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High

Potential for insufficient operating reserves in normal peak conditions

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Medium Potential for insufficient operating reserves in above-normal conditions

Normal

Sufficient operating reserves expected

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# FERC/Federal News



## NERC Summer Assessment Sees Some Risk in Extreme Heat Waves

By James Downing

NERC's 2024 Summer Reliability Assessment, released May 15, found that every region has met its reserve margin targets but that many areas would face difficult operations in lengthy, widespread heat waves.

Wide-area heat events that affect generation, wind output or transmission systems coupled with demand growth in some areas are contributing to risks in some regions. The report lists CAISO, ERCOT, ISO-NE, MISO and the Southwest as facing elevated risks this summer.

Weather forecasts are calling for above-average temperatures in most of the country, with the highest chances for hot weather in the Northeast, Texas and much of the Intermountain West.

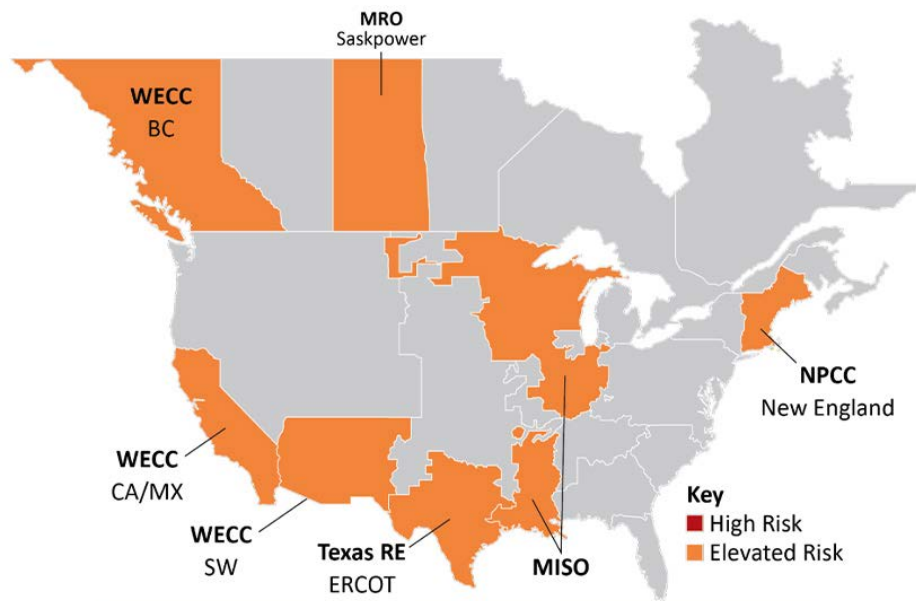
"What we're really seeing is a transformation of our system, but also the types of risks," said John Moura, NERC director of reliability assessments and performance analysis. "And as we address one risk, other risks pop up. As we bring on more wind and solar, certain risks need to be mitigated and addressed. As we also retire resources, we need to think about some of the essential reliability services that we've traditionally received from resources."

The changing grid has regions relying on their neighbors more than ever, as transferring power between regions can deal with some of those new risks that come with the changing generation fleet.

"We have now what we call wind droughts that are persistent and widespread, and these affect areas, and so we're seeing a greater need to not only economically trade with our neighbors, but really be reliant, and then have confidence in advance that those transactions are going to be there and they're going to be reliable," Moura said.

All of the areas assessed have adequate supply for normal peak load in part because of major capacity additions since last summer. The industry has added 25 GW of solar capacity in the past year, which comes on top of 19 GW added the prior year, said Mark Olson, NERC manager of reliability assessments.

"Really significant amounts of" battery storage have been added "in ERCOT and in the California-Mexico assessment area," Olson said. "These areas have a lot of solar resources, and so the batteries are particularly import-



Seasonal Risk Assessment Summary	
High	Potential for insufficient operating reserves in normal peak conditions
Elevated	Potential for insufficient operating reserves in above-normal conditions
Normal	Sufficient operating reserves expected

NERC summer 2024 assessment | NERC

ant resources capable of helping manage the variation ... as the solar ramps down in the late afternoon and early evening but demand is still high."

Growing demand is being felt most acutely in Texas and SPP this summer, Olson said.

MISO has seen some resource additions since last year, but those were offset by continued retirements and a cut in expected imports.

"Like last year, wind generator performance is really the key factor in MISO in its ability to meet reserves during high-demand periods," Olson said.

ISO-NE can no longer rely on the natural gas power plant at the Mystic site outside of Boston, which makes its reserve margins lower than last year.

ERCOT continues to see large load growth, along with massive growth in solar energy capacity, though it will still face issues when the sun goes down and demand remains high. The key to reliable operations there will be running storage properly so it can be fully charged when needed most, Moura said.

"California, under an extreme condition, would be highly reliant on its neighbors," Moura said. "That's really how the Western Interconnection works. We've shown improvements since last year, probably primarily because of the im-

proving drought conditions. And so, this year, it has a better chance of relying on its neighbors because there's a little more availability of hydro."

Most of the biggest issues with reliability in the last decade have come during the winter, but Moura and Olson said the summer still presents significant issues for grid operators. Demand can be very high in some regions because of the heat.

"In California, that demand can be really variable in the summer," Olson said. "They have a lot of rooftop solar; it just has a peakiness about it. That makes for demand challenges."

Winter has more supply issues, as the industry is competing for natural gas at its peak demand and extreme cold can lead to weatherization issues, he added.

Moura noted that the addition of solar has helped significantly in recent summers.

"We've almost had a perfectly correlated resource that we're building extremely fast. That's correlated with peak demand for now, which is solar," Moura said. "And so, this recent solar summer assessment shows for the peak hours that we traditionally have seen ... we've got a great resource that can provide that for that particular peak. But almost every other hour throughout the year has challenges." ■



## CAISO/West News

# CAISO Moves for Expedited Change to Soft Offer Cap

## ISO Looking to Increase the Cap for Battery and Hydro Resources Ahead of Summer

By Robert Mullin

CAISO is moving quickly to win approval for a proposal to raise the soft offer cap in its market from \$1,000/MWh to \$2,000 to accommodate the bidding needs of battery storage and hydroelectric resources in time for operations this summer.

The expedited proposal will be put up for a vote by the ISO's Board of Governors and the Western Energy Imbalance Market's Governing Body during their joint meeting May 22.

A product of stakeholder discussions in the ISO's Price Formation Enhancements (PFE) Working Group, the two-part *proposal* seeks to allow "energy-limited" resources with "intraday opportunity costs" — specifically batteries and hydro — to reflect those costs in their energy bids.

Those opportunity costs become a factor on days when the grid is stressed by tight supplies, usually from extreme weather. Under those conditions, energy-limited resources committed to the market at the \$1,000/MWh soft offer cap can find themselves dispatched at high prices occurring relatively early in the day. But because of constraints on their use once they've depleted their available energy, they will be unable to offer into the market later in the day in the face of even higher prices

(which often signal the need for more supply to prevent grid emergencies), reducing their opportunity to earn revenues.

"Market participants have posited that allowing these [opportunity] costs to be accurately reflected will ensure the market can effectively and efficiently manage the dispatch of these resources," CAISO's proposal says.

The proposal is tied to the ISO's rules stemming from FERC *Order 831*, which was issued in November 2016. That order required RTOs/ISOs to subject the bids of an energy resource in their markets to the higher of either a soft offer cap of \$1,000/MWh or a cost-based offer already verified by the market operator, which can exceed the soft cap. In the CAISO market, the ISO-recognized offer level for a resource is referred to as the resource's default energy bid (DEB).

To address concerns about the potential for runaway prices because of market power, Order 831 also directed RTOs/ISOs to set a hard cap of \$2,000/MWh for energy offers in calculating LMPs.

### 'Uncap the DEB'

CAISO's proposal explains that, to comply with Order 831, the ISO developed a reference level change request (RLCR) process to verify that a resource's costs exceed the soft offer

cap, allowing a resource to update its DEB to reflect its full costs for serving incremental demand.

But the RLCR process "was tailored toward gas resources that faced discrepancies between their actual fuel costs and the costs that CAISO's market systems used to calculate their DEB" and "was designed to validate requested DEB adjustments, using a reference based on fuel costs, in response to changing fuel costs."

Energy storage and hydro resources cannot use the RLCR process "to adjust their DEBs in response to intraday opportunity costs because the ISO does not have rules to determine a reasonable cost expectation upon which to base an intraday opportunity cost adjustment request," the proposal says. "Without the ability to use the automated RLCR process, hydro and storage resources cannot request DEB adjustments or bid above the soft offer cap when opportunity costs materialize in real time."

To remedy that issue, the first part of the proposal (section 4.1) calls for the cap on all energy bids — including those from natural gas-fired resources — to be raised from \$1,000/MWh to \$2,000.

"This proposal would 'uncap the DEB' for all resources" in both the day-ahead and real-time markets, CAISO wrote. "In particular, this would allow hydro resources to bid up to a value that reflects the opportunity costs already defined in their DEBs, even when those costs exceed \$1,000/MWh."

Because the DEB reflects a resource's "verifiable" cost-based offer, the proposal would comply with Order 831 rules requiring such offers to be capped at \$2,000/MWh, CAISO said. The plan represents "a process change, not a value change," because eliminating the \$1,000/MWh from the DEB calculation "does not change the basis for calculating marginal reference costs accepted" as the DEB, as outlined in the ISO's tariff, it said.

The ISO also attempts to provide assurance that the change won't mean gas-fired resources will have a free pass to increase their DEBs.

"This proposal would not change the resource-specific parameters defined by any resource's DEB calculation, but offers value to resources for whom the automated RLCR process is cumbersome or unusable for validating costs



RWE battery storage facility in Fresno County, Calif. | RWE

## CAISO/West News

above \$1,000/MWh,” the proposal says.

### Rules for Storage

But the proposal also explains that the proposed bidding changes cannot apply to battery storage resources in the near term because the technological changes needed to accommodate them cannot be implemented by this summer.

For that reason, CAISO proposes a second provision (section 4.2) that offers an “interim solution” by modifying market rules to provide storage resources in both the ISO and the WEIM to bid with more flexibility.

“The additional flexibility allows these resources to reflect intraday opportunity costs not fully captured by the existing storage DEB, and allows storage resources to unlock the benefit of the uncapped DEB value as a cushion in the event of market power mitigation,” the proposal says.

Under the plan, instead of using a storage resource’s uncapped DEB to formulate a bid, the proposal calls for using the market’s maximum import bid price (MIBP) — set by bilateral mar-

ket prices outside CAISO — as a proxy for the resource’s “verifiable opportunity costs.”

“The ISO proposes to allow storage resources to bid up to the higher of the MIBP’s fourth-highest calculated hourly value and the highest cost-verified bid when either of those values rise above \$1,000/MWh,” allowing those resources to manage their state of charge (SOC) through economic bids.

“Functionally, this proposal ensures four hours of SOC, which correlates to the typical sizing of the existing battery fleet, is available for use across net-peak hours, aligns with the day-ahead schedules and accurately values the storage resources’ opportunity costs,” the proposal says.

