RTO Insider

Your Eyes and Ears on the Organized Electric Markets

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Biden Budget Seeks Major Spending Hikes on Climate

Research, Environmental Justice, EVs Highlighted

By Rich Heidorn Jr.

President Biden's opening bid on the 2022 budget makes good on his promise to use a "whole of government" approach to address climate change, calling for an additional $14 billion in "climate change investments."

Biden's $1.5 trillion discretionary budget request released Friday is an attempt to reverse a decade of underinvestment from "overly restrictive" budget caps, an administration official, speaking on background, *told* reporters.

"Despite the growing threat of climate change, we've cut funding for climate science and technology at EPA by 27% since FY 2010, adjusted for inflation," the official said. The discretionary budget supplements the infrastructure initiatives the administration outlined in its American Jobs Plan on March 31. (See *Biden Infrastructure Plan Would Boost Clean Energy*.)

"The discretionary request is a complementary but separate proposal that lays out the president's funding recommendations for the annual appropriations process," the official said. "We want to use every lever at our disposal to address the challenges we face."

It would increase non-defense discretionary spending by 16% and defense by 1.6%.

The *request* would boost climate change spending "across nearly every agency to invest in resilience and clean energy, enhance U.S. competitiveness and put America on a path to achieve net-zero emissions no later than 2050," the Office of Management and Budget said.

The proposal includes $850 million for electric vehicles and charging infrastructure:

Continued on page 5

Also in this issue:

ERCOT Blames Cold Weather for Gen Outages

Equipment Failures, Fuel Supplies Less at Fault

By Tom Kleckner

ERCOT said "weather-related" issues accounted for the bulk of February's widespread and lengthy outages in Texas, according to a *report* it filed April 6 with the state's Public Utility Commission.

The grid operator said frozen equipment, ice accumulation and other weather causes accounted for 54% of the generation capacity taken offline during the height of the storm, representing 27.5 GW. Another 14% was attributed to equipment failure or malfunction.

Luminant's Trinidad plant | *Luminant*

Power plant operators have said they were hampered by a loss of natural gas supplies, but fuel limitations were blamed for 12% of the outages, or about 6.1 GW.

Frequency-related problems were responsible for about 2% of the outages, or nearly 1.3 GW.
Several generators also said they were knocked offline during a frequency drop.

Continued on page 18

SPP MMU Quarterly Report Focuses on Winter Storms

By Tom Kleckner

The SPP Marketing Monitoring Unit (MMU)'s quarterly State of the Market *report* for the winter 2021 period is dominated by the historic winter weather events of mid-February.

The storms left 73% of the continental U.S. covered in snow and broke 3,000 daily and 79 all-time low-temperature records, according to the National Weather Service. The event was "comparable to the historical cold snaps" of 1899 and 1905, the NWS *said*.

The MMU said in its report that the market's average load was up 10%; generation outages increased from 30 GW to 43 GW over the previous winter; and high gas prices led to average day-ahead prices of $504.42/MWh and real-time prices of

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In this week's issue

***NetZero Insider* is now live!**

See p.9 for this week's coverage.

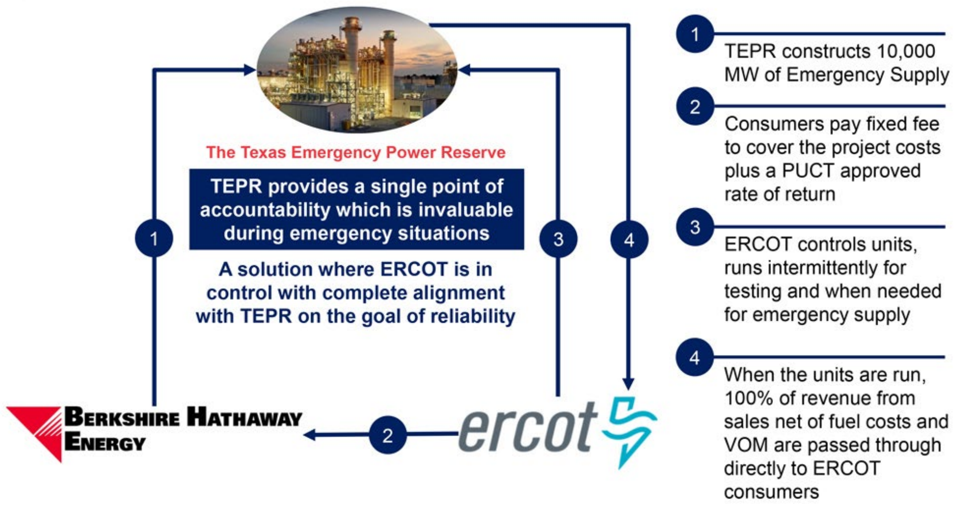
Stakeholder Soapbox

Berkshire's Proposal Will Prevent Another Texas Power Catastrophe

By Chris Brown, CEO, BHE Infrastructure Group

Chris Brown | *vestas*

A recent column by Steve Huntoon regarding Berkshire Hathaway Energy's proposed power solution for Texas included inaccuracies that completely misrepresent our proposal. His comments align with the disingenuous arguments shared by other critics of our proposal, who despite their criticisms have yet to offer a viable solution. (See *Counterflow: Beware Those Bearing Gifts*.) We believe our proposal brings real benefits to Texans — an emergency power reserve is the lowest cost, most effective way to ensure Texans never again face catastrophic blackouts.



Structure of the TEPR | *Berkshire Hathaway Energy*

For context, I'd like to provide background on the *solution* we have introduced to prevent future prolonged blackouts. Berkshire Hathaway Energy is proposing to fund $8.3 billion for the construction of the Texas Emergency Power Reserve, which would include 10 new 1,000-MW gas-fueled generating stations that are available to run during times of an emergency. This power would effectively act as blackout insurance, ensuring that future extreme hot or cold weather does not result in blackouts of longer than three hours.

Contrary to Mr. Huntoon's view, our proposal does not make the claim that 10,000 MW would alleviate the peak load shed of 20,000 MW that Texas recently experienced. Instead, adding the 10,000 MW of reliable emergency power reserve generation fueled by on-site liquified natural gas (LNG) would have provided sufficient generation to prevent rolling blackouts lasting for longer than three-hour periods, which would have maintained heat in homes and helped avoid the loss of more than 100 lives caused by winter storm Uri.

Moreover, if this emergency power reserve were available during winter storm Uri, the units would have generated over 1,000,000 MWh during the five-day event, resulting in revenues in excess of $9 billion ($9,000/MWh x 1,000,000 MWh = $9 billion), all of which would have been returned to Texas customers — fully paying for the entire cost of the facilities.

Mr. Huntoon surprisingly states that a performance guarantee of up to $4 billion isn't such a good deal. What's missing from this opinion is that, as is typical in traditional rate-regulated structures, financing is done on a 50/50 debt to equity method. As such, Berkshire Hathaway Energy is putting 100% of its equity at risk with the guarantee to Texas if we fail to deliver. To our knowledge, no other generators in Texas provide a guarantee that they will start — in fact, 30,000 MW did not perform during winter storm Uri when called upon, and no generators paid damages as a result.

In his column, Mr. Huntoon also asks how a project costing $8.3 billion has a lifetime cost of $3.55 billion. The answer is simple: the net cost of the project factors in the benefits that the plants provide when operating for testing (two weeks per year (336 hours)) over their 40-year design life. The proposal ensures that 100% of all revenue received during testing flows back to customers as a credit on their bill, which reduces the lifetime cost of the project to $3.55 billion.

Mr. Huntoon wrongly asserts that winterizing will cost a "pittance." In reality, estimates for fully winterizing thermal power plants will cost an estimated $3 billion and result in most units being offline for two months. Additionally, winterizing power plants does not add a single megawatt of new capacity to the system. Even if 100% of the thermal units were operating at full load during winter storm Uri, there still would have been load shedding, as there was not sufficient dispatchable capacity to meet demand. Our proposal fixes this problem.

While Mr. Huntoon offers "modest" proposals at the end of his article, they are lacking substance.

Our proposed emergency power reserve plants will not rely on critical gas infrastructure. They will be fueled by on-site LNG facilities with sufficient capacity to operate the plants at full load for seven days.

We agree the winterization of existing plants is something that should be done. But Mr. Huntoon does not mention that even if all the assets in Texas were winterized, there still would not have been enough generation during winter storm Uri.

In regard to Mr. Huntoon's proposal to add a dual-fuel capability (like diesel or LNG), it is not possible to simply add diesel fuel to existing power plants without significant modifications to the air permit, and no existing facility is likely to add a 10-million-gallon diesel fuel tank with the expectation to never or rarely use it. Additionally, adding LNG to existing facilities does not add any desperately needed dispatchable generation to the Texas market. Our solution provides both: 10 GW of new, reliable natural gas generation and fuel resilient LNG facilities to be there when needed most.

We echo Mr. Huntoon's best wish for Texas as it recovers from this tragedy. We strongly believe the Texas Emergency Power Reserve we're proposing will prevent a similar event from ever happening again. Our proposal greatly serves the needs of Texans, and we have not seen any other proposals to date that truly solve the problems in the state. We are here and ready to serve as good stewards of these assets on behalf of Texans. ■

Counterflow

By Steve Huntoon

Texas Gifting — Still Yikes

By Steve Huntoon

Steve Huntoon

In my last column I suggested that Texas pass on Berkshire Hathaway's offer to give Texas 10 GW of new emergency generation to be fueled by liquefied natural gas, at a cost of $8.3 billion, in exchange for a guaranteed return on that $8.3 billion. BH had billed this as a "TOTAL SOLUTION" to the tragedy this winter in Texas.

I pointed out that the 10 GW would not have avoided load shed, and how impossible it would be for new facilities with winterizing to cost more than winterizing existing facilities. I gave an example of the South Texas Nuclear Unit 1 that could have been winterized for a pittance relative to what BH wants for equivalent capacity, $1.1 billion.

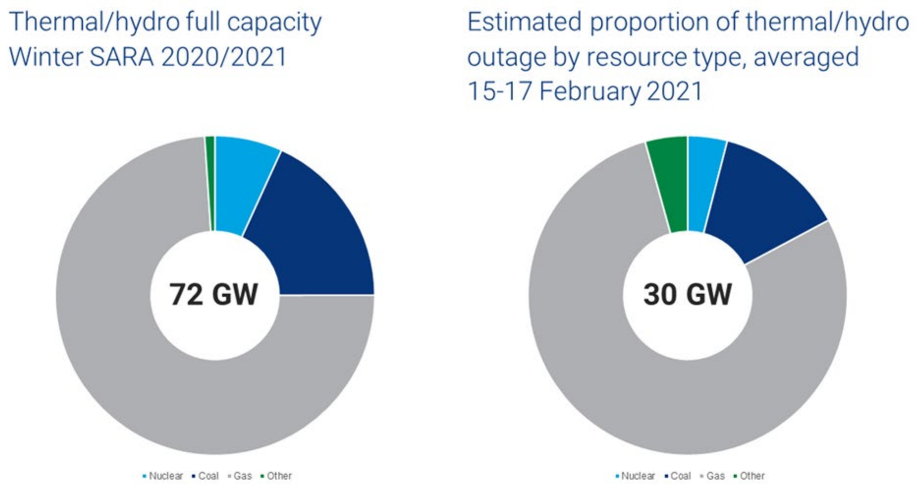
And I discussed some low-hanging fruit that Texas ought to pursue before throwing billions at BH.

BH has *responded* to my column, and here I address some of its claims.

No Load Shed if Existing Thermal Units Had Run

Perhaps most egregious of the BH claims is that "even if 100% of the thermal units were operating at full load during winter storm Uri there still would have been load shedding, as there was not sufficient dispatchable capacity to meet demand."

The numbers simply belie this. As these pie charts from Wood Mackenzie show, ERCOT had 72 GW of thermal capacity, and an average of 30 GW were out during the storm.[1] Maximum load shed during the storm was 20 GW.[2]



ERCOT's anticipated available capacity by fuel type for Winter 2020/21 compared to Wood Mackenzie's estimate of the average contribution of each unit type to total resource outages from Feb. 15-17. | *Wood Mackenzie, using data from ERCOT Seasonal Assessment of Resource Adequacy*

Thus, if all thermal units had been operating at full load, ERCOT would have had ***at least*** *10 GW of extra capacity* during the storm. Obviously, no load shed would have occurred. As many have said, the problem wasn't lack of steel in the ground; it was steel in the ground that didn't run.

Lifetime Cost No Bargain

On to the BH claim that the true lifetime cost of the 10 GW isn't $8.3 billion but really is $3.55 billion because of revenue from two weeks of annual testing over 40 years, which revenue "flows back to customers."

I don't know how BH gets this $4.75 billion of revenue credits (difference between $8.3 billion and $3.55 billion), but if two weeks of testing covers more than half the cost of 10 GW, why not test for *four* weeks a year and make the 10 GW free? That's of course impossible, and the reason is that the hypothetical $4.75 billion is billed to customers in the first instance. So the revenue credits are simply returning monies that customers pay.

Same, by the way, if the 10 GW had been around for Uri. BH says the 10 GW could have generated $9 billion in revenue, "fully paying for the entire cost of the facilities." But again, customers would pay that $9 billion in the first instance, so BH would just be returning what customers pay. No free lunch.

Dual-fuel Capability

As for the option of adding dual-fuel capability at existing generation, BH says a generator is unlikely to add, say, a diesel fuel tank "with the expectation to never or rarely use it." Of course, the BH proposal would reduce any incentive to do that by reducing energy prices.

And while conceding that the incentive may be insufficient in an energy-only market — with or without the BH proposal — my suggestion was that if Texas decides that some amount of dual-fuel capability is worthwhile, that it conduct a descending clock auction to add that to existing generation in a cost-effective way.

Subsidies Are Contagious

Let me close by observing that subsidized resources tend to crowd out unsubsidized resources in a kind of Gresham's Law. The ERCOT Market Monitor aptly states, "As an energy-only market, ERCOT relies heavily on high real-time prices that occur during shortage conditions to provide key economic signals that incentivize development of new resources and retention of existing resources."[3]

Adding 10 GW of subsidized resources in ERCOT would disrupt and crush those economic signals, discouraging new market-driven resources and inevitably leading to a need for more subsidized resources. As the PJM Market Monitor says, "subsidies are contagious."[4]

Is that the path that Texas wants to start down? ■

[1] https://www.woodmac.com/news/editorial/breaking-down-the-texas-winter-blackouts/full-report/ (Figure 3).

[2] http://www.ercot.com/content/wcm/key_documents_lists/225373/2.2_REVISED_ERCOT_Presentation.pdf (slides 15 and 16) ("20,000 MW peak load shed").

