# O Inside

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CAISO = ERCOT = ISO-NE = MISO = NYISO = PJM

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# RTO Insider

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10837 Deborah Drive Potomac, MD 20854 (301) 299-0375

Plan	Price		
Newsletter PDF Only	\$1,450		
Newsletter PDF Plus Web	\$2.000		

2019 Annual Subscription Rates: See additional details and our Subscriber Agreement at rtoinsider.com.

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# When All Else Fails, Read the Order

By Steve Huntoon



By now we've all been told that FERC's recent order on PJM's minimum offer price rule is the death knell for renewables and a big hit to consumers.

This is the spin from renewable advocates who didn't actually read the order before firing off

press releases.1

Let me explain four elements of the order that are positive for renewables, and then discuss the consumer rate hike that isn't.

#### The Death Knell for Renewables that isn't

#### Existing Renewables are Grandfathered, Fossil and Nuclear Aren't

This is a big preference for renewables. It also means that to the extent uneconomic subsidized fossil and nuclear units retire, energy prices for renewables increase.

#### Renewables Depend Much less on Capacity **Revenues for Project Viability**

Renewables' nameplate capacity is heavily discounted for Reliability Pricing Model purposes because of their intermittency. As a consequence, renewable projects are much less dependent on RPM revenue for project viability.

By the way, those complaining that renewables will lose project-critical RPM revenues are some of the same wanting to get rid of RPM altogether. Which is it?

#### The Unit-specific Exemption Favors Renewables

There is an exemption for projects that can show financial viability even without a state subsidy. And it would seem many renewable projects will be able to satisfy the test because of the generic nature of their subsidies.

State subsidies for fossil and nuclear units are tailored to providing just enough money to keep specific units around. So by definition — or at least by representations to state legislators — they have to have the subsidies to be financially viable, which in turn would mean no unit-specific exemption for them.

#### **Federal Subsidies are Excluded**

This is a big preference for renewables because their federal subsidies per megawatt-hour are enormous, averaging \$21.50, with fossil and nuclear subsidies less than 1/10 of that. See chart below with the data: 2

Yet, renewable advocates complained about federal subsidies for fossil being excluded. OMG.

#### The Consumer Rate Hike that isn't

At some point, we'll have some rigorous modeling of the consumer impact. There are a lot of moving parts, including how significant the unit-specific exemption turns out to be.

One thing we know now is that the consumer rate hike claimed by some advocates is a fantasy. They rely on a study that claimed an increase in RPM consumer costs of \$5.7 billion compared to the last RPM auction.3 This estimate was based on 24,000 MW being subject to the MOPR.

There are fatal flaws in that study. First is that at least 16,416 MW of the 24,000 MW didn't clear in the last RPM auction.<sup>4</sup> So the study is estimating a price increase by subtracting capacity resources that weren't there to subtract in the first place.

Now let's look at what's left after subtracting the nonexistent 16,416 MW from the 24,000 MW. The roughly 7,600 MW that's left is made up of three nuclear plants (Hope Creek and Salem in New Jersey, and Quad Cities in Illinois) and one coal plant (Ohio Valley Electric Corp.). The FERC order requires that offer prices be adjusted to the net avoidable cost rate, which is the gross going-forward cost net of estimated energy, capacity and ancillary services market revenues. Independent Market Monitor data show that none of the nuclear plants in question needs revenues in excess of estimated total energy and capacity revenue in order to remain financially viable. The necessary implication of this is that their minimum offer price will be below the locational deliverability area clearing price for the respective units.

As for the coal plant, generic PJM data show

	Direct Expenditures			Tax Expenditures						
Туре	Section 1603	R&D	Other	Subtotal	Elec. Sales	Power Plants	Fuel Sales	Fuel Comp.	Subtotal	Total
FY2019 Spendir	ng Summary b	y Type & Fu	el							
Coal	-	0.21	0.05	0.26	0.03	0.38	0.05	0.35	0.81	1.07
HC	-	0.02	0.04	0.06	-	-	0.11	0.78	0.89	0.95
Nuclear	-	0.62	0.04	0.66	0.44	0.63	-	-	1.07	1.74
Renewables	-	2.43	0.04	2.47	10.81	8.21	-		19.03	21.50
Wind	-	0.20	-	0.20	14.95	-	1-	-	14.95	15.15
Solar	-	3.92	-	3.92	-	38.59	-	-	38.59	42.51
Other	-	9.46	-	9.46	6.59	6.80	-	-	13.40	22.85
Avg. All Fuel	-	0.46	0.04	0.50	1.30	1.16	0.05	0.35	2.86	3.36

Per-MWh subsidy by type & fuel (2010, 2013, 2016, 2019, \$ nominal) | University of Texas at Austin Energy Institute

# Counterflow

### By Steve Huntoon

a gross going-forward cost of \$171/MW-day and very conservative energy and ancillary services revenue of \$45/MW-day.6 Netting the \$45/MW-day from the \$171/MW-day gives a MOPR replacement rate of \$126/MWday, which is below the \$140/MW-day RTO clearing price in the last auction. Thus, the coal plant clears without affecting the RTO clearing price.

Although not part of the study reviewed above, let me add a note on Commissioner Richard

Glick's estimate that 25% of demand resources that cleared in the last auction won't clear in the next one allegedly because a curtailment service provider (effectively an aggregator) will need to know its specific end-use customers three years in advance. This does not consider that the FERC order exempted all demand response resources that cleared in a prior auction, i.e., all the DR resources that Glick says are subject to the MOPR. Moreover, CSPs already live with some uncertainty about their ultimate end-use customers; no state

subsidy for DR has been identified; and DR resources could alleviate uncertainty for CSPs by certifying to current and future nonreceipt of state subsidies (which, as noted, don't even seem to exist).

To sum up: No effect on the last RPM auction results.

Yes, you read that right. No increase in RPM consumer costs relative to the last auction.

Speaking of reading, might I recommend the order? ■

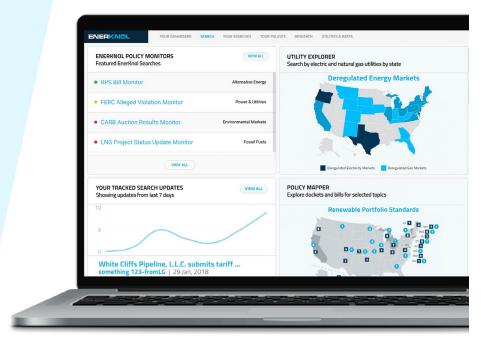
- ¹The order was posted at 5:51 p.m. ET on Dec. 19, 2019, after press releases were issued. Other groups also didn't read the order before firing, but their shots in the dark weren't so far off the mark.
- <sup>2</sup> https://live-energy-institute.pantheonsite.io/sites/default/files/UTAustin FCe Subsidies 2017 June.pdf, page 23, Table 7, FY 2019 ("HC" stands for hydrocarbons oil and natural gas). By the way, historical subsidies that no longer exist, and aggregate dollar amounts of subsidies, are irrelevant to relative subsidy value among resources. What is relevant is amount of subsidy per unit of generation.
- 3 https://www.sierraclub.org/press-releases/2019/12/ferc-costs-consumers-billions-hobbles-clean-energy-economy-help-coal-and; https://www.eenews.net/stories/1061856193; https://www.vox.com/energy-and-environment/2019/12/23/21031112/trump-coal-ferc-energy-subsidy-mopr. The study relied upon is here: https://gridprogress.files.wordpress.com/2019/08/consumer-impacts-of-ferc-interference-with-state-policies-an-analysis-of-the-pjm-region.pdf.
- <sup>4</sup> The 16,416 MW is composed of 14,300 MW of future renewable resources and 2,116 MW of Ohio nuclear units that did not clear in the last RPM auction. https:// www.prnewswire.com/news-releases/firstenergy-solutions-comments-on-results-of-pjm-capacity-auction-300654549.html.
- 5 http://www.monitoringanalytics.com/reports/PJM\_State\_of\_the\_Market/2019/2019q3-som-pjm-sec7.pdf, Tables 7-20 and 7-21 (The MMU didn't include ancillary services, which would add to revenue.)
- 6 Initial Submission of PJM Interconnection, LLC, Docket No. EL16-49-000, https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=15059002, pdf pages 118 and 120.

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# **FERC/Federal News**



# FERC's 'Rifts' Only Widened in 2019

Feuding Now the Norm at Historically Cordial Agency

By Michael Brooks

For years, it seemed like the most exciting thing to happen at a FERC open meeting was a creative interruption by environmental activists protesting the commission's approvals of natural gas infrastructure.

But while that certainly continued in 2019, center stage is occupied by the "Glick-McNamee Show": the label Commissioner Bernard McNamee, now in his second year, has given to the monthly debate he and Commissioner Richard Glick have through their opening statements over Glick's dissents at the meetings.

The FERC that unanimously rejected the Department of Energy's proposed Grid Resiliency Pricing Rule nearly two years ago is mostly gone. The commission began 2019 in mourning when Commissioner and former Chairman Kevin McIntyre died Jan. 2. Less than a month later, Commissioner Cheryl LaFleur announced she would retire; she left at the end of August, having served nine years on the commission, and joined ISO-NE's Board of Directors.

Prior to her departure, LaFleur gave a keynote speech at the Energy Bar Association's annual meeting in May, in which she said that "the polarization of Washington, D.C., and societal rifts on big issues have sort of spread to 888 First St., especially the profound societal disagreement about climate change."

Those rifts only widened at FERC after she left



FERC Chairman Neil Chatterjee (left) and Commissioner Richard Glick chat before the start of the commission's open meeting in September. | © RTO Insider

and, absent any major surprises, will stay in place for 2020.

#### Sabal Trail

Most of the tension between the remaining commissioners — Glick and Republicans Mc-Namee and Chairman Neil Chatterjee — stems from the D.C. Circuit Court of Appeals' August 2017 ruling in Sierra Club v. FERC (the "Sabal Trail" case), in which the court remanded the commission's environmental impact statement on the Southeast Market Pipelines Project. The court ordered FERC to estimate the project's impact on greenhouse gas emissions or explain more fully why it could not do so.

In May 2018, FERC chose to do the latter, arguing that it does not have sufficient information to determine the source of the gas being transported over pipelines, nor its end use. It declared that it would no longer prepare upperbound estimates of GHG emissions when "the upstream production and downstream use of natural gas are not cumulative or indirect impacts of the proposed pipeline project." (See FERC Narrows GHG Review for Gas Pipelines.)

In his dissents, and in public, Glick argues that this means "the commission is essentially ignoring" the court's determination when it approves natural gas pipelines and LNG export terminals.

Previous Commissioner	Current Commissioner	Term Expires
Robert Powelson	Bernard McNamee	2020
Tony Clark	Neil Chatterjee	2021
Colette Honorable	Richard Glick	2022
Kevin McIntyre	James Danly*	2023
Cheryl LaFleur	(empty)**	2024

Status of each seat on the commission. Terms end on June 30 each year. \*Danly has been nominated and advanced out of committee but not confirmed by the full Senate. \*\*Democrats have suggested a replacement for LaFleur, but President Trump has not nominated anyone. | © RTO Insider

# **FERC/Federal News**

During her remaining time with the commission, LaFleur voted for certain pipelines after considering their emissions but also partially dissented on those projects, noting the rest of the majority did not take emissions into account.

Until February, Chatterjee was pulling certain gas items from the commission's agenda to avoid them being voted down or nullified by a tie vote. That month, however, LaFleur joined the Republicans in approving the Calcasieu Pass LNG export project in Louisiana. While she criticized her Republican colleagues for their "failure to disclose and discuss cumulative potential direct GHG emissions associated" with Calcasieu Pass, LaFleur included in her concurring statement a table estimating those impacts.

FERC in 2019 approved 11 LNG export facilities worth about 20 Bcfd of liquefaction capacity and 19 natural gas pipeline projects.

"I'm trying to keep our disagreements about the way we conduct our environmental reviews from forcing me to dissent every single time, even if I have to supplement the climate analysis myself," LaFleur told the EBA.

"I expect that the courts will ultimately require the commission to do more climate analysis," she added.

#### **Stalled Proceedings**

The tension over the emissions dispute appeared to spill into other, less controversial proceedings. LaFleur told the EBA that "even some less prominent orders that have nothing apparently to do with climate have gotten stalled because individual commissioners are too dug in on something to agree on language. And this has happened far more frequently than in the past."

At his monthly press conferences, Chatterjee continually faced questions about the status of the commission's inquiry into grid resilience (AD18-7), PJM's proposal to extend its minimum offer price rule (MOPR) (EL16-49), the commission's consideration of revising its implementation of the Public Utility Regulatory Policies Act of 1978 (AD16-16) and its review of its 1999 policy statement on certifying new interstate natural gas pipeline facilities (PL18-1).

