference last week.

Speaking at the New England-Canada Business Council's 25th Annual Energy Trade & Technology Conference, Massachusetts Department of Energy Resources Commissioner **Judith Judson** said the region is heavily dependent on gas-fired generation, which puts stress on the system at times of peak demand in winter.

"A lot of those generators end up switching to oil and emissions become extremely high," Judson said. "It also means that we see some very high prices, and one of the challenges is balancing a clean energy future with affordability." However, a key way to reduce greenhouse gas emissions in the heating and transportation sectors is to electrify, she said.

Massachusetts regulators are at the heart of the current Canada-New England energy conversation. In January, the state will select bidders responding to its July request for proposals for 9.45 TWh/year in renewable energy generation. Hydro-Québec partnered separately with Eversource Energy, Avangrid and Transmission Developers Inc. on three different transmission projects for the Massachusetts RFP and has agreements with Boralex and Gaz Métro to add wind power into the energy mix on each project at the state's request. (See Hydro-Québec Dominates Mass. Clean Energy Bids.)

TDI CEO Donald Jessome agreed that something special is happening between Canada and the U.S. His company is partnered with Hydro-Québec on the New England Clean Power Link, a 154-mile underwater and underground transmission line that would transmit 1,000 MW of Canadian hydropower under Lake Champlain to Vermont. The project bid into the Massachusetts RFP.

"This has been going on for over a decade, discussing how we will connect the two regions, [and] how do we bring clean energy in from Canada," Jessome said. "How do we get that infrastructure in place? A decade ago, when New England governors and Canadian premiers started talking about this and making that a key issue, people started to take notice. In a lot of ways, it's happening already today."

William Hazelip, vice president of business development at National Grid, said, "Market-based solutions are very complicated in design and take time [and] a lot of buy-in from stakeholders. ... Long-term contracts are really the key to moving forward with financing renewable energy projects."

Left to right: Donald Jessome, Transmission Developers Inc.; Martin Imbleau, Gaz Metro; David Pasieka, Liberty Utilities; Will Hazelip, National Grid; DOER Commissioner Judith Judson; and Attorney Kevin Conroy of Foley Hoag. | © *RTO Insider*

Weak Case for Gas?

Slow growth in retail natural gas consumption could weaken the case for increasing New England's pipeline capacity, according to one panelist.

"The region needs more gas but not necessarily more infrastructure because we're adding 2% of new clients every year, but the overall load, yearly based, is not really increasing just because of the economics of energy efficiency," said Martin Imbleau, vice president of operations for Gaz Metro.

Liberty Utilities COO David Pasieka disagreed.

"When you look at the growth for this particular region, with 1 to 2% growth in customers, when you do the long-term projections, we're out of gas," Pasieka said. "There are in Massachusetts a couple of LDCs [local distribution companies] that went into moratorium mode, not being able to expand their customer base. As an LDC operator, I need more customers to be able to justify the spend that I'm currently doing."

Canada used to get gas from the north, but "all those offshore pockets are drying up," he said. "Between Marcellus and Utica, this is one of the largest producers of natural gas in the world and the price point reflects it. This will be good for customers if we can figure out how to move it from that part of the world to this part."

Imbleau countered: "The shoulder months are decreasing, but the peak period is increasing, so maybe what we need is seeking a solution not necessarily in underground facilities with a load factor of 100%, but in facilities that are designed to meet the peak load. They may be more expensive, but [they] make more economic sense in the long run, also in a social sense, including LNG peaking spots differing in different regions."

Technology to the Rescue

Meanwhile, energy storage is fast replicating some of the attributes of gas-fired generation, Hazelip said.

"National Grid just today announced a 6-MW, or 48-MWh, Tesla battery in Nantucket to help defer the need for a third subsea cable to connect the island to the mainland," Hazelip said. "National Grid Ventures is also

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New England-Canada Business Council Annual Conference

Cooperation, DOE NOPR, State RFPs the Topics at NECBC Meeting

By Michael Kuser

Left to right: Rich Paglia, Enbridge; James P. Torgerson, Avangrid; Eric Martel, Hydro-Québec; and John Reed, Concentric Energy Advisors. | *© RTO Insider*

BOSTON — Atlantic Canada, New York and New England are one region geographically, and the jurisdictions will be drawn into ever closer cooperation on energy.

That was the consensus among a dozen or so speakers at the 25th Annual Energy Trade & Technology Conference hosted by the New England-Canada Business Council on Nov. 8-9. Speakers also discussed proposed price supports for coal and nuclear generation and how FERC is likely to treat New England states' contracting for renewables.

NECBC President Jon Sorenson emphasized the benefits of cooperating to balance needs and resources across the area and reminded participants that the bilateral energy trade between Canada and the U.S. is already estimated at $130 billion annually.

Battery for New England

Hydro-Québec CEO Eric Martel said that his company last year exported more than 15 TWh of electricity into New England, about 12% of what the region is consuming now. The company has partnered on six different projects being bid into Massachusetts' recent clean energy procurement. (See Hydro-Québec Dominates Mass. Clean Energy Bids.)

"Our large reservoirs have a combined annual energy storage of 176 TWh," Martel said. "Today we are producing for the Canadian people 170 TWh/year [and] we are exporting about 30 TWh, which makes our production today at 200 TWh. But today our limit [on exports] is the number of transmission lines."

Hydro-Québec began developing non-hydro renewable generation in the early 2000s and has since added 3,500 MW of wind capacity in Québec, Martel said.

"We firm up our domestic wind generation using our hydropower resources, so it's very important that our source for firming is a renewable resource also," he said. "We've been planning for this energy transition that is taking place, but what needs to happen now is to build those transmission lines. At peak periods, hydropower can be adjusted almost in real time, so Hydro-Québec can be the battery for northeastern America."

NB Power CEO Gaetan Thomas suggested how to connect the region to that huge battery.

"The only way to do that is more transmission," Thomas said. "Transmission is king; transmission is going to solve these issues. Our vision should be to tie the whole region

Continued on page 14

Canada, New England Talk Energy Infrastructure

Continued from page 12

developing two 40-MW batteries on Long Island, which will replace gas feeders. That's something we've seen really pick up speed out in California as well. It's gotten to the point [that] in some parts of the country, constrained parts of the system, where it's very difficult to site gas infrastructure, batteries are a great choice. They're becoming cost-effective, and you can get them built in a much shorter amount of time, and they provide other great benefits that the gas peakers wouldn't."

National Grid partnered with Citizens Energy on the Granite State Power Link, an HVDC transmission line to deliver 1,200 MW of new wind power from Canada, and the Northeast Renewable Link, a 23-mile AC line from Rensselaer County, N.Y., to Hinsdale, Mass., to deliver 600 MW of new wind, solar and small hydro into the New England grid.

Imbleau highlighted what Gaz Metro subsidiary Green Mountain Power is doing in Vermont by installing rooftop solar panels and including them in the rate base, as it does with batteries.

"The concept is that it benefits the overall system," Imbleau said. "It's a classic example of where the regulatory regime followed technology. Honestly, it's not happening generally because technology's probably at 4.0 and regulatory regimes are at 1.0, if we're generous, so just allowing a regulated entity to play a role, not in the R&D sector, not in the technology that's available off the shelf, but in the middle spot where there's a barrier of entry and the technology has a social, economic and environmental benefit."

Already Happening

Attorney Kevin Conroy of Foley Hoag noted that all of the top 100 largest corporations in the U.S. have set individual renewable energy goals — and many are seeking 100% renewables.

"How are they going to get 100% in some of the communities that they're operating in?" Conroy said. "Guess what's happening? Small hydro and solar developers are out meeting with Amazon and Walmart and everyone's putting solar panels on their roof or doing community solar initiatives. Those things are happening, and it's happening quite rapidly in California, and I see it in Missouri and see it moving very quickly to this part of the world."

New England-Canada Business Council Annual Conference

Cooperation, DOE NOPR, State RFPs the Topics at NECBC Meeting

Continued from page 13

together and get to net zero [emissions]. That's the only way we're going to avoid the hits [caused by climate change] on the Eastern Seaboard. We're all connected to it; we have that in common."

DOE NOPR DOA?

Many speakers agreed that the U.S. Department of Energy's recent Notice of Proposed Rulemaking in support of coal-fired and nuclear baseload generation wouldn't amount to much, if anything.

But Concentric Energy Advisors CEO John Reed cautioned about being too optimistic.

"If we have one lesson from this administration, if you look at immigration or health care, the answer is, if at first you don't succeed, tweet, tweet again," Reed said. "If this doesn't go somewhere, and if you look at the initiatives that have occurred in Ohio, Illinois and New York to support baseload generation, what is going to come down as the next mandate, the next executive order on these issues? Because I don't think the administration's concerns in terms of supporting coal and nuclear and other baseload generation are going to go away."

"What I would expect — and PJM is already looking into it — is how to price things perhaps differently," said Avangrid CEO James Torgerson. "And I think the other organized markets will probably be told to do the same thing. I think each RTO and ISO is going to be looking at it from their perspective, and [if there is] an issue in their area that needs to be dealt with. FERC will probably push it back to the different regions to get it resolved on a regional basis, because you can't just say it's a national or international problem at this point; it's in certain pockets."

Michael Twomey, vice president for external affairs at Entergy, defended nuclear energy's role as an emissions-free resource. Nuclear power's contribution to New England's energy needs has remained generally unchanged because the retirement of Vermont Yankee was offset by upgrades and increased capacity from other units, he said.

"Oil has effectively disappeared from the landscape, coal is reduced significantly, and hydro and renewables honestly haven't moved that much," Twomey said. "We've seen tremendous gains in carbon emissions reductions in New England over the last 15 years, but that's mainly been attributable to the substitution of natural gas for oil and coal. Well, the oil and coal is going to be gone — soon — and there's not going to be any more low-hanging fruit to achieve carbon reductions, so what we're going to see is probably an increase in carbon emissions from where we are now, going forward, as you see new retirements."

An Accommodating FERC?

FERC is entering a much more "state-centric" cycle, according to Rob Minter, vice president for government and regulatory affairs at ENGIE.

"Confidence in the markets for maintaining things like fuel diversity to keep nuclear plants alive, to integrate renewables, to achieve public policy goals like carbon reduction does not fit with the market structure that we now have," Minter said. "Everyone's trying to build the type of plants they want for their own objectives, for their own fuel reliability, for economic development, to save stranded assets that are uneconomic and underwater but make sense, like a nuclear plant you need to continue to have low carbon. These are not compatible with the current wholesale market that was created in the 1992 Energy Policy Act."

"You start wondering how much of this [NOPR] is about reliability and fuel diversity versus some of the generators who have coal and nuclear plants aren't really making as much as they did in the past," Torgerson said. "So those are things being debated right now." He predicted FERC will set a technical conference so industry participants can examine the issue more thoroughly.

To implement different state public policies on clean energy requires out-of-market actions that are fundamentally incompatible with the wholesale market design, Minter said.

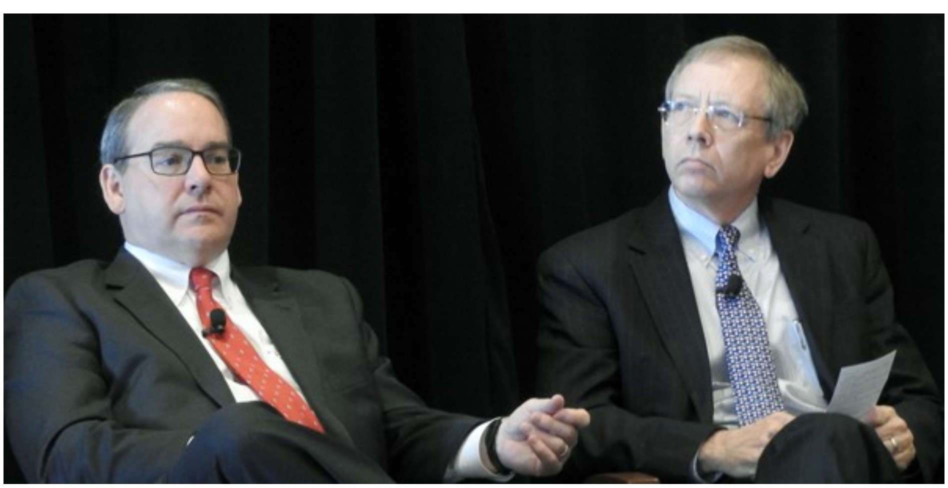
"You can find a way to price those attributes into the markets, but my god, you end up putting dozens of pricing mechanisms and algorithms into an already complicated market," Minter said.

He said although he would prefer fully competitive markets, they have "very little chance of success."

"I would like for it to work; I would like to see fully competitive wholesale markets," he said. "But regulators are not willing to accept the risk of very high energy prices that happen during periods of scarcity."

Leo Desjardins, CEO of Conservation Resource Solutions, said the new, fully staffed commission has arrived at an inflection point for markets.

"Massachusetts probably gets its way on Canadian imports [and] FERC figures out how to accommodate regional and state carbon pricing," Minter said. "And I think you'll see that [the] large renewable procurements that states want, that end up being out-of-market, get accommodated. Only for so long can a commission like FERC fend off states. If the number of states [asserting their public policy] grows, and as the frustration level grows, they eventually have to cave in and accommodate."



Michael Twomey, Entergy (left); and Rob Minter, ENGIE | © *RTO Insider*

ISO-NE NEWS

Generators Seek Rehearing of ISO-NE CONE Ruling

The New England Power Generators Association (NEPGA) last week filed a request for rehearing of FERC's Oct. 6 order accepting ISO-NE's updated cost of new entry value for the RTO's capacity auctions (ER17-795).

ISO-NE is required to recalculate the values every three years and will apply the revisions in next February's Forward Capacity Auction 12 covering the 2021/22 capacity commitment period, as well as in FCAs 13 and 14. (See *FERC Approves ISO-NE CONE, Offer Trigger Updates*.)

In its Nov. 6 filing, NEPGA specified several perceived errors in FERC's order and asked the commission to reconsider its previous finding that a net CONE value based on simple cycle generator technology is just and reasonable. The group instead favors basing that value on the costs needed to support a combined cycle turbine. It is asking the commission to change the rules in time for FCA 12, which begins Feb. 7, 2018.

NEPGA contended that the order was "arbitrary and capricious and not the product of reasoned decision-making" because the commission did not balance the financial interests of capacity providers against the "substantial" benefits conferred to load. The group also argued that the commission failed to consider the record of evidence indicating that simple cycle generators are not likely to be built in New England.

The $8.04/kW-month net CONE value proposed by the grid operator will cause a $1.5 billion reduction in market-wide capacity revenues at equilibrium from FCA 11 to FCA 12, which for a 500-MW capacity resource means a $22.8 million cut in capacity revenues in a single year, and more than $67 million during the three years covered by the auction, NEPGA said.

The filing did not seek to change the commission's approval of offer review trigger price (ORTP) values, which were also part of the order.