### MSC Endorses

CAISO’s Market Surveillance Committee endorsed the proposal in a 3-0 vote during its meeting May 15.

Committee members said that, for them, concerns about reliability trumped those about market power.

“I would say on balance, we’re more worried

about the depletion of storage than we are about the questions of system market power at this point,” said James Bushnell, professor in the Department of Economics at the University of California, Davis.

Kyle Navis, a senior analyst with the California Public Utilities Commission’s Public Advocates Office, expressed concern about letting batteries bid above the cap and warned the proposal was advancing too quickly.

“I want to say that Cal Advocates agrees that the problem statement guiding this initiative is a valid concern that needs to be addressed,” Navis said. “At this particular point, our fundamental overarching concern is that the expedited interim solution for summer 2024 has been too rushed and is not ready for adoption and creates significant cost risks.”

Michele Kito, CPUC regulatory analyst, expressed myriad concerns with the proposal, including a contention that the new bid calculation used for storage resources would represent a price based on a “thinly traded” bilateral market rather than a true opportunity cost for those resources. ■

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## CAISO/West News

# Nevada Power Exempted from Market Power Filing Requirement

## Utility Retains Category 2 Status in Home Northwest Region

By Elaine Goodman

FERC on May 14 granted Nevada Power an exemption simplifying the NV Energy subsidiary's filing of its triennial updated market power analysis (ER24-1518).

In a March 15 filing, Nevada Power asked FERC to change its designation from a Category 2 to a Category 1 seller in the Southwest Region.

A Category 2 seller must regularly file updated market power analyses, while sellers in Category 1 are exempt from that requirement. For a Category 1 designation, a seller must own or control no more than 500 MW of generation in the region, and it also faces limits on owning or operating transmission facilities.

Nevada Power noted in its filing that even with a Category 1 designation for the Southwest region, it would still have a Category 2 designation in the Northwest region, and therefore would continue to file triennial market power analyses.

With Category 2 designations in both regions, Nevada Power would be required to file duplicate triennial updates six months apart, the company said.

"To be clear, unlike other entities that have filed to be relieved of or exempted from Category 2 status, Nevada Power is and will remain a Category 2 seller in the Northwest Region — its home reporting region — and will continue to submit full triennial analyses addressing the whole of Nevada Power's horizontal and vertical holdings, including those holdings in the Southwest region," the company said in its filing.

FERC denied Nevada Power's request for Category 1 status in the Southwest region, saying the company was disqualified by its ownership of transmission facilities in that region.

According to Nevada Power's filing, the company partially owns the El Dorado substation in the Southwest region and within the CAISO market, as well as the Navajo-Crystal-McCullough line and associated substations



FERC determined in a May 14 order that NV Energy subsidiary Nevada Power is a Category 2 seller in the Southwest region. | DOE

in the Los Angeles Department of Water and Power (LADWP) balancing authority area.

But FERC agreed to grant Nevada Power an exemption from the filing requirements for a Category 2 seller. FERC Order 697 allows the commission to evaluate exemption requests on a case-by-case basis.

"In our attempt to keep the Category 1 criteria as simple and straightforward as possible, we may have swept under Category 2 particular sellers whose circumstances make it unlikely that they could ever exercise market power," FERC acknowledged in [Order No. 697](#).

FERC ordered Nevada Power to submit a compliance filing within 30 days with a revision to its market-based rate tariff reflecting the exemption.

No interventions or protests were filed in the case.

Nevada Power filed an updated tariff in 2014 designating itself as a Category 2 seller in the Northwest and Southwest regions, and a Category 1 seller in the remaining four regions: Central, Northeast, Southeast and SPP.

At the time, the company owned or controlled more than 500 MW of generation in the Southwest region, but that's no longer the case, the company said in its March 15 filing.

Before 2014, the relevant regions for the Nevada Power balancing authority area and for the BAA of its sister company, Sierra Pacific Power, were the Southwest and Northwest regions, respectively.

But the two BAAs were consolidated in 2014, when the One Nevada transmission line came online. Nevada Power's home reporting area became the Northwest region under the consolidation. ■

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# CAISO/West News

## New Mexico Plots Next Steps for Day-ahead Market Decisions

*Upcoming Workshop to Cover Utilities' 'Connectivity' in EDAM, Markets+*

By Elaine Goodman

As a next step in deciding which of two competing Western day-ahead markets to join, two New Mexico utilities are commissioning a study of transfer capability under different market scenarios.

Public Service Company of New Mexico (PNM) and El Paso Electric expect to have the results of the study in July, according to New Mexico Public Regulation Commissioner Gabriel Aguilera.

Aguilera mentioned the study during a PRC workshop May 17 on utilities' regional market participation. The commissioner has been coordinating what has so far been a series of three workshops on the topic.

Aguilera said he's planning another workshop in August in which PNM and El Paso Electric can discuss "the transfer capability that exists into either market. And especially with respect to the transmission rights that they have, and other entities could have [in] either option."

"The connectivity is really going to be a big factor in any decision that the utilities make," Aguilera said.

The PRC opened a docket last year and has been holding workshops with the goal of developing guiding principles for utilities' participation in a day-ahead market or RTO.

Aguilera invited entities to submit a draft guidance document for the commission to consider.



New Mexico PRC Commissioner Gabriel Aguilera has been coordinating a series of workshops on Western day-ahead markets. | © RTO Insider LLC

The May 17 workshop featured presentations from CAISO on its Extended Day-Ahead Market (EDAM) and from SPP on its Markets+ offering. CAISO and SPP representatives discussed governance, market design and implementation timelines for their respective markets — similar to ground they covered in other recent presentations. (See *Nevada RTO Proceeding Examines EDAM, Markets+ Design.*)

Both markets were developed with extensive stakeholder input.

In fact, Aguilera said, participation has been so extensive that it has left some stakeholders feeling overwhelmed and getting left behind in the process. But other stakeholders "have more resources and a lot at stake," he added.

"When you think about a stakeholder-driven process, it sounds great," Aguilera said. "In practice, if it's really these entities that have the most resources driving it, then it's not really fair."

In particular, consumer advocates and state regulators need a larger role, he said.

In addition to an August workshop on transfer capability, the commission might invite presentations from the West-Wide Governance Pathways Initiative and the Western Resource Adequacy Program (WRAP). The Pathways Initiative is an effort to create the governance framework for an independent market that expressly includes the state-run CAISO.

Commissioner James Ellison said the August workshop will address a key topic.

"The market design is important, but you've got to have the capacity for the regional exchanges to happen in order for the market to be valuable," he said.

Ellison said New Mexico is unique in having merchant transmission lines being built primarily to send wind power to California.

He said New Mexico ratepayers could benefit from California imports, which at times dip into negative pricing because of excess solar resources.

"I do think that consideration should be given to the ability of these merchant lines to allow for that regional market participation," Ellison said. ■

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# ERCOT News



## Texas RE: Resources' Weatherization a Success

By Tom Kleckner

The Texas Reliability Entity says its latest regional assessment indicates weatherization activities since the disastrous February 2021 winter storm have paid off.

David Penney, Texas RE's director of reliability services, told his Board of Directors on May 15 that state legislation passed since Winter Storm Uri and on-site inspections have both improved resource performance and cold-weather resilience, as measured by outage rates and balancing contingency rates.

"We definitely see a lot of improvement with resource weatherization," Penney said, citing the lack of outages during two more recent winter storms.

The assessment — not likely to be released until June, the entity said — also found:

- The solar down-ramp magnitude continues to increase, creating potential energy adequacy shortfalls.
- Misoperation rates are improving, but human performance continues to be a primary factor in both misoperations and system events.
- Conventional generation fleet outage rates have improved, but long-term outage rates continue to trend higher.



**2023 TEXAS RE RELIABILITY PERFORMANCE AND REGIONAL RISK ASSESSMENT**  
MAY 2024

The Texas RE's annual reliability assessment will soon be released. | *Texas RE*

Penney said the latter problem is found mostly in coal- and lignite-fired resources.

"A lot of it has to do with the way those units are operated in light [of] how the grid is being operated because of the changing resource mix," he said. "Those units are being cycled a whole lot more."

Texas RE's annual Assessment of Reliability Performance and Regional Risk Assessment is intended to inform market participants, stakeholders and policymakers of the data it gathers and the risks it sees in the interconnection. The

report looks at four main areas: grid transformation, resilience to extreme events, cybersecurity, and cyber and physical security and critical infrastructure.

The report was once called the "Assessment of Reliability Performance, much to the chagrin of Texas RE CEO Jim Albright.

"Assessment of Reliability Performance' was easy. 'ARP.' We had a nice acronym," he said in jest, noting the report's new acronym is ARPRRA. "Now, they've added 'Regional Risk Assessment.' That acronym gets really long, and it sounds like we're pirates."

### Budget, Business Plan OK'd

The board approved its 2025 budget and business plan and an audit of its 2023 financial statements that reported no findings.

Texas RE proposed a 5.9% increase to the budget, from \$19.11 million to \$20.24 million. It said the key drivers were an 8.1% increase in payroll expense, a projected 10% increase over current actual rates for medical insurance premiums and additional compliance oversight obligations requiring more staff travel.

The budget was approved by the Members Representative Committee in April and posted for members' comments May 7. It will now be sent to NERC. ■

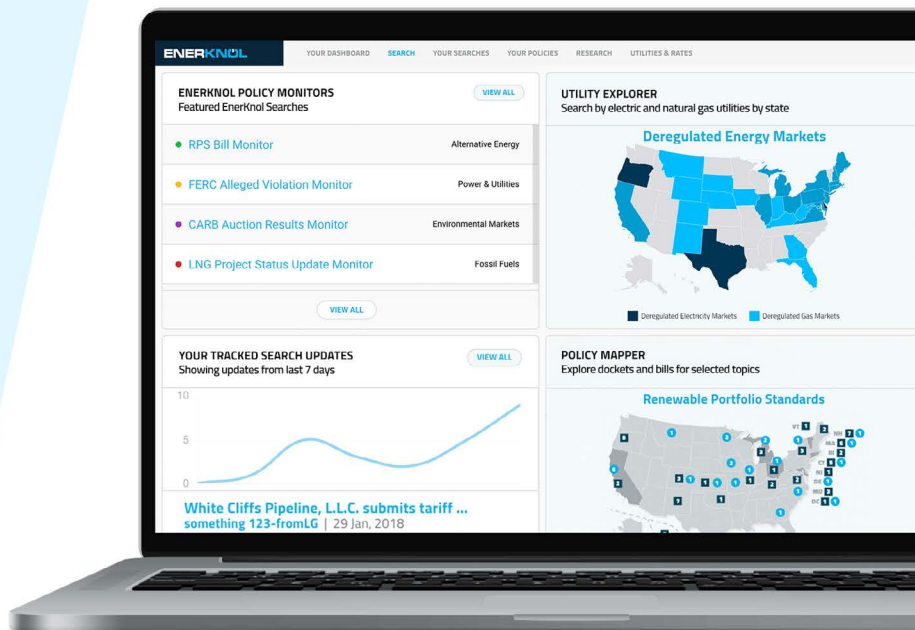
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## ERCOT News



# Texas PUC Prepping Reliability Standard for Comment

By Tom Kleckner

The Texas Public Utility Commission's staff, having been waved forward by commissioners, are preparing for public comment a revised version of ERCOT's proposed reliability standard.