FERC issued a **NOPR** on its PURPA regulations in September and extended PJM's MOPR to all new state-subsidized resources in December. Glick dissented on both dockets, which had languished at the commission for more than a year. FERC has yet to act on the resilience



FERC Commissioner Richard Glick (center) holds a press conference, with legal adviser Matthew Christiansen and Technical Adviser Pamela Quinlan, after the commission's ruling on PJM's MOPR in December. | © RTO

and gas dockets, both of which were opened in 2017 under McIntyre.

In October, Glick complained that he had not been allowed to suggest changes to staff's annual Winter Energy Market Assessment before its presentation at that month's open meeting. Glick cited the report's statement that "Coal and oil-fired generation continue to play an important role in maintaining electric reliability during the winter, especially in the Northeast, where winter demand for natural gas can exceed pipelines' capacity." He noted that coal makes up 2% or less of installed capacity in New York and New England.

After the next open meeting in November, Glick stayed to watch Chatterjee's monthly press conference. He also held his own press conference after the MOPR ruling in December calling it "definitely the wrong thing."

#### **Looking Ahead**

The D.C. Circuit rejected two challenges to FERC's gas infrastructure approvals in 2019 but mostly on procedural grounds.

In May, it ruled that New York-based environmental nonprofit Otsego 2000 lacked standing to challenge FERC's decision to approve Dominion Energy Transmission's New Market Project — the same decision in which the commission narrowed its review of GHG emissions. Otsego 2000 not only had argued that FERC was required to include an evaluation of upstream and downstream emissions in its environmental review of the project, but that the commission improperly announced its new policy without notice and an opportunity for public comment.

In June, the court rejected a similar complaint by Concerned Citizens for a Safe Environment over FERC's approval of a new natural gas compression facility in Davidson County, Tenn., by Tennessee Gas Pipeline. But it did so on far narrower grounds.

"We are troubled ... by the commission's attempt to justify its decision to discount downstream impacts based on its lack of information about the destination and end use of the gas in question," the court said. "It should go without saying that [the National Environmental Policy Act] also requires the commission to at least attempt to obtain the information necessary to fulfill its statutory responsibilities. ...

"Despite our misgivings regarding the commission's decidedly less-than-dogged efforts to obtain the information it says it would need to determine that downstream greenhouse gas emissions qualify as a reasonably foreseeable indirect effect of the project, Concerned Citizens failed to raise this record-development issue in the proceedings before the commission. We therefore lack jurisdiction to decide whether the commission acted arbitrarily or capriciously and violated NEPA by failing to further develop the record in this case."

The court seemed to open a path for a new challenge to one of the commission's approvals. But as of the end of the year, none on the "record-development issue" have been filed with the courts.

It's also unknown when the commission's makeup will change.

While the Senate Energy and Natural Resources Committee advanced both the nominations of General Counsel James Danly to the

# **FERC/Federal News**



commission and Dan Brouillette to succeed Rick Perry as energy secretary on Nov. 19, the Senate confirmed Brouillette mere weeks later, suggesting FERC was not high on Senate Majority Leader Mitch McConnell's to-do list. Danly's nomination could be further held up into the year as the Senate holds a trial on the impeachment of President Trump.

Danly was nominated Sept. 30 to finish McIntyre's term, which would end June 30, 2023. Trump *angered* Democrats when he declined to nominate a replacement for LaFleur. It has been widely reported that Democrats have put forward Allison Clements, clean energy markets program director for the Energy Foundation,

as their choice. It's fairly safe to say that Trump will be disinclined to acquiesce to their request as he goes through the impeachment process and runs for re-election.

McNamee's term expires June 30, but by law he is allowed to serve past that date until the end of the year if he is not reappointed and a replacement is not confirmed. If McNamee stays on into 2021, the presidential election could determine whether Chatterjee not only remains chairman but also a commissioner past June 30 of that year.

The 2020 election cycle also diminishes the odds of any major energy legislation being

enacted. Corey Schrodt, legislative director for Rep. Francis Rooney (R-Fla.), told the Solar Energy Industries Association at a meeting in December that "I've been on the Hill long enough to know that we have from now to maybe until March to really do anything."

On Dec. 20, Trump signed two spending packages for fiscal year 2020, which began Oct. 1, totaling \$1.4 trillion. The bills narrowly averted a government shutdown but did not include extending tax credits to solar and electric vehicles. Wind developers, however, can now qualify for the production tax credit through 2020. The bills also increased funding for FERC, the Department of Energy and EPA.

# North American LNG Export Terminals Approved, Not Yet Built



# **Export Terminals**

#### **UNITED STATES**

APPROVED - UNDER CONSTRUCTION - FERC

1. Hackberry, LA: 1.43 Bcfd (Sempra-Cameron LNG, Trains 2 & 3) (CP13-25) 2. Freeport, TX: 1.43 Bcfd (Freeport LNG Dev/Freeport LNG Expansion/FLNG Liquefaction Trains 2&3) (CP12-509) (CP15-518)

3. Corpus Christi, TX: 0.72 Bcfd (Cheniere-Corpus Christi LNG Train 2) (CP12-

. Sabine Pass, LA: 0.7 Bcfd Train 6 (Sabine Pass Liquefaction) (CP13-552)

5. Elba Island, GA: 0.280 Bcfd (Southern LNG Company Units 2, 4-10) (CP14-103)

6. Cameron Parish, LA: 1.41 Bcfd (Venture Global Calcasieu Pass) (CP15-550)

7. Sabine Pass, TX: 2.1 Bcfd (ExxonMobil - Golden Pass) (CP14-517)

8. Calcasieu Parish, LA: 4.0 Bcfd (Driftwood LNG) (CP17-117)



A. Lake Charles, LA: 2.2 Bcfd (Southern Union - Lake Charles LNG) (CP14-120)

B. Lake Charles, LA: 1.08 Bcfd (Magnolia LNG) (CP14-347)

C. Hackberry, LA: 1.41 Bcfd (Sempra - Cameron LNG) (CP15-560)

D. Port Arthur, TX: 1.86 Bcfd (Port Arthur LNG Trains 1 & 2) (CP17-20) F. Freeport, TX: 0.72 Bcfd (Freeport LNG Dev Train 4) (CP17-470)

G. Pascagoula, MS: 1.5 Bcfd (Gulf LNG Liquefaction) (CP15-521)

H. Jacksonville, FL: 0.132 Bcf/d (Eagle LNG Partners) (CP17-41) I. Plaquemines Parish, LA: 3.40 Bcfd (Venture Global LNG) (CP17-66)

J. Brownsville, TX: 0.55 Bcfd (Texas LNG Brownsville) (CP16-116)

K. Brownsville, TX: 3.6 Bcfd (Rio Grande LNG - NextDecade) (CP16-454)

L. Brownsville, TX: 0.9 Bcfd (Annova LNG Brownsville) (CP16-480)

M. Corpus Christi, TX: 1.86 Bcfd (Cheniere Corpus Christi LNG) (CP18-512)

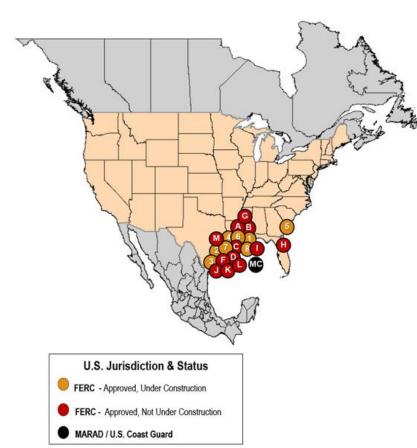
APPROVED - NOT UNDER CONSTRUCTION - MARAD/Coast Guard MC. Gulf of Mexico: 1.8 Bcfd (Delfin LNG)

#### CANADA

For Canadian LNG Import and Proposed Export Facilities go to:

https://www.nrcan.gc.ca/energy/natural-gas/5683

As December 17, 2019





# PG&E Turmoil Will Occupy West Again in 2020

CAISO Worries Over Reliability and Seeks EIM Expansion

By Hudson Sangree

SACRAMENTO, Calif. – The largest utility bankruptcy in U.S. history looks likely to continue through at least the first half of 2020, while CAISO seeks to expand its Energy Imbalance Market and meet reliability requirements as a capacity shortfall looms.

Pacific Gas and Electric must exit its Chapter 11 reorganization by the end of June to take advantage of a \$21 billion wildfire recovery fund established under Assembly Bill 1054, signed into law in July 2019.

That gives PG&E six months to fend off a competing reorganization plan by bondholders, who are trying to take over the company, and get its own plan confirmed by the U.S. Bankruptcy Court in San Francisco and the California Public Utilities Commission.

It's a tight schedule, given how slowly legal and regulatory processes can move, but PG&E says it's on track to reach its goal. The utility is also promising to change the behavior that led to a series of disasters involving its gas and electrical equipment, including the Camp Fire in November 2018, the deadliest wildfire in state history.

"We are focused on emerging from Chapter 11 as the utility of the future that our customers and communities expect and deserve," PG&E CEO Bill Johnson said in a statement announcing a \$13.5 billion settlement with fire victims in early December. (See Judge OKs Deals with



The Tubbs Fire in October 2017 destroyed nearly 1,300 homes in Santa Rosa's Coffey Park neighborhood, where rebuilding continued in November. | © RTO Insider

#### Fire Victims, Insurers.)

Calls for a public takeover of PG&E have been increasing, however, following complaints over a series of public safety power shutoffs meant to prevent further fires and suspicion that PG&E's equipment may have started the Kincade Fire, which ravaged Sonoma County in October.

California Gov. Gavin Newsom recently insisted that PG&E include a provision in its reorganization plan that could speed a takeover by the state, if needed.

PG&E's bankruptcy "puncutate[s] more than two decades of mismanagement, misconduct and failed efforts to improve its safety culture," Newsom wrote to Johnson in a Dec. 13 letter regarding the utility's latest update to its reorganization plan. (See PG&E Chapter 11 Plan Won't Do, Governor Tells Judge.)

The company may need to update its reorganization plan quickly if it hopes to win the governor's unofficial support and the necessary support of the gubernatorial appointees on the CPUC.

A trial to determine the utility's liability in the Tubbs Fire, which burned down more than 1,500 homes in and around Santa Rosa, killing 22 residents, is slated to start in January, though it may be put on hold because of the proposed settlement with fire victims.

# **CAISO Concerned About Reliability**

While PG&E struggles to secure its future, CAISO is trying to head off a capacity shortfall expected to start this summer and increase



The stone facade was all that remained standing of the Soda Rock Winery days after the Kincade Fire tore through Sonoma County. | © RTO Insider

significantly by summer 2021. (See CAISO, CPUC Warn of 'Reliability Emergency.')

The state's policy goals of increasing reliance on renewable energy resources while phasing out natural gas plants is behind the potential problem, CAISO and CPUC officials say. The planned closure in 2024 and 2025 of California's last nuclear generating station, PG&E's Diablo Canyon Power Plant, could worsen the situation.

CAISO Vice President Mark Rothleder told the CAISO Board of Governors in fall that the ISO could face a 2,300-MW shortfall during peak demand time this summer. That shortage could increase to 4,400 MW in 2021 and 4,700 MW in 2022, he said.

Summer peak load is shifting to later in the day as the sun sets and solar power goes offline, exacerbating the situation, Rothleder said.

In response to those concerns, the CPUC ordered that all load-serving entities under its oversight collectively procure 3,300 MW of capacity, on a basis proportional to projected load, by August 2023.

Additionally, the CPUC voted in November to recommend that the State Water Resources Control Board allow four once-throughcooling gas plants built in the 1950s and 1960s to remain online even though they are the last of their kind and are slated to retire by the end of the year. (See California PUC Votes to Keep Old Gas Plants Operating.)

"These requests are to ensure electric system reliability with the expectation that these OTC units will have low capacity factors, and therefore low emissions and low use of seawater for cooling," the CPUC said. "The commission remains committed to OTC compliance, for which California has made substantial progress in the last decade, and requests this schedule adjustment purely to ensure electric system reliability."

The OTC plants along the Southern Cali-

fornia coast are notorious for killing marine organisms and sullying some of the state's most popular beaches, making the decision extremely unpopular with residents and local elected officials. Even the commissioners said they wished they hadn't had to let the plants continue operating.

The Water Resources Control Board, which must vote to keep the OTC plants open, has a workshop on the issues scheduled for March 8.

### EIM Keeps Expanding

CAISO's Western Energy Imbalance Market had a banner year in 2019, with new entities indicating their intent to join the interstate trading platform. The EIM estimates that entities have saved more than \$801 million since the market began more than five years ago.

In December, four Colorado utilities — Xcel Energy Colorado, Black Hills Colorado Electric, Colorado Springs Utilities and Platte River Power Authority — announced they will join the EIM as soon as 2021. The four utilities serve almost 2 million customers and reported \$3.7 billion in sales in 2018. (See EIM Lands Xcel, 3 Other Colo. Utilities.)

