RTO Insider

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

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March 30, 2021

ACORE: Lack of Interregional Tx Planning Slowing Wind, Solar Development

By Michael Yoder

A lack of interregional transmission projects is stymieing the growth of renewable resources in SPP, MISO and PJM, according to a new report released Thursday by the American Council on Renewable Energy.

The report, compiled by Concentric Energy Advisors, was based on interviews with stakeholders and other key market participants in the RTOs and is meant to identify improvements to transmission planning and increase renewable resource deployment.

The current local, regional and interregional planning processes in place are not optimally designed to identify the best methods for getting renewable resources to the market and on the grid, the report said, emphasizing the need

for implementing transmission planning reform and moving toward a "centrally coordinated and integrated" planning process.

"America's transmission system is in need of a 21st century makeover if we're going to have any shot at achieving the level of renewable deployment necessary to address our climate challenge," ACORE CEO Gregory Wetstone said. "The current transmission planning processes in these regions are not working to deliver the affordable clean energy that states,

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MISO Execs Defend Need for Long-range Tx (p.24)

Robert Rosenthal.

counsel to the New York Public Service

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MOPR causes high-

er capacity prices,

Strong Bipartisan Support for Advanced Nuclear at Senate Hearing

Industry Says US Has Lost Global Market Leadership to Russia and China

By K Kaufmann

Developing countries in Africa and Asia are making deals with Russia and China to build nuclear reactors because the U.S. is not in the game. Russia has been dumping cheap uranium into the U.S. market, decimating domestic supply chains. Five more nuclear reactors, totaling 5.1 GW of electric power, are slated to close this year because energy markets do not pay for nuclear's value as carbon-free, reliable power.

The critical state of the U.S. nuclear industry

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Nuclear Key to Clean Energy Future, NEI Chief Says (p.10)

PJM MOPR in the Crosshairs at FERC Tech Conference

By Michael Brooks, Rich Heidorn Jr., Jason York and Michael Yoder

PJM's minimum offer price rule (MOPR) is living on borrowed time if the comments at FERC's technical conference on capacity markets March 23 are any guide.



FERC Chair Richard Glick | FERC

FERC Chair Richard Glick and PJM CEO Manu Asthana both said the MOPR is not "sustainable" because it is frustrating state decarbonization efforts.

"We're causing consumers to spend billions of dollars extrain the name of trying to address

price suppression [by state-subsidized resources]. ... We need to figure out a better way, in large part because the future and the benefits of the RTOs are really at stake ... in the Eastern states," Glick said, noting that some states within PJM, ISO-NE and NYISO — the only regions with mandatory capacity markets — are considering withdrawing from the markets.



Robert Rosenthal, NYPSC | FERC

Power Act.

"We believe there's a need for different legal framework based on cooperative federalism and that FERC can get there by revising some

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Your Eyes and Ears on Climate Policy and Adaptation
Building & Transportation Electrification Federal & State Policy

See p.3

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ERCOT: In 'Better Position' for Summer Heat this Year



NYISO Challenges NYPSC to Improve Grid Expansion



Ohio Lawmakers Repeal Nuclear Subsidy for Energy Harbor



Rural Ohio Lawmakers Want Towns to Have Final Say on Renewables

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Editorial

Editor-in-Chief / Co-Publisher Rich Heidorn Jr. 202-577-9221

Deputy Editor / Daily

Deputy Editor / Enterprise

Michael Brooks 301-922-7687

Robert Mullin 503-715-6901

Art Director

Mitchell Parizer 718-613-9388

New York/New England Bureau Chief Jennifer Delony 603-320-7043

MidAtlantic Bureau Chief K Kaufmann 202-494-4386

Midwest Bureau Chief John Funk 216-316-5413

Associate Editor

Shawn McFarland 570-856-6738

Copy Editor/Production Editor Rebecca Santana 770-862-6004

CAISO/West Correspondent Hudson Sangree 916-747-3595

ISO-NE Correspondent Jason York 860-977-7830

MISO Correspondent

Amanda Durish Cook 810-288-1847

NYISO Correspondent Michael Kuser 802-681-5581

PJM Correspondent

Michael Yoder 717-344-4989

SPP/ERCOT Correspondent Tom Kleckner 501-590-4077

NERC/ERO Correspondent Holden Mann 205-370-7844

Subscriptions

Chief Operating Officer / Co-Publisher Merry Eisner 240-401-7399

Account Executive

Kathy Henderson 301-928-1639

Account Manager

Phaedra Welker 773-456-4353

Marketing Director

Margo Thomas 480-694-9341

RTO Insider LLC

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

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NetZero Insider: Your Eyes & Ears on Climate Policy and Adaption

NetZero Insider is live!

The only publication covering climate policy from inside the room in D.C. and the state capitals.

The Biden administration and half of the states in the U.S. have pledged to reduce their carbon emissions to net zero by the middle of this century, an ambitious goal that scientists say is needed to address climate change.

Meeting states' goals will require decarbonization and electrification on an unprecedented scale, trillions in spending and major changes

to nearly every sector of the state economies. particularly transportation and buildings.

Despite the high stakes, news coverage of these initiatives, particularly at the state level, is spotty. NetZero Insider will fill the void for businesses, attorneys, environmental organizations and other stakeholders. Our reporters in D.C. and the state capitals will provide

exclusive coverage of policymaking to adapt to climate change and reduce greenhouse gas emissions.

We go into the rooms to answer the questions: What approaches are working? Which are not? What's next?

The NetZero website is now live. Here are our most recent stories:

Conn. Bill Addresses Solar Siting in Farmlands, **Forests**

NESSBE Credits Passive Houses for Benefits Beyond **Environment**

Mass. Governor Signs NextGen Climate Bill

NC Microgrids Improving Grid Reliability and Resilience

BPU Supports NJ Wind Power Hub

NY Kicks Off 'Dynamic' Great Lakes Wind Study

Act on Climate Heads to RI Gov.'s Desk

Report Finds Va. State Agencies Lagging on Environmental Justice

Vt. Bill Seeks \$3,000 EV Incentive for Low-income Residents

Wash. Land Use Measure Nears Passage





ACORE: Lack of Interregional Tx Planning Slowing Wind, Solar Development

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businesses and consumers are demanding."

Report Findings

The report highlighted several key findings, including:

- A "centrally coordinated" planning process is needed to identify locations where "untapped" renewable resources are located. The planning would integrate "realistic estimates" of future renewable energy production in the RTOs and allow for advanced technology solutions.
- Interregional transmission planning should have either a national model that is "unified" among the RTOs/ISOs or have regional models with "sufficiently aligned planning objectives, assumptions, benefit metrics and cost allocation methodologies" to assess the benefits and costs of the transmission projects. Stakeholders told the analysts that using separate RTO planning models with varying methodologies causes issues in achieving transmission development.
- The "reasonable" expectations of renewable resource expansion should be integrated into future assumptions in transmission planning studies, including forecasts of

- storage additions to the system and the retirement of fossil fuel plants. Stakeholders cited under-forecasting of renewable energy resources in future assumptions as a "significant obstacle" to transmission development.
- Benefit metrics used to assess the comparable benefit of projects relative to costs should be expanded and standardized across the RTOs. Stakeholders said standardization of benefit metrics should be completed to promote interregional transmission development along the RTO seams.
- The planning models should reflect the expected real-time operations and economic dispatch of generation resources. Stakeholders voiced concerns over the ability of the legacy transmission planning models used by the RTOs to identify transmission solutions that will reflect the likely dispatch of resources.
- The competitive planning processes would benefit from more coordinated planning to identify places where renewable resources are located and create infrastructure solutions that address the optimal paths to markets. Respondents said the current competitive processes lead to little expansion as the transmission owners and RTOs have focused on local or reliability projects with

short time frames.

Cost allocations for generator interconnection upgrades should be shared with load or other interconnecting generators and based on fair allocations of benefits. Renewable project developers said they can't access the MISO, SPP and PJM markets because of the costs of network upgrades necessary for interconnection.

"This report shows that bigger-picture, coordinated transmission planning is critical to developing the kind of reliable power grid we need to support the growth of clean, affordable renewable energy going forward," said Abigail Ross Hopper, CEO of the Solar Energy Industries Association.

Report Opinions

Heather Zichal, CEO of the American Clean Power Association, one of the co-sponsors of the report, said the U.S. is lagging behind other nations in updating the grid to provide the proper infrastructure for the future.

"Transmission development may not sound exciting, but it is absolutely essential to an affordable, reliable and clean electric system," Zichal said. "American homes and businesses will win if we modernize our electricity transmission system by coming together to improve the planning and permitting process for these needed grid improvements."

Julie Lieberman, senior project manager of Concentric and the lead author of the report, said the findings identified the areas where transmission planning processes in SPP, MISO and PJM could be upgraded to better integrate wind, solar and battery storage projects currently under development in the RTOs.

Lieberman said the primary challenge to interregional transmission planning is the "lack of alignment between each RTOs' respective transmission planning frameworks." She said the different perspectives of the RTOs and the importance placed on decarbonization and renewable integration also contributes to the challenge of interregional planning.

"Of the market participants we interviewed, there was very little confidence that we could reach consensus across the RTOs and states and build the necessary backbone transmission framework to optimize renewable resources in the time frame necessary to meet our individual state clean energy goals," Lieberman said. "Most expressed that a centrally coordinated planning effort or national authority would be needed."



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PJM MOPR in the Crosshairs at FERC Tech Conference

Continued from page 1

first principles," he said.

Rosenthal said the commission should "revisit the purpose of the Federal Power Act, which was enacted to address a narrow jurisdictional gap resulting from a 1927 Supreme Court decision. To address this gap, Congress enacted the FPA in 1935 for a specific purpose: to provide FERC's predecessor the ability to regulate the interstate wholesale sales and rates of electric energy — not capacity."

Democratic Commissioner Allison Clements appears likely to provide a second vote for overturning MOPR in PJM, while Republican James Danly appears to be adamantly against doing so.



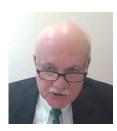


FERC Commissioner Allison Clements | **FERC**

Republican Commissioner Mark Christie, who joined the commission in January, or Commissioner Neil Chatterjee, who had pushed the controversial expansion of the MOPR in PJM when he was chair in December 2019. (See FERC Extends PJM MOPR to State Subsidies.) Chatterjee also supported a February 2020 ruling that narrowed the resources exempt from NYISO's buyer-side market (BSM) power mitigation rules in southeastern New York, which ordered the ISO to subject storage and demand response to a minimum offer floor. (See FERC Narrows NYISO Mitigation Exemptions.)

Chatterjee promised that he entered the hearing last week with an open mind, saying "I'm not wedded to the policies of the past."

But he insisted competition should remain central to any future rules. "We shouldn't overcorrect here," he said. "We can't lose sight of how successful our organized markets have been, not only in producing substantial cost



FERC Commissioner Mark Christie | FERC

savings for consumers but also ... for our energy future."

Although Christie did not opine on the MOPR, he indicated he would support changes that could make the capacity markets voluntary backstops instead of mandatory.



Clockwise from top left: FERC Chair Richard Glick; PJM CEO Manu Asthana; ISO-NE CEO Gordon van Welie; and NYISO CEO Richard Dewey | FERC

"After 15 years of this experiment ... we now have to ask ... does the reality of politics and rent-seeking [for subsidies] in a multistate RTO ... simply make it impossible for these administrative constructs to consistently deliver on the economic goal of least-cost power and ... accomplishing individual state policies?" Christie said. "If the reality is, they cannot ... is the most realistic path now for states to reclaim their authority and reclaim their responsibility ... for resource adequacy and chart their own course to achieve the resource mix they want?"

Danly said he was skeptical of suggestions that enhanced scarcity pricing or new ancillary services could provide the "missing money" to cover the revenue needs of all resources needed to serve loads.

"I hope that I'm wrong. But if I'm right, that means that we have to look to the cap markets to ensure that we get the proper revenues to provide the proper compensation to keep the required dispatchable resources in the market."

Glick said he wants the commission to move quickly on the MOPR, even if other capacity market changes take longer to achieve. He indicated he will seek to replace or eliminate the PJM MOPR in time for the 2023/24 Base Residual Auction in December.

Glick also said the commission would act unilaterally if necessary. "I think we should, to the extent we can, allow and enable the RTOs themselves and the stakeholders to come up with their own proposals [for] an approach that's different than the current MOPR rules around the country," Glick said. "To the extent

they don't come up with something, I think we have an obligation under the Federal Power Act to act where rates and terms in these markets are unjust and unreasonable. In my opinion, I've said several times before, they are certainly in PJM, and so, if for whatever reason PJM and the stakeholders aren't able to act, I think ... we need to do it for them."

NYISO: Confident in Stakeholder Process

NYISO CEO Richard Dewey expressed confidence that such intervention would not be required in his ISO, citing its Grid in Transition program to identify changes to energy, ancillary services and capacity market rules to accommodate the changing resource mix. He also said changes could result from the ISO's comprehensive mitigation review program to modify the BSM test to allow the entry of state-sponsored resources while still maintaining the price signal for dispatchable resources needed for reliability.

"I'm confident that New York's stakeholder process can generate effective solutions," Dewey said "I look forward to bringing some of those solutions to the commission in the coming months."

Few Defenders

Almost none of the 26 witnesses spoke in favor of the MOPR.

"MOPR is quickly becoming an orphan without an advocate," said Maryland Public Service Commission Chair Jason Stanek.

Abe Silverman, general counsel for the New Jersey Board of Public Utilities, said the MOPR



will cost New Jersey ratepayers \$300 million in excess costs in 2025, with excess costs of \$2 billion for all of PJM.

"I think the commission has the legal authority and the evidentiary record to tell PJM tomorrow to simply return to the tariff language that



PUCO Commissioner Daniel Conway | FERC

existed" before FERC's December 2019 ruling.

Ohio Public Utilities Commissioner Daniel Conway said FERC's claim that the expanded MOPR was needed because subsidized renewables were suppressing capacity prices was "too theoretical."

Impact of Removing MOPR

The second panel of the conference focused on how soon the MOPR could be eliminated, and how the timing of its elimination could affect energy and capacity prices.

There was a general agreement that getting rid of the rule would not result in severe price swings or threaten reliability in the short term.

Glick asked how quickly FERC would need to act for the RTO to proceed with its December auction with the elimination of MOPR. September, answered Stu Bresler, PJM senior vice president of market services. He added that "between now and when that process would play out, it would be important for us to get as much stakeholder interaction as we possibly could, because ... really robust stakeholder interaction is important to arriving at a durable, sustainable solution."

Joe Bowring, president of PJM's Independent Market Monitor, Monitoring Analytics, agreed with the general time frame, but he advised that there is a lot of preparation in the leadup to the auction. "So even if the order were not signed until [Sep-



PJM Monitor Joe Bowring | FERC

tember], it would be excellent to have a clear signal to the market that the rules are changing, because there's a lot of detailed work that people have to do before that," he said.

"I fully expect the existing MOPR to be eliminated," Bowring said, reiterating his position that removing it will have little immediate impact on the ability of most renewables to clear the market. Based on his unit-specific MOPR

reviews, he said, "we see a lot of renewable resources that are extremely competitive."

Because of its high price, offshore wind would be unlikely to clear with or without the MOPR he said.

Marji Philips, vice president of wholesale market policy at LS Power, cautioned that "you can't just rip the MOPR off without having a backup plan. ... Our view of the whole capacity construct needs to be reconsidered in light of the evolving grid. So what we'd like to see is a short-term fix that addresses this," and then "maybe a yearlong process that really looks at how we define resource adequacy."

Danly said he was concerned that without the MOPR in place, capacity prices would crash, leading "traditional" resources needed for reliability to shutter. He asked how those resources could be compensated to ensure reliability with the rule in place.

Multiple panelists had talked about the importance of valuing effective load-carrying capability, which they said would ensure inefficient thermal resources retire, while more efficient ones are maintained until they are no longer needed for reliability. Bresler signaled PJM's support for this approach in response to Danly's question.

But panelists also disputed the premise of Danly's question. They said that, in at least the short term, energy market revenues would be high enough to prevent mass retirement of resources. PJM really has until the glut of offshore wind resources being constructed comes online to find the missing money for the capacity market, they said. In that time frame, it was more important to get things right than rush a replacement construct.

"We haven't been sitting around for the past 15 years," said Ed Tatum, vice president of transmission at American Municipal Power. "There have been many changes to our energy rules. We've got fast-start pricing; we've got this [operating reserve demand curve]."



Roy Shanker, independent consultant | FERC

Consultant Roy Shanker was about the only witness to mount a defense of MOPR, and even he acknowledged it is a "crude tool."

But he said the capacity market would not remain competitive without it, expressing skepticism over the

idea of a "targeted" MOPR that only applied to buyer-side market power.

Shanker said it's not sustainable to maintain a "supply-side paradigm" with one segment of the market receiving no subsidies and another segment offering prices lowered by subsidies.

There is currently no "midpoint" between the full MOPR and cost-of-service regulation, Shanker said.

"In the middle, you're going to be stuck with somebody making subjective judgments and expressing their favoritism, picking winners and losers in one way or another," Shanker said.

Such a change would make the market "untenable," Shanker said. "I can't say two years or 10 years, but I know that's where we're going."

Elise Caplan, a consultant for the Sustainable FERC project, called for "extreme caution" in developing a targeted MOPR. Referring to buyer-side market power, she said, "I don't think we know what that looks like."

Ohio's Conway said that whatever changes are made must recognize that "reliability is not subservient to decarbonization."

"If we improperly value resources and, as a result, we end up having reliability problems or cost shifting, there's going to be hell to pay," Conway said. "And you can just look to Texas to see what's happened when not enough attention is paid to that primary point."

Other Capacity Market Issues

Witnesses said the shortcomings of the capacity markets don't end with the MOPR.

PJM's Asthana cited a need to strengthen qualification and performance requirements for capacity resources and to re-evaluate the appropriate level of capacity procurement.

Bowring spoke about the importance of defining key elements of the capacity market for it to work correctly and to function while accommodating state authority over the resource generation mix.

The Monitor called for addressing market power and tighter definitions of reliability. "If we're going to have the right mix and a reliable mix of renewable resources and traditional thermal resources, it's essential we define reliability and the reliability contribution of each resource correctly, otherwise we will end up building an unreliable system," he said.