[3] https://www.potomaceconomics.com/wp-content/uploads/2020/06/2019-State-of-the-Market-Report.pdf (page iv).

[4] http://www.monitoringanalytics.com/filings/2017/IMM_Testimony_NJSEEC_20171204.pdf (page 3).

FERC/Federal News

Biden Budget Seeks Major Spending Hikes on Climate

Research, Environmental Justice, EVs Highlighted

Continued from page 1

- $250 million to the Department of Transportation for grants for transit agencies to purchase low- and no-emission buses, more than double 2021 funding.
- $300 million for the General Services Administration to electrify its leased fleet of more than 200,000 vehicles, and $300 million for the U.S. Postal Service and more than a dozen other federal agencies for what the request calls "a down payment to support a multiyear transformation of the federal fleet."

Environmental Justice

OMB said 40% of climate spending is "targeted toward addressing the disproportionately high cumulative impacts on disadvantaged communities."

More than $1.4 billion would be allocated for environmental justice, with $936 million for a new Accelerating Environmental and Economic Justice initiative at EPA to reduce pollution, $100 million of which would create a community air quality monitoring and notification program to provide real-time data in the places with the highest exposures to pollution. An additional $30 million would be used to enforce existing laws to protect communities from pollution. It also would increase funding for the Diesel Emissions Reduction Act grant program. The funding is in addition to funding provided in the American Rescue Plan Act of 2021, OMB said.

The Department of Justice's Environmental and Natural Resources Division would receive $5 million to address environmental justice issues.

The proposal includes a $1.2 billion contribution to the Green Climate Fund to help developing countries reduce emissions and adapt to climate change; it would be the first U.S. contribution since 2017.

Jobs, 'Just Transition'

OMB's proposal makes repeated references to the jobs it says the spending will create. It includes $2 billion to support energy efficiency and clean electricity standards to reach a carbon-free electric industry by 2035, which the administration said would "put welders, electricians and other skilled labor to work building clean energy projects."

President Biden requested a 21% spending increase for the EPA, including more than $110 million to restore the agency's personnel, which lost more than 1,000 staffers during the Trump administration. | *© RTO Insider LLC*

More than $550 million — triple current funding — would be spent to remediate oil and gas wells and reclaim abandoned mines, which OMB said would create 250,000 jobs. It would also more than double funding for the Economic Development Administration's Assistance to Coal Communities program.

"This focus could be a sign of stepped-up administration efforts to address the concerns of unions with nexus to fossil energy in the wake of the president's cancellation of the Keystone XL pipeline and suspension of federal mineral leasing on his first day in office," Kevin Book, of ClearView Energy Partners, wrote in a report to clients.

Adaptation and Conservation

Much spending would be devoted to adaptation to climate change.

The Interior Department would receive a $550 million boost to "accelerate clean energy deployment and expand efforts around climate adaptation and ecosystem resilience" in its land management agencies. "These investments would directly benefit Americans by helping to limit climate-induced disruptions, including for coastal communities, the outdoor recreation economy, and people whose lives and livelihoods are intertwined with DOI-managed lands and resources," it said.

The U.S. Geological Survey and other bureaus would receive an additional $200 million to provide information about the impacts of climate change and how to implement mitigation, adaptation and resilience efforts. "The funds would help ensure that coastal, fire-prone and other particularly vulnerable communities have accurate and accessible information and tools."

Biden's proposed Civilian Climate Corps would receive $200 million for "science-driven conservation" to support the goal of conserving 30% of land and water by 2030 through "voluntary actions and incentives that support the stewardship efforts of farmers, ranchers and other private landowners."

The Department of Agriculture would receive $1.7 billion for high-priority hazardous fuels and forest resilience projects, an increase of $476 million. "This funding supports the

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administration's science-based approach to improve the resilience of forest and rangeland ecosystems to water stress from multiyear drought conditions and to protect watersheds, wildlife habitat and the wildland-urban interface from the negative impacts of uncharacteristically severe wildfire," OMB said.

Another $340 million would fund Interior's projects to manage vegetation and reduce the intensity and severity of wildfires.

An additional $1.2 billion is proposed to increase the resilience to wildfires, flooding and drought, including $100 million for the Center for Disease Control and Prevention's Climate and Health program. The Department of Homeland Security would receive a $540 million increase to incorporate climate impacts into pre-disaster planning.

The Small Business Administration would spend $10 million to help small businesses obtain capital for investments to help them become more resilient to climate change and support the "clean energy economy."

Department of Energy

The Department of Energy would see a $4.3 billion increase (10.2%) to $46.1 billion, including increases for the Office of Fossil Energy, which would be renamed the Office of Fossil Energy and Carbon Management. "This funding would advance carbon reduction and mitigation in sectors and applications that are difficult to decarbonize, including the industrial sector, with technologies and methods such as carbon capture and storage, hydrogen, and direct air capture," OMB said.

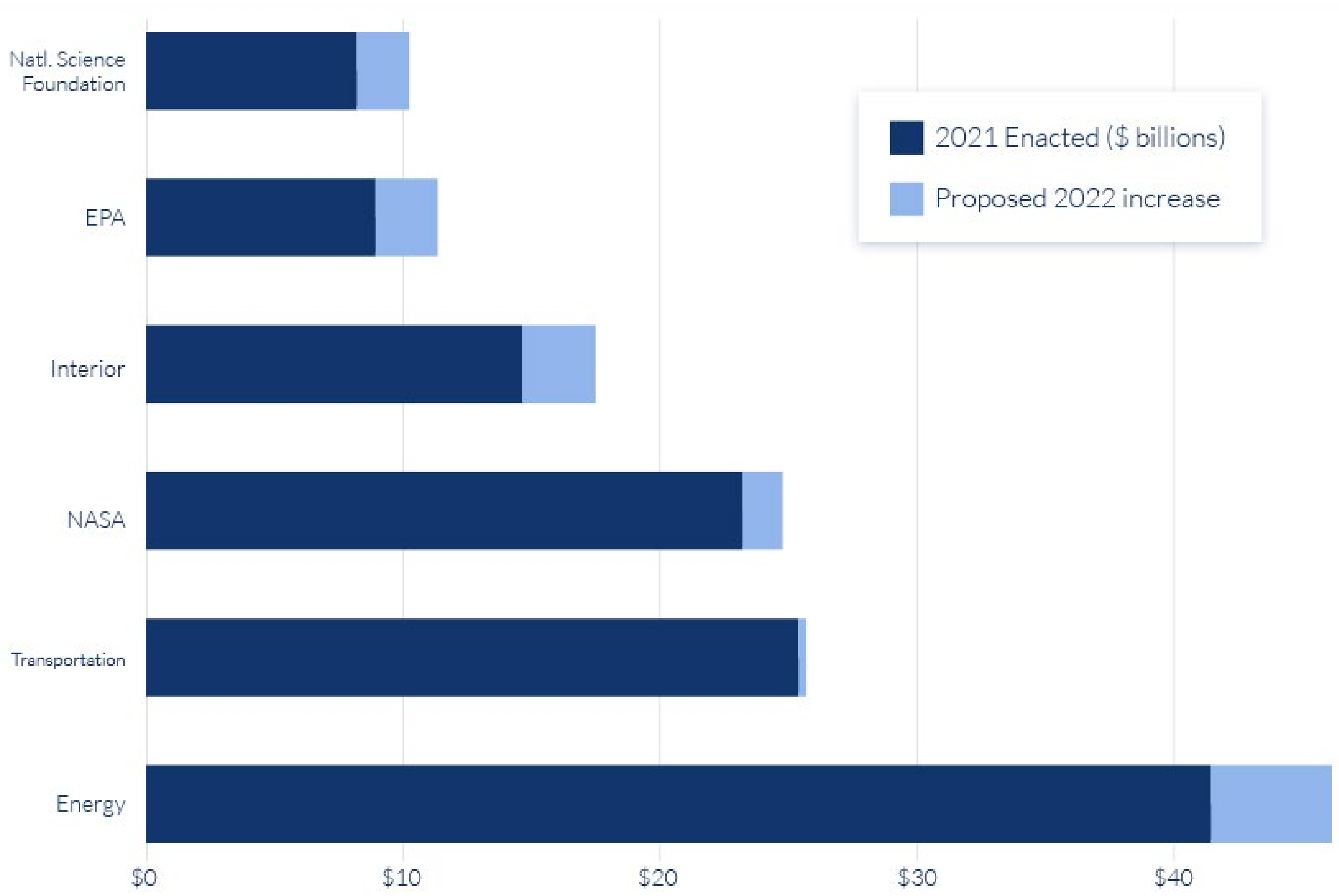
The administration hopes to quadruple government-wide clean energy research over four years, including $8 billion to boost DOE's funding by at least 27% in advanced nuclear energy, EVs, green hydrogen, and air conditioning and refrigeration.

The administration seeks $1 billion for the Advanced Research Projects Agency-Energy and a new Advanced Research Projects Agency for Climate to find "solutions for carbon-pollution-free energy, adaptation and resilience against the climate crisis."

DOE's Office of Science would receive $7.4 billion (+$400 million) to support the National Laboratories and research on the changing climate, clean energy technologies and artificial intelligence and computing "to enhance prediction and decision-making across numerous environmental and scientific challenges."

Environmental Protection Agency

Proposed Discretionary Spending for Selected Agencies



The Biden administration is seeking major spending increases for agencies involved in addressing climate change. | © RTO Insider LLC

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EPA would receive $11.2 billion, up $2 billion (21%), including more than $110 million to restore the agency's personnel, which lost more than 1,000 staffers during the Trump administration. It includes $48 million in additional funding for the Office of Air and Radiation "to build back staff expertise, analysis and capacity to implement climate change programs through the Clean Air Act." The office oversees GHG emissions standards for vehicles, power plants, and oil and gas wells.

The agency would spend $1.8 billion to reduce emissions, ensure environmental justice and create jobs, including $100 million in grants for states and tribes to reduce GHG emissions and $30 million to more than double EPA's climate change research budget. Additional investments are targeted to cut methane and hydrofluorocarbon emissions.

"Although we are generally reluctant to make too much of top-level spending numbers in the absence of agency- and program-level granularity, we regard Biden's proposed EPA spending hike as particularly significant because the request intends for $110 million to go towards hiring new staff," ClearView's Book said. "Recent history suggests to us that Democrats' single-party control of the House, Senate and White House could markedly improve prospects of bringing this proposal — or at least a substantial hike — to fruition."

NASA's earth science programs would receive $2.3 billion (+$250 million) to fund a new generation of satellites to answer climate science questions.

The National Science Foundation would be allocated $1.2 billion for climate and clean energy research (+$500 million), including research on atmospheric composition, water and carbon cycles, modeling climate systems, renewable energy technologies, materials sciences, and social, behavioral and economic research on human responses to climate change.

Reaction

The proposal was lauded by clean energy groups, with the American Council on Renewable Energy saying the R&D spending "has the potential to accelerate tomorrow's clean energy innovations."

The Edison Electric Institute praised the spending to reduce wildfire risks, saying "industry-government partnership is critical" to the effort. It also expressed support for funding to improve cybersecurity, including $500 million for the Technology Modernization Fund, $110 million for the Cybersecurity and Infrastructure Security Agency, and a $750 million reserve for federal agency information technology enhancements.

But Taxpayers for Common Sense *decried* what it called "a supersized increase for the bloated Department of Energy budget" and *noted* that every cabinet-level department would receive spending boosts over 2021.

If approved, Biden's DOE budget would represent a $10 billion (30%) increase since FY 2020. "The programs where the administration is directing funding have already been the focus of enormous spending expansion in recent years. Over the five fiscal years from FY 2017 to FY 2021, spending on the DOE Office of Science grew by 30%, Office of Energy Efficiency and Renewable Energy grew by 37%, and Office of Nuclear Energy grew by a whopping 48%. Adding billions more to the budgets of these offices is a tacit statement that everything they're currently supporting is worth funding, and that is far from the case," the group said.

The bipartisan Committee for a Responsible Federal Budget *said* Biden should find cuts to "fully offset" the discretionary spending increases. "Congress, for its part, should extend the expiring discretionary spending caps in order to restore budget discipline for that area of the budget. These caps can complement other efforts to raise revenue, lower health care costs, secure Social Security and reduce wasteful spending," it said.

Biden received criticism from both progressives and conservatives for his proposed $715 billion budget for the Defense Department, a 1.5% increase. "The already inflated Pentagon budget did nothing to protect us from a global pandemic, an economic recession or the climate crisis," Sen. Ed Markey (D-Mass.) said. "Increasing that budget now would be a grave mistake."

"At a time when the U.S. already spends more on the military than the next 12 nations combined, it is time for us to take a serious look at the massive cost over-runs, the waste and fraud that exists at the Pentagon," Budget Committee Chair Bernie Sanders (I-Vt.) *said*.

Senate Minority Leader Mitch McConnell (R-Ky.) and Republican leaders of the Armed Services, Intelligence, Budget and Appropriations committees *said* Biden was "sending a terrible signal not only to our adversaries in Beijing and Moscow, but also to our allies and partners" by prioritizing a "liberal wish list" over defense.

Biden will release his full budget later this spring. With Senate Democrats unlikely to secure the 10 GOP votes needed to overcome a Republican filibuster — and Sen. Joe Manchin (D-W.Va.) *saying* he won't support a weakening of the filibuster — it's unclear how much of Biden's spending plans will survive.

"This is the beginning of what we know is a long journey," White House Press Secretary Jen Psaki told reporters Friday. ■

FERC/Federal News

Installing EV Chargers and Equity in Low-income Communities

ACEEE Report Tracks States' and Utilities' Uneven Performance on LMI Engagement

By K Kaufmann

A new survey from the American Council for an Energy-Efficient Economy finds that only six states currently have policies encouraging or requiring equity and environmental justice considerations to be built into new programs for rolling out electric vehicle chargers.

According to the report, since 2012, utility commissions in 25 states and D.C. have approved almost $2.4 billion to accelerate the electrification of transportation by putting a total of 200,000 charging stations in cities and along highways. Almost all the approved programs include some provisions aimed at ensuring chargers get into low- and moderate-income (LMI) communities, but carve-outs and other programs for these underserved neighborhoods may only total about $646 million, most of which is being spent in California and New York, the report says.

In other words, said Peter Huether, senior research analyst for transportation at ACEEE and the report's author, a lot more work needs to be done. He says ensuring equity is incorporated into EV infrastructure planning and programs is critical "because investments in charging infrastructure will shape communities' transportation options for decades to come."

But making equity a central focus requires a change in thinking about what residents in LMI neighborhoods actually want and ensuring their active involvement in program design and development, Huether said.