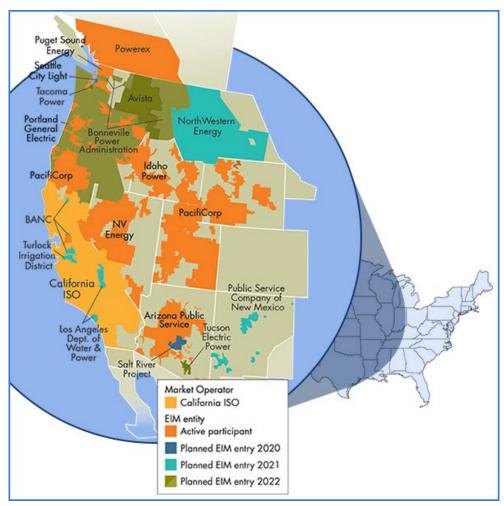
Before the announcement, Colorado was the only state in the Western Interconnection without an entity belonging to the EIM or planning to join. The news was a blow to SPP's nascent Western Energy Imbalance Service, which started far behind the EIM but hopes to compete with it.

The Bonneville Power Administration signed an implementation agreement with the EIM in September, positioning a vast region of the Pacific Northwest, with its powerful hydroelectric dams and thousands of miles of transmission lines, to begin participating in the ISO's real-time market in 2022. (See Bonneville Power Signs Agreement with CAISO EIM.)

The Western Area Power Authority's Sierra Nevada Region and members of the Balancing Area of Northern California also announced their intent to join. (See EIM Attracts More BANC Members, WAPA Region.)

It's not just the EIM's membership that's expanding. In October, CAISO launched a stakeholder process for the EIM's extended day-ahead market (EDAM), which will allow day-ahead unit commitments across the Western states. The EIM is currently a five-minute real-time market.

But the EDAM plan isn't guaranteed, and uneasiness about it lingers among those entities that worry it could compromise the EIM's current system of wholly voluntary participation



The announcement in December that four Colorado utilities will join the Western EIM promises to partly fill in the last blank state on the market's latest map. | Western EIM

and diverse governance.

An eight-month feasibility study of the EDAM, conducted by CAISO and 14 current and future EIM entities, was presented to the EIM Governing Body in September. At the time, EIM entities that aren't members of CAISO wrote a joint letter to ISO and EIM leaders emphasizing that they have not committed to the EDAM and want to make sure it addresses a number of concerns, including the continued independence of the Governing Body and the representation of a range of interests across the West.

A continuing worry among EIM participants is that CAISO or California politicians might try to dominate the regional market. CAISO's bid to form a Western RTO stalled in part because its board is appointed by the state governor and approved by the State Senate. (See CAISO Takes Step Toward EIM Day-ahead Market.)

"The issues to be resolved to make EDAM a

reality should not be underestimated," the entities wrote. Those that signed the letter included Arizona Public Service, Idaho Power and PacifiCorp.

The proposed expansion is probably the biggest initiative on CAISO's plate in 2020, and the stakeholder process is expected to continue through the year. A technical workshop on the EDAM initiative is scheduled for Feb. 12.

### **Western RC Transition**

Among the biggest events in the Western

"Governance structures must be considered that reflect the new market design and the legitimate interests that all within the broader market footprint will have in the operation and rules of the day-ahead market," it said. "In addition, it is likely EDAM will need to include a test to ensure that all participating balancing authorities are not leaning on neighbors to meet their continued reliability obligations."

BCH AESO RC WEST DECEMBER 3, 2019 WECC RCS

The Western Interconnection is divided into four reliability coordinator territories with the dissolution of Peak Reliability on Dec. 3. | Western EIM

Interconnection in 2019 was the handover of reliability coordinator services from Peak Reliability to CAISO, SPP and BC Hydro.

Peak announced in July 2018 that it would shut its doors by the end of 2019 as more of its customers signaled their intentions to defect to CAISO's lower-cost service, now called RC West. CAISO and SPP competed for Peak's remaining customers, with CAISO snagging the majority. BC Hydro assumed the RC role in its service territory, which encompasses most of British Columbia.

Despite trepidation that things could go wrong with multiple handovers on multiple dates, the transition appeared to go smoothly and ended when SPP took over the remaining portions of Peak's territory in the Rocky Mountain states in early December. (See West's RC Transition Earns Plaudits.)

"Going into this, there was a lot of concern and a lot of angst as to how this would all turn out, but once again the industry has come together and proven what we can do," Melanie Frye, CEO of the Western Electricity Coordinating Council, said during the regional entity's Board of Directors meeting Dec. 4.

WECC Member Advisory Committee member Fred Heutte, of the Northwest Energy Coalition, expressed reservations about having multiple RCs in the West, which traditionally has had only one.

"As I've said before, in the future, we may want to reconsider having multiple RCs in the West. There are some distinctive differences in topology here that make the situation more ... fragile, perhaps, than [in] the East, but I know that we'll pursue this current arrangement as best we can."

Branden Sudduth, WECC vice president of reliability planning and performance analysis, said that "between the utilities, the RC transition coordination group, WECC, NERC and other entities — the new RCs [and] Peak — it really was a herculean effort that they were able to accomplish this this year."

"They did run into several bumps along the way, but the industry really kind of [grabbed] the bull by the horns and they overcame," he

Sudduth cautioned that WECC's work with the RCs wasn't done but was entering a new phase.

"This isn't it. We can't just say, 'All right, perfect, we're done. The transition's complete," he said. "We need to make sure that these RCs are performing effectively."



# FERC: NorthernGrid Merger Needs More Work

# Order 1000 Competition, Openness Requirements Unmet

By Hudson Sangree

A proposed merger of two Pacific Northwest transmission planning groups fell short of the requirements of FERC Order 1000, a landmark measure meant to introduce more competition into transmission development while achieving efficiencies and cost savings, the commission ruled Dec. 27 (ER19-2760).

Seven member utilities of ColumbiaGrid and Northern Tier Transmission Group — including PacifiCorp, Avista and Portland General Electric – filed proposed tariff revisions with FERC in September seeking to combine the two entities to form a regional planning organization (RPO) called NorthernGrid. They said the merger would reduce member expenses and

allow for collaborative planning.

The effort had the backing of state regulators, several U.S. senators and the Bonneville Power Administration, among others.

FERC, however, sided with independent transmission developer LS Power, which argued that the utilities' proposed revisions were flawed under the requirements of Order 1000. (See Tx Developer Calls for Closer Look at NorthernGrid.) The company said it didn't oppose the merger but contended the filings had failed to demonstrate the new RPO would meet transmission needs more effectively than the status quo.

The commission agreed. It stressed that it was rejecting the proposal without prejudice, inviting the parties to refile after correcting

the deficiencies.

"We find that the proposed NorthernGrid regional transmission planning process does not satisfy Order No. 1000's requirement to evaluate alternative transmission solutions that might meet the needs of the transmission planning region more efficiently or costeffectively than solutions identified by individual public utility transmission providers in their local transmission planning processes," FERC

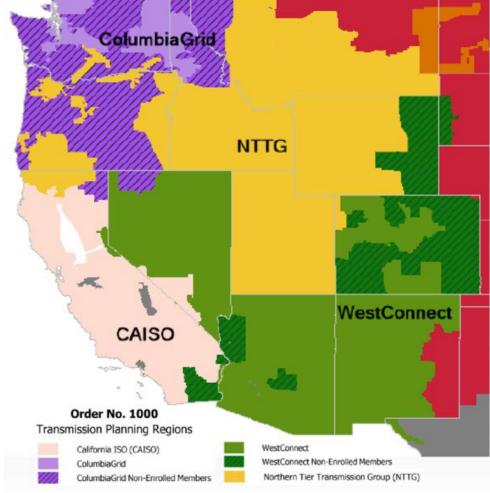
"Specifically, the proposed NorthernGrid regional transmission planning process does not provide transmission developers, including nonincumbent transmission developers, with a reasonable opportunity to submit project proposals after local and regional needs are identified and made available to stakeholders through the regional transmission planning process," the commission said.

In addition, the proposal required "the contemporaneous submission of both needs and proposed transmission projects," FERC noted. As LS Power pointed out, Order 1000 requires the identification of regional needs followed by specific project proposals, the commission said.

"The proposed [tariff revisions] would require developers to submit proposed transmission projects to address regional transmission needs prior to the identification of those needs by the regional transmission planning process," FERC wrote. "We find that this structure deprives developers and stakeholders of a sufficient opportunity to propose solutions in response to needs identified through the regional transmission planning process."

FERC also criticized the utilities' proposal for failing to meet the openness and coordination components of Order 890's local transmission planning principles, now incorporated regionally in Order 1000.

"The coordination principle requires public utility transmission providers to provide customers and other stakeholders with the opportunity to participate fully in the transmission planning process, which must provide for timely and meaningful input and participation of customers and other stakeholders regarding the development of transmission plans (including at the early stages of development)," FERC said. "The openness principle requires that transmission planning meetings be open to all affected parties including, but not limited to, all



The proposed NorthernGrid regional planning organization would consolidate the areas covered by Columbia-Grid and Northern Tier Transmission Group. | ColumbiaGrid

transmission and interconnection customers, state authorities and other stakeholders."

The filing parties' proposed revisions didn't satisfy the coordination and openness principles because they "exclude broad stakeholder participation in the initial review of the development of the draft study scope, draft regional transmission plan and draft final regional transmission plan," FERC said.

The commission identified additional flaws in the utilities' proposed cost allocation methodology and said they failed to meet the posting requirements for transmission needs driven by public policy requirements of state, local and federal governments.

Order 1000 has had a rocky path to implementation since FERC adopted it in 2011. (See *PSEG*, *GridLiance Spar over Order* 1000.) The commission said it welcomed the creation of the RPO, which it said could help the region meet the order's goals of regionalization and competition.

"We recognize that, by combining the existing ColumbiaGrid and [Northern Tier] transmission planning regions, the establishment of NorthernGrid would be a significant step forward for regional transmission planning in the Northwest," FERC wrote. "The commission has long recognized that transmission planning over a broader footprint has the potential to yield benefits for customers, and we appreciate the efforts by the region's stakeholders to establish NorthernGrid as a new transmission planning region.

"If filing parties refile their proposal," FERC wrote, "the revised process should provide a meaningful opportunity for transmission developers to submit project proposals after re-



The Bonneville Power Administration, with thousands of miles of transmission lines in the Pacific Northwest, is one of a dozen entities that could be included in the NorthernGrid consolidation, if approved by FERC. | BPA

gional transmission needs have been identified through the regional transmission planning process, and for that process to evaluate those proposed projects for possible selection in the regional transmission plan for purposes of cost allocation."







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# **ERCOT Market Adjusting to 'The New Normal'**

By Tom Kleckner

Most ERCOT market participants have come to grips with the fact that "9-ish percent" reserve margins are likely "the new normal" in Texas' energy-only market, as former FERC Chairman Pat Wood III recently said.

In 2019, for the second summer in a row, the state's grid withstood extreme heat and loss of wind power during some of the hottest days to meet multiple demand peaks exceeding the previous year. Despite beginning both summers with single-digit reserve margins, ERCOT resorted to emergency actions just twice.

"The reliability of our markets has been the story of the last quarter-century in our state," said Wood, also a past Texas Public Utility Commission chairman. (See "Wood Reflects on Electric Industry's Past — and Future," *Texas Reliability Entity Briefs: Dec.* 11, 2019.)

"What we've built here is something everybody

should be proud of," attorney Katie Coleman, representing the Texas Industrial Energy Consumers trade group, said during a PUC workshop on ERCOT's summer performance. (See "ERCOT MPs: Market Worked as Designed in Summer," Magness, Walker to Explain ERCOT Reliability to NERC.)

Real-time prices did hit the \$9,000/MWh systemwide offer cap several times, mostly because Texas wind generation hits a lull during the early-afternoon hours.

"But [that's] how an energyonly market is supposed to work and part of [its] success," Texas Competitive Power Advocates' Michele Gregg Richmond said.

"You do live closer to the edge than what I'm used to, but you do a fantastic job of managing it," NERC Trustee Ken De-Fontes said during the Texas Reliability Entity's December board meeting.

ERCOT, which has a 13.75% planning reserve margin, projects its reserves will climb

to 10.6% next year and 18.2% in 2021, before shrinking to 12.9% in 2024. (See ERCOT's Reserve Margin Climbs to 10.6% in 2020.)

Renewables will provide the majority of the incoming reserves with solar (64.7 GW) and wind (32.3 GW) accounting for almost 88% of the more than 110 GW of capacity under study in ERCOT's *generation interconnection* 

With not a single megawatt of coal capacity in the queue, wind is expected to surpass coal's share of the fuel mix in 2020. Coal accounted for 20.43% of ERCOT's energy production through November 2019, with wind right behind at 19.76%. The Norwegian research firm Rystad Energy has *predicted* that Texas wind farms will generate about 87 TWh of electricity this year, compared to 84.4 TWh from coal.