Stefanie Brand, director of the New Jersey Division of Rate Counsel, said the states view capacity markets as a "backstop" and not the only way to ensure adequacy in the region. States are making policy decisions on what resources to rely on, Brand said, resulting in a capacity





Stefanie Brand, director of the New Jersey Division of Rate Counsel | FERC

market that doesn't determine entry and exit of generation units as they did in the past, she said.

D.C. Public Service Commission Chairman Willie Phillips said capacity markets can be useful, but he's concerned with the cost to customers. "If we cannot do this affordably,

we will not do it successfully," Phillips said.

New Jersey's Silverman said the markets won't be just and reasonable until they internalize the costs of carbon emissions.

ISO-NE: Markets Must Evolve

ISO-NE CEO Gordon van Welie said in his opening remarks that he believes that while capacity markets "ensure both the clean energy transition and reliability," he also acknowledges "they must evolve" to address concerns about state-sponsored resources that do not clear the market because of the MOPR.

Eliminating the MOPR, however, creates risk for investors in unsponsored resources because increasing numbers of renewable resources will tend to reduce energy prices, and capacity prices will fall as well without the rule.

"Accordingly, we believe it is important to identify market rule changes that will eliminate the MOPR and thereby give capacity created to sponsored resources, while appropriately compensating merchant resource investment for that higher level of risk," van Welie said.



N.H. PUC Commissioner Kathryn Bailey | FERC

New Hampshire Public **Utility Commissioner** Kathryn Bailey said she fears that eliminating MOPR would disrupt momentum toward her state's preferred solution, such as a Forward Clean Energy Market.

"So rather than just throw out the MOPR,

I think we need to focus on creating market reform that values carbon reduction, while at the same time, some market reform to compensate for the reliability that we need to shore up from the intermittent resources that we expect the system to add in the future," Bailev said.

Katie Dykes, commissioner of the Connecticut Department of Energy and Environmental

Protection, said her state is frustrated that New England's capacity market is thwarting state policies.

"Connecticut is not contracting for clean energy resources to manipulate the market; we're doing so because our state laws and



Conn. DEEP Commissioner Katie Dykes | **FERC**

policies require us to reduce emissions," Dykes said.

Connecticut is not receiving credit for contracted resources within the capacity market, she said. The Competitive Auctions with Sponsored Policy Resources mechanism has cleared only 54 MW of the "hundreds" that Connecticut and other New England states have contracted in recent years.

Dykes said capacity markets have the potential to shield consumers from volatile prices, and they have a role to play in the evolving electric sector. Still, they are also administrative constructs that require heightened scrutiny for the "assumptions and preferences that underlie them, and special consideration for the views and policies of the states these markets are intended to serve." ■

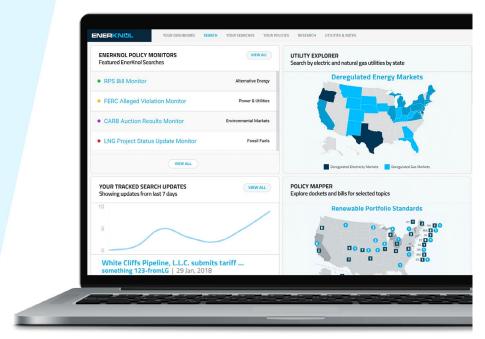
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Strong Bipartisan Support for Advanced Nuclear at Senate Hearing

Industry Says US Has Lost Global Market Leadership to Russia and China

Continued from page 1

- and its potential to provide clean, baseload power for domestic and global markets — were central themes for the Senate Energy and Natural Resources Committee's hearing Thursday on next generation advanced nuclear reactors. The hearing also offered a rare example of bipartisan agreement, with both Democrats and Republicans supporting a key role for nuclear energy as the U.S. moves toward a clean energy economy.

Bipartisan support provided \$75 million in the Energy Act of 2020, to fund the creation of a national uranium reserve, to help prop up the domestic supply chain. Federal dollars also furnished the \$210 million in grant money the Department of Energy awarded last year for its Advanced Reactor Demonstration Program, with the goal of having two advanced reactors online by 2027.



Sen. Joe Manchin | U.S. Senate

But, committee Chair Joe Manchin (D-W. Va.) said, "We still have a lot of work ahead of us. The public remains cautious about nuclear."

Citing figures from the International Energy Agency, he said, "If countries continue to allow nuclear reactors

to be prematurely shut down, it will be \$80 billion a year more costly to meet emissions goals. ... Lifetime extensions are cheaper than new builds and are generally cost competitive with other generation technologies. We cannot afford to let this carbon-free energy resource fade out."

Advanced nuclear reactors to be deployed over the next decade "will be safer, smaller and more efficient. [They] will generate less nuclear waste," said Sen. John Barrasso (R-Wyo.), the committee's ranking member. They will also open



Sen. John Barrasso (R-Wyo.) | © RTO Insider

"new market opportunities beyond the energy sector," he said, for example, in the production of chemicals and hydrogen.

The Natrium advanced reactor being devel-



TerraPower President and CEO Chris Levesque | U.S. Senate

oped by TerraPower one of two companies receiving DOE funds for demonstration projects — combines a sodium fast reactor and molten salt energy storage, said Chris Levesque, president and CEO of the Bill Gates-funded company. The combination of

generation and storage can "deliver 500 MW of power for five and a half hours," providing flexible, dispatchable power, said Levesque, one of four industry experts speaking at the hearing.

Addressing one of the key public concerns about nuclear, Levesque said, TerraPower's technology is also implicitly safer than traditional nuclear plants. "Unlike conventional reactors, Natrium operates at atmospheric pressure, and its operating temperature is hundreds of degrees below the boiling point of the coolant. This greatly reduces the likelihood and, importantly, the severity of any accident."



X-energy CEO Clay Sell | U.S. Senate

On the other critical issue of nuclear waste disposal, X-energy CEO Clay Sell said his company's small, fast-reactor technology uses fuel that is enclosed in "ceramic encased material. It is a tremendous fuel form, but it's an even better waste form. You

don't have to consider the kinds of degradation faced with metal-clad fuels. We never have to cool this waste in water; it's just air-cooled."

As the other company receiving DOE funding for a demonstration plant, X-energy can also store all nuclear waste on the plant site, Sell

A Dangerously Eroded Supply Chain

One of the main challenges for both traditional and advanced nuclear technologies is the erosion of a domestic uranium supply chain in the U.S. The need is particularly acute for the high-assay, low-enriched uranium (HALEU) that both X-energy and TerraPower's advanced reactors use.

Sell and others spoke about America's increas-

ing dependence on Russian-controlled sources of uranium, despite the 1 billion pounds of uranium in known and likely deposits across the U.S.



Scott Melbye, president of the Uranium Producers of America | U.S. Senate

"America is dangerously close to losing to losing our uranium fuel industrial base," said Scott Melbye, president of the Uranium Producers of America. "We lack a domestic enrichment capacity free of the control of foreign powers. The sole U.S. conversion facility in Illinois has been idle since

2017 and will restart operations in 2023."

Congress' funding for a national uranium reserve was intended to stimulate domestic production, and Melbye said the DOE should begin purchasing uranium for the reserve this year. He also called on Congress to ensure the reserve receives full funding of \$150 million per year for 10 years.

But progress on the uranium reserve remains slow, according to a spokesperson from the National Nuclear Security Administration, which is working with DOE on a plan for the reserve.

"NNSA is coordinating with [the] DOE Office of Nuclear Energy to establish first steps and to develop a long-term plan for the Uranium Reserve," the spokesperson said in an email to RTO Insider. More information would be shared as it becomes available, the spokesperson said.

The dependence on Russian uranium is also playing out in global markets where developing



Amy Roma, a founding member of the Atlantic Council's Nuclear **Energy and National** Security Coalition | U.S. Senate

countries in need of power are turning to both Russia and China for nuclear reactors to power their emerging economies.

"Russia uses nuclear exports as a tool to exert foreign influence and reap significant economic benefits, with a claimed \$133 billion in orders for foreign reactors," said Amy Roma, a founding member



of the Atlantic Council's Nuclear Energy and National Security Coalition. Meanwhile, China is estimating a \$145 billion pipeline for foreign projects, while the U.S. has been sidelined "with no orders for nuclear reactors abroad,"

"While the U.S. has ceded the current [global nuclear market], we have a chance to regain it when it comes to the next generation of advanced reactors where we hold a significant innovation edge," Roma said. "They are simple, scalable and safe and can be used for both power and nonpower applications. U.S. innovation, when properly supported, can stand up to state-backed competitors."

Unrecognized Value

The 94 nuclear reactors currently online in the U.S. provide about 20% of the nation's power, Sen. Barrasso said. The Tennessee Vallev Authority's three nuclear plants make up 42% of the electricity the agency delivers to rural communities across its seven-state service



TVA President and CEO Jeffrey Lyash | U.S. Senate

territory, CEO Jeffrey Lyash said.

TVA is currently working on a fourth reactor, the Clinch River plant, which it hopes to have online by 2032, Lyash said. But he added, "optimizing and extending the operating lifetime of our nuclear fleet [has] got to be a prima-

ry focus. We've already extended the lives [of TVA plants] from 40 to 60 years, and we will shortly extend to 80, perhaps 100."

The wave of plant closures across the U.S. is linked to the design of the wholesale markers, Lyash said, raising the controversial question of how to value the reliability and dispatchability attributes of a baseload fuel like nuclear. FERC voted down an effort by the Trump administration to provide higher compensation for baseload coal and nuclear plants in 2018.

On the state level, Public Service Enterprise Group has threatened to close its two nuclear plants in New Jersey if the state reduces the subsidies the plants now receive. (See PSEG Presses for Higher Nuke Subsidies.) And on Thursday, the Ohio legislature voted to strip billions in subsidies from the state's two nuclear plants. (See related story, Ohio Lawmakers Repeal Nuclear Subsidy for Energy Harbor.)

Lyash called on Congress to work with the states to find a solution. Nuclear "delivers reliability, cost effectiveness [and] carbon-free energy, and its dispatchability, fuel stability and security [are] unmatched, and, frankly, unrecognized in the organized markets," he said.

"We have short term-focused energy markets," Lyash said. "It's a market design that does not value the number one attribute that nuclear power gives, which is 24-7 baseload, emissions-free generation. As a result, you've seen good plants producing power at a very low cost shut down." ■





Nuclear Key to Clean Energy Future, NEI Chief Says

Korsnick Steps up Sales Pitch for the Role of Nuclear in a Net-zero World

By Hudson Sangree



NEI CEO Maria Korsnick | NEI

Nuclear energy is not only one component but "key" to the world's carbon-free future, Nuclear Energy Institute CEO Maria Korsnick said in her annual State of the Industry address March 23.

The pitch, from the head of the nuclear industry's main advocacy group, was the strongest statement yet in Korsnick's yearly speeches that nuclear should play a major role in a net-zero landscape.

In her address last year, Korsnick portrayed the nuclear industry as a good partner with renewables. (See NEI Emphasizes Cooperation with Renewables.)

This year, she sold it as the best-qualified leader.

"Optimism can be in short supply these days," Korsnick said. "When we talk about the future, we mostly hear about threats," including the "threat of a destroyed environment if we can't reduce carbon emissions. Those threats are real. But I'm here to tell you that they are also opportunities — and that nuclear energy is the key to seizing them. From good-paying jobs and carbon-free electricity to U.S. global leadership, nuclear energy is the source that can make it all work."

Korsnick said that when she spoke last year, there was widespread consensus that the

world needs to decarbonize while meeting growing demand, and that to avoid the worst effects of climate change, carbon emissions from generation would need to be nearly zero by 2050.

"Since then, utilities, state governments and the new Biden administration have made concrete commitments for getting there even sooner, by 2035," she said. "Fortunately, as we strive to meet those commitments, the U.S. leads the world in producing a proven, carbon-free, scalable source of electricity that enjoys bipartisan support. That source is nuclear energy. And there's no more serious debate: It's the key to making our climate commitments work."

Nuclear plants produce more than half of the carbon-free electricity in the U.S., the most of any resource category, Korsnick said. With 55 plants producing 800 million MWh, nuclear is now the second-largest source of electricity in the U.S., having surpassed coal for the first time ever last year, she said. Nuclear plants have generally operated at more than 90% of capacity, with greater reliability than intermittent renewables, she said.

Advocates of wind and solar often speak of the job-creation benefits of the switch to carbon-free energy. Korsnick said nuclear can also be a source of job creation, often for well paid union members. She cited the Vogtle 3 reactor in Georgia, scheduled to go online later this year, as a good example.

"At its height, the project employed 8,000 people, from electricians to engineers," she said. "Undeterred by a global pandemic, they're getting the job done. When completed, the two new Vogtle reactors will produce more carbon-free electricity than all 7,200 wind turbines in the state of California."

The next generation of nuclear will see new technologies such as small modular reactors and microreactors that can adjust their output, unlike the large baseline reactors of today, and can more easily work in combination with wind and solar, she said.

In addition, she said, a new breed of reactors "can bring clean electricity to hard-to-reach places where traditional reactors just don't make sense. These communities generally rely on expensive, carbon-emitting sources."

"From Alaska and Puerto Rico to parts of the developing world, nuclear can be a gamechanger," Korsnick said.

She noted that NuScale Power received approval from the Nuclear Regulatory Commission last year for its small reactor design. Proponents hope the design will help revive the nation's nuclear industry, while others remain skeptical given the declining costs of renewables and battery storage. (See NRC OKs NuScale's Small Modular Reactor Design.)

In Canada, she said, Ontario Power Generation has partnered with Ultra Safe Nuclear to build a micro modular reactor. And the U.S. Department of Energy's Advanced Reactor Demonstration Program will help small, advanced reactors get built, she said.

"These are exciting steps towards getting the next generation of nuclear online before the end of the decade." Korsnick said.









US Adds Offshore Wind Area off New York

Biden Administration Sets 30-GW-bv-2030 Goal

By Rich Heidorn Jr.

The Biden administration announced Monday it will open a new area between Long Island and New Jersey to offshore wind development and pledged to speed reviews of projects to meet a goal of 30 GW by 2030.

The new area and the 2030 target were among a flurry of announcements at an Offshore Wind Roundtable featuring Interior Secretary Deb Haaland, Energy Secretary Jennifer Granholm, Commerce Secretary Gina Raimondo, Transportation Secretary Pete Buttigieg, National Climate Adviser Gina McCarthy, and state officials from New York, New Jersey, Maryland, North Carolina, California and New England.

The new priority wind energy area is in the New York Bight, an area of shallow waters between Long Island and New Jersey. The Bureau of Ocean Energy Management will issue a proposed sale notice for the area, which will be followed by a formal public comment period and an auction late this year or early 2022.

The administration's 30-GW goal is slightly above the total of East Coast state OSW targets, although the states' timelines extend beyond 2030. In February, BloombergNEF predicted that the U.S. will become the third largest OSW market in the world by 2030, with a cumulative 23 GW. The administration said the U.S. could have 110 GW by 2050.

BOEM pledged to complete its review of at least 16 construction and operations plans (COPs) totaling 19 GW by 2025 and announced its intent to prepare an environmental impact

statement for Ocean Wind, Ørsted's 1,100-MW project 15 miles off Atlantic City, N.J. (See Developer to Use Union Labor for NJ OSW Project.)

The agency completed its final EIS for the 800-MW Vineyard Wind project off Massachusetts earlier this month. The 800-MW project, a joint venture of Copenhagen Infrastructure Partners and Avangrid Renewables, is on track to become the first large-scale OSW farm in the U.S., following the 30-MW Block Island Wind project. (See BOEM Releases Final Vineyard Wind Impact Statement.)

It also held public hearings in February following the release of its draft EIS for the South Fork project off Long Island, a 132-MW wind farm by a joint venture between Ørsted and Eversource Energy. (See BOEM Hears Public Support for South Fork OSW.)

Economic Benefits Cited

Although OSW is seen as central to meeting decarbonization goals, state officials and the Biden administration have primarily touted the projects for their economic development potential.

The administration said the economic gains won't be limited to coastal states, noting that workers in Alabama and West Virginia are supplying 10,000 tons of domestic steel to a Texas shipyard that is building the nation's first Jones Act-compliant wind turbine installation vessel for Dominion Energy.

The administration says the 30-GW target would generate more than \$12 billion in annual capital spending and result in more than

44,000 workers directly employed in OSW by 2030 and nearly 33,000 additional spinoff jobs in communities supported by OSW.

The Department of Energy "is going to marshal every resource we have to get as many American companies, using as many sheets of American steel, employing as many American workers as possible in offshore wind energy," Granholm said.

"This commitment to a new, untapped industry will create pathways to the middle class for people from all backgrounds and communities," McCarthy said.

Other Announcements

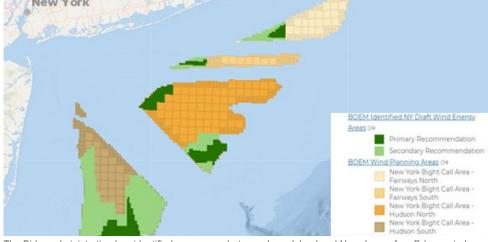
Also Monday, the Department of Transportation's Maritime Administration invited port authorities and others to apply for \$230 million in grants for port and intermodal infrastructure-related projects. The funding could be used to strengthen and modernize port infrastructure and create storage areas and docks for wind energy vessels.

For its part, DOE said it will offer \$3 billion in loans to OSW and offshore transmission developers and suppliers. The department has already loaned \$1.6 billion for OSW projects totaling about 1,000 MW.

The National Offshore Wind Research and Development Consortium (NOWRDC), created by DOE and the New York State Energy Research and Development Authority (NYSERDA) announced \$8 million in awards to 15 OSW research-and-development projects selected in a competitive process. The projects will focus on offshore support structure innovation, supply chain development, electrical systems innovation and mitigation of use conflicts. Created in 2018 with \$20.5 million from DOE and matching funds from NYSERDA, the fund has raised a total of \$47 million following contributions from Maryland, Virginia, Massachusetts and Maine.