"There's been a shift in the whole climate-energy space, toward thinking more holistically about things, about equity and putting equity first," Huether said. "It's not just light duty vehicle-focused; it's taking a very public view, looking at the whole system."

For example, offering rebates for EVs and chargers may not be the most effective way to build interest and support for transportation electrification in low-income communities, the report says, because most residents in these areas do not have access to "charging-capable parking" — dedicated parking spaces with outlets within 20 feet.

Rather, the report suggests that utilities, regulators and local governments first work on electrifying public transportation and ride-sharing services that are often the primary modes of transportation in LMI neighborhoods. Los Angeles launched an EV car-sharing service, *BlueLA*, in low-income communities in 2018, and the service continues to expand. Low-income residents can enroll for as little as $1/month and get a 25% discount on rental fees.

| Shutterstock

With the health impacts of air pollution a major concern in LMI communities, electrification of heavy- and medium-duty trucking may also be a priority. LMI communities are often located near major sources of carbon emissions and other pollution — sea and airports, refineries and power plants, and highways and other trucking routes — and as a result have higher rates of heart disease and asthma.

The issue became a major driver for Puget Sound Energy when it started talking about potential EV pilot programs with community organizations in its service territory.

"Our initial assumption was that all of our pilots would be focused on light-duty vehicles," said Mackenzie Martin, community projects manager at PSE. "We heard overwhelmingly from the community that they'd love to explore medium- to heavy-duty pilots as well."

The utility is now rolling out several pilots aimed at electrifying medium-duty vehicles for tribal transportation services and the fleets of home weatherization companies. In some instances, chargers are being installed where the fleet is based; in others, at a public spot where drivers can pull in and charge up during a lunch break, Martin said.

'Don't be Afraid to Slow Down'

Utilities' efforts at community engagement fall along a continuum from essentially ignoring and marginalizing local voices, to fostering full participation in planning and decision-making, the report says. To some extent, this uneven performance may be attributed to the risk-averse nature of utilities and the ongoing inability of both utilities and regulators to keep up with the pace of adoption of new technologies like EVs.

Surveying 61 utility filings on EV program plans, ACEEE found almost half had no plans for actively engaging LMI communities in program development. About a third included public meetings — a relatively low level of community engagement — while only eight had committed to doing a full community needs assessment, and 10 said they would provide training and advice.

The report points to guidelines for community involvement developed by the nonprofit Greenlining Institute, which puts a strong emphasis on "capacity building" to ensure LMI residents and organizations have the resources and skills needed to fully participate in stakeholder proceedings.

"The reality is that so many communities barely have the capacity to conduct their own scopes of work, let alone to participate in some kind of community engagement or public participation process to figure out where should electric vehicle chargers be installed," said Hana Creger, the group's senior program manager for climate equity. "We have to build the

FERC/Federal News

capacity of communities to participate in those processes, whether that's contracting with community-based organizations to conduct outreach or paying residents to participate in those processes. Every single program needs to build in technical assistance."

In the case of PSE, the community engagement process significantly extended the development and planning process for the utility's pilot programs, from an initial filing in 2018 to the first project rollouts beginning this year, Martin said.

Her advice to others: "Don't be afraid to slow down and really look for and ask for that community feedback. Had we not slowed down, I don't think we would have learned as much as we did, both about the needs of the community but also how to address potential barriers they face."

Looking Beyond Income

President Biden's massive infrastructure plan includes $174 billion to put more Americans of all economic classes in American-made EVs, which they will be able to charge on the plan's proposed national network of 500,000 EV chargers to be installed by 2030. While the plan calls for 40% of all investments to benefit low-income and disadvantaged communities, how money is allocated and to what programs will likely be questions with continuously evolving answers.

To begin with, as the ACEEE report points out, official definitions of LMI, disadvantaged and environmental justice communities vary widely between states, affecting which communities get help and the level of funding and services they receive.

Looking beyond income, "these decisions should be informed by both input from communities and overarching state equity, air quality, climate and mobility goals," the report says. "Adding criteria around race, tribal status or pollution burden to income requirements … would allow programs to better target the neediest individuals and rectify some wrongs in current transportation systems."

Equity carveouts are only a first step and should be tracked and monitored to ensure they have the desired impacts across multiple benchmarks, Creger said. "Every single electric vehicle charging infrastructure should be kind of a lifeline to creating high-quality jobs and opportunities," she said. "It's not enough to assume that these benefits will trickle down to communities. We really have to target them," she said.

ACEEE analyzed the data collected and tracked for the EV programs of 12 utilities, and again found uneven performance. Seven were tracking engagement with LMI communities, while only three were tracking the number of chargers installed in these neighborhoods. Only one utility was tracking the percentage of chargers installed and the number of applications and amount of rebates paid in LMI communities.

Creger now believes upfront incentives to spur EV sales should be limited to those that target the LMI market. Incentives that spurred sales among early and mostly well-off adopters were "OK 10 years ago when they were trying to get the market off the ground, but it's 2021 now; the market is officially off the ground."

"We need to begin to reform and retire those clean vehicle incentives, and the ones that we do actually retain have to be specifically targeted to low-income people," Creger said. "We have programs that do that really well; they are just very underfunded and have really long wait lists." ■

FERC/Federal News

FERC OKs Delay on Order 2222 Compliance

MISO, PJM, SPP Granted More Time

By Rich Heidorn Jr.

FERC on Friday approved requests by MISO, SPP and PJM to delay their Order 2222 compliance filings by up to nine months.

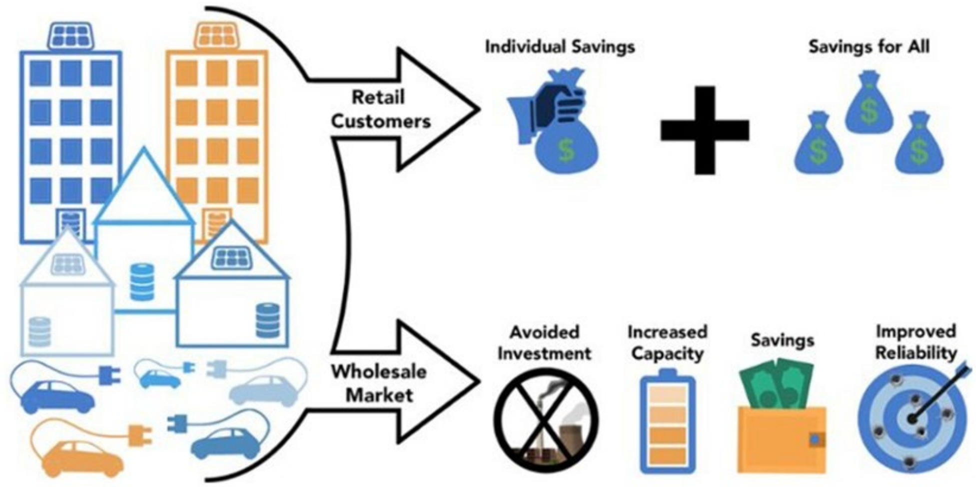
The September 2020 order required RTO markets to permit participation by distributed energy resource aggregators, with compliance filings due July 19.

In granting the RTOs' requests for delays until next year (Feb. 1 for PJM, April 18 for MISO and April 28 for SPP), the commission noted that no intervenors had opposed the requests (*RM18-9*).

But the commission agreed with intervenors' requests that the RTOs file stakeholder process schedules and status reports during the additional time. Schedules will be due in 30 days, with status reports every 90 days afterward until the compliance filing. The commission rejected requests to require implementation schedules.

MISO said the delay will improve coordination with its reliability imperative initiative and allow it to integrate the energy, capacity and ancillary services market revisions mandated by Order 2222 into its Market System Enhancement project. (See *MISO to Seek Extension on Order 2222 Plan*.)

SPP cited the coronavirus pandemic as a reason for additional time and said it could not implement the order before the first quarter of 2024. PJM said it will be unable to begin software development on the initiative until fiscal year 2022.



| *Advanced Energy Economy*

ISO-NE told *RTO Insider* it will also file a request for a delay. NYISO and CAISO told *RTO Insider* they do not plan to seek an extension.

"FERC Order 2222 has identified the ISO's distributed energy resource provider approach as a model for aggregation and was largely based on the DER aggregation *model* the ISO implemented in 2016," CAISO spokesperson Vonette Fontaine said. "We don't believe there are significant changes needed for compliance; therefore it is not necessary to extend our compliance filing from this summer."

Order 2222 requires RTOs to allow DER aggregators to register as market participants under models that accommodate their physical and operational characteristics. FERC defines DERs as any resource located on the distribution system, a distribution subsystem or behind a customer meter, including energy and thermal storage, intermittent and distributed generation, energy efficiency, and electric vehicles. (See *FERC Opens RTO Markets to DER Aggregation*.) ■

Jason York contributed to this article.

CAISO/West News

West Needs to Add Transmission for Renewables, CEOs Say

By Hudson Sangree

Western states must work together to share renewable resources and build transmission to avoid blackouts like those that happened in California and Texas, speakers said Friday during a roundtable discussion hosted by the Western Energy Imbalance Market's Body of State Regulators (BOSR).

Body Chair and Oregon Public Utility Commissioner Letha Tawney moderated a discussion between CAISO CEO Elliot Mainzer and Idaho Power CEO Lisa Grow.

The creation and expansion of CAISO's EIM showed what entities across the West could do by working together, Grow said. The interstate exchange of energy has saved market participants $1.18 billion since 2014. Now, with more states enacting clean-energy mandates and interests aligning, the West will need to build more transmission, she said.

"Transmission, in my mind, is the great enabler of all of this," Grow said.

"The notion that everyone is just going to build all the resources they need in their [balancing authority areas] to get to clean [energy], I don't think is necessarily the best way to think about it," she said. "When we really think about where the richest fuel sources are, the Pacific Northwest has hydro. The Desert Southwest has solar. Wyoming and Montana have wind. That's where the really good stuff is, and so, when you think about how we connect it, it's transmission."

The rolling blackouts in California in August and, to a lesser extent, the blackouts in Texas this winter, were examples of "what happens when you don't have enough transmission to move resources around to where they're needed," Grow said.

Transmission constraints were one factor that CAISO and state agencies cited in their report on the root-cause analysis of the Aug. 14-15 blackouts in California. (See *CAISO Says Constrained Tx Contributed to Blackouts*.)

Building transmission is difficult, but "it's just such a foundational requirement to get to where we all want to go and to unleash the economic potential" of transitioning to clean energy while ensuring reliability, Grow said.

"Lord knows we've been trying to build some transmission lines, it seems like, for most of my career," she said. "It is a long, drawn-out process, and I would just ask everyone to think about how we can reduce some of the barriers if we're all trying to get to that same goal."

Mainzer said: "I couldn't agree more."

In his previous job as head of the Bonneville Power Administration and now at CAISO, Mainzer said he has seen the importance of "interconnectedness and optionality and resource development, resource diversity, resiliency — those are all becoming so increas-

BOSR Chair Letha Tawney, CAISO CEO Elliot Mainzer and Idaho Power CEO Lisa Grow discussed issues facing the West. | *EIM BOSR* ingly important."

Looking to 2045 — the year California is required by Senate Bill 100 to supply all retail customers with clean energy — "I think there's a real recognition that having that additional capability and exchange of capacity, diversity and optionality with the rest of the West is going to be really important," he said. "The West has been planning its transmission system for a long time. I think people look at the map and they know a lot of the big paths. Some of them are even permitted and almost ready to go. It's how do you move from transmission planning, which is incredibly important, to transmission construction and the energization."

At CAISO, "we're really looking forward to accelerating the pace of transmission construction and working with the [California] Energy Commission, working with the [California Public Utilities Commission], working with all of you across the West to … see if we can put some commercial activity together."

Tawney asked Mainzer and Grow how not having a Western RTO — and relying on the hybrid structure of the EIM, a real-time interstate trading market — could affect the shift from transmission planning to construction.

Efforts to create a Western RTO have been halting and unsuccessful, Grow said. But the EIM "is showing how you can have this organic growth … whether or not you ever get to the full RTO."

"This is a way that we can incrementally grow … as we build the system out. With that in mind, I actually think it's a facilitator" of transmission construction, she said.

Mainzer said, "I agree with that a lot. I see the two things [EIM and transmission] as being very complimentary.

"If you think about a big piece of the value proposition of the Energy Imbalance Market, then your transmission interconnectivity that we already have with the West" is a big part of it," he said.

"Just last week, when we incorporated [the Los Angeles Department of Water and Power] into the EIM, that's a nice big piece of additional transfer capability between the ISO and L.A.," Mainzer said. "We've got that same thing happening with [Public Service Company of New Mexico] now." (See *Expansion Takes EIM into LA, New Mexico*.)

"As you think about the other regions, and we open up the EIM, we could take the existing transmission topology that we've got and we can ask ourselves, 'What are some other enhancements, reinforcements, new builds that could further open up resource development, diversification, capacity capability and strengthen the ability to exchange more energy, to unlock more economic and environmental value?'" he said.

"Part of it is just about raw access to resources." California may need an additional 80 GW of bulk generation to meet its clean energy goals by 2045, according to recent projections, he said.

"That's a lot of resources. We are going to need to access capability from out of state and transfer it and import and export economic and environmental capability," Mainzer said. "So we just have get to really real about where is the system today … what are the most potent and effective line expansions … so that we can unlock economic value." ■

CAISO/West News

Wildfires Bolster Case for Biomass in California

Energy from Forest Thinning Seen as Possible Solution

By Hudson Sangree

Some California lawmakers want the woody biomass from forest thinning efforts to be used for electricity generation, after four years of catastrophic wildfires bathed the West Coast in smoke, with rural disasters choking major urban areas.

The normally good air quality in the San Francisco Bay Area, for instance, was among the worst in the nation during last summer's massive fires that burned more than 4 million acres.

Assemblymember Rebecca Bauer-Kahan (D), who represents the wealthy San Francisco suburbs near where the SCU Lightning Complex of fires burned almost 400,000 acres in August and September, argued for biomass during Wednesday's hearing of the Assembly Utilities and Energy Committee, which approved a measure that could give bioenergy a boost.

"I am a diehard environmentalist and have one of the strongest environmental records in the legislature, and yet we have to be real about what is happening," Bauer-Kahan said. "We are having to thin our forests because, as we all know, one of the largest emissions sources right now is our wildfires, and the toxic air that is coming into all of our communities, whether you live in one of these high fire [threat] zones or not, is poisoning our children. And so we're doing the work to prevent that, and that is leading to biomass."

The black carbon and other particulate matter from wildfires are far worse than the relatively small amount of pollutants released by biomass plants, she and others contended.