Wood said during the Texas RE's annual meeting that the state is the country's largest carbon-emitter, "but this power system is much

cleaner than it used to be." He said the shift to cleaner-burning fuels has only just begun.

"That's going to happen in the country. I know President Trump doesn't like it, but that's inevitable." Wood said.

With more than 27 GW of installed wind capacity, Texas has more wind than any other state in the nation (including 22.4 GW in ERCOT). Solar capacity is coming at an even faster rate, with the 3 GW of capacity at the end of 2019 expected to double to more than 6.2 GW in 2020. ERCOT expects to have more than 11 GW of solar capacity on hand by 2022.

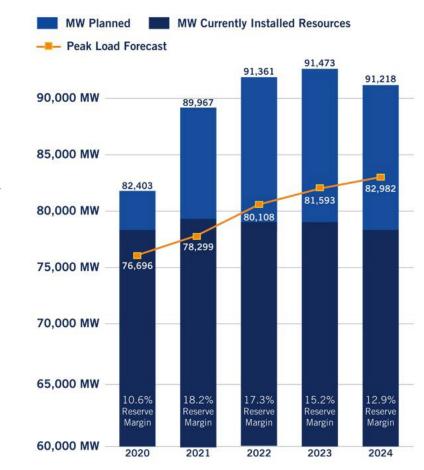
Battery storage, with its falling costs and improving technology, is fueling much of that increase. There is about 1 GW of storage on the system right now, but another 7.2 GW is under study.

Recognizing the need to be prepared for the wave of storage resources, ERCOT last year suggested creating a *Battery Energy Storage Task* 

Force to develop policy recommendations related to the resources' integration into the grid. The group will consider operational and market design policies that can be implemented in the short term and rules that can be implemented on a longer timeline. (See "TAC Approves BESTF Leaders, Scope," ERCOT Technical Advisory Committee Briefs: Oct. 23, 2019.)

Another task force has developed real-time co-optimization's key principles, which will go before the Board of Directors in February for final approval. Staff and stakeholders will then draft the revision requests and other documents necessary for the implementation of the market tool, which procures both energy and ancillary services every five minutes to find the most cost-effective solution for both requirements.

Staff are also developing rules and requirements for distributed generation. ERCOT has limited interconnections of new distributed generation projects in the meantime.



ERCOT's projected resource capacity through 2024 | ERCOT

# **ISO-NE News**



# ISO-NE Energy Security Plan Looms Large in 2020

ISO-NE Faces April 15 FERC Filing Deadline

By Michael Kuser

ISO-NE kicks off 2020 with a key deadline looming to file a long-term fuel security mechanism with FERC — a project two years in the making.

The New England Power Pool Markets Committee worked double-time through the fall to complete the Energy Security Improvements (ESI) program to address winter fuel security concerns. This year, it will meet three days a month to complete the work before FERC's revised deadline of April 15 (EL18-182). (See FERC Extends ISO-NE Fuel Security Filing Deadline.)

Stakeholders are discussing LNG supplies, market mitigation and a second demand curve to ensure the RTO can meet forecast load throughout the next operating day.

The Participants Committee likely will vote on the new market construct at its April 2 meeting, and stakeholders will learn of any schedule additions early this month.

Based on regular surveys on generator fuel supplies for this winter, the RTO estimates that more than 4,500 MW of gas-fired generating capacity could be unable to get fuel when needed. (See "RTO Cautions on Availability of Fuel in Cold Snaps," *ISO-NE Projects Adequate Resources for Winter.*)

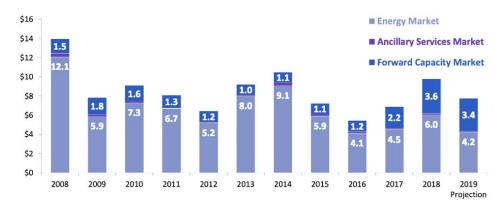
This is the first winter season since the 2,028-MW Pilgrim nuclear plant retired in May. The RTO said the plant's capacity is being replaced by several new resources, including three dual-fuel plants, as well as solar and wind resources.

# Stakeholder Proposals

What's taking so long to complete the plan? To begin with, stakeholders have varying opinions and have offered several proposals.

Calpine proposed a Forward Enhanced Reserves Market that would procure fuel-secure winter energy three years in advance.

The Massachusetts attorney general's office, which recommended a call option that would be sold in a simple auction of sealed bids with a uniform clearing price, withdrew its proposal in August. In September, it said it was keeping its options open on several amendments to the ESI proposal, depending on the flow of analyses and discussion in the lead-up to April's filing.



Energy market values vary with fuel prices, while capacity market values vary with changes in supply (\$ billions). | ISO-NE

Eversource Energy presented an amendment to address the company's concern that the RTO's Inventoried Energy Program would overlap with ESI for winter 2024/25.

The Connecticut Public Utilities Regulatory Authority and Department of Energy and Environmental Protection jointly presented an amendment to the Tariff language concerning quarterly certification of the competitiveness of the energy call option offers in the dayahead market.

FirstLight Power Resources proposed that the option strike price — intended to estimate the marginal price of energy to meet next day's forecasted load plus operating reserves — needs to vary by hour, just as marginal energy prices do.

#### **Market Concerns**

Even the U.S. Senate got in on the act in November, as seven senators from New England urged ISO-NE to "return to the table with stakeholders" and more closely align its fuel security initiative with state policies seeking to speed the transition to renewable energy resources. (See Senators Ask ISO-NE to Heed States on Clean Energy.)

In a letter to the RTO, the senators criticized it for "pursuing a patchwork of market reforms aimed at preserving the status quo of a fossil fuel-centered resource mix" and having "charted its own path forward and pursued unpopular initiatives" such as Competitive Auctions with Sponsored Policy Resources (CASPR) and the Inventoried Energy Program.

"CASPR was really just a mechanism we

invented and work around to allow such resources to enter the market without crashing the price in the primary auction capacity market," ISO-NE CEO Gordon van Welie said at a conference in November. (See Overheard at NECBC 2019 Energy Conference.) "When we set out to change anything in our markets, it's at least a three-year market design, stakeholder journey ... with anything substantive likely to be litigated."

Former FERC Chair Joseph T. Kelliher, now executive vice president for federal regulatory affairs at NextEra Energy, said at the same event that "to the extent there's a crisis in the industry, it's a crisis of low energy prices."

At another conference, Massachusetts Department of Public Utilities Chair Matthew Nelson said, "I don't think markets are broken; it's just that the world has changed around the markets. Regardless of our personal or political positions, the reality in the market is one of increasing demand for clean resources."

Nelson likened today's market to a threelegged stool balancing clean energy, cost and reliability.

"Reliability today is king in the electric market, but the relationship between reliability and clean energy is not binary," he said. "The narrative that a clean future can only come at the expense of reliability is false. It's not a zero-sum game."

Speaking at the Northeast Energy and Commerce Association's Power Markets Conference in November, FERC Commissioner Richard Glick said, "I never realized until I got to FERC how complicated some of these

# **ISO-NE News**





FERC Commissioner Richard Glick | © RTO Insider

markets have grown ... and we see a lot of proposals to tinker with the markets, particularly the capacity markets." (See Overheard at NECA 2019 Power Markets Conference.)

Massachusetts Energy and Environmental Affairs Secretary Kath-

leen Theoharides in December said that she is focused on bringing new renewable resources into the market and electrifying the transportation and building sectors to take advantage of new hydro, wind and solar resources as they come online. (See *Overheard at the 1st New England Energy Summit.*)

"We really feel you need to do those two pieces at the same time. You don't just clean up your power and then do electrification next," Theoharides said.

### **Big, Slow Clean Energy Projects**

Massachusetts has been facing delays in some of its larger state-sponsored renewable energy projects, as has Avangrid, which is partnered on two of the projects.

Avangrid said in November that it expects "in the not too distant future" to get the final permits on its New England Clean Energy Connect (NECEC) project to bring 1,200 MW of Canadian hydropower to Massachusetts. The company expects to begin construction in the second quarter this year and to be opera-

tional by 2022.

NECEC has been plagued by delays, controversy and opposition since it received the state contract following the failure of Northern Pass, a competing project by Eversource, to win regulatory approval in New Hampshire.

Avangrid's offshore wind joint venture, Vineyard Wind, also saw trouble last year, as the U.S. Bureau of Ocean Energy Management in August delayed issuing a final permit in order to expand environmental impacts analysis for all such offshore projects. (See *Renewable Backers Decry Vineyard Wind Delay*.)

"All of the developers have agreed to 1 nautical mile of turbine spacing, so we hope the fishermen can do their fishing, and we expect a decision by the secretary of the interior by early January so we can start construction," Avangrid CEO James P. Torgerson said.

ISO-NE's activities now center on the grid's transition to renewable resources, a topic to which the grid operator devoted a conference in May. (See 'Grid Transformation Day' Highlights ISO-NE Challenges.)

"It's a much different grid from 10 years ago," said Anne George, vice president for external affairs and corporate communications at ISO-NE, speaking at a public forum in December.

"The amount of wind in our interconnection queue is the greatest we've ever had," she said, citing 13,720 MW, or 65% of the queue total of 21,138 MW. "And over the next 10 years, we're going to see a lot more activity with

y 2022. battery storage."

FERC in December conditionally accepted ISO-NE's Order 841 compliance filing (*ER19-470*), requiring additional changes to how the RTO dealt with the application of transmission charges to storage resources and rejecting its approach for handling the state of charge and duration of those resources in day-ahead markets. (See *Storage Plans Clear FERC with Conditions.*) The RTO has *requested* a rehearing on the latter finding, contending that the commission's recommended approach is "inferior" to its own proposal and could "jeopardize critical ISO-NE projects."

The RTO's next compliance filing is due Feb. 10.

### **Competitive Transmission**

ISO-NE in December *announced* its first-ever competitive transmission solicitation to address peak load condition overloads in the Boston area and system restoration concerns with the underground cable system in the area.

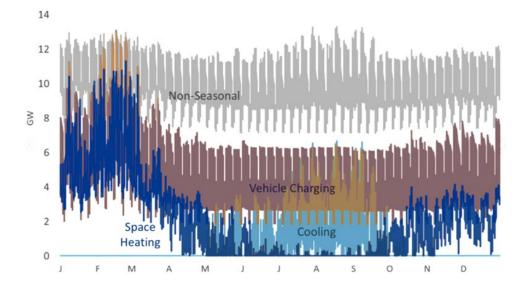
The *RFP* seeks to address reliability concerns associated with the upcoming retirement of the Mystic Generating Station in Everett, Mass. (See *ISO-NE Issues First Competitive Tx RFP*.) The RTO will review all proposals in a two-step process before selecting the preferred solution, with a March 4 deadline for submissions.

FERC earlier in December approved Tariff revisions refining ISO-NE's rules for conducting competitive transmission solicitations in compliance with Order 1000, a process being tried for the first time for solutions to non-timesensitive needs identified in the RTO's 2028 Boston Needs Assessment Update and Needs Assessment Addendum (ER20-92). (See FERC OKS ISO-NE RFP Rules.)

But the commission in October instituted Federal Power Act Section 206 proceedings, concerned that ISO-NE may be implementing the immediate-need reliability exemption in a manner "inconsistent with what the commission directed, and therefore may be unjust and unreasonable, unduly preferential and discriminatory" (EL19-90).

The RTO on Dec. 27 filed its *response* to the proceeding, concluding that "the exception is working as intended" and that no changes are necessary.

However, the RTO promised to conduct a "lessons learned" process following the completion of the Boston RFP to determine if improvements can be made. ■



Potential New England 2050 load profiles by end use. | EPRI



# MISO to Continue Adapting to Resource Shift in 2020

By Amanda Durish Cook

CARMEL, Ind. — MISO spent much of 2019 preparing for a massive shift to renewable resources — and 2020 will herald much the same, RTO executives say.

"The next leg of fleet evolution is going to take us to a much different place," MISO CEO John Bear said at the beginning of 2019.

Bear said the foreseeable future would be characterized by what MISO dubs the "3Ds": demarginalization, decentralization and digitization.

The three trends represent significant growth in renewables and natural gas generation; a shift in power production away from large centralized plants to distributed generation; and an Internet of Things to help consumers control their energy consumption, he said.

By 2030, MISO *predicts*, wind and solar will take a 36% share of its generation, with coal representing just 22%, compared with 76% in 2005.

The RTO in March will publish its second *Forward Report*, which explores changing industry trends and their impact on the footprint.

"We continue to expect a steady stream of renewable generation entering the queue," MISO Executive Director of Resource Planning Patrick Brown told RTO board members in December.

"We've got a big year ahead of us," Bear said last month at MISO's final Board Week of 2019.