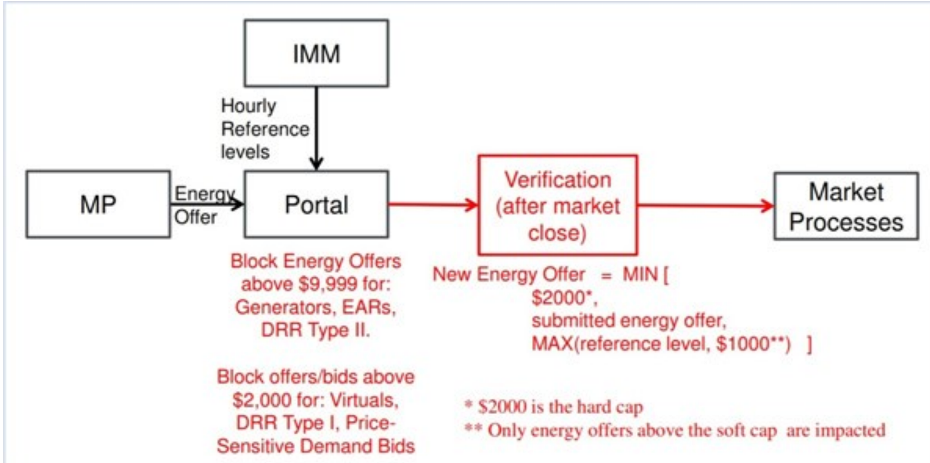
— Michael Kuser

MISO NEWS

MISO's Plans for Wintertime Offer Caps Stalled by FERC

Commission Mostly Accepts Other RTOs' Order 831 Compliance Filings

By Amanda Durish Cook



FERC rejected MISO's proposal to comply with Order 831. | *MISO*

CARMEL, Ind. — FERC on Thursday rejected MISO's Order 831 compliance filing just hours after the RTO told stakeholders it would head into winter with a $1,000/MWh soft cap and a $2,000/MWh hard cap on energy.

MISO's changes were to go into effect Dec. 1, according to Markets System Analyst Chuck Hansen, who spoke at a Nov. 9 Market Subcommittee meeting before the FERC order was released later that day.

The commission ordered the RTO to make a new compliance filing within 60 days (ER17-1570).

Order 831, issued a year ago, required RTOs to cap energy offers at the higher of $1,000/MWh or a price based on Market Monitor-verified costs (soft cap), and to cap those cost-based offers at $2,000 (hard cap). While cost-based offers above the hard cap — or those above the soft cap but unable to be verified before the market clears — would be excluded from setting LMPs, generators making those offers would still be eligible for make-whole payments once their costs were verified (RM16-5). (See *New FERC Rule Will Double RTO Offer Caps*.)

However, FERC determined that MISO completely prohibited resources from submitting cost-based offers above the hard cap.

"Although Order No. 831 requires that such offers are prohibited from being used to set LMP, resources with verified costs exceeding $2,000/MWh must be eligible to recover costs above $2,000/MWh through uplift," FERC said. "Although MISO proposes to increase the maximum incremental energy offer from $1,000/MWh to $2,000/MWh, there does not appear to be any mechanism, outside of proxy offers, that would allow a resource to make a cost-based incremental energy offer above $2,000/MWh. We therefore find that MISO has not met this requirement of Order No. 831."

But based on Hansen's statements at the subcommittee meeting, it appears the RTO did not foresee a problem with its filing.

"It's possible that you can have costs even above $2,000/MWh and have those costs verified and be eligible for make-whole payments, but payments over $2,000/MWh will not be available to set price," Hansen said.

Such offers will be verified by the Independent Market Monitor after market close, Hansen said. The Monitor will also continue to review generator energy offers above $1,000, he said, before they can be used to calculate LMPs. Hansen also said the processing of offers under $1,000 will remain unchanged in MISO's market system.

Those statements are all in compliance with Order 831. In its ruling, however, the commission said MISO didn't satisfactorily explain what factors would be considered when verifying offers, and whether those factors would be new to the RTO's existing mitigation measures. MISO also failed to lay out a process for dispensing uplift payments when an offer in excess of $1,000/MWh is verified after market close or detail how a resource's reference level may factor into that verification, although the RTO's revisions suggested a relationship between reference level and uplift payment, FERC said.

Order 831 was a response to the 2014 polar vortex, in which a severe cold snap sent natural gas prices soaring. Many generators complained they were unable to recover their fuel costs because of grid operators' hard $1,000/MWh offer caps.

Resource-Neutrality, External Transactions

The order also stipulated that offers be resource-neutral, and that external and virtual transactions also be capped at $2,000/MWh.

MISO's market currently automatically blocks all offers above $1,000/MWh. The RTO's new proposal was to block energy offers above $9,999/MWh from generators, Type I demand response resources and external asynchronous resources, as well as virtual offers and those from Type II DR r and price-sensitive demand resources above $2,000/MWh.

However, FERC found that MISO failed to show how its verification process applies to DR and that, with the exception of external asynchronous resources, the RTO was "silent with regard to import and export transactions or the requirement that external transactions be able to make offers up to $2,000/MWh without verification."

For the last two winters, FERC has granted MISO a waiver of its $1,000/MWh offer cap for verifiable offers, although MISO has not needed to use it. (See *MISO Granted Winter Waiver on Offer Cap*.)

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MISO NEWS

8 Projects Set for 2018 MISO Market Roadmap

By Amanda Durish Cook

CARMEL, Ind. — MISO and its stakeholders will devote time to eight projects in 2018, including five-minute settlement calculations, external local resource zones and multiday energy market commitments.

The eight market improvements that MISO management selected from the annual Market Roadmap process were a smaller-than-usual crop of projects in order to make space for the RTO's ongoing effort to replace its computer market system platform. MISO usually devotes time to about 20 market improvements per year.

"We are trying to significantly scale back, because a lot of resources are needed for the market system enhancement," MISO Senior Manager of Market Strategy Mia Adams said during a Nov. 9 Market Subcommittee meeting.

In 2018, MISO and stakeholders will work to implement:

- FERC-mandated five-minute settlement calculations;
- Tighter thresholds on uninstructed deviations from dispatch instructions;
- Automatic generation control for fast-ramping resources;
- The designation of external resource zones in the annual capacity auction — a long-running agenda item at MISO's Resource Adequacy Subcommittee meetings;
- Short-term capacity pricing and reliability standards so energy can be provided within 30 minutes when needed;
- Improved combined cycle modeling that can mimic more combinations of combined cycle units;
- A multiday energy market that would keep generators with long start-up times switched on for more than one day; and
- Rules to factor seasonal needs and risks into the capacity auction — a topic on which MISO is expected to release a white paper next month.

The 2018 work plan does not correspond with the final composite rankings of project importance by MISO, stakeholders and the Independent Market Monitor. For instance, devising a market resource definition for energy storage won top importance overall, but the effort is expected to remain in an idea-gathering stage in 2018. (See "Stakeholders Give Energy Storage Top Spot in Roadmap," MISO Market Subcommittee Briefs: Aug. 10, 2017.)

Other highly rated market projects, including automatic generation control, short-term capacity pricing, improved combined cycle modeling, seasonal consideration and a multiday energy market made the 2018 work plan but won't be tackled in the order of their assigned importance. Four of the six of the top-rated projects originated from stakeholder requests; the other two came from the Monitor.

AGC Design Work Underway

MISO is currently working on a conceptual design for automatic generation control (AGC) software that will deploy its 400 MW of fast-ramping resources more quickly by regulating either up or down. MISO Executive Director of Market Design Jeff Bladen said the RTO is a year away from a final design stage. It hopes to implement AGC by late 2019.

Uninstructed Deviation

The RTO is nearing a final approach on stricter rules for uninstructed deviation.

Monitor David Patton has proposed a new deviation threshold based on a generator's ramp rate instead of the current 8% deviation threshold from dispatch signals.

Last month, Ameren Missouri urged MISO to keep the percentage threshold, saying it could be constricted to 7% or 6% over time. The company also asked MISO to only focus on generators that don't move for an hour within dispatch instructions. (See *Ameren Calls for Milder MISO Response to Uninstructed Deviations*.) Since then, multiple stakeholders have voiced support for Ameren's proposal.

Patton said his proposal will result in lower dispatch costs and day-ahead margin assistance payments. He also said the new calculation would save consumers money and result in better reliability.

"It's surprising there's not a vocal segment of the market behind this change," Patton said. "I think asking generators to move at half of the rate they've offered with a 20-minute grace period is reasonable." MISO and Patton will continue to refine an uninstructed deviation proposal in 2018.

MISO Asks for 5-Minute Settlement Delay

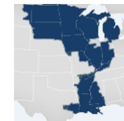
MISO will ask FERC for permission to delay the implementation date for its five-minute settlements for four months, Bladen confirmed.

The RTO will ask for a July 1, 2018, effective date instead of the existing March 1 target in a filing expected within the next week. The extra time will be used for testing, and Bladen said MISO will let stakeholders know when different testing stages begin.

MISO is also moving back the go-live date on its new computer settlements system, aiming for early 2018 instead of a fourth-quarter implementation. The extra months will also be used for testing the new system.

Mia Adams presents the eight selected Market Roadmap projects. | © RTO Insider

MISO NEWS



Members to Vote on Change to Capacity Export Limits

By Amanda Durish Cook

CARMEL, Ind. — MISO stakeholders will vote on whether to broaden export limits for its upcoming capacity auction after WPPI Energy called for the RTO to act.

WPPI engineer Steve Leovy said MISO has not been distinguishing imports sourced outside the RTO from those sourced inside in calculating its capacity export limit (CEL), making available transmission capacity appear scarcer than it really is. MISO calculates capacity import and export limits for each local resource zone to assure that cleared capacity can be delivered.

"We have a small amount of excess capacity in Zone 1, so we stand to have an adverse financial impact if the limit binds," Leovy said at last week's Resource Adequacy Subcommittee meeting.

Leovy said Zone 1's CEL is 516 MW, but the zone cleared 613 MW in the 2017/18 Planning Resource Auction. Zone 1 — which covers portions of Wisconsin, Minnesota, the Dakotas and Montana — has more contributing external resources than any other zone in MISO, Leovy said.

"We're concerned with what we see is improper clearing in the coming Planning Resource Auction," Leovy said. He asked MISO to calculate "appropriate, accurate" limits for the 2018/2019 auction. His motion, calling for the RTO to ensure alignment between the PRA and CEL calculations, will be voted on in an email ballot through Nov. 15.

MISO was planning to update CELs with the creation of external resource zones, but the proposal is now on hold until the 2019/20 planning year. (See *MISO Postpones External Zones Until 2019 Auction*.)

Laura Rauch, MISO resource adequacy manager, said the RTO still plans to create new CELs that correspond with any new external zones that MISO designates. "Our concern is moving a piece of this forward without the rest of it," she said.

Rauch also said MISO's capacity import limits (CILs) and CELs are linked, and it would be inappropriate to update one without the other.

MISO's CIL calculation was changed to account for counterflows created by exports to neighboring balancing authorities in response to a FERC order in 2015 (EL15-70, *et al.*). Leovy said a similar change is needed for CELs.

Some stakeholders said that while they could see others supporting an export limit change, they doubted stakeholders wanted to change CILs and local clearing requirements.

Steve Leovy | © *RTO Insider*

'Shopped Around'

NRG Energy's Tia Elliott said Leovy made a motion that didn't result in action during a similar presentation at a spring 2016 Loss-of-Load-Expectation Working Group. "I'm concerned that maybe that this is being shopped around," Elliott said.

"Thanks for the reminder that this is something that we've been discussing with MISO for quite some time. MISO is aware that this is an issue," Leovy responded. "All I'm asking for is a vote to the timeline to get this fixed, and I don't think this is forum-shopping or dodging the stakeholder process."

Elliott also pointed out that the limits have already been set for the upcoming planning year in MISO's loss-of-load-expectation study, and said changing them now would complicate the process.

Leovy said MISO may be able to implement a fix that doesn't involve revising its Tariff, because it defines CELs as the megawatts of planning resources that can be "reliably exported" from a local resource zone. He believes the language supports transmission providers modeling the physical location of load and planning resources, giving MISO enough information to differentiate between external and internal capacity.

FERC to Examine DTE Reactive Rate Reduction

FERC last week opened a fresh settlement proceeding to determine the fairness of DTE Electric's decreased revenue requirement for reactive power services, an issue already under scrutiny by the agency (ER17-2465).

DTE in April asked the commission to approve an $11 million annual revenue requirement for reactive supply in the ITC transmission pricing zone, down 14% from the current $13 million requirement (ER17-1414). The Detroit-based utility submitted the revised request in September to account for an additional $118,000 decrease stemming from the Nov. 14 retirement of St. Clair Unit 4, an aging coal-fired generator. The first request had been under settlement proceedings for four months by the time of the second filing (EL17-71).

The company cited seven retirements, increased investments in generation units that provide reactive service, and the replacement of its total revenue requirement with unit-specific revenue requirements as reasons behind the rate decrease.

FERC said preliminary analysis shows that DTE's rate schedule may still be unreasonable even with the $118,000 decrease, and consolidated the newly opened settlement proceeding with the existing one under a new docket, EL18-23.

"Because DTE Electric is proposing a rate reduction, but a further rate decrease may be appropriate, we will institute a Section 206 proceeding," FERC wrote.

— Amanda Durish Cook

MISO NEWS

MISO Still Tweaking OMS Survey Assumptions

Ryan Westphal presents to the RASC. | © *RTO Insider*

By Amanda Durish Cook

CARMEL, Ind. — MISO is proposing to once again revise the equation behind its yearly resource adequacy survey issued in partnership with the Organization of MISO States.

The new adjustment for the 2018 OMS-MISO survey adds a "likelihood" weighting to account for the in-service dates of potential new capacity still in the queue, said MISO Resource Adequacy Coordinator Ryan Westphal.

Including queue resources "is a pretty new process, so there's no history of a success rate yet," Westphal said during a Nov. 8 Resource Adequacy Subcommittee meeting.

Last year marked the first time the survey began including in its weighted resource adequacy averages a 35% capacity share of projects in the definitive planning phase of the interconnection queue. But MISO at the time didn't contemplate adding likely in-service dates into the equation. The RTO is now proposing to weight projects represented within that 35% share based on the likelihood they'll complete the queue by a certain year.

Under the proposal, next year's survey will weight according to status — 10% for projects not yet started and in the first phase of the queue, 25% for projects in the second phase and 50% for those in the third phase. All projects with signed generation interconnection agreements will count fully toward offsetting resource adequacy requirements. MISO will also credit new wind and solar resources at 16% and 50%, respectively, of nominal capacity.

The new approach to weighting will result in a far lower forecast of potential resources. In last year's survey, MISO predicted that 2.2 GW of potential resources in the definitive planning phase would come online in 2019. By applying the new weighting to the 2018 survey, MISO expects only 0.1 GW of potential resources will come online in 2019. By 2020, MISO sees 0.7 GW in operation instead of an earlier prediction of 3.3 GW. The in-service forecast climbs to 2 GW in 2021, but that represents just more than half the 3.8 GW predicted last year.

Before this year, MISO stakeholders had criticized the survey as being too alarmist for not including any potential new resources without signed interconnection agreements. Inclusion of a portion of those resources in this year's survey showed MISO will have 2.7 to 4.8 GW of excess resources from 2018 to 2022, a departure from the shortfalls predicted in previous years. (See *Capacity Survey Shows MISO in the Black*.)

Saying the new survey style could "dramatically" impact some zones, Exelon's David Bloom asked for a zone-by-zone comparison showing how predictions for potential new generation will change from this year to the next.

"By changing the assumptions from year to year, I think what MISO is doing is changing results," said Kevin Murray, representing the Coalition of Midwest Transmission Customers. "You're going to go from reporting a surplus in 2019, to reporting a deficit simply by arbitrarily shifting assumptions."