During its May 16 open meeting, the commission agreed with staff suggestions that two of ERCOT's three metrics be tweaked to strengthen their effectiveness.

"Coming up with reliability standard is really mission critical to what we're doing on the wholesale market design side," PUC Chair Thomas Gleeson said.

The Texas grid operator has *proposed* a "multi-metric" framework that establishes thresholds for three metrics: frequency, duration and magnitude of loss-of-load events (54584). PUC staff filed comments May 9 recommending changes to the duration and magnitude values' calculations. (See related story [ERCOT Proposes 'Multi-metric' Approach for Reliability Standard.](#))

Commissioner Lori Cobos suggested ERCOT include the normalized expected unserved energy (EUE) to provide an idea of the load that won't be served. ERCOT has said EUE is an average measure, like the loss-of-load expectation, and does not distinguish the characteristics of extreme events. The grid operator did allow that EUE is a useful measure for the expected cost of not meeting customer firm-load requirements and the expected incremental cost of modifying the reliability standard's elements.



Texas PUC Commissioner Lori Cobos opines on ERCOT's proposed reliability standard. | *Admin Monitor*

"I think it's a helpful perspective to have in addition to the fundamental reliability standard that will be based on the one-in-10 with the additional criteria of duration, frequency and magnitude," Cobos said.

Commission staff proposed adding a 0.25% exceedance probability for the 19-GW magnitude metric because it is tied directly to the grid's operational capability. Cobos said she wants stakeholders, with their comments, to further explore the exceedance number.

"Based on just my initial thoughts, it seems to be very conservative," she said, saying the

0.25% exceedance translates to one loss-of-load event every 400 years. Cobos suggested the rule could start at 0.25% but wondered aloud whether stakeholders might want to double it to 0.5%, the equivalent of one loss-of-load event every 200 years.

"It's typically easier to start with more stringent standards, say one in 400, and then pull back to something less stringent," Gleeson said.

Following stakeholder feedback, a final reliability standard could be published as soon as June 13. ■

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## ERCOT News



# ERCOT Proposes 'Multi-metric' Approach for Reliability Standard

By Tom Kleckner

Three years after a deadly winter storm nearly imploded the ERCOT grid, killed hundreds of Texans and caused billions in financial damages after blackouts lasted for days, stakeholders in the Texas market have begun working on a reliability standard that may be stricter than industry norms.

ERCOT is *proposing* a “multi-metric” framework that establishes thresholds on three criteria: frequency, duration and magnitude of loss-of-load events.

Its baseline recommendations would set a loss-of-load expectation (LOLE) frequency of once every 10 years; 14 hours of rolling outages during an event; and no more than 19 GW of load shed to maintain the ability to roll the outages (54584).

The grid operator said using maximum magnitude as a probabilistic measure addresses a key physical reliability constraint: how many megawatts can be effectively managed at one time for rotating load shed purposes. It included maximum duration because one reliability policy constraint is the acceptable length to customers of an outage event.

Pete Warnken, ERCOT senior manager of resource adequacy, told the Texas Public Utility Commission during a May 2 technical workshop that after Winter Storm Uri in 2021, it became clear that the industry’s normal one-in-10 LOLE wasn’t enough on its own. He said staff reviewed other grid operators’ reliability standards and dug into background materials to come up with their proposal.

“One overarching theme became apparent: Simply relying on the 0.1 LOLE industry standard was not acceptable, and any reliability standard for ERCOT needed to expand beyond this single metric,” Warnken said. “There is an expectation for the commission to establish a reliability standard for ERCOT and take action to ensure the reliability and needs of the region are met both in the near and long term.”

The 2021 storm came 10 years after a less severe cold weather event in 2011. The rolling outages during the week leading up to Super Bowl XLV, played in the Dallas-Fort Worth area, were shorter and less severe than Uri’s.

“It makes me think that at a basic level, we are hitting that one-in-10 standard, but we’re still getting the massive outages that we want to try to avoid,” Commissioner Jimmy Glotfelty



Texas PUC Commissioner Jimmy Glotfelty | Admin Monitor

sense,” PUC Chair Thomas Gleeson said, expressing more interest in what market participants had to say.

“This is probably the most important policy decision this commission is going to make in terms of the impact to the state and reliability for our system,” NRG Energy’s Bill Barnes said, adding that his company “strongly supports” the resource adequacy-based reliability standard.

“We feel that this is the missing piece of our market structure. For the most important reliability type of our grid, resource adequacy, up to this point it’s been a shoulder shrug and, ‘Let’s just see what we get.’ That’s why this is such an important decision,” he added.

Katie Coleman, representing Texas Industrial Energy Consumers and its large industrial users, said the standard could be a “useful tool” as a reference point to decisions on whether to increase the offer cap, change the shape of the operating reserve demand curve or add ancillary services.

“There’s a lot of judgment involved in a reliability standard. It’s extremely imprecise,” Coleman said. “We continue to have concerns about using it as a single reference point to move billions of dollars around through a capacity construct. So that’s our sensitivity, but not the reliability standard in and of itself.”

### ‘Reasonable Starting Point’

PUC staff have since filed a *memo* responding to several points made during the technical conference. It lays out the decision points staff say it needs to prepare a proposal for the reliability standard’s rulemaking.

The commissioners will use the memo as the basis for discussions during their May 16 and 23 open meetings. A final rule could possibly be published by June 13, and a final PUC vote taken on the rule in August.

Commission staff said they view ERCOT’s

said. “So, semantics. Two massive outages in 20 years, that’s one in 10.”

The commission and stakeholders generally supported ERCOT’s approach.

“I think what ERCOT is proposing makes

approach to a reliability standard recommendation to be a “reasonable starting point” and that a commission-approved standard is “essential to achieving long-term resource adequacy.” They said setting the LOLE at close to one event every 10 years is a “reasonable benchmark” that alternative values can be compared to.

“At a minimum, the commission-approved reliability standard should target a level of reliability that is comparable to other markets and regions across the country,” they said in the memo.

Staff also noted that adopting a reliability standard does not require implementing the performance credit mechanism (PCM), saying it is not the only tool that could be used to meet the standard. They suggested “alterations” to existing ancillary service products, new reliability products or changes to the scarcity pricing signals as other policy options that could be “tailored” to affect reliability standard metrics.

While staff agreed with using the industry’s One-in-10 LOLE standard, they found setting a firm megawatt value for the 19-GW magnitude metric is not appropriate as it is directly tied to the system’s operational capability. They suggested a 0.25% exceedance probability for magnitude and updating the metric on a predictable, scheduled basis that aligns with future load-shed capabilities.

Staff also recommended the duration metric be reduced to 12 hours, with a “more relaxed” 1% exceedance probability. They noted ERCOT’s emergency pricing program will kick in after prices have been at the high systemwide offer cap for more than 12 consecutive hours.

According to ERCOT’s cost analysis, a 0.1 LOLE is not enough to constrain the maximum magnitude to 19 GW; instead, it would require a 0.04 LOLE. The incremental system cost to achieve this increased reliability is between \$195 million and \$271 million per year above the amount that supports a 0.1 LOLE, staff said.

ERCOT’s sensitivity variables include using weather years dating back to 1980 to ensure a “robust weather history” is accounted for. It also suggests a retirement assumption of 900 MW over the next several years and using combustion turbines for capacity, as the latter can be converted into any other combination of resource types. ■



## ISO-NE News

# ISO-NE Provides Update on Potential New Resource Adequacy Metric

By Jon Lamson

ISO-NE on May 14 *outlined* for the NEPOOL Reliability Committee its work on a potential metric quantifying energy shortfall risk in the Northeast based on extreme weather to complement the traditional one-day-in-10-years loss-of-load expectation.

The so-called Regional Energy Shortfall Threshold (REST) is intended to be a “reliability-based threshold that reflects the region’s level of risk tolerance with respect to energy shortfalls during extreme weather,” according to the RTO. (See [ISO-NE Details Proposal for Regional Energy Shortfall Threshold](#).)

As climate change causes extreme weather events to become more frequent, there has been growing concern that the widely used one-in-10 standard — requiring grid operators to procure sufficient resources so that its likely load is shed only one day in 10 years — is not enough to maintain reliability. (See related

story, [ERCOT Proposes ‘Multi-metric’ Approach for Reliability Standard](#).)

Once the REST is hit, ISO-NE would require certain measures based on possible 21-day extreme weather events. But the RTO is still working on the threshold’s exact value, what weather events would be used in the evaluation to set it and how often evaluations would be conducted.

ISO-NE told the committee that stakeholders prefer a metric based on expected unserved energy, defined as the expected amount of energy not supplied by the generating system during a certain period. It would consider the probability, magnitude and duration of an energy shortfall; percent of unserved load; customer impacts; and seasonal differences.

Jinye Zhao of ISO-NE said the RTO is considering a “maximum normalized seven-day energy shortfall,” which “would represent the system’s energy shortfall as a percentage of

the system’s demand over rolling seven-day periods within the 21-day events.”

This metric would capture both the severity and duration of shortfall risks and would minimize the need for frequent major updates as demand and resource profiles change, Zhao said.

ISO-NE said it is still evaluating how it would establish the threshold for whichever metrics it selects and noted that it is “in the process of studying a number of additional 2027 winter events in order to help quantify a meaningful threshold.”

The RTO would rank all 4,680 possible 21-day weather events based on average system risk and select a top percentage of them to weigh against the threshold. It would then use the Probabilistic Energy Adequacy Tool (PEAT), developed with the Electric Power Research Institute, to quantify the selected set’s risks. (See [ISO-NE Study Highlights the Importance of OSW, Nuclear, Stored Fuel](#).)

Regarding the assessments’ timing, the RTO said that the stakeholders have shown “a notable preference for seasonal assessments ahead of the winter and summer seasons,” as well as for annual PEAT assessments that look three to five years ahead.

“[ISO-NE’s] current thinking is that a seasonal assessment of operational peak periods for the energy shortfall risk against the REST criteria is most appropriate,” said Stephen George of ISO-NE. The RTO would likely perform these assessments two to four months in advance of a given season, he said.

“This timing would facilitate the use of the most up-to-date resource mix, demand profiles and fuel inventory assumptions,” while giving enough time to implement solutions to address shortfall risks, George said.

The RTO also is considering longer-term annual shortfall assessments to identify trends and upcoming risks, George added.

Once ISO-NE establishes the REST, it plans to embark on “a subsequent effort” to evaluate possible solutions to risks identified in the process, George said. Potential solutions include “market enhancements” and “responsiveness by end-use consumers.”