Bear said the RTO will continue studying renewable integration in the footprint, contemplate changes to its capacity resource accreditation, explore more tactics to minimize the impact of increasing generation outages, firm up new transmission planning futures and evaluate dynamic transmission line ratings.

MISO President Clair Moeller foresees "a lot of knowledge transfer" over the next five years to train a younger workforce.

"MISO has enjoyed a lot of baby boomer expertise," Moeller said during last month's Board Week.

MISO also envisions its control room operators will one day use Alexa-type voice command technology — what it tentatively calls "Electra" — to monitor and mitigate transmission congestion.



| Consumers Energy

Looming industry transformation has created a sense of urgency in the stakeholder community.

"We're facing rapid change in the industry, and our current stakeholder cadence isn't going to cut it," Transmission-Dependent Utilities sector representative Kevin Van Oirschot said during the Advisory Committee's meeting in June. He argued for quicker development of policies for distributed energy resources and storage devices.

# SATA, DER and Solar: New Kids on the Block

MISO wrapped up the year by submitting to FERC its first rules governing the use of storage-as-transmission assets (SATA). The RTO's 802-page proposal (ER20-588) would limit SATA to transmission-only functions operated by transmission owners and bar them from simultaneous participation in the energy markets — for now. (See Despite Pushback, MISO Pursuing TO-only SATA.) It said its plan will avoid introducing complexities around cost recovery, particularly related to how non-TOs would be compensated for providing transmission services.

Director of Planning Jeff Webb predicted that MISO will soon begin addressing SATA's participation in the energy market.

"It's something we need to address early in the year, I think, because folks are interested and dual-use storage is going to be complicated," Webb said at the Planning Advisory Committee's October meeting.

"In the spirit of marginalism, we're addressing

this one step at a time," Principal Adviser of Market Design Mike Robinson told attendees at the Market Subcommittee's meeting Oct. 10.

MISO also held seven workshops in 2019 to prepare for widespread DERs in its footprint and markets.

"We don't have the answers yet, but we want the situational awareness in place," Executive Director of Market Strategy and Design Scott Wright said during the last Board Week, adding that MISO is now focusing on what new communication protocols it may need to introduce to foster greater DER participation. (See MISO Explores Changes to Accommodate DER.) Even without a DER participation ruling from FERC, MISO has nevertheless reserved space for a participation model in its new market platform.

Bear also pointed out that MISO contains a few gigawatts of "legacy DERs," which have for years existed outside the markets.

"How do we bring all that together and still operate the system is pretty complicated," Bear said. "It's a lot of snowflakes to bring together."

Meanwhile, MISO has more than two years before it must roll out a participation model for electric storage resources. (See *Storage Plans Clear FERC with Conditions.*) The RTO must still address a handful of compliance requirements in its model, including crafting metering and accounting rules for distributed storage resources, the potential qualification of storage as fast-start resources and exemption of those resources from transmission charges when providing down-ramp capability.



MISO is also seeking to make solar resources dispatchable using rules nearly identical to those that brought wind resources under dispatch in 2011. (See "Solar Dispatch Imminent," MISO Market Subcommittee Briefs: Dec. 3, 2019.) Solar could register under the dispatchable intermittent resources category as early as the first half of this year. The RTO currently has 314 MW of registered solar capacity.

"We expect solar to grow 10 to 20 times. It's small now; we'd like to get ahead of it," Wright said.

#### **Facelift for MTEP Futures**

MISO has committed to using more aggressive renewable generation projections in its annual transmission planning by 2021.

The effort will include development of three new 15-year future scenarios — Announced Plans, Accelerated Fleet Change and Advanced Electrification — that account for utilities' decarbonization plans, the push toward renewable generation and increasing electrification in the footprint. (See Stakeholders Debate MISO Planning Futures.)

"Certainly, the drive in demand appears to be there," MISO Director Nancy Lange observed.

Director Phyllis Currie urged the RTO to carefully balance increasing energy efficiency with electrification, the "savior" of the industry.

Vice President of System Planning Jennifer Curran said stakeholders have not yet reached "widespread agreement" on the futures retooling, noting that some think the proposed futures are too aggressive and others think the renewable predictions don't go far enough.

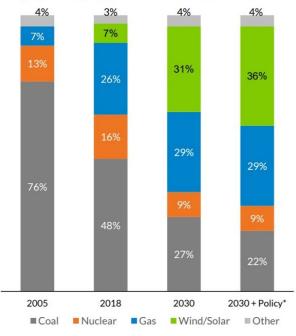
Moeller said the 40% renewable penetration scenario outlined in the futures reflects MISO's regional characteristics, with a nearly 80% penetration in the northwestern portion of the footprint and about 10 to 15% across MISO South.

The RTO hopes to finalize the new future scenarios in June or July. Directors asked executives to ensure it meets its self-imposed deadline.

MISO predicts it will have adequate resources in 2020 to meet a 9% planning reserve margin requirement above forecasted peak load but is bracing for the possibility of a winter emergency in January. (See MISO Taking Pains to Prepare for Moderate Winter.)

# Portfolio Change (energy mix %)





MISO portfolio change predictions | MISO

Last year roared in like a lion, as an extreme late-January cold snap prompted the largest deployment of load-modifying resources since MISO rolled out its current annual capacity auction design in 2013. The RTO exceeded the 3,000-MW contractual limit on the regional directional transfer limit to provide replacement for MISO South generation outages and derates. That region saw another emergency event May 16 in the face of outages and derates coupled with unseasonable heat. (See Emergencies Prompt MISO to Re-examine LMR Protocols.)

The January event prompted MISO to solicit stakeholder ideas on how to get additional capacity to address the North-South constraint, producing nine potential transmission projects. (See MISO Studying Projects to Cut North-South Tx Reliance.)

#### **Cost Allocation Decision Made**

MISO and PJM last year agreed to construct their first interregional market efficiency project, the \$21.6 million reconstruction of the 138-kV Michigan City-Trail Creek-Bosserman line in northwestern Indiana. (See MISO Board OKs \$4 Billion MTEP 19.) But the year ended without plans for projects along the seam with SPP, spurring an independent joint study from by the RTOs' monitors. (See MISO, SPP Emptyhanded After 3rd Project Study.)

MISO has emerged with a nearly complete

cost allocation plan for its market efficiency projects (MEPs) despite stakeholder complaints the proposal ignores the wider benefits of sub-230kV transmission lines.

After months of back-and-forth, MISO recently landed on a proposal that lowers the MEP threshold from 345 kV to 230 kV and eliminates the 20% postage stamp allocation. The plan also adds new benefit metrics for savings from the avoided costs for reliability projects and cost reductions related to the MISO-SPP contract path.

MISO's new plan also eliminates the regional benefit-to-cost test on local economic projects between 100 and 230 kV, now proposing to perform only a local test on those projects.

Still, stakeholders said the costcausation issues that prompted FERC's June rejection of the first cost allocation plan remain, with some saying MISO is essentially ignoring an entire class of transmission projects that could be beneficial on a regional basis. (See MISO Makes U-turn on Cost Allocation Policy.)

"This is not 'beneficiaries pay;" Michigan Public Service Commission staffer Bonnie Janssen said of the new plan at a cost allocation meeting in early December.

"If we thought this was going to fail, we wouldn't file it. We have a level of confidence this will work for us," MISO Senior Manager of System Planning Jarred Miland responded. "We're not justifying the projects regionally; we're justifying them locally."

"I certainly wouldn't characterize this as a consensus proposal," WEC Energy Group's Chris Plante told RTO officials at the same meeting.

MISO plans to file the proposal in January and has included a provision to revisit the effectiveness of the cost allocation method in three years.

#### **FERC Upholds 2015 Capacity Auction**

MISO also closed the book on a four-year dispute after FERC in July cleared the 2015/16 Planning Resource Auction results, finding no market manipulation on the part of Dynegy (now Vistra Energy). (See FERC Clears MISO 2015/16 Auction Results.) The commission said it would take no further action to investigate allegations of market manipulation in the auction, which resulted in a \$150/MW-day clearing price in Southern Illinois' Zone 4.

# 1

# **TOs Challenge New MISO ROE Rules**

# Shift from 4 to 2 Models Cited in Rehearing Requests

By Amanda Durish Cook

FERC's new methodology for calculating return on equity for transmission owners drew several requests for rehearing from TOs dismayed and perplexed that the commission would use a MISO-centric order to set national policy.

The commission adopted the new methodology in late November under two MISO proceedings (EL14-12., et al.). (See FERC Adopts ROE Methodology in MISO Complaints.) Under Opinion 569, the commission set the TOs' ROE at 9.88%, a figure it determined via both the discounted cash flow (DCF) and capital asset pricing models (CAPM). The new base ROE sheds 250 basis points from the TOs' prior rates.

Calls for rehearing were filed around the holidays, with several TOs calling the 9.88% base ROE too low to attract investment and wondering why FERC would use the circa-2013 MISO proceeding as a platform to set policy when it had already collected opinions through a Notice of Inquiry.

Some sought assurances that the commission wouldn't apply the new ROI methodology universally.

#### 'Artificially Deflated'

FirstEnergy *characterized* Opinion 569 as "a prime example of government regulation that is arbitrary, capricious, and contrary to law and commission policy." The company — along with several others — said that by limiting ROE to the DCF and CAPM models while ignoring the expected earnings and risk premium models, transmission ROEs would fall below the capital attraction standards established in 1923's *Bluefield Waterworks Improvement Company v. Public Service Commission of West Virginia* and 1944's *Federal Power Commission v. Hope Natural Gas Company.* 

The company said that under the new rate, transmission ROEs could fall below state-approved distribution ROEs, rendering them "artificially deflated" and "grossly inadequate to incentivize new transmission build that is desperately needed."

MISO TOs also *argued* that FERC was violating the *Bluefield* and *Hope* standards and said the investor community was voicing "very serious doubts about the future ability of commission-regulated energy companies to attract

capital should the commission stand by [the position] that transmission investment warrants only single-digit equity returns."

The Edison Electric Institute *said* FERC's decision "sends mixed signals to investors and transmission owners about the commission's commitment to ensuring that needed transmission is built."

Further, FERC circumvented the Administrative Procedure Act by making new ROE policy through the order, FirstEnergy said, adding that several entities weren't "on notice that the commission intended to use the MISO proceeding to establish new policy."

Trade association WIRES also *expressed surprise* that the commission used the "proceeding-specific" MISO dockets to establish a new ROE methodology instead of the NOI it opened in March to collect opinions on using a combination of the DCF, CAPM, expected earnings and risk premium models. (See *Tx Incentives NOI Brings Calls for Broader Reforms.*)

#### 2 or 4 Models?

WIRES said using only two of the four financial models paints an incomplete picture of the information used to make transmission investments. Transource Energy also *urged* FERC to adopt the four-model framework it originally considered. PJM TOs *said* FERC's new ROE approach "removes half of the models from the methodology and thereby magnifies the flaws in the remaining models and decreases the diversity of the new methodology."

"Despite receiving approximately 175 initial comments and 30 reply comments in the NOI docket, the commission opted instead to use Opinion No. 569 to make drastic changes to its proposed ROE methodology without substantively addressing the comments in the generic NOI proceeding or taking comment on the new approach," WIRES said in its request for rehearing. "A specific contested proceeding is not the most appropriate docket for the commission to announce broad policy changes that will impact the methodology for determining transmission ROEs for all FERC-jurisdictional public utilities."

"The commission adopted a new two-method approach on which it never sought comment, barely mentioning the still-open inquiry docket," Ameren chimed in, insisting that FERC address the record in the NOI. PJM TOs likewise said the commission should explain its



reasoning behind "issuing a potential industrywide policy change ... while the generic NOI docket remains open."

Other non-MISO TOs, including PPL Electric and American Electric Power's Indiana Michigan Transmission Co., lodged motions to intervene in the proceedings, explaining that they had expected a new ROE methodology to emerge from the NOI, not dockets limited to MISO TOs.

Southern California Edison and a group of SPP TOs also filed motions to comment. SCE *said* the commission abandoned "its previous robust and legally sound proposal to rely on four financial models without addressing the questions it raised in the ROE NOI and disregarding the extensive record it requested."

The SPP TOs were equally bewildered as to why FERC would rely on a proceeding involving "a small subset of the industry" to make changes impacting all jurisdictional public utilities, calling it "legal infirmity." The group *asked* for confirmation that Opinion 569 was intended to set national policy and pointed out that the record in the MISO proceeding closed more than three years ago. Exelon also *asked* FERC if the new ROE method was to be applied universally.

The New England Transmission Owners (NE-TOs) also seemed unsure as to whether FERC meant for the new ROE method to extend to them and *filed* correspondence in the MISO proceedings and a supplemental brief in their own ROE complaint dockets that have been ongoing since 2011. (See FERC Discloses Data Behind New England ROE Order.)