Westphal asked stakeholders to keep in mind that the change deals only with potential resources still in the queue, which the survey only began including last year. He said all generation with signed interconnection agreements will continue to be counted.

"Did the queue get worse in the last year? Did a bunch of resources drop out? What happened to lose about 2.1 GW in 2019?" asked Indianapolis Power and Light's Ted Leffler.

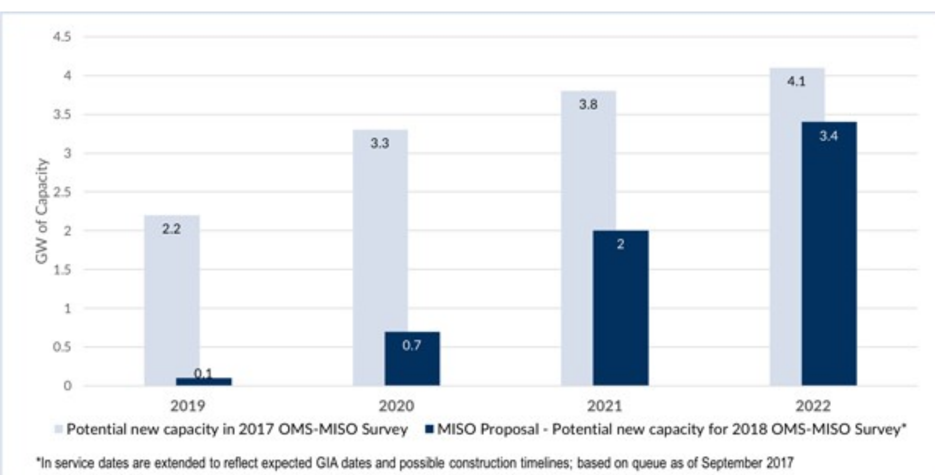
Laura Rauch, MISO manager of resource adequacy coordination, said the 35% of new generation used in last year's survey was not adjusted for the more realistic in-service dates.

"Last year, we took the in-service dates that owners provided with their queue application. Some of those generators hadn't been studied yet," Rauch said. She said updated in-service dates for potential wind resources have the biggest effect on MISO's numbers.

Madison Gas and Electric's Megan Wisersky said she was concerned change would spark public concern about capacity shortfalls.

"You look at how the survey gets used and abused out in the public," Wisersky said. "Two things happen when the survey is released to people who don't deal with these kinds of things every day. One: I know what happens when you show these types of deficits — things get dicey. Two: [People ask if] the queue process is leading to resource inadequacy. And that's what I'm worried about when people without knowledge of these get ahold of them."

Westphal said MISO has time to collect stakeholder advice and refine the survey over the next several months.



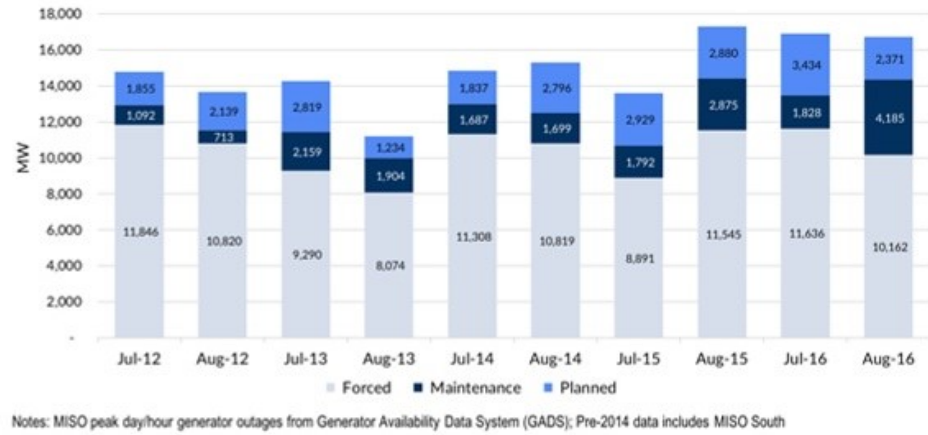
| *MISO*

MISO News

MISO Seeks to Gauge Risk of Peak Season Planned Outages

By Amanda Durish Cook

CARMEL, Ind. — Facing an increased number of outages from an aging fleet of baseload generators across the footprint, MISO officials are examining how they can capture the risk of planned and maintenance outages occurring during peak load.



| *MISO*

Ryan Westphal, MISO resource adequacy coordinator, said an investigation by the RTO's Loss of Load Expectation Working Group suggests a need to account for intentional outages, but stakeholders have not yet reached consensus on how to proceed.

"Every year [since 2012], we saw some number of both planned and maintenance outages that happen on peak," Westphal said during a Nov. 8 Resource Adequacy Subcommittee meeting.

Westphal said MISO has looked into incorporating a combined average volume of planned and maintenance outages into its loss-of-load-expectation (LOLE) calculation, which would bump up the RTO's predicted 17.1% planning reserve margin by about 0.4% in the 2018/19 planning year. The increase would lead to an additional 600 MW being cleared in this year's capacity auction, MISO estimated.

MISO currently does not model any planned and maintenance outages at peak load, assuming such outages are optimized and not occurring during peak demand, but the RTO may want to revise its LOLE study to include the probability that some outages will occur during the peak, Westphal said.

"It leads us to think that all the risk isn't being captured in our planning reserve margin today," he said. Over the last several years, MISO has carried a sufficient reserve margin to cover outages that occur on peak, he added.

During July 2016, MISO experienced about 3.4 GW of planned outages and 1.8 GW of maintenance outages. The following month saw planned and forced outages of 2.4 GW and 4.2 GW, respectively. While those outages combined were nowhere near the volume of forced outages in the summer (12 GW in July, 10 GW in August), they helped nudge total outages above 16 GW during both months, a benchmark that was surpassed only once before in August 2015.

Duke Energy's Brian Garnett asked how a maintenance outage occurs that's not already planned or forced.

MISO defines maintenance outages as less severe mechanical issues that don't result in an immediate outage trip but must be scheduled for repairs, Westphal said.

Indianapolis Power and Light's Ted Leffler asked if the new calculation will be applied universally across the footprint or target individual units.

"I would caution that not every generation unit that has planned outages has load," Leffler said.

Westphal said MISO would discuss the proposal again next month, and asked stakeholders to send written feedback before the Thanksgiving holiday.

MISO Stands by Load Forecast Confirmation Method

CARMEL, Ind. — MISO is defending its methods for validating utility load forecasts after Dynegy last month charged that Ameren Illinois miscalculated its summer peak load forecast.

Michael Robinson, MISO principal adviser of market design, said the RTO's Tariff obligates it to draw a random sample of load-serving entity demand forecasts to "assess credibility" of the forecasts. For the LSEs selected for the sample, MISO performs an *ex post* review of their previous year's forecast and works with them to reconcile differences between their forecasts and those produced by Purdue University's State Utility Forecasting Group.

"Ameren was a draw in the random sample last year," Robinson confirmed at a Nov. 8 Resource Adequacy Subcommittee meeting. "We did have to come back and ask them for additional documentation. Some of their documents were a bit sketchy, I guess, but they gave us everything we needed."

Last month, Dynegy called on MISO to develop a new process for verifying load forecasts produced by LSEs, claiming Ameren's forecasts led to under-procurement in the capacity auction for Zone 4. (See Dynegy: MISO LSE Load Forecasts Require Tune-up.)

MISO said it found no evidence of systemic bias in forecasts. Robinson said Zone 4 was slightly hotter than normal at coincident peak this summer and all local resource zones were within two standard errors of their forecast values.

"The way we design this is the LSEs are the experts in the sense that they know when customers are building. They certainly have more information than we do," Robinson said. "We don't forecast ourselves on the zonal level for the coincident peak. We don't have that kind of information."

— Amanda Durish Cook

MISO News

EDF Asks MISO to Revisit Queue Overhaul

By Amanda Durish Cook

While not even a year has passed since MISO implemented its new interconnection queue process, one market participant is already urging stakeholder groups to consider a two-stage queue instead of the RTO's selected three-stage design.

EDF Renewable Energy argues that the "flawed" three-stage process is worsening the interconnection backlog, and that MISO has the means to implement a two-stage queue. During a Nov. 7 conference call, the company asked the RTO's Steering Committee to assign the appropriate stakeholder committee a discussion on shortening the queue process for vetted projects and developing an earlier assessment of milestone payments.

"MISO's published data shows a serious backlog in its queue," EDF's Omar Martino wrote in comments to the RTO. "It needs a streamlined process so that projects that demonstrate they are ready to proceed toward an interconnection agreement can actually achieve that."

Steering Committee members determined they need more information on the EDF proposal before they can assign the issue to a stakeholder committee. They asked the company to return in January with a fuller explanation.

Bruce Grabow, an attorney with Locke Lord representing EDF, said that while MISO's three-stage process is a "good" model, it doesn't require enough front-end milestone fees to discourage "speculative megawatts." He said charging milestone payments before the definitive planning phase (DPP) of the queue could discourage uncertain projects from entering.

In an effort to reduce restudies that caused backlogs in the old queue process, MISO's new queue design divided the DPP — the final stage of the queue — into three phases in which system impact studies are performed three separate times in lieu of restudies. At the time, MISO estimated that

> ***"FERC approved the process in January, and we'd like to see a full cycle through."***
>
> **Justin Stewart, MISO**

interconnection customers would spend 460 days in all three stages combined, instead of the previous average 589 days in the DPP.

"Shore up a bit more the site control from the beginning," Grabow urged, noting that 60 to 70% of MISO's queue entrants now enter the queue without securing site control, electing to instead pay a $100,000 fee as part of the new queue rules.

"We've opened the floodgates, so to speak," he said.

MISO views a queue overhaul so soon after the January approval of the new design as "premature," MISO Stakeholder Relations

Continued on page 22

Steering Committee to Clear up MISO Election Rules

By Amanda Durish Cook

After recently confronting confusion around the stakeholder task force nomination process, MISO's Steering Committee is seeking to clarify how the RTO will nominate and elect individuals to fill stakeholder group leadership positions in the future.

The issue emerged at the Steering Committee's September meeting, when the committee deviated from standard practice by administering separate elections for the positions of chair and vice chair of MISO's Energy Storage Task Force during the same election cycle. Both candidates for chair expressed an interest in running for vice chair if they weren't picked for the top spot and, as a result, one nomination for vice chair was submitted after the deadline, leaving the committee to decide whether to include the late submission for voting. Committee members voted to reopen the nominating process, but not all stakeholders were pleased with the process. (See *Nomination Redux for MISO Energy Storage Task Force*.)

MISO's Stakeholder Governance Guide is silent on the issue of moving election dates, accepting late nominations or dealing with instances when stakeholders simultaneously run for two leadership positions in the same committee.

The Steering Committee will take up the issue in January, when it will vote on redline clarifications to the elections process outlined in the governance guide. The changes could allow consecutive ballots in instances where a stakeholder wants to run for chair but also be considered eligible for vice chair should they lose their bid for the chair position.

Ameren's Ray McCausland said his company supports Stakeholder Governance Guide changes that allow a stakeholder to run for both chair and vice chair simultaneously, with the option for runoff elections when needed. If the same candidate is elected to both positions, the candidate would accept the chair position, and a runoff election would be held using the previous slate of vice chair candidates. Currently, elections for chair and vice chair for all MISO stakeholder committees and groups are held simultaneously via electronic ballot among MISO members with voting rights. No late nominations are accepted.

Madison Gas and Electric's Megan Wisersky said that while she understood the RTO's wish not to dissuade stakeholders from running for leadership positions, she could also see the value in compelling individuals to focus on running for a single position.

"I'm not much help here," she joked during a Nov. 7 conference call.

WPPI Energy also advocated for the continued simultaneous election of chair and vice chairs, requiring candidates to choose to run for a single position and not both leadership positions.

McCausland argued that preventing a candidate from running for both positions might lead to empty vice chair positions.

MISO NEWS

EDF Asks MISO to Revisit Queue Overhaul

Continued from page 21

Specialist Justin Stewart said. "FERC approved the process in January, and we'd like to see a full cycle through."

Grabow said he was only asking to begin a discussion in the Planning Advisory Committee.

MISO External Affairs Director Vikram Godbole said stakeholders debated the merits of a two-phase queue process in 2015 and ultimately decided against it. He asked stakeholders to allow time for the new queue design to work before proposing modifications.

"I'm personally wary of making changes before we see how the changes we've just made roll through the process," said PAC Chair Cynthia Crane.

Similar Requests Denied in FERC Order

EDF's request for a faster queue comes on the heels of a Nov. 3 FERC order that denied a rehearing of several aspects of the new queue process.

That order stemmed from a filing by a group of generation developers who complained that MISO's new process had failed to actually streamline the queue because it does not update system data as quickly as promised and charges only $100,000 upfront when a project developer has not yet secured site control (ER17-156).

The generation developers also questioned FERC allowing MISO to conduct restudies after a generation interconnection agreement has been signed, and also contended that a developer that withdraws its projects within six months of signing such an agreement should have to pay to mitigate the cost shifts stemming from the cancellation.

The commission rebuffed most of the developers' arguments, saying the group failed to provide evidence or reasoning to support its proposal, and that MISO's role was to "minimize but not necessarily eliminate restudies."

But FERC did agree with the developers' concerns about projects withdrawing from the queue after executing interconnection agreements, which prompts the need for restudies and increases interconnection costs. The commission directed MISO to include data on the number of such withdrawals — and the number of resulting restudies and their cost impacts — in its semiannual reports on the queue process.

FERC denied a request for a special "fast track" study process for developers who can demonstrate "site control, evidence of power sales opportunity and security in the amount of 20% of all identified network upgrades," but it advised MISO to alleviate delays for those developers anxious about missing production tax credit deadlines.

The developers claimed that MISO's queue transition timeline is already behind schedule, with interconnection agreements for the MISO West region February 2017 transition group delayed until June 2019, "a full five months beyond the planned January 2019 completion date."

MISO argued that adding a faster study timeline option would throw its interconnection process "into disarray."

"Although such delays suggest that MISO's queue reforms may not be working as well as intended, we do not find that these delays rise to the level of the 'extraordinary circumstances' the commission has required to reopen the record … and to disturb the finality of the DPP framework accepted in the Jan. 3 order," the commission said. "We strongly encourage MISO to consider measures that could be adopted to address the delays."

PJM NEWS

OC Briefs

Market-Based Frequency Response Solution Hard to ID

VALLEY FORGE, Pa. — PJM's Glen Boyle presented the Operating Committee last week with a proposed solution to address FERC's proposed primary frequency response rule.

The proposal, which came from meetings of the Primary Frequency Response Senior Task Force, would rely on individual resources to provide the capability with specific performance settings; PJM doesn't plan on requiring units to maintain operating headroom.

"We didn't see need for that right now," Boyle said.

PJM is considering either a cost-of-service payment, where the resource owner files with FERC for cost recovery for performing during an event, or determining that the frequency response capital investment is already included in the cost-of-new-entry (CONE) calculation. The focus comes in response to a 2012 NERC report found that only 30% of units were providing primary frequency response and a Notice of Proposed Rulemaking last year from FERC that would require all new units, excluding nuclear, to provide the service. (See *FERC Has More Questions on Frequency Response NOPR*.)

"As far as looking at a pure, market-based mechanism, that's something that PJM would be open to, but we've had some difficulties with identifying what the actual requirement is, as it changes on a literally minute-by-minute basis," Boyle said.

