

# RTO Insider

**YOUR EYES AND EARS ON THE ORGANIZED ELECTRIC MARKETS**

**CAISO ■ ERCOT ■ ISO-NE ■ MISO ■ NYISO ■ PJM ■ SPP**

**FERC & Federal**

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# RTO Insider

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

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RTO Insider LLC

10837 Deborah Drive

Potomac, MD 20854

(301) 658-6885

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### Correction to MISO Board of Director Briefs: March 23, 2023

The article "MISO Board of Director Briefs: March 23, 2023" incorrectly stated that MISO Director Nancy Lange is serving her final term on the RTO's board. Lange is actually eligible to serve a third three-year term after her current term expires at the end of 2024.

## FERC/Federal News



# LBNL: Interconnection Queues Grew 40% in 2022

## Huge Growth in Backlog Despite No New Projects in CAISO and PJM

By James Downing

Interconnection queues around the country are filled with over 2,000 GW of new generation, dominated by solar, storage and wind, according to updated *analysis* from the Lawrence Berkeley National Laboratory released Thursday.

The 2,000 GW number is up 40% from a year earlier, according to LBNL, which studied the seven ISO/RTOs and 35 additional utilities outside organized markets that altogether serve 85% of total electric load in the country. Over 10,000 projects representing 1,350 GW of generation and 680 GW of storage are in the queue.

The zero-carbon generation in the queues alone totals about 1,260 GW, which would be about equal to the total amount of generation operating around the country today.

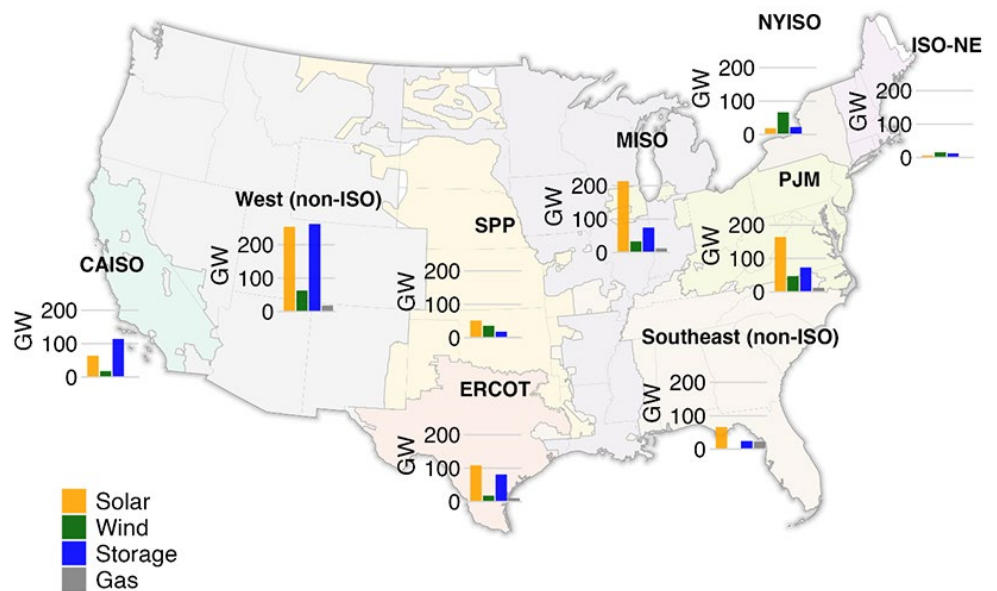
The growth in projects reflects the real interest in transitioning the industry to a cleaner future, but it also represents growing backlogs as projects take five years to get through the processes, the lead author of the study, Joseph Rand, an energy policy researcher at LBNL, said in an interview.

“The queues illustrate both the opportunity and the challenges of rapid electric sector decarbonization in the United States because we see this unprecedented development interest in new clean energy,” Rand said. “But then, on the other hand, we do see the backlogs and delays and high withdrawal rates.”

Some of the trends in the queue are worthy of concern, but others represent a real opportunity, he added.

The continued growth in the queue reflects the reality that the industry wants to build a lot of renewables, which is because of demand from state mandates and commercial customers, Brattle Group Principal Johannes Pfeifenberger told *RTO Insider*. But only a fraction of those projects will ever lead to steel in the ground — and the fact that it is so hard to get through the queue contributes to that growth.

“You never know which location on the grid is a good location, or which is a bad location,” Pfeifenberger said. “So, if a developer hopes to develop 1,000 MW of renewables, they might submit 3,000 MW of interconnection requests, hoping to find a good location where



A map showing the queue size in different regions from LBNL's report | Lawrence Berkeley National Laboratory

it is cost-effective to interconnect.”

While the overall amount of capacity continued to rise in the year, the number of new requests fell from 2021, which LBNL said was caused by both CAISO and PJM pausing new applications as they dealt with significant backlogs that led to new rules in both markets. CAISO's pause ends this year, but PJM will not take any new requests until 2025.

“The interest in solar, storage and wind is so widespread across the country that even if these two leading markets dip down or pause for a year, it's surging everywhere,” Rand said.

PJM had the largest number of active projects in its queue at 3,042, followed by the non-ISO West at 1,879, MISO at 1,734, ERCOT at 902, and the Southeast (outside of ISO/RTOs) at 830. By total capacity the numbers are different — with the non-ISO west at 598 GW, MISO at 339 GW, and PJM at 298 GW.

Solar represents the largest technology by volume in the queue, with 947 GW of the total, followed by storage at 680 GW. Both figures include hybrid projects made up of both technologies.

Solar is widespread across the country, but

LBNL noted that both the Northeast and SPP had less of the resource type waiting to connect to the grid. Most of the wind is in the West, or offshore from the East Coast, while storage is centered around the CAISO and the West — although it is rapidly expanding to the east as well.

Offshore wind makes up 113 GW, which is more than enough to meet the Biden administration's goal of 30 GW by 2030.

### Most Projects Drop Out

While the capacity in the queues would be enough to decarbonize the power sector if everything were built, that is not going to happen. For all the projects in queues between 2000 and 2017, just 21% (and 14% of capacity) entered service, LBNL said. The success rate of more recent proposals cannot be determined yet.

More recent projects are dropping out later in the queue process, which exacerbates delays for those left behind as grid operators must do significant restudies to determine who must pay for the transmission upgrades required to reliably interconnect generation.

FERC is working on several proposed rules

# FERC/Federal News



meant to help the process. One would update the pro forma queue rules (RM22-14) to include revisions such as giving priority to projects farther along their development paths, and another on regional planning that would require planners take into account future sources of generation (RM21-17).

FERC’s reforms should help to streamline the queues a little bit, but they are far short of progress in Europe, which is generally farther along in its grid transition, Pfeifenberger said. He said ERCOT has a similar system to that of the United Kingdom and some other European countries, which can move renewables through the queue at a much quicker rate than the current FERC-regulated processes, which were designed over 20 years ago to connect natural gas plants to the grid.

Rand believes that, together, FERC’s NOPRs can have an impact on the queue and its backlog, but they both need to become final rules for that to happen.

“Either one of them in isolation just wouldn’t be sufficient to make a big dent in this problem,” Rand said. “But combined, they might they definitely have real potential to unlock this queue.”

## ‘Connect and Manage’

The interconnection NOPR would adopt on a national basis changes that some organized markets and individual utilities have already

made to speed up their queue and minimize speculative projects, but it will not lead to new transmission being built to resource-rich areas. The transmission planning NOPR would handle that second part, but one key issue remains, Rand said.

“That’s cost allocation: Who pays?” Rand said. “If you’re a generator, trying to interconnect to the grid system, how much do you pay for the interconnection upgrades? And what determines what fraction that you pay? And what types of upgrades you pay for? That’s not really addressed in those two NOPRs, and it’s a very sticky issue that I think leads to a lot of projects ultimately withdrawing from the queue.”

The U.K. and ERCOT both use a process called “connect and manage,” compared with the “invest and connect” process used in FERC-regulated RTOs, and when the British adopted that system their queue times were cut from five years to one year, Pfeifenberger said.

“The idea is you let people interconnect. It might be non-firm, they might get curtailed, but then use ... congestion management or proactive transmission planning, where congestion makes it worthwhile to upgrade the transmission system,” Pfeifenberger said.

Enel North America, a subsidiary of the Italian utility that develops renewables and is a major player in demand response, has written a [white paper](#) endorsing the basics of connect and manage, and it has made similar arguments to

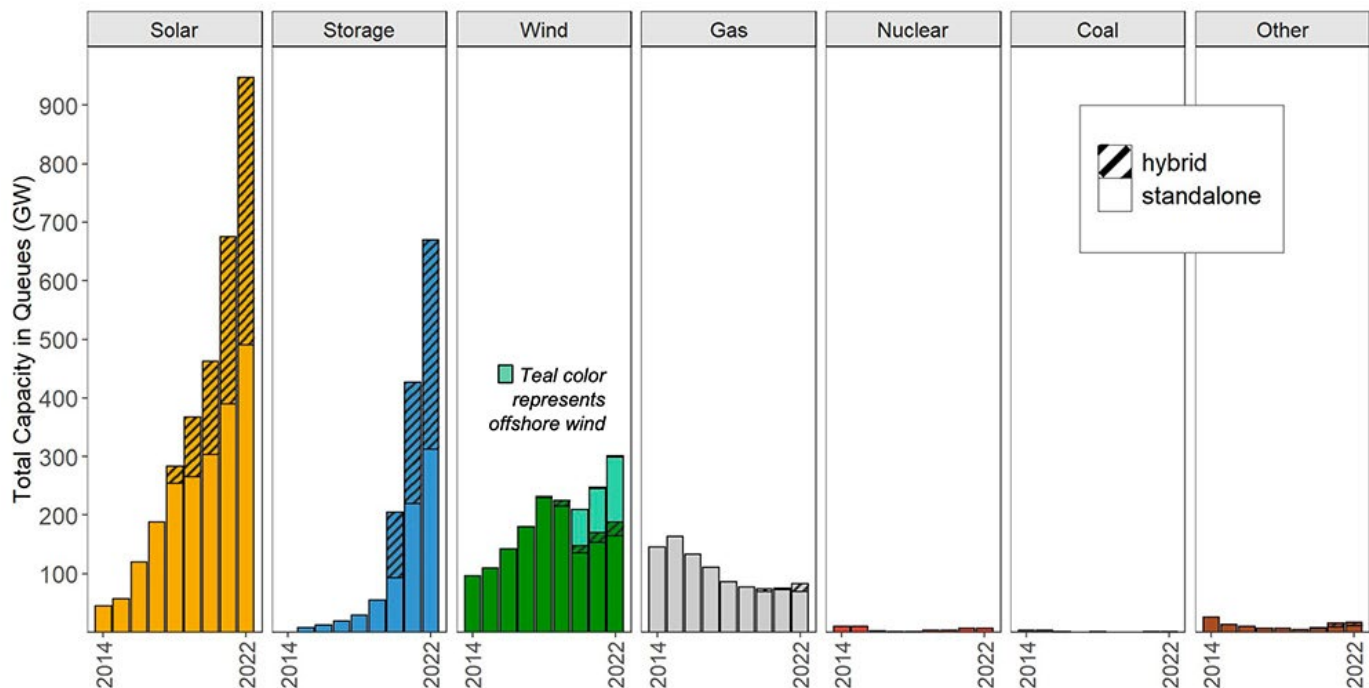
FERC as it weighs reforms, he added.

ERCOT does not have the regular, proactive transmission planning process to complement the “connect and manage” process, Pfeifenberger said. The process has not been adopted elsewhere in the U.S. because it represents a major change from the normal of doing business.

“It’s very hard for an ISO to change it in the connection process,” Pfeifenberger said. “First of all, the ISO may not want to because they think the interconnection process is what is necessary. But even if they wanted to, they have to go through the stakeholder processes; they have to change the tariff; they have to get FERC approval. But I think it’s mostly a mindset issue, that the ISOs just like the way they’re doing it.”

ERCOT does have a record of more quickly connecting resources to the grid, but Rand said it was not a silver bullet because projects there face higher risks of curtailment as the Texas grid operator just offers energy-only service as opposed to the network interconnection service in other markets.

“You can connect without paying those upfront, interconnection upgrade costs,” Rand said. “But you face a curtailment risk. You face a lot more curtailment risk, perhaps, than you might get in MISO if you have a network interconnection service.” ■



A graph showing queue requests by technology type from around the country | Lawrence Berkeley National Laboratory



## FERC/Federal News



# EPA Proposes Tougher MATS Regs on Coal Power Plants

## Tighter Emissions Limits, Continuous Monitoring Sought

By John Cropley

EPA last week took the next step in its campaign to clean up coal-fired power plants, proposing to strengthen the Mercury and Air Toxics Standards (MATS).

The changes would impose stricter limits on emissions of mercury and other metals, fine particulate matter, sulfur dioxide, nitrogen oxides and carbon dioxide.

EPA said in a [news release](#) Wednesday that the [proposal](#) would reduce by 67% the emissions of filterable particulate matter (fPM) from existing coal-fired plants. The proposal contemplates even lower emission limits for fPM and seeks comment on whether EPA should finalize a more stringent standard.

It would also require operators to run continuous fPM emission-monitoring systems; EPA estimates about two-thirds of existing coal-fired units do not currently use such a system. It also seeks to revise requirements to assure better emissions performance during plant start-up.

Finally, the proposed changes would bring plants that burn the lowest-grade coal, lignite, up to the same standards as other coal-fired plants. A [fact sheet](#) indicates lignite plant emissions limits would be slashed by 70%.

When issued in 2012, MATS required significant reductions of mercury, acid gases and other harmful pollutants from coal- and oil-fired power generation, framing them as a health threat. EPA called the proposal the most significant update to MATS in the 13 years since.

The agency had undermined the legal basis for MATS during the Trump administration but promptly moved to restore it after President Biden took office in January 2021. In February, EPA reaffirmed the scientific, economic and legal underpinnings of the regulations. (See [EPA Reaffirms Power Plant Mercury Regulations](#).)

That move had little immediate impact, as U.S. coal plants were already in compliance, having reduced their mercury emissions by 90%. But it set the stage for further regulatory steps to limit the impact of a fossil fuel long blamed for pollution and climate change. EPA estimates its proposal would result in about 500 MW of coal-fired capacity retirement by 2028 but cause only minimal increases in the cost of electricity and natural gas.



The U.S. EPA is proposing tighter limits on mercury and other harmful emissions from coal-burning power plants. | Shutterstock

After EPA reaffirmed MATS in February, it announced two other moves to limit emissions. In early March, it proposed tighter rules on wastewater emissions from coal plants. The Effluent Limitations Guidelines and Standards have followed a trajectory similar to the path of MATS: They were instated under President Barack Obama, weakened under President Donald Trump, then reinstated and expanded under Biden. (See [EPA Proposes Tighter Coal Plant Wastewater Regs.](#))

In mid-March, EPA announced final details of its Good Neighbor Plan to slash emissions of smog-forming nitrogen oxides from power plants and industrial facilities in 23 states that contribute to ozone formation in downwind states. (See [EPA Good Neighbor Plan Expected to Accelerate Coal Plant Retirements.](#))

Collectively, the changes and proposals may hasten the trend away from coal as a source of fuel for power generation in the U.S.; EPA's wastewater proposal, for example, offers smaller decreases in emissions limits at power plants whose operators agree to stop burning coal by 2028.

Advocates for public health and the environment have cheered the moves, while those connected to the coal industry have criticized them. Others worry that the policy of speeding the pace of fossil fuel generation retirements while simultaneously pushing to electrify large swaths of society could result in shortages of power.

The divide was on clear display Wednesday between leaders of the U.S. Senate Environment and Public Works Committee after the MATS proposal was announced.

"The Mercury and Air Toxics Standards continue to be a remarkable, cost-effective success in reducing mercury and other toxic air pollution," Chair Tom Carper (D-Del.) [said](#). "Thanks to MATS, children and families are breathing cleaner air, and there is less pollution in our nation's waters. EPA's proposed rule would build on the progress made to better protect communities. This science-based rule will ensure that power plants use modern pollution-control technology, which will help save lives and support a healthy economy."

Ranking Member Shelley Moore Capito (R-W. Va.) [blamed](#) the original MATS for closure of many coal-fired plants. "The Biden administration continues to wage war on coal and affordable, reliable energy by issuing unnecessary regulations intended to drive down electricity production from our nation's baseload power resources," she [said](#). "With one job-killing regulation after another, the EPA continues to threaten the livelihoods of those in West Virginia and other energy-producing communities across the country."

The American Lung Association [said](#) it would advocate for the more stringent options EPA is considering beyond its initial proposal. "EPA's statutory requirement is to protect individuals from the maximum exposure to hazardous air pollutants, and the Mercury and Air Toxics Standards must be strengthened so that they adequately protect health from power plant pollution. The American Lung Association will work during the public comment process to strengthen the final rule to maximize health protections from power plant toxic pollution."

The Union of Concerned Scientists [hailed](#) the benefits of the original MATS and bemoaned delays to its rollout a decade ago. "For all the good that MATS has brought, we must also reckon with the fact that all these towering benefits could and should have happened sooner, and lives were harmed in the time between. EPA cannot repeat that same delay today. While MATS has driven enormous benefits to date, the fact remains that coal- and oil-fired power plants still release pollution that hurts people and the environment, and it is incumbent on EPA to act." ■

## FERC/Federal News

# IPF Panel: Contingency Limits Could Cut OSW Power Coming Onshore

## ISO-NE Wants to Explore 2-GW Limit Likely to be Standard in EU

By K Kaufmann

BALTIMORE — Offshore wind turbines can — and in the coming years, will — produce thousands of megawatts of electric power, which is way more than the onshore transmission system is currently able to absorb, according to Bill Magness, senior principal consultant at DNV.

States and offshore developers “want to see the most bang for the buck. ... [They] want to see the maximum transfer into the system of those offshore resources,” Magness, the former CEO of ERCOT, said during a panel at the Business Network for Offshore Wind’s recent International Partnering Forum (IPF). “Moving into the onshore grid is where the rubber really hits the road, or the water, or whatever it’s hitting.