The National Oceanic and Atmospheric Administration announced \$1 million in grant funding for research proposals to increase understanding of the effects of OSW on the ocean and local communities and economies.

NOAA also said it has an agreement with Ørsted to share physical and biological data in waters leased by the company. The agency said it hopes to reach similar agreements with other leaseholders to fill gaps in the science regarding ocean mapping and observing.



The Biden administration has identified a new area between Long Island and New Jersey for offshore wind development. | Northeast Ocean Data

CAISO/West News



CPUC, CAISO Take Steps to Improve Summer Reliability

By Hudson Sangree

The California Public Utilities Commission on Thursday instituted a *package* of demand response programs to promote sharper reductions in electricity usage during times of strained supply and ordered additional procurement to increase CAISO's planning reserve margin.

The orders are intended to head off capacity shortages this summer and next like those that plagued the state last year. They apply to the state's three large investor-owned utilities: Pacific Gas and Electric, Southern California Edison and San Diego Gas & Electric.

"This proposed decision directs PG&E, SCE and SDG&E to take up multiple actions to avert the potential need for rotating outages in the summers of 2021 and 2022 by adopting or modifying programs aimed at decreasing energy demand and increasing energy supply during peak demand and net-peak demand hours," CPUC President Marybel Batjer said in Thursday's voting meeting.

Shortages last summer occurred in the netpeak hour, after solar ramped down in the evening but demand remained high during heat waves.

Meanwhile, CAISO on Wednesday approved changes to market rules and bolstered resource adequacy in response to problems identified in a root-cause *analysis* of the blackouts it ordered Aug. 14-15 during a brutal Western "heat storm." Labor Day weekend last year also saw energy emergencies amid triple-digit temperatures across the West. (See CAISO Says Constrained Tx Contributed to Blackouts.)

The ISO moved its changes through at a record pace; the process for the stakeholder initiatives took just three months. The CPUC also fast-tracked its orders to implement them this summer, leaving some stakeholders and ratepayers dissatisfied with a process that designated diesel generators and other fossil fuel resources as emergency resources.

The commission heard about an hour of public comment Thursday morning, most of it critical of the package. The potential health impacts of fossil fuel emissions on low-income communities was a main concern.

Batjer acknowledged the commenters' dissatisfaction in her remarks, saying commissioners also shared it.

"We came to where we landed in this proposed decision after many restless days and nights grappling with the question of what plans we should have prepared in the worst-case weather and reliability scenarios," Batjer said. "Let me underscore there will be backup generation only if needed as a last resort," and only during short periods when demand outstrips supply.

The commission ordered the IOUs to procure an additional 2.5% of capacity to increase the state's planning reserve margin from 15% to 17.5%, a move requested by CAISO. The change represents an additional 450 MW each for PG&E and SCE and 100 MW for SDG&E.

The CPUC also enacted a new Emergency Load Reduction Program to lower demand during the peak and net-peak hours of emergencies.

"The pilot program will compensate customers for voluntarily reducing demand on the power system when called upon to do so by the CAISO in the event of a grid emergency," the CPUC said in a statement. "This program will serve as a layer of insurance on top of existing resource adequacy plans and will give grid operators a new tool among the existing demand management programs to address unexpected power system conditions."

The moves came on top of the CPUC's November 2019 order to the IOUs to procure an additional 3,300 MW of capacity to compensate for summer deficiencies and its order in February for the IOUs to procure more incremental capacity that can come online to serve demand this summer. (See Summer Readiness Sought by CAISO, CPUC.)

CAISO Summer Readiness

CAISO's Board of Governors approved two stakeholder initiatives — *Market Enhancements* for summer 2021 and the first phase of the ISO's Resource Adequacy Enhancements.

The board plans to take up the second phase of the RA enhancements — which deal with unforced capacity, must-offer obligations, and export and wheel-through priorities — in April.

The market changes seek to increase incentives for hourly imports and provide more accurate pricing signals during times of tight supply. CAISO proposed the measures after its analysis showed prices in mid-August remained too low to attract imports and additional capacity. (See CAISO MSC Weighs Summer Market Changes.)

The RA changes will establish a minimum state of charge for battery storage resources, require generators to find substitute capacity in advance of planned outages and streamline the process by which new storage resources connect to CAISO's grid. The ISO expects approximately 1,500 MW of new battery storage to come online by summer, bringing total capacity to around 2,000 MW. Storing excess solar during daylight hours is seen as key to preventing evening load shed. (See CAISO Readies RA Enhancements for Summer.)

"The enhancements are designed to better equip our energy markets and power grid for extreme weather, while complementing the efforts of California's regulatory authorities and utilities to develop new clean energy resources," CAISO CEO Elliot Mainzer said in a statement. "We are committed to strong collaboration with our many state and regional partners to achieve reliable system operations this summer and beyond."



CPUC members listen to a presentation by President Marybel Batjer, bottom right, on demand response programs for summer. | CPUC

CAISO/West News



Regulators Greenlight NV Energy's Greenlink West

By Elaine Goodman

The Public Utilities Commission of Nevada on March 22 approved NV Energy's request to build a 525-kV transmission line from Las Vegas to the northern part of the state.

The project, Greenlink West, is the first phase of the utility's \$2.5 billion Greenlink Nevada initiative. In addition to a 350-mile, 525-kV line from Las Vegas to Yerington, Greenlink West includes two 345-kV lines from Yerington into the Reno/Sparks area. NV Energy estimates that Greenlink West will be completed by December 2026.

Planning is also underway for Greenlink North, a 525-kV line that will span about 235 miles from Yerington to Robinson Summit near Ely. PUCN approved the conceptual design, permitting and land acquisition for Greenlink North; NV Energy will return for approval of construction.

The Greenlink projects would complement NV Energy's existing One Nevada line, which runs through eastern Nevada from Las Vegas to Robinson Summit. The three lines would join together to form a triangular transmission

Economy and Clean Energy

NV Energy said Greenlink Nevada would have many benefits, such as increasing electric reliability, creating jobs and helping the state's economy recover from the COVID-19 pandemic, the company said.

Greenlink Nevada would also help the state meet its clean energy goals, NV Energy said. At least half of electricity sold to retail customers in the state must be from renewable resources by 2030.

"Greenlink Nevada will transform Nevada's clean energy landscape by tapping into resource-rich renewable energy zones throughout western and northern Nevada, helping accelerate the responsible development of clean energy on public lands," NV Energy said in a news release.

PUCN agreed that enhanced transmission is needed.

"These [renewable energy] goals cannot be achieved without opening up the state such that renewable energy resources can be accessed from all areas of the state — and that can only be accomplished by expanding the existing transmission system," the commission



Nevada regulators approved construction of the Greenlink West line, while greenlighting design and permitting activities for the northern segment. | NVEnergy

said in its order approving construction of Greenlink West.

"Additionally, the economic benefits which are desired from decarbonizing the state's electrical energy needs are not going to materialize solely by importing large amounts of renewable energy from out of state."

NV Energy said in its application to the PUCN that the West is the only U.S. region without a regional transmission organization. Utilities and state officials are starting to realize that an RTO might be necessary in order to meet the requirements of renewable portfolio standards, the company said.

"Whether the companies eventually join an RTO or not has yet to be determined," NV Energy said. "But the Greenlink Nevada plan creates the type of electrical network required to make Nevada a major hub in the western market."

Project Phases

NV Energy had initially planned to build the Greenlink North transmission line first, with Greenlink West to follow. But constructing Greenlink West first would bring benefits to the state more quickly, the company determined.

In particular, Greenlink West would eliminate the single contingency of the One Nevada Line and result in a larger immediate increase in import capacity than Greenlink North, the company said in its application to the PUCN.

The project would also provide access to more solar resources in Nevada and boost economic investment into the state sooner, NV Energy

Although NV Energy sought a critical facility designation for Greenlink West, the commission declined to grant it. The designation would have allowed NV Energy to incorporate construction work in progress into its rates.

Unlocking Benefits

Nevada Gov. Steve Sisolak tweeted his approval of the commission's decision, saying the line "will unlock for all Nevadans the sustainability and economic benefits that come from providing essential transmission access to our State's vast renewable energy resources and exemplifies the potential of my vision for NV's new energy economy."

Environmental group Western Resource Advocates (WRA), a vocal advocate for creating an RTO in the West, also welcomed the decision.

"The transmission buildout will provide economic development and ratepayer benefits for Nevada and beyond, by providing the infrastructure to connect renewable energy resources for import and export across the West and opening up economic opportunities for Interior West states to market their renewable resources to West Coast states while improving efficient use of energy resources across the region," Cameron Dyer, WRA staff attorney in Nevada, said in a statement. ■

CAISO/West News



PG&E Equipment Started Zogg Fire, Investigation Finds

Determination Marks 4th Year of Catastrophic Blazes for Utility

By Hudson Sangree

A fire that killed four residents and destroyed more than 200 structures last September started when a leaning tree struck a Pacific Gas and Electric power line, the California Department of Forestry and Fire Protection (Cal Fire) said March 22.

The Zogg Fire burned more than 56,000 acres in rural Northern California near the community of Igo in Shasta County. Those who died in the blaze included a mother and her 8-year-old daughter, who were overtaken by flames as they fled.

"After a meticulous and thorough investigation, Cal Fire has determined that the Zogg Fire was caused by a pine tree contacting electrical transmission lines owned and operated by Pacific Gas and Electric," Cal Fire said in a brief statement.

PG&E responded with a statement saying it "has fully cooperated with Cal Fire's investigation. While we have not been given access to Cal Fire's report or evidence it collected, we look forward to reviewing both when we are allowed to do so."

Cal Fire's findings were not a surprise. Federal Judge William Alsup, who oversees PG&E's criminal probation from the 2010 San Bruno gas explosion, has said for months he believed

that the leaning gray pine was the likely cause. The line it hit remained energized even though PG&E had ordered widespread public safety power shutoffs (PSPS) in the surrounding area because of high winds. (See PG&E Line Was Active when Zogg Fire Started.)

"I think it was reckless, maybe criminally reckless, for PG&E to have left that tree, that gray pine looming," Alsup said in a February hearing. "It was leaning at a 60-degree angle over that line. Gray pines ... have a shallow root system. That tree had also been burned earlier. That tree was a clear and present danger to the line, and whoever made the decision to leave that tree up should be looked at very carefully. And PG&E did leave it up."

PG&E has tacitly acknowledged its equipment may have started the fire. It told the U.S. Securities and Exchange Commission in December that it expects to pay victims at least \$275 million in damages, though it stopped short of admitting responsibility.

The official determination that PG&E equipment started a catastrophic wildfire for the fourth year in a row means the state's largest utility likely faces continuing financial troubles and scrutiny by regulators, lawmakers and Alsup.

Cal Fire blamed the utility's equipment for starting the devastating Northern California

wine country fires of October 2017; the Camp Fire, which killed 85 people and leveled the town of Paradise, in November 2018; and the Kincade Fire, which tore through Sonoma County in October 2019.

The company filed for bankruptcy protection in January 2019 and emerged from Chapter 11 proceedings in June, after agreeing to pay a total of \$25.5 billion to fire victims, insurance companies and local governments for the wine country fires and the Camp Fire.

Efforts to prevent the utility's equipment from starting new fires are continuing as the state heads into its 2021 fire season.

PG&E filed its latest wildfire mitigation plan with the California Public Utilities Commission in February. It said the \$3 billion plan uses advanced computer modeling to target high-risk fire areas for system hardening and vegetation management. (See PG&E Files Wildfire Plan Under Intense Scrutiny.)

Alsup has said he may impose new probation conditions on PG&E related to its vegetation management. The CPUC is seeking enhanced oversight of the utility's vegetation management practices and line maintenance.

State regulators and lawmakers are also trying to rein in PG&E's extensive use of PSPS to prevent fires, which caused public and official outrage in recent years.



The Zogg fire raged in rural Northern California in late September. | Jeff Head via Flickr



ERCOT: In 'Better Position' for Summer Heat this Year

By Tom Kleckner

ERCOT released its preliminary seasonal assessment of resource adequacy (SARA) for the summer Thursday, saying power reserves "are in a better position" than they have been in recent years.

The Texas grid operator projects a summer peak demand of 77.1 GW, which would be a new record. Based on information provided by generation owners, ERCOT expects to have nearly 87 GW of summer-rated capacity available and a 15.5% reserve margin June through September. That is up from 12.6% a year ago and 8.6% in 2019, when the grid operator set its all-time demand peak of 74.8 GW.

Staff postponed the SARA for two weeks to incorporate new system stress scenarios and other design changes following February's near crash of the ERCOT system. The assessment includes a new section that details more extreme scenarios that could lead to energy emergencies and the possibility of controlled outages.

In unusually frank language, the grid operator said the extreme scenarios consist of "combina-

tions of high system risk assumptions derived from historical data, and while there is a low probability that they will occur, they would be high-impact events."

Last year's final winter assessment, based on normal weather conditions during peak periods from 2004 through 2018, forecast a peak of 57.7 GW. ERCOT shattered that mark on Feb. 14 at 69.2 GW and would likely have set a new all-time peak had not 35 GW of generation dropped off later that evening. (See ERCOT: Record 5 GW of Installed Wind Capacity.)

The ensuing dayslong outages have been blamed for 111 deaths.

"We recently experienced a terrible tragedy, and ERCOT is committed to working with legislators, regulators and stakeholders on how to prepare for more extreme outcomes moving forward," said Woody Rickerson, ERCOT's vice president of grid planning and operations. "We must strike a balance between communicating the possibility of these types of conditions and providing realistic seasonal expectations."

The ERCOT system is built to handle Texas' 100-degree summer weather and generators are typically built to maximize performance

during the dog days of August. Pete Warnken, the grid operator's manager of resource adequacy, said an extreme weather event during summer would likely not lead to emergency, as happened in February.

"It wouldn't be as much of a problem as what happened this winter, where you had failures of equipment as well as the natural gas infrastructure," Warnken said during a media call. "There are certainly risks involved, but it's a different situation."

"The data for this summer is based on what we know today," spokesperson Leslie Sopko said. "It is also worth keeping in mind that we are anticipating record breaking demand on the system. Of course, we will closely monitor the situation as we move into the summer months."

Baseload generation accounts for 63.4 GW of the operational capacity. ERCOT also expects to have nearly 25 GW of installed wind capacity (with capacity factor ranges of 19%-61%), 4.2 GW of solar capacity (with a peak average capacity factor of 80%) and 3.5 GW of switchable capacity (resources dispatchable to both ERCOT and SPP) on hand.

Another 11.2 GW of capacity — all but 895 MW of it wind and utility-scale solar — has executed generator-interconnection agreements and is expected to be available. Nearly 1 GW of battery storage is also available, but not included in summer capacity contributions.

"ERCOT will benefit from growth in generation resources, but forecasts are also showing another record-breaking summer on the demand side," Rickerson said.

The grid operator also released its final spring resource adequacy *assessment*, which includes a 64.4 GW peak-load forecast.

The SARA report is based on an assessment of generation availability and expected peak demand conditions at the time it was prepared. It now includes synchronized generation that may be producing power but has not yet been approved for commercial operations.

The assessment considers expected generation outages that typically occur during each season for maintenance, as well as a range of generation outage scenarios and weather conditions.

ERCOT will release the final summer SARA in early May. It said the report will reflect the expected summer weather conditions, including developing drought conditions in west and south Texas.

Preliminary Summer 2021 Seasonal Assessment of Resource Adequacy

5,489 MW of planned summer-rated capacity



Solar 2,718 MW



Wind 1,876 MW



Gas 895 MW

Additionally, ERCOT expects to have 939 MW of installed battery storage, which includes 717 MW of planned additions. 77,144 MW
Summer 2021 peak
demand forecast

| ERCOT



Avangrid, Texas PUC Agree to TNMP Purchase

Texas regulators have reached a settlement with Avangrid in its \$4.3 billion acquisition of PNM Resources, parent company of Texas-New Mexico Power.

Attorneys for Avangrid told a Texas administrative law judge on March 19 that all parties in the case had reached a unanimous agreement in principle and that a stipulation with revised regulatory commitments was being circulated (51547).

The Texas Public Utility Commission on March 22 canceled a hearing on the merits of the acquisition that was scheduled for last week.

The Office of Public Utility Counsel, Texas Industrial Energy Consumers, Alliance for Retail Markets, Texas Energy Association for Marketers, Walmart and the *ad hoc* group Cities Served by Texas-New Mexico Power are among the organizations and entities that have intervened in the proceeding.

Avangrid announced the acquisition in October. Its parent company, Spanish energy giant Iberdrola, says the merged company would have assets worth \$40 billion and generate around \$2.5 billion in earnings and a net profit



The Texas PUC has reached a settlement with Avangrid over its proposed acquisition of Texas-New Mexico Power. | © RTO Insider

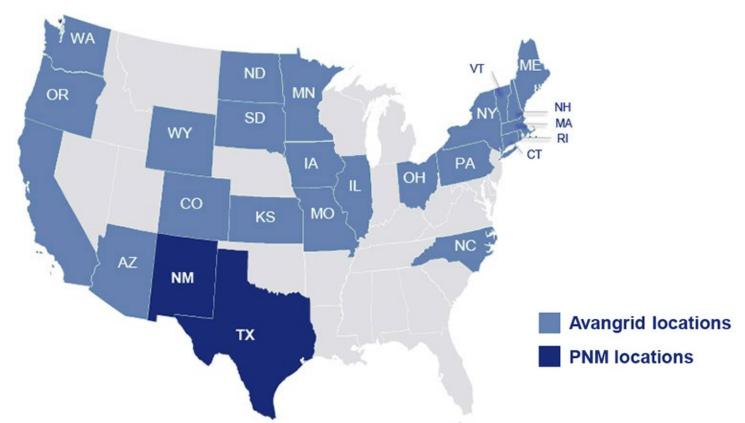
of \$850 million. (See Avangrid to Acquire PNM Resources for \$4.3B.)

The deal must be approved by the New Mexico Public Regulation Commission, FERC, the Nuclear Regulatory Commission and the Federal Communications Commission. It has been

cleared under the Hart-Scott-Rodino Act and the Committee on Foreign Investment in the United States.

PNM shareholders approved the merger in February, with 93% favoring the acquisition.