He also highlighted concerns about measuring units' responsiveness. "So there are some pretty significant challenges to a market-based compensation," he said. Tom Hyzinski of GT Power Group agreed it would be difficult to develop a market to compensate a minute-by-minute response.

Several generator representatives, including Hyzinski and Calpine's David "Scarp" Scarpignato, balked at exempting certain technology types and not compensating frequency response beyond capacity payments. Hyzinski suggested developing a product based on a resource's ability to provide the service.

"You can't have resources that don't provide primary frequency response participating in the same capacity market and taking the same capacity payment," he said, questioning whether the capacity market currently compensates for the capability to provide frequency response.

PJM's Jacqui Hugee (left) and Ed Kovler | © *RTO Insider*

"I think you'll want to look at a way that, if they can't provide it, they somehow purchase … it," Scarp said.

"That is another option that's still out there on the table," Boyle acknowledged.

Scarp said frequency response is an element of resiliency, and "PJM is saying in a lot of forums that it wants to value resiliency." He asked that PJM staff working on the frequency response issue engage with those focused on resiliency.

Restoration Drills

PJM's Ryan Lifer reviewed the results of the annual fall restoration drills held recently. There were 108 transmission owner participants, 17 from generators and 47 PJM staffers, Lifer said.

User feedback was positive for a centralized website where participants could upload all information in one location, he said. PJM plans to complete the site in time for the annual spring restoration drill, which will be held May 15-16. Communications checks will happen on May 14. Alternate dates are set for May 21 through 23.

PJM Expects Cold Winter Season

System operators are planning for a colder winter this year than in the past two, PJM's Augustine Caven said. Analysts expect a weak La Nina effect to develop, causing colder conditions, along with above-average precipitation in the Great Lakes region and below average to the south.

"Southward shifts in the polar vortex caused unusually cold weather this past August, and the expectation is that if this trend continues, we're anticipating greater risk of arctic cold," Caven said. "In short, we expect a significant cold winter season, and we're taking steps to be prepared."

TOs Must Approve PJM Licensing of DIMA

PJM wants to offer its Dispatcher Interactive Map Application (DIMA) to all TOs, but there's a catch. Because DIMA requires some confidential TO information to work optimally, all TOs will have to sign off on the plan, and those that want to use it will have to sign nondisclosure agreements and pay PJM a licensing fee.

PJM's Ed Kovler and Jacqui Hugee outlined the advantages, including compiling data from multiple resources into one geospatial display, and the requirements, which include several Operating Agreement changes.

PJM Holds Ground on Expanding 'Hot Weather Alert' Definition

PJM's Chris Pilong said that the RTO still plans to revise its "Hot Weather Alert" definition to include lower temperatures "during the spring and fall periods if there are significant amounts of generation and transmission outages that reduce available generating capacity."

The revisions, part of a periodic review of Manual 13, have sparked concern among stakeholders who feel the alert should be very narrowly defined.

"It seems like we're taking a Hot Weather Alert and turning it into a 'hot weather and warm weather/stuff is out' alert," said Adrien Ford of Old Dominion Electric Cooperative. "My question for you to consider is … should we consider making them separate?"

American Electric Power's Brock Ondayko said he's "still opposed" to the procedure PJM is trying to develop. He had initially voiced his opposition when Pilong announced it at October's OC meeting. (See "Grid Operator Communications Changes Spark Debate," *PJM Operating Committee Briefs: Oct. 10, 2017*.)

"I think there needs to be discussion," he said.

— Rory D. Sweeney

PJM NEWS

MIC Briefs

Surprise IMM Proposal on PRD Fails to Gather Steam

VALLEY FORGE, Pa. — PJM Market Implementation Committee members last week expressed frustration over a proposal from the Independent Market Monitor on price-responsive demand (PRD) requirements, saying they hadn't been given any time to review it prior to voting on the issue.

Ruth Ann Price of Delaware's Division of the Public Advocate apologized on the Monitor's behalf and took responsibility for requesting the late submission, but the measure failed to garner stakeholder backing. The proposal was so unexpected that it didn't make it into the presentation PJM posted on the issue. It received 28 votes in support, or 15%, far below the 50% threshold for approval.

Two other proposals — one from PJM and the other from Calpine's David "Scarp" Scarpignato — did receive enough support and will be presented at the Markets and Reliability Committee meeting on Dec. 7. Because of the Thanksgiving holiday, PJM moved the November MRC to the first week of December.

At issue is how PRD will be held to Capacity Performance requirements. PRD was developed before CP existed, but PRD bids cleared the annual Base Residual Auction in May for the first time since the new construct was implemented. PJM has proposed extending annual requirements developed for demand response to PRD and trigger CP penalty assessments during performance assessment intervals when the LMP is greater than the PRD price curve. Scarpignato's "Proposal C" would make the assessment triggers any performance assessment interval. (See *PJM Grilled on Price-Responsive Demand Rule Changes*.)

DR provider Whisker Labs had presented another proposal but retracted it in favor of the Monitor's proposal. The IMM argued that all PRD eligibility and performance should be measured from the participant's peak load contribution (PLC). Both the planned PRD and the amount finally registered should be measured as the PLC minus the participant's firm service level (FSL) and performance should be measured as PLC minus the actual load, the Monitor proposed.

"The key difference is that in our proposal, it is based on the total consumption in the summer period," the IMM's Skyler Marzewski said.

Carl Johnson, representing the PJM Public Power Coalition, and Dave Pratzon of GT Power Group objected to the proposal's late inclusion because neither had had a chance to review it and make voting recommendations to their membership.

"It's tough when totally new proposals come in at the last minute with no explanation," Pratzon said.

Monitor Joe Bowring explained to *RTO Insider* in an email following the meeting that his staff provided PJM with its proposal on Oct. 29, more than a week before the MIC, and attempted to present it at a meeting of the Demand Response Subcommittee the following day. He said they were told they could not present on such short notice.

"The IMM's proposal was included in the posted matrix on Monday prior to the Wednesday MIC meeting," Bowring said. "The IMM agrees that there was some miscommunication among the IMM, the DRS and the MIC."

Pratzon requested an explanation for basing all measurements off the PLC. Marzewski said the measurement should reflect how much the participant can reduce from its overall peak demand, not how much it can reduce at that moment. PJM proposed using different peak-demand calculations for summer and winter measurements.

He remained unmoved.

"As of right now, I'm not seeing the justification for the different treatment," he said.


Gregory Carmean | © RTO Insider

Gregory Carmean, the executive director of the Organization of PJM States Inc., argued the baseline should be the load that the RTO would have purchased if not for reduction.

"It's PJM that's trying to turn this into a seasonal product" by changing the definition of the PRD measurement between summer and winter, he said.

Delaware's Price, Joe DeLosa of the Delaware Public Service Commission and Greg Poulos, executive director of the Consumer Advocates of the PJM States, also voiced support for the Monitor proposal.

Advocates "want residential customers to be able to respond to price," Poulos said.

Dave Mabry, representing the PJM Industrial Customer Coalition, argued that the purpose of PRD is to get "the customer back to paying for the capacity that he needs."

"There isn't a payment that flows back," he said.

Scarp argued that point, and PJM's Pete Langbein confirmed the performance is paid as a credit.

"Call that a payment, call that a credit, but that's effectively what will happen," Langbein said.

Scarp said "PRD was supposed to get away from" the "hypothetical difference" between what was scheduled to be used and what was actually used.

James Wilson of Wilson Energy Economics, who consults for consumer advocates in several PJM states, disagreed that the proposal increases winter-adequacy risks. PJM's reserve requirements study always shows zero loss-of-load expectation (LOLE) in winter, he said, and "there's a huge margin of excess winter capacity before we get anywhere near where that changes."

Big Support for Jurisdiction Mention in DERS Charter

Stakeholders voted overwhelmingly to include explicit deference to state and local regulatory authority in the charter for the new Distributed Energy Resources Subcommittee. (See "DER Subcommittee Charter Sent Back to MIC," *PJM MRC/MC Briefs 10-26-17*.)

FirstEnergy had proposed what it hoped was an uncontroversial amendment, which stated "Market rules must respect the distribution system and state/local jurisdictional agency standards and protocols to ensure safety and reliability. Rules should adhere to all pertinent jurisdictions and respect the relevant electric retail regulatory authority (RERRA)."

DER companies saw it as a potential barrier to market entry.

"The vagueness of 'respect the … standards

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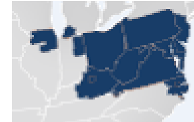
PJM NEWS



OVEC Integration not up for Debate, PJM Says

By Rory D. Sweeney

VALLEY FORGE, Pa. — PJM members are questioning a request by the Ohio Valley Electric Corp. to join as a new transmission zone, but the issue is not up for debate, the RTO said last week. (See *Unanswered Questions Force Special PJM Session on OVEC Integration*.)

Jim Burlew | © *RTO Insider*

"So long as a [transmission owner] provides PJM with all of the required information, PJM studies that information and ensures it can reliably [integrate], then PJM must proceed," Senior Counsel Jim Burlew said during a special informational meeting last week. "PJM is the only entity to make a determination if a TO can integrate, and that's based only on reliability."

RTO officials said that procedure is based on the existing Tariff and Operating Agreement language. But members were not satisfied.

"I think the members have some concerns, and I think that PJM has a bit of an obligation to first of all hear, and second of all address, the concerns that may be raised in this forum," American Municipal Power's Ed Tatum said. "Why do they want to join the party?"

CFO Suzanne Daugherty, who chairs the Markets and Reliability Committee, agreed that "PJM has an obligation … to make sure you know what's going on." But she said CEO Andy Ott "is authorized to accept" membership applications if they don't hinder reliability, as is the case with OVEC.

"This is consistent with several other parts of the Operating Agreement," she said. "It's an open party; there's no cover charge."

Tatum continued to press, saying "there is discretion," and that PJM would be "well advised" to take in further perspectives from members before deciding. Members are concerned that OVEC's integration will result in significant upgrade costs and increase the existing generation oversupply without providing more load for PJM generators to serve. Tatum said he is specifically concerned about costs from supplemental projects for aging transmission infrastructure and reliability improvements that could be needed if one or both of OVEC's generating units retire.

OVEC, which is headquartered in Piketon, Ohio, owns 2,200 MW of generation capacity but will have no load after a U.S. Department of Energy contract ends sometime before 2023. The company was created in 1952 to service a uranium enrichment plant near Piketon that ceased operations in 2001. The department ended the 2,000-MW contract in 2003 but maintains a load that can be 45 MW at its maximum but is generally less than 30 MW.

The company's two coal-fired generating plants — the 1.1-GW Kyger Creek in Cheshire, Ohio, and 1.3-GW Clifty Creek in Madison, Ind. — are already pseudo-tied into PJM, and its eight "sponsors" can sell their portions of the output into the RTO's markets. The generation would become internal to PJM following membership, eliminating the pseudo-ties.

"It might be older than Ed Tatum, and although I'm advocating strongly to not be replaced, it might need to be replaced," Tatum said of OVEC's transmission infrastructure. "We see major upgrades looming here … and that's one of the concerns we have. … What we have here is a very unique situation in which you have very little load to allocate to."

"Our infrastructure has been consistently maintained for 50 years, meets all NERC requirements and will meet all PJM requirements," OVEC attorney Brian Chisling said.

OVEC's representatives didn't provide many additional details. When Tatum asked about plans for transferring OVEC's existing load, Chisling said it involved a "feature" of Ohio's Certified Territory Act and referred him to a proceeding of the Public Utilities Commission of Ohio (15-0892-EL-AEC).

Daugherty explained that any required upgrade would be billed to OVEC's zone and then distributed proportionally to the eight companies that own OVEC.

PJM's Mark Sims explained that OVEC is "required to have a plan" for upgrades before it joins but doesn't need to have upgrades done.

MIC Briefs

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and protocols' concerns us," said Tom Rutigliano, who represents providers of distributed resources.

"I think it's just a matter of clarification. It's motherhood and apple pie — we have to follow these things. I really wonder why there's the apprehension to having it in there. … I really don't understand all the pushback," FirstEnergy's Jim Benchek said.

Exelon's Sharon Midgley agreed. "This would give us a lot of comfort moving forward if this is added," she said.

They got their wish. The original version of the charter received 17% approval, or just 26 votes in favor, while the amended version received 92% approval, or 160 votes in favor.

Seasonal Demand Response Aggregation Registration Rules

EnerNOC's Steven Doremus presented a proposed revision to PJM's DR aggregation registration rules, arguing that the current method fails to maximize use of available resources. The proposal accompanied the first read of a problem statement and issue charge.

The current method is to take as the CP capability the lesser of the registrant's summer or winter capability. The CP capabilities of the registrants are then added together for a total capability, but this leaves a substantial amount of DR undispatchable.

"The problem we see is this is not the most efficient way to register the customers," Doremus said.

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PJM News

PJM's Markets Competitive, Energy Prices Up, Monitor Finds

By Rory D. Sweeney

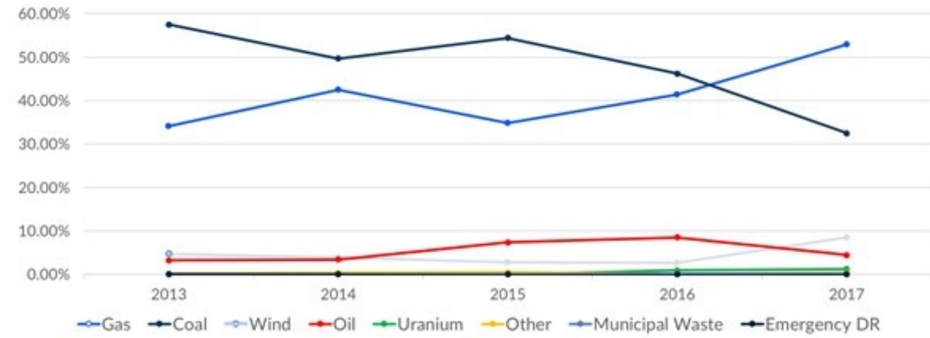
PJM's markets were competitive in the first nine months of the year and energy prices were up $1/MWh compared to the same period last year, the Independent Market Monitor found in its quarterly State of the Market Report.

"Energy prices in PJM in the first nine months of 2017 were set, on average, by units operating at, or close to, their short-run marginal costs, although this was not always the case during high-demand hours," the report said. "This is evidence of generally competitive behavior and resulted in a competitive energy market outcome."

The load-weighted, average LMP in PJM was 3.5% higher in the first nine months of 2017 than during the same period in 2016, rising to $30.36/MWh. The Monitor said the increase was "primarily" due to higher fuel prices.

Coal and natural gas costs rose faster than electricity prices, undercutting generator revenues. Average energy market revenues decreased by 51% for new gas-fired combustion turbines, 28% for new combined cycle units and 17% for a new coal plant, while increasing 6% for nuclear units, the Monitor said.

Coal units' dominance has dipped over time, while gas has risen. In 2008, coal represented 75% of the marginal resources and gas 20%. In the first nine months of this year, coal stood at 32.5% and gas rose to 52.9%, the Monitor said.



PJM fuel mix for first nine months, 2013-2017 | *Source*

Wind continued to depress prices as the marginal unit. In the first nine months of 2017, 74.1% of the wind marginal units had negative offer prices, 18.9% had zero offer prices and 6.9% had positive offer prices.