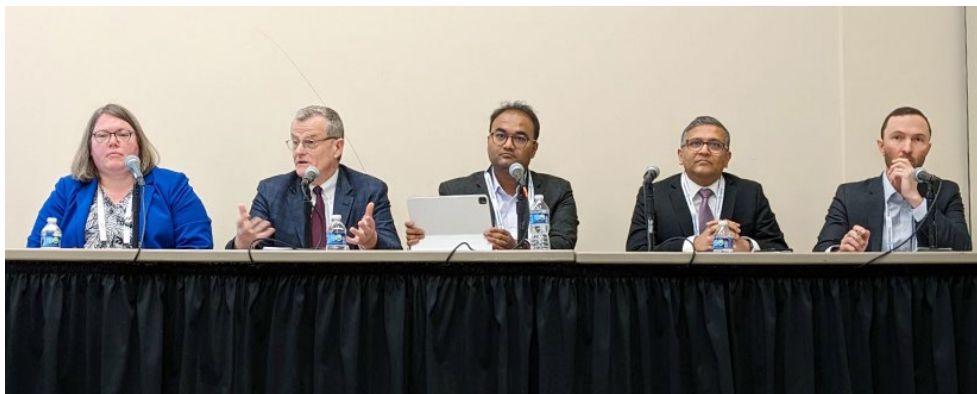
“The onshore grid is where the load is ... where the ratepayers are, and the onshore grid is where an extremely sophisticated, complex, several-decades-old, AC-based system lives ... [with] limits on reliability and limits on inter-connections that have to be honored,” he said.

The most severe single contingency (MSSC) is one of those limits, setting a maximum amount of reserve power a balancing authority is responsible for in the case of a sudden, large outage. For ISO-NE, the limit is 1,200 MW; in NYISO, it’s about 1,310 MW; and for PJM, it’s 1,500 MW — all of which “are suboptimal from the perspective of the technology that you want to bring onshore,” Magness said.

Reflecting the integral role it will play in offshore development, transmission was a major theme at IPF, with its own track of focused panels looking at the solutions that will be needed to efficiently and cost-effectively bring offshore power on shore. Meshed HVDC networks, as opposed to individual radial lines, have been identified as the most optimal way of connecting offshore turbines to onshore substations. (See [OSW Developers Look to Europe on Meshed HVDC Tx.](#))

But the MSSC issue “is one that highlights a number of other issues that we’re going to be facing,” Magness said. To begin with, reliability standards based on the MSSC “were not written with HVDC in mind. ... People are finding that, well, maybe the single contingency breach for HVDC is different than we thought.”

The MSSC is not itself a limit, he said, but



Talking transmission at IPF were (from left) Sheri Lauten, National Grid Ventures (moderator); Bill Magness, DNV; Shahil Shah, NREL; Gaurav Karandikar, SERC; and Peter Shattuck, Anbaric. | © RTO Insider LLC

NERC uses it to set the reserves a BA is required to have, purchased and ready to go in such contingencies.

“If you lose certain generation, you will have to make that up within 15 minutes; that’s the standard requirement,” said Gaurav Karandikar, senior manager for reliability analysis and technical services for SERC Reliability. “The balancing authority can actually study their system and determine that value ... and that drives how much reserve you are going to carry.

“The other aspect is that there is a 90-minute limit, where after that first contingency [where you] have used your contingency reserve,” Karandikar said. “You have to re-establish that contingency reserve within the next 90 minutes, so you’re ready for the next contingency.”

Factoring onshore wind into those equations may mean looking at the issue “in a more flexible way, in a more targeted way that can manage ... the larger-end feeds that are coming onshore,” he said.

Echoing Magness, Shahil Shah, a senior engineer at the National Renewable Energy Laboratory (NREL), said the MSSC issue is complex; it’s part of the problem but also a potential solution. The current MSSC limits don’t “allow us to go for big cables that are currently available,” he said.

“We see many projects where cables are coming from the same lease areas going to the same substations, but there are multiple of them,” Shah said. The way forward will involve designing HVDC transmission that can quickly isolate and recover from outages or other contingencies, he said.

Super-fast, super-reliable DC circuit breakers and multivendor interoperability will be needed, as well as revised, more sophisticated MSSC limits, he said.

“We need to coordinate the reliability standards and the resource standards together,” which will also require coordination between regulators, Shah said.

Coming in with a developer’s perspective, Peter Shattuck, president of Anbaric Development Partners’ New England projects, called for an incremental approach to the tangled issues involved in MSSC limits.

“It’s really hard to navigate the challenge of finding the most cost-effective solution that’s responsive to signals we’re getting from procuring entities during a period where these myriad questions and challenges that have been laid out are not resolved,” Shattuck said.

Magness agreed that with new procurements coming, “it is really essential that we start to inventory what these [transmission] issues are, identify them and pick the ones that are most important and try to start solving them.”

### A 2-GW Standard

The meshed, HVDC model is well established in Europe, where most recently TenneT, the transmission system operator in the Netherlands and parts of Germany, [announced its plans](#) for a standardized offshore transmission platform with 2-GW certified cable. The company intends to deploy this new system on at least 10 projects, a scale that could have significant impacts for offshore supply chains, Shattuck said.

“When there are tenders out there for 10-plus

# FERC/Federal News



2-GW systems, that's where the supply chain is going to go," he said. "So, if you want something else, if you want a customized solution or even kind of tweaking the 2-GW design to address some of these [MSSC] issues, that's going to have implications for costs and the timelines for bringing [a] project online."

At the same time, a standard 2-GW cable could provide considerable economies of scale, he said. While New England currently has about 6 GW of offshore wind in development, Shattuck cited [an industry analysis](#) that an additional 24 GW of projects or more will be needed to meet the region's climate goals.

"If you're doing that with 2-GW systems, then you're going to need 12, and if you're doing it with 1,200-MW systems, you need 20," he said.

ISO-NE has taken the first steps toward resetting its MSSC from 1,200 MW to 2 GW, with a [recent letter](#) to its Joint Planning Committee with NYISO and PJM, asking for a feasibility study on the change.

"As the region moves forward with the interconnection of large-scale renewables, such as offshore wind resources, project developers may identify proposals larger than 1,200 MW," Brent Oberlin, ISO-NE director of transmission planning, said in the March 27 letter. "The 1,200-MW limitation could constrain an otherwise optimal interconnection design. ...

"Depending on system conditions in PJM and NYISO, this limit can be raised in real time to a maximum of 2,000 MW," he said.

Magness also pointed to NYISO's ongoing exploration of dynamic scheduling of reserves, which could allow New York to import more clean energy to meet its emission-reduction goals of 40% below 1990 levels by 2030 and

no less than 85% by 2050. (See [Study: NYISO Dynamic Reserves Could Lower Congestion, Costs.](#))

Panelists also said that, rather than trying to change any NERC standards — which would involve what Magness called a "baroque" process — there are opportunities for regional changes that could address the MSSC limitations. Such solutions could "address reliability concerns and optimize the technology," Magness said.

## Low-hanging Fruit

NREL's Shah argued that grid operators' mandated levels of reserves are often higher than needed, "so we should be able to inject more power during those times. ... That's low-hanging fruit, just a slight modification in the standards."

Multiterminal offshore grids might offer another option, assuming that not all terminals would be operating at full capacity, he said. "If the capacity factor is diversified, then also there is another way to make sure that we are within limits, but at the same time we are allowing points of high injections."

Having 2-GW lines also could provide "head room" for capacity in the event of outages, Shattuck said. For example, with three 2-GW lines operating with a capacity of 1,500 MW each, if one line trips off, the other two lines can each pick up 500 MW of capacity, "so the system only loses 500 MW, well below the current contingency," he said.

"The ability to pick up extra power just increases the more lines that are connected to shore and networked offshore," Shattuck said. "So, in a way, the challenge is just getting over the near term ... and getting these first projects built. In a way, the offshore grid becomes a solution to the constraints of the onshore side."

Regional solutions can also be more finely tuned, Magness said.

"The regions that have seen more resources, wind and solar systems, some of what they have realized is ... you've got to slice this thing a lot more finely than you used to," he said. "You need to procure reserves during demonstrated hours and minutes when you need them, and you don't need to procure reserves at the same levels when you don't."

"You start to see what those patterns are, what seasons of the year in your particular region require [you] to have more reserves on hand, and you're able to run the system more efficiently based on everything you've got on the system," he said.

Such procurement strategies could also allow grid operators to take advantage of the "extremely fast response times" batteries can offer, he said.

Both Karandikar and Shah said that the foundation for such changes will be good research and good computer models, supported by industry.

"If you're looking or asking people to come up with a realistic limit, we should be able to make sure that we are providing them with good information," Karandikar said. It is incumbent upon industry to ensure "planners have enough tools," he said.

"It will be possible that we can maintain reserves offshore, provided we are able to forecast accurately how much capacity is available," Shah said, noting that NREL has run demonstrations of such forecasting. "It is possible if we have a coordinated design for the offshore wind generation."

Magness sees a range of benefits for meshed HVDC offshore transmission and more flexible approaches to MSSC limits, including less curtailment and opportunities for redispatch, "being able to move the power around through software systems in much more effective ways," he said.

The task ahead is to think "in terms of building out a network not only to optimize the amount of wind that comes into the system but provides the maximum controllability, flexibility benefits that we can get from HVDC technology," he said.

"How do we imagine them in a world where we have a grid that serves load onshore but also a grid that doesn't have load sitting next to it in the ocean?" he said. ■



Transmission was a key theme at IPF 2023, where Mythos AI displayed its autonomous boat — sort of an ocean-going drone — that performs seabed surveys. The company is developing a model specifically for offshore wind. | © RTO Insider LLC



# CAISO/West News

## CAISO Retools Tx Plan for Reliability, Renewables

*Adding more than 40 GW of Resources will Require 46 Projects Costing \$9.3 Billion*

By Hudson Sangree

CAISO published a draft transmission plan April 3 that identifies 46 transmission projects needed over the next decade to incorporate more than 40 GW of renewable resources essential for advancing the state's transition to 100% clean energy and maintaining grid reliability.

"The need for additional generation of electricity over the next 10 years has escalated rapidly in California as it continues transitioning to the carbon-free electrical grid required by the state's clean-energy policies," CAISO

said in the *plan*. "This in turn has been driving a dramatically accelerated pace for new transmission development in current and future planning cycles.

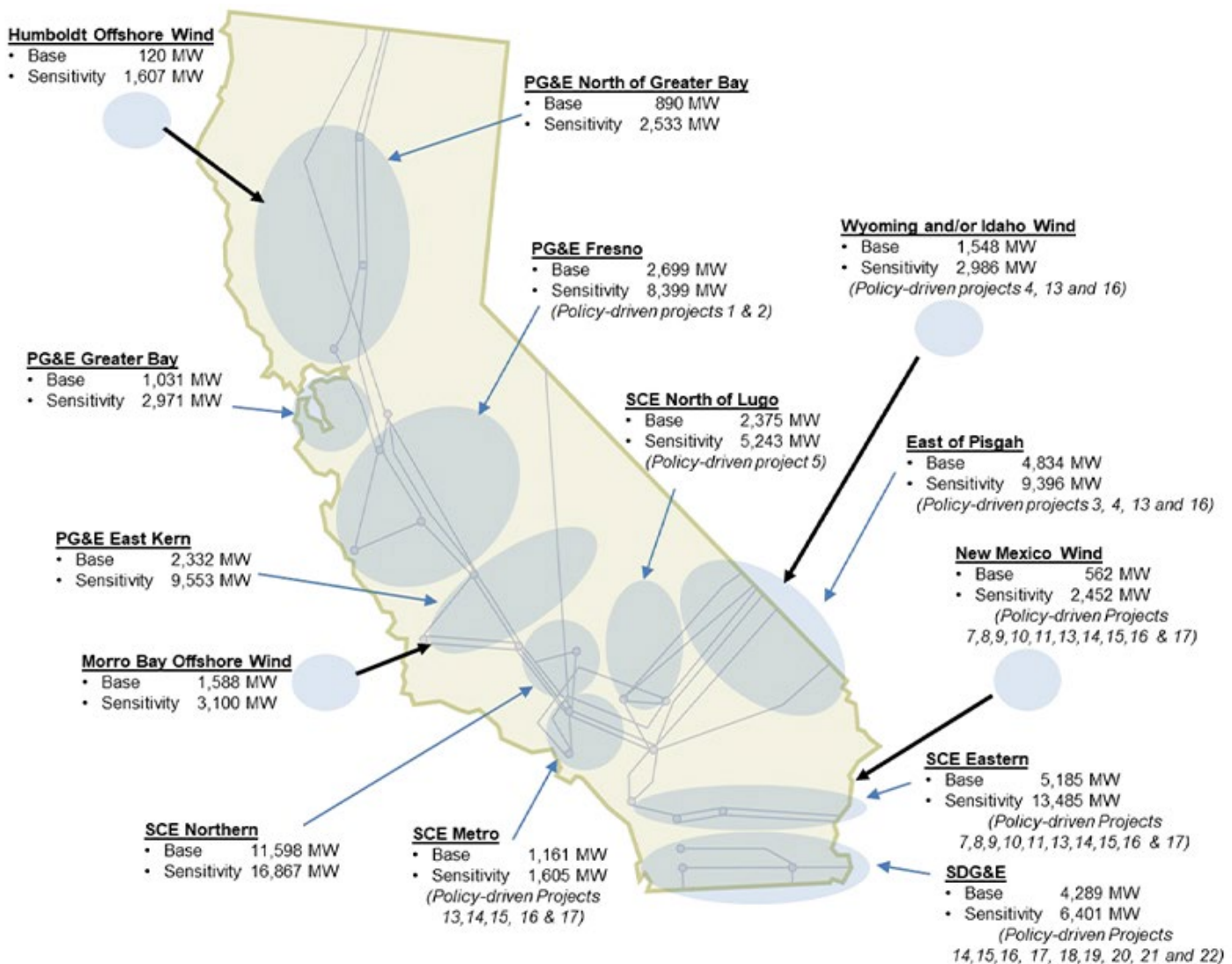
"To help ensure we have the transmission in place to achieve this transition reliably and cost-effectively, the ISO's 2022-2023 Transmission Plan reflects a much more strategic and proactive approach to better synchronize power and transmission planning, interconnection queuing and resource procurement," the plan says.

The more proactive approach was outlined in a memorandum of understanding that CAISO,

the California Public Utilities Commission (CPUC) and the California Energy Commission (CEC) signed in December. It provided a "new blueprint for our state" with closer links between the planning processes of each entity, CAISO CEO Elliot Mainzer told the ISO Board of Governors in February. (See *CAISO CEO Lauds Transmission Planning Agreement*.)

The new transmission plan is the first to be prepared under the MOU.

It is based on the CPUC's projections that the state needs to add at least 40 GW of new resources by 2032 in a base-case scenario and 70 GW in a "sensitivity" scenario "reflecting



A CAISO transmission plan map shows expected resource additions by interconnection zone, with base amounts and high-electrification scenario "sensitivity" projections. | CAISO



# CAISO/West News

the potential for increased electrification occurring in other sectors of the economy, most notably in transportation and the building industry,” the plan says.

“The network upgrades are recommended in this plan to make all of the base amounts available and, in Southern California, to also make most of the sensitivity amounts available as well,” it says.

The CPUC has already indicated it will provide the 70-GW scenario as its base case next year, so the “remaining network upgrades needed to achieve the sensitivity amounts will be approved next year” in CAISO’s annual update to its 10-year transmission plan.

## Interconnection Zones

In preparing the plan, CAISO analyzed projected resource additions within 14 transmission interconnection zones. The Southern California Edison (SCE) Northern zone, for example, will need 11.6 GW of new resources under the base case scenario and 16.9 GW under the sensitivity portfolio, primarily through a build-out of utility-scale solar and battery storage.

Critical resources identified in the plan include:

- 17 GW of solar generation in the deserts of Southern California and the Central Valley, and in areas of Nevada and Arizona.
- 3.5 GW of in-state wind generation.
- 1 GW of geothermal development in the Imperial Valley of far Southern California and in southern Nevada.
- Battery storage projects co-located with renewable generation projects and stand-alone storage near Los Angeles, San Francisco and San Diego.

- 4.5 GW of in-state transmission upgrades necessary to import out-of-state wind energy from Idaho, Wyoming and New Mexico.
- 3-5 GW of wind generation off the coast of Central California.

“To achieve these outcomes, the ISO has found the need for a total of 46 transmission projects, the vast majority of which would be built in California. They range in projected costs from \$4 million to \$2.3 billion, for a total infrastructure investment of an estimated \$9.3 billion,” CAISO said.

Major projects include a new 500-kV transmission line from the Arizona border to Imperial County, a new 500-kV transmission line from southern Imperial County to San Diego and the Los Angeles Basin, and upgrades to existing 500-kV and 230-kV lines along the Interstate 10 corridor, which runs from Los Angeles toward Phoenix.

“Together, these upgrades provide access to east Riverside County, Imperial County and Arizona solar generation, Imperial Valley geothermal, and New Mexico wind generation,” the transmission plan says.

Other notable projects include a new 500-kV transmission line from southeastern Nevada to the Los Angeles Basin and “rebuilding of existing southeastern Nevada 230-kV transmission inside the ISO to 500-kV, providing access for Eldorado and Pispah area solar generation, southeastern Nevada solar and geothermal generation, and Wyoming and Idaho wind generation.”

## ‘Next Major Installment’

CAISO identified 24 reliability-driven projects, totaling \$1.76 billion and 22 policy-driven

projects needed to meet the state’s climate goals, totaling \$7.53 billion.

In addition, the ISO has been working with out-of-state transmission developers to bring wind from Wyoming via the planned TransWest Express line and from New Mexico via the planned SunZia line to the CAISO boundary.

Developers for the transmission projects have sold capacity on their lines to “resource developers seeking to access California markets,” the plan says. “That work is ongoing, and the timing of those projects is driven by the developers and their subscribers.”

CAISO said it had also studied the need for transmission for North Coast offshore wind based on the sensitivity portfolio provided by the CPUC.

“As the study was only informational and set the stage for future planning, no projects were recommended for approval in this 2022-2023 plan,” it said. But with “growing volumes” of offshore North Coast wind identified in the CPUC’s 2023/24 planning cycle, the “ISO expects to make a decision on North Coast transmission in next year’s transmission plan.”

In a *blog post*, Mainzer said the 2022/23 transmission plan “represents the next major installment of infrastructure investment required to meet California’s long-term clean energy goals. In close coordination with regulatory agencies, load-serving entities and other key stakeholders, we endeavored to address the state’s reliability and policy needs in the most cost-effective and efficient way possible.”

CAISO has scheduled a stakeholder meeting today to discuss the draft plan and expects to seek approval from its Board of Governors in May. ■



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## CAISO/West News

# Western EIM Expands to Texas

By Hudson Sangree

CAISO's Western Energy Imbalance Market pushed into a small part of Texas on Wednesday with the addition of El Paso Electric, which occupies the westernmost corner of the Lone Star State.

The Western Area Power Administration's (WAPA) Desert Southwest Region and Avangrid also joined the WEIM on Wednesday, with the latter becoming the first generation-only participant in the interstate market.

