

# RTO Insider

YOUR EYES AND EARS ON THE ORGANIZED ELECTRIC MARKETS

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

**MISO** 

# **Load Growth Drives Early MTEP 25 to \$11B**



Projected load growth, aging infrastructure and reliability concerns are driving extensive MISO transmission proposals under the expedited process, as well as the normal process.

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MISO to Seek 3-Year Order 881 Delay for Vendor Holdups (p.24)

MISO: Better Preparations Clinched Winter Storm Operations (p.25)

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PJM MISO



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# PJM Market Monitor Publishes Mixed Views in Annual Report (p.32)

The PJM Monitor celebrated several recent changes and ongoing developments, but it laid out several recommendations for making the energy and capacity markets more competitive.

MISO Intent on Answers as to IMM Role in Tx Planning (p.27)

Chang Encourages MISO to Mobilize on Load Growth (p.28)

SPP NYISO



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## FERC to Rule on SPP's RA Requirement for Winter (p.37)

FERC will consider adding a winter season resource adequacy requirement at its regular montly meeting on March 20, and will examine complaints over a North Dakota cryptomining facility burdening a jointly owned flowgate with SPP.

FERC Approves New York Transco's Formula Rate, Sets ROE for Hearing (p.31)

ERCOT



Matthew T. Rader, CC BY-SA 4.0, via Wikimedia Commons

# **Experts Urge Texas Policymakers** to Go Big with 765-kV Transmission

(p.18)

Demand growth is coming to Texas in a big way, and while there is always uncertainty in forecasts, experts argued that building a new 765-kV system in ERCOT only makes sense.

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# Trump Cabinet Members Ding Climate Change at CERAWeek2025

NextEra CEO: Renewables Here Now, Gas Years Away

By Tom Kleckner

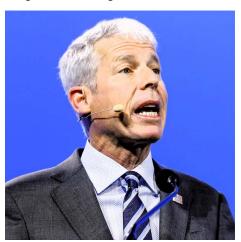
HOUSTON — Two members of President Donald Trump's cabinet swept through CERAWeek by S&P Global to cheer on attendees with provocative messages and their plans to take the U.S.' energy industry in an entirely new direction.

They spoke energetically and quickly, eschewing notes and frequently lauding the president. When their appearances were over, one attendee remarked, "Is it just me, or are they high on amphetamines?"

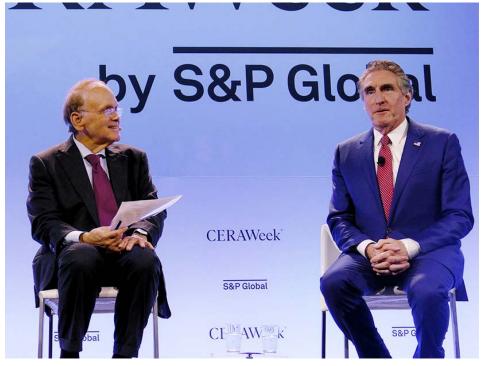
Energy Secretary Chris Wright opened the conference March 10 by telling his audience he wants to help reverse what he believes has been "a very poor direction in energy policy" with a "common-sense pivot in energy."

"The previous administration's policy was focused myopically on climate change, with people as simply collateral damage," he said to enthusiastic applause. "The Trump administration will treat climate change for what it is: a global physical phenomenon that is a side effect of building the modern world."

"I'm going to share two words that I do not think you have heard from a federal official in the Biden administration during the last four years, and those two words are, 'Thank you,'" Interior Secretary Doug Burgum said during a March 12 luncheon



Energy Secretary Chris Wright | CERAWeek by S&P



Interior Secretary Doug Burgum (right) discusses the Trump administration's plans with CERAWeek Chair Daniel Yergin. | © RTO Insider

address.

"You had the ideas; you went into areas where people said it's impossible to develop these resources; and you did it," he said, basking in the friendly reception. "You continue to do it in the favor of your own government that's done everything they can to try to slow you down — whether it's permitting, whether it's being supportive of organizations that bring unnecessary and unrealistic lawsuits — all in the name of a climate ideology that, in the end of the day, actually leads to having more emissions in the world, not less."

Calling himself a "climate realist," Wright said, "The last administration recklessly pursued policies that were certain to drive up electricity prices, knowing full well that millions of additional Americans would have to look in their kids' eyes and tell them that their lights might be going out.

"We are unabashedly pursuing a policy of more American energy production and infrastructure, not less. Our goal is to reindustrialize America, not deindustrialize America."

The Trump administration has made no secret of its plans to build more gas plants and pipelines and increasing natural gas production along the Gulf Coast. It has moved quickly in reversing former President Joe Biden's pause on new terminals to export LNG, signing four export approvals since the inauguration.

At the same time, government officials have been *dismantling most federal policies* aimed at slowing global warming.

Wright, a fracking executive and strong proponent of liquid fuels, said, "'Drill, baby, drill' also requires 'Build, baby, build.' To produce more, you have to have the infrastructure to move it to market."

Burgum chose a different maxim. "Mine, baby, mine."

Burgum and Wright both took shots at the renewable industry.

Discussing the need to take advantage of the country's vast natural resources,



Burgum referred to "intermittent, unreliable sources for electricity, a.k.a. wind and solar."

"Everywhere [that] wind and solar penetration have increased significantly, prices went up," Wright said, claiming U.S. electricity prices have risen by more than 20%, with only about 2% demand growth.

In a Jan. 27 report, the U.S. Energy Information Administration said that, accounting for inflation, residential prices have remained between 16 and 18 cents/kWh since 2010. It expects U.S. retail electricity prices to average 16.8 cents/kWh in 2025, 2% more than last year but relatively unchanged after again accounting for inflation.

"Beyond the obvious scale and cost problems, there is simply no physical way that wind, solar and batteries could replace the myriad uses of natural gas," Wright said. "The previous administration's climate policies have been impoverishing to our citizens, economically destructive to our businesses and politically polarizing.

"The cure was far more destructive than the disease."

During a later media session March 10, NextEra Energy CEO John Ketchum, who runs a clean energy behemoth with a subsidiary that produces more renewable energy than anyone else in the world, was asked whether he agreed with Wright's comments that wind and solar will be unable to replace natural gas.



NextEra CEO John Ketchum | © RTO Insider

"I disagree," he said. "First of all, we believe in all forms of energy. Not only are we the leader in renewables, but nobody operates or has developed and built more gas-fired generation in the last 20 years than NextEra.

"However, there's a timing difference in terms of when those generation solutions can be brought to market, and there's a cost difference," Ketchum said, noting that the industry has installed 175 GW of renewables, 13 GW of gas and 3 GW of nuclear over the last five years. NextEra's generation portfolio has 72 GW of renewables, gas and nuclear.

"We really kind of cover the complete waterfront when it comes to the energy industry," he said. "Renewables are ready to go right now because they've been up and running. When you look at gas

as a solution, to get your hands on a gas turbine and to actually get it built and brought to market, you're really looking at 2030 or later."

While Ketchum said NextEra's goal is to deliver the lowest-cost options for its customers ("We don't care if we're selling you wind turbines or gas turbines."), he said the industry is facing "unprecedented times" with a six-fold increase in power demand over the next 20 years, as compared to the prior 20.

"It's here right now, and it has to be met by something," Ketchum said. "The issue that we're seeing on the gas power generation side ... is you have to get a long life for a gas turbine, first of all, and that gas turbine is today three times more expensive than it was just 24 months ago.

"You also have to find the labor required to build the combined cycle facility. That's not as easy as it once was 24 months ago because we're building LNG terminals; we're building oil and gas refinery expansions; we're building data centers; and we're building industrial manufacturing to accommodate the electrification of our economy as we're pushing an America First agenda.

"We have to have the generation available to meet that demand at the lowestcost solution. Otherwise, we're going to have a huge power affordability crisis in this country with utility bills going through the roof." ■





# Overheard at CERAWeek 2025

## **Pattern CEO Armistead Says** Transmission is Being Overlooked

HOUSTON - CERAWeek 2025 by S&P Global, held March 10 to 15, examined the changing energy landscape through 14 themes, from policy and regulation to climate and sustainability.

None seemed to draw more focus from the more than 10.000 attendees (a record) representing 89 countries than the rapid expansion of artificial intelligence technologies and their potential to transform the industry.

Almost four dozen presentations — some that conflicted with each other — included AI in their titles during the conference, including "democratizing AI" or "accelerating AI." It was no surprise given the projected electricity demand of AI data centers and their potential for producing and managing and consuming power as well as for helping energy systems become more efficient and sustainable.

"Every time we come to CERA, you kind of think about themes that are going on in the conference," Pattern Energy CEO Hunter Armistead said. "My next slide will be, of course, a mandatory slide talking about AI driving the flow of goods. I think everyone has to have that slide."

Armistead was joking. But while AI may be reshaping the future of energy production, someone still must get the power from the source to where it's needed.

"I'm a little surprised so far that when we talk about responding to [AI], there hasn't been enough discussion about the



Pattern Energy CEO Hunter Armistead | © RTO



CERAWeek Chair Daniel Yergin (right) listens to FERC Chair Mark Christie's speech. | © RTO Insider

critical role that transmission can play in delivering resiliency and actual capacity for this new load that's coming," he said. "We need to think bigger and faster, just like we talked about 'all-of-the above,' as far as energy resources that can deliver and meet this amazing challenge."

Armistead's company, which he co-founded, is in the business of building HVDC transmission lines to deliver those resources. Pattern has a development pipeline of over 25 GW of renewable energy and transmission projects, but Armistead is most proud of the company's SunZia Wind and Transmission Project — a 550-mile, 525-kV line capable of moving 3.5 GW of renewable energy between New Mexico and Arizona.

"Spoiler alert: We're crushing it. ... It's ontime and on-budget," he said. "I've always said, when you're building an \$11 billion project, you better do it well because everyone's watching."

Construction began on SunZia in 2023. Armistead said it will begin commercial operations in 2026.

"For the last 20 years, we really had almost flat to no load growth. It's been super hard to have a discussion with either rate-based entities or ISOs about the absolute need for increased transmission," he said. "That's all changing, and that's super exciting. There's actually now a catalyst that basically says we need to

expand our grid and we need to expand our energy resources. And the part that I think the transmission provides for this is it allows efficient utilization."

Pattern's other U.S. HVDC project is the Southern Spirit Transmission, a 320-mile, 525-kV line able to transmit 3 GW of renewable energy to Mississippi and the Southeastern Regional Transmission Planning region. Pattern filed an application with FERC more than a decade ago and has cleared regulatory hurdles in Texas. Construction is targeted to begin in 2028, but Pattern must still negotiate with landowners and gain approval in Mississippi. (See ERCOT, PUC Adamant: Southern Spirit Doesn't Interconnect Texas.)

Armistead said the developers have found a way around a Louisiana law that would have hindered the use of expropriation to secure private land for the line's right of way.

"It's embarrassing to say both these deals have taken 12 years to get to this point where they're ready to go, but that's where we are," Armistead said. "The bigger challenge is getting the utilities of the Southeast to see why this helps them serve their customers that are coming in now. What we're seeing is the huge load growth within the Southeast has the utilities and those customers saying, 'Please, get Southern Spirit online.' So, we see a lot of traction to actually deliver this."



#### The Need for Speed

Armistead and Pattern have support in high places, including FERC Commissioner Judy Chang. Speaking on a panel discussing how to meet the power surge (The U.S. Energy Information Administration projects 4.6% demand growth in 2025, the highest in decades.), Chang said there is a need for speed.

"From a regulator's perspective, we want to move fast," she said. "We encourage the utilities and any folks that can serve the new demand to move fast at the same time to protect existing customers, or all customers, and to make sure that we do this with an efficiency in mind and reliability in mind, and with a long-term view of where this whole industry, where the whole demand growth is going."

"What do we need?" said fellow panelist Amanda Peterson Corio, Google's head of data center energy, clean energy and power. "We need everything. ... We need more grids. We have to find a way to be fast. Speed is the name of the game."

Ever the optimist, Chang said the "unprecedented growth" in demand is creating an opportunity for the industry.

"It's not an option to serve or not to serve this customer, whether it's AI or manufacturing. We built a sector to serve customers," she said.

Chang said she looks at the situation through "the lens of opportunities" around how the entire supply chain of the power industry - from generation to distribution — can serve these customers.

"From a regulator's perspective, we have to make sure ... we have secure energy and reliable energy and efficient use of energy. We want to make sure there's equity and fairness in the way the cost of the network, the cost of the resources, are being paid for," she said.

#### **Christie: CC Gas Units the Key**

Stressing the need for dispatchable resources to maintain grid reliability, FERC Chair Mark Christie relied on a statement that he's made before: "We have a rendezvous with reality."

"We're simply not ready to run a grid where we don't have dispatchable resources," Christie said. "That's just the reality. We need to deal with it. We need to act accordingly."

"I would say that's not just a rendezvous with reality; it's a rendezvous with a stark reality," CERAWeek Chair Daniel Yergin said.

Christie bolstered his case by referring to PJM's performance during the week of Jan. 20, when the RTO set a new winter peak at just over 145 GW. He ticked off the resources that made up the fuel mix at the pre-dawn peak: natural gas at 44%, and nuclear and coal at 22% each. (See PJM Sets Record Winter Peak Load.)

"What those numbers tell us is not that wind and solar don't ever have an important role to play at different times, but when PJM, the largest grid operator in America, hit their winter peak, the resources that were keeping the lights on and the heat pumps running so people didn't freeze were 88% dispatchable," he said.

Christie acknowledged the lengthy time it can take to build combined cycle gas units but said they are vital sources of baseload power.

"The [PJM] combined cycle gas units were running like a top," he said. "It doesn't take long to get the combined cycle gas as your baseload generating resource of choice. It's going to have to be, and if it takes seven years [to build], it takes seven years. It's not an argument not to proceed with building combined cycle gas."

After all. "I think it was Churchill who said. nothing concentrates the mind like being told you're going to be shot at dawn," Christie said. (He was actually paraphrasing Samuel Johnson: "When a man knows he is to be hanged in a fortnight, it concentrates his mind wonderfully.")



FERC Chair Mark Christie | © RTO Insider



FERC Commissioner Judy Chang | © RTO Insider

#### **Nuclear Hub in Texas?**

Texas is taking quick action on its drive to become a "global nuclear energy hub," as posited by a 2024 report.

Bills have been filed in the Texas Legislature that would set up a Texas Advanced Nuclear Energy Authority and create a \$2 billion fund to offset construction costs, provide grants for reactors and fund research into nuclear power development. (See Texas Now Wants to be No. 1 in Nuclear Power.)

But even that may not be quick enough.

During a panel on the state's Texas-sized ambitions, Dale Klein, former Nuclear Regulatory Commission chair and now a mechanical engineering professor at the University of Texas at Austin, said Gov. Greg Abbott has been proactive and recently hosted a reception for an industry group.

"When he heard it might be 2030 before new nuclear [could] be in Texas, he said. 'That's too late,'" Klein said. "He wants it earlier, but the federal government licenses reactors."

In the meantime, Texas A&M University has asked the NRC for an early site permit that would allow up to five 10- to 200-MW reactors to be built on its campus. The commission approved Abilene Christian University's request in 2024 to build and test a 1-MW advanced nuclear reactor (ANR) that will be cooled by molten salt. Along the Gulf Coast, Dow Chemical and X-energy plan to develop four gas-cooled ANRs at a large chemical plant.