San Diego Gas & Electric similarly *asked* the commission in a motion for clarification if it meant for the decision to apply outside of MISO. If it did, SDG&E also included a request for rehearing, echoing concerns over the departure from the proposed four-model approach and possible violations of the *Hope* and *Bluefield* standards and the Administrative Procedure Act.



# Pioneer OK'd to Recover \$10M in Development Costs

By Amanda Durish Cook

Pioneer Transmission can recover about \$10 million in precommercial operation costs used to develop a high-voltage transmission line in Indiana. FERC decided last week.

The joint venture of Duke Energy and American Electric Power incurred the costs March 2009 through Dec. 31, 2019, while planning and constructing the \$347 million, 765-kV Greentown-to-Reynolds transmission line between Kokomo and Reynolds, Ind. FERC approved Pioneer's October filing to include the asset in its formula rate on Dec. 31 (ER20-159).

However, the commission also told the transmission company it must update its capital structure from the hypothetical 50% debt and 50% equity to the 2018 year-end actual of approximately 51.1% debt and 48.9% equity.

The 70-mile Greentown-to-Reynolds project is the first segment of the \$1 billion, 290-mile Greentown-to-Rockport line that has been in the works for more than a decade. The completed line is expected to traverse MISO

into PJM. Pioneer began construction on the segment in 2013 and finished work in June 2018; the segment is one of the 17 multi-value *projects* MISO approved in 2011.

In a related order issued the same day, FERC also denied Pioneer's request to rehear its first request to amortize and recover the precommercial operation costs of the Greentown-to-Reynolds line (ER18-2119).

Pioneer first filed to recover precommercial operation costs in July 2018, but the commission rejected the filing without prejudice a year later, finding that the company included a 150-basis-point return on equity adder for new transmission in its carrying charges. FERC had previously said in 2009 that Pioneer could not receive the adder unless the project was approved by both MISO and PJM. Pioneer has not yet obtained PJM approval for the project. (See FERC Lowers ROE for Segmented Pioneer Tx Project.)

Pioneer said FERC should revisit the decision because the commission did not act within the 60-day period prescribed by the Federal Power Act, thus making the filing legal on Sept.



The Greentown-to-Reynolds line | Duke Energy

30, 2018.

But FERC said Pioneer's regulatory asset filing was not properly filed electronically and therefore was not subject to a statutory action date.

"If we were to vacate the commission's rejection of Pioneer's filing in this docket as Pioneer requests, it would be permitted to accrue an unauthorized 150-basis-point ROE adder to its regulatory asset carrying charge and thus profit through its own failure to comply with the commission's filing regulations," FERC explained, pointing out that Pioneer was able to submit its October filing correctly.



# **NYISO News**



# New York Advanced Clean Energy Goals in 2019

Wraps Carbon Price Design, Buys Offshore Wind, Refines Storage Plans

Bv Michael Kuser

New York started 2019 with big promises around renewable energy that it fulfilled in summer as it quickened the pace of the most ambitious decarbonization goals in the country.



New York Gov. Andrew Cuomo | NYDPS

Gov. Andrew Cuomo last January announced that New York would aim to get 70% of its electricity consumption from renewable energy resources by 2030, with a 100% carbon-free electricity target for 2040. He also nearly quadrupled

the state's offshore wind energy target to 9 GW by 2035. (See New York Boosts Zero-carbon, Renewable Goals.)

The state's clean energy goals also included doubling distributed solar generation to 6 GW by 2025, deploying 3 GW of energy storage by 2030 and upping its energy efficiency savings to 185 trillion BTU by 2025.

#### **Leading the Transition**

Talk became action on July 18 when Cuomo signed the Climate Leadership and Community Protection Act (A8429), the same day he announced the state was awarding a combined total of 1,700 MW in offshore wind contracts to Equinor's Empire Wind project and to Sunrise Wind, a joint venture of Ørsted and Eversource Energy.

"We want to get to a 100% renewable, clean economy — no fossil fuels, no gas," Cuomo said in August while expanding an artificial reef program off Jones Beach State Park, on Long Island. "How do you power cars? How do you heat a home? How do you fly a plane? Where do the renewables come from?"

Cuomo emphasized that those "details" constitute the essence of the decarbonization effort.

"We have not made this major a transition in society in this short a period of time probably ever. So, the 'How do you do it?' is not just a tedious question; it is actually everything," he said.

"Now, how do you do it? That's where New York has to lead," he continued. "New York



Indian Point nuclear plant | Entergy

already leads in the most aggressive goals. We have to lead in this transition: how you actually make it happen."

### **Carbon Pricing**

Meanwhile, NYISO market participants hashed out how the state's new energy law and mandated influx of renewables would affect a parallel effort to price carbon in the ISO's wholesale electricity markets.

In order to include the new statutory energy targets in the modeling, NYISO over the summer delayed wrapping up its 30-month carbon pricing effort. (See "New Energy Law Could Affect CO<sub>2</sub> Market Design," NYISO Business Issues Committee Briefs: June 20, 2019.)

NYISO's Market Issues Working Group took over last January from the Integrated Public Policy Task Force, a joint effort between the ISO and the state's Public Service Commission that spent a year-and-a-half developing the carbon pricing *proposal* released last December.

The state must put a price on carbon in its electricity market if it hopes to meet the aggressive timelines of the decarbonization goals set out in the new law, the co-author of NYISO's carbon pricing study said in October. (See Carbon Pricing Vital to NY Goals, Study Author says.)

"If New York does not do this in the electricsector engine that the law hopes to rely upon to decarbonize the economy, it's tying two hands behind the state's back," Analysis Group's Sue Tierney said Oct. 22 in delivering a summary of the study to ISO stakeholders. "You will not get the efficiency or timing or depth or pace of change without having this electric system engine on acceleration to get it."

In addition, the state Department of Environmental Conservation last year revised its Clean Air Act regulations to lower allowable NOx emissions from simple cycle and regenerative combustion turbines during the ozone season. The rules are effective May 1, 2023, with generator compliance plans due by March 2, 2020. (See NY DEC Kicks off Peaker Emissions Limits Hearings.)

### **Aligning Plans and Law**

The carbon pricing study was not the only thing affected by the new energy law. Meeting for the first time in two years, the New York State Energy Planning Board last month approved the issuance of proposed amendments to the state's energy plan for public comment.

New York State Energy Research and Development Authority CEO Alicia Barton, who serves as chair of the planning board, highlighted "tremendous growth in the clean energy sector," with employment for 2019 expected to have *grown* 7.7% year-over-year to nearly 171,000 jobs.

The Climate Act mandates a minimum of 35% of overall benefits from clean energy investments be realized by disadvantaged communities, which Barton said "are inured to" injustice. The benefits include spending on clean energy and energy efficiency programs, and investments in housing, workforce development, pollution reduction, low-income energy assistance, transportation and economic devel-

The planning board also directed the PSC to arrange stable funding for the transition of power plants through the state's Electric Generation Facility Cessation Mitigation Program, which supports localities that lose 20% or

# **NYISO News**



more of their tax base through the closure of a power plant.

"We've already seen communities turn to the fund since retirements have occurred, so that leads to a need to be thoughtful about the effect on host communities," said PSC Chair John Rhodes, who also serves on the planning board. "The time is right to work on stability for those future needs."

For example, this year will see Entergy shutter the first of two units being decommissioned at its Indian Point nuclear plant on the Hudson River, with the second reactor scheduled to go offline in 2021. A third reactor at the site was decommissioned in 1974. Cuomo had pushed to shut down the nuclear plant because it is only 24 miles from New York City.

### **ZEC Program Stands**

Far from the city, Exelon's three upstate nuclear power plants — James A. FitzPatrick, R.E. Ginna and Nine Mile Point — all qualified for the state's zero-emission credits (ZEC) program approved by the PSC in 2016 to prevent their retirements. The commission created the program as part of the state's Clean Energy Standard (CES).

Acting Justice Roger D. McDonough of the New York Supreme Court in Albany County dismissed a challenge to the state's ZEC program by Hudson River Sloop Clearwater and others, a decision that in November was appealed to the state's highest court, the Court of Appeals. (See NY Court Rejects Challenge to ZEC Program.)

The 2nd U.S. Circuit Court of Appeals in September 2018 also upheld the ZEC program, rejecting the argument that it intrudes on FERC jurisdiction (17-2654-cv). In upholding a district court's dismissal of the complaint by the Electric Power Supply Association and others, the 2nd Circuit said its finding was "consistent" with the 7th Circuit's earlier ruling upholding Illinois' ZEC program. (See Appeals Court Upholds NY Nuclear Subsidies.)

The PSC said the ZEC program avoided the issues behind the U.S. Supreme Court's April 2016 ruling in Hughes v. Talen, which voided Maryland regulators' contract with a natural gas plant as an intrusion into federal jurisdiction over wholesale power markets.

"Plaintiffs point to nothing in the CES order that requires the ZEC plants to participate in the wholesale market," the 2nd Circuit said. "As the district court concluded, a generator's decision to sell power into the wholesale markets is a business decision that does not give rise to pre-emption concerns.

"Until 2019, the ZEC price cannot vary from the social cost of carbon, as determined by a federal interagency workgroup. After 2019, the ZEC price is fixed for two-year periods and does not fluctuate during those periods to match the wholesale clearing price," the court said.

### **Public Policy Tx**

NYISO's Board of Directors in April selected two 345-kV transmission projects intended to address persistent transmission congestion in New York and foster delivery of renewable energy to population centers in the southeastern part of the state. (See NYISO Board Selects 2 AC Public Policy Tx Projects.)

The projects — part of the broader AC Public Policy Transmission Project — address transmission capacity at the Central East (Segment A) electrical interface and Upstate New York/ Southeast New York (UPNY/SENY or Segment B) interface.

"The projects will add the largest amount of free-flowing transmission capacity to the state's grid in more than 30 years," the board said in a statement.

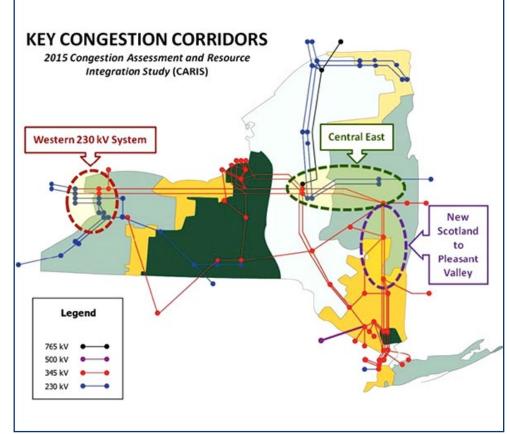
In December 2018, the board rejected one of two project selections made by the NYISO Management Committee, which along with ISO staff had backed two joint proposals by North America Transmission and the New York Power Authority. Cost estimates for each project ranged from \$900 million to \$1.1 billion.

# **Storage Rules**

FERC in December partially accepted NYISO's plan to comply with a mandate that grid operators provide energy storage resources (ESRs) full access to their wholesale markets. (See FERC Partially Accepts NYISO Storage Compliance.)

The commission found that "NYISO has demonstrated that all [ESRs], including those located on the distribution system or behind the meter, will be eligible to provide all capacity, energy and ancillary services that they are technically capable of providing" (ER19-467).

However, the Dec. 20 order also faulted NYISO's filing for a lack of details on its "metering methodology and accounting practices for [ESRs] located behind a customer meter," directing the ISO to add descriptions to its Tariff within 60 days of the issuance of the order. ■



New York's AC Public Policy Transmission projects are intended to relieve congestion in key corridors. | NYISO

# **PJM News**



# PJM's Season of Change not Over yet

By Christen Smith

PJM will spend much of the forthcoming year dealing with the fallout of FERC's Dec. 19 capacity market ruling and adjusting to a new CEO and chief financial officer following a tumultuous 2019.

The RTO has until mid-March to make a compliance filing in response to last month's ruling expanding the minimum price offer rule (MOPR) — a move that critics called an overreach of commission authority that will stifle the RTO's transition away from fossil fuels.

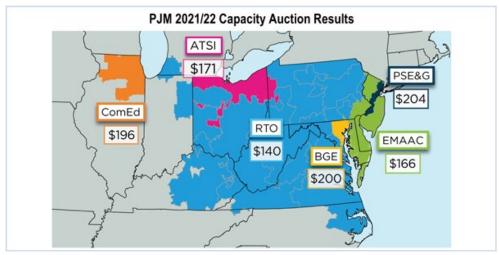
FERC's Republican commissioners and the generators who stand to benefit from their decision say expanding the MOPR corrects the price suppression resulting from state subsidies for lower-carbon resources (EL16-49). (See FERC Extends PJM MOPR to State Subsidies.)

"States have the right to pursue policy interests in their jurisdictions," FERC wrote. "Where those state policies allow uneconomic entry into the capacity market, the commission's jurisdiction applies, and we must ensure that wholesale rates are just and reasonable."