- Tom Kleckner



Avangrid's acquisition of PNM Resources would give the combined company utilities in six states and renewable energy operations in 24 states. | Iberdrola



Berkshire Hathaway Offers Texas Emergency Power Supply

Monthly Customer Surcharges Would Pay for \$8B Plan

By Tom Kleckner

Addressing a congressional panel last week investigating the February Texas blackouts, Republican Rep. Michael Burgess said his home state has things under control.

"Texans are angry and deserve answers. No one single policy could have prevented this," Burgess told the House Energy and Commerce Subcommittee on Oversight and Investigations on Wednesday. "Texans can and will solve this problem within their borders," he said twice.

That can-do Texas streak of independence is evidenced by its political leadership's pride in the ERCOT system, an interconnection of its own tucked in between the Eastern and Western Interconnections. The leadership and regulators often credit the grid operator's de-

regulated market for providing cheap energy that drives the state's economic engine.

The independent spirit was also evidenced in Texans' fury at the ERCOT Board of Directors' out-of-state members, who are selected to ensure their lack of ties to market participants. Five of those directors resigned from the board and a sixth pulled his nomination a week after dayslong outages during sub-freezing temperatures resulted in at least 111 deaths, according to the Texas Department of State Health Services, and could cost as much as \$295 billion in economic damage. (See ERCOT Chair, 4 Directors to Resign.)

Former FERC Chair Cheryl LaFleur, now a distinguished visiting fellow at Columbia University's Center on Global Energy Policy, said she was disappointed to see the board

members run out of the state.

"People from Michigan and Maine might actually be helpful to you if you want to figure out what to do about cold weather," she said, a reference to former Michigan Public Service Commissioner Sally Talberg and former ISO-NE General Counsel Raymond Hepper.

Enter Warren Buffet's Berkshire Hathaway Energy. Though Iowa-based, the company is no stranger to the Texas market, having attempted to acquire Oncor Electric Delivery for \$18 billion in 2017, only to see Sempra Energy steal away with the utility. (See Sempra Outmuscles Berkshire for Oncor.)

This time, Berkshire is making the rounds at the Texas Legislature and proposing to create an entity, called Texas Emergency Power Reserve, that would build and maintain 10 GW of natural gas-fired capacity and gas storage for \$8.3 billion. The plants would only be used to provide emergency power when demand outstrips supply, as happened in February when ERCOT lost more than half its available generation.

According to a slide deck obtained by *The Texas Tribune, consumers would be charged* a monthly fee for 40 years. Berkshire estimates residential customers would pay \$1.42/month, commercial customers \$9.61/month and industrials \$58.94/month, the paper said. Berkshire is hoping for a 9.3% rate of return, similar to regulated utility charges in Texas.

Berkshire has hired eight lobbyists for more than \$300,000, according to the Tribune, and polled 800 likely Texas voters to determine their support. The company said in its presentation that Texans would be "broadly supportive" of paying "a little more" to increase reliability.

Don't count on industrial consumers as being willing to pay a "a little more" for backup power.

"We need to focus on ensuring that the ample generation we already have is there when we need it, not forcing customers to buy new power plants," Richard A. Bennett, president of the Texas Association of Manufacturers, said in an emailed statement.

Not surprisingly, the proposal has run into opposition from those in ERCOT's energy-only market, especially from generators who are only paid when they are sell power into the



Frozen equipment at an Entergy power plant | Entergy

market. A similar proposal has been floated in the past, though the energy would have been competitively bid, in what was called the "break-glass-in-case-of-emergency" plan. The concern has always been the state's regulators and lawmakers "wouldn't have the stomach" to keep the new, more efficient units out of the market, thus eroding investment incentives, said one long-time observer.

Alison Silverstein, an energy consultant who helped write the U.S.-Canada Blackout Investigation report after the 2003 grid collapse in the Northeast, told RTO Insider that as far as she can tell, Berkshire is "generously offering to use our recent brush with electricity disaster to return to guaranteed monopoly recovery of gas plant costs — without the benefits of a competitive market to protect customers



Energy consultant Alison Silverstein says she's "leery of billionaires offering gifts." | © RTO Insider

from paying for unneeded capacity, overpriced plants or overpriced fuel."

"I'm leery of billionaires offering gifts," Silverstein said. "Power plant availability wasn't the problem in February. The [generation] that failed wasn't sufficiently winterized and/or didn't have enough fuel."

Noting the Trump administration's push to support struggling coal and nuclear plants, framed as providing grid resilience, Silverstein said Berkshire's proposal "puts a new face on the same idea" to justify out-of-market generation reserve payments for politically connected resources. (See Perry Orders FERC Rescue of Nukes, Coal.)

"It's still about using fear of an emergency to pay a favored provider for expensive power plants that can't compete on their own," she

Legislation Would Overhaul PUC

The Texas Senate last week passed Senate Bill 2154, which would expand the Public Utility Commission from three members to five, still appointed by the governor but required to be Texas residents. The legislation would add professional engineers, attorneys and certified public accountants as being eligible for the commission, and mandate that at least two members be "well informed and qualified in the field of public utilities and utility regulation."

"We didn't want just industry insiders," Sen. Charles Schwertner (R), SB2154's sponsor, said during debate on the changes. He argued that the PUC needs to better understand the implications of its actions.

Lawmakers have criticized the commission for not enforcing power plant weatherization recommendations and for not repricing 32

hours of \$9,000 MWh scarcity pricing after the grid was restored. All three commissioners have resigned in the storm's aftermath, though Chair Arthur D'Andrea will remain seated until Gov. Greg Abbott appoints a successor. (See D'Andrea Resigns from Texas Commission.)

"Who in their right mind would want to be a PUC commissioner now?" Silverstein said. "How do you unwind these problems with everyone shooting at you? My hat's off to you ... thoughts and prayers go out to them. Those are some extremely tall boots to fill."

The Senate this week will also consider a bill (SB3) that would give the PUC the authority to fine generators and utilities up to \$1 million for not weatherizing their power plants or transmission lines. The legislation also allows the Texas Railroad Commission, which has regulatory authorities over the gas industry, to fine natural gas producers the same amount for not properly weatherizing.

The lack of weatherization, pinpointed by a FERC-NERC report after smaller-scale blackouts in 2011, has been blamed for the loss of much of the thermal generation during the winter storm.

The bill would also set up a Texas Energy Reliability Council to ensure energy and electric industries meet "high-priority human needs and address critical infrastructure concerns" and improve the industries' coordination and communication; create an improved outage alert network; and limit scarcity pricing to no more than 12 hours in succession.

The measure does not offer funding to companies to weatherize their facilities.

"That's the cost of doing business," Schwertner said.









ERCOT Technical Advisory Committee Briefs

Members Discuss Natural Gas Criticalcare Applications

ERCOT's Technical Advisory Committee last week conducted its first regular meeting since the February winter storm, with its aftereffects unsurprisingly dominating the discussion.

Liz Jones, vice president of regulatory affairs for Oncor Electric Delivery, addressed the committee regarding a recent ERCOT market notice alerting participants to an application for critical-load designation.

The notice is meant to allow gas facilities that provide fuel to generators to request designation as a "critical load-serving electric generation and cogeneration."

Almost half of ERCOT's natural gas-fired generation was lost during the February extreme weather because power was cut to gas infrastructure not listed as critical load. With compressor stations out of service and pipelines frozen, drilling companies had to burn off, or flare, so much gas flowing out of the ground that the flames could be seen from space.

Jones said the application, housed on ERCOT's website but also linked from the Texas Railroad Commission's website, is intended to identify the "entire natural gas supply chain." The form also makes clear it does not guarantee an uninterrupted supply, she said.

"It asks for specific information about backup generation and restoration times," Jones said. "This is a way that we will become better

The completed forms should be sent to the local transmission and distribution service providers responsible for the gas facilities.

Asked how the response has been, Jones said, "They haven't come pouring in, but it's early, yet. I'm hopeful that by providing it to industry trade organizations and the RRC letter, participation will increase."

TAC also discussed its working list of potential solutions to the events preceding and following last month's storms, which numbers more than 110 issues. Many of the issues are listed as awaiting legislative action or being longterm stakeholder items, but others are being parceled out to various subcommittees. (See "TAC Takes up Ideas for Solutions," Texas PUC Won't Reprice \$16B Error.)

Reliant Energy Retail Services' Bill Barnes urged his fellow members to be prepared to



Liz Jones. Oncor I Texas RE

help policymakers as they consider legislation during the current session, which ends May

"For the next two, two-and-a-half months, our priority will be waiting on the legislature," he said. "I would encourage us to engage as much as possible, and prioritize those activities, to assist the legislature and work with the [Public Utility Commission]. We should assist where we can and be ready for efforts we'll need to undertake in helping the commission and the legislature implement changes."

Passport Program Faces Staffing Constraints

Staff said the Passport Program, which bundles several high-profile initiatives, remains on schedule despite staffing constraints from winter storm-related activities.

That has led ERCOT to evaluate staff resources for an upgrade to the energy management system (EMS) that will house the Passport's programs, and its business requirements, said the ISO's Matt Mereness.

"There's some knowns and still some unknowns, given everything that's going on," Mereness said.

Passport's 2021 objectives, which Mereness described as a "heavy lift," include the EMS upgrade and developing and integrating the EMS, market management system (MMS), and settlements and billing business requirements. The MMS project began three months late, further squeezing available IT resources, but remains on schedule.

Passport is scheduled to be delivered in late 2024. It is comprised of implementing revision requests produced by the Real-Time Cooptimization (RTC) and Battery Energy Storage (BES) task forces along with the EMS upgrade. Passport will also integrate a 10-minute contingency reserve ancillary service product and improve distributed generation resources' mapping.

Mereness put off a decision to sunset the RTC task force, but said staff wants to work with TAC leadership to develop a Passport implementation working group. TAC did sunset the BES task force.

Should the Passport's work be delayed, Mereness said, a go/no-go decision point will be reached. "EMS would be put on its own path," he said. "It can't be delayed past 2024."

The program has an \$85.5 million budget, with \$51.6 million allocated to the RTC effort and \$27.1 million to the EMS upgrade.

\$6.1M Price Correction

Staff also added further details to the recent software error that occurred after the February outages began, requiring a price correction by the Board of Directors. (See Software Error Could Mean ERCOT Price Revisions.)

Dave Maggio, ERCOT's director of market design and analytics, said staff discovered that the MMS software contained programming errors that resulted in incorrect megawatt amounts being used for the estimated deployed emergency response service (ERS) component of the real-time price adders for certain dispatch intervals on Feb. 15. The grid



operator had already entered its highest level of energy emergency alert at that time, requiring prices at the \$9,000/MWh cap.

The result was weather-sensitive (WS) ERS megawatts being included in the price-adder calculations for some SCED intervals when there was no WS ERS deployment obligations. Staff have since rerun the affected intervals to determine the correct prices.

The resettled prices amount to an additional \$6.1 million in invoices due to ERCOT. The largest change to any single counterparty is more than \$868,000 due to the ISO.

The price corrections are within the parameters for after-the-fact corrections. They will be taken to the board for its consideration during its scheduled April 13 meeting.

Demand Control 2's Hendrix Joins TAC

The TAC welcomed Demand Control 2's Chris Hendrix to the committee as an independent retail electric provider segment representative. He replaces Shannon McClendon, also with Demand Control 2, who recently took a seat on the Board of Directors as the retail sector's representative.

Hendrix has previously served on SPP's Members Committee and the Markets and Operations Policy Committee, where he represented Walmart in the large customer sector. (See New SPP Member Walmart Eyes 'Everyday Low Costs'.)

Members Pass 11 Change Measures

Members approved a nodal protocol revi-

sion request (NPRR) and an other binding document revision request (OBDRR) related to emergency response service (ERS). Both measures were opposed by Morgan Stanley's Clayton Greer, who has made a point of voting against anything related to ERS.

NPRR1060 makes a number of revisions pertaining to ERS, including: modifying and adding language related to ERS resource testing, sites that participate in more than one ERS resource, and availability determinations; simplifying the process for notifying ERCOT of planned maintenance and self-testing for ERS generators; clarifying metering requirements for ERS generators and the performance of co-located ERS generators; and addressing how ERCOT will treat ERS resources with missing meter data.

OBDRR027 clarifies OBDRR023's implementation timeline to align ERS procurement methodology with previous Protocol changes. The latter change will be implemented over two separate dates: partial implementation that occurred Feb. 1 and the remaining language's addition on Oct. 1.

The combination ballot, which included seven NPRRs, an OBDRR and a change to the Nodal Operating Guide (NOGRR), passed unanimously, 29-0:

NPRR1023: establishes a process for liquidating a repossessed congestion revenue rights
(CRR) portfolio through the use of financial security held by ERCOT for the defaulting
CRR account holder for settlement purposes.

The NPRR also modifies the process for forfeiture of CRRs resulting from the account holder's non-payment or late payment of an invoice.

- NPRR1045: moves and revises the definition of transmission operator from the Nodal Operating Guide to the Protocols and adds a new section that clarifies the designation process and basic qualifications for TOs.
- NPRR1057: applies the hub LMP formulas to the Panhandle 345-kV hub and the Lower Rio Grande Valley 138/345-kV hub and eliminates portions of hub real-time settlement point prices formulas designed to address all buses within a hub being de-energized.
- NPRR1059: sends interval readings for non-interval data recorder meters, such as residential accounts with consumption under 700 kW, to settle on actual usage/generation instead of the load profile.
- NPRR1065: replaces a sentence describing a settlement-only generator's (SOG) energy volumes subject to nodal versus zonal pricing with a formula; revises the name and definition of a related billing determinant to more accurately describe the data it represents; and adjusts the default uplift settlement to combine SOG generation with the counterparty's other generation.
- NPRR1066: grants ERCOT the discretion to apply existing standards for grandfathered generation resources to an existing unit owned by a municipally owned utility or electric cooperative that is transferring load into ERCOT and seeks to interconnect the existing generation unit to the ISO's system.
- NPRR1069: clarifies settlement billing determinants to ensure that an energy storage resource's capacity is not counted in the off-line reserve imbalance of the real-time ancillary service imbalance payment or charge.
- NOGRR219: removes the definition of transmission operator from the Nodal Operating Guide because it is being moved to the ERCOT Protocols by NPRR1045. This NOGRR also clarifies existing language relating to load shed obligations and removes the Load Shed Table from the Nodal Operating Guide. Instead, the Load Shed Table will be posted on the FRCOT website.
- OBDRR028: clarifies that ESR capacity will not be accounted for in operating reserve's offline portion.

EMS Technology Foundation Upgrade

RTC
Key Principles RTC
NPRR review Real-Time Co-optimization

BES Key Topic BES
Concepts NPRR review Battery Energy Storage Resources

DGR
Workshops NPRR review Distribution Generation Resources

ERCOT Contingency Reserve Service
New 10-minute Ancillary Service product defined in NPRR863

"Pre-Passport" deliveries before 2024:

- · FFR advancement
- DGR enhancements to re-open registration
- · Battery storage functionality enhancements

ERCOT's Passport Program currently remains on schedule for completion in 2024. | ERCOT

- Tom Kleckner

ISO-NE News



NE Officials Focus on Environmental Justice, Public Outreach in Forum

By Jason York

State energy officials in New England have recently pressed their case for reforms at ISO-NE with a series of online technical forums during the last three months focused on the RTO's wholesale electricity market design, transmission system planning process and governance. There is also a recognition that significant equity and environmental justice considerations exist within those core reform areas.

On March 18, the officials explored the links between the reforms they seek from ISO-NE and equity and environmental justice during a virtual meeting with a heavy focus on public engagement.

Maine Public Utilities Commission Chairman Phillip Bartlett said ISO-NE's market design has resulted in high electricity costs in New England, disproportionately burdening lowincome consumers and communities of color.

Judy Chang, undersecretary of energy for the Massachusetts Executive Office of Energy and Environmental Affairs, added that siting of transmission lines and substations in low-income communities needs to be considered more carefully.

Connecticut Department of Energy and Environmental Protection Commissioner Katie Dykes said that ISO-NE has limited transparency and public accessibility in its governance, which does not provide an opportunity for environmental justice communities in New England — unless they participate in the nonpublic NEPOOL stakeholder process — to be part of energy planning conversations and decisions that directly impact them.

Engaging the Public

The officials heard from several residents during the forum.

Ross Conrad, a beekeeper from Middlebury, Vt., said he appreciated the focus on environmental justice and equity issues related to fossil fuels and their air pollution but that he also has concerns around renewable resource siting. Conrad singled out Hydro-Québec, which he said has never compensated Five Nations communities for dams on their lands before 1996, and ISO-NE for importing electricity from it.

"So, I'm wondering why we don't reduce our reliance on Hydro-Québec energy, instead of increasing it, until such point they may



| Central Maine Power

actually agree to compensate the Five Nations people for the dams and the flooding that has occurred on their land?" he said.

Eugenia Gibbons, Massachusetts director of climate policy for Health Care Without Harm, a nonprofit that works to reduce the health care sector's environmental footprint, said that having a Spanish translation for the forum was an essential step in the right direction.

"Multilingual communication is a cornerstone of any meaningful engagement and more inclusive process," Gibbons said.

Energy policy can be "wonky, but it doesn't have to be," she said.

"I would say that community members are very conversant in energy policy because they're living with the consequences of bad decisionmaking, day in and day out, and have a lot of good recommendations and insight to offer when we're thinking bigger picture."

Gibbons added that while the states want more transparency and accountability from ISO-NE, they, in turn, need to continue to think about how to meaningfully engage the community in a process that is "not necessarily very welcoming or exciting."

Shaina Kasper, Vermont and New Hampshire state director for Community Action Works, a regional nonprofit based in Boston that works with environmental justice communities, said

her organization has been asking for a platform like this "for too long."

In November and December, Kasper said, several organizations sent letters to the New **England States Committee on Electricity** asking for a regional public process with afterwork-hours meetings to discuss updates to the grid in "layman's terms."

"Months later, after dozens of calls and emails, we've got this one meeting, and we just got the agenda for it, two days ago, and so you just want to get members of the public engaged on what the grid should look like, but it just seems like you're trying to check the box of offering public participation but not doing anything substantial to make that happen," Kasper said.