ISO-NE plans to provide more information on the REST at the July RC meeting and present a proposal in August, with the hope of presenting a final proposal by the end of the year. ■



A winter storm in Cambridge, Mass. | © RTO Insider LLC



## ISO-NE News

# ISO-NE Re-elects Slate of Board Candidates

ISO-NE has re-elected current Directors Caren Anders, Steve Corneli and Michael Curran, the RTO *announced* May 16.

The re-elected members have “significant expertise in clean energy, consumer advocacy, transmission, wholesale electricity and financial markets, and deployment of complex IT systems,” ISO-NE wrote in a press release.

ISO-NE relies on a slate voting system to elect its board, which consists of 10 members serving three-year terms. Some NEPOOL stakeholders have previously taken issue with the system, arguing that participants should be able to vote on individual candidates.

The slate was nominated by a committee featuring current board members, NEPOOL sector chairs and Phil Bartlett, chair of the Maine Public Utilities Commission. The slate was approved by the NEPOOL Participants Committee in early May.

“We’re thrilled to have Caren, Steve and Michael remaining with us,” ISO-NE CEO Gordon van Welie said. “Their extensive and diverse experience and expertise remain critical as



From left: ISO-NE Directors Caren Anders, Steve Corneli and Michael Curran | ISO-NE

the region continues its transition to a clean, reliable energy future.”

Anders has a background in transmission and has worked for Quanta Technology, Duke Energy and Exelon. Corneli works as an independent clean energy adviser and previously worked on climate and market policy issues for NRG Energy. Curran is the retired chair of the Boston Stock Exchange and has expertise in

investment and financial services.

The RTO’s most recent IRS Form 990 shows that Anders, Corneli and Curran made between \$138,000 and \$164,000 for seven to nine hours of work per week in 2022.

Board members must not be affiliated with any company that participates in the region’s wholesale electricity markets. ■

— Jon Lamson

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# ISO-NE News

## ISO-NE Planning Advisory Committee Briefs

National Grid introduced a pair of asset condition projects estimated to cost about \$538 million at the ISO-NE Planning Advisory Committee on May 15.

The bulk of the cost, \$491 million, would come from the refurbishment of a 115-kV line along the Vermont-New Hampshire border. The project would consist of replacing wood structures with steel poles, installing optical ground wire and moving part of the line toward center of the right of way to reduce tree damage.

The line was refurbished in 2008 but has since deteriorated because of damage from woodpeckers and exposure to the elements, said Rafael Panos of National Grid.

Some stakeholders expressed concern about the high cost of the project and the short lifespan of the previous refurbishment.

Abigail Krich, president of Boreas Renewables, asked whether National Grid has considered whether the line overlaps with needs identified in ISO-NE's 2050 Transmission Study. The study identified the North-South interface along the southern borders of Vermont and New Hampshire as a high-likelihood area for overloads in coming decades.

"The region is planning to have conversations very soon about right-sizing projects like this one," Krich said. "This is a really big project, and I'd hate to miss that opportunity."

Panos agreed regarding the importance of avoiding a "subsequent rebuild" and said he would consult with the National Grid team

about a potential overlap with the needs identified in the 2050 study.

### Asset Condition Process Guide

Dave Burnham of Eversource Energy gave an overview of the draft asset condition process guide that was developed jointly by the New England transmission owners (NETOs).

The guide outlines how the NETOs monitor their assets, identify asset condition needs and select solutions. The document comes in response to requests from the New England states for more transparency and oversight on the asset condition process. (See *States Press New England TOs on Asset Condition Projects.*)

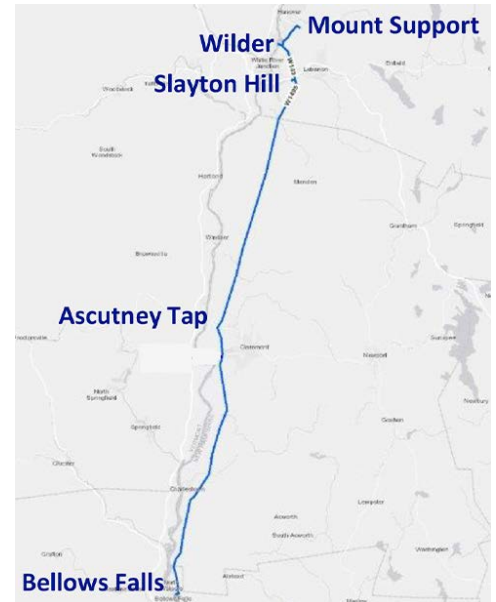
Burnham requested stakeholder feedback on the draft by May 29.

### FERC Order 881

Brent Oberlin, executive director of transmission planning at ISO-NE, presented on how FERC Order 881 compliance will affect transmission planning. The order requires transmission providers to use ambient-adjusted line ratings to evaluate short-term transmission service and seasonal ratings for long-term service.

Oberlin noted the order does not require any changes to the ratings used in transmission planning but said ISO-NE intends to update its winter ambient temperature assumptions.

While ISO-NE's winter planning assumes an ambient temperature of 50 degrees Fahrenheit, winter peak loads typically occur as the



Map of National Grid's proposed asset condition project between Bellows Falls and Hartford, Vt. | ISO-NE

temperature drops, a trend that will increase with heating electrification, Oberlin said. To account for this, ISO-NE plans to assume 20 F for transmission planning.

Oberlin emphasized that ISO-NE has a lot of work to do to be ready for the July 2025 implementation date.

"We're going to be coming in on two wheels to actually get this done," he said. ■

- Jon Lamson

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## MISO News

# OMS RA Summit: Scarcity to Persist, Load Growth Debatable

By Amanda Durish Cook

AMES, Iowa — There's no going back on waning capacity in MISO, panelists agreed this week at a gathering of state regulators, though predictions of escalating load growth have some skeptical.

New OMS Executive Director [Tricia DeBleeckere](#) opened the Organization of MISO States' third annual Resource Adequacy Summit May 14-15 at Iowa State University, predicting that MISO will be managing a shallower supply for years to come.

"We're going to have to live in this new world order of tight margins," DeBleeckere said.

MISO President Clair Moeller agreed some capacity insufficiency within MISO is here to stay. He said it was unsurprising to MISO that one of the resource adequacy zones returned a shortage for the upcoming planning year. He said most zones were "right on the edge" of adequacy.

MISO's capacity auction April 25 returned insufficient capacity for the upcoming fall and spring 2025 in Missouri's Zone 5, where capacity prices hit a \$719.81/MW-day limit, on par with building new generation. Otherwise, all local resource zones cleared at \$30/MW-day in the summer, \$15/MW-day in the

fall, \$0.75/MW-day in the winter and \$34.10/MW-day in the spring. Zone 5 contains local balancing authorities Ameren Missouri and the city of Columbia, Mo.'s Water and Light Department. (See [Missouri Zone Comes up Short in MISO's 2nd Seasonal Capacity Auction, Prices Surpass \\$700/MW-day.](#))

Moeller defended his standing as a "storm crow" on resource adequacy.

"The reason it's not bad is because I've been telling you all to worry about it," he joked with regulators.



Wisconsin Public Service Commissioner Marcus Hawkins | © RTO Insider LLC

Former OMS Executive Director and Wisconsin Public Service Commissioner Marcus Hawkins said despite thinning reserves, MISO members are fortunate to operate under an established resource adequacy construct. Hawkins said parts of the country just

now are trying to launch the "basic resource adequacy construct that's been operating in MISOLand since 2011."

"Let's be thankful that we have something in place," Hawkins said. He added that MISO's construct recently has substantially tweaked

its resource adequacy rules, including introducing seasonal capacity auctions and a pending sloped demand curve in addition to an also-pending, all-encompassing resource accreditation based on past performance and forecasted availability during risky hours. (See [Stakeholders Deliver Negative Reactions to Proposed MISO Capacity Accreditation at FERC; MISO's Sloped Demand Curve Plan Draws 2nd Deficiency Letter.](#))

DeBleeckere said MISO's recent and proposed modifications are "unheard of and ground-breaking" and probably the largest transformation of its resource adequacy construct ever.

## Conflicting Views on Load Growth Volumes

Hawkins said that there's a lot of buzz around booming load growth now, but he qualified that MISO at one time predicted as much as 12 GW of new demand that hasn't materialized. He also said the footprint has lived through the "Groundhog Day" of MISO predicting major capacity shortfalls "three to five years from now for every year since 2015."

Hawkins said despite dire estimates, MISO, utilities and states survived without catastrophe. He said there's value in taking stock of predictions that didn't pan out.

"We have to have these more nuanced conversations and be realistic about what has transpired after those predictions," he said, prescribing "new, hard conversations on what is an appropriate level of risk to plan for."

Hawkins said MISO's and states' plans will be reliant on one another's information more than ever.

"Resource adequacy on paper is much different than serving load in operations. You can't just feel good that you've hit your resource adequacy targets on paper," Hawkins said.

Despite Hawkins' plea for moderating expectations around load growth and capacity deficits, he was followed by a panel titled, "Load Growth Galore."

Grid Strategies' Rob Gramlich predicted the end of the country's 25 years of flat load growth. He said Grid Strategies' recent [report](#) shows Indiana and Michigan are especially ripe for new industrial load in MISO.

"Like many, we've gotten interested in load growth in the last six to nine months. It seems to be the biggest thing changing everything we thought we needed to do," Gramlich said.



The OMS RA Summit was held at Memorial Union at Iowa State University | © RTO Insider LLC



# MISO News

Gramlich said the nation is at an “inflection point” of new applications for data center servers occurring alongside the Biden administration’s push for stronger domestic manufacturing and the open question of hydrogen’s potential importance.

Gramlich said expanding load is evidenced in MISO by utilities’ requests for expedited project reviews, which have more than quadrupled since 2020. MISO’s expedited transmission project reviews are a bellwether of load growth, as they’re most often used to accommodate new load connections.

Gramlich said MISO is “already doing pretty well on forward-looking” transmission planning to connect new generation to serve load growth. He said the RTO likely is ahead of the curve on FERC’s newly issued Order 1920 concerning transmission planning. (See [FERC Issues Transmission Rule Without ROFR Changes, Christie’s Vote.](#)) However, he suggested MISO dedicate an internal group, or tap an independent entity or the Organization of MISO States, to contribute to load forecasting.

“We really as an industry have lost our muscle memory on load forecasting,” Gramlich said.

Google’s Betsy Beck said MISO should turn to “nontraditional data sources” and initiate discussions with large industrial customers in addition to compiling forecasts from their load-serving entities to more comprehensively view future demand.

Great River Energy Director of Resource Planning Zac Ruzycski urged utilities to have “open and honest discussions” with companies about the size, location and longevity of their new loads.

He said utilities and MISO may have to get comfortable with forecasting being “a lot more work” and more probabilistic going forward, given the confluence of sweeping changes.

Minnesota Public Utilities Commissioner Joe Sullivan said when he thinks about a hypothetical, 1-GW data center coming online in Minnesota, he can’t help but think that the new, daily load would be larger than the electricity ultimately produced from the state’s largest mining operation or refinery.