California law requires the state to rely entirely on clean energy and renewable resources by midcentury. Although biomass is classified as a renewable resource, environmentalists have opposed it because burning wood and agricultural waste emits pollutants, as does burning methane from the mountains of manure produced by California's large industrial dairies.

Two major environmental groups, the Sierra Club and the Natural Resources Defense Council, initially opposed the measure that Bauer-Kahan and other urban Democrats supported. The groups removed their opposition to Assembly Bill 322, introduced by Assemblymember Rudy Salas Jr. (D), only after he agreed to remove a proposal to dedicate a large chunk of the state's renewable energy research funding to biomass projects.

Before it was amended, AB 322 would have required the California Energy Commission (CEC) to allocate at least 20% of its Electric Program Investment Charge (EPIC) funding to biomass research and innovative startup projects. The EPIC program dispenses about $130 million each year, meaning biomass could have received $26 million annually, significantly more than the CEC has allocated previously.

Getting rid of the spending requirement means the bill only asks the CEC and the California Public Utilities Commission to consider biomass projects in future funding cycles. Some lawmakers on the committee, both Democrats and Republicans, strongly disagreed with the decision.

Sierra Pacific Industries operates five cogeneration facilities in California that use woody biomass from forest thinning and sawmill operations, including this plant in Shasta County. | *Sierra Pacific Industries*

CAISO/West News

"A whole lot of people just spoke on a bill that no longer exists," Assemblymember Bill Quirk (D), also from the San Francisco Bay Area, said after a round of public comment. "We're just basically going to politely ask, which I'm sure will not mean a whole lot."

Forest biomass is typically the most expensive fuel for generation. It cost about $200/MWh, compared with $50/ MWh for solar power in 2019, the CPUC reported.

Transportation is a major factor. "The maximum viable haul from the forest to the biomass power plant is 50 miles to be financially feasible," the energy committee's analysis of AB 322 said.

That cost is a main reason biomass has never become a major power source in California.

The CEC said there were 79 biomass and waste-to-energy power plants operating in 2019, producing less than 3% of in-state generation. Most of the plants are small, with nameplate capacities ranging from 2 to 32 MW, and only a half dozen use woody biomass for fuel.

Total capacity of bioenergy in California declined from 1,301 MW in 2014 to 1,289 MW in 2019, with 10 plants idled, the CEC reported.

Quirk acknowledged the cost hurdle, but he said biomass research and demonstration projects are needed for forest management and wildfire prevention.

"The problem I see is that it's not just a matter of generating electricity," he said. "The problem here is what you do with the biomass and what the alternatives are if you don't do this. It becomes extremely expensive to, say, take it and compost it somewhere. Is that what we're going to do?"

Gov. Gavin Newsom and legislative leaders announced a deal Thursday to spend an extra $536 million to accelerate forest management and other fire-prevention efforts.

With the state focused on wildfire fuel reduction, it needs a plan to deal with millions of tons of forest debris or face larger problems down the road, Quirk said.

"This is not just an energy issue; this is a much wider environmental issue," he said.

Assemblymember Jim Patterson, the Republican vice chair of the energy committee, said he was disappointed the bill had been weakened. Patterson's district encompasses much of the burn area from last summer's 380,000-acre Creek Fire, which started in September 2020. It was the biggest wildfire in state history that was not part of a larger complex of fires.

"Most of you know I'm a rate hawk, and I've been one since being vice chair here," Patterson said. "But I think my colleague [Quirk] raises a very important point: that there is more to cost than merely the creation of the electricity."

Like others, Patterson said he would vote for the weakened bill in hopes that it would prompt more interest in using biomass generation as part of the state's wildfire prevention efforts.

"My hope is that it will begin a conversation, and I hope that the regulatory agencies that are going to make these decisions will take the comments seriously of members here, and also ask the real tough question about what happens if we don't," Patterson said. ■

Woody biomass fuels the 44-MW Mt. Poso Cogeneration facility in Bakersfield, Calif. | *DTE Energy*

CAISO's 1st System RMR Agreement Set for Hearing

By Amanda Durish Cook

FERC on April 2 sent CAISO's first systemwide reliability-must-run (RMR) agreement to settlement proceedings after the ISO raised questions about the fairness of the contract's cost structure.

While the commission approved the unexecuted RMR agreement for Midway Sunset Cogeneration Co.'s (MSCC) plant near Bakersfield, Calif., beginning Feb. 1, it declined to rule on the reasonableness of the arrangement without additional details (*ER21-998-001*).

CAISO designated Midway as RMR in December after *determining* that it must prevent the 248-MW gas-fired plant from retiring in order to meet systemwide reliability standards after experiencing blackouts in August. (See *CAISO Board Fields RA Measures, Big and Small*.)

But in negotiating the RMR, MSCC proposed multiple deviations from the cost recovery mechanisms in CAISO's standard agreement contract, prompting protest from the ISO. The grid operator said Midway incorrectly cast its situation as being unique and took too many liberties with the FERC-approved RMR contract. CAISO also contended that the company had misrepresented the plant's ability to provide RMR service.

In seeking additional cost recovery, MSCC said the plant's three turbines must undergo "major maintenance projects" in 2021 if they're to provide RMR service. It said Turbine C needed the most extensive work because its nitrogen emissions exceed permit limitations when in simple-cycle mode.

The company elected to include "a daily surcharge for transition costs" in its RMR capacity payments starting from its December 2020 RMR designation until the RMR's effective date on Feb. 1. It also proposed a fast-paced depreciation for the turbine upgrades based on the plant's 23-month "remaining economic useful life," reasoning that CAISO will probably renew the facility's RMR status into 2022.

MSCC said it "negotiated operational provisions with CAISO in good faith, but that its negotiations were complicated due to the need for facility maintenance during the 2021 year."

CAISO argued that Midway's proposed daily transition cost surcharge violates FERC's principle that "cost recovery should not commence until a capital item is placed in service." It also argued that the company should record its

Midway Sunset Cogen Plant | *Union of Concerned Scientists*

stack repair costs as capital costs rather than transition costs and depreciate the expense over 10 years, rather than two.

Midway also proposed using an alternative to CAISO's Resource Adequacy Availability Incentive Mechanism performance rule, which penalizes generating units failing to meet performance requirements. The proposal would use the plant's seasonal ambient derates — not CAISO's prescribed maximum normal capability (Pmax) — to calculate the agreement's non-availability charge. The company argued that it did not have a historically established Pmax and its "turbines experience ambient derates relative to Pmax in most months."

The ISO said MSCC's bid for adjusted performance rules was "an unjustified departure from CAISO's method of addressing ambient derates that gas plants may require in hot weather."

Other Protests

The California Public Utilities Commission, PG&E, San Diego Gas and Electric Co. and SoCal Edison joined CAISO in protesting the agreement.

While they didn't oppose the facility's RMR designation, the entities said that hearing and settlement proceedings would "allow time for third-party review to ensure the proposed costs in the RMR agreement are just and reasonable."

SoCal also questioned Midway's accelerated depreciation schedule, saying it was "unclear why depreciation would be accelerated over the RMR agreement term since Midway intended that the facility be mothballed."

The protesters also raised doubts about whether some of the turbine maintenance would have been necessary in order to mothball the plant as originally intended and said that it should be excluded from RMR recovery. Midway also included asset retirement costs in its RMR rates, which isn't permitted, CAISO said.

The ISO acknowledged the potential need for Midway to make repairs and upgrades to provide reliability service, but said it needed to see "additional documentation" to justify the work.

PG&E contended that extra scrutiny was necessary given that the agreement represents CAISO's first systemwide — rather than local — RMR designation; it remains unclear what conditions the ISO would look for before an RMR assignment is lifted.

SoCal said CAISO might have improperly used a 20% planning reserve margin requirement in calling for the RMR, instead of its current 15% PRM requirement.

Danly Criticizes RMRs

While Commissioner James Danly agreed with FERC's decision to allow the RMR contract to proceed with a hearing, he penned a separate statement railing against RMRs, calling them a "short-term fix" and evidence of failed markets.

"Rather than RMRs being the last resort that Commission precedent demands, it appears that the instant RMR agreement with Midway is CAISO's first resort to address its failure to ensure that it acquires and retains sufficient capacity," he said.

Danly argued for an investigation into CAISO's markets and whether they could benefit from pricing reforms to prevent generators from retiring early. He also said the commission's practice of granting RMR requests without requiring justification for the decision remains flawed. ■

CAISO/West News

Prosecutors Charge PG&E for 2019 Kincade Fire

By Hudson Sangree

The Sonoma County District Attorney's office on April 6 filed 33 criminal charges against Pacific Gas and Electric in connection with the Kincade Fire, which tore through Northern California wine country in October 2019.

Six firefighters were injured in the blaze; no one was killed. Authorities ordered mass evacuations as the wind-stoked fire burned 78,000 acres of hillsides and vineyards and destroyed 374 structures, including 174 homes and a historic winery established in the 1800s. (See *PG&E Stock Plummets amid Wildfires, Shutoffs*.)

The fire started near The Geysers, a sprawling geothermal field about 70 miles north of San Francisco, when a piece of a PG&E transmission line broke loose and arced against its tower, sending a shower of sparks onto dry vegetation below, the California Department of Forestry and Fire Protection (Cal Fire) concluded.

PG&E accepted those findings but denied the criminal allegations.

"In the spirit of working to do what's right for the victims, we will accept Cal Fire's finding that a PG&E transmission line caused the fire, even though we have not had access to the agency's report or the evidence it gathered," the utility said in a statement April 6. "However, we do not believe there was any crime here."

Cal Fire concluded its investigation and referred the matter to the prosecutor's office in July 2020. The district attorney's office said it conducted its own detailed investigation and determined criminal charges were warranted.

"I went with others from my team, along with Cal Fire, to the location in The Geysers where we believe the fire began as soon as it was safe to do so," Sonoma County District Attorney Jill Ravitch said in a statement. "Since that time, we have been working with Cal Fire and independent experts to determine the cause of and responsibility for the Kincade fire. I believe this criminal complaint reflects our findings."

A winery from the 1800s was among the structures destroyed by the Kincade Fire.| © *RTO Insider*

In a 20-page complaint, Ravitch's office charged PG&E with five felonies and 28 misdemeanors. The felony charges include "recklessly causing a fire with great bodily injury" to the firefighters, named as John Does Nos. 1-6. Another felony charge accuses PG&E of emitting harmful contaminants such as wildfire smoke and ash into the air, harming a child named as "Minor Victim No. 1."

"The Kincade Fire caused substantial emissions of air contaminates throughout the county, threatening the health and safety of residents and their property," the district attorney's office said in a news release. "Exposure to wildfire smoke has the potential to cause serious health conditions, including increased risk of stroke, and serious respiratory conditions, such as worsening asthma in children."

The complaint marks the third time in the past decade that PG&E, the state's largest utility, has been charged with felonies.

The utility remains under criminal probation for six felony convictions stemming from the San Bruno gas pipeline explosion, which killed eight residents and destroyed part of a suburban San Francisco neighborhood in September 2010.

PG&E pleaded guilty last June to 84 counts of involuntary manslaughter in the November 2018 Camp Fire, the state's deadliest and most destructive wildland blaze. (See *PG&E Pleads Guilty to 84 Homicides and Arson*.)

Cal Fire found that PG&E equipment ignited the Camp Fire along with 21 of the major wine country wildfires in October 2017. It also found a PG&E line had sparked last year's Zogg Fire in Shasta County, which killed four people.

In a February hearing on PG&E's role in the Zogg Fire, federal Judge William Alsup, who oversees PG&E's probation from the San Bruno disaster, said the utility's failure to maintain its lines made it a "terror" to California residents.

New PG&E CEO Patti Poppe insisted last week that PG&E will change.

"I came to PG&E in January to ensure that we care for all those who were harmed and that we make it safe again in California," Poppe said in a statement. "We will work around the clock until that is true for all people we are privileged to serve." ■

ERCOT News

Texas Supreme Court Stays ERCOT Lawsuits

50 Cases Filed Against Texas Grid Operator, Market Participants

By Tom Kleckner

A Texas Supreme Court panel on Friday stayed 50 lawsuits filed against ERCOT and other entities in the wake of February's long-term controlled outages, which have been blamed for almost *200 deaths*.

The court's Multi-District Litigation (MDL) Panel *granted* ERCOT's request to stay court proceedings, including discovery, in 35 cases filed against it and other market participants. The grid operator's April 7 motion also asked the panel to consolidate those cases (*21-0313*).

The panel also granted a request by Vistra, NRG Energy, Calpine, Exelon Generation and other ERCOT market participants to stay proceedings in another 15 cases related to the February storms.

The grid operator's attorneys said in the *motion* that the 35 cases have been filed in four different counties, with 24 filed in Harris County in 15 different district courts.

"Based on the current number of filings and public advertising efforts undertaken by in-state and out-of-state attorneys, ERCOT anticipates there will be additional cases filed against ERCOT in numerous different counties," the grid operator told the panel. "Under those circumstances, the likelihood of inconsistent rulings is near certain."

ERCOT spokeswoman Leslie Sopko said the consolidation request was a "procedural mechanism to … more efficiently resolve common questions of law and fact."

The grid operator maintains it has legal immunity from litigation, saying in its motion, "ERCOT has and will continue to assert that it is entitled to sovereign immunity due to its organization and function as an arm of state government."

The Supreme Court last month left standing an appellate ruling granting ERCOT sovereign immunity from lawsuits in a 5-4 ruling. The issue is expected to be revisited as additional lawsuits are filed. (See *Texas Supremes Sidestep Ruling on ERCOT Lawsuit Shield*.)

In a separate court proceeding last week, Cincinnati Insurance, ERCOT's insurance company, asked the U.S. District Court for the Western District of Texas to excuse it from covering storm damages or damages from lawsuits filed against the grid operator (*1:21-cv-298*).

The insurer argued that it does not have to defend ERCOT because it does not view the power outages as an accident, which it defined as a "fortuitous, unexpected and unintended event."

"The allegations in the underlying lawsuits allege ERCOT either knew, should have known, expected and/or intended that Winter Storm Uri would cause the same power outages which occurred as a result of previous storms in Texas, including storms in 1989 and 2011," Cincinnati said in its motion. "The underlying lawsuits allege the power outages caused by Winter Storm Uri were a result of the exact same failures including failures of the same generators which failed in the previous winter storms, and therefore, the power outages were foreseeable, expected and/or intended."

The insurer said the policy, which expires June 1, 2022, requires it to cover "damages because of 'bodily injury' or 'property damage.'"