The idea that states must pay the price for their newly implemented clean energy policies while legacy generators emit carbon without cost is at the center of the debate over how the RTO's markets can accommodate the decarbonization goals of some of its 13 states and D.C. while excluding others without unintended consequences. (See PJM Carbon Pricing Challenges Surmountable, Panel Says and Carbon Pricing Steers Discussion on PJM's Future.)

Some stakeholders in PJM's western territory, encumbered with coal and natural gas plants that provide affordable electricity and bolster their economies, argue carbon pricing is a solution in search of a problem, while others, underwhelmed by PJM's relatively slow adoption of renewables, want a proactive approach to what they consider an inevitable policy shift. As it does in all stakeholder debates, PJM says it serves as a conduit for negotiation and compromise but doesn't make the rules or set the prices. (See Enviro Officials Talk Carbon, Consequences at OPSI.)

It's a position enshrined in the Federal Power Act but seemingly muddled with the MOPR expansion. FERC's ruling saddles PJM with the responsibility of setting default offer floor prices for all resource types that participate in its capacity auction, as it did with natural



PJM

gas-fired powered combustion turbine and combined cycle units years earlier. PJM and its Independent Market Monitor must then review the legitimacy of exemption requests from sellers who insist their unit costs fall below the standard.

Marc Gerken, CEO of American Municipal Power, said the order confirms that PJM's capacity market is "nothing more than an administrative construct" with prices set at its headquarters and "no enduring features of a competitive market."

Vistra Energy CEO Curt Morgan countered that FERC's ruling levels the playing field for capacity auctions. The company argues that a national or regional carbon price would better target the climate change concerns underlying state policies and encouraged stakeholders to focus their efforts there instead.

"If a resource is economic without a subsidy, it will be able to bid into and clear the capacity market auction," the company wrote in a news release Dec. 30. "The unit-specific review process and having PJM and the Independent Market Monitor's opinion on a subsidized resource's costs will provide discipline for resource owners who represent to the state that they are uneconomic in order to secure a subsidy."

#### **New Leadership at Helm**

It's not just the capacity market that's raised questions about PJM's future. Alongside a year of uncertainty over FERC's impending MOPR ruling, the RTO's leadership exodus left many wondering who would guide it into the new year.

Then in November — five months after CEO Andy Ott retired in the wake of the GreenHat Energy default — PJM announced that a former Direct Energy executive, Manu Asthana, would take over in 2020. (See PJM Taps Ex-Direct Energy Exec as New CEO.) His decades of experience in energy trading and residential services left many stakeholders hopeful that he could help oversee credit policy changes and a redesign of the financial transmission rights market in the wake of GreenHat's 890 million MWh default. (See Battle Over FTR Reform Shaping up in PJM.)

But not everyone found PJM's choice so promising. Tyson Slocum, director of Public Citizen's energy program, criticized the Board of Managers for selecting Asthana despite Direct Energy's track record of regulatory violations against consumers. (See New PJM CEO Defends Direct Energy Stewardship.) Public Citizen isn't a PJM member but recently joined the Public Interest & Environmental Users Group.

Slocum articulated his position in a Dec. 12 letter to the board listing numerous instances in which Direct Energy was fined by state regulators for deceptive sales practices.

"Your troubling choice for CEO requires in-person explanation to members of PJM's Public Interest & Environmental Organizations User Group as to how an executive from a company notorious for breaking the rules and ripping off household consumers is fit to serve as PJM's CEO," he said.

Board Chairman Ake Almgren defended the board's choice in a Dec. 18 response, saying that it used an outside firm to conduct a "thoughtful and deliberate search." An

# **PJM News**



extensive background check, Almgren said, confirmed that Asthana implemented organizational changes and addressed misleading and unfair business practices while serving as president of Direct Energy's residential division.

"Be assured that the Board of Managers and Mr. Asthana are fully committed to PJM's Core Values and Code of Conduct," he said. "Mr. Asthana is a dedicated and conscientious leader, and the board is confident that he will operate in an honest and trustworthy manner."

It's uncertain how widespread Slocum's feelings are among PJM's nearly 1,100 members, though it's clear many want a chance to speak with him in person. Interim CEO Susan Riley told the Markets and Reliability Committee on Dec. 19 that while the organization is excited to welcome Asthana aboard in January, stakeholders requesting meetings with the new leader must exercise patience.

"We want him to get to know PJM and understand the complex issues we are dealing with," she said. "He will go on a listening tour that you will find enormously valuable."

Asthana won't be the only new face on PJM's executive team. With his appointment resolved, the RTO must now focus on replacing the vacancy left behind by its longtime CFO Suzanne Daugherty, who retired in April on the heels of a controversial report that lambasted the RTO's leadership for not preventing GreenHat's unprecedented default. (See PJM CFO Retiring in Wake of GreenHat Default and Report: 'Naive' PJM Underestimated GreenHat Risks.) PJM denied that Daugherty's departure was related. however.

In September, Vice President Denise Foster, who had no role in the GreenHat episode, resigned, and Riley announced she was restructuring the State and Member Services Division that Foster had headed. (See Stakeholders, States in Dark over PJM Personnel Moves.)

General Counsel Vince Duane stepped down suddenly in November to "seek other opportunities" after more than 16 years with the organization. (See *General Counsel Vince Duane Leaves PJM*.)

#### GreenHat

GreenHat loomed large over PJM in 2019 after FERC told stakeholders in January to unwind five months of settlements that had been negotiated to avoid the complex and expensive task of liquidating the defunct company's FTR portfolio and rerunning the impacted incremental auctions from 2018. (See FERC Orders

#### PJM to Unwind GreenHat Settlements.)

For months, stakeholders debated the schedule of its upcoming capacity auctions as the growing list of unresolved FERC orders — MOPR and GreenHat included — paralyzed their ability to move forward with any confidence. (See *Capacity Market Sellers Anxious over Uncertain PJM Auction Rules.*)

Then, in June, FERC issued paper hearing and settlement judge procedures that allowed stakeholders to forge a solution themselves to the GreenHat issue instead of relying upon the commission for guidance. (See FERC: PJM Settle GreenHat Disputes Before Paper Hearing.)

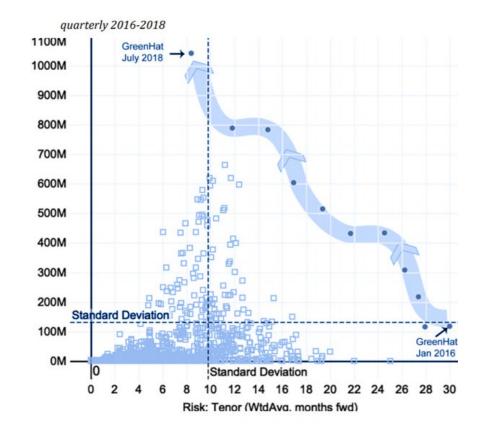
In October, PJM filed a settlement with FERC that paid two trading firms \$12.5 million to end the dispute over whether GreenHat's portfolio should have been liquidated based on existing rules. (See PJM to Pay \$12.5 million to Settle GreenHat Dispute.) The agreement cost stakeholders \$177.5 million — less than half of what PJM predicted it would cost to rerun the auctions back in February. (See PJM: FERC Order Could Boost GreenHat Default by \$300M.) FERC approved the settlement on Dec. 30.

To fill the cracks in credit policies and FTR

market design that the default exposed, PJM in April filed a mark-to-auction provision with FERC that gives the RTO leverage to secure collateral for declining portfolios in its FTR market (*ER19-945*). GreenHat had amassed 890 million MWh of FTRs with less than \$600,000 in collateral.

PJM also hired its first chief risk officer, Nigeria Poole Bloczynski, in July after the independent report advised the RTO to bring in a credit risk mitigation expert. (See *PJM Names Chief Risk Officer.*) Bloczynski is a fixture at meetings of the Financial Risk Mitigation Senior Task Force, another stakeholder-approved panel charged with identifying holes in PJM's credit policies. The group's first wave of changes would restructure incremental auctions to give PJM more visibility into portfolio conditions and collect more collateral, if necessary.

Bloczynski told the MRC last month, however, that PJM should assess market participant risk profiles and enhance its collateral practices across all markets — not just FTRs. Tariff and Operating Agreement changes to implement tougher rules will come for a final vote before the committee in January.



Size and tenor of GreenHat's portfolio | PJM

# **PJM News**



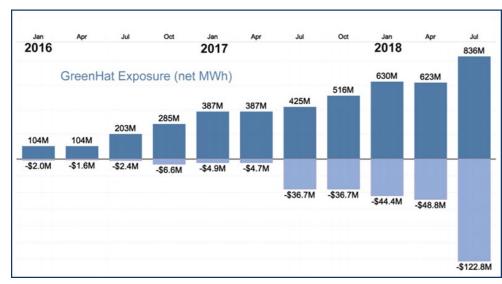
# **GreenHat Claims Fund Opens After FERC OKs Settlement**

PJM last week sent members directions on how to file claims against the \$5 million fund established in the GreenHat Energy settlement just days after FERC accepted the terms of the agreement.

In October, PJM filed its plan with the commission to pay two trading firms \$12.5 million to settle claims of economic harm that resulted from the RTO's decision to not liquidate GreenHat's entire 890 million MWh portfolio of financial transmission rights during the 2018/19 planning period (ER18-2068).

After the company defaulted in June 2018, PJM reran only the July FTR auction — a decision the RTO says kept costs to members down and avoided a cascade of market violations that would increase uncertainty for years to come. (See PJM to Pay \$12.5 million to Settle GreenHat Dispute.)

As part of the settlement, members agreed to fund a separate account that would pay out additional claims if PJM's analysis verified those market participants also suffered economic harm. If PJM discovers instead that a claimant benefited from prior actions, it will owe a fee equal to 50% of the amount of the benefit. The RTO said in October that it doesn't expect additional claims, based on the limited protest



GreenHat's significant growth in exposure and MTA loss | PJM

filings it received during the proceeding.

In its email to members Thursday, PJM directed potential claimants to submit an email to FTRPayeeFund@pjm.com with "Payee Fund Claim" in the subject with the name of the market participant in the body of the email on or before Feb. 1. Claimants should not include a dollar amount for which the market participant was harmed.

PJM said it will notify claimants by Feb. 10 of the harm or benefit for the market participant and what amount will be credited or charged, respectively, to its monthly billing statement following the notification. ■

- Christen Smith



# **SPP News**



# Changes at the Top for SPP in 2020

By Tom Kleckner

"Evolutionary, not revolutionary," SPP executives like to say about their RTO. It's written into SPP's *corporate culture*, the idea being that it takes time "to do the right thing, for the right reason, in the right way every time."

The RTO's emphasis on continuity will be tested in 2020, however. By midyear, SPP will be without five of the key figures who have helped expand the grid operator's footprint into 17 states and implement a day-ahead market. Former Board of Directors Chair Jim Eckelberger and Directors Harry Skilton and Phyllis Bernard left the board at year-end after having served together since 2003. COO Carl Monroe will follow them out the door after January.

Come April, CEO Nick Brown, who joined the RTO 35 years ago as employee No. 7, will retire. SPP, having identified both internal and external candidates, says it is on track to announce his replacement during January's board meeting in Santa Fe, N.M. (See SPP's Brown to Retire as CEO in 2020.)

Larry Altenbaumer replaced Eckelberger in January 2019, seeking to place his own stamp on the RTO by shortening board meetings and focusing them on strategic discussions with members and the Regional State Committee. In addition to taking over the chairmanship of the Strategic Planning Committee, he also headed the Affordability and Value Task Force, which identified "meaningful opportunities to enhance other aspects of performance." (See SPP Value Group Finds No 'Silver Bullets.')

Dennis Florom, manager of energy and environmental operations for Lincoln Electric System, said that as SPP grows in size and membership, "it gets more difficult to keep things member-driven," referencing the RTO's preference to serve as advisers to members.



Dennis Florom, Lincoln Electric | © RTO Insider

"This is what sets SPP apart, and SPP prides itself on that. The new CEO will need to work with the board to make sure that SPP maintains its identity and that members continue to set the direction as forks in the road present themselves," Florom said.

SPP's expansion into the Rockies and beyond has already reached the crossroads.

In early December, the RTO became the reliability coordinator for 15 Western Interconnection utilities, representing about 12% of the region's load. (See Westward Ho: SPP Now a Western RC Provider.) However, shortly thereafter, SPP's ambitions to run an energy market in the Western Interconnection took a hit with news that Colorado's largest utility (Xcel Energy) and three others chose CAISO's Western Energy Imbalance Market over its own competing market offerings. (See EIM Lands Xcel, 3 Other Colo. Utilities.)

The RTO is still plugging ahead with its Western Energy Imbalance Service, which is scheduled to go live in early 2021. Two utilities, Municipal Energy Agency of Nebraska and Wyoming Municipal Power Agency, have announced they will join WEIS. (See SPP Board OKs \$9.5M to Build Western EIS Market.)