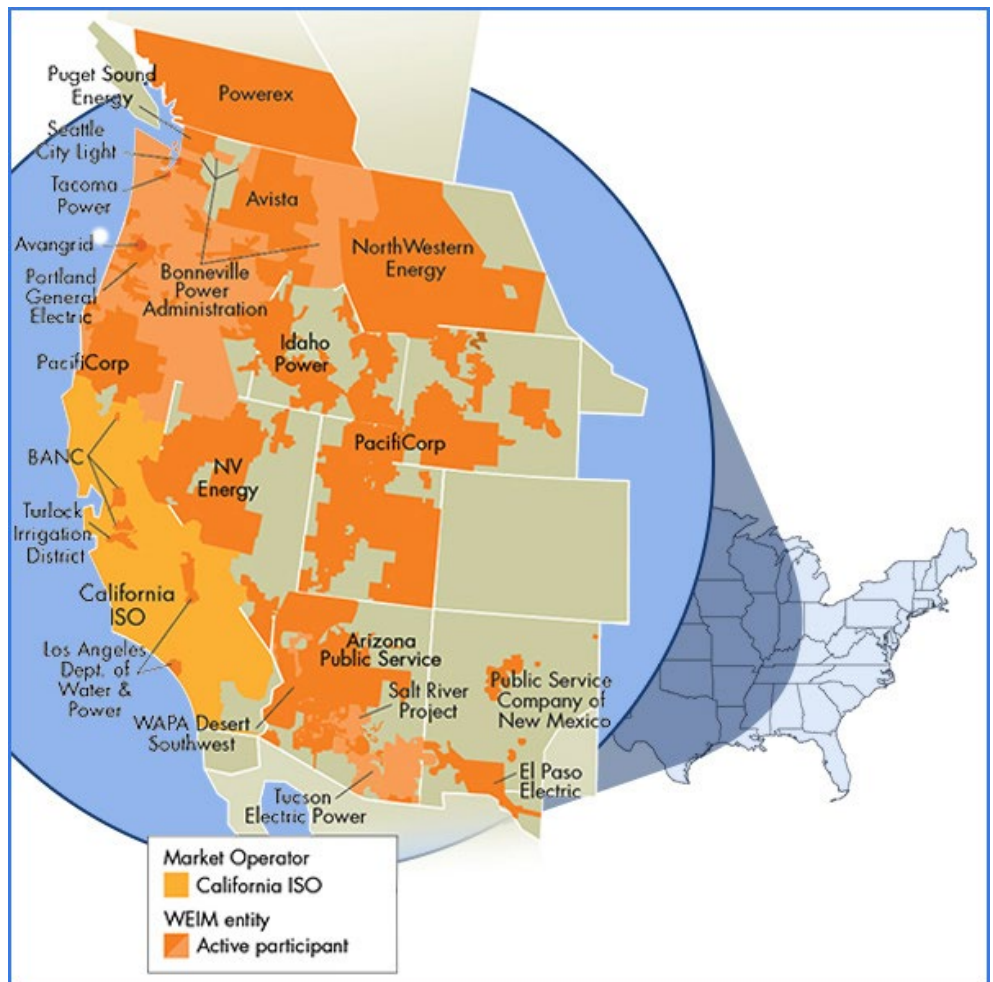
The latest additions mean the WEIM now encompasses approximately 80% of electricity demand in the Western Interconnection and has a presence in every state in the West except Colorado. (Three Colorado utilities that had planned to join the WEIM instead *joined* SPP's Western Energy Imbalance Service last year.)

"Because of their varied resources and location, these new WEIM partners further strengthen regional collaboration and coordination in the West," CAISO CEO Elliot Mainzer said in a news release. "It's been a pleasure to work with them in support of their effort to achieve enhanced operational efficiencies while providing cost savings to their customers."

WAPA's Desert Southwest Region, based in Phoenix, "sells power in Arizona, Southern California and portions of the Southwest to wholesale customers such as towns, rural electric cooperatives, public utility and irrigation districts; federal, state and military agencies; Native American tribes; and U.S. Bureau of Reclamation customers," WAPA says on its [website](#). It operates transmission lines to deliver power from the Hoover Dam and the Parker-Davis Project, which includes two other hydroelectric dams on the Colorado River.

EPE is a regional utility that operates generating resources — including wind, solar and natural gas plants — and transmission and distribution systems that serve more than 460,000 customers in a 10,000-square-mile area of the Rio Grande Valley in West Texas and southern New Mexico.

Avangrid has operations that sprawl across 24 states. Avangrid Renewables, the arm of the company that joined the WEIM, operates a generation-only balancing authority area in Oregon and Washington that connects to the Bonneville Power Administration's transmission system.



With the addition of three new participants, the Western Energy Imbalance Market now covers approximately 80% of load in the Western Interconnection. | CAISO

"Avangrid owns and operates 18 generation facilities and provides balancing services for one third-party generator, which are made up of primarily wind resources within the BAA," CAISO *wrote* in a June 29, 2022, letter to FERC that accompanied Avangrid's agreement to join the WEIM. "The total nameplate capacity is 2,763 MW, with an additional four facilities under construction.

"Also sitting within the BAA are pseudo-tied contracted hydro facilities and the Klamath Falls Cogeneration (535 MW) and peaking (100 MW) facilities," it said.

In a news release Wednesday, Avangrid said that as a WEIM participant, it "will support and strengthen the energy system of 11 Western states with almost 2 GW of installed emissions-free capacity from facilities that the company operates in the region."

"Joining the WEIM as the first generation-only entity represents a meaningful milestone for the CAISO and for us," Avangrid CEO Pedro Azagra said in the news release.

Since it began in late 2014, the WEIM has generated more than \$3.4 billion in benefits for its participants, including \$1 billion in 2022, by supplying lower cost energy and avoiding curtailment of renewable resources.

CAISO has been working to add a day-ahead component to the real-time market. Its Board of Governors and the EIM Governing Body approved the extended day-ahead market (EDAM) proposal on Feb. 1. (See [CAISO Approves Day-ahead Market for Western EIM](#).)

The ISO is developing tariff language that it plans to send to FERC before the end of June. ■

# CAISO/West News



## Public Service Co. of New Mexico Joins WRAP

By Hudson Sangree

Public Service Company of New Mexico (PNM) said Friday it has joined the Western Resource Adequacy Program (WRAP), expanding the reliability program's footprint in the Desert Southwest and bringing the number of participants to 22 across the Western Interconnection.

WRAP also received formal participation agreements last week from two Washington utilities, Seattle City Light and Snohomish County Public Utility District. Both are participants in the program's current non-binding phase, a precursor to a binding phase in which member utilities can be penalized for falling short of their reserve requirements.

In contrast, PNM is a new participant in WRAP, a first-of-its-kind reliability effort started by the Northwest Power Pool, which changed its name to the Western Power Pool in February 2022 to reflect its expanding reach across the West.

"One of the things that makes the WRAP so beneficial is the ability to share in the diversity of the entire Western region," Western Power Pool CEO Sarah Edmonds said in a news release. "Bringing in PNM adds to that diversity, in terms of geography, resource mix and seasonal loads."

PNM's generation fleet includes solar, wind, natural gas and coal resources. It has said it will meet the state's clean energy mandate five years before the compliance date. The mandate requires utilities to have a zero-carbon power supply by 2045.

The company serves its 525,000 customers in Albuquerque, Santa Fe and 19 smaller cities, villages and tribal communities with 55% carbon-free energy.

It has participated in CAISO's Western Energy Imbalance Market since April 2021, allowing it to buy and sell energy in the interstate real-time market.

"We continue to ensure our customer needs are met through innovative solutions to our power resources, participation in energy markets and strengthening our resource adequacy framework," PNM CEO Pat Vincent-Collawn said in a statement. "We see WRAP as another tool to continue to enhance PNM's system reliability."

WPP has been developing WRAP since 2020, initially to address concerns that Pacific Northwest utilities had been unknowingly drawing on the same shrinking pool of reliability resources. Interest in the effort quickly spread to other parts of the West; its footprint now covers all or part of 10 Western states and British Columbia.

FERC approved WRAP's tariff in February, saying the program "has the potential to enhance resource adequacy planning, provide for the benchmarking of resource adequacy standards and more effectively encourage the use of Western regional resource diversity compared to the status quo." (See [FERC Approves Western Resource Adequacy Program](#).)

The ruling allowed WRAP to move forward with a binding phase that will include penalties for members that fail to meet their resource-sufficiency obligations. WPP has the option to initiate the binding phase of the program during any season between 2025 and 2028, per the commission's order. (See [WPP CEO Looks to 'Earliest Possible' Binding Season for WRAP](#).)

The program involves two "time horizons" — a forward-looking program requiring participants to show they have sufficient capacity months in advance of summer and winter peaks, and an operational program, focused on the allocation of resources in the real-time and day-ahead time frames.

"PNM is expected to participate in WRAP's forward showing later this year ahead of the summer 2024 operational program," WPP said in its news release. "The forward showing component of the WRAP is where participants demonstrate they have secured their share of the region's energy needs. The operational component, in the winter and summer seasons, is when utilities with a deficit can tap into the pool of shared resources if needed."

WRAP participants in the Southwest include Arizona Public Service, Arizona's Salt River Project and NV Energy. ■



The WRAP footprint extends from British Columbia to the Desert Southwest. | WRAP



## CAISO/West News

# CPUC Approves Microgrid Incentive Package

By Hudson Sangree

The California Public Utilities Commission on Thursday approved rules for its Microgrid Incentive Program, a \$200 million effort to support the development of microgrids in communities prone to extended blackouts from wildfires, earthquakes and line outages.

The approved *decision* allocated funds to the state's three large investor owned utilities — \$79 million for Pacific Gas and Electric, \$83 million for Southern California Edison and \$17.5 million for San Diego Gas & Electric — to “build complex projects that can operate independently for extended periods and serve multiple customers in disadvantaged and vulnerable communities,” the CPUC said in a statement.

Selected microgrid projects can receive up to \$15 million each.

“The Microgrid Incentive Program will provide valuable support to disadvantaged and vulnerable communities towards ensuring they are not left behind in the broader statewide resiliency effort,” Commissioner Genevieve Shiroma, who led the proceeding, said in the statement.

“These communities tend to be located in more electrically isolated areas with greater distances to essential services, experience more outages, and have less accessibility to entities with backup power. This program will

also provide the funding and education many communities need to meaningfully participate in the program.”

Disadvantaged and vulnerable communities eligible for the grants include those in areas at high risk of wildfires or that have experienced public safety power shutoffs, the intentional blackouts that utilities use to prevent their equipment from starting blazes. Also eligible are locations prone to damaging earthquakes and those with lower levels of reliability because they are served by one of the worst-performing circuits in a utility's system.

The Blue Lake Rancheria microgrid, in an area that meets all the requirements, is often cited as an example of the value of microgrids in California. It uses a 420-kW solar array and battery storage to power a hotel and casino with electric vehicle charging, a convenience store gas station and water systems used by nearby residents during frequent outages, including to keep cell phones charged. It was funded by a California Energy Commission grant last decade.

The CPUC *proceeding* began in 2019 in response to Senate Bill 1339, which *required* the commission to “facilitate the commercialization of microgrids for distribution customers of large electrical corporations” and to “develop separate large electrical corporation rates and tariffs ... to support microgrids.”

Thursday's decision also directed PG&E, SCE



The Blue Lake Rancheria microgrid in Humboldt County supports an area prone to power outages. | *Blue Lake Rancheria*

and SDG&E to conduct outreach and consult with potential program applicants, and to help successful applicants develop community microgrids. It requires the utilities to post handbooks to their websites within six months to “guide applicants through the program and explain how potential projects will be evaluated.”

The utilities must submit quarterly status reports to the CPUC until the funds run out. ■

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## ERCOT News



# Texas Legislature Moves Bills Remaking the ERCOT Market

## 10-GW Gas Generation Proposal Passes Despite Opposition

By Tom Kleckner

Texas lawmakers have advanced several bills that, while revised, still threaten to upend the ERCOT market and punish renewable energy.

Introduced last month, the bills would fund the construction of 10 GW of gas-fired plants that would only be used to prevent load shed; place limits on how much renewable generation can be built; institute a firming requirement for all resources and load-serving entities; and mandate that generation be built closer to load to reduce transmission costs. (See [Texas Senate Lays out Changes to ERCOT Market](#).)

The Texas Senate approved four bills Wednesday, three of which cleared the Business and Commerce (B&C) Committee earlier in the week. They include [Senate Bill 6](#), which has drawn widespread opposition over its proposed Texas Energy Insurance Program. Under the program, interest-free loans from state funds — Texas has a \$32.7 billion budget surplus — would be used to build break-glass-in-case “reliability assets,” defined as gas plants in ERCOT’s footprint with on-site fuel storage.

The bill’s detractors include Grover Norquist’s Americans for Tax Reform (ATR) conservative advocacy group. It [said](#) SB 6 and other legislation “all seek to impose arbitrary restrictions on energy producers or authorize superfluous subsidies.”

“While the motivation behind them is well-meaning, such misguided intervention is likely to produce barriers to entry that reduce competition and raise consumer prices,” the



Texas lawmakers have advanced several bills that threaten ERCOT’s competitive market. | © RTO Insider LLC

organization added.

SB 6 is similar to Berkshire Hathaway Energy’s proposal during the 2021 legislative session to fund \$8.3 billion to build 10 GW of gas fired generation for “blackout insurance.” The proposal never made it into legislation. (See [Stakeholder Soapbox: Berkshire’s Proposal Will Prevent Another Texas Power Catastrophe](#).)

The current legislation is expected to cost about \$10 billion. However, the costs could be as high as \$18 billion, according to a Lower Colorado River Authority [document](#) recently obtained through an open records request by Austin’s NPR radio station, KUT. In the document, LCRA says it could build about 5.6 GW of reliability assets for \$10 billion in capital

costs and about 10 GW for \$18 billion.

State Sen. Nathan Johnson (D) reminded the B&C Committee April 3 that stakeholders have raised concerns for several years over an off-market backup system that could have “damaging, perhaps destructive effects” to the ERCOT market.

“To the extent we’re going to preserve our competitive market, I’m concerned that the scope of this is too large and it ought to be brought down considerably in size and work in conjunction with other elements,” he said. “It seems to wag the whole system at this size.”

“This bill ... speaks to the concerns of millions of Texans regarding what do we do when there is anticipated extreme heat or extreme cold. Do we have enough backup electricity to make sure our grid doesn’t go down?” B&C Chair Charles Schwertner (R) said during last week’s committee meeting. “This is just like a generator at your house. It is an insurance electricity backup system that stands behind the energy-only market here in Texas.”

Schwertner, who drafted the bill, said he had added several revisions after further input from 20 “major stakeholders” and hours of discussion with members and stakeholders. The modifications include weakening the thresholds project developers must meet to establish “financial stability” by reducing the applicant’s ownership of existing capacity from 15 GW down to 2.5 GW and not requiring total assets of \$10 billion for every GW of capacity applied for.



Sen. Charles Schwertner, author of SB 6 and SB 7, explains his legislation to the Texas Senate. | [Texas Senate](#)



# ERCOT News



However, applicants will be required to have an investment grade credit rating.

The substitute bill's biggest revision keeps the program's plants from entering the competitive day-ahead and real-time markets for 40 years and clarifies that Texas regulators should continue to work on market design fixes that address the state's reliability issues.

That could satisfy some market participants who have said the temptation would be too great not to use the plants sitting on the sidelines.

"The concern is that you're going to be paying for these resources and they're going to be sitting there," South Texas Electric Cooperative General Manager Clif Lange said during a legislative hearing last week. "It's going to be extremely tempting when we come back in two years or four years to want to make sure that the [Public Utility] Commission uses these a little bit more frequently. I think you're going to get pressured to try to make sure that those are deployed at a lower price level."

Lange said that should the gas units enter the ERCOT markets, they could start displacing competitive resources and lead to price distortions.

"You start to see more pressure on the existing portfolio of assets and as a result, you potentially start flushing out more dispatchable generation," he said, warning that lower-cost renewable generation will continue to replace inefficient thermal resources.

Energy producer WattBridge has spent \$2 billion in adding 4 GW of fast-start gas generators since 2018. In testimony before both legislative bodies, CEO Mike Alvarado said his company is one of those that would be affected.

"The market we invested in over the last 36 months is not the market that exists today," he said. "We do not anticipate investing any further in ERCOT; the current market conditions simply do not allow it, and the current legislation considered by the Senate makes it that much more challenging for our business."

Other provisions in the substitute bill would cap the sidelined gas plants' regulated rate of return at 10%. Independent research firm Clearview Energy Partners said the revised legislation would also ensure that a generator with one or more participating plants does not receive more than \$100 million a year in revenue per gigawatt of installed generation capacity.

Should the state not provide sufficient funding for the program, the bill directs the PUC to set a nonbypassable charge to all transmission and distribution utilities, municipally owned utilities and electric cooperatives in ERCOT.

The Senate, controlled 19-11 by Republicans, passed SB 6 by a 22-9 margin, with one Republican and four Democrats crossing the aisle. Johnson and the other two Democrats on the B&C Committee all voted "present" last week in sending the bill to the floor.

## Another 'Legislative Priority'

Senators also unanimously approved [SB 7](#) Wednesday. Along with SB 6, it has been designated a "legislative priority" by Lt. Gov. Dan Patrick, who controls the Senate.

The bill creates a new "firming" ancillary services program that directs load-serving entities to purchase "dispatchable" reliability reserve services on a day-ahead basis. Revisions to the bill mandate that resources offering the service be capable of running for at least 10

hours, up from four hours as originally drafted. That would essentially lock out energy storage, which ERCOT considers dispatchable.

Americans for Tax Reform said SB 7 would subsidize energy capacity instead of compensating firms for electricity they sell and would create an "adverse incentive structure wherein energy producers would become more reliant on taxpayer subsidies."

"This would hamper the Texas energy industry and likely lead to increased prices on consumers as well as producers," Americans for Tax Reform said.

In testimony before lawmakers last month, ERCOT CEO Pablo Vegas called the concept a "tax" and said it could lead to increased generation retirements.

"We would lose energy resources in the short term," he said. "Resources that cannot be economic under the new cost burden that's put in place [by SB 7] would pull out of the market, so we would have an energy deficit from that."

The Senate has already sent several other bills to the House of Representatives. They include:

- [SB 2012](#), which would establish policy guardrails should the PUC implement the performance credit mechanism. Lawmakers have thrown cold water on the construct, advising the regulators that they can't go forward with it without legislative input.
- [SB 2014](#), which would make renewable energy credits voluntary instead of mandatory.
- [SB 2015](#), which would mandate that 50% of generating capacity installed in ERCOT after this year be sourced from dispatchable resources.
- [SB 1287](#), which would require developers to pay for some of the interconnection transmission costs, adding more hurdles for renewable resources that are built far from the grid,

Renewable generation already accounts for a bit more than half of ERCOT's capacity and for most of the projects in ERCOT's interconnection queue. According to a [study](#) by Joshua Rhodes, a University of Texas researcher, wind and solar resources saved Texas consumers \$11 billion in just 2022.