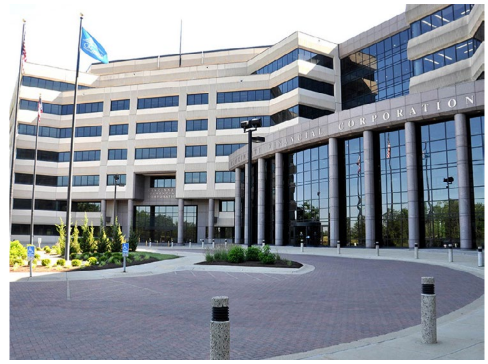
"We will have the right and duty to defend the insured against any 'suit' seeking those damages," it said. "However, we will have no duty to defend the insured against any 'suit' seeking damages for 'bodily injury' or 'property damage' to which this insurance does not apply."

If the federal court doesn't grant the declaratory judgment, Cincinnati would likely have to cover ERCOT under its current policy contract.

The insurer said it had received 19 lawsuits alleging ERCOT's responsibility for damages resulting from the storms. If the court doesn't grant the declaratory judgment, it will likely have to cover the grid operator as part of its contract.

Cincinnati said it requested information on March 18 from ERCOT to facilitate its coverage investigation but said the grid operator didn't respond to the requests.

ERCOT declined to comment on the insurance company's allegations.



Cincinnati Insurance has requested legal authority to not pay claims against ERCOT following the winter storm. | *Cincinnati Insurance*

ERCOT to Take Questions on Outage Report

ERCOT on Friday invited stakeholders to submit questions about staff's recent preliminary report on the causes behind generation outages that led to February's long-term controlled outages. (See related story, *ERCOT Blames Cold Weather for Gen Outages*)

In a *market notice*, the grid operator acknowledged the "many questions" about the report and concerns that it may not have accurately reflected the total amount of capacity affected by the various outage causes. ERCOT filed the *report* with the Public Utility Commission on April 6.

During a Wholesale Market Subcommittee meeting last week, several stakeholders pushed back on the methodology that staff used in compiling the report. It used nameplate capacity in aggregating the outage numbers, resulting in outsized values for renewable resources.

"It seems likely, based on the outage cause categories presented, that a significant amount of wind and solar impacts were categorized as 'Weather Related,' resulting in that bucket appearing much larger than was operationally relevant during the event," Luminant's Ian Haley said in an email requesting the WMS place the report's discussion on the agenda.

"Just as importantly, this may visually obscure valuable information about the relative outage and derate drivers for thermal generation," he said. "Thermal and intermittent resources need to be separated into different graphs as these types of resources have very different characteristics. That comparison, while more helpful, is still not completely fair to wind and solar generation, as we would not expect every intermittent resource to be at nameplate capacity for six days in a row."

Stakeholders have until the close of business on Thursday to submit questions about the report, which staff will "endeavor" to promptly respond to. ERCOT has promised a final report by Aug. 31. ■

ERCOT News

ERCOT Blames Cold Weather for Gen Outages

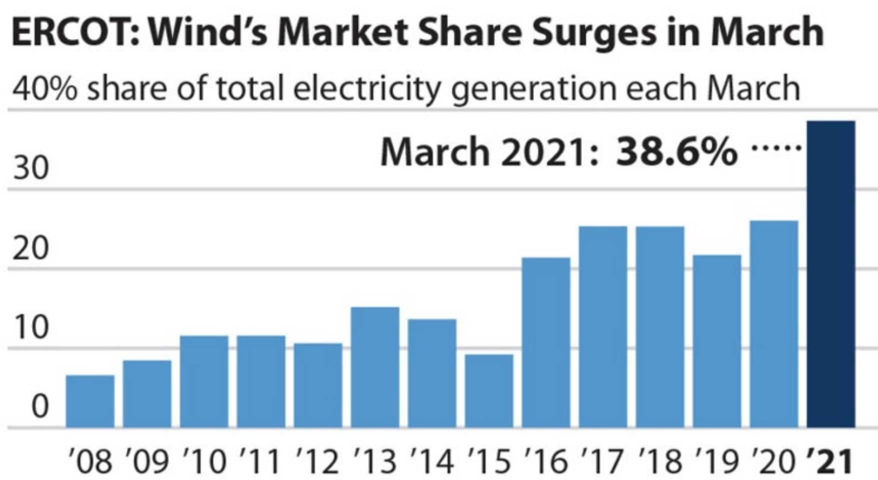
Equipment Failures, Fuel Supplies Less at Fault

Continued from page 1

The report shows aggregated data based on information provided by generators and reflects outages and derates between Feb. 14-19. ERCOT used generators' nameplate capacity in compiling the information, noting that wind and solar resources typically produce at much lower than their nameplate figures, resulting in outsized outage values.

Responding to media criticism over the report's use of nameplate capacity, ERCOT said its outage scheduler software uses that metric as a standard reporting method.

"This was used throughout the [winter] event for reporting aggregated outage amounts and is used in this report for consistency," spokeswoman Leslie Sopko said.



Wind resources accounted for a record amount of energy in March. | *IEEFA*

In a *Twitter thread*, University of Texas energy researcher Joshua Rhodes said it "might be more useful" to look at what ERCOT expected to be online rather than "raw capacity numbers." Wind was low, but not as low as the full chart implied, he said, noting that thermal outages were greater than expected.

The grid operator said some of its request for information is still outstanding. It expects to release a final report no later than Aug. 31.

PUC Tweaks Scarcity Pricing Mechanism

PUC Chair Arthur D'Andrea directed staff to draft a proposal for a make-whole provision within ERCOT's scarcity pricing mechanism following stakeholder feedback on whether a rule change is necessary to adjust the low systemwide offer cap (LCAP) before the summer.

The commission last month asked for comments on adjustments to the LCAP, but staff said stakeholders did not provide a consensus recommendation. Several commentators did note the provision setting the LCAP at the higher of $2,000/MWh or 50 times natural gas prices would have actually increased prices far above the high systemwide offer cap (*51871*).

Saying the natural gas price provision did not make sense, D'Andrea asked staff to eliminate the metric and replace it with a make-whole provision. He said the commission could wait on market-design changes that could be coming.

Staff *recommended* a holistic review of the broader scarcity pricing mechanism but said that it "need not be rushed ahead of this summer." The review should be conducted as part of a more formal rulemaking process, staff said.

D'Andrea, who resigned from the PUC last month, still sits as the agency's lone commissioner until a successor can fill his seat. Gov. Greg Abbott on April 1 appointed construction lobbyist Will McAdams to the PUC, but he must first be confirmed by the Senate. (See *Abbott Taps ABC Texas President McAdams for PUC Seat*.)

Board Adds Muni Representative

ERCOT filled the latest vacancy on its Board of Directors when the municipal segment this month elected Garland Power & Light COO Tom Hancock as its representative.

Hancock replaces Bob Kahn, who resigned from the board March 25 over a conflict of interest involving his position as general manager of the Texas Municipal Power Agency. Denton, one of the agency's four member cities, has filed one of numerous lawsuits against ERCOT over the February long-term outages. (See *Former ERCOT CEO Kahn Resigns from Board*.)

Speaking to Austin's local public radio station, Kahn said, "So, basically, my bosses sued me."

Kahn had earlier replaced Austin Energy's Jackie Sargent, who was among a wave of director departures in the storm's aftermath. The 16-person board now lacks only the five out-of-state unaffiliated directors, who resigned or withdrew their nominations in February over concerns their lack of state residency was a distraction to legislators. (See *ERCOT Chair, 4 Directors to Resign*.)

ERCOT Record for Wind Generation

Wind power, the early scapegoat for ERCOT's generation shortage during the February winter storms, provided a record 10.5 million MWh of energy in March, according to the grid operator's latest demand and energy *report*.

March's wind energy production surpassed ERCOT's previous high, set in December, by more than 2 million MWh, and pushed its share of the market to 38.6%. Natural gas provided 25.7% of ERCOT's energy in March and coal 14.8%.

Solar generation topped 1 million MWh during the month, a level it had only reached June-August 2020, the Institute for Energy Economics and Financial Analysis said.

Luminant to Keep Trinidad Running

Luminant on April 5 told ERCOT it is *withdrawing its suspension notification* for Trinidad 6, a 244-MW gas-fired plant energized in 1965.

Luminant, Vistra's generation subsidiary, notified ERCOT late last year that it intended to retire *Trinidad*, effective April 29. (See *Vistra to Shut down Another Texas Coal Plant*.)

Vistra did not respond to an inquiry about the reason for the withdrawal. However, it has said it continually assesses its power plants based on real-time information and environmental compliance costs. ■

ERCOT News

Abbott Appoints New Texas PUC Chair

By Tom Kleckner

Peter Lake | *Texas Water Development Board*

Texas Gov. Greg Abbott on Monday appointed Texas Water Development Board Chairman Peter Lake to head up the state's Public Utility Commission.

Lake has served on the water board, which provides planning for the state's water resources and wastewater services, since December 2015 and was appointed chair by Abbott in 2018. He was formerly head of business development at Lake Ronel Oil Co. and previously served as director of special projects for the VantageCap Partners equity firm.

"I am confident [Lake] will bring a fresh perspective and trustworthy leadership to the PUC," Abbott said in a *statement*. "Peter's expertise in the Texas energy industry and business management will make him an asset to the agency."

Lake's appointment as PUC chair is subject to Senate confirmation and will expire Sept. 1, 2023.

Abbott made the announcement while Will McAdams, Abbott's previous appointee to the PUC, testified before the Texas Senate Committee on Nominations. The committee approved his nomination, sending it on to the full Senate for confirmation. (See *Abbott Taps ABC Texas President McAdams for PUC Seat*.)

Will McAdams introduced himself to the Texas Senate Committee on Nominations on Monday. | *Texas Senate*

"I can sincerely say that I wish I were here under different circumstances," McAdams told the committee.

The PUC has come under heavy political fire in the aftermath of the February winter storm that nearly brought down the ERCOT grid. All three commissioners resigned in the wake of the event, but Arthur D'Andrea, the last remaining member, remains in his seat until a successor is confirmed. He has conducted two open meetings by himself since the resignations. (See *D'Andrea Resigns from Texas Commission*.)

State Sens. Kelly Hancock (R) and Charles Schwertner (R) introduced McAdams to the nomination committee.

"I thought the appointment was a very wise appointment by the governor," Hancock said, calling McAdams the "right man in the right place."

"He does understand the issues the PUC is going to deal with. He knows the subject matter, and he has integrity," Hancock said.

Schwertner, for whom McAdams served as legislative director, said, "It's obviously a very important job, looking forward at what needs to be done in regulating the electric industry." ■

ISO-NE News

ISO-NE, NEPOOL File 'Jump Ball' on Updated ORTP Values

By Jason York

ISO-NE and NEPOOL jointly filed updated offer review trigger price (ORTP) values with FERC on Wednesday for Forward Capacity Market (FCM) parameters in the 2025/26 capacity commitment period (*ER21-1637*).

Filing under the "jump ball" provision of the *Participants Agreement* gives the RTO's proposal and a stakeholder-backed alternative equal legal standing and provides the commission with discretion and latitude to adopt either measure. Both proposals accommodate changes and extensions to the federal tax credits for solar and wind developers passed by Congress in December.

ISO-NE's ORTP proposal, created in concert with consultants *Concentric Energy Advisors* and *Mott MacDonald*, did not curry favor with stakeholders at a March 24 meeting of the NEPOOL Participants Committee. The consultants modified their treatment of tax credits in the discounted cash flow model, resulting in a revised ORTP value for solar resources. The RTO also made minor changes to each of its proposed ORTP values for the 16th Forward Capacity Auction because of the updated performance payment rate (PPR) value. Proposed tariff revisions include $1.381/kW-month for solar and removal of ORTP values for solar-plus-batteries resources. Despite the modifications, only 19.04% voted in support during a sector-weighted vote.

The PC did, however, approve modifications to ORTPs and tariff revisions from stakeholders. The first, from the Union of Concerned Scientists on behalf of RENEW Northeast, revised its proposed lithium-ion battery ORTP from $2.612/kW-month to $2.601. This reduction resulted from the ISO-NE modified PPR value for FCA 16. The second, from Advanced Energy Economy, Borrego Solar Systems, Enel X, ENGIE North America and RENEW Northeast, revised previously supported tariff revisions. They passed with 72.5% PC support. (See *NEPOOL Participants Committee Votes on ORTP Values*.)

Proposed ORTPs		
Generating Capacity Resources		
Technology Type	**ISO-NE ($/kW-month)**	**NEPOOL ($/kW-month)**
Simple Cycle Combustion Turbine	$5.355	$5.355
Combined Cycle Gas Turbine	$9.811	$9.811
Onshore Wind	$0.000	$0.000
Offshore Wind	FCA Starting Price	$0.000
Energy Storage Device – Lithium-Ion Battery	$2.912	$2.601
Photovoltaic Solar	$1.381	$0.000

Comparison of proposed offer review trigger prices for capacity resources | *ISO-NE and NEPOOL, via RENEW Northeast*

"The NEPOOL alternative reflects that renewable energy and battery storage resources are already competitive and should not be subjected to [ISO-NE's] administrative screen that uses artificially inflated cost estimates for these resources that could exclude them from the market," Francis Pullaro, executive director of RENEW Northeast, said in an emailed statement. "[The RTO's] proposal to erect barriers to participation in the market by renewable energy, particularly offshore wind, will only result in making prices artificially high for consumers while perpetuating financial advantages to conventional generators."

Not a MOPR Referendum

ISO-NE told FERC that the filing should not be viewed as a referendum on the minimum offer price rule (MOPR). The RTO said its evaluation of the competitive cost of new entry (CONE) for offshore wind follows the same approach for calculating the ORTP for all technologies. In contrast, the NEPOOL proposal sets "an artificially determined ORTP at zero" for both OSW and solar, which is "functionally equivalent to having no MOPR ... regardless of their true costs of entry."

The RTO said that without an ORTP, the Internal Market Monitor would review no new capacity supply offers, and because OSW and solar are expected to dominate new entry in New England, setting the ORTP to zero would eviscerate the MOPR. It added that many New England states and stakeholders seek the elimination of MOPR, and that it recognizes the region must address concerns about the FCM's failure to account for the capacity provided by sponsored resources that do not clear the market because of the rule.

"To be clear, ISO-NE intends to work with the states and stakeholders to achieve the elimination of the MOPR in a manner that maintains reliability," ISO-NE wrote. "We understand the urgency felt by some stakeholders regarding the elimination of the MOPR. Nonetheless, we ask the commission to provide the region with the time needed to address such significant market changes, and not to uphold arguments that would seek to indirectly eliminate the MOPR through the adoption of inaccurate ORTPs." ■

The Block Island Wind Farm, off Rhode Island | *Ørsted*

ISO-NE News

Maine Regulators Probing CMP's Interconnection Practices

By Jennifer Delony

Maine regulators are moving forward with a formal investigation of Central Maine Power's distributed generation interconnection practices.