Ruzycski said it’s more likely than not that Great River Energy will be serving substantially more load within a decade.

“We feel fairly confident that’s going to be the case,” he said, adding that utilities are going to have to “do more with less” to serve larger loads with fewer baseload resources. Ruzycski said that’s why Great River is partnering with



MISO President Clair Moeller (left) and Iowa Utilities Board member and OMS President Josh Byrnes | © RTO Insider LLC

Form Energy to pilot a 1.5-MW long-duration iron-air battery capable of 100 hours of continuous dispatch.

Ruzycski said Great River Energy is building the battery — due online at its Cambridge peaking plant sometime next year — not to make money, but to see how the technology behaves.

Ruzycski said MISO’s mostly solar and wind interconnection queue means there are days ahead with curtailments due to “extreme production and low demand.” He said a long-duration battery can soak up excess generation from renewable generation over multiple days.

“Including new technology is challenging but necessary,” Ruzycski said.

## MISO President Advocates for Restraint in Load Forecasting, Unit Retirements

But MISO President Clair Moeller cautioned that load growth might not ascend to the heights some are expecting.

“I’ve noticed when people are selling you something, they can be hyperbolic. So, how much of this is hyperbole and how much of it really is load growth?” he asked rhetorically. He also told attendees not to confuse “the interested public with the public interest.”

Lumpy load growth matters depending on location, Moeller said. He joked that he doesn’t care if a new data center eyes Ohio as its home base, but that same data center sited in Indiana might give him anxiety.

Moeller said utilities are in the unenviable position of balancing customers representing new load, customer affordability, shareholder interests and governor’s offices desiring economic development before another state can snap it up.

He said utilities, regulators and RTO planners should engage with economic development organizations and lawmakers “so everybody’s goals get on the table at the same time.” He said “a lack of coordination is risky” for the grid.

Moeller said the supply chain is the “governor” on how fast new load can be served and said the COVID-19 pandemic showed the “brittleness” of the supply chain.

“It’s two years to a data center and four years to a transformer,” Moeller said. “We’ve got to think this through in order to get a safe transition.”

Moeller said past transitions in the energy industry since 1900 have been “layered,” where new technologies were spread on top of operating older technologies.

“We didn’t turn anything off until we were well and done with it. Now, this transition is: ‘Turn stuff off and then turn stuff on,’” Moeller said.

He said MISO isn’t opposed to inverter-based resources but wants to make sure the technologies to support them for 24/7 output are tested. MISO sometimes is criticized as “pro-gas” by environmental groups, Moeller said, but added that he sees MISO as “pro-reliability.”

“Reducing the carbon footprint doesn’t have to mean turning off all the carbon-producing resources. It could mean make sure you use it only when you need it,” he said.

Moeller said in the past two years, the electrification of the economy is accelerating, data center load is swelling and manufacturing is reshoring.

“Now, what we’ve got to say, ‘Is that a wave or is that a trend?’”

Moeller also said robust transmission connections keep the lights on during 100-year events that are beginning to occur every other year. He said it’s unlikely any one grid operator can hold enough available generation to weather all storms.

However, Moeller implied there’s a transactional nature to imports and exports aided by transmission. He said that while MISO has supported TVA with exports — at one point during December 2022’s winter storm it was forced to stop to protect its own system — TVA never has returned the favor. Now, MISO isn’t inclined to lend a hand to TVA in future weather events because of that flow’s one-sidedness, Moeller said.

Moeller said MISO is meticulously drafting its second, \$17 billion to \$23 billion long-range transmission *portfolio*.

“The worst thing you can do is plan \$20 billion in transmission and miss all the locations where the data centers want to be,” he said. ■

# MISO News

## MISO Unable to Find Alternatives to Delayed Entergy Louisiana Tx Project

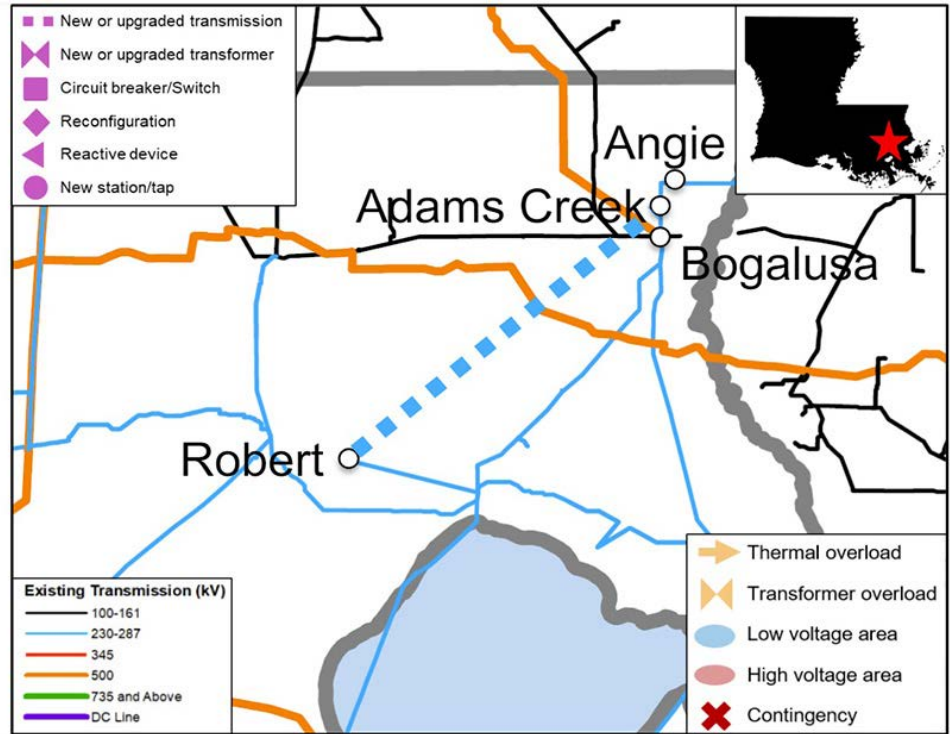
By Amanda Durish Cook

MISO on May 15 said it plans to move ahead after all with Entergy Louisiana’s original version of a \$260 million reliability project proposed for the southeast part of the state.

The RTO announced about eight months ago that it would delay recommending Entergy’s project to study alternatives. But this week it revealed it was unable to choose a suitable substitution, as the project’s higher-voltage alternative configurations were not cost effective.

The project was initially introduced for MISO’s 2023 Transmission Expansion Plan (MTEP 23) as the third phase of Entergy Louisiana’s three-part, nearly \$2 billion Amite South reliability project to satisfy the utility’s local reliability criteria. The RTO ultimately advanced a substitution for the first phase of the project last year. (See *MTEP 23 Catapults to \$9.4B; MISO Replaces South Reliability Projects.*)

This time, however, MISO said Entergy’s original proposal to construct a 40-mile, 230-kV line between its Adams Creek and Robert substations and upgrade the substations is more appropriate for the area than the 500-kV possibilities it analyzed. Entergy said in addition to the line solving potential overloads, the project would help it meet load growth in the Amite South load pocket and address upcoming generation retirements, which could be exacerbated by EPA’s new power plant emissions rules. Entergy also reasoned that the line would provide an “additional hardened path” into Amite South, which can be useful during restorations following hurricanes or



The third phase of Entergy’s Amite South reliability project | MISO, using Ventyx Velocity Suite

other extreme events.

MISO studied two alternatives to Entergy’s proposal, including a \$1.1 billion option involving construction of two 500-kV substations and more than 50 miles of 500-kV line. However, the RTO said construction costs would be too high and the project itself would be impractical to construct.

A second alternative – resulting in a new 500/230-kV station, an 11-mile 500-kV line

to operate at 230 kV and a 26-mile 230-kV line – was found to cost about \$100 million more than Entergy’s original proposal without solving any other reliability issues, MISO said.

MISO plans to recommend Entergy’s project proceed as a late addition to MTEP 23. It will run its recommendation past the Planning Advisory Committee before seeking approval from the Board of Directors’ System Planning Committee and, later this year, from the board itself. ■

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## MISO News

# MISO Selects Former Airline CIO for New Digital Officer Role

By *Amanda Durish Cook*

MISO on May 14 *announced* that Nirav Shah, Republic Airways' former chief information officer and vice president of information technology, will serve as its new chief digital and information officer.

Shah had worked at Republic since 2017; his roles included chief digital officer and chief information security officer. Shah also led IT applications development at financial services company OneAmerica and has held IT roles at other institutions.

At MISO, Shah will manage the digital technology division's innovation, operations and infrastructure areas. He will be responsible for the technologies that will support market innovations and MISO's "reliability imperative," the phrase it uses to describe it and members' joint responsibility to ensure the clean energy transition occurs in a reliable and organized manner.

"We are pleased to welcome Nirav aboard, and we are confident he'll play a key role in driving us forward as we continue to navigate the ever evolving and complex energy landscape," Todd Ramey, senior vice president of markets and digital strategy at MISO, said in a press release. "He brings a well rounded background with significant expertise, and his strategic mindset will accelerate innovation for MISO and our members."

"MISO's responsibility to ensure reliable power for 45 million people makes this role particularly exciting," Shah said. "I'm eager to join such a highly skilled team during a



Nirav Shah | MISO

period of dynamic change where technology is paramount to MISO achieving its strategic priorities."

Shah holds an MBA from Missouri State University, a master's in computer science from the University of Missouri-Kansas City and a bachelor's in computer engineering from the University of Mumbai. He also recently completed the Chief Digital Officer program at Northwestern University's Kellogg School of Management.

The chief digital and information officer position is a newly created role at MISO, which said it revamped its IT leadership structure following former CISO Keri Glitch's departure last year. (See *MISO Names New Chief Information*

*Security Officer.*)

MISO said that while new CISO Eric Miller is focusing on security and cybersecurity, Shah will concentrate on technology infrastructure, operations, digital innovation and data analytics. The RTO said having duties split under two roles will improve its expanding digital technology department and will prepare it for the growth and complexity that it is expecting.

"Digital technology enables all the critical work at MISO, so it has great breadth. Both functions are critical to maintain grid reliability and to meet the demand of an ever evolving technology and security landscape," MISO said in a statement to *RTO Insider*. ■

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# NYISO News

## NY Energy Storage Industry Seeks Faster Path Forward

*Evolving Regulations May Get State Closer to 2030 Goal of 6 GW*

By John Cropley

ALBANY, N.Y. — The promise of doing well for both the environment and the economy (and the obstacles to that goal) were highlighted as the 2024 edition of New York's energy storage industry conference opened.

Manufacturers, developers, regulators and researchers — each looking for ways to overcome the challenges and be part of the solution — offered updates on their progress at *Capture the Energy 2024*.

William Acker, executive director of the New York Battery and Energy Storage Technology Consortium (NY-BEST), highlighted these parallel goals as he welcomed attendees to the conference on May 15.



NY-BEST Executive Director William Acker | © RTO Insider LLC

"We will be focusing a lot of discussion in this conference around how we're going to meet New York state's climate and energy goals that are among the most

aggressive in the country and really are an opportunity to redefine things and to really get a much better future for all of us," he said.