"We do everything big in Texas," said former Texas Public Utility Commissioner Jimmy Glotfelty, who oversaw the



report. "We don't believe that the report is success. Success is steel in the ground, concrete in the ground, people working and building a plant. That is the end goal."

Texas has two nuclear sites, Comanche Peak and the South Texas Project. Each generates about 2,500 MW of power and has room for two additional reactors.

"We want enough new nuclear megawatts in the state to help the economy continue to hum as it has been for a long time, but we also want to have a role in the production of all of the nuclear plants around the United States and around the world," Glotfelty said.

"The momentum in the legislature is tremendous," said Jeff Miller, vice president of business development at Bill Gates' nuclear energy startup *TerraPower*. The company has partnered with the U.S. Department of Energy to build a reactor in Wyoming, using its sodium-cooled fast-reactor technology. "We are very bullish on Texas."

## **Think Local Supply Chains**

The U.S. Economic Policy Uncertainty Index may be one of the best measures of uncertainty for investors. With the Trump administration's use of tariffs potentially starting a global trade war, the index has reached levels not seen since the COVID-19 pandemic and the global financial crisis in 2008.

Not to worry, said NextEra Energy CEO



Canadian province Alberta set up Alberta House in the hotel lobby. | © RTO Insider

John Ketchum.

"We've been dealing with tariffs in our industry for a number of years. Tariffs are not a new thing for our industry," Ketchum said, noting that the Biden administration kept some of the first Trump administration's tariffs on solar panels. "Our supply chains have all adjusted to respond accordingly. But one thing that has changed is that our supply chains are largely American today."

Ketchum said 90% of wind turbines being installed in the U.S. are made domestically, and the industry has been able to pivot to a nearly 100% domestic supply

chain for batteries.

"When you turn this to solar, we're buying more and more here in the U.S.," he said. "We have been able to really diversify the supply chain. This is an industry that is an American industry. It's a trillion-dollar American industry."

"One thing which is important for us as big investors, since we build generation capacity on this side and the other side of the Atlantic, is the current geopolitically more tense environment," said Markus Krebber, CEO of global renewables provider RWE. "It is very important to keep an eye on your supply chain, not only where the capacity is available, but also where it comes from, with risk around tariffs, trade wars and so on. Building a local supply chain is much easier and safer to build local than to rely on imports."

"Anything that you import increases the amount of uncertainty that you have," said GAF Energy President Martin DeBono, whose solar firm sells solar shingles.

Stacy Ettinger, a senior vice president with the Solar Energy Industries Association, said her organization has been working with its members to help them understand "what actually is happening."

When it comes to tariffs, members are asking about the content of the measures, when they apply and what they apply to, so they can use the information when considering their own supply chain and procurement needs, Ettinger said.



Ischus Energy's Jimmy Glotfelty (left) and former NRC Chair Dale Klein share a smile. | © RTO Insider

Tom Kleckner



# **EPA to Reconsider Endangerment Finding, GHG Rules**

Agency to Reconsider 31 Regulations, Including Limits on Tailpipe, Power Plant Emissions

By K Kaufmann

In a series of announcements March 12, EPA Administrator Lee Zeldin began a full-scale offensive on the agency's regulatory authority, as it seeks to roll back as many as 31 regulations.

Zeldin's top targets include Biden administration rules on cutting emissions from vehicle tailpipes and coal-fired power plants and the 2009 endangerment finding, which established EPA's authority to regulate GHGs under the Clean Air Act.

The finding and other EPA rules threaten U.S. security and prosperity, Zeldin said in an agency *press release*, one of more than a dozen rolled out in a two-hour period.

"The Trump administration will not sacrifice national prosperity, energy security and the freedom of our people for an

agenda that throttles our industries, our mobility and our consumer choice while benefiting adversaries overseas," Zeldin said. "We will follow the science, the law and common sense wherever it leads, and we will do so while advancing our commitment towards helping to deliver cleaner, healthier and safer air, land and water."

President Donald Trump first called for a reconsideration of the endangerment finding in his Jan. 20 executive order, "Unleashing American Energy." Zeldin's announcement begins a reconsideration process that could take months or years to complete and certainly will face legal challenges.

According to EPA, multiple federal agencies and offices will be involved, including the Department of Energy, the

## **Why This Matters**

In the first Trump administration, EPA rescinded regulations on GHG emissions and replaced them with less stringent rules. Administrator Lee Zeldin now is attacking the very basis of the agency's authority to regulate GHGs.

White House Office of Management and Budget, and the National Oceanic and Atmospheric Administration.

"It is in the best interest of the American people for EPA to ensure that any finding and regulations are based on the strongest scientific and legal foundation," the agency said. "The reconsideration of the endangerment finding and EPA's regulations that have relied on it furthers this interest. The agency cannot prejudge the outcome of this reconsideration or of any future rulemaking."

Zeldin did not comment on how major staff layoffs and anticipated budget cuts at DOE and NOAA might affect the reconsideration process.

EPA's ability to regulate GHGs, based on their threat to public health, was established in the Supreme Court's 2007 decision in *Massachusetts v. EPA*.

Jarryd Page, staff attorney at the Environmental Law Institute, said the court ruled that "greenhouse gases probably fall within the very expansive definition of pollutant under the Clean Air Act, and so, EPA, you need to make a finding one way or the other, on whether or not these greenhouse gas emissions endanger public health or welfare, or whether they're reasonably anticipated to endanger public health or welfare."

After two years of study, the agency stating that GHGs are pollutants that do endanger public health, with a second finding issued at the same time saying they also "cause and contribute" to climate change.



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Page noted that Trump's direct attack on the endangerment finding differs from the approach EPA took to GHG regulations during his first term, during which rules issued during the Obama administration were rescinded and replaced with less stringent regulations. "The endangerment finding was not challenged," he said.

A reversal of the finding would affect all sectors of the economy that emit GHG, Page said. "Removing the endangerment finding would mean EPA no longer has a requirement to regulate in any of these areas, and they could move forward with pulling back any and all of these Bidenera EPA regulations trying to reduce emissions."

But, Page noted, the Supreme Court repeatedly has declined to consider rolling back the endangerment finding, most recently in *West Virginia v. EPA*, which struck down the Obama-era Clean Power Plan. In general, reconsideration of EPA rules takes one to two years, he said.

#### **Avalanche of Announcements**

Zeldin boasted in a *video* of "the greatest day of deregulation" in U.S. history before listing a handful of regulations EPA will reconsider.

Among others announced later in the day was its mandatory GHG reporting program, under which businesses must calculate and report their emissions annually.

Such reporting requirements are "another example of a bureaucratic government program that does not improve air quality," Zeldin said in a *press release*. "Instead, it costs American businesses and manu-

facturing millions of dollars, hurting small businesses and the ability to achieve the American Dream."

Also up for reconsideration are the Biden administration rules on emissions from power plants and on tailpipe emissions from both light- and heavy-duty vehicles.

Issued in April 2024, the 1,020-page rule on power plant emissions — referred to by opponents as "Clean Power Plan 2.0" — requires that coal-fired plants either ensure that 90% of their carbon emissions would be captured and stored by 2032 or close entirely by 2039. The rule sparked immediate legal challenges from Republican states and industry groups, but in an October ruling, the Supreme Court declined to put a hold on it. (See EPA Power Plant Rules Squeeze Coal Plants; Existing Gas Plants Exempt.)

The costs that regulations impose on U.S. businesses and consumers were a consistent theme in Zeldin's announcements, as was protecting consumer choice.

Biden administration rules setting limits on tailpipe emissions from light-, medium- and heavy-duty vehicles resulted in \$700 million in regulatory and compliance costs, EPA said in yet another press release. The rules were also characterized as the foundation for the nonexistent "electric vehicle mandate that takes away Americans' ability to choose a safe and affordable car for their family and increases the cost of living on all products that trucks deliver."

Issued in March 2024, the emission rules for heavy-duty vehicles aimed to cut 1 billion tons of GHG emissions per year, while saving \$3.5 billion for truckers. The

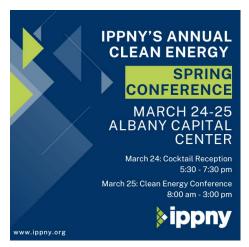
rules also updated proposed standards issued in 2023 to provide a longer runway for manufacturers to meet emission-reduction targets. (See EPA Issues Final Standards on Heavy-duty Truck Emissions.)

Other regulations and programs up for reconsideration include:

- limits on particulate matter, the microscopic pollution that can cause asthma and other respiratory illnesses;
- limits on hydrofluorocarbons used in aerosols, foam and refrigeration, which can be thousands of times more
- damaging to the climate than carbon dioxide; and
- standards on hazardous air pollutants — toxic chemicals that may cause cancer, birth defects or other serious diseases. EPA's website notes that it has standards for 188 hazardous air pollutants.

Rep. Julie Fedorchak (R-N.D.) called EPA's reconsiderations "great news for North Dakota's energy producers, farmers, businesses and families. This administration is taking decisive action to eliminate unnecessary, burdensome regulations that have made it harder for our energy producers to power the country and for our farmers to feed the world."

Rep. Frank Pallone (D-N.J.), ranking member of the House Energy and Commerce Committee, slammed the potential rollback of the endangerment finding as "a despicable betrayal of the American people. ... Reversing the endangerment finding will have swift and catastrophic ramifications for the environment and health of all Americans."









# **Ford Suspends Ontario Electricity Tariff as Trump Wavers**

US-Canada Trade War Continues Through Social Media

By Michael Brooks

Ontario Premier Doug Ford on March 11 said he would suspend the 25% tariff on electricity exports to the U.S., issued the day before, after speaking with Commerce Secretary Howard Lutnick and receiving threats of additional tariffs by President Donald Trump. (See Ontario Premier Ford Slaps 25% Tariffs on Power Exports to US.)

In a post on X, Ford and Lutnick said they would meet in D.C. on March 13 "to discuss a renewed" United States-Mexico-Canada Agreement. The two said they "had a productive conversation about the economic relationship between the United States and Canada."

The statement came several hours after Trump posted a rambling message on his own social media site, Truth Social, saying he had instructed Lutnick to impose an additional 25% tariff on steel and aluminum imports from Canada in retaliation to Ford's action, on top of a blanket 25% tariff on all such imports set to go into effect at midnight March 12.

Trump made a series of other threats, such as "declaring a National Emergency on electricity within the threatened area" and increasing a tariff on imported vehicles April 2.

"The only thing that makes sense is for Canada to become our cherished 51st state," the president wrote. "The artificial line of separation drawn many years ago will finally disappear, and we will have the safest and most beautiful nation

## What's Next

The Ontario premier's suspension of tariffs on electricity exports to the U.S. doesn't likely spell the end of an issue that has been vexing much of the power sector for more than a month.



President Donald Trump | Shutterstock

anywhere in the world — and your brilliant anthem, 'O Canada,' will continue to play, but now representing a GREAT and POWERFUL STATE within the greatest nation that the world has ever seen!"

Later, Trump posted another, shorter message, asking, "Why would our country allow another country to supply us with electricity, even for a small area? Who made these decisions, and why? And can you imagine Canada stooping so low as to use ELECTRICITY, that so affects the life of innocent people, as a bargaining chip and threat? They will pay a financial price for this so big that it will be read about in history books for many years to

Asked on MSNBC about his reaction to Trump's threats, Ford said, "We will not back down: we will be relentless. I apologize to the American people that President Trump decided to have an unprovoked attack on our country ... but we need the American people to speak up. We need those CEOs to get actually get a backbone and stand in front of him and tell him this is going to be a disaster. It's mass chaos right now."

Later that day, Trump backed off his threat to up the steel and aluminum tariff for Canada, according to White House Deputy Press Secretary Kush Desai. "President Trump has once again used the leverage of the American economy, which is the best and biggest in the world, to deliver a win for the American people," he said, adding that the blanket tariff was still scheduled to go into effect. ■



# **Calif. Regulators Approve New Safety Measures for Battery Storage**

New Safety Requirements Follow Massive Battery Fire at Moss Landing Site

By Henrik Nilsson

The California Public Utilities Commission on March 13 voted to approve stricter safety standards on battery storage following a series of incidents at battery facilities.

CPUC passed the new standards as an update to General Order 167, which became effective in 2005 and sets safety standards for electric generating facilities. The five-member commission voted unanimously to approve the update.

The update provides "a method to implement and enforce maintenance and operation standards for electric generating facilities, in order to add new safety standards for the maintenance and operation of battery energy storage systems," according to a news release.

Additionally, the update requires battery storage facility owners to develop emergency plans in coordination with

# **Why This Matters**

The new rules show recognition by CPUC that California's massive expansion of battery storage capacity will need to come with some guardrails to ensure safety at the facilities.

local authorities. It also imposes new technical logbook standards for battery storage systems, among other requirements. (See *Calif. Officials Propose New Safety Measures for Battery Storage.*)

Commissioner John Reynolds said the resolution comes as battery storage grows rapidly in California. Battery storage capacity in the state grew from 500 MW in 2019 to over 13,000 MW in 2024,

he noted.

But the expansion of battery storage has caused safety concerns. The commissioners brought up the Jan. 16 fire at Vistra's 300-MW energy storage facility at Moss Landing in Monterey County. The lithium-ion battery facility is one of the world's largest battery energy storage systems.

The fire, which prompted the evacuations of 1,200 people, is under investigation. Staff from CPUC's Safety and Enforcement Division visited the site Jan. 22 as part of its probe.

CPUC previously listed nine other safety incidents at battery facilities since 2021, including four in 2024. In one incident in September 2024, a fire at a San Diego Gas & Electric battery storage facility in Escondido prompted evacuations.

Evacuations also were ordered in May

2024 during a fire at REV Renewables' Gateway Energy Storage facility in Otay Mesa.

"The broad effect of updating this general order is to extend existing safety standards for generation assets to grid-scale energy storage systems, including grid-scale batteries. This update will support the CPUC role in advancing battery safety and will help to keep Californians safe," Reynolds said.

CPUC also noted the importance of battery storage in California's transition from fossil fuels.

"Battery storage systems are one of the key technologies California relies on to enhance reliability and reduce dependency on polluting fossil fuel plants," the news release stated.



CPUC headquarters in San Francisco | © RTO Insider

#### **MARCH 18, 2025**

# **EPE's Markets+ Decision 'Not Transparent,' NM Regulators Say**

Commissioners Seek to 'Reset' Relationship with Utility at Markets Workshop

By Elaine Goodman

A New Mexico Public Regulation Commission workshop March 13 aimed to restore trust between the commission and El Paso Electric after the utility's surprise announcement in January that it planned to join SPP's Markets+.

The PRC held a series of workshops in 2024 to explore issues related to two competing day-ahead markets in the West: Markets+ and CAISO's Extended Dav-Ahead Market.

During a workshop in August, EPE representatives said they hoped to conduct further studies comparing benefits of the two markets. They indicated that they would present results of the new studies to the commission before choosing a market, a decision they expected to make in the third quarter, according to Commissioner Gabriel Aguilera.

When EPE announced its choice of Markets+ on Jan. 24, many were taken by surprise — including the New Mexico commissioners. (See El Paso Electric to Join SPP's Markets+ in 2028.)

"The last thing I wanted was a surprise filing or announcement by a utility that they're joining 'X' market," said Aguilera, who has been leading the workshops. "EPE's announcement surprised me. And it surprised a lot of people.