The decision came after a preliminary review of recent interconnection studies did not resolve concerns raised by the Coalition for Community Solar Access and the Maine Renewable Energy Association, Chairman Philip Bartlett said during a Public Utilities Commission *meeting* April 6.

The two nonprofits called for the investigation in February, claiming CMP was jeopardizing as much as 540 MW of clean energy by reneging on costs set out in current interconnection agreements.

"Being able to interconnect projects — and rely on any cost upgrade estimates from CMP — is an important step toward being able to get a project financed, and then ultimately built and reaching commercial operation," Jeremy Payne, executive director of MREA, told *RTO Insider*.

The state has seen an overwhelming response to 2019 laws designed to promote renewable energy development, according to CMP spokesperson Catharine Hartnett.

There has been a "dramatic influx of solar development ... resulting in 600-plus requests to interconnect over 2,000 MW onto CMP's distribution network — 300 MW more than our system peak load now — in less than two years," she told *RTO Insider*, adding that the influx has "created significant technical challenges for developers and utilities alike."

While the interest in solar "is great news for achieving Maine's climate policy objectives," Hartnett said, "such transformational changes must be managed with careful and timely study and proper execution to ensure the continued safe and reliable service to our customers."

CMP, she said, is committed to Maine's clean energy future and will fully cooperate with the commission's investigation.

Investigation Scope

The investigation will address, among other things, whether CMP's efforts to identify issues related to potential DG islanding situations was timely and if its response to its findings was appropriate.

Islanding occurs when a DG facility continues to provide power to customers when electricity from the grid stops serving those customers. Without protection, overvoltage on un-faulted phases of the transmission circuit can damage customer and utility equipment, CMP said.

In response to a March 12 commission data request, the utility said that its understanding of possible islanding issues evolved during 2020. After an assessment of its current substation technology, CMP determined that "a significant number" of substations would need upgrades to properly detect overvoltage situations.

The costs for those upgrades are now affecting the system upgrade charges already established in existing interconnection agreements with developers.

Maine regulators are investigating difficulties that planned solar arrays like this 4-MW project in central Maine are having achieving interconnection with the grid. | *Revision Solar*

In their Feb. 10 letter to the commission, the nonprofits said upgrade charges for the interconnection of a 2-MW solar project, for example, jumped from $239,000 to $12.2 million.

Bartlett said the commission's investigation will determine whether CMP's communications with developers about the costs were reasonable and whether the utility should be fined.

"We are pleased the commissioners unanimously agree that the severity of CMP interconnection errors and issues warrant a formal investigation," Payne said. "In order to ensure these mistakes are not repeated, it is important we find out what happened, why it happened, and be sure there are processes put in place to avoid a repeat occurrence." ■

ISO-NE News

NE Grid Uses a Fraction of Storage Capability, FirstLight Says

By Emily Hayes

A significant amount of energy storage capacity is underused by the grid in New England, said Alicia Barton, CEO of FirstLight Power.

Deregulated wholesale electricity markets "do a terrible job of valuing storage right now," Barton said Wednesday during a webinar hosted by the Northeast Energy and Commerce Association.

Despite the large merchant assets FirstLight has as a renewable energy provider with storage capability, the company is delivering only a fraction of the energy that it could be to the grid, Barton said.

The company's 1,200-MW Northfield Mountain pumped-storage hydropower facility is compensated for electricity production and ancillary services.

"It's treated essentially as a merchant fossil generation asset," Barton said. The storage facility also provides large-scale backup power. FirstLight can dispatch the entire facility in less than 10 minutes.

But the New England market does not distinguish between peak and off-peak hours, so the electricity FirstLight produces all generates the same renewable energy certificates. The current market structure in New England also does not differentiate the values of short- and long-term energy storage.

In addition to the absence of a valuation system for energy storage, the existing markets were "never really designed for flexibility and the use cases that we're developing now," said Julia Frayer, managing director of London Economics International.

There is a mismatch between what will benefit the market and society, such as the long-duration storage of clean energy, and what private investors are able to monetize.

"It is an urgent issue to fix," Barton said. State climate mitigation laws, such as those in Massachusetts and Connecticut, rely significantly on energy storage to achieve net-zero emissions but lack specificity on the types of energy storage.

A regulatory or policy framework that provides consensus on how to value energy storage and benefit ratepayers in the market, not one particular company, is one solution, said Ramya Swaminathan, CEO of Malta Inc.

"Making a push on figuring out what that tool is and how it applies in the context of New England or a particular state jurisdiction would pay itself off in multiples," Swaminathan said.

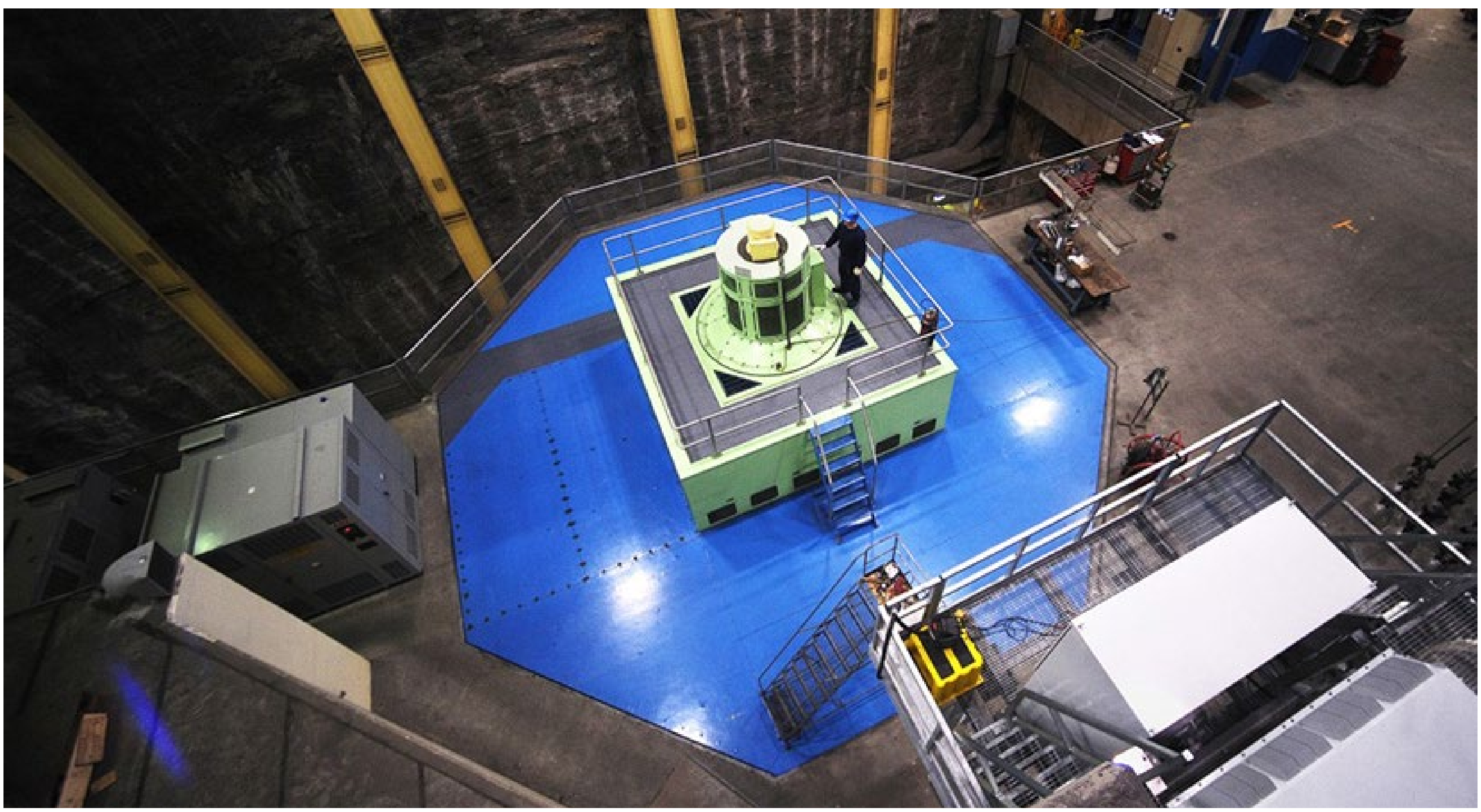
The industry also needs a storage investment tax credit, which is "far overdue," Barton said.

President Biden's push for infrastructure reform makes the coming months and years an "unprecedentedly open time for making the case for storage," Swaminathan said.

In the wake of a catastrophic winter storm in Texas that wiped out power for millions in the state, New England has a choice to make on how to move forward with energy infrastructure.

Barton said there is a "healthy number" of fossil fuel resources that can be retired and repurposed to connect solar and storage hybrid plans.

"There's a lot of innovation that can happen," she said. ■



FirstLight Power's Northfield Mountain pumped-storage facility, pictured above, is only delivering a fraction of the energy it could be providing to the grid, according to CEO Alicia Barton. | *FirstLight Power*

ISO-NE News

NEPOOL Markets Committee Briefs

Extension on Order 2222 Compliance Sought

ISO-NE will seek to extend its FERC Order 2222 compliance deadline until February 2022, the RTO's Director of Demand Resource Strategy Henry Yoshimura told the NEPOOL Markets Committee.

Yoshimura said the original July 19 compliance deadline was "pretty intense," though ISO-NE has "made very substantial progress in our compliance approach. But as we kept moving forward, it just seemed as though we need more time."

[Note: Although NEPOOL rules prohibit quoting speakers at meetings, those quoted in this article approved remarks afterward to clarify their standing on the issues.]

Yoshimura said that had the RTO kept moving toward the original compliance date, metering arrangements and tariff changes would be needed, in addition to coordinating the registration and operations of distributed energy resources with distribution utilities.

He said conversations with utilities "have been going fairly well, but there's always room for more improvement there, so I think having more time will give us the ability to refine our approach to coordinating distributed energy resources registration and operations."

Yoshimura added that FERC Order 2222-A might lead the RTO "to rethink some of our participation models as a result of not only that order, but the conversation leading up to that within the group stakeholder process, which has to do with how demand response might need to participate in a distributed energy resource aggregation." (See *FERC Limits State 'Opt Out' on DR*.)

Changes to GIS, Operating Rules Adopted for Maine Thermal RECs

The MC *adopted* changes to the Generation Information System (GIS) and GIS Operating Rules to include the thermal renewable energy credits (RECs) requirement in Maine's *renewable portfolio standard*.

Maine's Public Utilities Commission requested the changes, and as "regulatory enhancements," they can be adopted by the MC without additional corresponding action by the Participants Committee. The changes become effective on July 1 and apply to certificates created for energy generated on and after Jan. 1, according to a *pre-vote memo* from NEPOOL counsel Paul Belval of Day Pitney.

Thermal RECs will be awarded to facilities certified by the PUC to produce heat, steam, hot water or another form of thermal energy from sunlight, biomass, biogas or liquid biofuel or as a byproduct of electricity generated by Class I or Class IA resources under the RPS. To qualify for thermal RECs, a facility must have started operation after June 30, 2019, and the thermal energy must be delivered to an end-user in Maine and generated or delivered per the PUC's energy efficiency standards.

Maine's competitive electricity suppliers must also demonstrate that they have purchased a certain level of thermal RECs annually, starting at 0.4% in 2021 and ramping up to 4% in 2030 and beyond. The GIS and Operating Rules accommodations for Maine thermal RECs are similar to those made when New Hampshire and Massachusetts added thermal energy to their respective RPS provisions.

The GIS agreement, *amended* October 2020, provides that APX, the GIS Administrator, perform up to 500 hours of annual development work for enhancements each year without additional cost. APX estimates that the GIS changes for the Maine thermal RECs will require approximately 150 hours of development time. APX expects the other GIS changes targeted for July 1, including the addition of "clean existing generation" from the *Massachusetts Clean Energy Standard*, will require 260 hours to complete. This leaves 90 hours of development time remaining in 2021.

Other Action

The MC *voted* to recommend that the Participants Committee support ISO-NE's *proposal* to revise Operating Procedure 9 to clarify the order of actions between coordinated transaction scheduling (CTS) and non-CTS transactions and the timing of when actions are taken on CTS transactions — either before or during operating reserve deficiencies and minimum generation emergencies.

The revisions are consistent with the net interchange that CTS software would produce if it could respond instantaneously and allow the RTO's system operators to perform timely reductions on the CTS interface when transactions contribute to an emergency condition. These revisions will also provide a faster system response while considering the results of the day-ahead energy market. In addition, the ISO is proposing to add market notifications when CTS transactions are reduced for reserves, which will improve transparency. ■

— Jason York

Roadside solar panels in Vermont | *Shutterstock*

MISO News

Group Alleges Improper Entergy-Mississippi PSC Collaboration

By Amanda Durish Cook

A renewable energy watchdog is alleging that Entergy enjoys a particularly close relationship with the Mississippi Public Service Commission.

The Energy and Policy Institute (EPI) last week *claimed* that a batch of 2019 emails between the PSC and Entergy Mississippi are evidence that the commission worked with the utility to stall sizable transmission expansion that would enable more renewable generation to come online. EPI obtained the commission's emails through the Mississippi Public Records Act.

The email records show that Entergy coordinated closely with commission staff and consultants over 2019 on MISO transmission-planning matters.

Entergy shared its opinions with the commission on the development of MISO's 20-year planning futures, project cost allocation and the RTO's now-paused *plan* to align the generator interconnection queue's and annual transmission-planning cycle's timelines.

Company staff and Mississippi regulators and consultants in late 2019 emailed each other to share concerns about the amount of renewable generation MISO projected under its three planning futures. They prepared talking points in preparation for a MISO public meeting on futures development, often attaching documents or setting up informal meetings that appeared to show information sharing.

| Entergy

In a Nov. 1, 2019, *email* to Entergy employees, PSC legal counsel David Carr said, "We want to hear what Entergy thinks about the proposed futures and the assumptions contained therein." He said MISO's estimated 70% increase in energy demand from electrification "seemingly comes out of thin air." He told Entergy that the electrification scenario was a "nonstarter."

Carr asked for Entergy's stance on MISO's estimates of renewable expansion and electrification growth, which would require new transmission. Carr said the commission doubted MISO's projections and asked Entergy staff to "discuss how you folks plan on responding."

Entergy staffer Vishwas Sankaran responded that the company had "similar concerns … especially around the amount of renewable penetration they are targeting with these futures."

Carr last year requested that MISO pause futures development, questioning its electrification predictions in light of the COVID-19 pandemic. Other MISO members at the time said that the renewable predictions were too conservative. (See *COVID-19, Electrification Stir MISO Futures Debate*.)