"I worry that some of the bills come across as anti-renewable," Sen. Judith Zaffirini (D) said April 3. "And so, we want to make sure that we have the dispatchable energy that we have but not necessarily hurt, not punish, renewables." ■



Sen. Nathan Johnson (right) questions the legislation. | *Texas Senate*



# ISO-NE News

## Gas Volatility Leads ISO-NE to Seek Update to Inventoried Energy Program Changes Necessary to Attract LNG Because of High European and Asian Prices

By James Downing

ISO-NE and NEPOOL last week asked FERC to approve changes to the Inventoried Energy Program to reflect recent volatility in the global natural gas market and gas contracting prices in the region.

The program was designed as a stopgap for longer-term market reforms to ensure winter reliability and is designed to pay resources for maintaining inventoried energy during the next couple winters. The RTO initially filed the program in 2019, and it was approved by FERC in 2020 to go into effect for the winters of 2023/24 and 2024/25.

Russia's invasion of Ukraine last year led European nations to seek alternate sources to Russian gas, which has increased volatility greatly. Demand from Asia has also gone up in the interim, ISO-NE's consultant Todd Schatzki of the Analysis Group said in testimony filed at FERC.

"Since the commission's acceptance of the IEP, global energy markets have experienced dramatic and unprecedented changes in pricing

levels and volatility," ISO-NE said.

One of the most significant changes was to replace the fixed rate for resources procured in the IEP to an indexed rate that will be able to reflect any changed prices going forward, as the recent volatility is expected to last for the next couple winters. The initial program featured both a forward and spot rate, allowing resources to sign up ahead of time or during the winter, and both of those are moving to indexed pricing.

The forward rate FERC approved was \$82.49/MWh for inventoried energy, but the new price will be based on a formula using the price for liquefied natural gas at the "Dutch TTF" (Title Transfer Facility), a proxy for European prices that have recently set the price of LNG in the entire Atlantic basin.

The formula also includes a liquidation price to reflect the possibility that New England generators might procure too much LNG, which would have to be sold after the winter season when prices are typically lower.

The base rate is capped at \$288/MWh, which reflects the opportunity cost from participat-

ing in the IEP and liquidation costs and is based on the price needed to secure inventoried energy given real-world constraints.

The spot price now in place is just \$8.25/MWh, but the RTO asked FERC to change that one-tenth of the applicable base payment rate, which is consistent with the current market design.

The updates also include changes to natural gas contract eligibility requirements and fuel allocation for shared fuel inventory, which are meant to be better aligned with current contracting practices in New England.

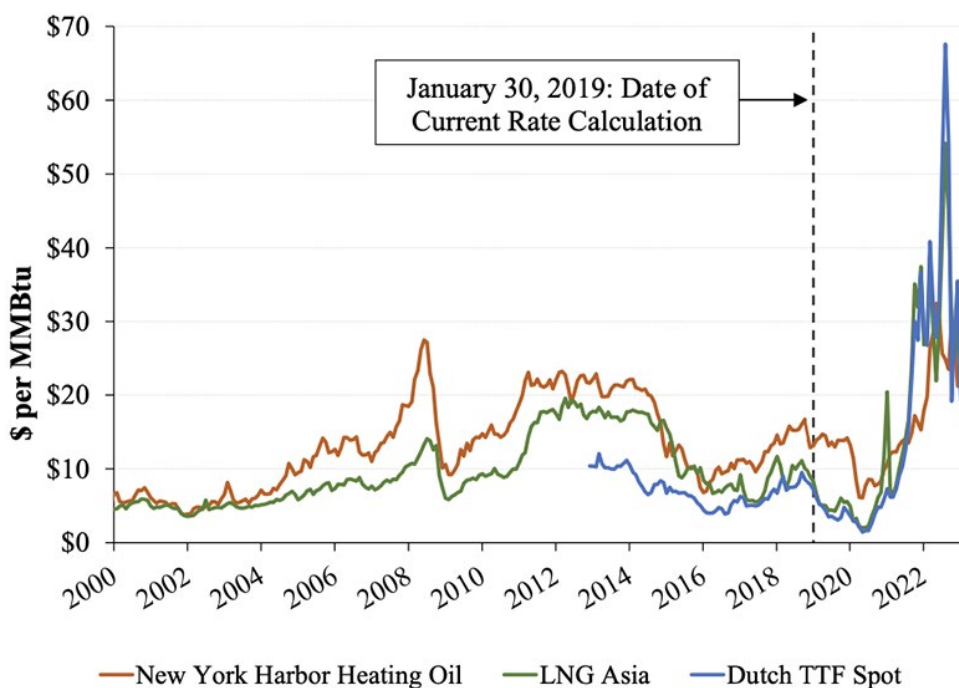
IEP participants will have to submit contracts that do not restrict when the gas can be called on during a day beyond the North American Energy Standards Board's Wholesale Gas Quadrant scheduling and nomination standards.

The currently effective rules are also too restrictive, ISO-NE and NEPOOL said, because they require a level of gas delivery firmness that is not commercially available from the interstate pipelines that serve New England, so that part was updated to reflect market realities.

If a natural gas contract specifies an indexed strike price, then that specified index must be at one of the Northeast trading locations for which Platts publishes a daily value in order to ensure the contract in question reflects regional prices.

ISO-NE and NEPOOL asked FERC to make the changes effective June 6, which will ensure the rules attract inventoried energy for next winter given the increased volatility in natural gas prices. The new indexed rate will also make it easier for market participants to hedge their program costs.

"Without the proposed changes to reflect actual market prices and contracting practices, the current commission-accepted IEP runs the risk of providing insufficient incentives for participants to procure and provide inventoried energy when needed to ensure reliability on the coldest winter days, when fuel supplies are stretched to their limits," the filing said. "Relying on well established and reliable price indices ensures that the IEP is providing accurate price signals reflective of the actual costs of providing the service, while avoiding overcompensation at the expense of regional consumers." ■



A graphic from ISO-NE's consultant Todd Schatzki showing the changes and volatility in global natural gas prices since the IEP was originally filed in 2019. | ISO-NE

## MISO News

# FERC Accepts Unexecuted Agreements Filed in Protest

## MISO IC Customers Disagree with Reinstated TOs' Self-funding Rights

By Amanda Durish Cook

FERC last month accepted three unexecuted network upgrade agreements for wind farms in the Dakotas and Minnesota, filed by MISO interconnection customers in protest over the commission's order reinstating transmission owners' rights to self-fund the upgrades.

MISO restored TOs' rights to self-fund in 2019 at FERC's direction. The commission originally issued an order in 2015 preventing TOs from providing initial funding for network upgrades, but that decision was remanded by the D.C. Circuit Court of Appeals.

The court ruled in November that FERC did not adequately explain why it reinstated TOs' option to finance network upgrades before the interconnection customers owning generation projects were given the chance. (See [FERC Must Clarify MISO Tx Funding Decision, DC Circuit Finds.](#))

The financing change has been generally unpopular with some MISO generation developers. They say it could lay the foundation for TOs to discriminate against some interconnection customers and increase the cost of new generation. (See [MISO TOs' Self-funding Option Tested Again.](#))

FERC accepted two unexecuted facilities service agreements (FSAs) between the Oliver Wind IV and Northern Divide Wind facilities, transmission owner Otter Tail Power and MISO ([ER23-998](#), [ER23-999](#)). It also accepted an unexecuted multiparty facilities construction agreement between the same four parties and Palmer's Creek Wind Farm, Prairie Hills Wind, Campbell County Wind Farm 2, North Bend Wind Project and Union Electric Company ([ER23-997](#)).

The Oliver Wind IV and Northern Divide Wind farms said they refused to execute their FSAs to reserve the right to terminate them and be made financially whole should FERC revert to its initial findings on TO self-funding.

Oliver Wind IV also asked FERC to order an amendment to the agreement that states the changes "will be undone if the legal premise for [transmission owner initial funding] is later eliminated."

Otter Tail disagreed with the request. "Unless and until the commission not only acts upon remand, but also reverses its prior position, the unexecuted FSA continues to reflect the state of the law today and should be accepted for filing," it said.

FERC agreed with Otter Tail. The commission said it will not allow MISO interconnection customers to "retroactively annul and reverse" TO funding elections if it later decides to reverse the self-funding order.

The agreements "appropriately reflect the state of the law as of the date the agreements become effective," FERC said. It said its response to the court's remand remains pending, and it will address any request to annul funding elections "if and when" a Section 205 or 206 filing is made under the Federal Power Act.

"Neither a request for rehearing nor a petition for review stays the effectiveness or enforceability of a commission order," the commission said.

MISO has been revising legacy interconnection agreements for TOs who wanted the self-funding option. (See [FERC Accepts Documents in MISO TOs' Self-fund Selection.](#))

Commissioner Mark Christie wrote identical concurrences to the orders to underscore his philosophy on who should pay for and profit from network upgrades. He said generation developers should bear the full "but-for" costs of their interconnection.

"Consumers (i.e., load) should not pay one nickel. They are not the ones seeking to profit from the interconnection," Christie wrote. "New generation in RTOs is supposed to be driven by the market, not by integrated resource planning, as in non-RTOs. This is the compelling principle underlying participant funding of interconnection in RTOs."

MISO interconnection customers are responsible for 100% of network upgrade costs, with a possible 10% reimbursement from load for network upgrades that are rated 345 kV and above.

Christie said that when generation developers pay the full interconnection costs, TOs should not be allowed to profit from the investment, "as the developer incurs a cost of capital, not the transmission owner."

"Allowing the transmission owner to profit on someone else's capital investment (i.e., through a return on equity) results in an unearned windfall," Christie said. He added that he looked forward to addressing his points in the remand proceeding. ■



Northern Divide Wind farm | Brosz Engineering



# MISO News

## FERC OKs Partial Settlement in Entergy Grand Gulf Row

By Amanda Durish Cook

FERC last week approved a partial settlement that resolves some city and state commissions' longstanding allegations of overcharging at Entergy's Grand Gulf Nuclear Station.

Under the agreement approved April 4, Entergy subsidiary System Energy Resources Inc. (SERI) will pay an \$18 million refund and commit to rate reductions that go back to October 2022 (ER23-435).

SERI operates and owns 90% of the 1,400-MW Grand Gulf plant in Port Gibson, Miss. It sells the plant's output under a unit power sales agreement (UPSA) to Entergy's Arkansas, Louisiana, Mississippi and New Orleans affiliates.

The refund will be split among the Louisiana (26.86%), New Orleans (32.87%) and Arkansas (40.27%) subsidiaries. Mississippi regulators last year accepted a separate settlement offer from Entergy that resolves the state's complaints about Grand Gulf's performance and billing. (See *Entergy Offers Regulators \$588M to End Grand Gulf Complaints.*)

The partial settlement also contains provisions that reduce the Entergy companies' monthly UPSA bills' base rate.

Louisiana, New Orleans, Arkansas and Mississippi regulators have for years accused Entergy and SERI of mismanaging the nuclear plant, massaging accumulated deferred income tax numbers to overcharge customers, overbilling ratepayers for Grand Gulf's sale-leaseback arrangement, and recovering the costs of lob-



Grand Gulf nuclear station | Entergy

bying, image advertising and private airplane use in the sales agreements' rates.

The UPSA bills will now exclude recovery of executive bonuses, restrict advertising cost collections to only safety-related advertising, and limit the recovery of employees' air travel costs to those directly linked to SERI.

Revised SERI UPSA bills will also include a line item that reduces the base rate for the advanced collection of Grand Gulf's semiannual lease payments. FERC trial staff argued that the management company should "return to its customers the monthly lease payments' time value that is held until SERI makes the lease payment."

As part of the deal, SERI will include money pool borrowings in its short-term debt, which is used to work out its cost-of-capital calculation used in the UPSA.

SERI has also committed to making additional refunds, with interest, in UPSA bill credits to the Entergy companies for a 15-month period dating back to September 2020. Those refunds will reflect UPSA formula rate reductions.

The partial settlement does not address city and state officials' complaints over SERI tax maneuvers related to Grand Gulf. That dispute is ongoing. (See *Regulators File Emergency Motion in Ongoing Grand Gulf Battle.*) ■

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# New York Energy Summit

## New York 2023: Growing Pains for the Energy Transition

### Energy Summit Examines Opportunities and Challenges

By John Cropley

ALBANY, N.Y. — The 2023 New York Energy Summit last week focused on the financial, regulatory and technology landscape in the state as it presses forward with a hugely ambitious, complicated and expensive energy transition.

Opportunity tempered with challenge and uncertainty was a recurring theme in the comments of dozens of panelists and in the questions posed by scores of attendees of the April 4-6 summit.

New York's leaders are still wrangling over key policy details, and federal guidance on how to leverage key tax incentives for clean energy finance is incomplete.

Meanwhile, despite some streamlining, the development process is still often slow and difficult in New York, and local opposition can be fierce. The grid interconnection process continues to be a bottleneck, as well.

But a confluence of factors — vision and opportunity backed by leadership and funding to make it reality — is present in New York in 2023.

Nick Addivino, of community solar developer Nautilus Solar, observed that money is not a problem, even amid high interest rates and inflation.

"There is certainly more capital chasing projects today than ever," he said. "There's more capital than projects."

The 19 presentations at the conference included discussion of New York's landmark climate law, efforts to decarbonize buildings, grid resilience, and financing all the work that the state needs or wants to see accomplished.

### High Needs

A frequent talking point at the summit was the large number of skilled workers who will be needed to carry out New York's energy transition — more than 200,000 by 2030, according to a state estimate — and how far short of that the present workforce is.

Michel Delafontaine, president of Alternative Aviation Fuels, said the timelines specified in various state and federal laws and guidance "seem to be long, but it's short. In terms of workforce development, we're looking at a turnover of three to four years to form and shape folks that know what they're doing in



The 2023 New York Energy Summit was held April 4-6 in Albany. | © RTO Insider LLC

many aspects — electrical, pipefitting, number-crunching, legal and all the aspects of project development — and we're short of them."

"I can testify to that aspect," he said. "We're short of workforce."

Jeffrey Andreini of Crowley Wind Services said it's a topic that comes up often in discussion of offshore wind. "What I tell people all the time is you can have the all the assets you want, you can have all the [waterfront construction and maintenance] terminals that you want, but if you don't have anybody that's going to run a vessel, going to be able to do the logistics on the terminal, guess what? Nothing's going to happen."

Richard Lawrence of the Interstate Renewable Energy Council said this reality is sinking in as more projects go from concept to execution.

"In the 20 years I've been working on this, I'd say the last year has really been the first time I've seen companies working in this space really recognizing the challenges that it takes to develop the workforce. It's coming up now as certainly in the top three of limiting factors to actually getting to our goals and building these projects out."

He added: "We're competing against every other sector that's out there that's looking for workers."

The Inflation Reduction Act of 2022 recognizes this need, Lawrence said. He called it one of the first federal incentive/policy packages with labor and workforce development provisions baked in.

Gary McCarthy, who has pressed the Smart Cities technology initiative in his dozen years as mayor of Schenectady, said more emphasis needs to be placed on the value employees bring to an organization than to their sheer numbers.

"We're looking for quantity now; everyone has a demand for employees," he said. "It's hard sometimes to step back and focus on quality; how do you do that outreach? How do you do that in a systematic way of building the rapport, getting the message and then creating the opportunity?"

New York law requires that more than a third of state spending on the energy transition benefit disadvantaged communities, and a main strategy to accomplish this will be training and employment opportunities — which are easier to mandate than achieve.

# New York Energy Summit

"I think the key piece here is to have really authentic organizations that have the trust of local communities partner with entities that have something to offer," said Adam Flint of the Network for a Sustainable Tomorrow. "Transferring resources into disadvantaged communities rather than doing everything from the outside, actually hiring people to help build these programs, is a really good move."

The clean energy sector also butts up against a multigenerational shift away from the skilled trades by a significant portion of American society, and it has trouble competing for the attention of young people entering the workforce amid the allure (and salaries) of the computer technology sector.

Both challenges are real, panelists said, but can be overcome.

The skilled trades should be introduced as a career option to children as young as 10 to 12, midway through their schooling, panelists said, and for those who are graduating now, clean energy should be framed as an opportunity to become one of the early experts in a new economy.

Also, Big Tech is currently laying workers off by the thousands, while clean energy is hiring by the thousands, Lawrence noted.

Andreini pointed to the optics of recruiting young adults to help save the planet. "We're cooler," he said. "At the end of the day, you're talking about an energy revolution right now. That's really what's going on. I tell adults that, and they get excited. It's got to be about more than just money."

## Major Projects

Houtan Moaveni, executive director of New York's Office of Renewable Energy Siting, was interrupted by the only spontaneous round of applause during the summit when he said his office — a recently created entity — has issued more final siting permits in the last two years than were issued in the preceding nine years. Each took only six months on average.

Darren Suarez of Boralex later qualified that record: ORES, which works with projects rated at no less than 25 MW, moved much of the review process outside the formal permitting procedure. Including pre-permitting work, the overall time involved is still lengthy.

But that procedural standardization and streamlining has been the beneficial result of the Section 94-c law under which ORES operates, he said.

"It has the appearance of being faster, but I

think the big thing for developers is it's more certain. You know spending the money — if we do the right thing; we meet the objectives; we meet the standards — we'll get the permit." That was not always the case with Article 10 permitting, which 94-c supplemented, he said.

One of the biggest initiatives in New York is not in the state, but in federal waters off its coast.

Gregory Lampman, director of offshore wind at the New York State Energy Research and Development Authority, said the state's goal for offshore wind is 9 GW of installed capacity by 2035, but the OSW program folds in much more than the flow of electrons from ocean to land: It seeks to create a local manufacturing supply chain and the supporting infrastructure; develop a workforce; and coordinate transmission needs with NYISO while striking a blow for environmental justice and benefiting disadvantaged communities.

The goal is a new ecosystem with spinoff benefits.

"We're trying to empower the whole of manufacturing capacity in the state of New York," while simultaneously competing with neighboring states for finite resources and collaborating with them to expand availability of those resources, Lampman said.

And how is that working out with the 27 OSW leases up and down the Atlantic Coast?

"We probably are far short of where we need to be, but we are moving forward because there are economic pressures to develop that supply chain," said Jim Bennett, a senior adviser at the U.S. Bureau of Ocean Energy Management.

He said BOEM's focus is now transitioning from leasing to project review and approval.

"In the past three years, we've doubled the number of people we have on board, which for a federal agency is pretty impressive, but during that same time, our workload has increased fivefold," Bennett said.

With the expansion of variable wind and solar power generation, New York needs a large amount of energy storage capacity: It has set a near-term goal of 6 GW, the most of any state, but eventually will need significantly more, some of it the long-duration type that is not yet technologically mature.