New England deserves a grid operator responsive to the needs of ratepayers "and the people living with climate catastrophe and pollution, not fossil fuel executives and utilities," Kasper said. She called on ISO-NE to work with states and communities and not "prop up" fossil fuel energy infrastructure in New England.

Chairman Bartlett said the forum is intended to serve as a kickoff to a conversation.

"We will certainly look for ways to keep this dialogue going, so it is important that all of us participate in finding solutions that will work for all of us as we make a very important transition to a cleaner energy future," Bartlett said.

ISO-NE News



NEPOOL Participants Committee Votes on ORTP Values

By Jason York

The NEPOOL Participants Committee last week acted on modified proposals for offer review trigger prices (ORTPs) used for Forward Capacity Market parameters in the 2025/26 capacity commitment period.

The proposals accommodate changes and extensions to the federal investment tax credit (ITC) for solar and wind developers passed by Congress in December.

At a PC meeting March 4. ISO-NE requested postponement of any action on its ORTP proposal, which was created in concert with consultants Concentric Energy Advisors and Mott MacDonald. The consultants modified their treatment of the ITC in the discounted cash flow model, resulting in a revised ORTP value for solar resources. The RTO also informed



The yellow cloud in Tolland County, Conn., represents greenspace locations that could be used as a potential site for a proposed facility. | ISO-NE via Concentric Energy Advisors and Mott McDonald

stakeholders that minor changes were also required to each of its proposed ORTP values for the 16th Forward Capacity Auction because of the updated performance payment rate (PPR) value.

Tariff revisions include \$1.381/kW-month for solar and removal of ORTP values for solarplus-batteries resources. Despite the modifications, the proposal did not pick up much support, with only 19.04% voting in favor in a sector-weighted vote.

The PC did approve modifications to ORTPs and tariff revisions from stakeholders. The first from the Union of Concerned Scientists on behalf of RENEW Northeast revised its lithium-Ion battery ORTP from \$2.612/kWmonth to \$2.601. This reduction resulted from the ISO-NE modified PPR value for FCA 16. The second, from Advanced Energy Economy, Borrego Solar Systems, Enel X, ENGIE North America and RENEW Northeast, revised previously supported tariff revisions. They passed with 72.5% PC support.

Additional Action

ISO-NE also sought action on tariff revisions for its updated Cost of New Entry (CONE), net CONE and PPR values for FCA 16 after the RTO corrected a location error with the reference unit.

In preparing a response to FERC's deficiency notice, ISO-NE discovered that the site must be located in Tolland County, Conn., not New London County, as the original modeling suggested.

A potential site for the CONE reference unit in or near Tolland County must be two miles

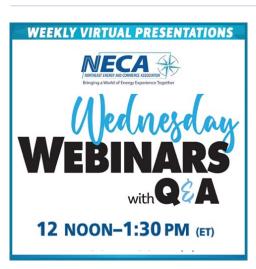
from both a central natural gas line and an interconnection point to the electric grid. The RTO must also estimate emissions limits and whether those limits affect the reference unit's revenue and offer additional support for the dispatch model's assumption that the reference unit always runs on natural gas rather than oil. Submission of that information resets the deadline for FERC action on the filing.

However, the PC did not approve. ISO-NE's modifications garnered 45.09% approval in a section-weighted vote, with no support from the generation and supplier sectors.

The RTO also proposed tariff revisions to support additional flexibility for permanent and retirement delist bids for FCA 16, unanimously approved with abstentions.

Upon FERC accepting the FCA 16 parameters, the Internal Market Monitor would perform mechanical adjustments to participantsubmitted permanent and retirement delist bids and test prices relevant to the CONE, net CONE and PPR values. Updated bids and substitution auction test prices will be provided to lead market participants in the retirement determination notifications issued June 3.

Lead market participants would be allowed to withdraw bids and substitution auction demand bids after receiving retirement determination notifications, and associated test prices would be removed. Written notice to the Monitor is required for withdrawal during the existing window (June 3-10) for suppliers to choose conditional or unconditional retirement treatment. Withdrawal will remove the obligation for a supplier to resubmit a retirement bid for the next FCA.









Minn. PUC Approves 'Last Good-priced' Wind PPA in MISO

By Craig Peterson

The Minnesota Public Utilities Commission has approved a power purchase agreement between Xcel Energy and a 200-MW Iowa wind farm that the utility says is the "last good-priced" wind available in MISO.

The commission approved the agreement with NextEra Energy Resources' *Heartland Divide II* on March 18 over the objections of the state Department of Commerce, which contended Xcel's acquisition process was flawed (E002/M-20-806). The PPA will provide 50 MW for Xcel's *Renewable*Connect* (R*C) program and 150 MW to Google's Honeycrisp Power, which has indicated an interest in developing a data center in Becker, Minn., in Xcel's service area.

The 150-MW portion of Heartland will be considered a system resource, with costs recovered through the fuel clause rider. The 50 MW will be paid for by a surcharge on R*C customers; residential customers in the program pay a \$6 to \$8 premium per month for 100% wind and solar power.



The Heartland Divide II wind farm is being built by NextEra Energy Resources in Audubon, Iowa, where a giant bull is a local landmark. | NextEra Energy Resources

Commerce: Process Flawed

The Commerce Department told the PUC it should reject the PPA because Xcel's acquisition process violated prior commission orders requiring competitive bidding.

Xcel "did not perform a reasonable exploration of alternatives and did not take any steps to ensure a perception of fairness in the company's process," the department said.

The company said it chose a "targeted solicitation" because its previous competitive solicitation in 2019 had fallen short of its needs and that it needed to expand supply for R*C by the end of 2021. R*C is fully subscribed and has a waiting list of 2,500 business and residential customers.

Xcel shortlisted three projects in its 2019 solicitation for 200 MW, but the highest ranked project was unable to bear its assigned interconnection costs; the second project negotiated terms with a different buyer; and the third project, Deuel Harvest Wind, could only provide 100 MW.

The company said the shortfall was illustrative of MISO's "oversubscribed and behind schedule" generator interconnection queue and increasingly high network upgrade costs, which prompt many projects to withdraw from the queue. (See MISO West Risks Becoming 'Dead Zone,' Stakeholders Warn.)

As a result, Xcel said it sought to identify resources in MISO Local Resource Zones 1 or 3 "that had — or that we thought could soon have — transmission interconnection cost surety." It found two possibilities, one of which was Heartland. The other declined to provide a bid.

Heartland, which is in Zone 3, will interconnect to the MISO system at MidAmerican Energy's 345-kV Fallows Avenue substation in Adair County, Iowa.

Although the price of the PPA was not disclosed, Xcel said it was comparable to those in the 2019 solicitation and other R*C wind resources and would save customers \$97.1 million in present value of revenue requirements.

Heartland "is the last good-priced wind we're going to see in the existing market," Xcel Lead Assistant General Counsel Matt Harris told the PUC at its March 18 meeting.

The Commerce Department said that if the PUC approved the PPA, it should limit cost

recovery to any shortfall between costs and the revenues from R*C customers and the Honeycrisp electric service agreement.

It said Xcel's conclusion that Heartland was the only project available was "unilaterally determined," because the company's evaluation was limited to only the ones it knew about. It said there was no evidence that Xcel employed an independent evaluator to ensure fairness in the solicitation or had announced publicly it was seeking wind projects.

PUC staff, however, sided with Xcel, *saying* that the commission had allowed "an informal process when unique circumstances arise such that starting over with a Track 1 [formal bidding] process would be detrimental."

"In staff's view, the commission could reasonably determine that Xcel exhausted its options through competitive solicitation, and unique circumstances justified Xcel's reasons for not beginning another Track 1 process," it said. "Therefore, staff does not agree with the department that the Heartland PPA should be rejected due to a violation of past commission orders."

Data Center Still in Early Planning Stage

Staff also cited the "favorable economics" demonstrated by Xcel's modeling. It took no position on the department's proposal to cap cost recovery.

But staff also said, "There is some uncertainty in how much additional renewable energy will actually be needed for the data center and R*C.

"Thus, the commission's decision might benefit from updated information from the company regarding its forecasts for the data center's usage and R*C demand to ensure that the underlying reasons for acquiring Heartland Divide II are justified," it said.

Google's data center is still in the initial planning stages. Xcel's most recent update, filed in its June 2020 annual report stated, "At this time, Google has not yet notified the company of its intent to proceed with this project."

At the March 18 meeting, PUC Commissioner Joseph Sullivan said, "We don't know if that data center is yet going to come into existence."

That comment was affirmed at the meeting by Harris, who said plans for the data center project were "slowly developing. There is still planning to do." ■



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MISO Execs Defend Need for Long-range Tx

By Amanda Durish Cook

MISO executives last week issued dire warnings about the possible fallout if the grid operator doesn't pursue big ticket transmission projects in its footprint.

Appearing virtually before the Board of Directors' System Planning Committee (SPC) on March 23, senior staff estimated the longrange transmission package unveiled March 17 could cost anywhere from \$30 billion to \$100 billion. The portfolio, which includes more than a dozen 345-kV additions, a handful of 500-kV and 765-kV lines and a massive footprint-wide network of DC lines, met stakeholder pushback over the necessity of such a dramatic expansion. (See MISO Reveals Contentious Long-range Tx Project Map.)

Jennifer Curran, vice president of system planning, said MISO sees an "increased urgency" to expand its transmission system given the resource changes it has already experienced, its member utilities' carbon-reduction goals and the time it takes for a transmission project's concept to become reality.

Without a long-range transmission plan, generation projects will likely continue to drop out of MISO's interconnection queue because of high network upgrade costs, Executive Director of System Planning Aubrey Johnson said.

Curran called the long-range plan "a journey, not a destination," and said staff must still conduct engineering analyses, present business cases and collect more stakeholder feedback. She said MISO is focusing first on system reliability as the resource fleet becomes more intermittent.

"Solutions may be added to or removed, but we think this is an important first step," Curran said of an early indicative map of transmission solutions.

Stacy Herbert, representing transmission owners on the SPC, said stakeholders may disagree about "how quickly, how much and where," but it's undeniable that the changing fleet demands transmission buildout.

MISO President: Think of Flint

MISO President Clair Moeller used Flint, Mich's water crisis to warn about the human cost when infrastructure upgrades are neglected.

In Flint, the decisions were always focused on putting off investments at the expense of



AEP transmission construction | AEP

public health, he said during the board meeting March 25. He reminded attendees that reliability and public safety are inextricably linked, and that blackouts have a disproportionate effect on vulnerable communities.

"MISO is in a good position because of the accident of geography," Moeller said, referring to the RTO's midwestern footprint and interconnections to neighboring supply. "The people that preceded us gave us the system we have. It's the sum of 100 years of choices."

Moeller also reminded stakeholders that some transmission projects in the 2011 Multi-Value project portfolio were tied up in litigation for the better part of a decade. He counseled stakeholders to not get too caught up in "parochial" cost-allocation issues for this round of planning. He said major transmission lines' benefits reach beyond "one town, one city, one state."

Renuka Chatterjee, executive director of system operations, credited MISO's collection of Multi-Value projects for helping maintain reliability and keeping the system from slipping into more drastic emergencies during mid-February's cold snap.

"I don't know what would have happened without them," she said of the RTO's last long-term transmission portfolio.

Director Barbara Krumsiek asked staff to prepare a short whitepaper on transmission expansion's importance during the arctic blast to help engender "more positive feelings" among stakeholders about MISO's proposed long-range transmission planning efforts.

Environmental sector representative Beth

Soholt said a long-range transmission portfolio will be instrumental in ensuring MISO can deliver a transformed resource fleet.

Clean Grid Alliance's Natalie McIntire asked MISO planners not to get stuck in "analysis paralysis" that may delay critical projects.

"We know when it comes to transmission planning for the future, we are never going to have a crystal ball," she said.

Climate Considerations in Tx Planning?

The committee was intrigued by the Environmental Sector's suggestion that MISO add public health and equity considerations to the annual Transmission Expansion Plan (MTEP)'s guiding principles.

"It's a subject that's getting a lot more attention as time goes on," Board Chair Phyllis Currie said.

Directors said that although their members not MISO — make carbon-reduction goals and plan generation additions, it might be worthwhile to gauge their social and climate goals.

"I think having a conversation about those larger goals about equity, about climate, about policy that could help the public isn't easy, but it's a conversation worth having," director Nancy Lange said.

Moeller said stakeholders could share their goals at upcoming Planning Advisory committee meetings, but MISO would likely have to tread carefully.

"Our job is facilitating our members' goal, not us assigning goals," he said. "We have to be a little careful about how we have that conversation." ■



Republican-backed Bill Seeks Clear Path for Ind. Renewables

By Amanda Durish Cook

A Republican-backed bill making its way through the Indiana legislature seeks to spur wind and solar development by setting statewide zoning standards for projects, overriding county ordinances that have obstructed renewable development.

House Bill 1381, now pending in the state Senate, would eliminate the application of Indiana's "home rule" policy in relation to commercial wind and solar development. That policy provides counties "all the powers that they need for the effective operation of government as to local affairs," according to Indiana Code.

The bill would instead require counties to adhere to statewide zoning standards for renewable energy farms, including uniform setback requirements, height restrictions, sound level and shadow flicker limitations and decommissioning.

It also stipulates that local authorities cannot impose "standards that are more restrictive" than the default standards that are adopted in this bill." If adopted, the rules would be in place by the beginning of July.

Of Indiana's 92 counties, 34 have ordinances restricting wind and solar projects. Some, such as Tippecanoe County, have effectively banned commercial wind projects by prohibiting turbines taller than 140 feet.

The legislation comes from an unlikely source, Rep. Ed Soliday (R), a longtime champion of coal generation. Last year, Soliday authored a successful bill that prolongs the process of retiring or selling coal plants within the state by requiring six months' notice, a public hearing and analysis on the reasonableness of the closure. (See Indiana Senate to Contemplate Slowdown of Coal Closures.)

Soliday said HB 1381 is not a pro-environment declaration, but a necessary response to market forces.

"There is a significant market for renewable energy. The state of Indiana, on some days, is buying almost 80% of our electricity from out of state," Soliday said at a February hearing of the state's House Utilities, Energy and Telecommunications Committee. He said Indiana's largest manufacturers want renewable generation.

"And they're going to get it," he said. "They're



Indiana wind turbines | © RTO Insider

going to get it either by buying it from other folks and paying the transmission costs, or we're going to generate some of it."

Other Republican representatives are starting to realize that Indiana cannot subsist on a diet of coal alone. Joining Soliday in co-authoring the bill were another Republican and a Democrat. The legislation attracted two Republican sponsors.

"There is an issue with the number of counties who have either outright banned or have in effect banned large-scale renewable projects," Rep. Ethan Manning (R) said during a Fulton County Chamber of Commerce meeting in January.

Manning said the bill does "still contain an aspect of local control" because local governments are still able to determine whether a project meets state standards.

Utilities are moving away from coal because of aging plants and economics, he said, adding that it doesn't make financial sense to keep upgrading antique plants.

"As they move away from that reliable baseload generation, what they're looking towards is renewables. And we can't really stop that. I mean, we could I guess, but that would be interfering with the free market," Manning said. "No matter what happens with coal in the future, they're going to continue to want to build wind and solar. And I don't want all of Indiana's energy to come from other states."

Hoosier Environmental Council (HEC) Executive Director Jesse Kharbanda said the bill could reverse the renewable development

deadlock in some counties.

"Were HB 1381 to pass, we definitely believe that it will cause renewables developers to think anew of counties that previously had bans, as several of those counties have excellent renewable energy resources," Kharbanda told RTO Insider. "Furthermore, attitudes in those communities may have shifted, due to new local leadership, greater awareness of renewable energy's economic benefits and continuing improvement in renewables technology that address past community concerns."

Kharbanda said Republican backers of the bill are thinking "first and foremost" of the economic development that it will facilitate.

Indiana has attracted about \$7 billion in utility-scale renewables, he said, "even in the absence of a renewable electricity standard." He added that the state "is poised to attract considerably more dollars" based on utilities' integrated resource plans, which ramp up renewable adoption throughout this decade.

'Disjointed Patchwork'

Several counties are labeling the bill government overreach.

Henry County Council President Susan Huhn traveled to Indianapolis in early February to testify against the rule in a committee hearing.

Commissioners in Kosciusko and White counties passed resolutions in February and March, respectively, to oppose the bill.

Kosciusko County commissioners said the bill "disenfranchises" citizens from making their



own land-use decisions.

The White County Commissioners' resolution states that they "believe that decisions regarding wind and solar development are best made by the citizens living in the community, rather than by the wind and solar industry or state officials who live outside the community."

Kharbanda said when local control turns to overt embargoes on renewable development. it's time for the state to step in.

"When local control — like outright bans on utility-scale renewables in certain counties - interfere with good, long-term state public policy, such as a stable investment climate to facilitate the timely expansion of the renewable energy industry, then statewide policy is appropriate to take precedence over local policy," he said.

Kharbanda said many aspects of wind and solar farm design are "unlikely to meaningfully vary due to the geographic particularities of a community" and "lend themselves to statewide standards ... provided that those standards are shaped by the very latest and best science."

RWE Renewables Director of Government Relations Will Eberle called the state "uniquely unfriendly" to the growing renewable industry and said the standalone ordinances have deterred about \$5.5 billion in renewable energy investment in the state.

"Indiana has, until now, left its renewable energy future up to a disjointed patchwork of local government regulation," Eberle said in committee testimony earlier this year.

RWE Renewables last year terminated a \$600 million, 400-MW project in Gibson and Posey counties, which enacted stricter zoning rules after the project was proposed. The rules – sound and shadow flicker restrictions, setbacks of 4.4 times the height of a wind turbine and banning turbines closer than two miles from towns, schools, hospitals, clinics and residential care facilities — caused RWE to scrap its plans.

Kharbanda said HEC hopes the bill can clear Indiana's Republican-led Senate.

"The prospects look challenging given the

number of counties that have individually expressed their opposition to the bill," he said, adding that the renewables industry "for reasons we're unsure of, opted to not pursue a grand coalition strategy in their efforts to advance HB 1381."

Kharbanda said while HEC is generally supportive of the bill, he'd like to see a change concerning groundcover standards under solar farms.