Total energy uplift charges decreased $16 million (15.7%) to $86.3 million during the nine-month period. Demand response payments also decreased by $167.2 million (31.1%) to $370.6 million, while congestion costs fell $366.8 million (44.6%) to $455.4 million.

The impact of FERC's ruling on balancing congestion — rejecting the notion that financial transmission rights are only intended to benefit load — was also evident this year. Revenues from auction revenue rights and FTRs offset 98.1% of total congestion costs for load during the 2016/2017 planning period, but only 79.7% of those costs for the first four months of the 2017/2018 planning period. In January, FERC accepted PJM's compliance filing in response to the commission's requirement that the RTO develop a method for allocating ARRs that doesn't consider extinct generators. Under the new rules, PJM assigns balancing congestion to real-time load and exports and regularly updates its ARR allocations to reflect generator retirements. (See *FERC Accepts PJM's FTR Plan, Rejects Rehearing Requests*.)

MIC Briefs

Continued from page 25

EnerNOC proposed adding up the summer and winter capabilities of all registrants and using the lesser of the two summations at the overall CP capability "to maximize the value."

"It wouldn't change the value; it wouldn't change the annual requirement," PJM's Langbein said of the proposal. "It's just how do we sum up winter and summer capabilities to ensure there's an annual capability at the [Reliability Pricing Model]-resource level."

Meetings Reduction

Responding to a request from the Members Committee, PJM staff reviewed the status of all issues assigned the MIC and subcommittees. Of the 23 issues, seven are completed and will be closed. Three others have proposals awaiting endorsement votes.

At the October Members Committee meeting, Vice Chair Mike Borgatti of Gabel Associates announced that the MIC, MRC, Operating Committee and Planning Committee will be directed to determine if any timelines can be relaxed to "free up a little room in the schedule." The directive came at the request of stakeholders, who have been complaining about the roughly 500 stakeholder meetings PJM conducts each year. (See "Reducing the Workload," *PJM MRC/MC Briefs*.)

Adrien Ford of Old Dominion Electric Cooperative thanked PJM for developing the review and taking a "leadership role" in streamlining the issues.

Account Cleanup

PJM will be automatically terminating accounts on its website that have been locked longer than nine months. The terminations will reduce security risks, as well as improve system performance, staff explained.

PJM.com has 141,000 accounts, but 60,000 have already been terminated. Of the remaining 81,000, approximately 37,000 have been locked for more than nine months, or about 46%. Only about 20,000 accounts are actively used.

Accounts can be restored, but account managers at member companies have been notified to review employees' accounts and delete any unneeded ones.

— Rory D. Sweeney

PJM NEWS

PC/TEAC Briefs

PJM Seeks Changes to Market Efficiency Process

VALLEY FORGE, Pa. — PJM's Asanga Perera presented stakeholders at last week's Planning Committee meeting with a problem statement and issue charge to address issues the RTO sees with its current process for evaluating market efficiency projects.

"We have conducted two cycles to date since FERC Order 1000 was established, and during these two cycles, we recognized various challenges that we think are important to address going forward," he said.

One of the issues, Perera explained, is that PJM's benefit-to-cost calculations beyond 10 years are extrapolations, not more accurate simulations.

"We have discovered, in certain instances, we may end up either overstating benefits or understanding benefits, especially on a longer horizon," he said.

PJM also must address modeling issues, timing of the proposal-window process, interregional analysis and project re-evaluation, Perera said.

Sharon Segner of LS Power applauded the focus on the process but asked if it could go further.

"This is a great discussion in terms of some of the challenges that the market efficiency window is facing," Segner said. "Is there anything missing?"

PJM staff resisted suggestions to include a review of cost calculations, saying that's being handled elsewhere.

Segner also warned against making any retroactive changes.

"It's important to not undermine the work of the past, because that's going to create a lot of regulatory uncertainty," she said.

If the initiative is approved, the work would be assigned to a task force, Perera said.

Light-Load Analysis

PJM has compiled some data to begin updating parameters for modeling light-load conditions. PJM's Mark Sims presented the data.

"There's definitely plenty of activity happening out there to draw some conclusions," he said.

One focus is comparing high-voltage alarms with instances when high-voltage emergency procedures were taken. The alarms, which require generators receiving them to take action, precede emergency procedures that PJM takes.

"The alarm data is a good proxy to use moving forward to look for statistical values to develop parameters" for a test, Sims said.

PJM is also considering how to address the lag between recognizing an issue and compiling all the information to address it effectively.

"Between it happening and us fixing it, it could be a couple of years," Sims said.

Summer Demand less than Expected

Mild weather meant load never came close to reaching the peak summer forecast, PJM's John Reynolds said.

The summer peak of 145,331 MW on July 19 was 5% below the forecasted peak of 152,999 MW and 4.4% below the 2016 peak of 151,945 MW. "The champ still reigns," Reynolds said, referring to PJM's all-time peak of 166,876 MW on Aug. 2, 2006.

There were 0.4 MW of load management July 19, he said, and there have been anecdotal accounts of a "significant amount" of peak shaving this summer.

The decline in weather-normalized load won't mean an immediate drop in load forecasts.

"That would be an assumption that people should not make," Reynolds said. "It will take time for that to work its way in full."

The call for patience confounded Calpine's David "Scarp" Scarpignato.

"I don't want to wait 18 years to get the forecast right," he said.

John Reynolds | © *RTO Insider*

ARR Analysis IDs Constraints

An analysis of Stage 1A 10-year auction revenue rights found "infeasible facilities" both within PJM's footprint and in market-to-market interactions with MISO, Perera said.

The internal constraint will be addressed by a project (b2774) in the Regional Transmission Expansion Plan, which is expected to be in service in 2020. Of the remaining nine M2M constraints, one will be addressed by a MISO Transmission Expansion Plan project that is expected to be in service this year. Three others have projects under consideration, two will be included in a future targeted market efficiency project proposal window and three are pseudo-tie flowgates.

Asked specifically about lines connecting to the Ohio Valley Electric Corp. — which is attempting to join PJM as a transmission zone — Perera said no new issues were identified. A project between OVEC's Clifty Creek Power Plant and the Trimble County substation is one of nine M2M constraints under consideration.

— Rory D. Sweeney

"I don't want to wait 18 years to get the forecast right."

David "Scarp" Scarpignato, Calpine

Pennsylvania Energy Management Conference

Early Adopter Pa. Contemplates Potential Retreat from Competitive Markets

By Rich Heidorn Jr.

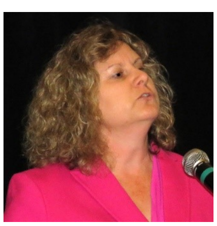
CAMP HILL, Pa. — Pennsylvania, which was among the first states in the U.S. to abandon cost-of-service electric regulation, now finds itself at ground zero of a debate that could largely reverse the process. So last week's 7th Annual Pennsylvania Energy Management Conference couldn't have been more timely.

FERC Chief of Staff Anthony Pugliese, who grew up just a few miles from here, praised the Department of Energy's Notice of Proposed Rulemaking to support struggling coal and nuclear generators, while promising it would not destroy PJM's competitive market.

Exelon's **Kathleen Barron** continued her ongoing debate with NRG Energy and other critics over subsidies for the company's nuclear plants. (See *EBA Panelists Talk 'Wacky' NOPR, 'Modest' ZECs, 'Rent Seeking'*.)

And PJM Independent Market Monitor Joe Bowring, who shared a panel with Barron and NRG's Abe Silverman, continued his attack on the RTO's proposed alternative. (See related story, *NOPR Reply Comments Bring More Criticism of PJM Proposal*, p.1.)

Stranded Costs



Pamela C. Polacek, an attorney with McNees Wallace & Nurick, one of the conference's sponsors, joined in the criticism. Her firm has long represented industrial customers and was central to Pennsylvania's move — following California and Massachusetts — to customer choice in 1996.

Pennsylvania consumers paid $12.3 billion in stranded costs to Exelon's PECO Energy and other nuclear plant owners between 1996 and 2010 as part of the bargain to unbundle generation from distribution. Polacek said subsidies for all of Pennsylvania's nuclear plants could cost $1.2 billion per year — raising the annual electric bill for

FERC Chief of Staff Anthony Pugliese | © RTO Insider

a small industrial user (12 million kWh/year) by more than $100,000, and that for a steel mill (330 million kWh/year) by $2.8 million.

"We can't afford this in Pennsylvania," she said. "We rank 48th in manufacturing job creation. … We can't continue to pile costs onto our industrials. Right now, our average industrial electric rate is about the middle [of the states]. But remember, we did this [retail choice] back in 1996 to get competitive advantage, not just to be in the middle."

Polacek said Three Mile Island Unit 1, the only planned nuclear retirement in Pennsylvania, doesn't deserve a rescue.

"As Joe has said, other Pennsylvania nuclear plants continue to clear the [capacity] auction. For the most part, they are not at risk of retirement."

Investment

She acknowledged that as a single-reactor plant (following the partial meltdown of Unit 2 in 1979) TMI does not have the labor economies of scale of multi-unit plants. But she said saving TMI's 750 workers would cost jobs in manufacturing because of higher electric rates.

"Three Mile Island didn't really take the opportunities to do upgrades that other Pennsylvania-based plants did. So those plants were looking at investing in their infrastructure to expand their capacity, to be more efficient. And Three Mile Island didn't do that."

Exelon, which purchased the plant from GPU in 1999, said in May it would shutter TMI in September 2019 "absent needed policy reforms." (See *Seeking Subsidy, Exelon Threatens to Close Three Mile Island*.)

Barron disputed Polacek's claim of underinvestment. "I can tell you we continue to invest very heavily in Three Mile Island, having replaced the steam generator … and [made] other investments," she said.

She cited a Brattle Group study that predicted early retirement of the state's nine nuclear generators would increase prices by $788 million per year, a 5% increase.

Resilience

The two also sparred over nuclear power's value to the grid's resilience.

"Looking at the idea of having onsite fuel supply as being something that is going to help us if all four gas pipelines serving the Northeast go down, I have to ask: Well if the terrorists do that, what's going to stop them from also targeting the nuclear plants, which would seem to be a pretty attractive,

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| © RTO Insider

Pennsylvania Energy Management Conference

Early Adopter Pa. Contemplates Potential Retreat from Competitive Markets

Continued from page 28

World Trade Tower-type targets?" Polacek said.

Barron said nuclear plants' defenses against terrorists are second to none. "We are so heavily regulated by a number of regulators, including the [Nuclear Regulatory Commission], on this specific point, on the amount of security we have to have in our plants and the ways that we need to protect them," she said. "There are more people who [are carrying] guns than people who are operating the plant. ... We do not have anywhere near that kind of protection on the natural gas supply system."

That is beside the point, responded **Bowring**, saying the vulnerabilities of gas pipelines also apply to electric transmission. "It doesn't matter what the fuel type is if the transmission grid is not there," he said. "So, you have to be careful how far you extend this argument."

ZECs

NRG's **Silverman** said that he agreed with the DOE on the need for price-formation reforms. But he said zero-emission credits for nuclear plants are not a good solution. ZEC prices in New York and Illinois will produce half as much carbon-free electricity as equivalent spending on renewables, he said.

He was critical of a Brattle study commissioned by NYISO and state regulators to evaluate the impact of ZECs. (See *NYISO Study Sees Little Cost Impact from Carbon Charge*.)

"It completely ignores the energy market response. Completely ignores the power of competition to find cheaper solutions and drive down the price," he said.

"We have these price-formation initiatives at FERC that have now been pending, in some cases, for four or five years. They need to be acted on. I mean come on guys, yes or no."

And he said the issue is broader than price formation. The challenge, he said, is creating incentives for what NRG calls the "four-product future," which envisions renewables providing most energy, supported by storage, controllable demand and fast-ramping gas. NRG says it will reduce the carbon emissions from its generation 50% by 2030 and 90% by 2050.

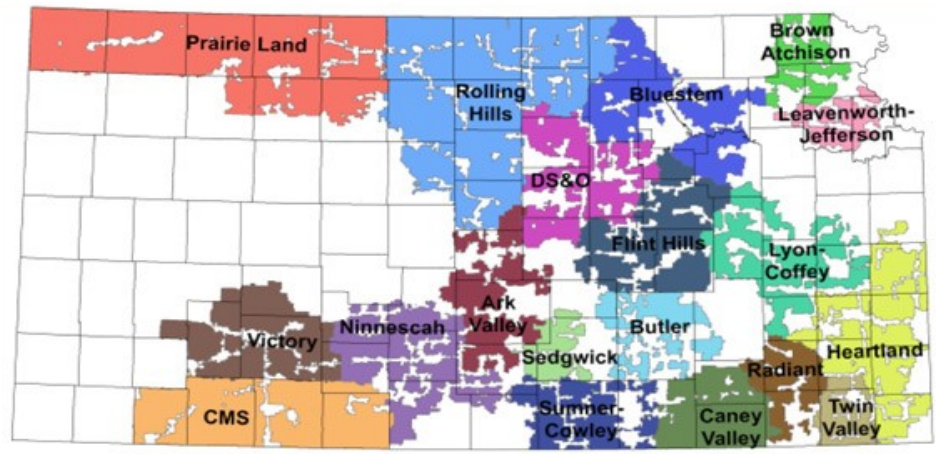
"A [gas-fired] power plant built today is already going to be lasting until 2050 and [will] be emitting too much carbon" to address climate change, Silverman said. "So, we end up with this long-term stranded cost environment where today's gas plants are tomorrow's coal plants."

SPP NEWS

FERC Rejects SPP Change on Network Resource Upgrades

Upholds Z2 Waiver; Orders Hearing on Rice-Circle Project

By Rich Heidorn Jr.



| KEPCo

FERC last week issued rulings in three SPP transmission cases, mostly siding with the RTO but rejecting its proposal to change the conditions for classifying service upgrade costs for designated resources.

SPP's Tariff allows service upgrades associated with new or changed designated resources to be classified as base plan upgrades, subject to regional cost allocation, if the load-serving entity's resulting capacity does not exceed 125% of its projected system peak responsibility.

SPP said its proposed wording changes clarify and update its rules and have "no practical or detrimental effect" on its study process.

The commission disagreed, saying the proposed Tariff language was inconsistent with SPP's representation of how it calculates customers' "highest hourly load" (ER17-1795).

It also took issue with the RTO's plan to calculate "highest hourly load" on an aggregate basis for network customers with multiple service agreements that include the same designated resources. The commission said SPP had not proven that its proposal was not unduly discriminatory to customers with multiple agreements that do not include the same designated resources.

Z2 Waiver Upheld

The commission denied rehearing requests on its July 2016 order waiving the one-year limit for adjusting payment obligations and revenue distributions for transmission projects under Tariff Attachment Z2. (See *SPP MOPC Recommends 5-Year Timetable for Resolving $849M Z2 Bill*.)

FERC said the challengers — American Electric Power, Xcel Energy, Kansas Electric Power Cooperative (KEPCo) and Southern Co. — incorrectly applied the commission's criteria for granting waivers (ER16-1341-001).

"Specifically, the arguments made on rehearing conflate the waiver's scope (i.e., the provisions to be waived) with its potential consequences," FERC said. "The parties on rehearing also ignore the waiver's purpose because they assert that SPP must demonstrate that it will implement the crediting mechanism correctly before the waiver can be granted. The purpose of the waiver is to remove barriers to implementation. The process of implementation itself is beyond the scope of this proceeding."