In most decarbonization scenarios, storage is more than an opportunity; it is an imperative.

The transition from baseload fossil generation to intermittent zero-emission renewables is predicated on there being a way to store energy in periods of excess generation for use in periods of insufficient generation.

Building enough of that storage to accomplish that depends on technological, financial, regulatory and societal factors that are mostly still evolving.

The New York State Energy Research and Development Authority is working on multiple fronts to firm up some of those factors and streamline buildout of energy storage in the state.

### State Efforts

In her keynote address, NYSERDA President Doreen Harris announced the latest step in this effort: the launch of the much-awaited Block 5 of the *retail energy storage incentive*. The

\$58.5 million funding package is expected to incentivize construction of 135 to 150 MW of energy storage in New York City.

"Fundamentally, when we think about this funding, it's intended to deploy what are the most mature projects across our state in the place that it is probably needed the most, to reduce peak flows, to mitigate the need for additional distribution grid upgrades and [to] displace some of the dirtiest fossil fuel peaker plants in the region," Harris said.

New York's official goal is 3 GW of storage installed by 2030, but Gov. Kathy Hochul has directed that it be doubled to 6 GW. A proposed road map that would formalize that target and lay out a path to reach it has been in an extended period of review by the Public Service Commission.

"I have to tell you, we are eagerly, like you, awaiting a decision on that road map," Harris said. "But fundamentally, that is our next step that will allow us to partner with the industry to really scale up that next wave of projects and to deploy at a much greater scale toward the 6 GW goal."

Beyond this, NYSERDA is helping fund research and development and supporting market reforms.

### Word of the Day



Adam Cohen, NineDot Energy | © RTO Insider LLC

Adam Cohen, chief technology officer and co-founder of NineDot Energy, focused his keynote on the need for market reforms to make storage work financially. It now operates under a haphazard system he described as "make it fit where it can, how it can." The term for this is "kludge," he said, and he proceeded to describe a situation just as clunky as that word sounds.

Utility rates for the past century have been based on the axiom that generation must be designed to meet maximum anticipated need



NYSERDA President Doreen Harris | © RTO Insider LLC



Attendees mingle during a break at NY-BEST's Capture the Energy 2024 conference in Albany, N.Y., on May 15.

| © RTO Insider LLC

## NYISO News

because energy cannot be stored, he said. As a result, the characteristics and benefits of energy storage are fundamentally mismatched to existing tariffs.

“It should not be a kludge anymore when we have gigawatts of these things on the grid [and] terawatt-hours of energy going to be consumed and spit back out in bursts when it’s most needed,” Cohen said.

“You should charge the battery in an optimal way, and you should export the battery and apply grid services in an optimal way, and not have to build this duct-taped version of a tariff.”

NineDot and other retail developers in New York have collaborated to produce a series of bidirectional service classification principles they would like to see: The tariff should be market-based and transparent; be universal, so it provides certainty; optimize imports and exports; provide localized adders; be adaptable to the changing grid; share savings with low-income customers; and use rates that computers can read.

### Headwinds, Tailwinds

Vanessa Witte, senior research analyst on Wood Mackenzie’s storage team, said the data and analytics provider has a bullish outlook on standalone storage, primarily because of the federal investment tax credit, but also all the wind and solar generation being planned: Their volatility creates a need for storage.



Vanessa Witte, Wood Mackenzie | © RTO Insider LLC

However, WoodMac also sees short-term hurdles in the renewable energy sector, such as permitting and interconnection delays, local opposition, interest rates and inflation.

“Really, we just need to accept the reality that total capex is high; interest rates are not expected to go down this year,” Witte said. “Despite some drops in supply cost and also lithium raw material costs, total capex does remain high.”

The data show multiple problems in New York, and as it stands now, she projects the state will not reach 6 GW of storage by 2030.

Fossil generation retirements are on track to far outstrip storage additions, Witte added: “Currently, what I’m showing right here is actually 2.8 GW of utility-scale [storage] by 2028. And then 4.5 GW of retirements.”

## NY-BEST ANNUAL CONFERENCE & EXPO



William Acker (left) and M. Stanley Whittingham hold a fireside chat during NY-BEST’s Capture the Energy 2024 conference in Albany, N.Y. | © RTO Insider LLC

But the equation changes after 2030. Construction of wind and solar has fallen well behind schedule in New York — far enough perhaps that its 70%-by-2030 target is now out of reach — but extensive buildout still is expected. And storage must follow.

“Storage is very sensitive to state mandates, especially when paired with a financial incentive, other policies, other regulation [and] market signals; this is due to it being still very new,” Witte said. “So, New York also has a large amount of renewables coming online, not in the near future necessarily, more into the latter half of this decade, post of 2030. But it will create some clear market mechanisms by creating volatility on the grid.”

There’s one other factor at play in New York: It’s New York.

“New York is known to be one of the most difficult regions to build in. A number of developers actually don’t want to get involved in New York. There’s just too many permitting issues, the NIMBYism, the interconnection timeline, but also the interconnection costs,” Witte said. “The question is, what is the return for all of the difficulty and additional time to develop? Some areas do have higher volatility and better returns, but many areas don’t.”

She added: “Sometimes working with utilities has also proven to be really challenging. Some are not accepting the PPA cost. Others maybe want to move into ownership and don’t want to contract for PPA any more at all.”

### Evolving Technology

Energy storage technology and applications are still evolving, especially the long-duration energy storage that will be critical if state policymakers do succeed in weaning New York off fossil fuels.

One after another, speakers discussed the need to advance not only the development of technology, but also high-quality execution of it.

Around the time of last year’s conference, New York City was reeling from a wave of hundreds of fires sparked by poorly made or incorrectly used lithium batteries for E-bikes and E-scooters. Soon after the 2023 conference, three unrelated fires hit New York grid-scale battery energy storage facilities in remote corners of the state, each one more serious and more widely publicized.

The sequence of events galvanized local opposition to battery storage well beyond mere NIMBYism. (See [Battery Storage Developers Bump Against Perception of Risk.](#))



# NYISO News



Harris said NYSERDA is part of the *multiagency task force* assembled to design safety standards and prevent further erosion of public trust in battery storage. Its work continues. (See *NY Fire Code Updates Recommended for BESS Facilities*.)

Meanwhile, recent industry reports have faulted battery manufacturers' quality control. (See *Insurer: Majority of BESS Failures are in First Two Years* and *Engineering Firm Finds Quality Problems in BESS Manufacturing*.)

M. Stanley Whittingham, who was awarded the 2019 Nobel Prize in Chemistry for his work on lithium-ion batteries, raised the same issue.

"These fires we had last year ... it's sloppy manufacturing, cheap manufacturing — things go wrong," he said. "Same as what we have in New York City with E-bikes. These are cheap batteries, all from a certain country."

Whittingham, who is NY-BEST's vice chair of research and a professor at Binghamton University, reminded the audience that all major commercial innovations in batteries came from the U.S. or the U.K.

The U.S. can take the initiative back, he said.

"We don't want to chase the Asians. That's not going to work. We want to leapfrog them. So, we're going to come up with more sustainable

technology."

The economics must get better too, Whittingham said.

"It takes 40 to 80 kWh to make a 1-kWh battery, so we have to change that."



Brian Gemmell, National Grid | © RTO Insider LLCs

Brian Gemmell, COO of National Grid's New York electric utility, said the state has only about 400 MW of utility-scale storage built toward its 6,000-MW goal at a critical time in the energy transition. He explained the need to sharply accelerate the buildout and why speed cannot be the overriding concern.

"We recognize that product development has slowed in the past year. The state has taken a crucial review of fire safety standards after the thermal runaways in 2023," Gemmell said in his keynote address.

"So, we're particularly focused on ensuring this standard is successfully implemented with the engagement of communities including fire first responders. I want to emphasize that safety and reliability must serve as the foundation of



Erik Spoerke, Sandia National Laboratories | © RTO Insider LLC

energy storage deployment going forward."

Erik Spoerke, energy storage materials lead at Sandia National Laboratories, drew back to the longer view to give a better sense of where all these incremental setbacks and advances are leading.

He's leaving Sandia after 20 years to take an advisory role in the U.S. Department of Energy's Office of Electricity.

"I'm trying to help them understand how we can make grid-scale long-duration storage viable," he said in his keynote speech.

He gets asked why he's making such a large transition, taking a policy position after decades of hands-on work in the lab.

"Really, an important part of the motivation here is to recognize that in the next 10 years, we're expecting there to be more change to the grid infrastructure than in the last century. That's a pretty good jump. ... And there's been a few times in history we can think about where there's been that kind of colossal technical endeavor." ■

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# NYISO News



## NYISO Reports Adequate Capacity for Summer, but Heat Waves a Concern Margins Continue Downward Trend

By Michael Brooks

NYISO officials told stakeholders May 16 that the ISO expects enough capacity to serve peak load this summer under normal conditions, but hotter-than-expected weather could lead it to resort to emergency procedures.

The ISO expects to have about 34.9 GW of capacity to serve an expected peak load of about 31.5 GW and maintain its operating reserve requirement of 2.62 GW under its baseline forecast. The 752-MW capacity surplus is down 45.8% from last summer, continuing a downward trend.

NYISO saw a peak load of about 30.2 GW last summer, less than its baseline forecast of 32 GW.

The surplus would become a deficiency under extreme weather conditions, namely a sustained heat wave in which average daily temperatures stay in the high 80s or above over a multiday period. NYISO would be forced to resort to its emergency operating procedures to unlock an additional 3,275 MW to maintain resource adequacy. Under the most extreme scenario examined, the capacity margin would

be a razor-thin 182 MW.

Aaron Markham, NYISO vice president of operations, told the Operating Committee that the main driver in the reduction of surplus from last year is a nearly 1.4-GW decrease in net imports from neighboring balancing authorities. He also noted a 900-MW increase in total available capacity from last year is mostly offset by an increase in assumed unavailable capacity from derates.

The ISO has added a net 393 MW in generation since July 1, 2023, with 452 MW of new facilities — mostly wind and solar — going into service. But “the average forced outage rate of those intermittent resources is quite high,” Markham said. “Probably 80% of that [additional capacity] is assumed available during the peak load hour, depending on when it occurs.”

NYISO also presented “more focused” assessments for subregions, including New York City, the surplus for which is 348 MW without taking special-case resources into consideration.