"It was not transparent," Aguilera added. "And I really hope to bring transparency back into this by having this workshop."

Commission Chair Pat O'Connell said the

# **Why This Matters**

El Paso Electric surprised electric industry stakeholders in January with its decision to choose SPP's Markets+ over CAISO's EDAM. New Mexico regulators weren't pleased with the timing.



El Paso Electric's Macho Springs Solar Facility in Luna County, N.M. | El Paso Electric

workshop was important to "reset" the relationship between the PRC and EPE.

"When you say you're going to do something, you've created the expectation. And then when you don't do it, it breaks the trust," O'Connell said.

Emmanuel Villalobos. EPE's director for market development and resource strategy, said the utility had "misrepresented ourselves" in saying that the new study results would be shared before making a market announcement.

"We are deeply sorry for that miscommunication," Villalobos said.

In addition to hosting the series of workshops last year, the PRC issued a set of "guiding principles" in late October intended to help utilities make a day-ahead market choice. (See NM PRC Issues 'Guiding Principles' for Electricity Market Participation.)

#### **Brattle Group Study**

During the workshop, Brattle Group principal John Tsoukalis presented the results of a recent study completed for EPE, which looked at benefits of dayahead market participation if the utility joined Markets+ and Public Service Company of New Mexico (PNM) joined EDAM.

PNM announced its choice of EDAM in November (See PNM Picks CAISO's FDAM.) The new study was a follow-up to Brattle's previous study that projected annual benefits for EPE of \$19.1 million a year if both New Mexico utilities joined EDAM, versus \$9.1 million if they joined Markets+. (See Brattle New Mexico Study Shows EDAM Benefits Outpacing Markets+.)

The updated study projected annual benefits of \$6.6 million for EPE if the utility joins Markets+ but PNM goes with

But Brattle's figures changed when the consultant incorporated estimates of the value of the Eddy County tie, a 345-kV transmission line that connects EPE with the Eastern Interconnection. With the Eddy County tie value factored in, EPE's annual benefits would be \$19.3 million if both New Mexico utilities join EDAM, \$20.1 million if they join Markets+, and \$18.8 million if EPE goes with Markets+ while PNM joins EDAM, Brattle projected.

With the new study showing a smaller difference in monetary benefits among the different market scenarios, EPE weighed other factors in its market decision, including governance, reliability and resource adequacy. And Markets+ seemed to be a better fit.

"Market participation must be viewed holistically, considering both financial and operational realities," EPE said in a presentation.

# Pathways Initiative Receives Praise, Skepticism at Calif. Hearing

Lawmakers Share, Hear Views on Bill to Alter Governance of CAISO Markets

By Henrik Nilsson

California state senators on March 12 heard arguments for and against the bill to implement "Step 2" of the West-Wide Governance Pathways Initiative, with some lawmakers voicing concerns about guardrails against market manipulation and what the effort means for the Golden State's autonomy to set its own energy policies.

Members of the state Senate Energy, Utilities and Communications Committee brought in proponents and opponents of the Pathways Initiative for an informational hearing. Pathways is an effort to support expansion of CAISO's Western Energy Imbalance Market (WEIM) and the soon-to-be-implemented Extended Day-Ahead Market (EDAM) to entities outside California by shifting governance of the markets from the ISO to a proposed independent regional organization (RO).

Sen. Jerry McNerney (D) said he was "a little nervous" about the risks associated

## **Why This Matters**

The first hearing on the California Senate bill to implement the Pathways Initiative's Step 2 plan showed some lawmakers might not support the effort to relax CAISO's governance over its Western markets.

with establishing a day-ahead market intended to unleash the value of the market. He cited Enron, which collapsed spectacularly after its market manipulation schemes wreaked havoc on California and CAISO during the electricity crisis of 2000/01.

"I mean, what are the risks here? I mean, have you laid those risks out so that we can get a clear understanding what they might look like?" McNerney said.

Siva Gunda, vice chair at the California

Energy Commission, responded that the effort is about optimizing existing resources and ensuring "we have access to the largest number of resources."

Gunda also noted that California has put in place several guardrails since the Enron crisis, including market monitoring at CAISO and statutory responsibility to protect the public interest.

Sen. Monique Limón (D) said she is "slightly more skeptical" of where she will land on the issue, "in part because what I'm looking for are what those guardrails would be like."

Limón said she would need more details on guardrails as they evolve and how those will be designed to keep up with new technology "that poses a risk to a lot of our systems, not just this."

Members of the committee also asked questions about how the initiative would impact California's independence over its energy policies and how it differs from previous attempts to expand energy markets in the West.

Alice Reynolds, president of the California Public Utilities Commission, said previous efforts focused on expanding CAISO's balancing authority area, noting the ISO would remain a BAA within its current boundaries under the Pathways proposal. (See *California Energy Officials Pitch Pathways Plan to State Senators.*)

Participation in the market is also voluntary, Reynolds said, adding, "We would keep the control of our operation, of our transmission in the CAISO." She pointed out that "we would just be making a decision about whether the CAISO should join a market, or regional market, and then CAISO itself would operate it."

## 'Incredibly Difficult Environment'

Democratic Sens. Henry Stern and Josh Becker introduced *SB 540* — or the Pathways bill — in February. The proposed legislation sets conditions under which CAISO and Golden State utilities can



California lawmakers heard arguments for and against the West-Wide Governance Pathways Initiative on March 12. | Shutterstock

Continued from page 17

# **Nev. Regulators Give Nod to NV Energy Clean Transition Tariff**

Rules Will Accommodate Carbon-free Goals of Google, Other Customers

By Elaine Goodman

Nevada regulators have approved NV Energy's clean transition tariff (CTT), a framework developed in partnership with Google that will allow the utility's existing large-load customers to receive power from new clean energy resources.

The Public Utilities Commission of Nevada (PUCN) approved the tariff March 11 after parties to the proceeding reached an agreement resolving their issues.

Under the agreement, one element of the tariff was left out of the commission's approval: the base CTT rate model. That will be submitted for approval in a future integrated resource plan, or an IRP amendment, filed by NV Energy.

The commission said in its order that it won't accept applications to take service under the new tariff until the base CTT model is filed.

#### **Data Center Power**

Google started working with NV Energy on the clean transition tariff as it looked for ways to power its northern Nevada data center with clean energy. Google has set a goal of running all its data centers and office campuses on 100% carbon-free energy by 2030.

Companies including Google that are seeking clean power have been buying electricity directly from energy developers. But those purchases are often "isolated from broader grid planning," Google said in a *blog post* announcing the clean transition tariff.

"The CTT provides a novel and import-

# **Why This Matters**

NV Energy's clean transition tariff could provide a model for other utilities trying to incorporate big customers' clean energy needs into their planning processes.



NV Energy has received regulatory approval for its clean transition tariff, which will allow large customers such as Google to receive power from new clean energy resources. | Moonwater Capital

ant opportunity for NV Energy and its customers to bring corporate investment capital into alignment with the utility planning process," energy economist Carolyn Berry said in testimony filed with the PUCN on behalf of Google.

To power its northern Nevada data center, Google set its sights on an enhanced geothermal energy project from Fervo Energy. Without Google's involvement, NV Energy wouldn't have included the project in its IRP because of its cost, according to regulatory filings.

But through the CTT, Google plans to cover any premium costs of energy from the Fervo project to prevent cost-shifting to other customers.

During the long-term energy supply period, Google will pay a fixed price for energy from the 115-MW Fervo project. The entire output of the Fervo resource will go to Google. The data center is expected to need even more energy, which NV Energy will provide at a variable rate.

### **Existing Customer Benefit**

The clean transition tariff is modeled on NV Energy's Large Customer Market Price Energy tariff. The LCMPE tariff is only available to new customers; the CTT is a way to offer a similar arrangement to the utility's existing customers.

The CTT is available to customers with an average annual hourly load of 5 MW or more, based on a 12-month rolling average. It applies to a clean energy resource that hasn't previously been approved.

To use the CTT, NV Energy must file an energy supply agreement (ESA) as part of an IRP or an IRP amendment, or around the same time as those filings. The ESA must then be approved by the PUCN.

The ESA term must be as long as the life of the new resource.

NV Energy filed an ESA for Google to receive electricity from the Fervo project in June 2024, around the same time the utility filed its most recent IRP.

Two other ESAs linked to the CTT were also filed in June.

Under one agreement, Coeur Rochester would receive electricity from solar and battery storage projects for its mining, crushing and processing operations in Pershing County.

The other agreement involves solar and battery storage resources used to power the Las Vegas Convention and Visitors Authority's offices and the Las Vegas Convention Center.



# **NWPCC Considers Trump, Data Centers in Regional Power Plan**

**Ry Henrik Nilsson** 

The Northwest Power and Conservation Council (NWPCC) must ensure its models consider President Donald Trump's shifting energy priorities to ensure the council's upcoming 20-year regional power plan stays relevant, board members contended during a March 11 meeting.

The council is required under the Northwest Power Act "to develop a plan to ensure an adequate, efficient, economical and reliable power supply for the region." NWPCC publishes a plan every five years, according to the council's website.

The plan considers several factors, including federal policies that could impact resources. During the meeting on March 11, council members noted that Trump has rescinded certain clean energy initiatives imposed under former President Joe Biden.

For example, NWPCC's 2021 power plan included the social cost of carbon — a measure to estimate the economic impact of climate change — to inform resource decisions. Though states like Washington still require utilities to plan with the measure, other states stopped using it after Trump issued his executive order on Unleashing American Energy, which directed federal agencies to consider getting rid of the measure (See Federal Budgets, Procurements to Include Social Cost of GHGs and DOE Official to NASEO: 'There is not an Energy Transition'.)

Idaho-based utilities, for example, don't use the measure anymore, according to

# Why This Matters

The Northwest Power and Conservation Council members want to ensure the group's work remains relevant as the electric sector faces increasing uncertainty from political developments and expectations for rapidly growing demand.

board member Jeffery Allen. He contended the council's regional power plan should not apply the social cost of carbon regionwide.

"I want what we do to be relevant. I want the council to be relevant. I want the council to be interesting," Allen said. "If we say we're going to do social cost of carbon regionwide, and parts of it aren't, it kind of dings our relevancy in certain portions of the region."

Jennifer Light, director of power planning at NWPCC, said, "We do have a methodology where we can apply to just a portion of the region where it's required."

However, board member KC Golden, who represents Washington, said NWPCC risks its relevance if it fails to address "the objective reality of our physical circumstances on the planet ... because it's wrapped around the axle of political differences between the states."

"These costs are not hypothetical," Golden added. "We're seeing them in the rise in the [Columbia River Basin] Fish and Wildlife Program. We're seeing them ... with all the utilities who are going to their commissions ... or their boards and trying to figure out how to recover these wildfire costs. People are bearing the costs."

The council also discussed how Trump could impact clean energy tax credits. Golden said other incentives, like production and investment tax credits, should be safe from rollbacks.

"We are in uncharted water, so I'm not going to hazard a prediction, but I just will say that these two policies in particular had a long history of bipartisan support before this administration," Golden said. "So, it strikes me as different from some of the other clean energy policy things that are clearly going to be rolled back."

#### **Load Forecast**

Council staff also gave a presentation on load forecast, noting that board members will hopefully see a final forecast "sometime in April."

Like other entities across the country, NWPCC is paying close attention to demand growth spurred by electric vehicles



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and data centers.

Steve Simmons, senior energy forecasting analyst at the council, noted that fluctuations in markets can make forecasting difficult as industries grow and disappear. He pointed to the chip manufacturing industry in Oregon and Idaho, which has existed for a while and is currently going through a large growth spurt, saying that load is not always increasing.

"These are big jumps that you may not be able to exactly predict based on some of the economic forecasts," Simmons said. "Also, some industries may disappear again ... or they may move to a different region, and that can actually decrement load."

Simmons also cautioned against over-forecasting, which is a risk as stakeholders want to ensure they meet the power demand posed by industries. He pointed to the tech bubble in the early 2000s.

"Everyone was essentially over-forecasting because someone else had over-forecast," he added. "You end up with a bubble and then supply completely overwhelmed demand, and again it deflated, which bubbles do, but it's often a pretty painful process."



# NM Regulators Poke Assumptions Behind EPE's **Markets+ Choice**

Commissioners Seek Broader Analysis of Tx Line Linking State with SPP's RTO

By Elaine Goodman

A recent study that contributed to El Paso Electric's decision to join SPP's Markets+ rather than CAISO's Extended Day-Ahead Market (EDAM) has raised questions among New Mexico regulators.

The results of the Brattle Group analysis were presented to the New Mexico Public Regulation Commission (PRC) during a March 13 workshop.

The workshop followed EPE's announcement Jan. 24 that it would join Markets+. The announcement surprised commissioners, who were expecting to see results of additional studies before EPE selected a market. (See related story EPE's Markets+ Decision 'Not Transparent,' NM Regulators Say.)

In the new analysis, Brattle updated results from an earlier study for Public Service Company of New Mexico (PNM) and EPE with a "sensitivity case" that includes the value of the Eddy County tie. The tie is a 345-kV transmission line that links

EPE with Southwestern Public Service. which is a member of the SPP RTO in the Eastern Interconnection.

Under that case, EPE's annual benefits would be \$19.3 million if both New Mexico utilities join EDAM, \$20.1 million if they join Markets+ and \$18.8 million if EPE goes with Markets+ while PNM joins EDAM, Brattle projected in the new analysis.

That contrasts with results from Brattle's previous study, which projected EPE's benefits would be \$19.1 million a year if both utilities joined EDAM versus \$9.1 million if both joined Markets+. The benefits are in comparison to a "current" trends" (CT) case in which PNM and EPE remain in CAISO's Western Energy Imbalance Market (WEIM) and don't join a day-ahead market.

PNM announced its choice of EDAM in November, (See PNM Picks CAISO's EDAM.)

#### **Eddy Optimization**

In its new analysis, Brattle "optimized" the

Bilateral Trading Revenue **EDAM Congestion Revenues Summary of Benefit Drivers** Wheeling Revenue **Adjusted Production Cost** Markets+ RT Congestion Revenues Markets+ DA Congestion Revenues Net Benefit (dash) **WEIM Congestion Revenues** \$ Million/year \$40 \$30 revenue increase cost decrease or \$20 \$10 \$0 revenue decrease cost increase or -\$10 -\$20 Markets+ **EDAM** Sensitivity minus CT minus CT minus CT

The Brattle Group analyzed benefits to EPE if the utility and PNM both joined EDAM or Markets+. In the sensitivity case, EPE joins Markets+ and PNM joins EDAM. Current trends (CT) refers to EPE and PNM remaining in WEIM and not joining a day-ahead market. | The Brattle Group

## **Why This Matters**

The questions raised by the New Mexico commissioners signal that El Paso Energy's Markets+ decision could face increased regulatory scrutiny in the future.

Eddy County tie to SPP East for scenarios where EPE joins Markets+, assuming that trade flows freely across the tie. The model assumes the SPP East market is liquid enough to supply or receive all Eddy tie flows at prices comparable to those of Markets+.

"Whenever El Paso is purchasing power, we assume that the tie's importing; whenever they're selling power, we assume that they're exporting," Brattle Group principal John Tsoukalis said during the workshop.

In the cases where EPE is in EDAM or only in WEIM, the Eddy tie isn't optimized; instead, its value is assumed to be the same as it was in 2023.