This, along with the domestic manufacture incentives of the IRA, could create a new industry sector in New York, said William Acker, executive director of the New York Battery

and Energy Storage Technology Consortium.

"This is going to be a real catalyst to grow the economy in New York state," he said.

In the wake of the supply chain disruptions of 2020 and 2021, there has been great interest in domestic manufacturing, said Michael Slattery of Agilitas Energy. "I can't speak to the precise amount of batteries that will come into New York, but I think New York is very well positioned — as is any state that has a large industrial base and a hefty demand for the output."

Slattery said he might be more pessimistic than most on the subject, but he expects domestic demand to outstrip domestic production for three to five years.

"It is a huge, huge logistical challenge to get these factories built," he said.

Acker touched on a subject he has raised before: The present structure of New York's electricity market makes large-scale energy storage uneconomical.

"The new programs that the state is bringing forward might level that playing field, but right now there isn't really much traction," he said. "It was mentioned earlier: We have great goals in this state, but actual deployed projects at the bulk level have been pretty minor."

## Hurdles and Hiccups

Tens of thousands of megawatts of clean energy capacity is on the drawing board in New York state, but many projects will never advance beyond that stage. This divide was a frequent topic at the summit.

Panelists touched on the long and winding road that connects inspiration and execution in New York state government, as competing interest groups delay or reshape the laws and regulations needed to bring grand goals such as decarbonization to reality.

New York's landmark Climate Leadership and Community Protection Act — which set many of the goals the state and its energy sector must now reach — was signed into law nearly four years ago but is still mired in planning and sometimes heated debate.

State leaders are fond of pointing out that the CLCPA mandates 70% of the state's power come from renewable energy by 2030, and that the project already in NYISO's interconnection queue would bring the state to 66%. But some of those projects will never break ground.

"Projects haven't been built for a variety of

# New York Energy Summit

reasons. One of those certainly is interconnection,” Boralex’s Suarez said.

“We look at what’s in the queue now, [and] we actually see all the projects the state would need to meet, basically, its objectives. A lot of those projects won’t come to fruition for a variety of reasons, some of them as a result of timing or economics, or sometimes they’re purely speculative. Sometimes some developers may have more than one project that they’re putting in multiple interconnection queues.”

NYISO is trying to speed up the process and reduce some of the speculative activity, Suarez said, but the volume of applications is unprecedented, and the ISO is not set up for it. The most recent Class Year was one of NYISO’s largest ever, he added, and many projects had to go to FERC to seek additional time to get into it.

Moderator Ingo Stuckmann, of the Zero Emission Think Tank, asked his panel about those economic challenges, such as triple-digit price increases for substations and multiyear wait times for transformers.

Suarez said the long lead time between contracts being signed and work starting on projects proved harmful in 2022. “There is a real disconnect at this point between what the expectations were three years ago and what the reality is now, and unfortunately we’re confronted with that reality.”

Marguerite Wells of Invenergy said, “I think you see that too in the conclusion of the last [NYISO] Class Year, where half of the projects rejected their cost allocations, which means they’re out of the Class Year, and they’re either going to shut down or going to have to go through a new Class Year and hope for a better cost allocation.

“I think that’s a really significant indicator of how ... these costs are impacting project economics,” she added.

## Moving Forward

New York has a strong home rule tradition, and while some authority to approve renewable energy projects has been moved to the state level, local support remains important to the clean energy transition.

Winning hearts and minds is apparently something many of the panelists have put a lot of thought into; they offered the audience numerous suggestions on building community support.

Job creation is often touted by energy developers, but that is not a compelling argument to the local residents who stand up at a town hall meeting and say they just do not want to look at a solar array, said Amy McDonough of New Leaf Energy — particularly given that most of the jobs created are temporary construction positions.

“The bigger picture — what this renewable energy economy means to the state, not just this project in their town, but this project and the next project and the next project — that kind of messaging and education could potentially be helpful,” she said.

White Plains Mayor Thomas Roach said building that city’s large community solar program relied on the help of organizations trusted in the community, such as El Centro Hispano.

“They actually had volunteers entering people into the system so they could take advantage of the discounted electricity because a lot of people are intimidated by the process,” he said.

That type of outreach can be important with something like community solar, which may

sound suspiciously like a scam to someone who receives a cold call solicitation, said Sandhya Murali, co-founder and COO of Solstice.

Suarez threw in a plug for expanding New York’s transmission grid, which would make it possible to site renewable energy in more of the state, and not overwhelm a relatively small number of communities with solicitations just because interconnection is possible there.

“Increased transmission can actually increase social acceptance to some of those projects,” he said.

Wells suggested focusing locally instead of globally, emphasizing economic development rather than climate change, “in terms of the renewable energy industry committing to the communities in which it works.”

As is often observed, there are two New Yorks: New York City is densely populated, heavily Democratic and unable to host a meaningful amount of clean energy generation. Beyond the New York City suburbs, most of the state is more conservative, less densely populated and has a much lower median income.

The open space upstate is ideal for solar farms and wind farms spread across thousands of acres, but many upstaters resent having to look at power lines, wind towers and solar arrays.

“In a lot of these communities, climate change doesn’t exist in the minds of many constituents,” Wells said. “So, I don’t talk about climate change as a driver for my work; I talk about economic development. Because it is the other half, and the money that these projects generate is very significant in terms of making a difference in the lives of upstate communities that don’t have a lot of other revenues.” ■

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# New York Energy Summit

## Weaning NY off Natural Gas More Easily Mandated than Accomplished Panelists at NY Energy Summit Examine Future Role of Fuel

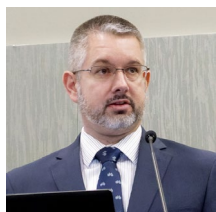
By John Norris

ALBANY, N.Y. — Natural gas is in the crosshairs of New York's decarbonization drive, but the fossil fuel will likely remain indispensable to the state's energy portfolio for years to come, even as it contributes to climate change.

So, until the transition is accomplished, it is critical to leverage every molecule of gas as efficiently as possible, panelists argued during the April 4-6 *NY Energy Summit*.

The state's Climate Leadership and Community Protection Act (CLCPA) codified decarbonization goals, including 70% renewable energy generation by 2030 and zero-carbon electricity by 2040, while New York City's Local Laws 97 and 154 effectively will ban installation of new gas systems in buildings starting in 2024.

And as New York's *Tale of Two Grids* notes, up-state regions' power needs are almost entirely supplied by renewable resources, while downstate is run almost exclusively by fossil fuels, particularly natural gas.



Chris Stolicky, New York State Department of Public Service | © RTO Insider LLC

"New York was a pioneer in using gas, and so it is no surprise that it is now pioneering aggressive climate goals that reduce methane," Chris Stolicky, chief of gas system planning and reliability at the New York Department of Public Service, said during his "Future of Natural Gas" presentation.

"The catch to this is that if you lose gas service, it's a very big deal" because it "delivers three times as much BTU content and energy to customers than other resources," so if New York wants to "offset that heating load with electric versus natural gas, [the state] needs to deliver three times as much energy," Stolicky said.

### Cooperation is Key

Natural gas is targeted for its global warming effects, both from methane leaks before combustion and carbon dioxide emissions during combustion. But as Stolicky noted, New York *continues* to rely on it for more than 40% of its energy needs, and the United States has become the largest gas producer in the world.

On top of that, there was a widespread push to



RTO Insider Editor Rich Heidorn Jr. (left) moderates a panel with Consolidated Edison's Christopher Raup (middle) and National Grid's Tom Vaccaro. | © RTO Insider LLC

replace oil-burning equipment with cleaner-burning gas until relatively recently. New York now "wants to stop that train ... and find a better way to generate energy because there's a lot of emissions and impacts," Stolicky said.

This is not expected to be easy, particularly in the densely populated downstate regions.

Therefore, "as the last firewall" between policymakers and consumers, Stolicky and his team act as the "gas ISO for New York," and look to balance system reliability and affordability with environmental concerns by bridging cooperation between stakeholders.

"A well planned and strategic transition of the gas system will require coordination across multiple sectors," he said.

Stolicky said an integrated planning process involving customers, NYISO and state agencies enables gas utilities to forecast peak demand, keep costs low without compromising reliability, and educate ratepayers about an industry whose operations influence their daily lives but

has "not always been transparent."

Stolicky said his agency remains committed to New York's decarbonization, but there are challenges ahead and stakeholders need to "buckle down and work hard collectively" to overcome them and bring the state to its net-zero goals.

New York utilities argue they are well positioned to tackle these challenges because of their existing network of assets, extensive knowledge about grid operations, and ability to invest in new technologies to replace natural gas.

### Leverage Every Gas Molecule

During the *Transmission & Distribution Plans & Investment* panel, moderated by RTO Insider's Rich Heidorn Jr., Christopher Raup, vice president of energy policy and regulations at Consolidated Edison, and Tom Vaccaro, director of transmission business development at National Grid, made their case for why utilities are well

# New York Energy Summit

positioned to help New York's transition.

Both panelists emphasized how state utilities committed to collaboratively decarbonize through the Coordinated Grid Planning Process (CGPP). They said that the plan will maintain reliability, expedite renewable development and deployment, keep utilities competitive and not hurt ratepayers.

The details are not finalized, however. (See [NY Utilities' Proposed Grid Planning Process Gets Tepid Reception](#).)

Leaving "no stone unturned" the CGPP plan offered by New York's utilities would operate via a "meaningful iteration" process that integrates stakeholders while "striking a balance between coming up with new information and getting [interconnection] processes done as quickly as possible so that [stakeholders] can iterate again," said Vaccaro.

New York has a "high voltage" problem, said Vaccaro, explaining that the grid is "running at 345 kV, which is very high compared to what you would typically see for bulk power at the utility distribution level." The utilities' CGPP proposal would solve this issue by integrating transmission planning at all grid levels so utilities "can build things for customers that are less expensive."

Additionally, after Superstorm Sandy, utilities have actively worked with state agencies and other stakeholders to develop climate modeling that predicts extreme weather impacts on the electric system, according to the panelists.

Utilities "take lessons from climate change vulnerability studies and reflect those in the infrastructure that [they] build out and operate," said Raup.



Pete Budden, Natural Resources Defense Council | © RTO Insider LLC

"All of us utilities have a shared [decarbonization] vision with the state and NYISO," and the cooperation initiated by the CGPP "hopefully removes some roadblocks and expedites these processes," Vaccaro said.

Vaccaro fielded a question about how the state's utilities are strategizing fossil fuel infrastructure as the state presses to make it obsolete.

"We're not going to be able to do everything at once" but will "leverage the remaining life out of our gas system" since New York's electrification may face future challenges, he said. Utilities plan to "use [gas] equipment for as long as [they] can before transitioning out."

Raup added that hydrogen could be used in existing gas infrastructure after 2040 and "could help fill the valleys when the sun isn't shining, or the wind isn't blowing."

## Hydrogen: A Natural Gas Substitute?

Hydrogen is still in development as a clean and economical energy source but likely has a future in New York as the technology improves.

Green hydrogen was frequently cited "as a tool to reduce greenhouse gas emissions" in the Climate Action Council's [Scoping Plan](#).

More recently, the state, as part of the seven-state Northeast Regional Clean Hydrogen Hub, [applied](#) to be designated as a national hub for hydrogen.

"I envision hydrogen infrastructure across the U.S. with pipelines in different municipalities all shifting their waste to go to hydrogen gasification," Joe Bushinsky of the Regional Hydrogen Infrastructure Development at Mitsubishi said during the [Hydrogen Hubs: Financing, Revenue Structures & Incentives](#) panel.

Introducing this technology to scale "is a challenge, but it is doable" he said. "There is a market for [hydrogen] but a lot of things have to fall into place."

One potential opportunity, Bushinsky said, "is to take waste and instead of putting it into landfills and waiting years for it to produce renewable natural gas to instead move it to syngas to produce hydrogen."

Pete Budden, a green hydrogen advocate with the Natural Resources Defense Council, tempered expectations, saying hydrogen "is an incredibly useful and important tool in our decarbonization toolbox," but "can be a distraction from more cost-effective solutions."

"Hydrogen is an indirect greenhouse gas," Budden said, referring to how atmospheric



Jessica Waldorf, New York State Department of Public Service | © RTO Insider LLC

leakages prevent methane decay, so it "should not land into gas distribution networks" because that blending is "where we are most worried about leaks."

Michel Delafontaine, president of Alternative Aviation Fuels, agreed, saying "blending is not going to be the project that drives these infrastructure demands" and hydrogen's best application will be decarbonizing transportation or energy-intensive industries such as steelmaking.

But he pointed out that some utilities, SoCal Gas for example, have been studying how to safely blend hydrogen into their gas networks.

"There are opportunities for these infrastructure projects" to help gas utilities decarbonize since it can "act as an enabler" to defer consumer costs by expanding capacity, Delafontaine said.

Moderator Michelle Detwiler, executive director of the Renewable Hydrogen Alliance, added that Hawaii Gas has been "blending hydrogen into their syngas residential distribution systems at about 20% for 46 years with no deleterious effects."

The push to phase out natural gas as quickly and completely as possible in New York is countered by the need to maintain its infrastructure as long as needed.

Jessica Waldorf, chief of staff and director of policy implementation at the Department of Public Service, touched on this during her presentation. "There are many paths to achieving the outcomes envisioned in the climate act," she said, and a "one-size-fits-all approach is unlikely to meet the diversity of needs across the state." ■



## New York Energy Summit

# Overheard at the 2023 New York Energy Summit

ALBANY, N.Y. — Here are some opinions, updates and words of wisdom from a few of the more than 60 panelists at last week's New York Energy Summit:



Michael Daschle,  
Brookfield Properties |  
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Michael Daschle of Brookfield Properties said his company is preparing two designs for a new building: one all-electric, and one that will incorporate natural gas. The all-electric version would be 40 feet taller to accommodate

additional equipment and significantly more expensive to build, but it would carry the cachet of being emissions-free, which means a lot to some prospective tenants. "You have to go back to your investors ... and say, 'Look, this is not necessarily going to achieve the same returns as a traditional gas building, but there are all those other considerations to think about.'"

Mike DeSocio of NYISO raised a warning flag on retiring fossil fuel generation before new renewable energy projects come online. "There's plenty of projects in the pipeline; the issue is we need some projects to be commercial, and that we have not seen yet. So the outlook is delicate. ... We are expecting the first wave of peaker retirements in 2023, and the next wave would be in 2025. At the same time, we're staring at a future reserve margin of zero-ish, maybe negative, and we're very interested to see how the forecast might come out."

Dawn Fenton of Volvo Group North America spoke about the transition away from internal combustion engines in heavy-duty vehicles. "I think we're in a real paradigm shift in the transportation sector. ... I'm also excited about the fact that I feel we've hit a transition even in the last several months, that we're getting beyond the pronouncements and the lofty goals. ... We're finally getting to the point of people recognizing the challenges of charging infrastructure; the challenges of permitting reform; all the work that needs to be done to actually realize this goal."

Shweta Kapadia of Crayhill Capital Management highlighted the impact that financial volatility has had. "I think one thing that ... developers are doing and we as vendors are doing is, we are very cautious when we are signing a [power purchase agreement] because we did see a lot of projects that signed PPAs ...



Dawn Fenton, vice president of government relations and public affairs at Volvo Group North America, speaks at the 2023 New York Energy Summit. | © RTO Insider LLC

are now underwater because prices have gone up."

Maureen Leddy, director of the New York Department of Environmental Conservation's Office of Climate Change, said the state's climate law requires her agency to promulgate key emissions-reduction regulations by Jan. 1, 2024. Given the complexity of those rules, and the amount of stakeholder input and feedback DEC will need to seek out, the statutory deadline is "very ambitious and highly unlikely."



Kara Podkaminer, DOE  
| © RTO Insider LLC

will be functional together. "The transportation system and the power system are two of the largest systems we've ever made, and now we need to actually make them work together, because if we don't, we actually need to build more infrastructure."

Marguerite Wells of Invenergy said she does not expect a significant increase in onshore wind capacity in New York, beyond what is already in the pipeline. "Most of the windy hill-

tops already have turbines on them, and most of the remaining windy hilltops are nowhere near transmission lines. So I don't believe there's all that much more wind resources to build out because fundamentally, that wind is competing in every [request for proposals] with solar."

David Whipple of Empire State Development was asked why a green energy manufacturer might build a new factory in New York rather than Georgia or some other state where the cost of doing business is lower. He cited net-zero policies, which have become an important consideration for some corporations: "If they want to manufacture this technology with green energy, they're going to get there a lot faster in New York than they would in many Southern states."

Joe White, Consolidated Edison's distributed generation ombudsman, was asked with his fellow panelists what had been the best thing and worst thing to happen in recent history. He identified the COVID-19 pandemic as both best and worst, because it has been so disruptive and because so many people have adapted so well in response: "On both sides of the meter, we've had to be more creative, more innovative than we ever have before in trying to get things done from an office and field environment." ■

— John Cropley



## New York Energy Summit

# Decarbonizing New York: Chicken and Egg Proposition

## Energy Summit Examines Challenges of Going Green While Keeping the Lights On

By John Norris

ALBANY, N.Y. — Amid all the talk of electrons and dollars thrown around at the *New York Energy Summit*, the old chicken and egg metaphor popped up several times during the three-day event on April 4-6.

The state's lofty climate goals are balanced by the need for the electricity fossil fuel produces, and there are multiple obstacles to replacing fossil fuel with new clean energy.

Chris Stolicky, chief of gas system planning and reliability at the New York Department of Public Service, said rapidly approaching statutory emissions reduction requirements are running into the realistic need to maintain "peaking assets to offset reduced capacity."

A chicken and egg proposition, in other words.

Panelists applauded New York for modernizing its grid but worried that attempts to decarbonize too quickly without boosting clean energy generation threaten the state's ability to both reliably keep the lights on and achieve its goals.

### Goals vs. Needs

New York's conundrum is how to ensure grid

reliability and resilience as it calls for fossil fuel resources to be replaced by intermittent resources.

The state must "fill in the gaps for when the sun goes down or the wind breaks," said Dr. Ingo Stuckman, founder of the Zero Emission think tank, who moderated the summit's *Alignment of Wholesale Markets with Decarbonization Goal* panel.

"We have to make sure we have a market that covers the needed resources to maintain a significant amount of supply to meet extreme conditions," said Mike DeSocio, director of market design at NYISO. But he added that the "outlook is delicate."

"There are plenty of projects in the pipeline; the issue is we need some projects to be commercial, and that we have not seen yet," DeSocio said, referring to the ongoing backlog of projects in NYISO's interconnection queue. (See *NYISO Previews Plan to Expedite Interconnection Queue*.)

Rachel Goldwasser, general counsel and vice president at Key Capture Energy, contended that energy storage resources could solve many of these problems, but "making sure [storage resources] can be interconnected

and that the market signals work ... has taken longer than expected."