Also in late 2019, PSC Senior Attorney Sam Mabry circulated Entergy discussion points ahead of a meeting between the company and MISO on possible cost allocation.

The entities also traded *emails* with attachments containing talking points on the Organization of MISO States' long-range transmission planning principles, which pushed the RTO to embark on a new long-range transmission plan. The Mississippi PSC, the Louisiana Public Service Commission and the New Orleans City Council ultimately opposed the *principles*, saying MISO didn't need to change its long-term planning approach last used in 2011.

Emails also appear to show that the Mississippi PSC was coordinating with Arkansas regulators to oppose the Missouri Public Service Commission's call for interregional transmission planning between MISO and SPP.

Entergy said the close collaboration is above board and said it shouldn't keep an arms-length distance from the regulators that approve transmission and generation projects.

"As do many, if not all, regulated public utilities in MISO, we work together with our retail regulators, as part of the public MISO stakeholder process, to advocate for MISO policies and MISO decisions regarding transmission planning that benefit our customers and ensure that they realize the benefits of MISO participation," Entergy Mississippi said in a statement to *RTO Insider*. "Ultimately, it is MISO that independently determines the transmission projects needed to cost effectively deliver electricity and comply with existing regulatory and reliability standards."

Entergy did not include a position statement on MISO's transmission planning process. The Mississippi PSC did not respond to a request for comment on the collaboration.

MISO executives have said billions of dollars in transmission construction is imperative to maintain the footprint's reliability and accommodate the shifting resource mix. (See *MISO Execs Defend Need for Long-range Tx*.)

In stakeholder meetings, Mississippi PSC consultant Bill Booth has asked that the grid operator *pause* its long-range transmission planning effort until it develops a strategic plan with clearer goals.

Booth has also expressed concern that the RTO intends to make all MISO Midwest wind generation deliverable to its South region and, conversely, all the latter's solar generation deliverable to the Midwest through expensive transmission projects.

However, the February winter storm and subsequent rolling blackouts in MISO South are renewing calls among the stakeholder community for long-term transmission planning. (See "Stakeholders Invoke Southern Blackouts," *MISO Reveals Contentious Long-range Tx Project Map*.)

In a position reversal, New Orleans Mayor LaToya Cantrell expressed support for MISO's long-term transmission plan in a March 25 *letter* to the grid operator. Cantrell also asked that it consider the effects of climate change in transmission planning.

"Given the lengthy process of transmission planning and development, and the looming threats of additional extreme weather, I am asking that you move as swiftly as possible to incorporate the climate and resilience goals of New Orleans in MISO's transmission planning processes," she wrote. "We are relying on MISO to plan the grid infrastructure that the city of New Orleans can rely on now and for the century to come. We stand ready to partner with you to ensure that this occurs." ■

MISO News

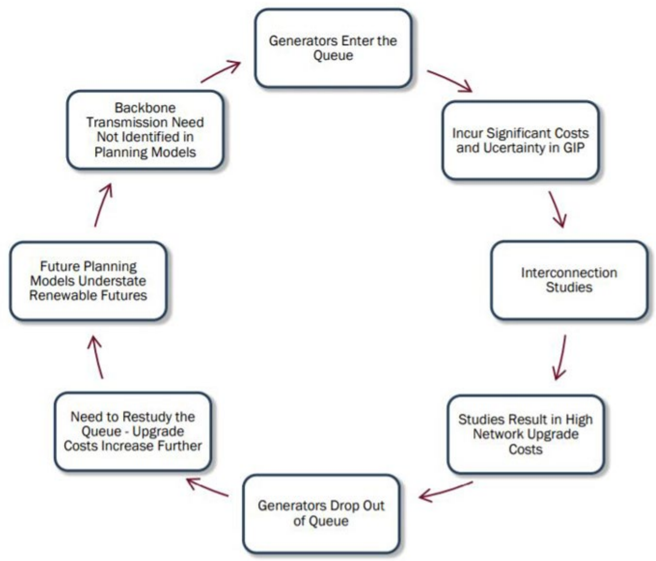
MISO-SPP Targeted Interconnection Study Moves Forward

By Tom Kleckner

MISO and SPP told state regulators last week that their joint targeted interconnection queue study has moved into its technical phase and promised more stakeholder involvement in the effort in the months ahead.

Speaking to the Organization of MISO States and SPP Regional State Committee's Seams Liaison Committee (SLC) on April 5, MISO's Aubrey Johnson and SPP's Antoine Lucas said RTO staff and study leaders have been meeting monthly since the effort was announced in September.

The RTOs' leadership has tasked staff with identifying "comprehensive, cost-effective and efficient" upgrade projects, with a focus on projects near their seam that support both organizations' interconnection processes. (See *MISO, SPP to Conduct Targeted Transmission Study*.)



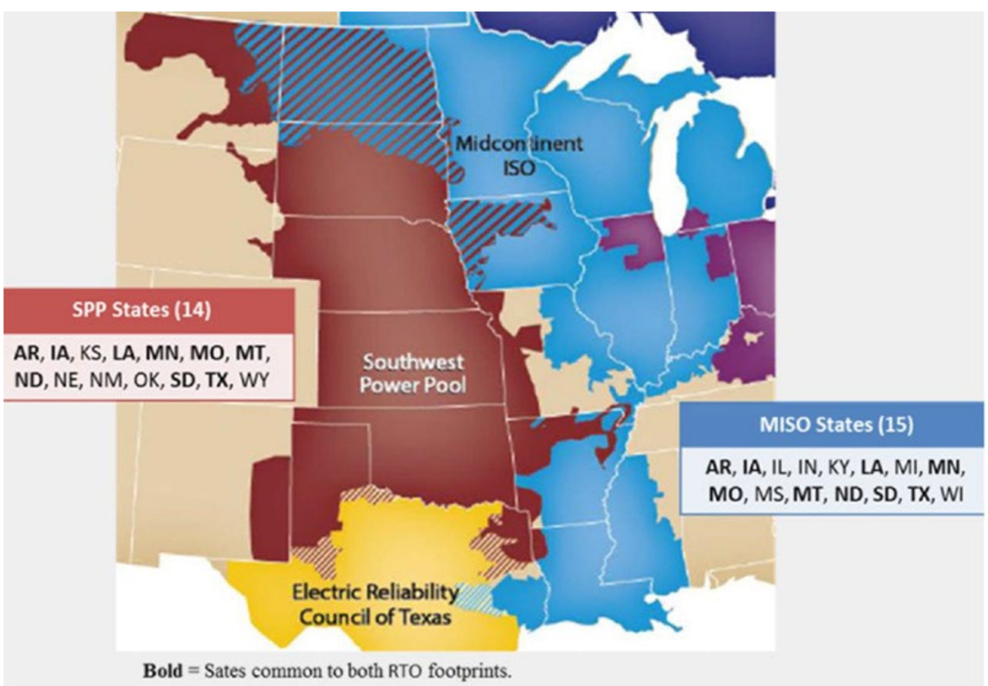
The negative feedback loop of transmission planning and GI processes. | *Concentric Energy Advisors*

Johnson, MISO's executive director of system planning, said sticky cost-allocation discussions have been pushed back in the schedule until staff come up with initial solutions.

"We certainly recognize that could take some time," Johnson said.

"Once we can get some solutions we can really focus around on the table, that's when we can have a lot more discussion around how to move those things forward," said Lucas, SPP's engineering vice president.

The two executives promised more stakeholder involvement, beginning with a joint stakeholder meeting June 25. Three additional meetings have been scheduled for Sept. 22, Oct. 18 and Dec. 13. The final report is scheduled to be presented during the December meeting.



The MISO-SPP seam | *Organization of MISO States*

Staff said they are developing common solutions and plan to use February's arctic event to inform their work.

The authors of a recent *report* on planning improvements and the increased deployment of renewable resources told regulators that the industry has "great hope" that the MISO-SPP study will result in new interregional projects and prove to be a best practice that would "improve each regions' understanding of interactions and opportunities" with neighboring regions.

The report, produced by Concentric Energy Advisors for the American Council on Renewable Energy and released last month, was based on interviews with SPP, MISO and PJM stakeholders and market participants. It emphasized the need for implementing planning reforms and moving toward a "centrally coordinated and integrated" planning process. (See *ACORE: Lack of Interregional Tx Planning Slowing Wind, Solar Development*.)

"What's been going on in the MISO-SPP seams study and what this committee is doing are all in line with the recommendations we have made," said Concentric's Julie Lieberman, the report's lead writer.

With its work winding down, the SLC suggested meeting on a quarterly basis. The committee has recommended evaluating targeted market efficiency products (MISO's TMEP projects) and has suggested a working group to inventory and measure interest in rate pancaking along the seam. ■

MISO News

Vistra Hurries Joppa Retirement, Plans Renewable Developments

By Amanda Durish Cook

Vistra on April 6 said that it will idle units at its coal- and gas-fired Joppa Power Plant next year, three years earlier than planned.

The Texas-based competitive supplier also said that, pending passage of legislation in Illinois, it will invest more than $550 million to develop about 300 MW of utility-scale solar and 175 MW of battery storage at nine former plant sites across the state by 2025. Vistra said the buildout would more than triple Illinois' utility-scale solar generation and double its battery storage capacity.

Vistra said the accelerated retirement timeline settles a 2018 complaint the Sierra Club brought before the Illinois Pollution Control Board. The environmental group alleged that the Edwards, Coffeen and Joppa plants *contaminated* groundwater in excess of state standards prior to Vistra's acquisition of Dynegy.

The settlement also has Vistra paying a portion of its property taxes for three years following the closure of Joppa and installing additional groundwater monitors at Edwards and Joppa.

Vistra said that because of "mounting financial and legal pressures that now come from operating coal plants," it's calling for passage of the *Illinois Coal to Solar and Energy Storage Act* to help fund the repurposing of coal plant sites.

"We agreed to shut down the Joppa plant in light of the legal uncertainties and significant economic challenges facing the plant. First and foremost, we will work with our team members and the impacted communities to ensure a just transition, including our commitment to pay $1.1 million in incremental property taxes over three years," Vistra CEO Curt Morgan said. "As part of this just transition, we remain focused on passing the Coal to Solar and Energy Storage Act, which will enable us to reinvest and repurpose sites like Joppa into zero-emission generation, using existing infrastructure, creating jobs and adding to the property tax base. We have a construction-ready plan to invest $550 million, including approximately $59 million at the Joppa location, to transform coal plant sites into renewable energy centers."

Vistra said that if the bill passes, the Joppa site will house a standalone 45-MW battery storage facility. It said the land "does not have the site characteristics to support utility-scale solar."

Joppa plant | *Gibraltar Chimney*

The approximately 65-year-old Joppa plant was included in a septet of retirement announcements from Vistra in October. (See *Vistra Declares End of Midwest Coal Fleet*.) The company initially said it would wind down Joppa's six coal units (1 GW) and five gas units (239 MW) in 2025. The company's seven-plant Midwest coal fleet will cease to exist by 2027, "or sooner should economic or other conditions dictate," Vistra said at the time.

In its latest retirement announcement, Vistra again parceled out blame to a "dysfunctional" MISO capacity auction design that employs a vertical demand curve and prioritizes reliability over price signals.

MISO did not respond to a request for comment about Vistra's criticisms.

Morgan said the Joppa closure is an "unfortunate reminder that our remaining MISO fleet continues to face challenges and is at risk of rapid closure for a variety of factors, most notably legal and economic challenges — the latter due to the dysfunctional MISO market in Illinois and significant maintenance costs."

The CEO said Vistra would like to "reinvest in and responsibly reuse its Illinois plant sites so local communities like Joppa and Massac County can economically benefit from the transition to renewable electricity generation rather than being left as a nonproductive former plant site."

"The agreement will not only prevent millions of tons of dangerous air pollution from one of the oldest coal plants in Illinois, it will also require Vistra to install additional groundwater monitors that will help Sierra Club and our local members advocate for the safest coal ash closure plan under Illinois' new coal ash regulations recently adopted by the Illinois Pollution Control Board," Sierra Club Illinois Director Jack Darin said in a statement.

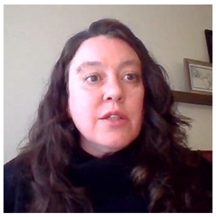
Darin also said the fast-tracked retirement spotlights the need for the Illinois legislature to pass the Clean Energy Jobs Act, which would help workers during Illinois' transition from fossil fuels in the power sector. ■

NYISO News

NY Power Panel Debates Gas Moratorium

By Michael Kuser

New York state officials and appointed advisers disagreed Wednesday on the merits of a moratorium on new natural gas infrastructure, including pipelines and power plants, and on repowering of older generation units.



Lisa Dix, Sierra Club | *NYDPS*

Lisa Dix, New York representative for the Sierra Club Beyond Coal Campaign and a member of the state Climate Action Council's Power Generation Advisory Panel, called for the moratorium and referred to the Public Service Commission's recently *announced* proceeding on gas planning (*20-G-0131*).

"The idea of the docket is really to come up with creative, flexible ways in which we can meet increased load, if that's going to be an issue, or can figure out how to scale efficiency, demand response and storage to meet immediate needs," Dix said.

The planning process will help stakeholders avoid continuing to build out gas infrastructure in the short term and also establish a comprehensive system, including a regulatory framework, for the long-term replacement of fossil fuel-fired generation, she said.

New *regulations* under the state's Climate Leadership and Community Protection Act (CLCPA) require 40% decreases of methane and other greenhouse gases by 2030 and 85% cuts by midcentury.