Split Decision in KEPCo Dispute

The commission partially granted KEPCo's November 2016 complaint in a separate transmission dispute with SPP (EL17-21). The commission also denied some claims and set settlement judge procedures on others.

FERC rejected KEPCo's allegation that SPP inappropriately directly assigned the cooperative $6.2 million in costs for network upgrades in violation of four network integration transmission service (NITS) agreements and the filed rate doctrine.

"Even though the NITS agreements did not list any network upgrades for which KEPCo would be directly assigned cost responsibility, KEPCo knew that … there may be possible Attachment Z2 revenue credit payment obligations and also that SPP was in the process of developing the [Crediting Process Task Force] white paper, with a methodology that would identify the network upgrades with more certainty," the commission said.

FERC also rejected KEPCo's claim that SPP's allocation of upgrade costs was made too late under its Tariff. "To the extent SPP's original analysis did not capture certain creditable upgrades, we also find it is reasonable to permit SPP to make corrections to the list of network upgrades so that upgrade sponsors are compensated for transmission service that their sponsored upgrades have facilitated, and which KEPCo has received," it said.

SPP also prevailed on KEPCo's claim that it violated the "but for" test in directly assigning costs for certain network upgrades.

The commission agreed with KEPCo that SPP had "improperly applied" its cost allocation rules in one instance but said the violation had no impact on the costs allocated to the cooperative.

Finally, FERC set hearing and settlement judge procedures to resolve whether KEPCo's transmission service requests had a material impact on the Rice-Circle transmission project — a new Rice substation and an upgrade of the 28-mile line between it and the Circle substation to 230 kV from 115 kV.

"The specific issue is whether, according to a transfer distribution analysis, KEPCo's transmission service requests cause at least a 3% impact on the Rice-Circle facility, and therefore, are considered to impact the facility and should be assigned costs for that facility," the commission said.

Tom Kleckner contributed to this article.

SPP NEWS

FERC OKs SPP Scarcity Pricing Change

By Rich Heidorn Jr.

FERC last week approved SPP's proposal to change the way it prices regulation and operating reserves but said the RTO should respond to complaints that it overuses out-of-market procedures to avoid scarcity pricing.

The ruling, effective May 11, 2017, finalized a tentative approval granted by FERC staff in August before the commission regained its quorum (ER17-1092).

The changes were in response to FERC's June 2016 ruling (Order 825) requiring RTOs and ISOs to align their settlement and dispatch intervals and implement shortage pricing during any shortage period. (See *FERC Issues 1st RTO Price Formation Reforms*.)

SPP previously set a single administrative scarcity price for each reserve product regardless of the severity of a shortage. Under the new rules, the RTO will use segmented demand curves with higher degrees of scarcity resulting in higher prices. It is also renaming its operating reserve demand curve as the contingency reserve demand curve.

In approving the changes, the commission rejected a complaint from Golden Spread Electric Cooperative that the regulation demand curves should begin with a steeper slope to incentivize units to provide regulation earlier.

"We find that SPP has supported the structure of the proposed contingency reserve demand curve, which is based on NERC requirements for SPP to carry reserves to protect against loss of the largest online resource in its footprint and based on the contingency reserve the [Reserve Sharing Group] procures to protect against the loss of half of the second largest online resource in the SPP footprint," FERC said.

However, it directed SPP to add to its Tariff definitions and other details of the new rules, which the RTO had planned to include in its Marketplace Protocols. "The commission has found that provisions that are used to calculate a rate should be included in the Tariff because they significantly affect rates, terms and conditions of service," the order said.

The commission also rejected Golden Spread's complaint that SPP has prevented the implementation of shortage pricing by overusing out-of-market actions such as reliability unit commitments and manual commitments.

Although the commission said Golden Spread's call for market design changes regarding such actions was outside the scope of the proceeding, it said the cooperative had "raised an important issue that SPP should consider exploring through its stakeholder process."

"We understand that there may not be sufficient data available to stakeholders to facilitate these discussions, as the commission noted in its Notice of Proposed Rulemaking in Docket No. RM17-2," the commission said, referring to its January 2017 proposal to reduce uplift, allocate it more accurately and increase transparency. (See *FERC Seeks More Transparency, Cost Causation on Uplift*.)

"While further commission action in Docket No. RM17-2 may result in additional transparency, we encourage SPP to work with its stakeholders and provide them with the data necessary to aid in any discussions about this issue."

FERC NEWS

NOPR Reply Comments Bring More Criticism of PJM Proposal

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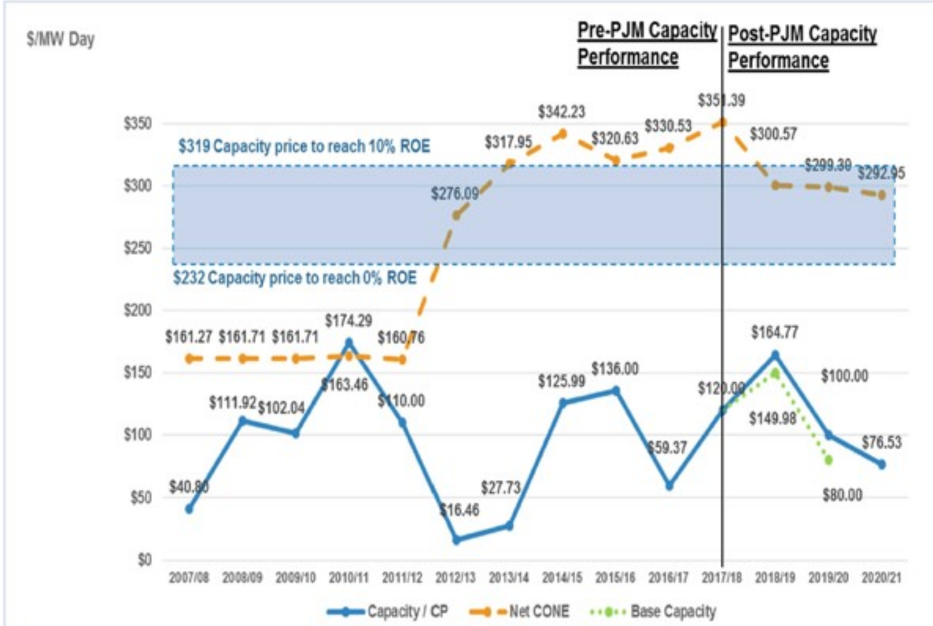

FirstEnergy contends PJM's Capacity Performance rules haven't raised prices enough to properly compensate "baseload" generation. | *FirstEnergy*

Wednesday, Bowring rejected Ott's premise. "Clearly the supply curve is not too flat in PJM," Bowring said. "PJM has been ensuring the reliability of the grid for the last almost 90 years and it continues to do so. The grid is reliable and resilient, although resilience remains to be defined."

In reply comments last week, Bowring faulted the proposal on both substance and process, saying the RTO's 180-day timeline "would unnecessarily truncate the PJM stakeholder process."

Andrew Place | © *RTO Insider*

Pennsylvania Public Utility Commission Vice Chairman Andrew Place was also critical, saying PJM's "fast-track proposal for consideration of reforms to marginal cost and shortage pricing are inconsistent with its comments which document the sufficiency of PJM's reliability."

"Appropriate and cost-effective reliability and resiliency requirements can be developed through market-based mechanisms, rather than discriminatory, cost-based mechanisms," Place said.

Robert Howatt, executive director of the Delaware Public Service Commission, joined with environmentalists, industrial customers and others in also opposing the PJM plan. "PJM's request for a near-term directive to file a proposal it has not fully revealed to its stakeholders, and which has not received the appropriate (let alone any) vetting, inappropriately subverts the stakeholder process," the group said.

ISO-NE, NYISO Seek Distance from PJM

Both ISO-NE and NYISO sought to distance themselves from PJM's proposal.

"The region has already invested significant work in implementing major market improvements, including energy market offer-flexibility enhancements, sub-hourly settlements and Pay-for-Performance," ISO-NE said.

NYISO said it "takes no position on PJM's proposed reforms at this time other than to emphasize that they are not applicable to New York. Similarly, the NYISO takes no position on the question of whether the commission should initiate Section 206 proceedings in PJM, other than to note that doing so in PJM does not mean it needs to be done in New York. … Consequently, if the commission decides to initiate a Section 206 proceeding to consider PJM's reforms, it should be a PJM-specific proceeding."

Other Monitors also Critical

The CAISO Department of Market Monitoring and Potomac Economics, which monitors MISO, ISO-NE, NYISO and ERCOT, also expressed opposition.

CAISO's DMM did not submit initial comments on the DOE NOPR because it does not include CAISO, which lacks a centralized capacity market. But it said it was concerned PJM's proposal could apply to CAISO because it would make changes to spot markets. "If applied to CAISO, the pricing proposed by PJM would undermine CAISO's spot markets," the department said. "PJM's proposal is actually an administrative pricing rule that moves away from efficient spot market pricing."

Potomac Economics said PJM's proposal "will be highly inefficient and destructive to existing energy markets in the Eastern Interconnection."

P3 Group Supports PJM Plan

PJM wasn't completely lacking for allies. The PJM Power Providers Group (P3) said it "supports the framework that PJM [has] presented to resolve the shortcomings."

But coal interests said it is too little, too late. FirstEnergy said PJM's proposal is "nothing more than an argument for delay and will not lead to a remedy for current unlawful rates any time soon."

"While PJM has not yet determined how much customers will have to pay under this construct and how much power plants would be paid, it almost certainly is not enough help to assure that power plants with resilience benefits through on-site fuel will remain in the market," said the American Coalition for Clean Coal Electricity and the National Mining Association in a joint filing.

Michael Kuser contributed to this article.

FERC NEWS

NOPR Backers, Foes Seek Last Word at Comment Deadline

By Rich Heidorn Jr.

> **"In-depth analysis is not needed to understand why the proposal is both legally untenable and an unviable policy option."**
>
> **ISO-NE**

Nuclear and coal generators made their closing argument for price supports last week, as opponents urged FERC to reject the proposal or let RTO stakeholders take up the resilience debate.

Nov. 7 was the deadline for reply comments in response to the Department of Energy's Notice of Proposed Rulemaking, which called for cost-of-service pricing for coal and nuclear generators in competitive markets (RM18-1). The deadline for initial comments was Oct. 23. (See FERC Flooded with Comments on DOE NOPR.)

The Rule of Three

Three-step proposals were all the rage in the latest filings, with the Nuclear Energy Institute calling for a cost-of-service mechanism to prevent "premature" retirements, an order requiring RTOs to promptly improve their price formation rules, and a long-term program for ensuring that organized markets value resilience.

Exelon, which is the beneficiary of nuclear subsidies in Illinois and New York, had its own three-step proposal, starting with "immediate action" to correct "inaccurate price signals [for] fuel-secure resources," including ordering PJM to make energy market reforms within 90 days. RTOs and ISOs also would be prevented from mitigating the capacity market bids of plants receiving zero-emission credits "or other support payments." (See related story, *NOPR Reply Comments Bring More Criticism of PJM Proposal*, p.1.)

FERC should follow those actions, the company argued, with an order requiring RTOs to report on their systems' vulnerabilities to high-impact, low-frequency events. Lastly, it said the commission should use that data, "together with threat analysis from the national security and intelligence communities, to establish a design basis threat (DBT) that can inform cost-effective market reforms." The DBT would provide a resilience benchmark and a basis for developing solutions, the company said.

The last two steps of Advanced Energy Management Alliance's proposal were like those of Exelon's, with the opening of a resilience proceeding and reporting by RTOs.

But the group, which represents distributed energy resource companies and storage providers, had its own idea for step one: "Eliminate barriers to storage and distributed energy resource participation" by finalizing FERC's November 2016 NOPR (RM16-23). (See FERC Rule Would Boost Energy Storage, DER.)

The commission received hundreds of responses to the DOE NOPR. FERC staffer Patrick Clarey told the SPP Board of Directors meeting Oct. 24 that the commission had received more than 700 comments; AEMA said it had counted "roughly 750 sets of comments."

Congress Weighs in

Among the most recent responses were dueling submissions from members of Congress, with Republicans generally supporting the proposal and Democrats mostly in opposition.

Illinois Republican Reps. Mike Bost, Rodney Davis and Darin LaHood said "the proposed DOE rule makes critical strides toward correcting faulty market designs and valuing the role of baseload generation."

Rep. Joyce Beatty (D-Ohio) joined with David Joyce and 10 other Ohio Republicans to warn that premature plant closings "have resulted in an electrical grid with weakened resiliency and a diminished ability to respond to crisis."

New Jersey Republican Reps. Frank LoBiondo and Leonard Lance expressed fear that the state could lose its nuclear generation — the source of almost half of its electricity.

Rep. Jerry McNerney (D-Calif.) and 13 other Democrats from his state, Pennsylvania, Hawaii, New York, Massachusetts, North Carolina, Virginia and Vermont expressed "serious concerns with the proposal and its timeline." They cited DOE data showing outages resulting from extreme weather increased 10-fold from 1984 to 2012 and doubled between 2003 and 2014. "Given these facts and the compounding, regional and varied effects of climate change on extreme weather, a one-size-fits-all approach to resiliency, as outlined in the NOPR, is inappropriate and not adequate to the challenge," they said.

House Energy Subcommittee Vice Chair Pete Olson (R-Texas) joined with ranking member Bobby Rush (D-Ill.) to say more time is needed to study the "remarkably complex issue." They said it should be addressed "through existing proceedings at the federal and regional level rather than quickly moving to make a sweeping, top-down decision in the near term."

"FERC — with bipartisan support from members of Congress and presidents — have worked for decades to improve these markets. Ultimately, this has given us markets that provide a reliable and resilient power system through open competition. This has also meant that risks are borne by investors in generating assets, not consumers or taxpayers. We continue to believe this is critically important," they said.

Among those also registering support for the NOPR were the Interior Department, Southern Co. and AES (parent of Indianapolis Power & Light, Dayton Power and Light and AES Energy Storage).

Opponents Urge Time for Study

In contrast, the Electricity Consumers Resource Council and other industrial energy users said the NOPR would "overturn decades of precedent and suddenly determine the existing RTO/ISO tariffs are unjust and unreasonable."

A broad coalition including the American Petroleum Institute, American Wind Energy Association, Conservation Law Foundation

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FERC News

NOPR Backers, Foes Seek Last Word at Comment Deadline

Continued from page 33

and Electric Power Supply Association reiterated its earlier comments, urging FERC to reject what they called an "abrupt and unjustified cost-based compensation mechanism."

The National Association of State Utility Consumer Advocates, which had not filed initial comments, said acting on DOE's demand for a final rule within 60 days would violate the Administrative Procedure Act by failing to provide the public with adequate notice or reasonable time to have meaningful input.

ISO-NE said the "very limited time" FERC allowed for reply comments did "not permit a comprehensive rebuttal to the efforts of the NOPR's supporters to overcome the proposal's unsound foundation."

"However, in-depth analysis is not needed to understand why the proposal is both legally untenable and an unviable policy option," the RTO said. "The breadth and depth of opposition to the NOPR among industry stakeholders and electricity consumers is striking in its own right."

American Municipal Power also cited procedural concerns. "Several other commenters suggested that the commission adopt alternative proposals to modify the RTO energy market rules or take other actions that are beyond what was contemplated by the DOE proposal. The commission cannot lawfully accept such proposals as part of this rulemaking process."