DeSocio agreed that storage resources potentially present an elegant solution, but "the jury is still out."

"We need to make sure that all the pieces are moving together on the chess board," he said, referring to how one project's delay in the interconnection queue can impact the timing or viability of another.

NYISO "would love to add storage" he added, but "we want to be careful not to add it too quickly because we don't have the renewable resources yet to charge storage en masse."

He also flagged the short duration of most current storage technology: "We haven't seen storage in the queue that can be expected to run for 10, 12 or 14 hours," which is the current level of support needed during a grid emergency.

In response to DeSocio's comments, Goldwasser said, "There's going to be a transition period where we're going to be uncomfortable," and if stakeholders do not address these problems, then "we'll be in a position where we're contracting with fossil plants to stay online."

### Cue the Queue

New York's ability to rapidly integrate emissions-free resources has been hampered by ongoing problems with NYISO's interconnection queue, which has been pushed to the limit since the state's Climate Leadership and Community Protection Act (CLCPA) passed in 2019.

The increasing amount of time spent moving through the interconnection queue is the "elephant in the room," said Jessica Stromback, CEO of Joule Assets and moderator of the *Distributed Generation Update: What's Next for C&I, Community, and Residential Solar Markets* panel.

"We've grabbed the low-hanging fruit," said Andrew Bernstein, managing partner at Kearsarge Energy, referring to residential solar projects requiring little permitting or study. "Now the question is how to get commercial and industrial projects interconnected."

There are "tons [of projects] in queue right now. ... The question is how do we reduce costs," he said.



Rachel Goldwasser, Key Capture Energy | © RTO Insider LLC

# New York Energy Summit

Daniela Pangallo, director at Nautilus Solar, said interconnection costs are multiplied first by inflation and then by the amount of time the process takes to complete, causing some projects to exit the queue entirely.

Joe White, distributed generation ombudsman with Consolidated Edison Company of New York, said in response to these growing challenges state agencies and utilities have increasingly integrated stakeholders into these studies to identify “things that are great about the interconnection process ... and what items need improvement.”

“We take that feedback and look at any software enhancements, training and opportunities to reinvent the interconnection process, and we put those into motion,” he added.

But more needs to be done to prepare for the future.

This was a key focus during the *Utility Grid Modernization & Resiliency Planning* panel, which discussed the growing threat climate change poses to grid operations.

Referring to New York’s transformer shortage, Ryan G. Hawthorne, vice president with Central Hudson Gas & Electric, said the state has a “chicken and egg problem.” Do developers push new projects through NYISO’s queue, which risks costs rising, or invest in aging assets to make them more resilient, which may not necessarily be the best long-term solution but offers a more predictable outcome?

What is a certain, he said, is that to ensure future reliability and resilience “we need [investments] in our system to be able to address more frequent and impactful [extreme weather events].”

“We’re entering a period of a lot of uncertainty related to project development,” said Kyle Collins, director of business development at Hydro-Quebec US, where interconnection concerns and questions about renewables’ ability to meet future peak loads has forced generators to “leverage as much as [they] can out of the existing system.”

## Challenges In Focus

New York’s obstacles to decarbonization came



RTO Insider Editor Rich Heidorn Jr. | © RTO Insider LLC

into sharper focus during both the *Building Electrification/Decarbonization and Transportation Decarbonization Standards, Models & Incentives* panels.

In the building discussion, moderated by RTO Insider Editor Rich Heidorn Jr., panelists

identified how legal mandates and policies, such as the Local Law 97 or the CLCPA, have pressured developers to decarbonize a sector of society that accounts for 30% of New York’s emissions without impacting consumers. (See *NYC Proposes Rules to Implement Building Emissions Law*.)

Modernizing New York City’s building stock to these new net-zero requirements will be particularly difficult.

These laws “created some challenges” and forced developers “to think very carefully about anything [they] deliver,” said Michael Daschle, senior vice president of sustainability at Brookfield Properties.

Namely, should developers and building owners invest now to upgrade their buildings to comply with new net-zero energy requirements or suffer financial penalties for not decarbonizing that might be less economically painful in the near-term?

Daschle explained that developers are increasingly concerned about whether all-electric homes will “actually be marketable” because they will “require more equipment ... and are significantly more expensive.”

Additionally, much of the state’s building stock is old, noted Samantha Pearce, vice president and director of sustainability at New York State Homes and Community Renewal, the state’s affordable housing agency. Electrifying them with new technologies, such as heat pumps, is not only expensive but requires a lot of space, she said.

“We now have to accommodate larger mechanical room spaces,” and in some residential buildings this has created economic “domino

effects” that place new “limitations and considerations” into affordable housing decisions, Pearce said.

Similarly, Dawn Fenton, vice president at Volvo Group North America, said the transportation sector is undergoing a “paradigm shift” and needs to move “beyond the pronouncements and lofty goals. ... Yet there’s not been a realization of what are the challenges behind [a net-zero future] and that it is not as easy as mandating it as so and it will be so.”

She added, “I think people are starting to recognize the challenges of charging infrastructure or the challenges of permitting reform and all the work that needs to be done to actually realize [the state’s] goals.”

Kara Podkaminer, senior adviser for sustainable transportation at the U.S. Department of Energy, said “there is a misalignment in planning timelines, where in six months you can get an electric vehicle, ... but the timeline to get the charging infrastructure or upgrades can be more like a decade.”

Fenton and Podkaminer agreed that consumer education and awareness is the biggest “nut left to crack,” as many people remain skeptical about how decarbonization will impact them, either from an economic, social or environmental perspective.

They also agreed that informed consumers help guide decision-makers to where the needs are greatest.

We need to “come up with a plan together that meets all of our needs in a way that is more streamlined ... and produces less uncertainty” Podkaminer said.

“This is a difficult transition for everybody,” Fenton said, but if New York does not address these unresolved issues and “make it as easy as possible for everybody to take part of this transition” then the state will struggle to reach net-zero.

Hawthorne summarized New York’s chicken and egg problem using an example drawn from the transportation sector, but which could be applied to every sector needing to be decarbonized: Do you “want electric vehicles first or their charging stations?” ■

## Northeast news from our other channels



### Report Flags Gaps in Scientific Knowledge of OSW Effects



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# NYISO News

## NYISO Previews Plan to Expedite Interconnection Queue Long Island Draft OSW Planning Report Released

By John Norris

NYISO last week updated the Transmission Planning Advisory Subcommittee on a phased window approach to its generator interconnection queue to potentially replace the current process.

The construct would enable groups of overlapping projects, which proceed in separate phases in a single queue window, to be evaluated simultaneously throughout the interconnection process; add decision periods and milestone requirements to give developers more flexibility; and replace individual system reliability impact studies.

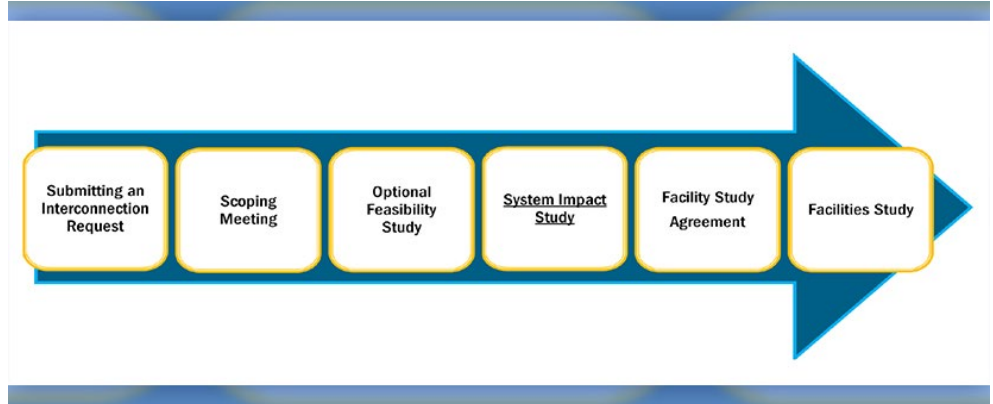
Since the 2019 passage of New York’s Climate Leadership and Community Protection Act, NYISO has been devising ways to hasten its existing three-part interconnection study process, adding more staff and considering tariff revisions. (See *NYISO Begins 2023 Class Year with Nearly 100 Projects.*)

Thin Nguyen, senior manager of interconnection projects, told stakeholders that the window approach seeks to reduce study times, increase efficiency without compromising reliability and give developers the ability to “get off the train” by opting out of the process without disrupting other studies.

Although encouraged that NYISO is investigating queue enhancements, stakeholders still sought clarity on many aspects of the approach.

Mark Younger, president of Hudson Energy Economics, asked whether a project would still “have another bite at a future queue window” and rejoin later if it decides to not proceed as part of their assigned queue window.

Nguyen responded it would but added that projects electing to withdraw from their cur-



Visual representation of NYISO’s current interconnection study process | NYISO

rent queue window “actually have no more bite but can jump to the next queue window.”

Doreen Saia, an attorney with Greenberg Traurig, asked how the approach would interface with state agencies, such as the New York State Energy Research and Development Authority (NYSERDA), and their solicitations.

Nguyen said that “it’s probably easy for NYISERDA to look at our new process and create the new rules that will be applicable for any solicitation,” to which Saia responded that she would “definitely encourage that those conversations happen in the relatively near team, because I don’t want [NYISO] to go too far down this path and then have [state agencies] say that it’s just not going to work.”

Stakeholders asked additional questions, such as about how study deposits would be treated if a project withdraws, whether the ISO could elaborate on certain definitions or terms, the role consultants would play and how elements of the current interconnection study process would fit into the new approach.

Nguyen addressed these lines of questioning but reiterated that NYISO was “not going to go too deep ... because [stakeholders and the ISO]

have not yet agreed to move forward with the new process.”

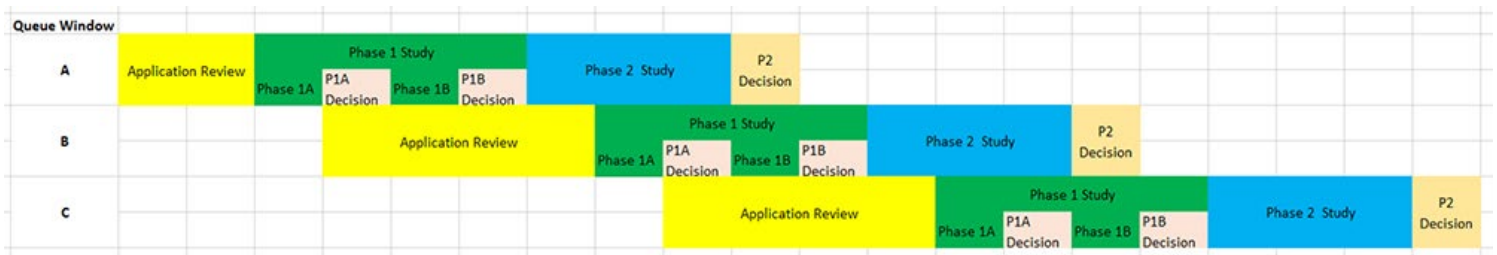
NYISO will continue soliciting feedback and spend part of the April 14 TPAS meeting addressing any remaining questions or unresolved issues, Nguyen said.

### Long Island PPTN Report

At the same meeting, NYISO also released its draft public policy transmission planning report, which included sensitivity results for 16 offshore wind projects that participated in the Long Island public policy transmission needs (PPTN) process. (See “Offshore Wind,” *NYISO Stakeholders Propose Three Areas for Public Policy Transmission.*)

In the coming months, NYISO will continue to review the results with stakeholders, add further details on additional sensitivities for consideration and include ISO-recommended rankings for all the submitted projects.

Developers are invited to present their projects to NYISO’s Board of Directors on April 17; on June 13 the ISO will conduct an “appeal-like process” for stakeholders to raise concerns and provide other feedback directly to the board. ■



Visual representation of NYISO’s proposed interconnection queue window approach | NYISO



## PJM News



# Complaints to FERC over PJM Performance Penalties Multiply

## Lincoln Power Files for Bankruptcy

By Devin Leith-Yessian

Additional generator companies have filed complaints with FERC alleging that PJM violated its governing documents during its response to the December 2022 winter storm in its assigning of nonperformance penalties.

Independent power producer Nautilus Power filed one of the first complaints March 30, arguing that PJM did not follow the correct process for initiating an emergency, depriving gas generators of notice that they could be called on and to procure fuel. (See *IPP Asks FERC to Dismiss PJM Performance Penalties over Elliott Outages.*)

Nautilus' filing was followed by several more in the following week, alleging that PJM violated its tariff by exporting energy during emergency conditions, failing protocols for declaring

an emergency and penalizing generators not scheduled.

### ComEd Generators: Region was not in Emergency

Several independent power producers within the ComEd zone filed a joint complaint arguing that conditions in the region throughout most of the performance assessment interval (PAI) during the storm, also known as Winter Storm Elliott, did not warrant emergency conditions and that the penalties faced by generators there should be eliminated (EL23-54).

The companies argued that PJM was exporting as much as 6,000 MW to the Tennessee Valley Authority and the SERC Reliability footprint during emergency conditions, in violation of the Operating Agreement and suggesting that emergency procedures were not warranted. It

argued that there was not a capacity shortage by pointing out that LMPs were below the rest of PJM throughout much of the assessment intervals.

"Simply put, no emergency conditions existed in the ComEd zone: There was no capacity shortage in the ComEd zone, prices were low, and constraints precluded the generation in the ComEd zone from helping the rest of PJM and, if anything, signaled to PJM to back down in-zone generation. Further, PJM committed several tariff, OA and manual violations, such as failing to curtail exports," the IPPs said.

Prior to the declaration of the Dec. 24 PAI around 4:30 a.m., PJM's net exports to TVA and SERC were approximately 5,000 MW. Exports had fallen to under 1,000 MW by 6 a.m. but began to increase three hours later and had reached 4,000 MW by noon.

Drawing off an affidavit supplied by Scott Harvey of FTI Consulting, the complaint said that reserve shortages "disappeared" when exports were cut and argued that that shows they were the driver of the shortages leading to the emergency declaration.

"Dr. Harvey concludes that the effect of the increases in exports on PJM prices and reserve levels suggests that emergency actions in other regions of PJM may have been needed (though not needed in ComEd) precisely because of the exports that were supposed to be curtailed before emergency actions were invoked," the IPPs said.

### Solar Developer Argues Penalties Run Contrary to Purpose

SunEnergy1, which operates about 1 GW of solar generation, filed a complaint arguing that the nonperformance charges and the overall Capacity Performance construct are unjust and unreasonable by creating penalties that do not incentivize a change in behavior for solar units that have no capability to operate at night. The company said that 87% of the charges it has been assigned were accrued during evening hours (EL23-58).

The company argued that both PJM and FERC discussed the need for incentives for capacity resources to invest in performance during emergencies as one of the justifications for creating CP following the 2013/14 polar vortex. PJM's effective load-carrying capability (ELCC) structure already accounts for solar



| Shutterstock

# PJM News



resources' output fluctuations in class accreditation, the company argued, and imposing penalties could drive resources out of the capacity market.

Because PJM staff are aware of and plans around the limitations of solar, the company argued that nighttime operations should be treated similarly to planned outages.

"How does it further the goals of PJM's capacity market, and how is it just and reasonable, to excessively penalize such resource for nonperformance during times when such resource is physically incapable of performing — particularly when PJM's operators know such resource cannot operate during such times, and do not rely upon it to operate during such times in order to maintain the reliability of the bulk power system?" SunEnergy1 said.

The complaint asks FERC to "direct PJM to explore more holistic and comprehensive reforms to its capacity market design to specifically ensure that the risks of participating in PJM's capacity market do not materially outweigh revenue opportunities for solar resources in PJM's capacity market moving forward."

## Generator Coalition Files Complaint

Several companies representing 27,500 MW of generation jointly filing as the Coalition of PJM Capacity Resources argued that PJM should be required to determine which resources would not have been dispatched had the RTO curtailed non-firm exports during the PAI and excuse them from penalties. The group also recommended that FERC require PJM to recalculate the balancing ratio to include all exports and to use those figures to reassess penalties (EL23-55).

The coalition said PJM's low load forecast resulted in insufficient capacity being procured, which the RTO was slow to make up for through reliability assessment and commit-

ment (RAC) runs that did not secure any systemwide capacity on Dec. 22 and less than a third of the forecast error the next day.

It also argued that PJM continued exporting throughout emergency declarations, constituting a tariff violation and effectively holding generators to the capacity needs of outside regions.

"To be clear, complainants do not object to PJM providing assistance to neighboring regions when that assistance is needed and when PJM has available resources to assist (as PJM apparently did during Winter Storm Elliott)," the coalition said. "Rather, complainants object to PJM declaring emergency operations and imposing penalties on PJM resources to support other systems."

## Talen Generators not Dispatched

In addition to joining the coalition's complaint, Talen Energy filed its own, arguing that PJM is seeking to improperly assign penalties against several of its generators that were available to operate but were not dispatched (EL23-56).

"These generators had available staffing, access to fuel and start times that would have allowed them to provide power during the Dec. 23 and Dec. 24 PAIs had PJM scheduled them in a timely manner," Talen said. "Assessing nonperformance charges against the Talen PJM generators in this circumstance would amount to penalizing them for following PJM's instruction, which was to remain ready to operate if dispatched."

Talen argued that generators are normally excused from CP charges if they are not dispatched or are scheduled down by PJM, with an exemption to allow penalties for units not scheduled solely based on their operating parameter limitations or market-based offers that are higher than their cost-based offers. This was not the case for at least two of the company's generators, as similarly configured

facilities in its fleet were dispatched, it said.

"Simply put, PJM made a judgment call, or perhaps even a mistake, at the time of the PAIs and did not dispatch Martins Creek," Talen said referring to its 1,719 MW gas-fired generator. "PJM must take responsibility for its own management of the grid during Winter Storm Elliott — including its decision not to dispatch the Martins Creek units."

## Lincoln Power Declares Bankruptcy Because of Penalties

Delaware-based Lincoln Power declared bankruptcy on March 31 because of about \$39 million in nonperformance penalties assigned to two of its combustion turbine generators: the 480-MW Elgin Plant and the 330-MW Rocky Road Plant, both in Illinois. Like Nautilus, the company is an affiliate of Cogentrix Energy Power Management.

In an affidavit filed with the U.S. Bankruptcy Court in Delaware, Chief Restructuring Officer Justin Pugh stated that PJM has been withholding \$350,000 weekly from the company's revenues and demanding about \$2 million in collateral. While it has been disputing the validity of the penalties with PJM, Pugh told the court that the company cannot continue to operate through the withholdings.

Lincoln has been experiencing a liquidity crunch because of low clearing prices in recent capacity auctions, Pugh said, but the company likely would have otherwise remained profitable.