"The land footprint of solar farms in Indiana - by the end of this decade - could be on the order of Indiana's state park system," he said. "So making sure that the land underneath solar farms benefits the community as much as possible is so crucial, for the sake of pollinators, stormwater control, soil and water conservation and the aesthetics of the area. We've been advocating, since the beginning of the legislative session, that Indiana either establish baseline standards for pollinator-friendly solar that are customized by local governments, or that Indiana allow counties to retain their authority over the groundcover in and around solar farms." ■





Clean Energy Groups Protest MISO Storage Model Delays

By Amanda Durish Cook

Clean energy advocates are contesting MISO's request for a three-year extension to comply with FERC's directive that energy storage resources be allowed to fully participate in RTO markets.

MISO earlier this month asked FERC to extend its deadline to comply with Order 841 into 2025. It was the RTO's second request for extension after having already secured an earlier postponement until June 6, 2022, later than any other RTO. (See MISO Stuns Stakeholders with 2nd Order 841 Delay.)

Speaking March 23 at a meeting of the MISO Board of Directors' Markets Committee, Clean Grid Alliance's Natalie McIntire said it was unacceptable for the RTO to delay storage resource participation — and by extension, hybrid renewable and storage resource participation — for so long. She asked the board to direct MISO to offer a storage participation framework as soon as possible.

In its petition to FERC, MISO explained that it must first get its new market platform operational before it debuts storage offers in its markets (ER19-465). The RTO said a second deferment could allow it to implement its new dav-ahead market in 2024 versus an earlier target of 2025 or even mid-2026. MISO in 2017 originally estimated it would fully migrate to its new, \$160 million modular market platform in 2023.

The grid operator explained that the same General Electric and RTO personnel are working on both the storage participation model and the Market System Enhancement (MSE). Todd Ramey, MISO vice president of market system enhancements, said the RTO based its deferment request on past experience with launching new market products on its oldfashioned market platform.

Although MISO decided to introduce its new 30-minute reserve product on the legacy system later this year, the development has been painstaking and needs to be carried out twice, he said.

"Essentially, you are designing and developing and deploying those products twice — once on the legacy system and once on the new market system," Ramey said during a meeting of the Board of Directors' Technology Committee on

Ramey estimated that each new market prod-

uct introduced on both the vintage and new modular platforms delays full implementation by 18 to 24 months.

Clean Energy Orgs Network in Protests

The deferral request sparked several protests from clean energy and storage trade groups.

In a joint protest filed March 19, CGA, the American Clean Power Association, U.S. Energy Storage Association, Solar Energy Industries Association, Advanced Energy Economy and Southern Renewable Energy Association said MISO's request "ignores the detrimental impact that a further delay ... will have on [storage resources] that had reasonably planned for interconnection and operation based upon the existing MISO-requested, commissionapproved operational date of June 6, 2022."

The groups argued that MISO blindsided its stakeholders with the deferment request. ignored the harm that a delay could have on third parties and did not have good cause to put off Order 841 compliance for another three years.

"Upgrading the Market System Enhancement software before implementing the Order 841 markets might be administratively beneficial (at least in in MISO's view), but is hardly a resolution to a 'concrete problem,'" they wrote.

NextEra also argued that MISO presented no "convincing argument" for three extra years that would upend energy storage developments already in motion.

"Instead of being able to rely on a June 2022 date for deploying storage resources consistent with Order No. 841, developers must now wait several more years. This delay is unacceptable and should be rejected by the commission. ... It is now almost two years since the commission granted MISO's request for deferral until June 2022, and it's only about 15 months until such date arrives," the company

The Environmental Law and Policy Center, Natural Resources Defense Council, Sierra Club, Sustainable FERC Project and Union of Concerned Scientists echoed claims that MISO's argument for deferment was weak.

"Asking MISO customers to endure an additional three years of unjust and unreasonable rates after already living under those rates for more than four years requires more than a claim of staffing burden by MISO and GE," they said, arguing that the RTO had the resources to handle both Order 841 and the MSE. They said MISO should not conflate being shortstaffed with a technological barrier.

MISO's rules currently allow electric storage resources to operate either as a Stored Energy Resource (SER) Type I, which is limited to providing behind-the-meter regulating reserves, or SER Type II, which can function as demand response in the day-ahead market and participate in the annual capacity auction.



Invenergy's Grand Ridge Battery Storage Facility in Illinois | BYD



MISO Members Aim for Mandatory Consultant Transparency

By Amanda Durish Cook

A controversial rule requiring consultants to be upfront about who they represent could soon be codified in MISO's Stakeholder Governance Guide.

Steering Committee members approved draft language during their meeting Thursday for the Advisory Committee's consideration.

The ruleset would require stakeholders to state their full name and the company they represent before speaking during stakeholder meetings. Consultants would either give the "identity of their client on whose behalf they are speaking" or — if the consultant is working under a nondisclosure agreement — provide the sector "with which the specific client is or would be affiliated." The rules also stipulate that consultants should announce when they're speaking on behalf of multiple clients or a particular client.

"The idea is to clarify, not to stifle dialogue," said Planning Advisory Committee (PAC) Chair Cynthia Crane, with ITC Holdings.

She pointed out that PJM stakeholders have such a requirement.

"There's clearly precedent for consultants to identify their clients in some fashion," Crane said. "Transparency is a hallmark of the MISO stakeholder process."

The draft language also encourages stakeholders to provide their first and last names when logging into virtual webinars.

The rule has some roots in consultant David Harlan's refusal to divulge Entergy as his client when offering opinions during MISO planning meetings in 2019 and 2020. (See Entergy Consultant Under Fire for Covert Role in MISO.) Steering Committee leadership, however, only referenced concern regarding consultants not identifying clients or the sector they speak for during PAC meetings.

Some MISO members insisted that requiring consultants to be forthcoming about their clients could be unduly burdensome, noting that some consultants may have a list of clients.

"We're all adults here, and we're expected to act professionally," said Market Subcommittee Chair Megan Wisersky, of Madison Gas and Electric. "I find this requirement to be unnec-

She said the language singles out consultants

and is silent on attorneys, nongovernmental organizations and trade group representatives. "It's forcing consultants to wear a scarlet letter."

Resource Adequacy Subcommittee Chair Chris Plante, of WEC Energy Group, said, "It seems benign, but I can see where this could create a lot of obstacles for a chair to run a smooth meeting."

Reliability Subcommittee Chair Ray Mc-Causland, with Ameren, said that in his years in the MISO stakeholder process, he's seen just one individual refuse to name their client. But he said having the language on hand couldn't hurt if the RTO again encounters a similar issue. "Let's just get this simple language done; let's put it to bed; and let's keep moving."

"This is very straightforward language," Manitoba Hydro's Audrey Penner said. "I don't see anything here that could disenfranchise anyone."

"I like the free-flowing discussion, the hard questions. It bothers me to the core that we're going down an authoritarian route on the stakeholder process where we require this, require that, before people are allowed to speak," Wisersky said, noting she didn't know "what the fear is" if consultants don't identify themselves.

The Advisory Committee will decide in the coming months whether to approve the language its members debated during a Jan. 20 teleconference.

"Stakeholders get trained. They understand it, but as meetings drag on, some might get lax and forget to announce," said DC Energy's Bruce Bleiweis, representing the Power Marketers and Brokers sector. "Usually all they need is a gentle reminder. Adherence is near

Gabel Associates' Travis Stewart, a delegate for the Independent Power Producers sector, said it's "entirely reasonable" for a consultant to divulge a client when they make a request of MISO staff during a meeting.

The IPP sector had suggested that individuals who attempt to disguise clients or mislead stakeholders or MISO leadership be silenced in committee meetings. They would still have the option to submit written opinions afterthe-fact, it said.

Consumers Energy's Kevin Van Oirschot said the issue was "exceedingly rare" and didn't need to be codified.

But Stewart said stakeholder committee chairs "could use some assistance ... and authority."

"Transparency and professionalism are the cornerstone of the MISO stakeholder process," he said. "Even though it's one or only a few instances, in my view this is something that could not and should not happen." ■



MISO's Carmel, Ind., headquarters | MISO



MISO, Stakeholders Disagree on Post-storm Accreditation

By Amanda Durish Cook

MISO staff and stakeholders clashed last week in front of board members on whether the RTO's proposed capacity accreditation design should move forward.

The grid operator said February's load shedding is further justification to introduce a four-season capacity auction and corresponding reserve margin targets paired with an availability-based accreditation, which compares a generator's recent availability against predefined risky hours. (See MISO Underscores Need for RA Action in Winter Storm Review.)

The RTO hopes to file the changes with FERC in June, although a majority of members voted to oppose the accreditation proposal during an earlier Resource Adequacy Subcommittee meeting.

Several stakeholders said availability-based capacity is unfair because it relies on sheer luck for generation to be available on the right day. Others said using three years of historic data to judge a generator's performance is inadequate.

Several stakeholders asked for more analysis into why MISO's suite of solutions is the best route to address the footprint's worsening resource adequacy.

"These concepts are not necessarily bad ... but we want to make sure we know what we're getting into," Exelon's John Orr said during an Advisory Committee meeting on March 25. "The information has been sparse, I think, and there's just this rush to a deadline."

Attorney Jim Dauphinais, representing the Coalition of Midwest Transmission Customers, said a June filing date may be unrealistic.

"I think we're just barely scratching the surface of the details we need to work through," he said.

"We don't think that this proposal is fully baked," Minnesota Public Utilities Commissioner Matthew Schuerger added.

MISO CEO John Bear said February's winter storm revealed that the RTO needs a different resource accreditation method.

"MISO's scale, diversity and extensive planning really paid off during that trying time," Bear said, adding that it was "amazing" that staff was able to limit load shed to local events and one two-hour MISO South event.



Ameren Missouri lineman Feb. 17 | Ameren Missouri

"Will a resource be there when it says it will? Will we be able to rely on a resource when we need it most?" he asked rhetorically.

Bear said MISO's emergencies most often occur in winter and fall, when forced outages remove anywhere from 25 to 35% of its fleet.

"So that's pretty high. ... We can't stay where we are. It's not sustainable," he said. "We need to find a better method. We need to really look at the four seasons."

He asked stakeholders to "please, please" work together with staff on a more pragmatic accreditation.

MISO President Clair Moeller called resource availability during severe winter weather "consistently bad" and said the reserve margins necessary to manage polar vortices "are not in the math."

"We operated the system at its limits essential-

ly for two days," he said.

Moeller said NERC load-curtailment procedures could be updated because they are predicated on a slower-moving summer peak that's easier to anticipate. He said public safety issues "are substantially different in the winter versus in the summer."

"NERC's version of reliability is an orderly blackout rather than a disorderly blackout," Moeller said. "They're important backdrops, but they're not sufficient for these kinds of emergencies."

Manitoba Hydro's Audrey Penner said that if February's events weren't a wake-up call for dramatic change, "then I don't know what is."

Travis Stewart, representing the Coalition of Midwest Power Producers, said "but for PJM's about 30% reserve margin," MISO might have ordered more load shed.



Stewart asked for the grid operator to develop rules to incent resources to be more available and winterize equipment. "We're now seeing a pattern where load shed is common to the footprint," he said.

Renuka Chatterjee, MISO's executive director of system operations, said the recent string of polar vortices make clear that reliability risks are no longer a summertime game.

"We are in continuous risk assessment mode," she told the Board of Directors.

MISO estimated that the extensive snow and ice dumped across the system was a once-in-30-year event.

After 40% of its generation fleet was unavailable by Feb. 17, MISO will now classify outages by fuel, mechanical or weather-related issues. Chatterjee said the RTO is working with generation owners to understand the reasons behind the unplanned outages and prevent them in the future.

The grid operator uncharacteristically flowed power east-to-west over its system to manage the ubiquitous cold Feb. 15-17.

"We were seeing flows that we had never seen before, and I have been here since the beginning of MISO," Chatterjee said. "Many shift operators were telling me that they had never seen congestion like this before. ... I describe it more casually as our system was a drain hole in the South."

As the cold took hold Feb. 16, MISO was forced to cut 3,000 MW of exports flowing to SPP during the morning peak. Staff removed them in two tranches of 1,500 MW separated by half an hour, so as not to shock the system.

"We understood we needed to do this. SPP understood we had to do this," Chatterjee said.

However, operators still saw dangerous congestion that needed to be managed by manual redispatch and, eventually, load shed orders.

"Directing load curtailment is nobody's favorite tool, especially in cold weather," Chatterjee said. "And we use it only in the context to avoid uncontrolled, cascading outages."

Chatterjee said one generation owner deferred an outage as "500 boots were on the ground," she said, explaining that a 250member crew was already on-site to begin maintenance work. Another member brought a unit back online that hadn't run since November or December, she said.

"I want to highlight the work of the members in bringing every megawatt back to the table," she said.

MISO said the cold snap caused \$122 million in uplift payments, compared to the \$90 million in congestion costs that Hurricane Laura caused six months before. Settlements staff is working through charges and bills, Chatterjee

Independent Market Monitor David Patton said average energy prices in February rose 226% year-over-year, owing just to the winter storm. He said the month's transmission emergencies led to a record \$1.1 billion in real-time congestion costs, more than MISO accrued in all of 2019.

"We've never seen this much congestion accumulate over two days," Patton said. "At one point, we were violating 33 constraints simultaneously."

Patton said the Monitor's staff worked to allow offers above MISO's \$2,000/MWh offer cap during the arctic blast. "These costs are devastatingly high if you can't recover them," he said.

Director Nancy Lange noted that staff got "a lot of experience" in load-shed orders between 2020 and 2021. She asked whether MISO could improve its procedures to limit outage

Chatterjee said staff holds monthly loadmanagement drills with members, where they pose load-reduction scenarios using members' real-time availability. She also said MISO and members could prepare the public earlier for conservation appeals.





NYISO Challenges NYPSC to Improve Grid Expansion Says Decision on Meshed OSW Grid Cannot Be Delayed; Others Urge Haste

By Michael Kuser

NYISO last week urged the New York Public Service Commission to "move quickly" in supporting construction of a meshed transmission network to support at least 9 GW of offshore wind "before opportunities for an efficient design are foreclosed."

Stakeholders have had a couple months to review state regulators' draft power grid study report since it was issued in January, and not one of 30 comments submitted by the March 23 deadline fully supports the report's conclusions (Case No. 20-E-0197). (See NY Grid Study Pushes Meshed OSW Tx, Coordination.)

The ISO said its new comments reiterate those it made at a technical conference in October and that it "respectfully disagrees with the finding ... that a decision to implement a meshed system can be delayed." (See OSW Growth to Test New York's Transmission Grid.)

Limitations on feasible points of interconnection and cable routes signify that the costs to integrate OSW in New York City and Long Island are likely to increase because of siting and transmission constraints, NYISO said,



NY Transco lineman | NY Transco

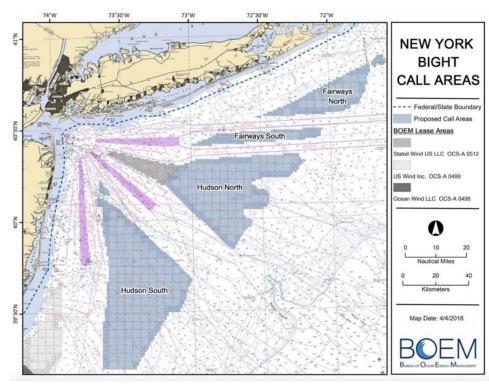
noting that its interconnection queue already

includes 4,316 MW of OSW projects.

"Considering the impacts from the offshore wind grid, the issues identified above for the PSC's consideration could have significant impacts on grid operations, interconnection planning and market design," NYISO said. "These issues should be addressed to prepare all relevant stakeholders for a future meshed system, if deemed desirable. While designing with expandability in mind would likely cost more upfront, it would likely still be cheaper than replacing interconnection facilities later and could also maximize the use of limited available transmission cable routing options."

The New York State Energy Research and Development Authority and the state's Department of Public Service prepared the study, supported by The Brattle Group and Pterra Consulting, among others. The PSC ordered the report last May, as directed by the Accelerated Renewable Energy Growth and Community Benefit Act.

The three-part grid study examines transmission needs for OSW, bulk system needs for land-based renewables out to 2040 and needs on the sub-bulk level to achieve net-zero power generation by 2040, as called for by the Climate Leadership and Community Protec-



Future wind energy lease areas are well understood and mapped as shown here. | BOEM

NYISO News



tion Act (CLCPA).

Follow European OSW

Ocean Winds North America, a joint-venture between EDP Renováveis and ENGIE, said that offshore transmission infrastructure shared by multiple OSW farm owners has become the norm in the Netherlands, Belgium and Germany.

The situation in these countries resembles New York in the sense that they have populated and constrained coast lines, limited cable landfall opportunities and few suitable onshore points of interconnection (POIs), the company said, adding that it supports the comments submitted by the New York Offshore Wind Alliance (NYOWA) as being largely those of industry participants.

NYOWA submitted comments together with the Alliance for Clean Energy New York, American Clean Power Association and Advanced Energy Economy Institute urging the PSC to consider a scenario where POIs reflect the likely needed size and capacity of contracted projects — and as soon as possible to identify at least three specific public policy needs associated with OSW development.

"One should address the need to expand the capacity to export power off Long Island. The second should address the need to develop an offshore meshed transmission system, with the option of including an interregional connection. The third should be the need to identify and develop one or more clean energy hubs in Zone J (NYC) and one or more clean energy hubs in Zone K (Long Island)," NYOWA said.

Transmission developer Anbaric said that the draft report erred in assuming that transmission cable carrying capability is limited to no larger than 1,310 MW, a limitation not imposed by NYISO or regulators, but one that represents the size of an existing known system contingency: the New York Control Area's existing most severe operating capability loss.

"As the U.K. grid operator has also recently found, its early embrace of radials was suboptimal even for a country with a vast coastline," Anbaric said. "The U.K. is now moving from radials to a planned system anticipating ... a 6 billion pound cost savings to consumers and a reduction of the amount of equipment needed by 50%, 'creating significant environmental & social benefits."

The U.K. grid operator also found that a delay in moving from radials to a planned, shared network approach by just five years reduced cost savings and other benefits by half.