The optimization is only in the Markets+ cases because Markets+ and SPP East have the same market operator, said Tsoukalis, who said his understanding is that SPP is planning for the optimization. While Tsoukalis said it's possible that SPP would optimize flows with EDAM, he said he's not aware of any discussions to do

Commission Chair Pat O'Connell guestioned the assumption, saying it implies something "kind of remarkable."

"You have to accept that SPP would not work to optimize interregional transfer unless you're in Markets+," O'Connell said.

Commissioner Gabriel Aquilera also wondered whether there would be an opportunity for Eddy County tie optimization through a seams agreement in a case where EPE joins EDAM. Aquilera asked if Brattle could calculate benefits



in two additional ways: one in which the Eddy tie is not optimized in any of the four scenarios, and another in which it is optimized in all four scenarios, including cases where EPE joins EDAM or remains solely in WEIM.

"It seems like all of those have an equal possibility of occurring," Aguilera said.

EPE representatives agreed to bring those variations of the analysis to the commission.

EPE and PNM are co-owners of the 200-MW Eddie County tie: EPE has rights to two-thirds of the capacity, and PNM has rights to the remaining third. That prompted questions from the commission on why the Brattle analysis optimized the tie's entire 200 MW in the two cases where EPE joins Markets+.

"PNM owns part of this, and yet your sensitivity analysis relies so heavily on using 200 MW," Aguilera said.

#### Weighing the Choices

After the latest Brattle analysis found similar monetary benefits in the different scenarios, EPE turned to additional factors in making its day-ahead market decision.

SPP's experience as an RTO operator and its record of expanding renewable energy resources make "it a trusted partner in this endeavor," EPE said in its announcement. (See El Paso Electric to Join SPP's Markets+ in 2028.)

During the PRC workshop, EPE representatives said another advantage of Markets+ relates to resource adequacy. Markets+ will require all participants to join Western Power Pool's Western Resource Adequacy Program (WRAP).

"It is important to make sure that everybody is on equal footing on how you're calculating your resources," said Emmanuel Villalobos, EPE's director for market development and resource strategy.

Instead of facing a WRAP requirement, EDAM participants will undergo a daily resource sufficiency evaluation (RSE). EDAM participants have the option to join WRAP, but it's not required.

Aguilera questioned EPE's ability to meet

WRAP's requirements. He said the utility might need to accelerate resource procurement, with a resulting cost impact to customers.

"As a regulator who is concerned about affordability, I would see that as a benefit in EDAM to have more of that flexibility" on resource adequacy, Aguilera said. "Especially given that WRAP hasn't taken off. It's been delayed. It's been having its own issues." (See WRAP Members Align on Key Issues to Prioritize.)

EPE did not participate in Phase 1 of Markets+ development and has not yet signed a Phase 2 funding agreement with SPP — a move Villalobos said EPE is likely to make in the first quarter of 2026. The funding commitment would be in the form of collateral rather than money given upfront, he added.

Consultant Utilicast is wrapping up a gap analysis for EPE, looking at steps the utility needs to take before joining Markets+.

EPE expects to begin Markets+ implementation activities next year and start participating in the market in 2028.

# Pathways Initiative Receives Praise, Skepticism at **Calif. Hearing**

Continued from page 13

participate in energy markets governed by an independent RO. (See Pathways 'Step 2' Bill Sets Conditions for EDAM Governance.)

During the March 12 hearing, Stern said he appreciated the scrutiny about how the effort will impact California's autonomy and emissions goals.

However, Pathways can help build trust among Western states amid trade wars with Canada, staff cuts at the Bonneville Power Administration and other actions taken by the Trump administration aimed toward the energy sector, according to Stern.

"There's a lot of politicization in the energy arena too," Stern said. He added "the reason, I guess, I'm a part of this initiative is that I think we still have to be on that mission and try to ... build that trust in an incredibly difficult environment."

He said it is a tricky balancing act to ensure the economic and reliability benefits will work for states like California, which is "as green as it gets, or for a state that doesn't want to make that their banner."

The commission heard from various other stakeholders, including environmental organizations, labor parties and utilities.

Michael Colvin, director of regulatory and legislative affairs at the Environmental Defense Fund, told the commission, "To ensure that we have a fully clean electric grid funded by affordable bills, and that we make the necessary clean infrastructure investments to keep the lights on, we must leverage the geographic diversity of the West."

"I think of Pathways as a critical ingredient to help us fight climate change, to ensure that our electric bills remain affordable and that we have the reliability that we need to keep the lights on,"

Colvin added.

Skeptics of Pathways also joined the meeting, including former CPUC President Loretta Lynch.

Lynch contended that many of the arguments favoring Pathways rely on hypothetical scenarios in which EDAM would consist of participants from all Western states. This is unlikely, Lynch said, noting several entities have already decided not to join EDAM.

Lynch also said California would give up control of energy policies and risk losing jobs to other Western states.

Right now, California is in charge, "but Pathways throws all that out. California gets a yet to be priced seat in the back of the plane where don't know the destination, how the plane is flown, or even our ticket price, until and unless you give up control of the pilot seat," Lynch said. ■

# **Experts Urge Texas Policymakers to Go Big with** 765-kV Transmission

Ry James Downing

ERCOT already operates a power system as large as those in several European countries, but demand growth is expected to bring it up to the level of PJM and MISO, which has the industry considering building a new system of 765-kV lines to transmit power around Texas.

"When you think about PJM's high-voltage overlay, they have this huge 765and 500-kV system to move power back and forth and back and forth," Grid United President Kris Zadlo said on a webinar March 13 hosted by Americans for a Clean Energy Grid. "And I think that's kind of what we need to start thinking about if we're going to be going to such a large system."

In the next decade, peak demand could double on ERCOT's grid while overall consumption of power triples, said Michael Webber, professor of mechanical engineering at the University of Texas at Austin.

The new demand is being driven by different factors. Data centers are part of the picture, but other sources include the need to electrify more of the oil and gas production in the booming Permian Basin and keep up with the general population and economic growth in Texas. ERCOT has grown 1 to 2% per year recently, when much of the rest of the country grew little to none, but now growth rates are up to 3 to 4% annually, Webber said.

CenterPoint Energy is forecasting that demand in and around Houston will grow by 10 GW, which is the equivalent of adding Belgium's total power demand to



Matthew T. Rader, CC BY-SA 4.0, via Wikimedia

the system.

"So, we have to add a Belgium to Houston, but we also have to add a Belgium to West Texas, and maybe half of Belgium to Abilene for data centers, or whatever," Webber said. "If you start to add it up, and maybe a 10th of a Belgium here and there for LNG export terminals, which all say they'll be electrified ... it's a lot of demand."

If all the demand were in one part of Texas, it could be met by building one power plant, but given how spread out it is across the state, transmission needs to be part of the picture, Webber said.

"All of this adds up to this new estimate of 150 GW of load coming down the pipe," said Conservative Texans for Energy Innovation's Michael Jewell. "When the legislature heard about that, I think it really kind of freaked them out and got them to say, 'You know, maybe there really is something that needs to happen.' And I think it really has changed the dynamic to, 'We do need to think about, how are we going to address this?"

Building transmission is part of the answer, but policymakers could decide to stick to 345-kV lines, as they did when Texas last did a major buildout of transmission more than 15 years ago with the Competitive Renewable Energy Zone lines to bring wind to customers.

"One of the early questions was, should we be looking at 500-kV lines?" Jewell said. "And that kind of fell to the wayside as the advantages of 765 and the greater ability to move power there kind of outweighed almost what one could think of as an interim step in that regard."

The idea of building out 765-kV lines was first broached in the legislature with the aim of helping Permian Basin drillers continue to electrify, but once the focus was widened to the entire state, 765 kV only made more sense, he added.

While 765 kV is the largest voltage used in the U.S., China has built an overlay system with 1,100-kV lines, Webber said. Voltages that high start to come up against manufacturing issues, Zadlo said.

"Once you go above 345, whether it's 500

## **Why This Matters**

Demand growth is coming to Texas in a big way, and while there is always uncertainty in forecasts, experts argued that building a new 765-kV system in ERCOT only makes

or 765, it's the same thing," Zadlo said. "My understanding is the 765 breakers come out of the same factories that are making 345 breakers. So really, there's no difference there. I think the only big difference is when it comes to transformer production."

Building a series of 765-kV lines also takes about the same amount of time as building 345, he added.

Forecasting demand growth always comes with uncertainty, but given that some of the new loads can come online in a year while power plants take three or four, and transmission in Texas takes at least six, it makes sense to start planning for it now, Zadlo said.

"You can't accelerate a transmission line, right? You just can't," Zadlo said. "It'll be disastrous if we're wrong; if we don't build that line on time. ... But you can always slow it down if the load doesn't materialize. You can always pull back the plans."

Another reason to move with big infrastructure buildouts is that they are almost always used to their capacity, Webber said. Railroads, broadband, the highways and other historical examples all involved some overbuilding, with only massive technological changes like the advent of automobiles and highways making the railroads less useful a century later.

"If you're going to go to the trouble [of building capacity, you might as well build more capacity, and the higher voltage gives you more capacity," Webber said. "So, I'd argue that this is actually the American way of doing things, and it would just give us more ability to move things around."

# ISO-NE Gives Updates on Prompt, Seasonal Capacity Market Changes

By Jon Lamson

ISO-NE provided stakeholders with a high-level *overview* of its proposed prompt capacity market design and discussed several other aspects of its capacity auction reform (CAR) project at a two-day meeting of the NEPOOL Markets Committee on March 11 and 12.

The CAR project aims to transform the region's Forward Capacity Market, with auctions held over three years prior to each yearlong capacity commitment period (CCP), into a prompt and seasonal capacity market, held a month or two prior to each CCP, which would be split into summer and winter periods with separately procured capacity. (See ISO-NE Refines Scope, Schedule for Capacity Auction Reforms.)

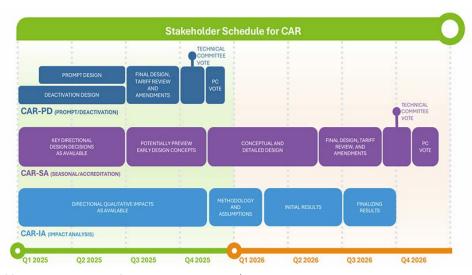
Chris Geissler, director of economic analysis at ISO-NE, said the RTO would run the first prompt auction in April or May 2028 for the CCP beginning on June 1, 2028. It would finalize resources' qualified capacity values in early 2028.

New resources would need to be in service prior to the auction to sell capacity, Geissler said. One of the motivations behind the prompt auction format is to eliminate "phantom entry," in which an in-development resource secures a capacity supply obligation (CSO) but does not come online in time for the CCP.

Geissler said ISO-NE would provide "as much opportunity for new resources to demonstrate being in service as possible." The RTO would allow non-

# **Why This Matters**

The proposed capacity market format is intended to help the region prepare for a changing resource mix and risk profile and is poised to become an increasingly important source of revenue for resources in the coming decades.



ISO-NE capacity auction reform stakeholder schedule | ISO-NE

commercial resources to participate in auction qualification and intends to set the latest possible deadline for resources to demonstrate they have achieved commercial operation.

He emphasized that the fundamentals of the demand curve and bid formulation will stay the same in a prompt market.

"Under either a forward or a prompt auction, a resource's competitive capacity offer price should consider the incremental costs associated with taking on a CSO," Geissler said.

He noted that some costs that would be included in offers in a forward auction — such as investment costs for a new resource — could not be included in offers in a prompt market. While this could lower some offer prices, Geissler said he does not expect this to lower overall market prices.

"Resources that are considering investment costs will only incur those costs if they expect to recover them via the markets, whether those markets are forward or prompt," Geissler said. "We would therefore expect similar quantities of capacity to be sold in a forward or prompt market, producing comparable capacity prices."

## Seasonal Market Update

Jennifer Engelson, supervisor of resource qualification at ISO-NE, provided *additional information* on the RTO's plans for the seasonal divide of the CCP.

ISO-NE would split the annual CCP into six-month summer and winter seasons beginning and ending at the ends of April and October, respectively. These periods would be aligned with the seasons used in NYISO's capacity market. ISO-NE would run separate seasonal auctions for the next CCP each spring.

Dividing the CCP into two seasons is intended to help ISO-NE mitigate growing winter reliability risks, driven by heating electrification and gas supply issues. While ISO-NE considered using more than two seasons, it determined that "two longer seasons with clear peaks would be more economically efficient for the region" because of the concentration of risks in the winter and summer, Engelson said.

#### **Resource Deactivations**

Under ISO-NE's existing tariff, the resource retirement process is tied to the FCM, and resources planning to retire signal their intent about four years prior to their exit from the market.

Because a prompt auction would provide little time to address potential system issues caused by the retirement, ISO-NE plans to decouple the retirement process from the capacity market. (See NEPOOL Markets Committee Briefs: Feb. 11, 2025 and ISO-NE Introduces Proposed Resource Retirement Changes.)

Under the *new process*, deactivation notices would be due two years prior to each



CCP. Notices would be binding and set off a review process to evaluate potential reliability and market power issues created by the resource's retirement.

The reliability review — triggered for all resources with more than 20 MW of capacity — would include an evaluation of local transmission security. If issues are identified, ISO-NE could retain the resource through an out-of-market agreement. The RTO has repeatedly said it only plans to consider resource retentions to address local transmission security issues and will not retain resources for energy security.

To evaluate and mitigate market power, the ISO-NE Internal Market Monitor would review deactivation submissions "to determine whether the retirement is justified by economics or potentially motivated by benefits to a portfolio."

Retiring resources would be subject to a conduct test to evaluate the economics of the retirement and a net portfolio benefits (NPB) test to assess whether retiring a profitable resource would increase revenue for the resource owner's remaining portfolio.

"When a participant fails both the conduct and the NPB test, this suggests that the deactivation represents an exercise of market power," said Zeky Murra-Anton, an economist at ISO-NE.

When market power is identified, ISO-NE plans to impose a 1.5-times multiplier on the projected increase in portfolio-wide revenue caused by the retirement. Murra-Anton said this multiplier is intended "to effectively deter deactivations for market power purposes without being excessively punitive."

#### **Treatment of Repowering** Resources

ISO-NE also discussed how the CAR changes would affect resource repowering efforts.

The RTO's interconnection procedures and FCM have mechanisms for evaluating changes to existing resources. Both the interconnection process and the FCM are undergoing major reform efforts, which will necessitate changes to the treatment of resource repowering.

Alex Rost, director of transmission services at ISO-NE, assured stakeholders that the RTO is committed to retaining "a path for repowering projects as the CAR design is set."

"At a fundamental level, [interconnection customersl with repowering projects that seek to change/replace an original generating facility with a new generating facility, where the new generating facility assumes its needed interconnection service from the original generating facility, will maintain the ability to do so," Rost wrote in a memo issued prior to the

#### **NEPGA Tie Benefits Concerns**

Bruce Anderson, general counsel for the New England Power Generators Association, presented some concerns about how ISO-NE's capacity market accounts for tie benefits, which the RTO has defined as "the assumed amount of emergency assistance from neighboring control areas that New England could rely on ... in the event of a capacity shortage."

"The current market design 'assumes away' approximately 2,000 MW of capacity demand based on the belief that system energy from neighboring control areas is equivalent to 'firm capacity,'" Anderson said, adding that these assumed tie benefits reduce the region's installed capacity requirement.