"Discussions continue with other interested parties, but no additional contracts have been signed at this point," SPP spokesman Derek Wingfield said.

CAISO's EIM, which currently has nine members, is expected to grow to 23 by the end of 2022.

#### **Competing for Load**

In the meantime, there's plenty for the grid operator and its members to chew on. The explosive growth of renewable energy shows no signs of easing. Wind farms and, more recently, solar installations and energy storage, continue to add more energy than SPP — with a reserve margin of around 25% — knows what to do with.

SPP set a new wind peak record of 17,861 MW on Dec. 11, breaking a mark set two months earlier by 266 MW. In the early-morning hours of Oct. 9, the RTO produced 73.67% of its energy from wind, hydro and other non-fossil resources, fulfilling predictions a year before that it would reach the 70% threshold.

Florom said that a peek at the generation interconnection queue "shows a level of renewables that SPP load can't handle." The RTO had more than 22 GW of installed wind capacity as of October, with more than that in the queue.

Florom suggested storage and new transmission could "present opportunities for addressing more renewables."

"Tariff changes and working with other entities outside of SPP to export these renewables are ways that SPP can address this challenge in ways that might benefit everyone," Florom said

But exporting energy could require additional transmission construction, which comes with a cost. Altenbaumer is keenly aware that members are still digesting the \$10 billion in transmission construction and upgrades over the previous decade.

"The big concern [stakeholders] have is what happens with the next wave of transmission projects and making sure they pass a very tight metric to provide value," he said in November.

Some of the answers may lie in the implementation of the Holistic Integrated Tariff Team's recommendations. (See *SPP Board Approves HITT's Recommendations*.) State regulatory staff are working on some of the key recommendations, including creating larger transmission pricing zones and sub-zones; evaluating the byway facility cost allocation review process; and evaluating cost allocation and rates for storage devices classified as transmission assets.

Other stakeholder groups are working on an uncertainty market product, improvements to the day-ahead market — including a multiday, longer-term market product — and establishing uniform local planning criteria within the Tariff's Schedule 9 pricing zones.

SPP's staff take a deeper view into the future. During a Strategic Planning Committee meeting in November, Senior Engineering Vice President Lanny Nickell said the RTO and its stakeholders should be "thinking about" competition between RTOs and keeping its own load while competing for other loads.

"How do we compete, as a region, for loads that love the renewable resources and [their] low prices?" he asked. "They're looking for opportunities to add warehouses and data centers. How do we compete for those?"

"Given concerns with costs, we can't afford to lose much load as we calculate administrative costs and move forward in a world that is changing rapidly," said Bruce Rew, senior vice president of operations. "We can't afford to lose megawatt one."

Change is coming. Whether it's evolutionary or revolutionary, a new cast of characters at the top will be the ones to address it. ■

# **Company Briefs**

## Rick Perry Rejoins Energy Transfer **Board of Directors**

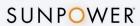
Former Secretary of Energy and Texas Gov. Rick Perry last week rejoined the board of directors overseeing Dallas pipeline company Energy Transfer.



**Energy Transfer** announced Perry had joined the board for LE GP, a company that owns and oversees the pipeline operator. Compensation was not disclosed, but under the company's board rules, Perry would be eligible to receive an annual retainer of \$100,000 as well as annual stock awards worth up to \$100,000.

More: Houston Chronicle

### SunPower to Cut 3% of Global Workforce



SunPower said last week it will eliminate

between 145 and 160 jobs, representing roughly 3% of its global team, in the next 12 to 18 months, according to a filing with the

U.S. Securities and Exchange Commission.

The layoffs, which are said to be a part of a restructuring plan that will cost between \$16 million and \$22 million, come after SunPower announced in November that it would spin off most of its manufacturing operations to form Maxeon Solar Technologies. About 70 of the eliminated positions are with SunPower Technologies, the company's global manufacturing and research and development group. The remainder of the losses will be distributed throughout the company.

More: GreenTech Media

### The Hartford to Limit Insurance for **Fossil Fuel Companies**



The Hartford Financial Services Group, a U.S.-based investment and insurance company, said last week it will no longer cover companies that get more than 25%

of their revenue from thermal coal mining or produce more than 25% of their energy from coal.

The Hartford also said it will not create pol-

icies or make investments in companies that generate more than 25% of their revenue directly from extracting oil from tar sands, or cover or invest in the construction of new coal-fired plants. Current policies that violate those parameters aim to be phased out by 2023.

More: The Associated Press

### Vistra Cuts Jobs Despite Claims it is Texas' No. 1 Power Seller



Vistra Energy said last week it is cutting costs and eliminating

50 jobs as it absorbs Ambit Energy and makes a push to become the biggest seller in Texas' electricity market.

Vistra is eliminating the jobs at Ambit's call center in Plano as part of a reorganization as the two companies combine operations. Vistra bought Ambit in November for \$475 million. With the purchase, Vistra now controls 32% of the retail electricity market, making it the leading residential retail power company in the state.

More: Houston Chronicle

# **Federal Briefs**

### Navajo Nation to Acquire Rights to 500 MW of Tx Lines



Navajo Nation President **Jonathan Nez** and Vice President Myron Lizer on Dec. 28 approved \$1.9 million to secure the rights to 500 MW along the Navajo Generating Station's transmission lines that will allow

the tribe to earn revenue from the use or marketing of power.

The rights to the transmission lines were part of an extension lease negotiated between the tribe and the owners of the plant in 2017, which also included the terms of decommissioning and remediation of the plant.

The \$1.9 million from the tribe's Unreserved, Undesignated Fund Balance will be

paid to the Bureau of Reclamation for the annual costs associated with the 500 MW. The resolution also calls for the creation of an account to hold all revenue generated from the 500 MW to be used to repay the \$1.9 million, to pay for future annual costs and to fund energy-related projects.

More: Indian Country Today

### **Trump Admin to Approve Largest US** Solar Farm, Other Renewables

Federal officials last week said they plan to approve a massive 690-MW, 7,100-acre solar farm with energy storage in the Las Vegas desert, which will clear the way for a \$1 billion Gemini project that will provide electricity to Nevada residents via NV Energy. It is expected to be operational by Dec. 1, 2023.

The project, which will be on federal lands, still requires the greenlight from the Interior Department. The Bureau of Land Management released a final environmental impact statement on Dec. 30, in which officials indicated they would approve the project after one last round of public comments.

E&E News obtained a list of other projects on federal lands that the administration plans to approve, which included Gemini. The other projects include: the 350-MW Crimson Solar Project in Riverside County. Calif.; the Haiwee Geothermal Leasing Area, which would offer more than 21,000 acres in California for utility-scale geothermal power development; the Walker Ridge Wind Energy Project in Northern California; the 100-MW Borderlands Wind Project in Carlton County, N.M.; and the 250-MW Yellow Pine Solar Project, to be built on roughly 9,000 acres about 32 miles west of Las Vegas.

More: E&E News; Los Angeles Times

# **State Briefs CALIFORNIA**

### Judge Allows Shift to Energy-saving **Light Bulbs**



U.S. District Judge Kimberly Mueller last week rejected a petition from the National Electrical Manufacturers Association and the American Lighting Association to temporarily block new minimum

efficiency standards for light bulbs that the state Energy Commission adopted in November.

Mueller said regulators acted properly under exemptions that give special privileges to California and Nevada to adopt tougher regulations more quickly than the U.S. Department of Energy. The new regulations include incandescent and halogen candle- and flame-shaped bulbs, reflector bulbs, round globe bulbs, and bulbs that can operate at three different light levels.

Supporters say the change will save residents as much as \$2.4 billion on their annual hills

More: The Associated Press

# **COLORADO**

### Polis Names Susan Perkins to 4-year **Term on PUC**



Gov. Jared Polis last week named attorney **Susan Perkins** to the Public Utilities Commission. Her four-year term would start Jan. 13 should she be confirmed by the Senate.

Perkins would succeed Frances Koncilja, whose term expires this month.

More: The Denver Post

## **Xcel Energy Wins Rate Increase**



The Public Utilities Commission last week

approved a \$41.5 million rate increase for Xcel Energy-Colorado, which was significantly lower than the \$158 million the utility originally sought. The increase will

add roughly \$1.03 to a monthly residential bill and \$1.95/month for small commercial customers.

The new rates will not take effect until the decision becomes final, with a written decision from the PUC expected to come this month. The parties involved can then ask for reconsideration of the decision.

Xcel said it sought the increase to help pay for upgrades and protect the grid from wildfires.

More: The Denver Post

## **IDAHO**

# **Utilities Commission to Allow Idaho Power to Purchase Energy**



The Public Utilities Commission last week approved a 20-year

agreement to allow Idaho Power to buy 120 MW of energy from Jackpot Solar.

The agreement will allow Idaho Power to initially buy energy at \$21.75/MWh and will increase by 1.5% each year. The commission said the pricing will depend on the project developer securing a 30% federal investment tax credit, which ended at the close of 2019.

More: The Associated Press

# **MASSACHUSETTS**

#### **Activists Block Coal-carrying Train**



About 30 protesters from environmental group Climate Disobedience Center stood on the train tracks in the woods of Harvard on Thursday night to delay a delivery of 10.000 tons of coal to Merrimack Station in Bow, N.H. It was the sixth blockade of a Bow-bound train since December and lasted roughly eight hours.

The goal, according to the protesters, is to get Granite Shore Power to set a date for the plant's shutdown and have ISO-NE accelerate the move.

Local law enforcement and railway police negotiated with the protesters to leave the tracks. Four people refused to leave and were removed by fire department's tactical team, with the last person being arrested at

More: CommonWealth Magazine

### State Restarts Rebate Program for EVs

The Department of Energy Resources said the state restarted its rebate program for electric vehicles Wednesday, three months after it was discontinued because of a lack of funding, allowing buyers to get rebates of up to \$2.500.



The state began offering rebates for EVs in 2014, but the program ran out of money and was eliminated Sept. 30. However, a supplemental budget bill signed by Gov. Charlie Baker in December lets state

energy officials use \$27 million in 2020 and 2021, taken from money collected by the Regional Greenhouse Gas Initiative, to reinstitute the program.

More: MassLive

# **MICHIGAN**

### Judge Rules for DTE Energy IRP Revision



Administrative Law Judge Sally Wallace

last week issued a recommendation for the Public Service Commission to insist on major revisions to DTE Energy's integrated resource plan. Among her 15 recommendations to the PSC was a finding that DTE's IRP was "not a workable remedy" and that the company should "be required to file an updated IRP 24 to 30 months after the commission issues its order in this case."

Wallace also determined that DTE's retirement analysis of the Belle River coal plant was insufficient. The recommendations will now be submitted to the PSC for a final decision early this year.

More than 3,300 residents submitted comments and 150 attended a public hearing in June. Along with the state Environmental Council, they argued DTE's proposed plan undervalues energy efficiency and renew-

ables while also lengthening the life of old and expensive coal plants.

More: Grand Rapids Business Journal

# NORTH CAROLINA

### **Duke Energy to Dig Up Coal Ash**



Duke Energy said last week it will dig up nearly 80 mil-

lion tons of coal ash at six sites — the largest coal-ash cleanup in U.S. history — in a legal settlement with the state Department of Environmental Quality.

Last year the department ordered Duke to dig up ash from nine basins at six sites, after which the utility sued the department. A settlement was then signed Dec. 31. Most of the coal ash will be excavated and put into lined landfills or used to make building materials. Among the sites to be cleaned up include the Marshall Steam Station at Lake Norman and the Allen Steam Station in Gaston County.

Duke said it will be closing all its coal ash basins, including 31 in the state. It will be allowed to keep some coal ash in place at three locations, which will cut the cost of closing the coal ash basins by \$1.5 billion.

More: The News & Observer

# RHODE ISLAND

#### **OER Commissioner Grant to Retire**



Carol Grant. the head of the Office of Energy Resources, last week said she will step down from her position on Jan. 10. Grant said she has no plans on another job and is looking forward to retirement.

Grant, who was appointed by Gov. Gina Raimondo, took over for Marion Gold in May 2016. The search for a new commissioner is currently underway, with a replacement likely to be announced in the coming weeks.

More: Eco RI News

## **SOUTH CAROLINA**

## **PSC Reverses Course on Amount Dominion Should Pay Solar Developers**



The Public Service Commission last week changed

course on an earlier decision and voted 5-0 in agreement that Dominion Energy should pay solar farm developers more for power than the commission had approved in November. The new ruling states Dominion will have to pay solar providers about 3.5 cents/ kWh, an increase from roughly 2 cents/kWh, according to experts familiar with the ruling.

The PSC's decision to reconsider its November order had been requested by solar advocates who accused the commission of siding with utilities over renewable energy interests. The commissioners who reversed course suggested they had received information that changed their minds.

More: The State