Hurry Up on Phase 2 Projects

The initial grid study report said that local transmission and distribution (Phase 1) projects already under development appear sufficient to integrate land-based renewables, although some might be accelerated, while more preliminary (Phase 2) projects might be pushed forward in order to attract investment in solar and wind development upstate.

The New York Solar Energy Industries Association (NYSEIA) called for a more holistic approach to the grid and a faster process for developing high-priority Phase 2 transmission projects.

The historical separation of the bulk transmission system and utility distribution systems is no longer appropriate, as issues affecting one system are increasingly influencing the other, NYSEIA said. Interconnecting renewable generation to the grid challenges both utility-scale and distributed energy resource projects, it said.

The state's investor-owned utilities agreed with most aspects of the initial report, but disagreed that Phase 2 projects will not be necessary until 2030.

"Rather, Phase 2 project development should continue in the interim to lay the groundwork for other projects, such as electrification," the utilities said. "Phase 2 projects are, and should remain, under the purview of utility planning processes rather than those governed by the NYISO. ... The commission states that local transmission refers to transmission line(s) and substation(s) that generally serve local load, and transmission lines which transfer power to other service territories and operate at less than 200 kV."

New York City decried the grid study's "fragmented approach" and said "the current regulatory framework assigns responsibility for discrete aspects of system planning to different entities, inhibiting comprehensive, cost-effective, systemwide planning."

The city called for broad coordination and a comprehensive planning process that considers the electric system as an integrated whole, urging the PSC to require procedures to implement needs identified by the planning process and to fairly allocate the costs of achieving CLCPA goals among all New Yorkers.

The commission "should consider incentives only on a limited basis and should utilize only incentives that align customer and shareholder interests, such as incentives that share savings achieved ... and should consider the social cost of carbon in its analyses and in prioritizing projects," the city said.







NYISO News



NY Preps Statewide GHG Emissions Report

By Michael Kuser

New York officials on March 22 held the first of three public hearings as they prepare the first annual report of statewide greenhouse gas emissions required by the state's Climate Leadership and Community Protection Act (CLCPA).

The state Department of Environmental Conservation (DEC) is preparing the report to be issued this year and is seeking public input on its format and the methodology used to determine annual statewide GHG emission levels.

"There is no deadline at all for public input, but if you really want to inform the annual report you should get it in by May," Suzanne Hagell, climate change policy analyst at the DEC's Office of Climate Change, said.

The CLCPA mandates that GHG emissions be reduced to 40% of 1990 levels by 2030 and 85% by 2050. It directs the DEC to measure emissions on a common scale using the carbon dioxide equivalence metric and the 20-year global warming potential of each gas, as derived from the U.N.'s Intergovernmental Panel on Climate Change.

The DEC in October completed its public hearing process on the (Part 496) emissions limits and in December *finalized* the regulations to reduce GHG emissions, the first regulatory requirement of the climate law. (See New York Holds Final CLCPA Emissions Hearings.)

EPA Model

The department is basing its report on the EPA draft Inventory of U.S. Greenhouse Gas Emissions and Sinks from 1990-2019, the final version of which will be published in April.

Inventorying manufacturing emissions would depend on their type, which may be confusing for industries with emissions that go under different categories, Hagell said. For example, CO₂ emitted from a foundry would fall under the category of "industrial process and product use," while emissions associated with combustion of fuel to drive or energize the process would go under "energy."

"I'd love input on how the EPA takes these emissions and categorizes them in different ways to present them for a different purpose. like for economic sectors as opposed to emissions sectors," she said. "If there is something that is particularly helpful for New York state, a different way of organizing, we can always organize in multiple ways and provide figures in this report that would be helpful for the purpose of policy."

Officials can evaluate whether to include the social cost of carbon in the GHG emissions

report, though they are not aware of any other jurisdiction doing so, she said. Also, emissions data will not be reported at the county level, as such data is not always reported at a granular level and a hydrofluorocarbon inventory is not vet available.

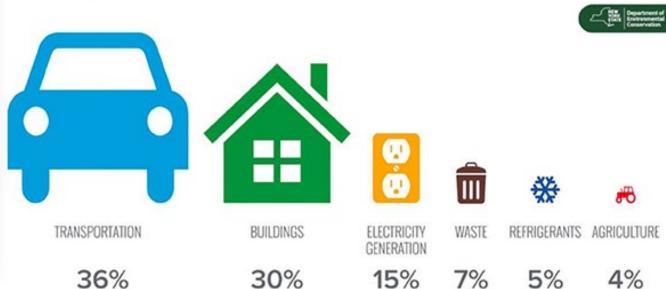
The state is working to cut GHG emissions (including methane and hydrofluorocarbons) from buildings, food waste and other sources outside the power and transportation sectors, and data in the report will reflect that goal. (See NY Proposes Food Scrap Regs to Cut Waste, Emissions.)

In addition, the state plans to collect data on non-GHG emissions, such as particulate matter (PM_{25}).

"We do calculate emissions from heating fuel use as well as from a host of other categories, and several pollutants from each," Ona Papageorgiou, DEC chief of mobile source and climate change planning, said. "There are criteria pollutants as well as some others that may be included, and PM_{2.5} is part of that."

Feedback may be provided at any time and can be mailed to DEC Office of Climate Change, 625 Broadway, Albany, NY 12233-1550 or emailed to climate.regs@dec.ny.gov. Include "Annual Report" in the subject line of the email. ■

Main Sources Of Greenhouse Gases in NYS



The main sources of greenhouse gas emissions in New York state | NYSDEC

7'10

Ohio Lawmakers Repeal Nuclear Subsidy for Energy Harbor

No Definite Plans yet to Repeal Subsidies for OVEC Coal Plants

By John Funk

Ohio lawmakers last week voted unanimously to eliminate the \$1.1 billion customer-paid subsidy they created in July 2019 to bail out the state's two nuclear power plants then owned by a former FirstEnergy subsidiary that had filed for bankruptcy protection.

A spokesman for Energy Harbor, the company that emerged from the bankruptcy of FirstEnergy Solutions, did not return a phone message or an email seeking comment.

Gov. Mike DeWine (R) is expected to sign the legislation, House Bill 128, when it arrives on his desk, ending at least one legislative chapter in what federal prosecutors have called "likely the largest bribery, money-laundering scheme ever perpetrated against the people in the state of Ohio."

Those prosecutors have alleged that former Ohio House Speaker Larry Householder (R) forced the passage of H.B. 6, creating the nuclear subsidy as well as subsidies for two 1950s coal plants operated by the Ohio Valley Electric Corp. (OVEC). It also created a \$20

million temporary fund for a half dozen utility-scale solar farms previously approved but not yet built.

The federal investigation involved FirstEnergy as well as Energy Harbor. FirstEnergy fired its CEO and four others following its own internal investigation. The company recently hired a new chief ethics officer. (See FirstEnergy Names Chief Ethics and Compliance Officer.)

Former U.S. Attorney for the Southern District of Ohio David DeVillers recently said a grand jury has resumed its investigation into Householder, already indicted along with four associates on racketeering charges, after shutting down in November because of the COVID-19 pandemic.

H.B. 128 eliminates only the nuclear subsidies. It does nothing to remove the OVEC subsidies, which have been estimated to be worth more than \$700 million. And while the legislation keeps the temporary subsidy for the solar projects, it does not affect the state's renewable portfolio standard, which the GOP leadership previously capped at 8.5% by 2026.

Nor does H.B. 128 restore customer-paid utili-

ty consumer energy efficiency programs.

"I don't see those coming back, House Speaker Bob Cupp (R) said in a brief teleconference following passage of the bill late Thursday.

Cupp did say, however, that he expects Rep. Jim Hoops (R) to hold hearings on the issue of the OVEC subsidy.

In a statement issued a short time later, Cupp said the bill is one "that Ohioans can be proud of — one that retains carbon-free energy in the state, provides additional ratepayer protections and savings, and moves Ohio forward. This is sound energy policy."

Although there was no debate on the House floor before passage of the bill, Rep. Kent Smith (D) urged passage but noted that the bill did not remove the OVEC subsidies. "I would hope that this chamber would bring that up in the remaining 21 months" of the legislative session, he said.

Rep. Dick Stein (R), a co-sponsor of the original version of H.B. 128, which would have also removed the subsidies for the solar projects, also recommended passage.



The Perry nuclear plant in Ohio | Nuclear Regulatory Commission

PJM News



Rural Ohio Lawmakers Want Towns to Have Final Say on Renewables

By John Funk

The battle waged by some Ohio Republican lawmakers for more than a decade to limit wind and solar development is back on the front burner, this time with the support of some rural voters who say the decisions of the state's Power Siting Board (PSB) on utilityscale projects should be put to a vote at the township level.

A pair of bills introduced last month both in the House of Representatives and Senate to give townships the last word on renewable projects had their third public hearings before utility committees last week and are expected to

quickly move to floor votes.

House Bill 118, introduced Feb. 16 by Northwest Ohio Reps. Dick Stein (R) and Craig Riedel (R), has been presented as a way for local government to pull back control of renewable projects from the PSB, characterized as distant and paying little attention to local issues in proponent testimony earlier this month. Senate Bill 52, introduced Feb. 9 by Sens. Bill Reineke (R) and Rob McColley (R), both also representing the state's northwest, takes a similar tack.

But an unexpected surge of opposition orchestrated by the solar industry to the bills. buttressed by pro-solar farmers worried about the politicization of their property rights in ballot fights, appears to have stalled momentum on the legislation.

Well over 120 people, including farmers, school districts administrators, economic development organizations and solar developers. logged objections to the proposed legislation last week. The committee hearings, which lasted nearly five hours each, ended with neither votes nor an announcement of further hearings.

GOP leadership has successfully reduced Ohio's renewable mandate since it was initiated in 2008 at 12.5% by 2025, to 8.5% by 2026. A second, abolished mandate required another 12.5% of power sold in Ohio by 2025 to be generated by "advanced energy" technologies, including fuel cells and advanced nuclear

Renewables generated about 5% of the power produced in Ohio in 2019, according to the Public Utilities Commission, using data from PJM. About 2.5% of that was wind-generated.

Wind development has been stymied since 2014 when GOP leadership, participating in an 11th hour conference committee preparing the state budget, slipped language into the final legislation extending the distance a wind turbine must be from adjacent properties that are not part of a wind development.

But the pace of solar development, especially large utility-scale projects, has accelerated in recent years. Currently there are 23 applications totaling 4,279 MW pending before the PSB. The agency has already approved another dozen projects with a total generating capacity of more than 2,000 MW.

The growth of solar, typically welcomed by local schools and government because of the millions of dollars in guaranteed longterm payments they bring for up to 40 years, appears to have prompted the proposed legislation — as well as the pushback against it.

Michael Lutmer, who owns a farm in Highland County in southwest Ohio, summed up his disgust with the legislation in testimony before the House Public Utilities Committee: "I was surprised to read the bill sponsors believe they are 'allowing citizens of a township the ability to exercise their property rights through a public referendum with regards to solar projects.' What's next, where I can park my truck, build my barn or how big my house can be?

"The property rights referred to in HB 118 are held by the person who writes the mortgage



Innergex Renewables Development USA has nearly completed the 200-MW Hillcrest Solar Project in Brown County in southwest Ohio. Innergex will pay a total of \$1.8 million annually to the Western Brown Local School District, Green Township and Brown County for the next 35 years. | Innergex Renewables Development USA

PJM News

check," Lutmer said. "As a farmer, I take on all the risk brought by Mother Nature. Diversification into a solar project represents a unique opportunity to supplement my volatile farming income with an income stream that is fixed over the life of the project. This is simply a good business practice."

On March 9, another farmer, Joanna Clippinger of Preble County, also told the committee that she was a strong believer in private property rights. For that reason she supported HB 118 to allow local voters an up or down vote on the huge solar projects.

"My husband is a full-time farmer, and our livelihood depends on the productivity of our land. Yes, my neighbor certainly has property rights, but so do we," she said, adding that her family has owned and farmed the property for more than 100 years.

Clippinger said she had to hire a lawyer to intervene in a case before the PSB for a 1,000acre solar farm adjacent to her farm after learning that elected officials had little say over the project. "I had to spend thousands of dollars to hire a lawyer for someone in our government to hear my opinion. That goes against the very principles of democracy," she said.

"I personally have many concerns about a large-scale solar facility being built next to me. However, if I knew, through a ballot initiative, that the majority of my fellow township residents supported its construction, I would be willing to accept the will of the people in my community. This bill embodies my core political beliefs: property rights, small government and, most importantly, local control," she told committee members.

The Utility Scale Solar Energy Coalition of Ohio, a relatively new trade group organized by solar developers to answer the charges that developers and the PSB ignore the complaints of farmers who oppose solar farms, led the coordinated testimony opposing the legislation.

"In Ohio, data centers like Amazon, Facebook and Google are buying the energy from entire solar projects in an attempt to meet their sustainability goals," Jason Rafeld, executive director of the coalition, told the committee. "Solar developers are racing to meet skyrocketing demand for clean energy, uniquely positioning the state to benefit for decades.

"If this opportunity is realized, the state will become a solar powerhouse, bringing thousands more jobs and billions of critically needed investment dollars and economic growth to municipalities."

Others pointed out that the solar installations,



The Hillcrest Solar Project employed as many as 900 people during the peak of its construction over the last vear - a timely economic stimulus to southwestern Ohio. I Innergex Renewables Development USA

which leave no permanent structures behind when they are decommissioned, are a way to give the farmland a rest. One witness noted that in some regions farmers have allowed sheep to graze between the rows of solar panels.

Jared Wren, a development associate with Hecate Energy, a global solar development company with projects under development in Ohio, including a 300-MW solar farm that will be built in Highland County, described the PSB licensing process as "fact-based, robust, rigorous and equitable."

"When I am discussing solar development with folks in a project area, either around the kitchen table or standing outside around my pickup truck in the driveway, there are a few concepts that I work very hard to convey," he said.

"First of all, that my company, and the project we intend to develop, is not a nameless, faceless entity, attempting to approach by stealth and drop a project next door without their

knowledge. In fact, it is quite the opposite. I am there to give a face and a name to the projects and let folks know that I am there to hear their concerns, that I understand and respect their property and way of life," he said.

Both Wren and competitor Mike Volpe, vice president at Open Road Renewables, another solar developer working in Ohio, noted that getting through the PSB process typically takes 12 to 16 months and that their companies typically spend money months before they even file an application with the agency.

Volpe said Open Road's first Ohio project, the 200-MW Hillcrest project in Brown County, now nearly complete, will pay \$1.8 million annually to local schools and government. He said Open Road hired 400 Ohio-based workers to build the solar farm.

Both developers also noted that they already contact local governments before they file applications with the PSB.

PJM News



Black Start Fails in Final PJM MC Vote

By Michael Yoder

PJM stakeholders rejected a compromise proposal on the controversial black start unit testing issue in a final vote at Monday's Members Committee meeting.

In a sector-weighted vote of 3.17 (63.4%), the proposal addressing black start unit involuntary termination, substitution rules, capital recovery factor (CRF) and minimum tank suction level failed to reach the necessary 66% threshold for endorsement.

The same proposal, which was originally offered by PJM at the Operating Committee and was later presented by stakeholders at the Markets and Reliability Committee, was endorsed at February's MRC meeting in a sector-weighted vote of 3.35 (67%). (See PJM Black Start Rules Inch Closer to Final Approval.)

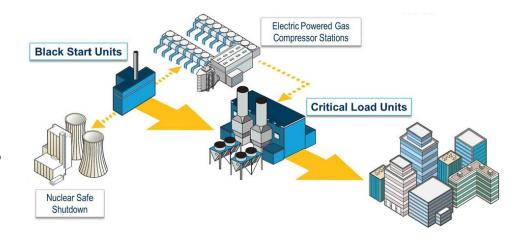
The black start issue remained in limbo for a month when PJM's alternative Option 1 proposal failed with a sector-weighted vote of 2.48 (49.6%), while Dominion Energy's alternate proposal also failed with 2.47 (49.4%) at the January MRC meeting. Several stakeholders searched for a compromise, leading to the updated proposal that ultimately fell short of endorsement. (See "Black Start Packages Rejected," PJM MRC/MC Briefs: Jan. 27, 2021.)

Members pointed to the CRF issue as the most contentious portion of the black start unit discussions throughout the stakeholder process, which dates back as far as 2018. Stakeholders voted to amend the issue charge at the OC in December to align with language in the problem statement after it was discovered the two documents did not match, leading to heated debates. (See Vote on PJM Black Start Compensation Deferred.)

The Independent Market Monitor's package, which received only 7% support at the December OC meeting, called for updated CRF rates and commitment periods to apply to new and existing black start units.

Market Monitor Joe Bowring pointed out at the OC meeting that the CRF table was originally created in 2007 as part of the Reliability Pricing Model capacity market design and currently includes incorrect assumptions. Bowring said the CRF values are higher than they should be under the lower corporate tax rate from changes in the 2017 tax law, leading to overcompensation for units.

Adrien Ford of Old Dominion Electric Coop-



| PJM

erative said she was "both pleased and not pleased" that the black start proposal failed to be endorsed on Monday. Ford said the compromise proposal's lack of addressing the CRF table was ODEC's reasoning for voting against it, saying the CRF has "been in error" and needs to be corrected "prospectively."

She said there were many important issues regarding reliability concerns that the proposal addressed and should be considered by stakeholders.

"We just were not able to support it without addressing the rate error," Ford said.

Compromise Proposal

Susan Bruce, counsel to the PJM Industrial Customer Coalition, and Sharon Midgley of Exelon, presented the compromise proposal of PJM's original proposal. Bruce said the compromise proposal had a different "term of commitment" for black start resources — the "life of unit."

PJM's Option 1 had a commitment period of 20 years or greater if the unit offers more in the request-for-proposal process. The Dominion proposal had a commitment of the capital recovery period plus three years of a 5-, 10-, 15- and 20-year period based on unit age at the time it entered black start service.

Bruce said the content of the compromise proposal was largely consistent with the other proposals that had already been reviewed in the stakeholder process. She said she viewed the proposal as a true compromise and supported the measure.