Because tie benefits are not subject to the same obligations, audits and nonperformance charges as resources with CSOs, Anderson said treating tie benefits as "equal to actual capacity" creates risks of price suppression and capacity under-procurement.

Anderson added that price suppression increases the likelihood of "uneconomic retirements of resources important to system reliability."

He said NEPGA will propose alternatives intended to improve ISO-NE's tie benefits accounting methodology in the coming months.

#### Flexible Response Services

Also at the meeting, Matthew White, vice president of market development and settlements at ISO-NE. discussed the RTO's long-term plan to improve its flexible response capabilities "to address greater operational uncertainties with an increasingly weather-dependent resource mix."

In a memo issued prior to the meeting, White wrote that ISO-NE is "assessing a combination of new probabilistic forecasts and enhancements to the cooptimized energy and reserve markets."

On March 1, ISO-NE launched a new day-ahead ancillary services market, which procures reserves to help grid operators cope with load variability and fill any energy gaps that arise between the day-ahead energy market and the load forecast. (See FERC Approves ISO-NE's Day-Ahead Ancillary Services Initiative.)

Looking forward, ISO-NE is considering how to improve its real-time forecasting of ramping needs and may look to procure "dynamically determined incremental quantities" of 10- and 30-minute reserves and new longer-response reserve products, potentially in the 60- or 90-minute range, White said.

"New England's power system is becoming increasingly dynamic, and extending conceptually familiar market designs with new probabilistic modeling capabilities appears to be a promising next step to reliably address increasing operational uncertainties." White wrote.

"By carrying less incremental reserves when net load uncertainty or ramping needs are forecast to be low, unnecessary costs can be avoided; and by increasing incremental reserves when net load uncertainty or ramping needs are forecast to be higher, reliability can be maintained." he added.

#### Fall Markets Report

Finally, the IMM's Kathryn Lynch presented the Monitor's fall quarterly markets report, which found that wholesale market costs during the guarter increased by 8% relative to fall 2023, up to nearly \$1.5 billion in total costs.

Market costs increased despite a 13% decrease in natural gas prices and the lowest recorded fall season power de-

The increase was driven by increased emissions costs for the Regional Greenhouse Gas Initiative and decreased imports and domestic nuclear generation, Lynch said. Average hourly nuclear generation decreased by about 423 MW compared to the prior fall "due to planned and forced outages," while net imports dropped by an hourly average of 892 MW because of "dry weather in Québec and a nuclear generator outage in New Brunswick."

Overall, market pricing outcomes were competitive, and "there was no evidence of impactful capacity withholding," Lynch said.



# In Conversation with ISO-NE's First Community **Affairs Policy Adviser**

By Ion Lamson

As the Trump administration pulls federal support for environmental justice programs across the country, Ruben Flores-Marzan, ISO-NE's first environmental and community affairs policy adviser, remains optimistic about the RTO's efforts to engage with communities that historically have been absent from energy policy and planning discussions.

The RTO established the new position in response to a 2023 request from five of the six New England states for a position to help "provide an EJ and equity lens to ISO-NE's management and staff; inform the development of ISO-NE initiatives, rules and operations; and engage EJ communities and stakeholders." (See States Call for an Executive-level EJ Position at ISO-NE.)

The states wrote that the position should "serve as a critical bridge" between the RTO and the communities it serves. including the neighborhoods most affected by energy infrastructure. The request was supported by environmental advocacy groups, which have long called for a wider range of voices in ISO-NE's

decision-making processes.

ISO-NE hired Flores-Marzan, who has extensive professional experience as an urban planner, in July 2024. He has spent his first months on the job meeting with a wide range of community groups to listen to concerns; discuss ISO-NE's role, abilities and limits; and take input on the RTO's direction going forward.

"I'm talking to everyone, because the input of everyone is important to where we want to go," Flores-Marzan told RTO Insider. "That's a major part of what I've been doing: listening, reflecting, getting back in the engagement process with you to say, 'Did I get that right?'"

He said his job is "essentially to reach out to different constituencies, learn from them, educate them about what the ISO does and does not do, and come up with different ways to continue engaging with them."

Connecticut, Maine, Massachusetts, Rhode Island and Vermont have all passed laws intended to protect EJ communities. While the statutes and definitions vary, the laws generally aim to ensure that low-income communities,

# **Why This Matters**

Increased engagement with EJ communities could bring new perspectives to the ISO-NE stakeholder processes and put a greater focus on the local impacts of policy and market changes at the RTO.

people of color and non-English speakers are provided equal opportunity to meaningfully participate in planning and policymaking processes.

EJ communities typically are located closer to energy infrastructure and face increased exposure to hazardous pollutants, including fine particulate matter and nitrogen oxides. A 2024 study by a coalition of advocacy groups found that about 80% of polluting generation facilities in Massachusetts are located within a mile of a state-designated EJ community. (See Report Shows Uneven Burdens of Power Infrastructure in Mass.)

Low-income residents typically are also more vulnerable to the impacts of cost increases, although low-income discounts are available across all six New England states.

As an RTO, ISO-NE has significant constraints around what it can do to address EJ issues. It does not have jurisdiction over infrastructure siting and has indicated that it would need support from all six states to put a price on carbon or air pollution within its wholesale markets.

All six states also participate in the Regional Greenhouse Gas Initiative, which adds emissions compliance costs that ultimately affect prices within the markets.

Despite its constraints, the RTO is free to engage with the public on transmission planning, grid studies and market changes that could affect communities on the ground.

"What I can bring to the fold is that ability to embrace and incorporate people that



ISO-NE headquarters in Holyoke, Mass. | ISO-NE

haven't been part of those discussions in the past," Flores-Marzan said.

Flores-Marzan was born and raised in Puerto Rico and previously worked as a city planner in San Juan, working to procure wind and solar power to help the city decarbonize. In the mainland U.S., he has worked for the municipal governments of Providence, R.I.; Ware, Mass.; and East Windsor, Conn., where he helped site a 120-MW solar project.

He said his experience in Puerto Rico has helped him understand the importance of power system reliability, along with strong communication with the public about the issues that grid operators are facing.

"Energy drives everything; having that reliability is so important," Flores-Marzan said.

Flores-Marzan is bilingual and said he hopes to boost the RTO's outreach to Spanish speakers who face significant barriers to participating in ISO-NE's public forums. While some state agencies across the region have implemented language access requirements for proceedings, ISO-NE public meetings are typically conducted only in English.

"A lot of Spanish speakers don't know what the ISO is," he said, adding that ISO-NE is translating some of its key documents into the language.

New England EJ advocates praised Flores-Marzan's willingness to listen to community concerns and said the creation of the position is a step in the right direction for ISO-NE.



Ruben Flores-Marzan, ISO-NE | ISO-NE

"I think the community affairs team has been working hard to listen to us and other community leaders ... and to put in a best effort to answer our questions and understand our concerns," said Mireille Bejjani, a community organizer who leads the Fix the Grid campaign. "I don't think there was as much of that communication even just a few years ago."

"We see this as a genuine commitment and a good first step," said Susan Muller, senior energy analyst at the Union of Concerned Scientists. She said she is not aware of a comparable position that exists at any other RTO and expressed her hope that the role will serve as a model for other grid operators to follow. "They are rightly proud to be a leader."

Moving forward, the advocates said they hope ISO-NE will increase its engagement with local communities, not just regionwide advocacy groups.

Bejjani said she hopes to see the "the

buildout of a team at ISO-NE" focused on engaging EJ communities. At a higher level, Bejjani urged the RTO to open all the meetings of its Board of Directors to the public and put more resources into advertising its public meetings to increase participation.

"These are positive steps, but there's more work to be done," said Phelps Turner, a senior attorney at the Conservation Law Foundation. He added that it is "very important for the ISO to increasingly provide information that is more accessible that the everyday electricity consumer can understand and weigh in on."

At the federal level, Trump administration has taken aim at EJ initiatives in its broader effort to remove support for diversity, equity, inclusion, and accessibility programs and protections. EPA Administrator Lee Zeldin has directed all regional EPA offices to eliminate their offices of environmental justice.

Eric Johnson, executive director of external affairs at ISO-NE, said he does not anticipate the change in federal policy affecting the new environmental and community affairs position or the RTO's overall approach to community engagement.

"We created this position to be broader than environmental justice," Johnson said, "and it's really driven by the engagement we have with our states here in New England.

"The state's priorities are not changing, and I don't see our priority in that space changing. I think we're just going to continue to build on this, and we'll deal with whatever happens at the federal level."









# **Load Growth Drives Early MTEP 25 to \$11B**

By Amanda Durish Cook

NEW ORLEANS — MISO's preliminary 2025 Transmission Expansion Plan (MTEP 25) is set to become another record-breaking collection, at 434 transmission projects at an estimated cost of \$11 billion.

MISO said load growth is pushing investment again.

Introducing the early version of the plan to board members March 11. MISO's Laura Rauch said for the third consecutive year, the RTO is managing record levels of MTEP investment.

The \$11 billion MTEP 25 contains \$754 million in generator interconnection projects, \$2.07 billion in baseline reliability projects and a whopping \$8.17 billion in projects termed as "other," which include projects needed for load growth, projects needed to replace aging infrastructure and projects needed to meet transmission owners' reliability criteria.

Rauch said load growth is the thrust behind 61% of other category projects this year. She also said load growth likewise is propelling expedited treatment of projects.

This MTEP cycle includes \$4.2 billion in developers' expedited projects, or those projects that are needed sooner than MISO's routine MTEP approval in December. The expedited investment this year eclipses MTEP 24's \$896 million worth of expedited requests and MTEP 23's \$684 million.

"You can't help but having an eye pop at the expedited projects this cycle," MISO Director Barbara Krumsiek said.

# **Why This Matters**

Projected load growth, aging infrastructure and reliability concerns are driving extensive MISO transmission proposals under the expedited process, as well as the normal process.



MISO planning leads Laura Rauch (left) and Aubrey Johnson | © RTO Insider LLC

Rauch acknowledged it's becoming more difficult to conduct expedited reviews "when you have data centers the size of Baton Rouge." She assured board members that MISO's expedited review process for transmission projects does not cut corners. MISO studies expedited projects outside of its usual MTEP reliability studies to make sure the projects won't be detrimental to the grid.

If the full MTEP 25 moves ahead, Entergy Louisiana alone would account for \$3.1 billion of MTEP 25 through 14 projects. Two 500-kV projects would cost more than \$1 billion apiece.

MTEP 25 will take a more definitive shape over the fall. MISO will submit the portfolio for board approval Dec. 11.

#### Concerns over MISO South Planning

Virginia Paschal, representing the Arkansas Advanced Energy Association, asked MISO to take a "more proactive" approach on transmission planning in MISO South at the meeting.

Paschal said MISO South risks unnecessary energy curtailments in the future without cohesive, multi-value transmission planning. She said the South's perceived penchant for new gas plants is overblown and many in the region want

more than the "piecemeal" transmission planning occurring today.

"We need transmission that maximizes economic, reliability and consumer benefits," Paschal said. She pointed out that MISO has focused exclusively on its Midwest region in its long-range transmission planning.

At a March 12 Advisory Committee meeting, the Alliance for Affordable Energy's Yvonne Cappel-Vickery said the number of expedited projects requested from MISO South is alarming, particularly because the projects have limited oversight. She said her Louisiana-based nonprofit joined MISO hoping for more oversight of her investor-owned utility, in an apparent reference to Entergy.

Cappel-Vickery asked for MISO assurances that the expedited projects won't replace comprehensive transmission planning in the South region.

Senior Vice President Todd Hillman said MTEP having such a large share of expedited projects is a new phenomenon. He also said MISO seeks to provide the lowest-cost "delivered" energy, not simply the lowest-cost energy, and that transmission planning in addition to resource planning achieves lower costs.



# MISO to Seek 3-Year Order 881 Delay for Vendor **Holdups**

Ry Amanda Durish Cook

NEW ORLEANS - MISO announced March 12 that it will ask FERC for a postponement on rolling out ambientadjusted line ratings until December 2028.

MISO leadership told the Advisory Committee, meeting as part of MISO Board Week, that RTOs are experiencing delays from vendors supplying the necessary software for the varied line ratings required under FERC Order 881.

Some stakeholders seemed taken aback by the announcement. Clean Grid Alliance's Beth Soholt said it was disappointing that MISO was not prepared for Order 881 when it previously said adjusted line ratings would not be a particularly heavy

"It's a consistent theme that systems are not ready to go," Soholt said of compliance with FERC rulemakings.



MISO Senior Vice President Todd Hillman | © RTO Insider II C

Order 881 is set to go into effect for MISO on July 12.

MISO Senior Vice President Todd Hillman said the RTO is not the only grid operator requesting extra time on compliance. He said that although it is unfortunate, it is simply a reality because the country's RTOs are vying for deliveries from a few specialized vendors to track and implement AARs.

"We're counting on MISO for the system of the future." Soholt said, later adding. "excuses, excuses, excuses" in response to Hillman's explanation. Hillman and Soholt continued in a tense exchange, in which he said he felt the news of the delay was akin to disappointing his mother, to which Soholt responded that she would play the role of dissatisfied parent.

"The vendor stuff is not immaterial. There are a small number of vendors working for all the RTOs." Hillman said. It's worth it for MISO and its "RTO brethren" to take the time to get implementation right, he argued.

MISO said over 2022 and 2023 that it had been able to receive and use variable line ratings for about a decade, albeit on a smaller scale. (See MISO, Members Debate Deploying AARs.) At the time, MISO staff said it was up to transmission owners to determine and submit their AARs while the RTO devised an interface to accept and share hourly line ratings.



# MISO: Better Preparations Clinched Winter Storm Operations

By Amanda Durish Cook

NEW ORLEANS — MISO emerged from winter 2024/25 without turning to emergency procedures despite wide-ranging winter storms Jan. 6-9 and Jan. 20-22.

During the March 11 meeting of the Markets Committee of the MISO Board of Directors, RTO leadership credited relatively smooth operations to more open communication with members, market improvements and better data and modeling of risks than in past deep freezes.

"After a quiet December, weather-wise,

## What's Next

With January 2025's winter storms handled better than ever before, MISO is turning its attention to the dramatic ramping needs it would require in a similar situation 20 years into the future.

we had a very busy January," Vice President of Operations Renuka Chatterjee

told board members. "We always talk about how more days are going to get interesting, and here we are."

Chatterjee said the snow that fell over Little Rock and New Orleans in early January was unusual for the footprint.

But Chatterjee said MISO was able to predict risks appropriately during the first bout of icy weather. She also said collaboration with members and the RTO's risk assessment and uncertainty model shone to predict the gigawatts of market products needed during late January's footprint-wide freeze.



From left MISO's Todd Ramey, IMM David Patton, IMM Carrie Milton, MISO's DL Oates and MISO's Renuka Chatterjee | © RTO Insider LLC

The Jan. 20-22 storm was one for the books in MISO South; the region hit an all-time, 33-GW record for wintertime demand. (See MISO South Hit Record, 33-GW Winter Peak in Jan. Storm.) The larger footprint crested at a seasonal peak of 108 GW on Jan. 22 during an average 6.5 F temperature.

Chatterjee took a moment to reflect on how far MISO has come since the winter storms of early 2021 and late 2022. She said from Jan. 20-22, 2025, MISO experienced just \$1.5 million in uplift payments to resources. That's compared to the \$49 million in uplift payments incurred during a storm lasting Feb. 15-17, 2021, and a \$22 million tally from another storm Dec. 23-25, 2022.