Former FERC Chairman Norman Bay made a similar point at the GTM U.S. Power and Renewables Summit in Austin, Texas, last week.

"The timeline really amounts to a rocket docket. There's no other way to describe it," Bay said. "When you look at FERC Order 888, FERC spent a year on that particular order. In the normal course of events, it's not uncommon to see a rulemaking take 12 to 15 months, or even longer than that," Bay said.

AMP also agreed with many critics that the DOE proposal failed to prove existing RTO market rules are unjust and unreasonable. "The legal deficiencies coupled with the practical reality that the DOE proposal would not resolve the reliability concerns raised by the secretary but would impose significant new costs on customers should make this an easy call for the commission," AMP said.

The Environmental Defense Fund urged FERC to "further enhance gas-electric coordination in a focused and targeted manner."

"Electric generators were the smallest sector for natural gas demand in 1988, and they now are the largest," EDF said. "But the natural gas regulatory framework has not kept pace with this new development."

Next Steps

The commission has said it expects to take some action on the proposal within 60 days after its Oct. 10 publication in the *Federal Register*.

FERC will address the NOPR with a full complement of commissioners, thanks to the Senate's Nov. 2 confirmation of Republican Kevin McIntyre and Democrat Richard Glick.

Michael Kuser and Tom Kleckner contributed to this article.

FERC NEWS

MISO's Plans for Wintertime Offer Caps Stalled by FERC

Continued from page 16

Other RTOs

Where MISO failed, other RTOs succeeded — mostly.

FERC found that NYISO (ER17-1561), PJM (ER17-1567) and SPP (ER15-1768) complied with its directives on bifurcating their offer caps and showed that their existing verification processes were sufficient and resource-neutral.

However, NYISO and PJM failed to specify that any price adders included in cost-based offers be limited to $100/MWh, another stipulation of Order 831. Such adders also can't be recovered through uplift payments.

In PJM's case, the RTO acknowledged this and laid out further revisions in an answer to a protest filed by its Independent Market Monitor.

In NYISO's, FERC found the ISO also incorrectly included opportunity costs as an adder. As it explained in its clarification order, "verifiable opportunity costs should not be subject to the $100/MWh limit on adders above cost because opportunity costs are legitimate short-run marginal costs and not adders above cost."

"NYISO's proposal prevents resources from recovering opportunity costs through uplift when NYISO is unable to verify these costs before the close of the relevant market," the commission said. "Accordingly, we direct NYISO to ensure that opportunity costs for bids exceeding $1,000/MWh are eligible for uplift, even if they are not verified before the close of the relevant market, if such costs are submitted as part of the resources' bid, those costs were timely submitted and supported with documentation, and that those costs were verified by NYISO after-the-fact."

PJM also failed to address external and virtual transactions — both of which have $2,700/MWh hard caps — in its filing, the commission found.

FERC directed PJM and NYISO to submit further compliance filings by Dec. 9. It accepted SPP's revisions in full, with an effective date of April 1, 2019 — the day the RTO estimates it will launch its new settlement system software.

The commission itself, however, did not rule on ISO-NE's compliance filing. Instead, its Office of Energy Market Regulation accepted the RTO's changes under delegated authority (ER17-1565). This is because, unlike the other grid operators' filings, no intervenors filed any comments or protests to ISO-NE's.

The RTO was also granted an Oct. 1, 2019, effective date by staff. Like SPP, ISO-NE said this was needed to give it time to implement software changes necessary to comply. Unlike SPP, however, ISO-NE needs to start from scratch.

"ISO-NE anticipates that it will take approximately 18-24 months to design, develop, implement and fully test the necessary software and process changes to implement the Order 831 revisions," it told FERC in its May compliance filing. "The requested effective date of Oct. 1, 2019, is aggressive and assumes that each phase of the implementation goes smoothly and is not delayed due to demands from competing priorities."

CAISO in May asked FERC for an extension until May 1, 2018, to submit a proposal for implementing Order 831, saying it doesn't currently have market mitigation measures in place to verify cost-based offers prior to market clearing. The commission has not yet ruled on that request.

MISO VoLL also Rejected

MISO's plan to similarly raise the limit on its operating reserve demand curve was likewise rejected by FERC because of its reliance on the RTO's offer cap revisions (ER17-1571).

"We agree with MISO that changes to MISO's operating reserve demand curves may be necessary to accommodate the requirements of Order No. 831," FERC wrote in its brief order. "However, because MISO's proposal relies upon definitions and provisions that are not part of MISO's effective Tariff, we reject this filing without prejudice to MISO submitting another filing as may be necessary to accommodate Tariff revisions made in its future compliance filing for Order No. 831."

MISO was planning to maintain its $3,500/MWh cap on the value of lost load (VoLL) for the time being, with staff acknowledging that it still needs to conduct analyses to update it. This year, Market Monitor David Patton recommended that the cap be increased to almost $12,000/MWh to create a more sloped contingency reserve demand curve. (See *MISO Board Hears State of the Market Recommendations*.) MISO's proposed curve is much flatter, hovering at $2,100/MWh unless the RTO clears less than 8% or more than 96% of its requirement level.

"In principle, we agree with potentially looking at the value of lost load, but we wanted to take some time, not rush into anything and get stakeholder input because this does impact prices," MISO's Hansen said.

Jeff Bladen, MISO executive director of market design, said the existing VoLL is a "historical artifact at this point."

Michael Brooks, Michael Kuser and Robert Mullin contributed to this report.

FERC NEWS

DOE, Pugliese Press 'Baseload' Rescue at NARUC

Continued from page 1

sponsored by the Consumer Energy Alliance. After lunch, Sean Cunningham, DOE's executive director for energy policy — and a former lobbyist for FirstEnergy and American Electric Power — lectured the audience on how he said FERC had failed to protect the grid against disaster. The audience included Commissioner Cheryl LaFleur — who kept her head down, writing notes and betraying no reaction.

The department's Notice of Proposed Rulemaking (RM18-1) was a big topic of conversation both at the microphones and in the hallways at the Hilton Baltimore beside Oriole Park at Camden Yards. But LaFleur and Commissioner Robert Powelson, who spoke to consumer advocates in the morning, had little to say on how they will vote next month on the controversial proposal.

FERC Chairman Neil Chatterjee said last week he will seek an interim "lifeboat" to ensure the survival of struggling coal and nuclear plants while the commission ponders long-term rule changes. Chatterjee has said the commission will take action by Dec. 11 on Energy Secretary Rick Perry's call for "full recovery" of coal and nuclear plants' costs in RTOs with energy and capacity markets, including PJM, ISO-NE and NYISO. More than 700 comments were filed in response to the proposal. (See NOPR Backers, Foes Seek Last Word at Comment Deadline.)

LaFleur, Powelson Respond

LaFleur declined to comment on Chatterjee's plan.

"I've really tried to spend my time thinking through the issues and not debating in the press. So, for now, I'll just stick there, I think," she said, adding, "But it's less than a month so you'll be hearing from us."

Powelson also declined to say if he would support the chairman's proposal.

"We'll listen and see what everybody's saying," he said in an interview after speaking to the National Association of State Utility Consumer Advocates (NASUCA), which is holding its annual meeting alongside NARUC. "I don't want to prejudge any outcomes.

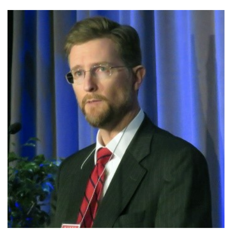
Robert Powelson | © RTO Insider

"I'm open to having a broader conversation around valuing resiliency; looking at reliability metrics beyond just the capacity construct. And making sure … that we stay above and out of the fuel war conversation. That's not the FERC's role.

"I don't think the secretary's asking us to revert on organized markets," Powelson added. "I think what he's saying is, look at some of the things that are working in these markets and some of the things that aren't working."

Coal, Nukes 'Came to the Rescue'

But at the General Session after lunch, DOE's Cunningham made it clear he already knows the answers.



Sean Cunningham | © RTO Insider

"The bottom line is this: Coal and nuclear power remain crucial to the continued functioning of the electric grid," he said.

He used a revisionist view of the 2014 polar vortex to make his point.

"Because a large portion of gas supply is diverted to home heating, the grid operators struggled to meet demand and gas generators became unavailable. It was then that coal and nuclear plants came to the rescue. Because these plants are true baseload generators with onsite fuel storage, they successfully met the emergency demand," he said.

In its response to Perry's proposal, PJM said the NOPR "mischaracterized and misconstrued" the polar vortex, noting "PJM's system remained reliable despite nearly 14,000 MW of coal retirements" and saying the 22% forced outage rate had been "mitigated" by the Capacity Performance rules enacted afterward.

"Contrary to the DOE NOPR, neither the 2014 polar vortex nor the recent hurricanes justify upending existing competitive energy markets," PJM said, noting that some coal plants were idled because of frozen fuel and conveyor belts. "While fuel delivery was an issue during the polar vortex, it was not the driving factor behind outages that occurred during the extreme weather event, nor was gas-fired generation the villain, nor coal and nuclear the savior, that the DOE NOPR suggests them to be," PJM said.

DOE: FERC Slow to Respond

Cunningham painted a dire future without coal and nuclear generation.

"Unfortunately, due in part to years of pressure brought to bear by opponents of coal and nuclear power, many of those plants were and are scheduled to close, which makes any number of disasters — or just a hot day in October or a cold one in April — a significant potential threat to our grid today. What if they had closed? How would that closure have affected the functioning of our hospitals? How would it have affected our police and firefighting capabilities? How would it have impacted the operations of our military?"

Cunningham said FERC has been slow to respond to the threat.

"FERC has been studying these issues for years, but the problem remains," he said. "Secretary Perry's proposal was intended to jump start a long overdue conversation — and more importantly, to spur FERC to action.

"Washington has been stacking the deck against coal and nuclear power for years despite their benefits to the grid," Cunningham added. "President Trump's clear direction is to unleash every energy resource to make America energy dominant. … The president has nominated the people for government service who share that vision and are willing to address the regulatory burdens and government overreach that have limited our growth potential. Secretary

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FERC NEWS

DOE, Pugliese Press 'Baseload' Rescue at NARUC

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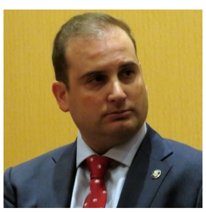
Perry is doing, and will continue, to do everything in his power to jeep our diverse energy mix in place."

> **"What I don't want to have is plants shut down while we're doing this longer-term analysis, so we need an interim step to keep them afloat."**
>
> **FERC Chairman Neil Chatterjee**

Chatterjee Aide Chimes in

During the earlier meeting, DOE's McNamee also defended the NOPR, echoing Cunningham's response to critics who fear it would disrupt wholesale markets. Electric markets are not free, they said, but are shaped by policies such as the tax credits for renewables. "The fundamental fact [is] that the markets are distorted," McNamee said.


Bernard McNamee | *© RTO Insider*


Anthony Pugliese | *© RTO Insider*

FERC's Pugliese responded to complaints that the commission's deliberations were being rushed because of Perry's 60-day deadline.

"I don't think it is" too little time, Pugliese said. "Within PJM, this has been an issue that has been discussed for three-plus years. But for a lot of places around the country it … wasn't. And so, all the sudden now we get 60 days, and I will tell you first-hand, every group around the country is coming in, every chance they get, to come give us ideas."

'Lifeboat'

Chatterjee laid out his "lifeboat" plans in remarks at an industry conference and in an interview Thursday on Bloomberg television.

In a meeting with reporters last month, Chatterjee said FERC's options include initiating its own rulemaking, convening a technical conference or issuing a final rule based on DOE's NOPR.

Now, facing legal and political obstacles to winning approval of a final rule, Chatterjee said he is seeking a short-term plan to rescue as many plants as possible while the commission does additional fact-finding.

"What I don't want to have is plants shut down while we're doing this longer-term analysis, so we need an interim step to keep them afloat," Chatterjee told the S&P Global Platts Energy Podium in D.C. "I don't know that we can get everybody in the lifeboat," he added.

"My approach is going to be one of no regrets," he said in the Bloomberg interview. "The worst-case scenario would be we do the long-term analysis, we figure out we actually did need these plants, but they're gone. They're offline and we can't get them back."

He said his plan will not alter RTO dispatch practices or distort markets.

Chatterjee also disclosed he had met with FirstEnergy CEO Chuck Jones "to really kick the tires on what they proposed [in their comments on the DOE NOPR] and challenge them on some of what they had put forward." FERC's *ex parte* rules, which bar commissioners from private discussions with parties in "case-specific, contested proceedings," do not apply to rulemakings, according to a 2010 presentation by FERC Associate General Counsel Lawrence R. Greenfield (18 CFR 385.2201(a), (b), (c)(1)(ii)).

FirstEnergy proposed that the commission require RTOs and ISOs adopt a *pro forma* Resiliency Support Resource (RSR) tariff agreeing to make monthly payments to "fuel-secure, resilient generators." The payments would be "equal to its full costs of operation and service" and a "fair return on equity," minus its revenues for capacity, energy and ancillary services.

Chatterjee, a native of coal state Kentucky and a former aide to Senate Majority Leader Mitch McConnell (R-Ky.), has made no secret of his desire to aid coal generators. Powelson, a Republican, and LaFleur, a Democrat, have reacted more warily to the Perry proposal, expressing concern it could damage wholesale markets.

Awaiting McIntyre and Glick

Republican Kevin McIntyre and Democrat Richard Glick, who were confirmed to FERC by the Senate on Nov. 2, are awaiting their swearing-in and have not commented publicly on the proposal. Chatterjee told Bloomberg that he had not discussed the NOPR or his interim proposal with McIntyre, who will replace him as chairman.

"Kevin is somebody with a lot of expertise. He's a smart, thoughtful guy. … And I hope that he will ultimately be persuaded to follow the course that I've laid out," Chatterjee said.

Perry's Sept. 28 proposal requested that FERC issue a final rule within 60 days. But even if Chatterjee won the two additional votes he needs to approve a final rule in December, it could be vulnerable to court challenges on the grounds that it was rushed through without sufficient notice to the public and proper evaluation by the commission.

Powelson said he was looking forward to the arrival of McIntyre and Glick — who cannot join FERC until President Trump gives them their signed commissions.

"Having two other colleagues be part of this conversation is important," he said. "I think we've got a lot of work ahead of us over the next 24 days."

Michael Brooks contributed to this article.

COMPANY BRIEFS

OG&E Dedicates 462-MW Natural Gas Power Plant

Oklahoma Gas & Electric dedicated a 462-MW, $390 million natural gas power plant Friday at an Oklahoma City site the company has renamed the Mustang Energy Center.

The power plant has seven quick-starting, simple cycle gas turbines and is the second in the country with its design and capability. It replaces a combined cycle plant OG&E opened in 1940.

The Mustang Energy Center also is home to a 2.5-MW solar farm.

More: *The Oklahoman*

Madison Gas and Electric Gets Approval to Build Iowa Wind Farm

Madison Gas and Electric on Thursday received approval from the Public Service Commission of Wisconsin to build, own and operate a 66-MW wind farm near Saratoga, Iowa.

The wind farm, which will be MGE's largest, will cost approximately $107 million to build.

MGE anticipates starting construction next spring and completing it by the end of next year.

More: *Madison Gas and Electric*

Lincoln Clean Energy's 250-MW Texas Wind Farm Begins Operations

Lincoln Clean Energy said its Willow Springs wind farm in Haskell County, Texas, has begun commercial operation.