"It was designed to show the opportunity for consensus-building and stakeholder process successes," Bruce said.

Midgley echoed Bruce's comments, saying the proposal represented a real compromise between stakeholders. She said it had "important enhancements" to black start testing and replacement rules and included an important change to the term of commitment.

"It's been a little bit of a long and winding road to get this proposal in front of the Members Committee," Midgley said.

Future Moves

Ford asked about PJM's plan in light of the proposal's failure to be endorsed.

Mike Bryson of PJM said that, from the beginning of the black start unit stakeholder process, the RTO has "been on the record" that it believed the CRF issue must go to FERC for a decision. Bryson said the next step will be a consultation with the PJM Board of Managers, "hopefully this week," about the direction the RTO will take on black start and an update on any decisions by the board at the Market Implementation Committee meeting April 7.

Paul Sotkiewicz of E-Cubed Policy Associates asked if the PJM board will look at the CRF issue on a "forward-going basis" and not retroactive based on past comments by the RTO.

Bryson said PJM's discussion with the board will be "representative of all our positions" up to the present, and the RTO will also bring forward the stakeholder discussions over the last few months.

SPP News



No MISO-SPP Joint Study in 2021

By Amanda Durish Cook

MISO and SPP won't undertake a major interregional transmission study in 2021, officials announced Friday.

The grid operators said planners are already tied up in the RTOs' joint targeted interconnection queue study in a search for interregional projects to alleviate their jammed generator interconnection queues.

"Both MISO and SPP have very full plates in 2021," SPP's Neil Robertson told stakeholders during an Interregional Planning Stakeholder Advisory Committee meeting on March 26.

He said the joint queue study will examine "most, if not all, of the same congestion" that would be studied under a coordinated system study (CSP). The RTOs will hold a teleconference April 9 to discuss their joint interconnection study.

MISO and SPP have conducted four CSPs since 2014 but have yet to find a gainful

project. (See 4th Time No Charm for MISO-SPP Interregional Study.)

Robertson said the one-year CSP pause will give the RTOs time to better line up cost estimates to construct projects.

"I would offer to this stakeholder group that SPP and MISO will address the varied cost estimates in terms of the interregional process and how we will prevent them from impeding projects," he said, adding that the RTOs don't yet have a blueprint for accomplishing that.

American Clean Power Association's Daniel Hall urged the grid operators to pursue a fifth CSP, despite their additional planning responsibilities for 2021. He said the mid-February emergencies made clear that the RTOs could use cross-border projects to avoid load shedding and energy price spikes.

TMEP Category Likely Imminent

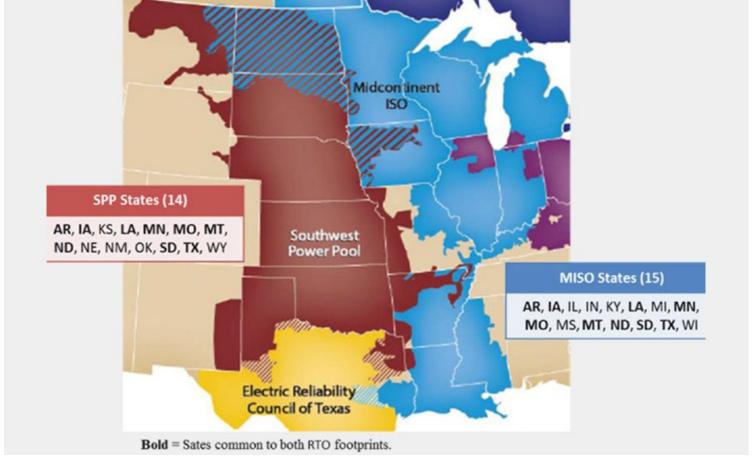
Robertson also said the RTOs will likely establish their own smaller interregional project type, similar to MISO's and PJM's Targeted Market Efficiency Project (TMEP). MISO and SPP state regulators have asked the grid operators to commit to a TMEP-type category. (See MISO, SPP Regulators Call for Pancaking Fix, Smaller Projects.)

"It's clear that there are planning gaps in the SPP-MISO seam," Missouri Public Service Commission Chair Ryan Silvey said.

Adopting a new TMEP-style project type might address some of those shortcomings, Silvey said, and could result in relieving the chronically congested Neosho-Riverton flowgate on the Kansas-Missouri border that habitually incurs millions of dollars in congestion costs.

Silvey said MISO and SPP shouldn't "automatically" implement a carbon copy of the TMEP process, but they could apply aspects that make sense.

MISO and PJM debuted the project type in 2017. They have since approved two portfolios of the smaller congestion-relieving projects.



The SPP-MISO seam | Organization of MISO States

Company Briefs

American Clean Power Association **Announces 1st Board of Directors**



The American Clean Power Association on Monday announced its first board of directors, with Invenergy Presi-

dent and COO Jim Murphy serving as the first chairman.

The board is made up of 39 members, including Murphy and three other officers. Also included are: Laura Beane, ENGIE North America: Avangrid Renewables CEO Alejandro de Hoz; Apex Clean Energy CEO Mark Goodwin; EDF Renewables CEO Tristan Grimbert; NextEra Energy CEO John Ketchum; and Xcel Energy CFO Brian Van Abel.

"American Clean Power is uniting the efforts of U.S. wind, solar, storage and transmission into a cohesive voice to create American jobs, invest in American communities and innovate a better American energy system," said Heather Zichal, CEO of the organization, which was formed as the successor to the American Wind Energy Association last year. "Our board reflects these shared priorities as we collectively grow renewable

energy as the dominant electricity source in the nation."

More: American Clean Power Association

Arrival to Build EVs for UPS in North Carolina

British electric vehicle company Arrival last week announced it is investing more than \$41 million in a second microfactory in Charlotte, N.C., where it plans to assemble vehicles for the United Parcel Service starting in the second half of 2022.

About a year ago, UPS placed an order with Arrival for 10,000 Generation 2 EVs as part of a move to electrify its fleet of delivery vans. The vehicles are expected to hit streets during the next four years.

More: CNBC

Great River Energy in Talks with Potential Coal Creek Buyer



Great River Energy announced last week that it has entered into nego-

tiations with a potential buyer for its Coal Creek coal-fired plant, which is slated to

shut down next year.

The potential buyer is considering purchasing the North Dakota plant and the transmission line attached to it and would operate the plant with workers it hires. The plant employs about 240 workers.

GRE anticipates the deal could be finalized later this year.

More: The Bismarck Tribune

Investors BlackRock, Vanguard Join **Net Zero Effort**

Asset managers BlackRock and Vanguard Group have joined an investor push to limit greenhouse gas emissions to net zero by 2050. The two largest U.S. fund firms now account for roughly half of the \$32 trillion of total assets supporting the initiative.

The two join 71 other members of the Net Zero Asset Managers Initiative, who have committed to press companies in their portfolios to achieve net zero emissions by 2050. Asset managers will set interim reduction targets for 2030 and report progress under common standards.

More: Reuters

Federal Briefs

2020 a Banner Year for US Solar Installations



The U.S. solar market had its largest installation year in 2020, according to IHS Markit's Maria Jose Chea, with more than 22 GW of photovoltaic installations completed. Utility-scale projects represented 77% of that volume.

Thanks to the renewables-friendly Biden administration, an extended investment tax credit schedule, increasingly competitive pricing and a massive late-stage project pipeline, IHS believes the U.S. will install

more than 20 GW of utility-scale projects this year.

More: pv magazine

DOE Aims to Cut Solar Costs by 60%



The Department of Energy hopes to lower solar power costs by 60% in the next decade as the Biden administration looks to speed up deployment of renewable

sources.

The DOE is targeting solar costs of 3 cents/ kWh by 2025 and 2 cents by 2030. It replaces a prior goal of hitting the 3-cent target by 2030.

The effort is part of a broader administration push to have various zero-emissions sources provide 100% of the nation's power by 2050.

More: Axios

Fed Reserve to Create Financial Stability Climate Committee

The Federal Reserve last week said it will create a Financial Stability Climate Committee that will focus on potential threats that climate change can pose to the broader financial world.

The Fed had created a Supervision Climate Committee to study the climate risks facing specific firms and the general banking industry; the new panel will focus on how climate-related disruptions could affect credit markets and other industries within the financial sector. The two will work together along with other agencies throughout the federal government.

More: The Hill

Oil, Gas Industry Says it will Support **Carbon Pricing**

The American Petroleum Institute last week backed the idea of the government putting

a price on carbon emissions, provided the Biden administration avoids other measures the group terms "regulatory duplication."

API did not say how big a carbon tax should be, although many of its members have long used \$40 a ton as an internal price to judge the viability of their projects. However, economists have warned that a price two or three times that would be needed to change behavior enough to effectively curb greenhouse gasses.

About 25% of U.S. greenhouse gas emissions come from oil and gas drilling on federal land. The administration has paused new oil leases on those lands while it reviews how to alter practices.

More: The Washington Post

Oil Industry Titans Vow Climate Collaboration with White House

Chief executives from three industry trade groups and 10 oil companies promised to collaborate with the Biden administration in its campaign against climate change during a

meeting with White House National Climate Adviser Gina McCarthy last week.

The leaders pledged support for federal regulations explicitly limiting emissions of methane from wells and other oilfield equipment and cheered the administration's return to the Paris Agreement. They also urged greater government support of carbon-capture and hydrogen technology that can help fulfill new carbon-cutting pledges set to be unveiled next month.

More: Bloomberg Green

Senate Confirms Turk as Deputy **Energy Secretary**



The Senate last week confirmed **David Turk** as deputy energy secretary in a 98-2 vote.

Turk. who served on the National Security Council and in the State Department during the

Obama administration, cleared the Senate

Energy and Natural Resources Committee in a unanimous vote earlier this month.

More: The Hill

WH Withdraws Interior Nominee Following Murkowski Opposition

The White House withdrew its nomination of Elizabeth Klein for the Interior Department's deputy secretary last week after the Biden administration faced pushback from Sen. Lisa Murkowski (R-Alaska).

According to sources, the administration pulled Klein's nomination after hearing of opposition coming from Murkowski, a moderate Republican whose vote is crucial to Biden's legislative agenda.

Klein is a former Obama administration official and deputy director of the State Energy and Environmental Impact Center at the New York University School of Law where she focused on renewable energy and climate change issues.

More: POLITICO

State Briefs CALIFORNIA

LA Has Roadmap to 100% Renewable Energy

In a report commissioned by the city of Los Angeles, the National Renewable Energy Laboratory last week concluded that the city can achieve 98% clean energy within the next decade and 100% by 2035.

The laboratory found that the city needs to build solar farms, wind turbines and batteries, get solar panels on rooftops, electric cars in garages and electric heat pumps in homes. It also said the city should invest in energy efficiency and "demand response" programs that pay people to use electricity during times of day when solar and wind power are plentiful.

To achieve this, Los Angeles will need to add 470 to 730 MW of solar, wind and batteries every year for the next 25 years on average.

More: Los Angeles Times

ILLINOIS

ICC Reaches Consumer Protection Agreement with Utilities

The Commerce Commission last week

announced it had reached a consumer protection agreement with regulated utilities to mitigate outstanding consumer debt and prevent disconnections.

While utilities will be able to send disconnection notices on a staggered basis, as of April 1, the notices must also inform customers of their potential eligibility for deferred payment. Utilities will waive reconnection fees for low-income customers through June 30 and reconnect those whose income is 300% or less of the federal poverty level based upon payment of 25% of the outstanding balance through July 10.

The agreement was made before Wednesday's expiration of the utility's voluntary winter moratorium on disconnections.

More: Daily Energy Insider

INDIANA

NIPSCO Inks 2 More Renewable Agreements

NIPSCO

NIPSCO and EDP Renewables last week announced a power purchase

and a build-and-transfer agreement for two renewable energy projects in White County. The PPA will apply to the planned 204-MW Indiana Crossroads II Wind Farm, while the build-and-transfer agreement will allow for the construction of the 200-MW Indiana Crossroads Solar Park. They are expected to become operational in 2023 and 2022, respectively.

The agreements are the third and fourth projects the companies have undertaken.

More: The Times of Northwest Indiana

KANSAS

Plan to Limit Turbines Riles Growing Wind Industry



Senate Utilities Committee Chairman Mike **Thompson** (R) last week introduced a bill that would impose statewide regulations limiting wind turbines to one per square mile and keeping them 1.5 miles from any home or public building.

Thompson said he is trying to protect landowners who fear turbines will lower property values and harm their quality of life.

The proposal has split Republicans and

inspired a backlash from environmentalists and economic development officials. Thompson said he's not backing off but has not scheduled a committee vote after days of hearings.

Alan Claus Anderson, vice chair of the Polsinelli law firm's energy group, called the proposed regulations "pretty extreme" and said no one would be able to site a project.

More: The Associated Press

MAINE

No Violations Found in Dispute Between Lobstermen, Wind Devs



The Department of Marine Resources last week said there was no issue between wind developer New England

Agua Ventus' survey vessel and local fishermen.

Project officials had said fishermen appeared to be putting gear in the vessel's way, bringing their boats too close and forcing suspension of survey operations. However, a DMR statement said that when state Marine Patrol officials radioed to fishing boats that they needed to stay a safe distance from the survey vessel, the captains complied. The DMR also said officers did not see direct interference with the vessel and saw no clear evidence that a significant amount of gear had been moved into the route.

More: Maine Public Radio

MICHIGAN

PSC Approves DTE Energy's Plan to **Support Fleet Electrification**



The Public Service Commission last

week approved DTE Electric's application to begin the second phase of its Charging Forward electric vehicle pilot program, allowing the utility to spend up to \$10.3 million on operation and maintenance costs of the program, which centers on fleet electrification.

The program was one of three utility vehicle pilot programs the commission approved to encourage EV adoption and test technology innovations, rate designs, gauge customer response and analyze other factors.

The second phase, which is designed to prevent disruption from EV adoption and fleet electrification expansion, will run through 2025.

More: DBusiness

MISSOURI

Ameren Gets Approval for Largest **Solar Project**



Ameren last week received regulatory approval to build a 6-MW solar facility

in Montgomery County. It will be the company's largest solar facility to date.

The project, which is expected to start construction this summer and finish by the end of the year, is part of Ameren's community solar program.

More: St. Louis Post-Dispatch

MONTANA

PSC Votes to Oppose Colstrip Bailout

The Public Service Commission last week voted unanimously to oppose a bill that places all financial risk associated with buying more of the Colstrip Power Plant on NorthWestern Energy customers.

The bill requires that customers to pay for any additional shares of the power plant NorthWestern buys, plus associated repairs and environmental cleanup, to the tune of \$1.9 billion. The PSC wouldn't be able to reject any purchase considered too risky for customers and wouldn't be able to set limits on what customers paid for additional shares. Also, there is \$272.4 million yet to be paid off on what NorthWestern owns of Colstrip.

More: Ravalli Republic

OREGON

PUC Approves Programs to Assist Customers Affected by COVID-19

The Public Utility Commission last week approved debt relief programs to benefit residential customers with past due balances caused by the COVID-19 pandemic.

Portland General Electric's plan was approved on Feb. 11, while plans for Pacifi-Corp, Idaho Power, NW Natural, Avista and Cascade Natural were approved on March 23. The programs must be in place no later than April 1, except for NW Natural, whose program goes into effect May 3.

As of January, there were more than 91,000 customers who had past-due balances and were more than 90 days behind in paying their energy bills.

More: KTVZ

PENNSYLVANIA

Chesapeake Could be Fined for Wetland, Stream Violations



The EPA and the state's Department of Environmental Protection have proposed a \$1.9 million fine against Chesapeake Energy for damaging dozens of wet-

lands and streams at its gas drilling sites.

According to a complaint, Chesapeake illegally damaged wetlands and streams at 76 well sites in Beaver, Bradford, Sullivan, Susquehanna and Wyoming counties. Regulators said the company filled in, dredged or otherwise encroached on protected waterways without obtaining the proper permits.

As part of a proposed consent decree, Chesapeake would restore 55 acres of wetlands and repair more than 4,000 feet of streams.

More: StateImpact Pennsylvania

TEXAS

Annova LNG Ends Brownsville Project

Annova LNG last week said it is canceling its LNG plant at the Port of Brownsville. The plant was expected to produce 6.5 million metric tons of LNG a year.

The company had not announced any contracts for its LNG in the years since its development, while other U.S. developers have struggled to sign long-term offtake agreements due to effects from the COVID-19 pandemic.

Annova and two proposed LNG export terminals at the port have faced stiff opposition from a coalition of shrimpers, fishermen. environmentalists, Native Americans and neighboring communities as well.

More: Houston Chronicle

CPS Energy Sues Gas Companies over Winter Storm Prices



CPS Energy last week sued 16 natural gas companies over high prices stemming from

the winter storm and is hoping to reduce \$1 billion in charges.

CPS, which uses natural gas at some of its plants, bought more than \$600 million in natural gas during the storm and said it found that some utilities charged more than a 15,000% increase. The lawsuits are asking a state court to find the excessive charges unlawful and grant a restraining order to prevent gas suppliers from declaring a financial default against the utility.

CPS President and CEO Paula Gold-Williams said the utility filed suit to protect customers from excessive prices.

More: Texas Public Radio

VIRGINIA

Gas Pipeline Proposal Withdrawn in **Prince William County**

Virginia Natural Gas last week withdrew its

proposal for a new natural gas pipeline in Prince William and Fauquier counties, according to a motion filed to the Corporation Commission, and noted that the project was "no longer needed as proposed."

The VNG Interconnect would have added more than nine miles of pipes to connect to an interstate pipeline and included the construction of a compressor station in Prince William County.

More: Patch

Tree-sitters Removed from Mountain **Valley Protest Site**

Police removed two Mountain Valley Pipe-

line protesters from a treetop blockade last week.

Police extended a crane's boom above the trees and lowered a bucket with two officers to within arm's reach of the tree stand. One tree-sitter was locked to a device called a "sleeping dragon," which secured the protester to the tree stand. After cutting through the metal lockbox, police lowered the tree-sitter to the ground in the basket.

The man and woman were charged with interfering with the property rights of Mountain Valley and were being held without bail, the sheriff's office said.

More: The Roanoke Times; The Roanoke Times