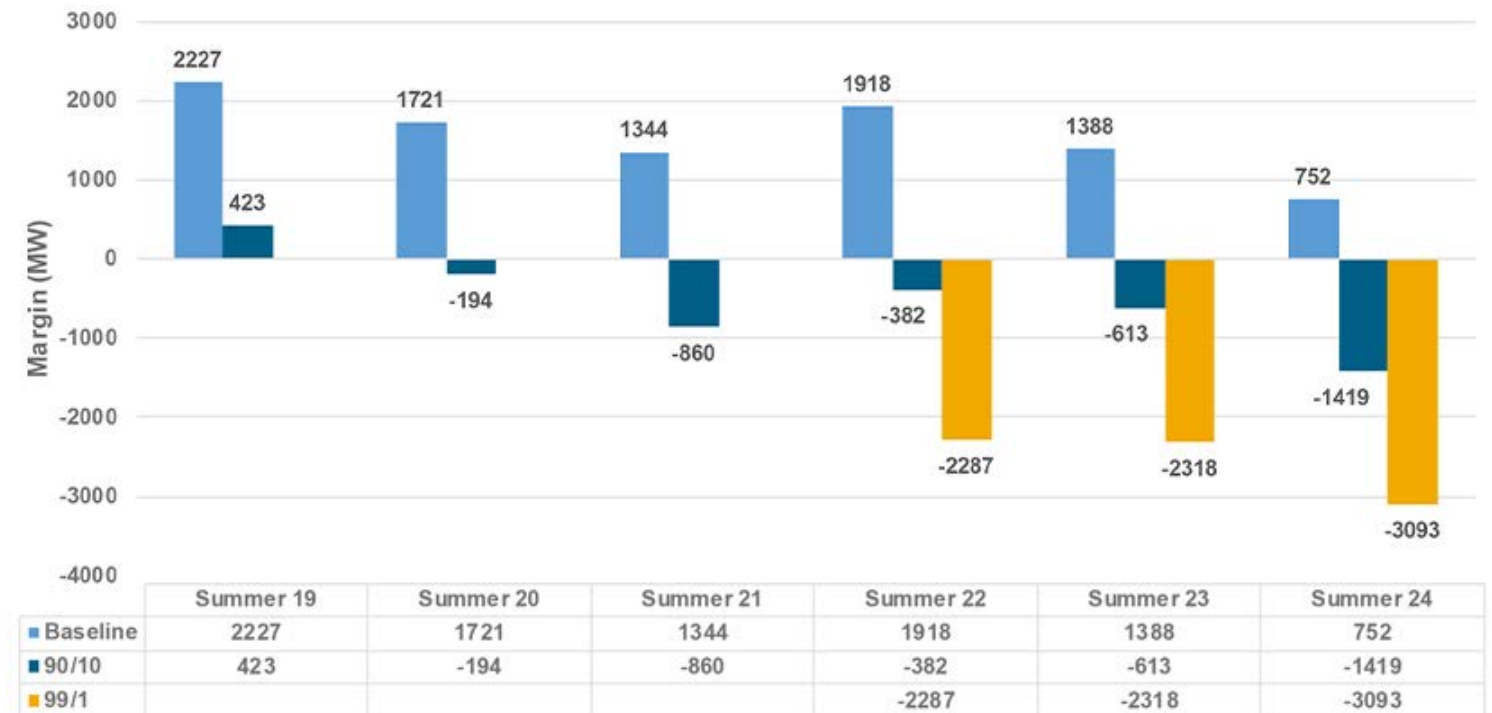
Howard Fromer, of PSEG Power New York, asked what the ISO would do if its assessment showed a deficiency under its baseline forecast, if anything.

“There are a number of tools in the toolbox, whether they be emergency operating procedures; running the transmission system to emergency transfer ratings,” Markham replied. “There’s a number of actions that, even if this showed negative, and we actually experienced those conditions in real time, would be implementable before we would need to shed load in New York City.”

NYISO’s assessment followed a similar one from NERC released the day before. (See related story, [NERC Summer Assessment Sees Some Risk in Extreme Heat Waves.](#))

“Reliability margins have declined by more than 1,000 MW in just the last two years. That’s a significant issue, especially when we’re impacted by heat waves,” NYISO COO Emilie Nelson said in a press release. “As demand is forecasted to rise in the coming years, this trend will continue to pose a challenge to system reliability.”

The ISO also noted in the press release that its Comprehensive Reliability Plan found that reliability margins will continue to shrink across the state through 2032. (See [NYISO’s 10-Year Forecast: Challenges Ahead, but No Immediate Needs.](#)) ■



NYISO summer capacity margins from 2019 to 2024 show a continuing decline to surpluses under normal operating conditions and increase in deficits under extreme scenarios. | NYISO



## PJM News



# AEP Ohio Asks PUCO for Data Center-specific Tariffs

## Facing 30 GW of Potential New Load, Utility Seeks Revenue Guarantees

By John Cropley

American Electric Power's Ohio utility is asking state regulators to create new tariffs forcing data center developers to pay for 90 to 95% of their projected electrical demand for their first decade of operation, even if they use less (24-0508-EL-ATA).

AEP Ohio filed the application with the Public Utilities Commission on May 13. Utility President Marc Reitter said in a *news release* that the company needs that level of commitment to make the investments required to supply the power-intensive facilities being planned in large numbers in its territory, particularly Central Ohio.

The proposals would apply to new data centers with a maximum monthly demand of at least 25 MW at a single location or mobile data centers, such as cryptocurrency mining operations, with a maximum monthly demand of at least 1 MW. Data centers that already have signed agreements with AEP at the time the proposed tariffs took effect would be subject to its existing general service tariffs, at least initially.

According to its filing, AEP's peak demand in Central Ohio is approximately 4,000 MW, and it has signed binding electric service agreements for 5 GW of new data center load to come online by 2030. But more than 50 customers have submitted requests reserving over 30 GW of additional load.

"AEP Ohio's current tariffs were not designed to address (and did [not] contemplate) either the current growth curve based on hyperscale data center development or the unique demands for serving this new class of data center customers," it said.

There is also no RTO-controlled generation in Central Ohio, so AEP must import power over the 765-kV backbone system. Using existing transmission, the company will be able to import enough power to serve the new data centers with the 5 GW it has committed to, but serving additional data centers would require construction of new lines at great cost and time, it said: 120 miles of 765-kV line would take seven to 10 years and hundreds of millions of dollars to build.

In March 2023, AEP imposed a temporary moratorium on data center service requests in Central Ohio so it could analyze the likely



One of AEP's operating companies, AEP Ohio, has asked the Public Utilities Commission of Ohio to create a new rate category for data center customers. | *Electric cat*, CC BY-SA 3.0, via *Wikimedia Commons*

impact of future data centers. It will keep the moratorium in place until its proposal is resolved.

The utility argued in its filing that state law requires it to serve all customers in its service territory, but not in a way that would be unreasonable or impose unjust risk for the company or its other customers.

Data centers would be billed for the greater of 90% of their contracted capacity or the highest previously established billing demand in the preceding 11 months. That would increase to 95% for mobile data centers.

The proposed tariffs would also:

- require contracts for an initial term of at least 10 years;
- include an exit fee for customers that leave early;
- impose security and collateral provisions determined by AEP to protect against customer bankruptcy or other failure to meet financial commitments;

- impose technical requirements such as a ban on intentionally or unintentionally cycling load in a way that unbalances system frequency; and
- mandate participation in the PJM Emergency Demand Response Program and in any emergency event declared by AEP Ohio, with potential service disconnection if the customer does not respond.

In its request, AEP said it expects data centers to hold at least the top five spots on its list of largest customers by 2030.

"AEP Ohio has helped the state of Ohio attract thousands of new jobs and billions of dollars in investment because over the decades, AEP has built an extensive network of transmission lines to deliver the power these customers need," Reitter said in the company's statement. "This is one of the reasons data center developers targeted Central Ohio, and they continue to request large amounts of power. We need to ensure they can follow through with their commitments as significant new investments are made to serve them." ■

## PJM News



# PJM Board Re-elects Takahashi as Chair; Mills in Line to Succeed

The PJM Board of Managers has re-elected Mark Takahashi to his fourth one-year term as its chair and named David Mills as chair-elect.

The chair-elect position signifies that Mills is slated to take over in 2025 if his election is reaffirmed by a second vote next year.

“Both Mark Takahashi and David Mills have the wealth of experience needed to help PJM manage the challenges of our evolving energy landscape,” CEO Manu Asthana said in a May 16 [announcement](#). “I look forward to our ongoing work together toward maintaining a reliable grid amid our current energy transition.”

Takahashi joined the board in 2016 and has served as chair since 2021, having previously chaired the Competitive Markets Committee. Until 2018 he was CFO for the Ascendant Group, the parent company of Bermuda Electric Light Co. He also served as CFO of CLP

Holdings, a vertically integrated utility in Hong Kong, between 2008 and 2014.

Mills was elected to the board in 2021 and serves as chair of the Competitive Markets Committee, in addition to being a member of the Risk & Audit and Human Resources committees, according to the announcement. He was re-elected to his second term on the board during the May 6 Members Committee meeting. (See “Stakeholders Re-elect 3 PJM Board Members Over Consumer Dissent,” *PJM Members Committee Briefs: May 6, 2024*.)

The announcement also included board committee assignments, with Terry Blackwell selected as chair of the Reliability & Security Committee and Vickie VanZandt named chair of the Human Resources Committee. ■

— Devin Leith-Yessian



PJM Board of Managers Chair Mark Takahashi | © RTO Insider LLC

## PJM MRC/MC Preview

Below is a summary of the agenda items scheduled to be brought to a vote at the PJM Markets and Reliability Committee and Members Committee meetings this Wednesday. Each item is listed by agenda number, description and projected time of discussion, followed by a summary of the issue and links to prior coverage in *RTO Insider*.

*RTO Insider* will cover the discussions and votes. See next week’s newsletter for a full report.

### Markets and Reliability Committee

#### Consent Agenda (9:05-9:10)

The committee will be asked to endorse as part of its consent agenda:

C. proposed [revisions](#) to Manual 3: Transmission Operations drafted through the document’s periodic review. (See “First Read on Periodic Review Manual Revisions,” *PJM OC Briefs: April 4, 2024*.)

D. proposed [revisions](#) to Manual 36: System Restoration, including administrative changes identified through periodic review.

#### Endorsements (9:10-9:50)

##### 1. Capacity Obligations for Forecasted Large Load Adjustments (9:10-9:35)

PJM’s Pete Langbein will [present](#) a proposal to revise how capacity obligations stemming from forecast large load additions are assigned. Lynn Horning, of American Municipal Power, will [present](#) an alternative proposal. (See “Changes to Capacity Assignments for Large Load Additions Contemplated,” *PJM MRC Briefs: April 25, 2024*.)

The committee will be asked to endorse revisions to the tariff, Reliability Assurance Agreement and Operating Agreement.

Issue Tracking: [Capacity Obligations for Forecasted Large Load Adjustments](#)

##### 2. Demand Response Availability Window (9:35-9:50)

Bruce Campbell, principal of Campbell Energy Advisors, representing demand response providers, will present a quick-fix proposal to extend the winter availability of DR resources. (See “Demand Response Providers Seek Expanded Availability,” *PJM MRC/MC Briefs: Feb. 22, 2024*.)

The committee will be asked to approve the proposed [issue charge](#) and endorse the proposed solution to key work activity 2 using the quick-fix process, which allows an issue charge and proposed solution to be voted on concurrently.