"While such liquidity constraints are substantial, the debtors could have sustained their current debt load had their business not been subjected to numerous issues caused by a severe winter storm that struck and inflicted record cold temperatures across most of the United States, from Dec. 22, 2022, through Dec. 27, 2022," he said. ■

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## PJM News



# PJM Presents Alternative Capacity Auction Schedule

By Devin Leith-Yessian

PJM presented a draft proposal to delay the next four Base Residual Auctions (BRAs) to the Members Committee during a special meeting April 4.

The *alternative schedule* would move the 2025/26 auction, currently scheduled for this June, to June 2024; the following three auctions would be held every sixth months thereafter. Auctions would return to their regular timing of being held three years in advance of the 2029/30 BRA, which would be held in May 2026. (See [PJM Board of Managers to Seek Capacity Auction Delays](#).)

The tightened schedule would also continue the current practice of canceling incremental auctions (IAs) when they take place within 10 months of the BRA or would be within the same year as the corresponding delivery year. The first two IAs for the 2025/26 auction and following year's would be canceled, leaving only the third IA in place. Two IAs would be held in the 2027/28 and 2028/29 delivery years, before going back to the normal three per year.

PJM's tariff requires that it consult with the MC and Transmission Owners Agreement-Administrative Committee (TOA-AC) at least seven days prior to making a Federal Power Act Section 205 filing with FERC. The TOA-AC, whose meetings are closed to the public, met the same day after the MC.

Pre-auction activities will continue until PJM has received an order from FERC to ensure that the 2025/26 BRA can still be held in June should the commission reject the filing. Should the commission approve the filing, PJM's Tim Horger said those activities will be rerun leading up to the auction's new date.

Horger said the filing is based on the premise that FERC will approve the capacity market overhaul that the Board of Managers plans to approve and have filed by Oct. 1 within 60 days. If the commission were to take longer and reach a decision as late as March, Horger presented a potential alternative that would delay the 2025/26 BRA to October 2024 and delay the following four auctions. The schedule would go back to normal with the 2030/31 auction in May 2027.

The draft filing shown to the MC only seeks the capability to change the timing of auctions through the 2028/29 delivery year, necessitat-



Tim Horger, PJM | © RTO Insider LLC

ing an additional FERC filing for the alternative Horger presented.

Greg Poulos, executive director of the Consumer Advocates of the PJM States (CAPS), said requiring a filing by Oct. 1 and setting June 2024 in stone for the 2025/26 BRA would limit stakeholders' ability to extend discussions on capacity market changes through the Critical Issues Fast Path (CIFP) process. He noted that PJM has delayed the release of its report on the December 2022 winter storm to July, which he argued also leaves little time for review and to incorporate findings into proposals. (See [PJM Presents More Detail on CIFP Proposal](#).)

The report will be especially important for state consumer advocates, Poulos said, as they are not market participants and lack the insight into the storm's impact that those directly affected by it possess. A short timeline for making these decisions could put advocates in the position of voting on proposals to recommend

to the board without having all the necessary information, he said.

Poulos also questioned whether there is a plan for how PJM would act if FERC approves the auction delay but ultimately rejects the eventual capacity market proposal.

Horger responded that PJM is aware of that possibility and that the risk will have to be addressed should it manifest.

Vistra's Erik Heinle asked if PJM will request expedited consideration of the filing to reduce the amount of pre-auction activities that market participants must engage in.

PJM Senior Counsel Chen Lu said the decision to make the filing under Section 205 was intended to reduce the amount of time to receive a determination, but PJM will consider asking for expedition.

Ian Oxenham, legal specialist for the New Jersey Board of Public Utilities, urged PJM to not seek expedited consideration, saying that it could deprive commenters of the time needed to evaluate the filing.

"PJM should be very hesitant to shorten that comment period," he said. ■



Greg Poulos, Consumer Advocates of the PJM States (CAPS) | © RTO Insider LLC



## PJM News



# FERC Approves Revisions to PJM's ELCC Accreditation Model

By Devin Leith-Yessian

FERC on Friday conditionally approved a PJM proposal to revise its approach to accrediting intermittent and hybrid resources under its effective load-carrying capability (ELCC) model, a change that aims to more accurately model roadblocks to delivering capacity from those generators during peak conditions ([ER23-1067](#)).

The new rule caps the hourly output that can be incorporated in the ELCC calculation at the resource's individual capacity interconnection rights (CIR) level and creates a transitional process where generators can temporarily receive higher accreditation while they undergo a re-evaluation of the value of their capacity contribution.

PJM's current practice of including hourly output above a resource's CIR rating in its ELCC analysis when setting accreditation has been the source of much of the contention over the two years and is the subject of an ongoing complaint with FERC (EL23-13). (See [Stakeholders Challenge PJM in Capacity Accreditation Talks](#).) The approved proposal was the result of a long development process that culminated in stakeholder approval in January. (See [PJM Stakeholders Endorse](#)

### *Accreditation Changes for Renewables.*)

"We agree with PJM that reflecting a resource's deliverable megawatts in PJM's model of the resource's expected output guarantees that the modeled output will not exceed the resource's studied deliverability and aligns with the requirement that a capacity resource's sell offer cannot be greater than its CIR megawatt value," the commission said in its order.

In its filings, PJM stated that the shift was based on a reconsideration of the assumption that historical system conditions can be used to effectively estimate the future reliability contribution of intermittent resources. Instead, it posits that decarbonization is likely to change system conditions to a degree that the ability to evaluate future outputs and curtailments is uncertain. The revisions also change the accredited unforced capacity (AUCAP) analysis to adjust actual output to account for curtailments.

For combined resources, such as hybrids, the output of the variable component in the ELCC calculation will be capped at the overall generator's deliverable megawatt value minus the effective nameplate capacity of the limited-duration component, such as a battery. PJM argued that the status quo risks overcounting the output of the intermittent portion

of the generator and cause the combination resource's ELCC output to exceed its deliverability.

Because the new methodology will effectively reduce the accreditation for intermittent resources and require existing and planned generators to re-enter the interconnection queue, which has been beleaguered by long review times, the revisions include a transitional process through which generators can request a higher temporary accreditation and take advantage of existing transmission headroom.

To participate in the transitional study process, the additional capacity a generator is seeking to deliver must be available without any physical modifications to the facility, and the headroom must not be claimed by another generator's CIRs. The studies will be conducted prior to each future BRA and continue until PJM has completed the process of transitioning to the new methodology for studying interconnection requests.

The commission identified inconsistencies between the filing's description of the transition mechanism and the proposed revisions to PJM's Reliability Assurance Agreement (RAA). It required that the RTO submit a compliance filing within 30 days aligning the two.

### Protests

The proposal originally included a requirement that generators seeking to enroll in the studies apply by March 3, but by approving the filing with an April 10 effective date, the commission extended the application time frame and encouraged PJM to consider lengthening it further should it pursue its stated intention of delaying the 2025/26 Base Residual Auction and future capacity auctions.

An association of clean energy industry groups opposed the filing, arguing that closing applications for the transition studies violates a Federal Power Act provision requiring RTOs provide at least 60 days' notice of any proposed changes and does not provide generators enough time to determine how much additional capacity they should request. It argued that PJM should instead include a new window for applying for the transition studies prior to each BRA.

PJM responded by stating that the stakeholder process included significant discussion of the process and "more than ample notice of the timing." It also said more than 400 study requests have been submitted, which it said is



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## PJM News



evidence that generators had sufficient time to apply.

FERC said that, “should PJM determine to make a filing with the commission to delay the 2025/2026 BRA, we encourage PJM to consider extending the deadline for submitting a request to increase a resource’s CIRs as well.”

The Natural Resources Defense Council protested the proposal on the basis that it represents undue discrimination against ELCC resources by requiring them to pay for higher transmission costs to recover the accreditation that would be lost under this proposal, when in the past thermal generators have had interconnection costs passed to load under what it describes as similar circumstances.

“PJM’s proposal does not require any ELCC resources to pay for upgrades to ensure reliability; PJM is offering ELCC resources the opportunity to request additional CIRs to increase their accredited UCAP,” FERC said. “The interconnection queue is PJM’s existing process by which all resources request and receive CIRs. Thus, PJM’s proposal is not unduly discriminatory; it simply reflects

existing processes that are designed to achieve different goals.”

### Clements Dissent

In opposing the filing, Commissioner Allison Clements argued that the proposal will reduce generators’ ability to deliver capacity that is currently able to be provided to the transmission system and requires them to re-enter the transmission queue at the back of the line, potentially creating scenarios in which generators that could provide their status quo capacity with minimal upgrades wait years to find that they’re now being asked to pay substantially higher transmission upgrade costs. By reducing the accreditation for both intermittent and combined resources, she said, the order risks increasing capacity costs, sending inefficient price signals and over-procuring capacity.

“In other words, owners of existing ELCC resources whose requests for a higher amount of CIRs could have already been processed at low cost find themselves sent to the back of a slow-moving line that will take years, fighting

to purchase at a potentially much higher price the same capacity deliverability they could’ve already gotten, or arguably have already purchased,” Clements wrote.

She also argued that the April 10 deadline provided too little notice for generators, likely creating an “ill informed mad dash into the interconnection queue.”

“Rewarding this approach allows regulated entities to strong-arm market participants into compliance actions prior to a commission determination, meaning that proposed rules that are not just and reasonable or are unduly discriminatory will shape commercial decisions before the commission can opine on them,” Clements wrote. “While an order ultimately rejecting a proposal as not just and reasonable or unduly discriminatory would give market participants some relief from having to comply with a rule that does not past muster under the Federal Power Act, it would not return to them the time and money spent complying with the proposed unjust and unreasonable or unduly discriminatory rule in advance of the commission’s determination.” ■



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## PJM News



# Ohio PUC Opens 2021 Audit of OVEC Charges for Public Comment

## Decision Follows Protests and New Bill to Eliminate Charges

By John Funk

The Public Utilities Commission of Ohio is preparing to consider formal comments on the findings of independent audits of extra customer charges collected in 2020 by three utilities buying electricity from Ohio Valley Electric Corp.'s (OVEC) coal-fired power plants, often at above-market prices.

The action by the PUCO to accept formal comments on the performance audits came two days after the Sierra Club, the Ohio Environmental Council and other groups publicly demanded action by the regulator.

2019's Ohio Clean Air Act, better known as HB 6, added surcharges to ratepayer bills to subsidize the OVEC plants. The provision was added to the controversial bill, aimed primarily at subsidizing FirstEnergy's nuclear plants in the state, to ensure its passage.

When former Ohio House Speaker Larry Householder (R) was indicted on federal racketeering conspiracy charges in connection with the bill, state lawmakers in 2021 revoked the nuclear subsidy but rejected several bills seeking to eliminate the OVEC subsidy, known as the "legacy generation rider."

AEP Ohio, AES Ohio (formerly Dayton Power & Light) and Duke Energy Ohio are the largest investor-owned companies that jointly own OVEC and have contracted to buy a percentage of the power generated by its two 1,000-MW plants at whatever it cost to produce. The plants were designed and built in the early 1950s. OVEC offers most of their power into the PJM market.

The agreement between OVEC and the three utilities is also designed to work in reverse, producing customer credits if OVEC's costs were less than market prices. That happened in 2022 when the companies added modest credits to customer bills, reflecting the lower price of coal compared with natural gas during the period.

The surcharge raised total customer bills in the state by \$114.7 million in 2020 and \$72 million in 2021 but reduced the total amount paid by customers of the three utilities by \$28.5 million in 2022, according to PUCO figures obtained by *RTO Insider*.

The performance audits were done for the PUCO by Boston-based London Economics



Ohio Valley Electric Corp.'s Kyger Creek Power Plant | FunksBrother, CC BY-SA 4.0, via Wikimedia Commons

International. The company audited each company's monthly OVEC-connected charges from Jan. 1 to Dec. 31, 2020. The audits have been available in a PUCO *docket*, but the agency has only now called for comments, which are due May 5.

The performance audits found that "overall ... the processes, procedures and oversight were mostly adequate and consistent with good utility practice." They also found that one component of fixed costs that each of the three utilities listed appeared to be similar to a "return on investment," something not permitted by a company operating in a deregulated market.

Following the March 9 conviction of Householder and a former state Republican Party chairman, two Democratic state representatives introduced a new *bill* to eliminate the OVEC charge and require the utilities to reimburse customers for past collections. The

bill is in committee, but no hearings have been set. (See *Householder Convicted in FirstEnergy Bribery Case*.)

"Initially the subsidy was imposed by the PUCO. And now the subsidy is a state law courtesy of the infamous House Bill 6 and utility lobbying," said J.P. Blackwood, spokesman for the Ohio Consumers' Counsel. "Consumers should not be forced to pay AEP, Duke and AES for this corporate welfare. Ohio is supposed to be a deregulated state for power plants, meaning there should be no subsidies at consumer expense for these AEP/Duke/AES coal power plants."

The Ohio Manufacturers' Association noted in a study released on March 24 that customers have already paid nearly \$400 million to the three utilities for their ownership in OVEC and can expect to pay a total of \$850 million by 2030 unless HB 6 is revoked in its entirety. ■



## PJM News



# Md. Legislature Sends POWER Act to Governor's Desk

## Bill Sets Targets for Regional Tx Planning and 8.5 GW of Offshore Wind by 2031

By K Kaufmann

With hours to go until the end of their 2023 legislative session, Maryland lawmakers on Monday passed the Promoting Offshore Wind Energy Resources (POWER) Act (*S.B. 781*), committing the state to developing 8.5 GW of offshore wind by 2031.

After the House of Delegates passed the bill on April 4, with *amendments* from its Economic Matters Committee, a conference committee was quickly formed Monday and hammered out final changes, *removing* some of the amend-

ments. The bill was approved first in the Senate by a vote of 35-12 and then in the House of Delegates, 101-38. (See *Maryland Lawmakers Vote to Raise Offshore Wind Target*.)

In addition to more than quadrupling the state's 2-GW pipeline of projects in development, the bill now headed to Gov. Wes Moore's (D) desk would require the Maryland Public Service Commission to ask PJM to set up a State Agreement Approach planning process for offshore wind transmission, similar to New Jersey's agreement with the grid operator. However, the bill calls on the PSC to reach

out to other PJM states to evaluate regional transmission cooperation that could help it meet its offshore wind goals, according to the legislature's analysis of the bill.

The PSC or PJM will have to issue one or more competitive solicitations for transmission projects by July 1, 2025. Additional solicitations could be issued after that if needed.

The bill requires PJM or the PSC to study specific transmission solutions, including one that uses an open-access collector system to allow for the interconnection of multiple offshore wind projects at a single substation.



Maryland State House | Shutterstock

# PJM News



One of the House amendments to the bill states that such studies must also “demonstrate net benefits to ratepayers in the state when compared with an alternative baseline scenario under which 8,500 MW of offshore wind capacity is connected to PJM Interconnection independent of an offshore wind transmission project.”

Such an alternative scenario might connect offshore projects to PJM via individual radial lines as opposed to networked transmission linking multiple projects to onshore substations. Industry experts increasingly favor networked, meshed HVDC systems as the most flexible and efficient for offshore transmission. (See [OSW Developers Look to Europe on Meshed HVDC Tx.](#))

Moore is expected to sign the bill, after voicing his support for its 8.5-GW goal at the recent Business Network for Offshore Wind (BNOW) International Partnering Forum in Baltimore. The new target would produce “enough energy to power nearly 3 million homes” and provide opportunities to rebuild and expand steel manufacturing in the state, he said. (See [U.S. Wind Industry Set to Take Off.](#))

## Industry Response

Industry response was immediate and celebratory, heralding both the bill’s clean energy and economic benefits.

“The POWER Act establishes a comprehensive strategy to plan, connect and deploy offshore wind at the scale necessary to support supply chain investments and decarbonize Maryland’s economy at the lowest possible cost to Marylanders,” said Evan Vaughan, deputy director of the Mid-Atlantic Renewable Energy Coalition.

The law will allow the state to reclaim “national leadership in offshore wind [by] establishing a

first-in-the-region initiative to proactively plan a 21st century transmission grid,” Vaughan said.

BNOW CEO Liz Burdock agreed that “the POWER Act repositions Maryland back into a leadership position, and with the federal government opening up new lease areas next year, offers the state a rare opportunity to attract major manufacturing and supply chain investment.

“Maryland must capitalize on this opportunity by moving quickly from legislation to execution and commercialization,” she said.

“The POWER Act is a real game changer for Maryland,” said Jeff Grybowski, CEO of Maryland-based offshore wind developer US Wind. “It sets a path for the people of Maryland to reap the benefits of huge amounts of clean energy in the coming years. It also tells the entire offshore wind industry globally that Maryland is back big time as a major player. Companies looking to invest in offshore wind have to seriously consider Maryland.”

Echoing Vaughan, Nick Bibby, Maryland state lead for Advanced Energy United, hailed the bill’s regional approach to transmission planning, saying it “will improve the transmission infrastructure planning process to improve grid efficiency and resiliency, lower utility bills for homes and businesses, and create good-paying jobs that connect Maryland to wind and solar resources.”

## Maximize Opportunities

Other amendments to the bill include a call for the state to “maximize the opportunities” for obtaining federal funds for offshore wind and transmission projects by aligning its labor and domestic content standards with those in the

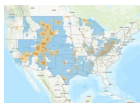
Infrastructure Investment and Jobs Act and Inflation Reduction Act.

Provisions in the two laws either require projects to pay prevailing wages and offer registered apprenticeship programs. Tax credits provide bonus incentives for ensuring clean energy projects include made-in-the-U.S. materials and components.

Here are some other key sections of the bill:

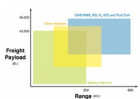
- Transmission proposals could include upgrading the existing grid, extending the transmission grid both onshore and offshore, interconnecting between offshore substations, adding energy storage, and using high voltage direct current converter technology to support potential weaknesses in the transmission grid.
- The PSC will have to pick one or more transmission proposals by Dec. 1, 2027, and then work with the developers, PJM, FERC, potentially other states, and other stakeholders to ensure the lines get built. If the solicitation does not lead to any beneficial or cost-effective proposals, the PSC can end it without picking one and would then have to notify the legislature of its decision by Dec. 1, 2027.
- The bill also includes language for the 2 GW of offshore wind developments that have already cleared earlier procurements, allowing developers to ask the PSC for an exemption to the requirement that they pass along to ratepayers 80% of the value of any state or federal grants, rebates, tax credits, loan guarantees or other benefits. Developers must prove that the exemption is needed to meet their contractual obligations. ■

## National/Federal news from our other channels



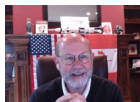
[IRA Tax Credits Draw Clean Energy Projects to Coal Communities](#)

NetZero  
Insider



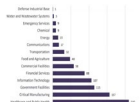
[NACFE: Battery Electric and H2 Fuel Cells to Displace Diesel](#)

NetZero  
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[NERC's Robb, Cancel Discuss Evolving Reliability Challenges](#)

ERO  
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[E-ISAC's Duncan Warns Cyber Threats Growing](#)

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## SPP News



# SPP: 31 Entities Join in Markets+ Development

By Tom Kleckner

SPP said last week that 31 utilities, public interest groups and other entities have officially joined the grid operator's effort to develop and launch its Markets+ offering in the Western Interconnection.