Chatterjee said those results happened because MISO improved its operational awareness.

"I generally don't believe in luck. I believe in preparation," she said.

Chatterjee said she heard one operator in the control room during the storm remark that he moved from feeling "little confidence in the information and high stress" as he had in past years to being confident in MISO's information and experiencing less stress during winter storms.

"This is a huge improvement for MISO, and it speaks to how well their processes have evolved," Independent Market Monitor Carrie Milton said of MISO's reduction in uplift payments. She also said MISO achieved a "very impressive" decrease in out-of-market actions in the control room to manage congestion over the winter.

However, Milton urged MISO to trust its look-ahead commitment software more.

She said on Dec. 12, 2024, the look-ahead tool recommended calling up about 20 more units than MISO operators ultimately committed. Milton said if MISO had followed the extra commitment recommendations, it might have avoided having one transmission constraint in violation for more than nine hours, which racked up \$36 million in congestion costs.

**MISO** 

Milton also said in one February instance, MISO experienced a 30-minute contingency reserve shortage where prices temporarily shot to \$1,900/MWh. She again said MISO should direct operators to be more accepting of look-ahead recommendations.

IMM David Patton said he understood why operators might not perceive the look-ahead tool as an authority. He said the tool historically has not been as accurate as it is now, and MISO operators have long been under pressure to reduce costs and not overcommit resources. Now the tool is more precise, he said.

"So, it's a bit of a change in logic and process," Patton said, adding he was confident MISO would change course and accept the tool as the default more often.

Otherwise, the IMM reported that winter's real-time energy prices of \$41.08/MWh were 31% higher than last winter on rising gas prices. Milton said the historically low gas prices of 2024 vanished on sustained cold weather across the country.

# MISO Priming for Steep Ramping Needs

Looking ahead, MISO predicts a 99-GW peak during the spring. Chatterjee said MISO will enter the season with twice as

much solar as it had last year. MISO was peaking at about 11 GW of solar in February. She said MISO likely will manage an average 9 GW in ramping needs over March, with requirements set to intensify.

"This is going to be new for us, so I expect some lessons learned," Chatterjee added.

Executive Director of Markets and Grid Research DL Oates said rising operating uncertainty is an inevitability for MISO. He said MISO navigated the winter with about 200 GW of resources, including 41% gas, 24% coal and 16% wind. However, by 2043, MISO anticipates overseeing a 515-GW fleet with 18% gas, 4% coal, 35% wind and 27% solar.

Oates said while MISO experienced an approximate 11-GW deviation between MISO's initial forecasted needs and what generation ultimately proved necessary during the late January storm, that unknown could widen to more than 40 GW within 20 years.

Oates said by 2043, MISO could require a net load ramp of 100 GW on a sunny day. He said on those days, new energy storage assets would need to charge during the day to be ready to discharge as the sun goes down. He also said MISO must ensure that reserves are deliverable on its transmission system.

Milton said MISO already needed more than 20 GW in ramp demand Jan. 19 as the sun set, which ultimately led to higher prices and PJM furnishing imports.

"It's important that MISO continue the good work that they're doing, that DL talked about," she said.















# MISO Intent on Answers as to IMM Role in Tx Planning

By Amanda Durish Cook

NEW ORLEANS - MISO confirmed it's taking steps to get answers from FERC about the role the Independent Market Monitor should have — if any — in transmission planning.

During March Board Week, MISO Director Trip Doggett said the board was put in a tough position, with some members agreeing the IMM should monitor transmission expansion from an independent perspective and others vehemently opposed to the Monitor critiquing MISO's planning in addition to market operations.

MISO board members on Feb. 14 ultimately passed a motion directing MISO to ask FERC whether it's appropriate for the IMM to analyze the value of proposed transmission. In the meantime, MISO is to freeze any funding for independent scrutiny of transmission planning by the IMM until MISO gets clarity. (See Board Orders MISO to Get Answers on IMM's Role in Tx Planning.)

The board drew up the motion following IMM David Patton's vocal opposition to MISO's nearly \$22 billion long-range transmission portfolio over 2024.

"We felt like being responsible for the budget, we really couldn't let the IMM continue until we have clarification," Doggett explained at the March 11 Markets Committee of the MISO Board of Direc-

During a March 12 Advisory Committee meeting, MISO counsel Jacob Krause said MISO would pose the question to FERC sometime in the second quarter. MISO may file a petition for a declaratory order with FERC; the RTO has not confirmed that's the route it will take.

Attorney Ken Stark, representing MISO's end-use customers, said he found MISO's intent to file problematic. Some state regulatory staff also have expressed concern over the appearance of MISO effectively shutting the IMM out of planning discussions for the time being.

During a March 13 MISO board meeting, Organization of MISO States President and Minnesota Public Utilities Commissioner Joseph Sullivan said a few requlators have strong opinions about MISO temporarily withholding funding. He said OMS is following developments closely.

"We have agreed to disagree on that topic," MISO Board Chair Todd Raba said, though he added MISO was working with FERC and the IMM to draft a filing.

Patton did not comment on the future filing over the course of Board Week,

## What's Next

It could take MISO months to get an answer from FERC on whether the IMM's monitoring role should be limited to markets, not transmission construction.

though in the past he's said repeatedly that markets and transmission planning cannot be viewed in isolation because of their interdependence.

At a Feb. 25 OMS board meeting, Wisconsin Public Service Commissioner Marcus Hawkins said it was "surprising how the process played out," with MISO leading the charge to stop payments to the IMM on transmission planning assessments. He pointed out that states and MISO are free to disagree with the Monitor's independent views.

"[It] seems ironic that the only time that MISO has ever brought this up is when the IMM disagrees with its transmission planning," said Bill Booth, consultant to the Mississippi Public Service Commission. He questioned whether MISO was trying to "silence" its IMM. ■



MISO Markets Committee of the Board of Directors in session March 11 at The Westin New Orleans | © RTO Insider

## RTO Insider

# **Chang Encourages MISO to Mobilize on Load Growth**

By Amanda Durish Cook

NEW ORLEANS — FERC Commissioner Judy Chang delivered remarks on the importance of meeting ballooning load at MISO Board Week.

Chang, who made an unscheduled appearance March 13, said the pace and size of recent load growth could "threaten the reliability of our grid."

"We have to meet this event. We have no choice," she told MISO leadership and members.

Chang said she's focused on solving load growth collaboratively, competitively and within the markets. She said she would "take very seriously the cost issue affecting ratepayers" while ensuring necessary infrastructure can be built.

Chang characterized ever-increasing load as an opportunity, while warning it might come with "a lot of headaches."

She also called MISO's regional transmission planning process "a model for the rest of the country" and a cornerstone to meeting the needs of the coming decade.

"Thank you for being a leader in this area," she said.

"We're seeing significant load growth in the South and up into the Midwest in our footprint," MISO CEO John Bear said following Chang's brief remarks.

Bear said MISO's yearlong pause in long-range transmission planning to recalibrate its 20-year planning futures is



FERC Commissioner Judy Chang at the March 13 MISO board meeting | © RTO Insider

necessary to contemplate the effect load growth will have on the footprint and how transmission needs might escalate. (See MISO Aims for 4 New Tx Planning Futures in 9 Months.)

During a March 12 strategy update, Senior Vice President Todd Hillman said MISO is concerned primarily with the pace of generation coming online and going offline in the footprint combined with the unprecedented load growth.

Hillman said MISO expects its solar fleet to double every year from now until 2028, when it predicts it will have 41.7 GW of panels. He noted that nameplate solar capacity already has doubled since the beginning of winter, when it was 6 GW.

Hillman said that dominant renewable energy mix could leave MISO with ramping needs as high as 100 GW on some days by 2044. Over that time frame, MISO could experience anywhere from 1.6 to 2.7% compound load growth annually.









# MISO Members Grapple with 54 GW in Incomplete **Gen, Predict Storage Expansion**

Ry Amanda Durish Cook

NEW ORLEANS - MISO members haven't landed on easy answers in getting the approximately 54 GW of unfinished generation that has cleared the interconnection queue online sooner.

MISO's Advisory Committee convened March 12 during Board Week to focus on the footprint's lagging generation projects and how future delays could be prevented. (See MISO Members to Explore Ways to Rev Up Stalled Generation Builds.)

Despite the focus on commercial operation delays, members agreed later in the meeting that energy storage will eventually flourish in the footprint.

Illinois Commerce Commissioner Michael Carrigan said some increased transparency from MISO about the challenges in getting generation online would be helpful. He said he appreciated the RTO's new reporting on the status of approved projects' commercial operation dates but said more detail on the delays would be valuable for stakeholders.

Wisconsin Public Service Commissioner Marcus Hawkins said he has observed delayed projects inch past their original budgets into cost overruns. "So, ratepayers are affected by these delays."

Multiple stakeholders also said the delays are set to affect states' resource plans.

Clean Grid Alliance's Beth Soholt said states and load-serving entities might consider speeding up their procurement timelines or consider changing their permitting processes. She said that she, like many, "underappreciated" how decisively the COVID-19 pandemic upended the generation development cycle. Soholt said some developers struggled with virtual meetings while land agreements languished without construction. "There's still a hangover there."

Soholt also noted that MISO has introduced several rule changes in its interconnection queue over the last few years, which may have some developers scrambling.

"Interconnection customers have been living by the rules that MISO has set," she

Hawkins suggested that the full effect of the RTO's latest rule changes — the stepped-up fees, automatic withdrawal penalties, more rigorous proof of land rights and annual megawatt cap — have

## What's Next

MISO and members will continue to try to get some of the 50-plus GW in unfinished generation connected to the system in the near term. On the long-term horizon, both agree on a proliferation of new energy storage.

yet to settle in. Hawkins said he thinks projects that are processed in the stricter environment will arrive better vetted. However, he said, stakeholders might have to accept that the energy transition may be interspersed with failed plans for generation projects.

"I think this just might be some of the new normal ... this presence of stalled or delayed resources," Hawkins said.

Soholt said that while a lot of the responsibility for delayed projects is "rightly" on interconnection customers, she asked for a dialogue with transmission owners on what can be done about their own staff shortages and supply chain woes that grind network upgrades to a halt.

"All it says is, 'TO Delay.' So, can we get more granular?" Soholt asked of TOs' reports to FERC. She also requested that more light be shed on how TOs prioritize construction of network upgrades. She said interconnection customers don't know enough about what causes network upgrade bottlenecks.

Pelican Power's Tia Elliott suggested that stakeholders and MISO create a method to match existing projects in the queue to a nearby LSE's forecasted needs.

The Union of Concerned Scientists' Sam Gomberg asked if it was worth examining the RTO's generator interconnection agreement contracts to see if there are any impediments or out-of-date language.

Alliant Energy's Mitchell Myhre said MISO's proposed resource addition lane for its queue should help get projects



MISO Advisory Committee in session March 12 at The Westin New Orleans | © RTO Insider





CGA Executive Director Beth Soholt speaks (background) as NextEra Energy's Erin Murphy takes notes | © RTO Insider

online faster. (See MISO Says Queue Fast Track Design Settled, Ready for FERC.) The RTO is set to file that proposal imminently.

But Gomberg said he did not see how an express lane in the queue would keep those projects from running into the same "buzz saws" of delays that plague projects in the traditional queue.

Soholt said MISO should have been focused on its existing queue all along instead of introducing "chaos" with a fast lane, in which projects will need transmission capacity alongside the projects in the regular queue.

At a meeting of the MISO Board of Directors' System Planning Committee on March 11, Aubrey Johnson, the RTO's vice president of system planning and competitive transmission, said members have recently been picking up the pace on generation additions despite the delays. He said members managed to add a record 7.5 GW in nameplate capacity in 2024, up from 5.6 GW in 2023 and 3.5 GW in 2022. In the first half of 2025, the RTO expects to have 5 GW in new nameplate capacity. Members have added 1.4 GW in nameplate capacity since the beginning of the year.

The interconnection queue contains 308

GW across 1,695 projects; 145 GW of that is solar generation.

Johnson also said he hopes the recently approved megawatt cap on annual entrants in the queue ends the "mad rush" of projects in recent years and leads to more thoughtful development.

#### Storage in the Wings

Later in the Advisory Committee meeting, members agreed that while storage might be a slow burn now, it will heat up in the 2030s.

MISO should contemplate new rules now, they agreed.

The RTO has just 164 MW of operational storage in its market, with about 2.7 GW approved and waiting to come online. Its interconnection queue contains 61 GW of nameplate capacity across 388 storage project proposals.

Executive Director of Markets Innovation and Strategy Zak Joundi said that although storage is in its "infancy" and growing modestly in the footprint, the RTO expects 12 GW of storage around 2030 to become 53 GW by 2043.

Gomberg predicted a rapid deployment of storage in the coming years and said



Zak Joundi, MISO | © RTO Insider

MISO needs to hammer out appropriate market rules to compensate the "versatile" resources that can supply capacity, as well as relieve transmission constraints.

Myhre said he anticipates the jump in storage will mimic the rise in wind capacity that began about two decades ago. He said megawatts will quickly multiply into gigawatts, with the RTO and stakeholders "learning together" to draw up participation rules.

Jim Dauphinais, representing a collection of MISO end-use customers, said that while battery storage will prove important, the current technology is still limited to about four hours of output.

"It doesn't give us the same thing as a generation with a sustained supply of fuel. ... While it can plug the gap, it can't solve the exit of large generation resources," he said.

Dauphinais also said storage technologies are only going to be pursued to the extent that they earn revenues. He urged the RTO to begin forming market signals.

NextEra Energy's Erin Murphy said storage developers right now may be hesitant to build in MISO because of the investment uncertainty over their accreditation values.

Joundi acknowledged that the RTO has work to do on modeling how storage would contribute to the grid. But he also said current storage volumes are low.

Murphy pressed MISO to begin modeling work even with a small sample size.

"We have to say, 'We're going to put a stake in the ground and begin," Murphy said. ■

# FERC Approves New York Transco's Formula Rate, **Sets ROE for Hearing**

Ry Vincent Gabrielle

FERC on March 11 approved including additional expense accounts in New York Transco's new company-wide formula rate over the protests of the New York Public Service Commission and New York City, but set its proposed return on equity for hearing and settlement procedures (ER25-885).

Transco was formed by Consolidated Edison, Avangrid, National Grid and Central Hudson Gas & Electric in 2014 in response to a state solicitation for transmission projects in case the Indian Point nuclear plant retired (which it did in 2021). The company's rate formula and ROE for those Transmission Owner Transmission Solutions (TOTS) projects were approved, but it has had to submit projectspecific cost recoveries for each new project since then.

The company proposed a new formula rate across all of its projects and a company-wide ROE of 10.9%. Included in the rate were expense accounts under FERC's Uniform System of Accounts related to general transmission operations and maintenance, including interconnection service studies.

Transco said these expenses were already included in its project-specific rates but under a different account for third-party vendors. It argued "that its significant growth suggests that it may be more efficient and cost effective if [it] were to open its own control center and utilize its own employees to perform these and other tasks." Other NYISO transmission owners have the accounts as part of their approved formula rates, it contended.



The PSC argued that the rate change had not been vetted enough to ensure it would not raise rates for consumers. New York City and Multiple Intervenors, a group of industrial consumers, jointly claimed that Transco was improperly booking the expenses in the third-party vendor account, allowing the company to improperly collect transmission operating expenses via its formula rate.