### Members Committee

#### Consent Agenda (11:35-11:40)

The committee will be asked to endorse as part of its consent agenda:

B. proposed governing document [revisions](#) focused on correcting grammatical, formatting and reference errors in language around the interconnection process. The changes were drafted by the Governing Documents Enhancements and Clarifications Subcommittee.

C. proposed [revisions](#) to the OA, tariff and Manual 15: Cost Development Guidelines to add three market parameters for synchronous condensers: condense start-up costs, condense-to-generate costs and condense energy use. (See “Other MRC Business,” *PJM MRC Briefs: April 25, 2024*.) ■

— Devin Leith-Yessian



## Company Briefs

### Report: Fossil Fuel Firms Received \$7T from Banks Since Paris

The world's biggest banks have given nearly \$7 trillion in funding to the fossil fuel industry since the 2015 Paris Agreement to limit carbon emissions, according to the annual "Banking on Climate Chaos" [report](#).

Researchers for the report, sponsored by environmental organizations led by the Rainforest Action Network, analyzed the world's top 60 banks' underwriting and lending to more than 4,200 fossil fuel firms and companies. Those banks, they found, gave \$6.9 trillion in financing to oil, coal and gas companies, nearly half of which went toward fossil fuel expansion.

U.S. banks were the biggest financiers of the industry, contributing 30% of the total \$705 billion provided in 2023. JPMorgan Chase

gave the most of any bank in the world, at \$40.8 billion.

More: [The Guardian](#)

### EV Maker Fisker Closing Manhattan Beach HQ



Electric vehicle manufacturer Fisker last week announced it is closing its Manhattan Beach, Calif., headquarters.

The company, which had about 300 employees in the building at the end of March, is moving its remaining workers to an engineering and distribution facility in La Palma, Calif.

Fisker has been attempting to avoid bankruptcy since March, when it announced that talks over an alliance with a major automak-

er had ended, squelching a deal that would have given it \$150 million in new financing.

More: [Los Angeles Times](#)

### Canoo Posts Larger-than-expected Q1 Loss

Electric vehicle startup Canoo last week posted a larger-than-expected loss for the first quarter but kept its outlook for the year unchanged.

Canoo's net loss widened to \$110.7 million for the quarter, from \$90.7 million in the same quarter last year. Analysts expected a loss of \$55.2 million, according to London Stock Exchange Group data.

The company's cash and cash equivalents stood at \$18.2 million as of March 31, up from \$6.4 million at the end of December.

More: [Reuters](#)

## Federal Briefs

### US Bans Russian Uranium Imports

President Joe Biden last week signed a bipartisan bill prohibiting Russian imports of enriched uranium.

The law bans uranium imports from Moscow beginning 90 days after its enactment. It will provide waivers until 2028 for utilities that would be forced to shut down nuclear reactors once supplies are cut off. The law also frees up \$2.7 billion passed in previous legislation to build out the domestic uranium processing industry.

Congress took swift action to ban Russian oil and gas imports following the country's invasion of Ukraine, but sanctions on uranium imports have taken much longer, in part because Russia supplies roughly 20% of U.S. nuclear fuel. American companies pay about \$1 billion a year for enriched uranium from Rosatom, Russia's nuclear power conglomerate.

More: [The Washington Post](#)

### DC Circuit Declines to Pause EPA Power Plant Rule, for Now

The D.C. Circuit Court of Appeals last week rejected a request filed by 25 Republican attorneys general for an administrative stay of EPA's new power plant emissions rule.

The rule mandates that many new gas and

existing coal plants reduce their greenhouse gas emissions by 90% by 2032. It has been challenged in multiple lawsuits by 27 Republican attorneys general.

The court didn't explain its decision but gave EPA until mid-June to respond to the challenger's requests for a longer pause on the rule while the court considers the merits of the case.

More: [Reuters](#)

### PHMSA Report Finds Possible MVP Flaws



A report by the Pipeline and Hazardous Materials Safety Administration found that the Mountain Valley Pipeline tests revealed more than 70 possible flaws with the pipeline.

The report "found a need for about 15 'cutouts,' or the removal and replacement of part of the pipe," in several locations in West Virginia during the latter months of 2023.

The administration ordered the pipeline's developers to "test the pipe, reapply the coating and make other repairs as needed."

The report came to light after sections of the MVP ruptured during hydrotesting on Bent Mountain in Roanoke County, Va., when developers ran pressurized water through the pipe to determine its soundness.

More: [Virginia Mercury](#); [The Roanoke Times](#)

### US Exceeds 5 Million Solar Installations

The U.S. officially exceeded 5 million solar installations nationwide, according to data released by the Solar Energy Industries Association and Wood Mackenzie.

More than half of the installations have come online since the start of 2020, while more than 25% have come online since the Inflation Reduction Act became law 20 months ago. The milestone comes just eight years after the U.S. reached 1 million installations in 2016.

SEIA forecasts that solar installations in the U.S. will double to 10 million by 2030 and triple to 15 million by 2034.

More: [POWER Magazine](#)

# State Briefs

## CALIFORNIA

### Air Regulators Ding Tesla Factory over Air Pollution



The Bay Area Air Quality Management District last week accused Tesla's Fremont manufacturing plant of frequently releasing illegal amounts of air pollution.

**TESLA**

The plant has been cited for more than 110 air quality violations since 2019. The district will now seek an order from the agency's quasi-judicial hearing board to compel Tesla to correct the issues. It also wants a third-party engineering firm to investigate the incidents and propose fixes.

More: [Los Angeles Times](#)

## FLORIDA

### DeSantis Appoints 5 to GRU Authority Board



Gov. **Ron DeSantis** last week appointed five new members to the Gainesville Regional Utilities Authority board following the resignation of all five former members.

DeSantis appointed Ed Bielarski, the former general manager of GRU who was fired in 2022 by the Gainesville City Commission before attempting a failed bid for mayor. Also appointed were Craig Carter, Eric Lawson, Robert Skinner and David Haslam.

The resignations were submitted in March after a lawsuit filed by local citizen group, Gainesville Residents United, questioned the eligibility of the members and the process through which the governor's office appointed them.

More: [The Gainesville Sun](#)

### DeSantis Signs Law Erasing 'Climate Change' from State Policy

Gov. Ron DeSantis last week signed legislation that will erase climate change from state policy, effective July 1.

The law will erase the words "climate change" from state statutes and make energy a top priority to ensure "an adequate, reliable and cost-effective supply of energy for the state in a manner that promotes the

health and welfare of the public and economic growth," according to the legislative analysis. Another law will ban offshore wind farms and prioritize the expansion of natural gas.

"Florida rejects the designs of the left to weaken our energy grid, pursue a radical climate agenda and promote foreign adversaries," DeSantis posted on X.

More: [United Press International](#)

### JEA Partnering with NextEra for Solar Facilities



JEA last week announced it finalized an agreement with a division of NextEra

Energy Resources to develop three solar facilities with a total capacity of 200 MW.

Florida Renewable Partners (FRP), a division of NextEra, will build, own and operate the facilities on land leased from JEA. FRP will then sell the energy to JEA through a 35-year power purchase agreement.

The facilities are expected to be operational in 2026.

More: [Jacksonville Daily Record](#)

## NEW YORK

### Public Power Push Spreads to Hudson Valley



Hudson Valley lawmakers last week introduced a bill to

mount a public takeover of Central Hudson Gas & Electric and replace it with a new Hudson Valley Power Authority.

Ratepayers have been complaining about billing issues with Central Hudson since 2021, fueling widespread outrage and leading state regulators to take the rare step of appointing an independent monitor. The issues include unexplained rate hikes and inconsistent billing intervals.

Still, the company is moving forward with major rate hikes that will likely take effect this summer. It faces a collective \$127 million in unpaid bills and will soon begin resuming shutoffs on those customers after a four-year freeze.

More: [New York Focus](#)

## NORTH DAKOTA

### Basin Electric Plans Gas Plant

Basin Electric Power Cooperative last week announced it plans to build another natural gas-fired power plant

Speaking at the Williston Basin Petroleum Conference in Bismarck, CEO Todd Brickhouse said the 1,400-MW plant would become the cooperative's largest power-generating facility. Brickhouse did not specify a location, saying it will depend on pipeline negotiations.

More: [KFGO](#)

## OHIO

### Siting Board Approves Battery Storage Site in Vandalia

The Power Siting Board last week authorized Prairie Flyer Energy Storage to build an 85-MW battery storage system in Vandalia.

The project will consist of an array of battery containers, power conversion systems, underground collection lines, a collection substation, a generation interconnection transmission line, access roads and perimeter fencing, the board said.

More: [Dayton Daily News](#)

## RHODE ISLAND

### Revolution Wind Sees 1st Turbine Foundation

Revolution Wind, the first major offshore wind farm that will supply power to the state, has reached a milestone with the installation of a turbine foundation.

The steel-in-the-water moment came on May 10 when a crane vessel finished hammering the first monopile foundation into the ocean floor.

The 704-MW project is expected to become operational next year.

More: [The Providence Journal](#)

## SOUTH CAROLINA

### Orangeburg County OKs Tax Incentives for Solar

The Orangeburg County Council last week approved tax incentives for the develop-



ment of five solar farm projects that represent a total investment of \$628 million.

Cope Solar (\$273 million), JMoss Solar (\$93 million), Shining Sun Solar (\$92 million), Sr Cordova (\$85 million) and Project Cooper (\$85 million) all plan to build farms.

The incentives include a fee in lieu of taxes, the placement of the projects in a multi-county industrial park with Dorchester County and special source revenue credits. The property tax incentive is performance-based. If a company does not satisfy the conditions, the tax benefit must be paid back to the county.

More: *The Times and Democrat*

## VIRGINIA

### Appalachian Power Issues Renewables RFPs

Appalachian Power has issued three requests for proposals for wind, solar, battery energy storage systems and renewable



energy certificates. The first RFP is for up to 800 MW of wind and/or solar resources, as well as co-located and standalone battery energy storage systems. The second RFP is for up to 300 MW of solar and/or wind resources via one or more long-term power purchase agreements, while the third is for renewable energy credits produced from eligible energy resources.

Proposals must be submitted by July 16.

More: *Solar Industry Magazine*

### Judges Side with Family in Mountain Valley Pipeline Compensation Case

The 4th U.S. Circuit Court of Appeals last week restored a jury award of more than \$520,000 to compensate a Roanoke County family after some of their land was seized for the Mountain Valley Pipeline, reversing a district judge's decision last year that had cut the award almost in half.

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The three-judge panel agreed with the Terry family that evidence presented at a 2022 trial supported a jury awarding the higher amount. The case centered around how much the family should be paid based on their land value and how much value they would lose from easements.

More: *Cardinal News*

### Lawmakers Pass Budget Without RGGI Language

Both chambers of the General Assembly last week approved a new two-year budget plan.

The budget deal dropped a Democratic provision aiming to force the Youngkin administration to have the state rejoin the Regional Greenhouse Gas Initiative. Senate Finance and Appropriations Committee Chair Sen. Louise Lucas suggested the steps were necessary as part of the back-and-forth with the Republican governor.

More: *Virginia Mercury*

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