Between the 250-MW wind farm and its Amazon Wind Farm Texas, Lincoln has brought 503 MW of wind energy online this year.

More: *Lincoln Clean Energy*

NV Energy Asks PUC to Approve 3 PPAs Totaling 100 MW

NV Energy is asking the Nevada Public Utilities Commission to approve long-term power purchase agreements for three solar arrays that will be owned by Techren Solar.

The Turquoise Nevada solar project will be located in the Reno Technology Park in Washoe County. At 50 MW, it will be the largest solar array in the state.

The Techren Solar 3 will be located in southern Nevada and the Techren Solar 4 be located in northern Nevada. Both are 25 MW.

More: *Las Vegas Review-Journal*

NRG Seeking $350M to Build 3 Solar Projects

NRG Energy is seeking to borrow about $350 million to build three solar projects in Hawaii that it bought from SunEdison last year, people familiar with the deal told Bloomberg.

Hawaiian Electric had canceled agreements with SunEdison to buy power from the projects, but NRG later arranged contracts with the utility.

NRG's effort to fund the projects comes as it's seeking buyers for its renewables development unit and its renewables portfolio.

More: *Bloomberg*

Llende Joins AEP As Vice President

American Electric Power on Thursday announced James Llende has joined the company as vice president of tax, with responsibility for its federal, state and local tax compliance, tax audit, tax accounting and tax planning functions.

Llende, 49, had been senior tax director at NextEra Energy. He replaces Mark Pyle, who will retire from the company Jan. 28, 2018.

More: *AEP*

Toshiba, NRG Deploy Battery Storage near Wind Farm in ERCOT

Toshiba and NRG Energy have collaborated to deploy the Elbow Creek Energy Storage Project on ERCOT's grid near NRG Yield's Elbow Creek Wind Farm in Howard County, Texas.

The project is a lithium-ion-based Toshiba battery system capable of storing and delivering up to 2 MW of power. It's expected to help correct short-term grid imbalances by providing high-speed frequency regulation services. It also can store power when wind generation is high and deliver it when load support is needed.

More: *NRG*

Central Maine Power Replaces 1,400+ Poles After Storm

Central Maine Power has replaced 1,416 utility poles broken in an Oct. 30 wind storm that cut off power to more than half a million people.

The company hasn't had to replace that many poles after a storm since it had to replace 2,600 after a historic ice storm in 1998.

More: *Portland Press Herald*

Siemens Cutting Jobs in Power & Gas, Renewables Divisions

In response to a steep drop in orders for power-plant turbines, Siemens plans to make significant job cuts at its power & gas division as well as at its renewable energy unit.

Talks between management and unions are expected to lead to a mid-November announcement on the elimination of a yet-to-be-determined number of mostly German positions, according to an executive familiar with the matter who asked not to be named because the discussions are ongoing.

Siemens said its Siemens Gamesa Renewable Energy subsidiary would eliminate about 6,000 positions that comprise about a quarter of its staff.

More: *Bloomberg*

Companies Form Alliance to Finance, Build Microgrids, DERs

Dynamic Energy Networks, which owns and operates microgrids and distributed energy resources, has formed strategic alliances with Schneider Electric, which develops microgrid technology, and The Carlyle Group, an alternative asset manager.

Working together, the three will be able to finance, build, own and run microgrids and DERs that serve a wide range of customers, including campus operators, hospitals and the military.

Dynamic also has rounded out its executive team, adding Steve Pullins as vice president of development; John Westerman as vice

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COMPANY BRIEFS

Continued from page 38

president of technical solutions; and Scott Rosebrook as vice president of corporate development and finance.

More: Dynamic Energy Networks

Organic Valley Agrees to Buy Power To Fund Solar Projects in 3 States

Farming cooperative Organic Valley has agreed to buy power from a group of municipal utilities in order to fund more than 12 MW of solar projects in Wisconsin, Minnesota and Iowa.

OneEnergy Renewables will build and own the solar projects and sell their power to the Upper Midwest Municipal Energy Group, which will sell it to Organic Valley.

Construction on the projects will begin next spring and is expected to be completed by 2019.

More: Wisconsin Public Radio

National Grid Installing Tesla Battery on Nantucket

National Grid will install a 48-MWh battery energy storage system made by Tesla and a new diesel generator on Nantucket to provide the island off the coast of Massachusetts with power should one of the two submarine cables between it and Cape Cod fail.

The system and new generator will replace two diesel generators that are nearing the end of their life spans. They also will enable National Grid to put off constructing a third submarine cable that it had predicted would be needed in 12 years for 15 to 20 years beyond that.

More: National Grid

FEDERAL BRIEFS

Group of States, Cities Pledges To Meet Paris Commitment

A group of 20 states, more than 50 cities and U.S. companies and universities calling itself America's Pledge said Saturday that its members still plan to meet the commitments of the Paris Agreement despite President Trump's plan to pull the U.S. out of the agreement.

But the group also released a report that said federal action would be required for the U.S. to meet its 2025 carbon-reduction commitments.

More: The Hill

Senate Tax Bill Retains Breaks for Renewables, EVs

The tax bill unveiled Thursday night by the Senate Finance Committee is friendlier to renewable energy and electric vehicles than the tax bill released Nov. 2 by House Republican leaders.

The Senate bill continues the production tax credit for energy from wind and other renewables that the House bill cut by a third. It also retains a $7,500 tax credit for consumers who buy EVs that the House bill eliminates.

In another reversal of the House bill, the Senate bill doesn't extend a tax credit for the nuclear power industry that would help Southern Co. in its effort to build two new reactors at the Vogtle Electric Generating Plant in southeast Georgia.

More: Bloomberg Politics

Pruitt to Keep Rolling Back CPP Despite Climate Report


Pruitt

EPA Administrator Scott Pruitt last week told USA TODAY that the National Climate Assessment won't stop him from continuing to roll back the Clean Power Plan.

The report, which the federal government released Nov. 3, says climate change is real, its effects are already being felt and it's caused by human activity.

Pruitt, who as Oklahoma attorney general sued to stop the Obama administration from administering the CPP, said Congress never gave EPA the authority to implement such a sweeping regulation.

More: USA TODAY

Bill to Speed Approval Process For Hydro Dams Passes House

A bill sponsored by Rep. Cathy McMorris Rodgers (R-Wash.) to speed the process for approving the construction and relicensing of hydroelectric dams cleared the House of Representatives on Wednesday.

The bill enables FERC to establish a schedule for federal and state agencies, local governments and Native American tribes to provide comments on a dam's construction.

While the congresswoman argues the law is necessary to expand the nation's output of green energy, environmental groups and a coalition of western state governors warn it could hasten the approval process at the expense of ensuring older dams meet current environmental regulations and the authority of local governments to determine water rights.

More: The Spokesman-Review

EPA's Science Panel Policy Could Face Court Challenge

In a letter to EPA Administrator Scott Pruitt, 62 members of the House of Representatives said his new policy blocking scientists who receive grants from serving on the agency's science panels is an "arbitrary and unnecessary limitation to disqualify preeminent experts" from advising the agency.

Rep. Bill Foster (D-Ill.) was the lead signatory of the letter, which was signed by one Republican, Rep. Brian Fitzpatrick of Pennsylvania.

Legal experts said Pruitt's policy could be challenged in federal court, where EPA could face an uphill battle to prove that blocking certain scientists from its boards serves legitimate government interests.

More: The Hill; The Hill

France Doesn't Invite Trump to Climate Change Summit

President Trump is "for the time being" not invited to a climate change summit to be

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FEDERAL BRIEFS

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held in Paris on Dec. 12, an official in French President Emmanuel Macron's office said.

The U.S. is still invited to the summit, but not Trump. More than 100 countries and non-governmental organizations have been invited to the summit.

More: Reuters

Children, Environmental Group Sue to Keep CPP in Place

Two children and a Philadelphia-area environmental group last week filed a lawsuit against President Trump, Energy Secretary Rick Perry and EPA Administrator Scott Pruitt to stop them from scrapping the Clean Power Plan.

The children, ages 7 and 11, and the Clean Air Council filed the lawsuit in U.S. District Court for the Eastern District of Pennsylvania.

The suit alleges that the children are suffering from the effects of a rapidly warming climate and says that the U.S. is "relying on junk science" and ignoring "clear and present dangers of climate change, knowingly increasing its resulting damages, death and destruction."

More: Reuters

NRC Extends Review of Vermont Yankee Sale

The Nuclear Regulatory Commission now expects to extend its review of the license

transfer of the closed Vermont Yankee nuclear plant in Vernon, Vt., through March.

Entergy, which owns the plant, and NorthStar Group Services, which is buying it, had asked the commission to rule on the transfer by the end of the year.

NRC said NorthStar must answer more questions about its financial plans and technical qualifications.

More: VTDigger

STATE BRIEFS

COLORADO

Boulder Votes to Renew Tax to Fund City's Effort to Form Power Utility

Boulder residents voted to renew a tax that provides funding for the city to pursue forming its own electric utility.

The tax will provide about $16.5 million for the effort over the next three years.

Residents also voted to require another vote before Boulder issues any debt to acquire the assets from Xcel Energy that it would need to form the utility.

More: Daily Camera

INDIANA

OUCC Recommends Lowering Utility's Authorized ROE

The Office of Utility Consumer Counselor (OUCC) is recommending that the Utility Regulatory Commission lower Indiana Michigan Power's authorized return on equity to 8.65% from 10.2%. The American Electric Power subsidiary is seeking an increase to 10.6%.

The OUCC also is recommending that the commission only allow I&M to increase its monthly residential charge from $7.30 to $8.30. The utility is seeking an increase to $18.

More: Inside Indiana Business

MAINE

Emera Power Procurement Results in SOS Rate Increase

The Public Utilities Commission has concluded its competitive solicitation to procure power for Emera Maine customers that receive standard offer supply service.

The solicitation will increase the price that Emera Maine residential and small business SOS service customers pay for power to 7.2 cents/kWh, effective Jan. 1. That's a 14% increase from the price they pay this year. Emera Maine large business customers will face a 21% price increase. Prices for large business customers will be indexed to market prices and set in advance of each month.

More: Maine Public Utilities Commission

MASSACHUSETTS

Test Site for Tidal Turbines Being Installed in Cape Cod Canal

The Marine Renewable Energy Collaborative is installing pilings and a platform near the Buzzards Bay, Mass., railroad bridge that will allow companies to test smaller energy generating turbines in tidal flows around 5 knots in the Cape Cod Canal.

MREC Executive Director John Miller said the test site will help developers save money by eliminating the permitting process.

The test site will be able to test turbines up to 3 meters in diameter. Much larger tidal turbines are currently generating energy in Northern Scotland and the Bay of Fundy in Canada, where tidal flows are up to 10 or 12 knots.

More: CapeCod.com

MINNESOTA

PUC Rules Co-Ops Must Change Rooftop Solar Fees

The Public Utilities Commission on Thursday ruled that the state's rural electric cooperatives should use so-called "cost-of-service" studies instead of revenue calculations in computing the fees they charge their customers with solar energy systems.

A 2015 state law allowed co-ops to charge the fees to recover their fixed costs.

A representative of a renewable energy research and advocacy group said that alt-

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STATE BRIEFS

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hough the decision didn't go far enough, it should lead to lower fees. Co-op representatives, however, said the methodology mandated by the PUC won't necessarily lead to lower fees.

More: Star Tribune

MISSISSIPPI

PSC Denies Request to Exclude Kemper Testimony

The Public Service Commission voted 3-0 last week to deny Mississippi Power's request to exclude testimony filed by Public Utilities Staff experts in proceedings to determine how much the company's customers will pay for the natural gas-burning part of its Kemper power plant.

The commission did exclude some testimony from Kemper foe Thomas Blanton of Hattiesburg.

Mississippi Power parent Southern Co. has lost $6 billion on the $7.5 billion plant, due largely to cost overruns on the coal-gasification technology it was to have featured. Mississippi Power decided in June to scrap that and just have the plant run on natural gas.

More: The Associated Press

OHIO

PUCO Adopts Changes To Net Metering

The Public Utilities Commission on Wednesday adopted amendments to the net metering rule in Ohio's administrative code that is likely to reduce the amount of the credits that customers with solar panels receive on their bills.

The Ohio Environmental Council was disappointed with the change to credits but pleased with other parts of the ruling, which helps create a common set of rules for all investor-owned electric utilities operating in the state.

American Electric Power said it had not reviewed the ruling in detail but reacted positively.

More: The Columbus Dispatch; Public Utilities Commission of Ohio

OREGON

Governor Issues Executive Orders on Green Buildings, EVs

Gov. Kate Brown has issued one executive order imposing green mandates on new construction and another meant to more than triple the number of electric vehicles in the state.

The first requires homes built after September 2020 and commercial buildings built after October 2022 to be equipped for solar panel installation. It also requires all parking structures for new home and commercial buildings to be wired for at least one EV charger by October 2022 and directs the state's Building Codes Division to require new homes to be "zero-energy ready" by October 2023.

The second order sets a goal of at least 50,000 registered EVs in the state by 2020, up from the 16,000 registered now. It requires the state to help meet that goal by increasing purchases of EVs and installing more charging stations on government property.

More: Oregonlive.com

NERC CEO on Leave After Arrest for Domestic Violence

Continued from page 1

Familiar Face

Cauley, who has led NERC as CEO for nearly eight years, is a familiar face in D.C., often testifying before Congress and FERC.

He holds a bachelor's in math and electrical engineering from the U.S. Military Academy, a master's in nuclear engineering from the University of Maryland and an MBA from Loyola University.

He served as the program manager for grid operations and planning at the Electric Power Research Institute and served five years as an officer in the U.S. Army Corps of Engineers before joining NERC in 1996.

As vice president and director of standards, he helped prepare NERC's application to become the FERC-certified Electric Reliability Organization after the 2005 Energy Policy Act gave the commission the power to enact mandatory reliability standards.

He left NERC in March 2007 to become CEO of SERC Reliability Corp., returning as CEO in January 2010.

He earned $757,481 in salary and $80,985 in other compensation in 2015 according to NERC's IRS form 990.

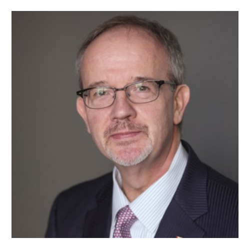
NERC, which employs about 230, has a 2018 budget of almost $73 million.

Berardesco

Berardesco, who goes by "Charlie," joined NERC as general counsel in July 2012 after more than nine years at Constellation Energy, where he served as senior vice president, general counsel, corporate secretary and chief compliance officer.

Before Constellation, Berardesco practiced law and served in executive positions at Fusara, a consortium of AIG, Kemper and Prudential, and HCIA, a health-care information company.

He has a bachelor's in political science from Duke University and a law degree from George Washington University, where he was managing editor of *The George Washington Law Review* and now serves on the dean's board of advisers.



Charles Berardesco | *Duke University Chapel*

According to his NERC biography, his other nonprofit endeavors include serving as chair of Duke University Chapel's advisory board; board chair of the Gay Men's Chorus of Washington; and a member of the Business Council of the Human Rights Campaign.

Among his awards and recognition: named one of the top 10 "GC's to Watch" by *The Corporate Board* magazine; named a Leader in the Law by *The Daily Record*; and winner of the Out and Proud Corporate Counsel award by the National LGBT Bar Association.

He earned about $494,000 in 2015.