The parties met an April 1 deadline to execute agreements allowing their participation in the first phase of the market's development. That effort began last month after funding reached critical mass a month ahead of schedule. (See [SPP Moving Quickly on Markets+'s Development.](#))

The funding agreements also give the participants voting rights in the first developmental phase.

"We're encouraged to see such a varied group of entities taking an active role in the development of Markets+," Antoine Lucas, SPP's vice president of markets, said in a [statement](#) April 4. "From utilities looking to improve reliability and reduce energy costs, to public interest

organizations advocating for natural resources and policy outcomes, these diverse perspectives are a benefit to the value, effectiveness and efficiency of our products and services. There's room for all those voices to have a say in the design and implementation of our market."

SPP said that in exploring the potential benefits of regional day-ahead and real-time markets in the West, it has worked to ensure its market design would reflect all stakeholders' perspectives. It recently rolled out the Markets+ independent governance structure that "gives meaningful say to several key audiences." (See [SPP Unveils Markets+ Governance Structure.](#))

Those audiences include:

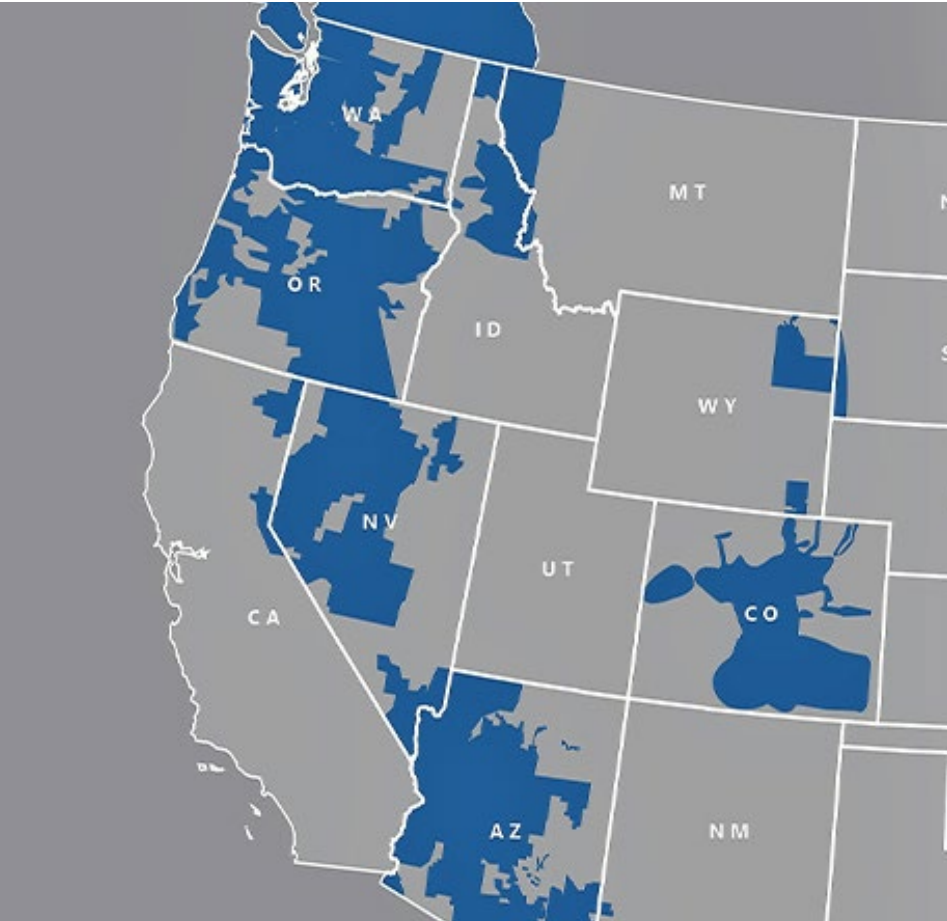
- utilities that serve load or own generation and will have assets participating in Markets+;
- organizations representing public interests, and other groups that won't participate in

the market but will be affected by its design and operation; and

- Western states and regulatory bodies, which can nominate representatives to a state committee.

Markets+ participant and stakeholder representatives will collaborate in committees and working groups to develop market protocols and governing documents that SPP will eventually file with FERC for approval.

"SPP's independent governance, past experience accommodating participation of federal power marketing administrations and commitment to engage with stakeholders to ensure a balanced market between buyers and sellers are all encouraging aspects of Markets+ going into this next phase of development," Public Power Council CEO Scott Simms said. "PPC looks forward to working with SPP and other stakeholders to further develop Markets+ and to build on the promising service offering developed last year." ■



### Markets + Phase One

- American Clean Power Association
- Arizona Electric Power Cooperative, Inc.
- Arizona Public Service
- Black Hills Colorado Electric, LLC
- Black Hills Power, Inc.
- Bonneville Power Administration
- Chelan County Public Utility District
- Cheyenne Light, Fuel and Power Company
- Clean Energy Buyers Association
- Grant County Public Utility District
- Interwest Energy Alliance
- Liberty Utilities (CalPeco Electric), LLC
- Municipal Energy Agency of Nebraska
- Northwest & Intermountain Power Producers Coalition
- NV Energy, Inc.
- Pattern Energy
- Powerex Corp.
- Public Generating Pool
- Public Power Council
- Puget Sound Energy
- Renewable Northwest Project
- Salt River Project
- Snohomish County Public Utility District
- Tacoma Power
- The Energy Authority
- Tri-State Generation and Transmission Association
- Tucson Electric Power Company
- Western Energy Freedom Action
- Western Power Trading Forum
- Western Resource Advocates
- Xcel Energy -Colorado

Thirty-one Western utilities, interest groups and other parties have signed funding agreements for SPP's Markets+'s development. | SPP



## Company Briefs

### Jury Awards Black Tesla Worker \$3M in Bias Case

A federal court jury last week awarded \$3.175 million in damages to a black factory worker at Tesla's Fremont plant who said he was repeatedly called racist names and subjected to abuse during his more than nine months of employment.

The damage award was far below the \$136.9 million another jury in San Francisco awarded to the former Tesla worker, Owen Diaz, at trial in 2021. However, U.S. District Judge William Orrick ruled those damages excessive and proposed reducing them to \$15 million. Diaz instead opted for a second trial, solely on the amount of damages. Jurors awarded him \$175,000 for emotional distress and \$3 million in punitive damages.

A Tesla representative was not immediately available for comment.

More: [San Francisco Chronicle](#)

### Ford: Sales up 10% in Q1



Ford Motor Co. last week said its total U.S. sales, including its Ford and Lin-

coln brands, rose 10.1% year-over-year to 475,906 vehicles for the first quarter of 2023. Ford brand sales grew 10.7%.

The company's sales of 10,866 EVs were up 41% from a year ago. The automaker has three EVs on the market: the F-150 Lightning pickup truck, the Mustang Mach-E crossover SUV, and the E-Transit cargo van.

More: [The Detroit News](#)

### Canoo Posts \$80M Quarterly Loss

Electric vehicle maker Canoo posted a

fourth-quarter loss of \$80.24 million, according to CEO Tony Aquila.

The quarterly loss equaled 25 cents per share, compared to a loss of \$138.11 million (60 cents a share), in the year-ago quarter.

Canoo noted it has \$36.6 million in cash as part of its fourth quarter reporting. The company also said it settled an investigation by the Securities and Exchange Commission with a \$1.5 million payment.

More: [Arkansas Democrat Gazette](#)

### G2 Net-Zero Drops Plans to Build LNG Export Facility in La.

G2 Net-Zero last week announced it has decided to drop plans to build an \$11 billion liquefied natural gas complex in Cameron Parish, Louisiana.

The company said that it has shifted its corporate focus away from LNG export activities to the development of net-zero greenhouse gas emission energy products and now plans to build a blue ammonia plant in Southwest Louisiana.

More: [KPLC](#)

### Google Inks 15-year PPA with Ørsted



Google last week announced it has signed a 150-MW power purchase agreement with Ørsted to purchase renewable energy generated by the Helena Wind Farm for the next 15 years.

It is the first agreement between Google and Ørsted in the U.S., and the second agreement globally. Both PPAs will contribute to Google's commitment to operate all its data centers, cloud regions and offices on

carbon-free energy by 2030.

Helena Wind Farm is a 268-MW wind farm in Pawnee, Texas.

More: [Greentech Lead](#)

### ABB Investing \$40M in New Mexico Cable Plant

Electrification and automation company ABB last week announced it will invest \$40 million to build a cable products factory in New Mexico.

The money will be used to add a 90,000-square-foot facility to its 40-acre campus in Albuquerque.

Plans call for the new plant to start production next year.

More: [T&D World](#)

### AEP Names Smyth Executive VP of Grid Solutions, Government Affairs



American Electric Power (AEP) last week announced organizational and executive leadership changes, including naming Antonio Smyth the executive vice president of grid solutions and government affairs.

Smyth will continue to oversee planning for regulated infrastructure investment and policy related to FERC and the RTOs, with expanded responsibility for federal and Ohio government affairs.

AEP's executive vice president of external affairs position is being eliminated, and the responsibilities have been realigned, as Raja Sundararajan is leaving the organization.

More: [AEP](#)

## Federal Briefs

### MVP's West Virginia Water Permit Tossed by Court

The 4th U.S. Circuit Court of Appeals last week vacated a water permit needed by developers to restart construction on the Mountain Valley Pipeline in West Virginia.

The court found several defects in the review the state's Department of Environmental Protection conducted before issuing

the permit. Construction can't restart until the agency reconsiders the permit, which is needed before the 303-mile pipeline can cross the state's streams and wetlands.

More: [Reuters](#)

### Challenge to Biden 'Cost of Carbon' Policy Dismissed

The 5th U.S. Circuit Court of Appeals in

New Orleans last week unanimously dismissed a lawsuit from Republican states that challenged figures the Biden administration uses to calculate damages from greenhouse gasses.

A federal judge in Louisiana had ordered a halt to the administration's approach early last year after the states filed a lawsuit. The states said the policy threatened to drive up energy costs while decreasing state reve-

nues from energy production. The Court of Appeals later blocked the judge's order, and the Supreme Court declined to intervene. The appeals court dismissed the case, saying the challenging states had no standing to sue because they had not shown that the regulations caused the economic harm their lawsuit cited.

The decision allows the administration to continue using a damage cost estimate of about \$51 per ton of carbon dioxide emissions as it develops environmental regulations. The cost estimate had been used during the Obama administration.

More: [The Associated Press](#)

### VP Harris Announces Largest Single Investment in US Community Solar

Summit Ridge Energy, the largest U.S.-based solar energy company, will buy 2.5 million solar panels from Korean solar panel manufacturer Qcells, Vice President **Kamala Harris** announced last week.

The Summit Ridge deal is projected to



ty solar power.

More: [The Hill](#)

### Court Rules Justice Coal Companies Must Pay Penalties for Violations

The 4th U.S. Circuit Court of Appeals last week ruled that two of West Virginia Gov. Jim Justice's coal companies must pay \$2.54 million in penalties and clean up sites as required by environmental regulators.

Southern Coal Corp. and Premium Coal Co. had asked the federal appeals court to reverse a 2021 district court order compelling them to comply with a 2016 consent decree under which they had agreed to address environmental violations. The decree required Southern Coal Corp. and two dozen

deploy about 1.2 GW of solar power. Investments at Summit Ridge Energy's two Georgia plants have been touted by the Biden administration as the largest single investment in communi-

other Justice-controlled companies to pay a \$900,000 civil penalty to resolve more than 23,000 water pollution violations.

More: [Charleston Gazette-Mail](#)

### EPA Fines Valero's Benicia Oil Refinery \$1.2M for Toxic Flaring Incidents



that spewed dark plumes of pollutants into nearby neighborhoods.

The "significant chemical incidents" occurred in 2017 and 2019 and forced people, including schoolchildren, to shelter in place due to the risk of exposure to harmful chemicals, the agency said.

Following a federal investigation, Valero executives agreed to make specific changes to their Benicia operations and pay a penalty totaling \$1,224,550.

More: [San Francisco Chronicle](#)

## State Briefs

### FLORIDA

#### PSC Approves FP&L Fuel Charge Reduction

The Public Service Commission last week approved a \$494 million fuel charge reduction for Florida Power & Light that will reduce average monthly bills by about 3.1% (\$4.43) over the next 8 months.

The latest adjustment comes less than a month after the PSC approved 2022 storm recovery charges and fuel charge adjustments that raised monthly bills by \$14.79. The increases approved in early March were on top of annual cost increases built into the utility's four-year rate plan approved in 2021; that plan guaranteed customer bills would increase by 18.2% by 2025 regardless of costs associated with fuel or storm recovery.

More: [South Florida Sun Sentinel](#)

### GEORGIA

#### First New Vogtle Reactor Begins Generating Electricity

Plant Vogtle's Unit 3 reactor, one of the



two long-delayed nuclear units at the plant, successfully generated electricity and connected to the grid for the first time on April 1. Georgia Power called the step a major milestone that brings the country's first new reactor built in more than 30 years closer to completion.

The company said operators will continue to increase power levels and conduct tests to ensure the reactor functions as designed in the coming weeks before placing it into commercial service. Unit 3 is expected to begin sending power by May or June. Its twin, Unit 4, is expected to be completed by the end of the year or the first quarter of 2024.

More: [The Atlanta Journal-Constitution](#)

### INDIANA

#### Indiana Michigan Power Plans 4 Solar Plants

Indiana Michigan Power last week said it plans to invest at least \$1 billion toward solar plants that would help power about a third of its customer base.

The company announced it has filed plans with the Indiana Utility Regulatory Commission and the Michigan Public Service Commission to create the plants.

The solar plants will take up to three years to construct and go online in late 2025 to mid-2026. Plans call for them to be built in Blackford, DeKalb, Elkhart and Pulaski counties.

More: [The Journal Gazette](#)

### NEVADA

#### Clark County Adopts Plan to Slash Greenhouse Gases

The Clark County Commission last week unanimously adopted a comprehensive plan aimed at slashing greenhouse gas emissions

and preparing the region for the effects of climate change.

Requiring energy-efficient appliances in new and existing buildings, switching to renewable energy, replacing county vehicle fleets with EVs, and reducing landfill emissions could meet the county's overall goal of reducing emissions by 72%.

The Department of Environment and Sustainability has been working on the plan since October 2019, when the commission joined the County Climate Coalition. Counties in the coalition adopt policies in line with the 2015 Paris Agreement to reach net-zero greenhouse gas emissions by 2050.

More: [Las Vegas Sun](#)

## NORTH DAKOTA

### Otter Tail Power Sticking with Coyote Station Coal Plant



Otter Tail Power last week reversed its decision to exit the Coyote Station coal-

fired power plant, citing new risks in the Midwest's electricity market.

In 2021, Otter Tail said it would sell its partial stake in the plant and exit its agreements by 2028. At the time, Otter Tail said the plant had become too costly for customers and would no longer be needed. Although the company is continuing to add renewables, it now says it still needs the plant.

Otter Tail said its decision to stick with the plant is rooted in changes in the regional energy market run by MISO. MISO said the potential power squeeze caused by high auction prices was rooted in the closure of several coal plants throughout its region.

More: [Star Tribune](#)

## OREGON

### Bill to Divest from Coal, Oil and Gas Fails to Advance

Lawmakers last week did not advance a bill that would have prompted faster divestiture of state investments in coal, oil and gas companies.

The bill would have compelled divestment action by the treasurer and the Investment Council by 2035, well before the 2050 target that current state Treasurer Tobias Read has set. It is also the state's goal to reduce greenhouse-gas emissions by 90% from current levels.

A House committee conducted two public hearings in February and March but failed to move the legislation by a deadline of April 4.

More: [KPMV](#)

### Clean Energy Data Center Bill Dies in Committee

The House Committee on Climate, Energy and Environment last week pulled a bill that would have compelled data centers to meet the state's climate goals.

The bill would have required newly built data centers and cryptocurrency miners to power their facilities with 80% clean energy by 2030, and 100% by 2040.

More: [Government Technology](#)

### PGE Files IRP, Inaugural Clean Energy Plan



Portland General Electric last week filed an Integrated Resource Plan and its

inaugural Clean Energy Plan with the Public Utility Commission that calls for a net zero power generation mix by 2040.

PGE's roadmap to a sustainable energy mix includes the development of new utility-scale renewable projects, located both in-state and out-of-state, and transmission upgrades to modernize the grid.

To date, PGE has reduced emissions from power sold to Oregonians by 25% below 2010-2012 baseline emissions. The utility has plans to reduce emissions by 80% by 2030 and to be fully net zero the following decade.

More: [pv magazine](#)

## TEXAS

### Bill Limiting Crypto Miner Benefits Passes Committee Vote



A law that would restrict benefits for bitcoin miners unanimously passed a Senate committee last week and will now head to the full Senate for vote.

The bill would cap how much miners can

participate in grid balancing services to 10% of the total participation. The bill will also take away tax abatements for certain property and require miners with more than 10 MW of computing power to register as large flexible loads operators with ERCOT.

More: [CoinDesk](#)

## VIRGINIA

### Charlotte County Lifts Solar Project Moratorium

The Charlotte County Board of Supervisors last month lifted its moratorium on new solar facilities after a seven-month pause on conditional use permits.



Supervisor **Hazel Bowman Smith** made a motion to end the moratorium after a closed session discussion on the matter with the county's attorney, who believed the moratorium

was invalid and contrary to state law. The attorney explained that state courts typically invalidate moratoriums related to land use. In the case of Charlotte County, there was no statutory authority for the county to enact the moratorium, said the attorney who called the ban an "unreasonable restriction on use of land" and its enactment "arbitrary and capricious."

More: [SoVaNow](#)

## WYOMING

### Rocky Mountain Power Shifts Plant Closures in Move Away from Coal



In its biennial Integrated Resource

Plan filed with the Public Service Commission, only two of Rocky Mountain Power's 11 coal-burning units in the state will remain by 2030.

The utility has opted to preserve coal use at one Glenrock unit for an extra 12 years but also decided to ditch coal entirely at its Rock Springs plant seven years ahead of schedule. Jim Bridger units three and four, which were set to continue burning coal until 2037, will be converted to gas in 2030. And instead of shuttering the Dave Johnston plant in 2027, the company will close unit three in 2027 and units one and two in 2028, but unit four will remain open until 2039.

More: [Casper Star Tribune](#)