FERC dismissed these arguments. In response to the PSC, FERC noted that Transco was not seeking to raise its rates through the new accounts, but to change the accounts under which certain expenses are booked. "We find no evidence in this record to conclude that this change will necessarily lead to cost increases," it said.

The commission also said that the city and Multiple Intervenors' concerns were beyond the scope of the proceeding. "Challenges to costs included in the

formula rate may be raised in the annual update process in accordance with New York Transco's formula rate protocols," it

FERC found that Transco's proposed base ROE was not demonstrably just and reasonable and set the matter for hearing and settlement judge procedures.

The company said the new ROE would apply to its existing transmission assets, including TOTS, and any future projects it develops and owns. This excludes the Propel NY Energy project, in development with the New York Power Authority, because its cost recovery is the subject of a separate settlement agreement.

Transco submitted testimony from an expert witness, which determined the zone of reasonableness to be 9.08 to 12.72%, resulting in a 10.9% midpoint. For comparison, Transco's ROE for TOTS is 9.65%.

#### Northeast news from our other channels



NY Sells First Build-Ready Site for Renewables





OSW Critics Petition US Supreme Court for Vineyard Wind 1 Review

Net Zero Inside

# PJM Market Monitor Publishes Mixed Views in Annual Report

By Devin Leith-Yessian

PJM's markets provided reliable service in 2024, but tightening supply and demand are laying bare design flaws that have inhibited the competitiveness of the RTO's markets, the Independent Market Monitor wrote in its 2024 State of the Market Report on March 13.

During a press briefing ahead of the publication of the report, Monitor Joe Bowring detailed several drivers behind the total price of wholesale power increasing 4.6% in 2024. Those include transmission service costs increasing from \$10.7 billion in 2023 to \$11.8 billion in 2024 and dayahead energy costs going from \$23.9 billion to \$26.2 billion.

The real-time load-weighted average LMP was \$33.74 in 2024, an 8.6% increase that Bowring largely attributed to PJM improperly applying the transmission constraint penalty factor (TCPF). He said that when lines are close to being overloaded, RTO staff will reduce their ratings by 5% in the security-constrained economic dispatch software, which leads to the TCPF being triggered more frequently and pushing prices to the \$2,000/MWh cap. That practice, he said, accounted for \$3.01 of the average LMP and 52.4% of the increase in 2024. Ancillary service redispatch costs contributed an additional 31.2%, and higher fuel and consumable costs accounted for 18.9%.

PJM spokesperson Jeff Shields said the RTO is reserving its comments on the report for its formal response. Wholesale consumer costs are also set to the discussed at the Public Interest and Environmental Organizations User Group

# **Why This Matters**

The PJM Monitor celebrated several recent changes and ongoing developments, but it laid out several recommendations for making the energy and capacity markets more competitive.

meeting March 20.

The report found the energy market was overall competitive and effective, though increased ownership concentration in the local market led it to not be competitive, and the aggregate market was only partly so. In the more granular markets, the Monitor wrote that transmission constraints can create opportunities for market power. Market participant behavior was competitive, the Monitor wrote, with marginal units typically making offers close to their marginal costs — though some economic withholding was identified both under normal market conditions and at high demand.

The report said market sellers have been able to avoid being mitigated to their cost-based offers by submitting inflexible parameters or positive markups, an issue it said had LMPs. It also argued there are no mitigation protections in the aggregate market and that the application of market power rules in the local market need improvement. It recommended that PJM expeditiously implement its proposal to schedule any resources that fail the three-pivotal-supplier market power test on their cost-based offers. (See "Schedule Selection Formula Endorsed," PJM MRC Briefs: July 24, 2024,)

Bowring noted another of the Monitor's recommendations is being pursued by PJM in a joint package of proposals that would revise how uplift and deviation charges are assessed. It would prevent resources not following dispatch from receiving uplift payments and introduce a Tracking Ramp Limited Desired MW metric looking at how resources respond to instructions over time. (See "First Read on Proposal to Overhaul Uplift," PJM MIC Briefs: March 5, 2025.)

#### **Capacity Market**

The Monitor's outlook on the capacity market was dimmer. Overall, aggregate and local market structure was determined to be noncompetitive, as was participant behavior. The report faulted PJM's rollout of marginal effective load-carrying capability for resource accreditation; resources categorically exempt from the requirement that market



Monitoring Analytics President Joe Bowring | © RTO Insider

sellers offer into Base Residual Auctions withholding their capacity; gas generators being capped at their summer ratings; resources operating on reliability-must-run contracts not being required to offer into the market; and a maximum price set at the gross cost of new entry rather than 1.5 times net CONE.

The Monitor said the ELCC paradigm adds risk and volatility to the capacity market and recommended revising the model to use unit-specific data; match supply and demand in every hour of the year; and recognize actual unit performance and availability, rather than modeling performance simulated on data from a limited number of past performance assessment intervals. During the Critical Issue Fast Path process in 2023, the Monitor's proposal to increase the granularity of the capacity market centered around evaluating resources' ability to deliver capacity in every hour. Unit-specific accreditation remains a topic of discussion at the ELCC Senior Task Force. (See "Monitor Proposes Hourly Model with Annual Pricing," PJM Stakeholders Finalize CIFP Proposals Ahead of Vote.)

While the Monitor lauded FERC's Feb. 20 approval of a PJM proposal to eliminate the categorical must-offer exemption for intermittent and storage resources, it faulted an element of the package allowing market sellers to request a unit-specific offer cap set at a unit's Capacity Performance quantifiable risk value without any net revenue offset. In



comments on the filing, it argued that not accounting for energy and ancillary service revenues in the offer cap would undermine the purpose of the capacity market: to provide the missing money resources require to be available as capacity (ER25-785).

While supply and demand are tightening, Bowring said capacity prices in the 2025/26 BRA were double what would reflect a competitive offer under the market conditions. He attributed much of that to the exclusion of intermittent, storage and RMR resources from the supply stack, as well as the capping of gas generators at their summer ratings. Given that the majority of reliability risk is now concentrated in the winter, when gas units may perform better, he argued that as much as 20% of gas capacity is not recognized. (See PJM Market Monitor Releases Second Section of 2025/26 Capacity Auction Report.)

Bowring expressed support for an agreement PJM reached with Pennsylvania Gov. Josh Shapiro to set the maximum capacity clearing price at \$325/MW-day, which would be roughly in line with the Monitor's recommendation that the maximum price be defined as 1.5 times net CONE. The inclusion of a \$175/MW-day price floor, however, could distort market outcomes, he said. (See PJM Presents Capacity Price Cap and Floor to Members Committee.)

Bowring said market signals cannot incentivize new generation without changes to PJM's interconnection planning processes. He said the Monitor strongly

supports the RTO's Reliability Resource Initiative, which FERC approved to allow 50 projects ranked on their capacity contribution and in-service dates to be added the Transition Cycle 2 (TC2). The initiative's goal of expediting resources that can quickly bring large amounts of capacity could be expanded by creating a permanent process that fast tracks new projects that would mitigate defined reliability needs. While Bowring said that could include general resource adequacy, it could also mitigate the need for transmission expansion and RMR agreements when generators retire. (See FERC Approves PJM's One-time Fast-track Interconnection Process.)

The synchronized reserve market and its regional elements were determined to be noncompetitive because of ownership concentration in the Mid-Atlantic Dominion subzone. The market design was rated as flawed because of PJM unilaterally extending the operating reserve demand curve with a 30% adder in 2023. Deputy Monitor Catherine Tyler said the report includes new recommendations on reserves: Require that resources have automatic generator control (AGC) technology installed to be eligible to be synchronized and primary reserves, and eliminate the adder. During the March 6 Operating Committee meeting, PJM presented a plan to scale the adder back if reserve performance improves across three consecutive deployments, with the hope that changes to how it uses AGC during reserve deployments will improve performance. Tyler said that so long as not all reserve resources are required to have electronic communications installed, the impact of those changes will be muted. (See PJM OC Briefs: March 6, 2025.)

Bowring said that when the Monitor reached out to underperforming resources, it found that some were not getting the all-call phone call for as long as seven to eight minutes into a 10-minute deployment.

"The technology was outdated. ... There's been some improvements there, but not enough, and that requirement needs to be extended to everybody," he said.

Bowring also argued that significant amounts of congestion revenue that is owed to consumers is being diverted through financial transmission rights auctions. If load held recognized property rights over congestion, some customers might be willing to sell variable congestion in return for a more predictable payment. But without the ability to set strike prices or receive all revenues from a sale, that capability does not currently exist. Total congestion in 2024 amounted to \$1.75 billion, up 64.2% over the prior year, but 69.9% of that was paid to customers through auction revenue rights and the self-scheduled FTRs revenues offset.

"The goal of the FTR market design should be to ensure that customers have the rights to 100% of the congestion that customers pay. Customers have received \$4.6 billion less in congestion revenues than load should have received, from the 2011/2012 planning period through the first seven months of the 2024/2025 planning period, as a result of flaws in the PJM FTR market design," the Monitor said in the report's announcement.

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# Data Centers' Need for Speed Clashing with Plodding Pace of Regulation

By James Downing

WASHINGTON — Even if demand forecasts from new data centers are twice as large as what ends up being built, the growth is going to be at a scale where the power industry's regulations need to change to keep up with it, former FERC Commissioner Allison Clements told the Energy Bar Association's Northeast Chapter Winter Summit on March 12.

"You have a desire for AI dominance, and then you still have this slow-churning, difficult regulatory process to get through," said Clements, who since leaving FERC has started working part time at ASG, which helps build data centers.

The power industry is among the most regulated in the country, and anytime a decision has to be made or money spent, it has to go through at least couple of proceedings, she added. The exuberance around data center expansion and artificial intelligence's potential is starting to clash with that.

"The reality is, whether or not *Stargate* is actually going to deploy \$500 billion in the U.S. depends on all those regulatory check marks," Clements said. "Nobody has stood up in this moment of exuberance and said, 'I'm going to spend the money no matter what. That money is still going to go through each individual

# **Why This Matters**

Much about dealing with the expected growth in data center load remains unclear. Will the pace of generation and infrastructure projects keep up? How will regulators respond to conflicting priorities?

company and investment community, right? You're still going to have to check all these boxes."

In the next few years, as Orders 2023 and 1920 are only being implemented; new natural gas turbines are taking five years to get installed; and clean, firm power supply options are not commercially viable, the industry is going need to get creative to serve new large loads, Clements said.

"This isn't a technological problem; it's a political will, operational kind of structural/institutional issue," Clements said.

The existing grid can have its capacity maximized with new software and hardware; interconnections could be optimized across seams; and the industry

could look to the new large customers themselves to help, she added.

FERC Chair Mark Christie is split by the issue, with Clements saying he understands the concerns about holding other customers harmless from the infrastructure expansions required by large data centers but he also sees the other side. "He's very clear about the political pressure and the market pressure to get something done, to unlock the jam."

Co-location has dominated the issue at FERC so far, with Christie saying he wants a proposed rulemaking, issued at February's open meeting, to be finished quickly. (See FERC Launches Rulemaking on Thorny Issues Involving Data Center Co-Location.)

The nuclear plants in PJM were initially paid for by ratepayers, and many wound up being subsidized to keep running by their states as cheap shale gas ate into their profits, but Clements noted they are often in fully restructured states.

"Now those resources have found better commercial opportunities," Clements said. "The way the market, if it was a fully functioning market, should work is that we facilitate those opportunities."

Co-located load can either be served entirely by its unit or get backup from the grid, said Jennifer Mansh, Talen Energy senior vice president of regulatory affairs. While the concept has been pursued around PJM and in other markets, so far Talen's Susquehanna nuclear plant in Pennsylvania is the only one to have a co-located data center.

FERC rejected an expansion of that co-located data center when it launched a broader look at the issue, and Talen is challenging the rejection in court, she added. The industry should get more clarity as PJM and other parties respond to the rulemaking and its dozens of questions in the next week, Mansh said.

"There's an acknowledgement that we need to move urgently, but then you see so many questions about the detail of how this might work," said Carrie Allen, deputy general counsel for Constellation Energy, referring to FERC's co-location proceeding. "And I would just suggest



Former FERC Commissioner Alison Clements, who now works as a consultant, speaks at the EBA Northeast Chapter meeting March 12.  $\mid @$  RTO Insider



to the commission, if I had a chance to talk to all of them, that not every single one of those 39 questions needs to be addressed ... in order to figure out the broader contours of a policy framework."

FERC says it wants to move quickly on the issue, but so far that has not been the case, said Nicholas Gladd, partner at Wilson Sonsini Goodrich & Rosati. "I also think what's on their minds, based on that lengthy list of questions, is they want to do something big and great because they think this is a big problem," he added.

But not all of those questions need to be answered immediately, he said. Gladd would prefer to let the market work and bring its own solutions to the fore, rather than have too many top-down regulations around co-location. PJM is facing some resource adequacy issues, but throttling down large loads does not get to the markets' root problems, in addition to being bad for national security, he said.

"Given the capacity market has those flaws, and the interconnection queue has those flaws, the fact that there's new large growth is an opportunity, not a risk," Gladd said. "What better investment signal, or what better factor to indicate that an investor signal is robust, than hundreds of megawatts of load?"

After years of flat load growth in most of the country that came with many traditional, thermal generators retiring and replaced by intermittent renewables, the growth in data centers has exposed some underlying tensions on the grid, said Mike Twomey, senior consultant for Charles River Associates.

"This increased demand for electric service by data centers in many parts of the country is causing a lot of friction on issues that have been largely, I guess the right word is ... 'underground' for the last 20 years," Twomey said.

Some parts of the grid might even be incapable of serving massive new load unless they bring supply along with the new demand, he added. Many of the data center developers want to be supplied by clean energy, but if they need it, they will not hesitate to supply a facility with natural gas generation, Twomey said.

While some data centers can shop

around for the best places to plug into the grid, that will not be possible in every case because of issues around latency, said Michael Armm, managing director of BlackChamber Group. Latency refers to the lag that happens when data is sent across long distances, which requires proximity for some applications.

The need for latency has kept the sector growing in Data Center Alley in Virginia and nearby. Latency will be an even bigger issue as autonomous vehicles move beyond the pilot project stage.

"Thinking about autonomous vehicles, if you're at an intersection and there's four cars and one's going to start moving, the other one is going to react to it; you can't wait for that signal to go 500 miles away to a data center to ... go through an algorithm and [be] sent to the car next to you," Armm said. "That timing is much faster, so you're going to see more edge computing."

Autonomous vehicles could require smaller, distributed data centers sprinkled around cities that can handle a few blocks worth of traffic, he added.





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# **FERC Sides with SEEM Members After Rehearing**

# Commission Calls for Update to Market Agreement

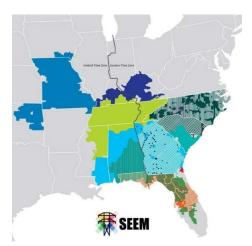
By Holden Mann

In a March 14 filing, FERC ruled that the Southeast Energy Exchange Market (SEEM) is compliant with the commission's orders and reaffirmed its acceptance of the SEEM Agreement in 2021 (ER21-1111, et al.).

However, commissioners also ordered SEEM's member utilities to update the market's manual to account for changing a key requirement and submit a compliance filing within 30 days confirming they have done so.

FERC's filing came after the commission requested briefings in June 2024 from SEEM's members and its opponents, in response to a 2023 order from the D.C. Circuit Court of Appeals remanding FERC's approval of the market. (See FERC Requests Briefings on SEEM After DC Circuit Order.) The commission wanted to hear arguments on:

- · Whether SEEM is a loose power pool.
- If so, whether and how SEEM "is consistent with or superior to the open-access requirements for loose power pools" in Order 888.
- If SEEM is not a loose power pool, whether and how it is superior to or consistent with the pro forma open access transmission tariff.
- Whether the market's non-firm energy exchange transmission service (NFEETS) should be considered a



The Southeast Energy Exchange Market covers all or parts of 12 states. | SEEM

non-pancaked rate.

- Whether NFEETS is "comparable to traditional transmission arrangements in bilateral markets."
- Whether entities with a source or sink outside of SEEM's territory could conform with the technical requirements of the market's matching platform.

Southern Co., Dominion Energy, Duke Energy and Louisville Gas & Electric, all members of SEEM, answered the commission's request in an August 2024 briefing that argued SEEM is not a loose power pool because NFEETS is not a discount or a special rate, as FERC previously determined. They further claimed that NFEETS is pancaked and that owning a source or sink connected to a SEEM transmission provider is necessary for SEEM to be technically feasible.

SEEM's opponents, a group of environmental organizations and renewable energy trade organizations, countered the following month with a filing arguing that the market's supporters focused on technical issues while ignoring the fact that SEEM "has walked and quacked like an exclusive power pool" since its conception. The opponents said SEEM violated Order 888 by systematically excluding independent power producers, while energy sales have been dominated by just a few utilities. (See SEEM Opponents Push Back on Supporters' Claims.)

In its March 14 filing, FERC agreed with SEEM's members that the market is not a loose power pool. Commissioners said that, based on information provided in the reply comments, NFEETS "cannot neatly be described as either pancaked or non-pancaked," but that the service "is best characterized as a pancaked rate because each SEEM transaction relies on the acquisition of NFEETS from each participating transmission provider."

The commission added that even if NFEETS did not disqualify SEEM as a loose power pool, the market still would comply with Order 888. FERC said though the order "prohibits participation requirements that are exclusionary based on geographic location or entity type, the commission does not read [Order 888] as

## What's Next

SEEM's member utilities are required by the FERC order to update the market's manual to account for changing a key requirement and to submit a compliance filing within 30 days confirming they have done so.

prohibiting reasonable technical requirements for participation."

These "reasonable technical requirements" include the source/sink requirement, FERC said, because it ensures that participants are close enough for NFEETS to function properly.

"These are not optional characteristics that constitute artificial barriers to participation," FERC said. "Rather, they are technically integral to the goal of SEEM — to efficiently match buyers and sellers of energy with transmission capability that is unused through any existing transmission services."

FERC did note SEEM members' statement that they have amended the market's business practices manual to allow utilities to use pseudo-ties to satisfy the source/sink requirement. Pseudo-ties are used to represent interconnections between two balancing authorities where no physical connection exists between the load or generation and the power system network.

The commission said the pseudo-tie option "significantly affects rates and services because it is the only option for such resources to participate in SEEM and use NFEETS." FERC said the terms of service for using pseudo-ties, and the process for evaluating such mechanisms, therefore must be included in the SEEM Agreement, and gave members 30 days to submit a compliance filing verifying the agreement has been updated with the option.



# FERC to Rule on SPP's RA Requirement for Winter

Preview of Upcoming Meeting Agenda Items Related to SPP

By Tom Kleckner

FERC is expected to rule on SPP's proposed tariff revisions adding a winter season resource adequacy requirement (RAR) during its monthly open meeting March 20 (*ER24-2397*).

The commission in November 2023 rejected the proposed revisions, finding SPP's proposal did not contain any requirement that the resources included in load-responsible entities' workbooks are expected to be available. FERC also said the grid operator had not demonstrated it is reasonable to permit LREs to rely on resources that are not expected to be available to satisfy their winter season RARs.

SPP filed a response June 28, asking for an effective date of Jan. 1, 2025.

The RTO's Board of Directors approved the winter season obligation in August

2023. (See "Board, RSC Endorse Winter Obligation," SPP Board/Members Committee Briefs: July 24-25, 2023.)

In February, the board approved a 38% planning reserve margin for the 2029 winter season. The 2029 summer season has a 17% PRM.

The commission also has placed on its agenda an order that may be related to requests for rehearing by MISO and Montana-Dakota Utilities of a 2024 order that denied their complaints over a North Dakota cryptomining facility's burdening a jointly owned flowgate with SPP (*EL24-61*).

MISO and MDU sought to have market-to-market coordination on the line lifted after the Atlas Power Data Center added a 200-MW load to an SPP load pocket in northwestern North Dakota. They maintain congestion management should not extend beyond SPP's respon-



FERC will consider adding a winter season resource adequacy requirement at its regular montly meeting on March 20, and will examine complaints over a North Dakota cryptomining facility burdening a jointly owned flowgate with SPP.

sibility. (See MISO Argues to FERC for 2nd Look at Crypto-stressed Flowgate Management.)

MISO in January filed a review petition with the D.C. Circuit Court of Appeals (25-1011) after FERC denied rehearing requests in November 2024, saying they "will be addressed in a future order." MISO says the "future order" has not yet been issued in any of the underlying proceedings.

FERC's agenda also includes:

- · A response to SPP's compliance filing in its effort to facilitate RTO membership for nine Western Interconnection entities. The commission found the grid operator's tariff for its Western RTO to be deficient in October 2024 (ER24-2185). (See FERC Issues Deficiency Letter for SPP's RTO West Tariff.) FERC asked for further clarifications on six issues, including transitioning the expansion members' transmission service request queues into SPP's existing transmission service study processes and how LMPs on both sides of the West DC ties will inform how the RTO optimizes the interties' use. SPP is trying to be the first grid operator with markets in both the Western and Eastern Interconnections. RTO West is scheduled to go live in April 2026.
- An order related to SPP's request to incorporate a mark-to-auction collateral requirement for its transmission congestion rights markets. The RTO asked for an effective date of May 1 to allow for enough time to add the collateral requirement before the TCR annual auction (ER24-2906).



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# **Company Briefs**

## Nel Hydrogen US Halts Plans for Hydrogen Gigafactory



Nel Hydrogen US last week announced it is pausing its plans to build

and operate a \$400 million gigafactory in Detroit.

The company accepted Michigan economic development subsidies totaling more than \$16 million for the new factory in September 2023. Federal awards, including \$29 million in tax credits, brought the subsidy total to \$200 million. However, the company disclosed in its 2024 annual report that construction had not yet started, and it has made no decision on when it may do so.

Nel specializes in electrolyzer technolo-

gy to produce renewable hydrogen from water.

More: Bridge Michigan

# Gates-funded Climate Group Slashes Staff



Breakthrough Energy, an umbrella organization funded by **Bill Gates** that works on a range of climate issues, last week announced deep cuts to its operations in an internal

memo.

Dozens of members were cut, including the organization's unit in Europe, its team in the U.S. working on public policy issues, and most of its employees

working on partnerships with other climate organizations, according to people familiar with the matter. Instead of trying to influence policy, Gates is now focused on building clean energy companies through Breakthrough Energy Ventures and the Breakthrough Energy Fellows.

More: The New York Times

# **Cooperatives Purchase Indiana Gas Plant**

Wabash Valley Power Alliance and Hoosier Energy, two nonprofit transmission cooperatives, jointly purchased the 720-MW St. Joseph Energy Center in Indiana.

The natural gas plant began operating in 2018. No financials were released.

More: WNDU

## **Federal Briefs**

# EPA Terminates \$20B in Biden Climate Grants



EPA Administrator **Lee Zeldin** last week said
he terminated \$20 billion in climate change
grants issued by the
Biden administration
under the Inflation
Reduction Act.

In a letter to the Climate United Fund, which received a \$7 billion grant under the program and has taken the agency to court to access that money, EPA said the termination was "based on substantial concerns" about the structure of the Greenhouse Gas Reduction Fund program, which was authorized by Congress in the 2022 law. The agency said it lacked "adequate" oversight of the funds and was concerned about "improper or speculative allocation of funds," as well

as "the circumvention and defeat" of its oversight abilities.

More: POLITICO; Grist

## SCOTUS Rejects an Effort to Block States from Suing Oil Companies

The Supreme Court last week declined to hear an argument that aimed to restrict states from suing oil companies for financial damage related to climate change.

The argument was brought to the high court by 19 Republican attorneys general who were trying to prevent other states from pursuing lawsuits against the oil industry. Those states have sued major fossil fuel companies for allegedly deceiving the public for decades about the effects of their greenhouse gas emissions.

Legal experts called the effort unusual because it took aim at state claims

before they had been addressed by state courts.

More: The New York Times

# EPA to Close All Environmental Justice Offices

The Trump administration intends to eliminate EPA offices responsible for addressing the disproportionately high levels of pollution facing poor communities, according to a memo from Administrator Lee Zeldin.

In a memo, Zeldin informed agency leaders that he was directing "the reorganization and elimination" of the offices of environmental justice at all 10 regional offices as well as in D.C. Last month, Zeldin placed 168 employees who work on environmental justice on leave, but a judge forced him to rehire dozens after finding the action had no legal basis.

More: The New York Times

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# **State Briefs**

## **ARKANSAS**

#### **Senate Passes Construction Cost Related Bill**

The Senate last week voted 23-9 to pass a bill that would allow a utility to charge ratepayers while construction of a plant is ongoing.

In the current model, the rate increase accompanying a new power plant would come after the project was completed. Proponents say the change would lead to an incremental increase in rates over time instead of a sudden and more significant rise under the current model.

More: KARK

## **COLORADO**

#### **PUC Approves Black Hills Rate Increase**



The Public Utilities Commission last week approved **Black Hills Corporation** a \$17 million rate

increase for Black Hills Energy.

The increase will raise the average residential monthly bill by \$7.40 (7%) per month. The company originally sought a \$37 million increase.

More: The Colorado Sun

# **LOUISIANA**

### **Entergy to Sell Natural Gas Networks to Delta Utilities**

The Metro Council last week approved the sale of Entergy's natural gas franchise rights within Baton Rouge and New Orleans to Delta Utilities.

No financials of the deal were released. Customers can expect the switchover to Delta to take place in late summer.

The sale, which was first proposed in October 2023, had already been approved by the Public Service Commission and the New Orleans City Council.

More: Greater Baton Rouge Business Report

# MISSISSIPPI

#### **Gas Explosion Injures 3 Workers**

A gas explosion in Lee County last week injured three utility workers and left 20,000 without gas service.

Officials reported that a group of workers were attempting to repair a gas leak the morning of March 12 when the line exploded.

The repairs process was expected to take multiple days as technicians worked to restore service.

More: SuperTalk Mississippi

## **MISSOURI**

### Ameren Makes Long-term Plans to **Build New Nuclear Plant**



Ameren's long-term planning documents submitted to the

Public Service Commission, updated in February, the utility is looking for ways to build more nuclear power plants in the state

Ameren, which said it will evaluate available nuclear technologies for the next few years, would like to add 1,500 MW of nuclear power by 2045. In addition to nuclear, the company plans to invest in new gas, solar and wind generation, as well as battery storage.

The five-year plan comes with a \$16.2 billion cost.

More: Columbia Missourian

## **House Passes 'Construction Work in Progress' Bill**

The House of Representatives last week voted 96-44 to approve a bill that would allow utilities to charge customers for new natural gas plants before they are built and operating.

Another part of the bill would allow utilities to implement rates based on estimates for future years rather than actual costs. It would also extend the state's hot and cold weather rules to prevent utilities from shutting off service during a 72-hour window of extreme weather instead of the current 24 hours.

More: Missouri Independent

# **NORTH CAROLINA**

## Senate Passes Bill to Remove 2030 Carbon-reduction Deadline for Duke

The Senate last week voted 31-12 to pass a bill that would repeal carbon-reduc-



tion requirements for Duke Energy to achieve by 2030.

A law enacted in 2021 requires utilities to meet two carbon-reduction targets; Duke must reduce emissions by 70% from 2005 levels by 2030 and became carbon neutral by 2050. The Senate's bill would eliminate the 2030 deadline while still mandating that Duke achieve carbon neutrality by 2050.

More: Winston-Salem Journal

## OREGON

## **PGE Can Cut into Forest Park Following Decision**



Portland hearings officer Marisha Childs last week ap-

proved Portland General Electric's plans to cut through nearly 5 acres of Forest Park, the city's highly protected urban forest.

PGE plans to log about 400 trees within a section of forest to relocate an existing power pole, install two new poles and wire 1,400 feet of transmission lines. The company said the project is needed to meet future energy demands.

Childs found the city's analysis against the project "confounding and inconsistent" with local environmental and land use rules. PGE demonstrated that energy demands make this project necessary, Childs argued, and cutting into Forest Park is "the best practicable" and "least environmentally detrimental" option.

More: OPB

## **SOUTH CAROLINA**

# **PSC Approves Ingka Group Solar**

The Public Service Commission last week unanimously approved a 249-MW solar farm in Williamsburg County.

Netherlands-based Ingka Group, the parent of furniture retailer Ikea, plans to build the solar array on about 4,700 acres of undeveloped land.

The facility is expected to be online by the end of 2028.

More: The Post and Courier

## **SOUTH DAKOTA**

# Summit Carbon Pauses Pipeline Permit Application



Summit Carbon last week filed a motion with the Public Utilities Commission

to suspend its carbon dioxide pipeline permit application and extend the commission's deadline to issue the permit "indefinitely."

The decision comes after the Legislature passed a bill prohibiting developers from using eminent domain to acquire land to construct or operate a carbon dioxide pipeline. The legislation goes into effect July 1.

Summit Carbon said the legislation affects the company's ability to perform land surveys.

More: Argus Leader

## **VIRGINIA**

# Judge Suspends Own Order Voiding RGGI Withdrawal



Floyd County Circuit Judge Randall Lowe last week suspended his own

order while the attorney general appeals his previous ruling that the state withdrew from the Regional Greenhouse Gas Initiative illegally.

In an opinion issued in November, Lowe found that the state's decision to leave RGGI was "unlawful, and therefore null and void." The attorney general's office defended the move, describing RGGI as a "hugely expensive" endeavor that failed to meet its mission.

More: The Roanoke Times

## **WYOMING**

## Gov. Signs Bill Requiring Utilities to Submit Wildfire Mitigation Plans



Gov. Mark Gordon last week signed a bill into law that will require public utilities to prepare and submit wildfire mitigation plans to protect them from wildfire-related

liabilities

The mitigation plans would need to be submitted to the Public Service Commission, which would then allow for public input and the possibility to reject plans if they are not stringent enough. It would also require periodic updates on the plans. Any plan approved by the commission would be considered "reasonable and prudent preparation for wildfire risk."

More: Cowboy State Daily

## National/Federal news from our other channels



ACEEE Recommends Winter Discounts to Spur Heat Pump Adoption

NetZero Insider



Dragos Outlines Voltzite Electric Utility Breach





NERC Cold Weather Standard Commenters Say More Work Needed





SERC Projects Shrinking Margins in Next Decade



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NJ Releases Electrification-focused Energy Master Plan





Ahead of Crossover Day, Energy Bills Stalled in Md. General Assembly



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