Not so Fast

John Reese, Eastern Generation | *NYDPS*

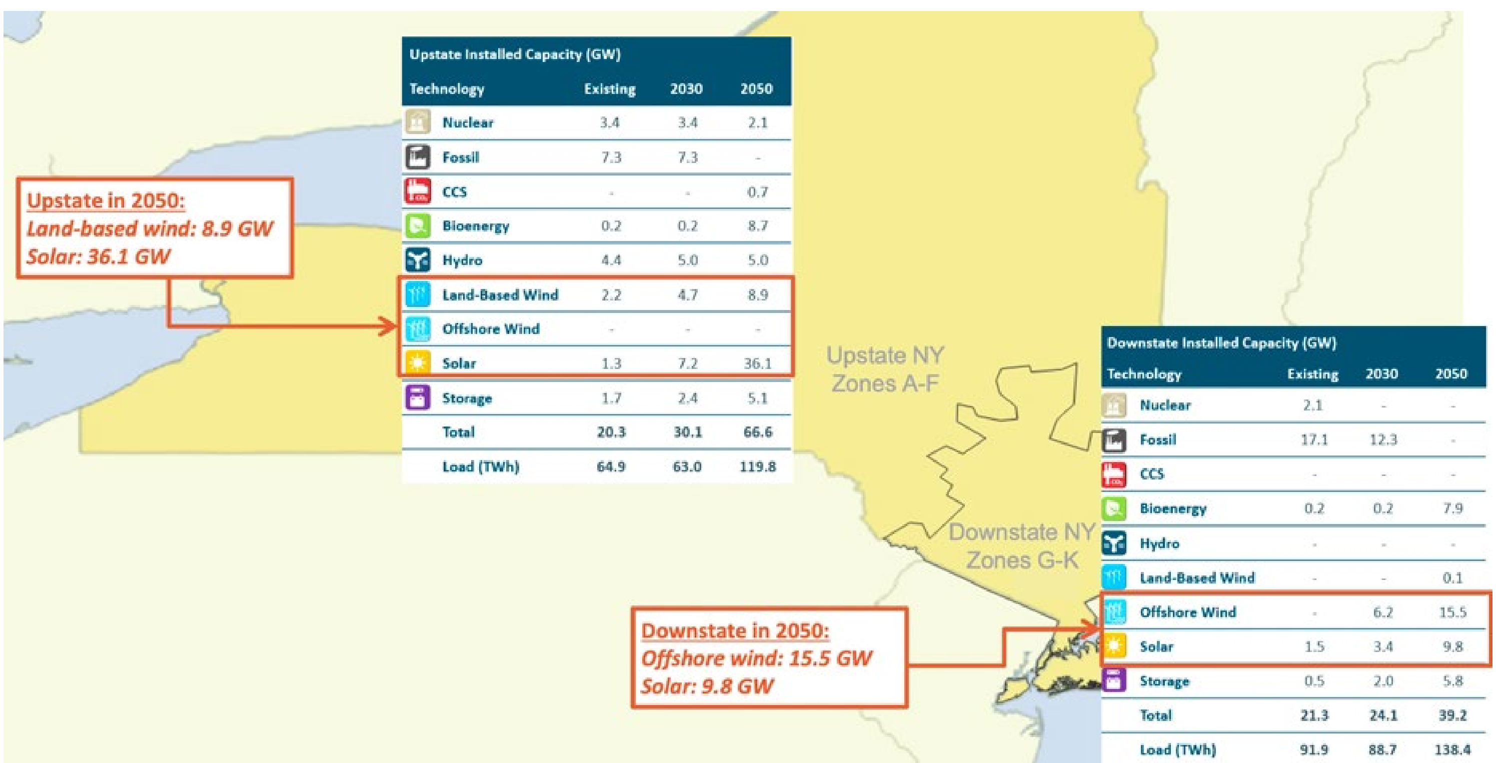
John Reese, senior vice president of Eastern Generation, said he opposed a moratorium for several reasons but not because of economic interests. The panel's recommendations to the full council lay out a process for reducing fossil fuels as the state increases renewables in the system, and adding a moratorium before planners go through that process would essentially amount to giving up on it, he said.

"A moratorium today doesn't consider all the factors we need to consider and basically imposes a Nancy Reagan, 'Just Say No'; it forgets the substance and the complexity," Reese said. "When you look at the rush to natural gas, there are two or three projects that are on the table and going through Article 10. No fossil fuel unit has ever made it through, I think, the new Article 10 legislation put in place five or six years ago."

The Article 10 process, which governs how generating resources are sited, is incredibly complex and requires an immense amount of study on everything from economics, fuel, emissions and environmental justice, Reese said.

"It isn't like projects that are currently being worked on are suddenly going to pop up without input and without consideration of these factors," he said. "I think a moratorium is harmful and not necessary."

Sarah Osgood, director of policy implementation at the state's Department of Public Service, chaired the meeting, which was the final public comment session before the panel



Upstate Installed Capacity (GW)

Technology	Existing	2030	2050
Nuclear	3.4	3.4	2.1
Fossil	7.3	7.3	-
CCS	-	-	0.7
Bioenergy	0.2	0.2	8.7
Hydro	4.4	5.0	5.0
Land-Based Wind	2.2	4.7	8.9
Offshore Wind	-	-	-
Solar	1.3	7.2	36.1
Storage	1.7	2.4	5.1
Total	20.3	30.1	66.6
Load (TWh)	64.9	63.0	119.8

Downstate Installed Capacity (GW)

Technology	Existing	2030	2050
Nuclear	2.1	-	-
Fossil	17.1	12.3	-
CCS	-	-	-
Bioenergy	0.2	0.2	7.9
Hydro	-	-	-
Land-Based Wind	-	-	0.1
Offshore Wind	-	6.2	15.5
Solar	1.5	3.4	9.8
Storage	0.5	2.0	5.8
Total	21.3	24.1	39.2
Load (TWh)	91.9	88.7	138.4

Projected electricity supply in New York state by 2050 | *E3*

NYISO News

makes its final scoping plan recommendations to the CAC. (See *Cut Peakers, Boost Storage, NY Climate Council Hears*.)

"What has been communicated from the Climate Action Council is that, if we don't have full agreement on any of the recommendations, we can put forth alternative viewpoints," Osgood said. "Basically they indicated that not all the panel members are necessarily in alignment on an option, but we can still" recommend ideas that only a portion of the panel supports.

NYISO Executive Vice President Emilie Nelson said that building out renewable energy and storage and focusing on the transmission buildout that will be required to deliver that energy will decrease the energy produced by fossil fuel.

"This focus is the critical priority, combined with planning the phase-down of fossil fuels, and I believe why the CLCPA is structured in such a way that we first need to get to 70% renewables in 2030," Nelson said. "The concept of a gas moratorium goes beyond the concepts they had in the CLCPA and takes solutions off the table that may become important during this broad transformation. So certainly I think focusing on the well informed planning study work in the near term makes a lot of sense."

Sarah Osgood, NYDPS | *NYDPS*

Public Input

Callers during the public comment session included Sam Lehr, policy manager for the RNG Coalition, who said he appreciated the panel being open to the idea that green hydrogen and renewable natural gas (RNG) can both be used alongside other resources in achieving carbon neutrality in the power generation sector.

"RNG is included as an important greenhouse gas reduction strategy in the climate plans in a number of jurisdictions, including in E3's June 2020 *analysis*, which highlights the role of bioenergy-based electricity in New York," Lehr said.

Upstate and downstate, the E3 study projects 9.5 GW of storage installed by 2050, nearly 25 GW of offshore and onshore wind, and nearly 46 GW of solar. (See *NY Climate Action Council Looks at Deep Decarbonization*.)

"I want to encourage the panel to take on the urgent need for New York to plan for the phaseout of the four upstate nuclear reactors," said Timothy Judson, executive director of the national environmental organization, Nuclear Information and Resource Service and a co-founder of the *Alliance for a Green Economy* in New York. "These are some of the oldest and most uneconomic nuclear power plants in the world actually ... and a number of those reactors would have closed by now except for the $7.6 billion nuclear subsidy that the PSC enacted with the Clean Energy Standard in 2016."

Emilie Nelson, NYISO | *NYDPS*

Under current New York state policy and regulations, upstate nuclear facilities will be within the resource mix until at least 2030. The panel is recommending that the contribution of nuclear power to the 2040 resource mix and any additional policy actions needed should be evaluated prior to the cessation of the zero-emissions credit (ZEC) program in 2029. (See *NY Court Rejects Challenge to ZEC Program*.)

"There are enormous climate and environmental justice opportunity costs to this [ZEC] program ... and the PSC never conducted analysis of alternatives to the ZEC program, although ample information was presented in the CES proceeding," Judson said.

Taylor Scarpa, a student at Syracuse University and a legislative associate at the New York Public Interest Research Group, said that New York must have a just transition and urged the panel to put forth a 100% renewable action plan to the CAC. ■

NYISO News

NY Pushes Electrification with Heat Pumps

By Michael Kuser

New York state and its utilities are leveraging new support at the federal level and investing $700 million in a program to encourage energy efficiency measures and building electrification, primarily through clean energy heat pump technologies.

"Heat pumps and electrification are some of our most pressing challenges, as buildings are responsible for approximately a third of New York's energy-related greenhouse gas emissions," New York State Energy Research and Development Authority CEO Doreen Harris said April 6.

Through the state's *Clean Heat program*, NYSERDA alone is investing $230 million, Harris told over 160 participants at a webinar hosted by the New York Geothermal Energy Association (NY-GEO).

To achieve a carbon neutral building stock by midcentury, as required by the Climate Leadership and Community Protection Act, new construction projects will need to be all-electric, and existing buildings will need to be updated to all-electric demand, she said.

"We are moving the needle on both of these priorities, and just last month we *awarded* $13 million to 14 all-electric, energy-efficient, carbon-neutral, multifamily buildings throughout the second round of our $40 million Buildings of Excellence competition," Harris said.

Sending Signals, Creating Jobs

The heating market needs strong signals to move away from its current fossil-fuel comfort zone, according to Bill Nowak, executive director of NY-GEO.

The organization has seen cost-competitive heat pump proposals that were turned down "seemingly on the basis of familiarity more than anything else," Nowak said.

The Geothermal Exchange Organization was pleased with measures passed in the federal end-of-year budget bill that support geothermal, COO Ryan Dougherty said. The bill included a tax credit extension through 2023 and the classification of geothermal heat pumps as renewable energy technology.

"The Biden infrastructure plan goes much farther than highways and bridges. ... [It] calls for a 10-year extension of both production and investment tax credits and makes at least a couple calls out to clean energy and electrification of two million buildings," Dougherty said.

President Biden framed his $2 trillion infrastructure plan as the American Jobs Plan and referred to well-paying union jobs as a way to build support for the plan across a broad spectrum of voters. (See *Biden Infrastructure Plan Would Boost Clean Energy*.)

There is potential for geothermal development under the infrastructure plan, according to Steven Schunk, an energy specialist at SUNY Geneseo.

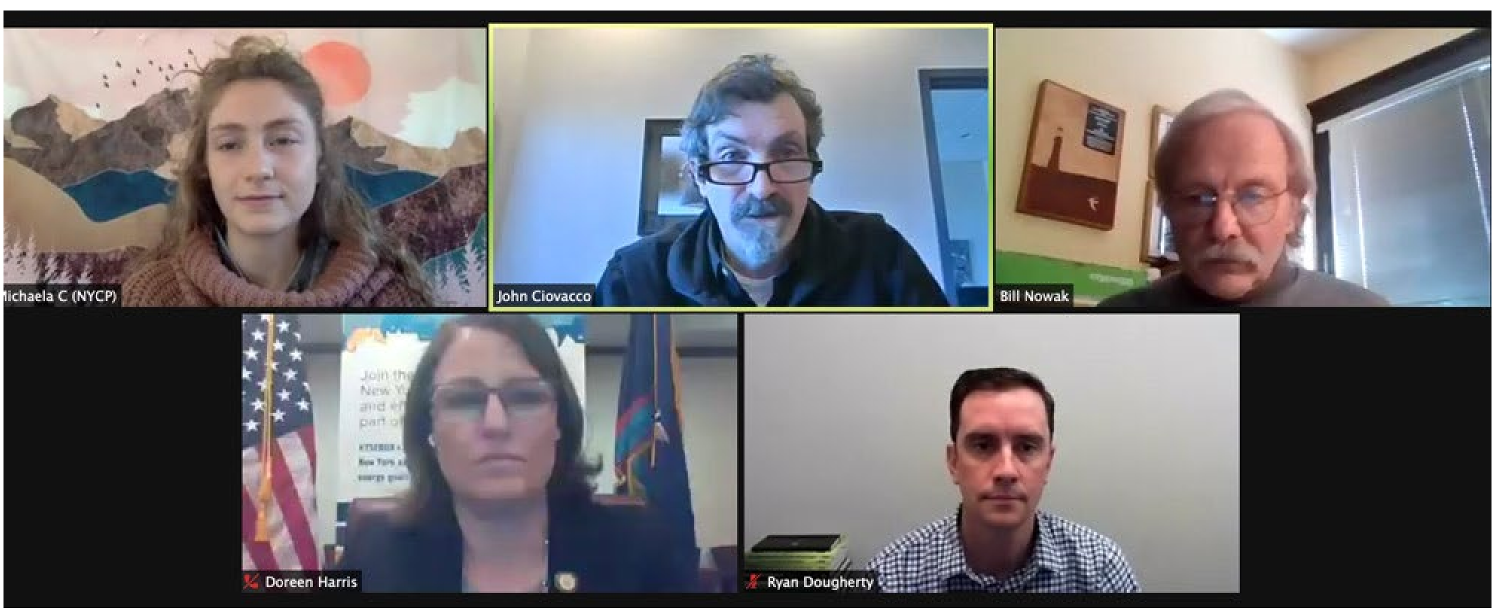
"We may need to expand our definition to include new kinds of infrastructure, such as low-temperature district heating, that we've never built in the past but should in the future," Dougherty said. "There's nothing in the plan that points specifically to district systems, but there's certainly potential for funding within the rough parameters."

The Department of Energy, he added, has reached out to SUNY for information on district geothermal heating, "so clearly the administration is starting to think about the potential."

NYSERDA likes to cooperate with other states on policies, standards and timelines, which are helpful for heat pumps and electrification, Harris said.

The agency's statewide heat pump implementation *plan* calls for increasing the pool of skilled labor needed to boost the industry by training 14,000 workers across the heat pump supply chain, including 4,200 workers to sell, design and install systems.

"We're very serious about building an industry here that can serve not only our goals, but perhaps export to other states as well, so the workforce development programs that we're implementing are intended to benefit New Yorkers," she said. ■



Clockwise from top left: Michaela Ciovacco, NYCP; John Ciovacco, NY-GEO; Bill Nowak, NY-GEO; Ryan Dougherty, GeoExchange COO; and NYSERDA CEO Doreen Harris | *NY-GEO*

NYISO News

FERC Approves NY Demand Curve Reset, Rejects 17-Year Amortization

By Michael Kuser

FERC on Friday approved an update of NYISO's Installed Capacity (ICAP) market demand curves, but it rejected the proposed 17-year amortization period as "speculative" and ordered a compliance filing within 14 days (ER21-502-001).

The commission said that reducing the previous 20-year amortization period "may result in unnecessarily high net cost of new entry (CONE) estimates, which will impact the ICAP demand curves." The order drew partial dissents from four of five commissioners.

The ISO in November proposed parameters and assumptions for the ICAP demand curves for capability years 2021/22 through 2024/25, selecting the H-class frame turbine from General Electric as the peaking plant to establish the curves. (See NYISO Proposes ICAP Demand Curve Reset Values.)

NYISO's Services Tariff defines a peaking plant as "the unit with technology that results in the lowest fixed costs and highest variable costs among all other units' technology that are economically viable," which includes "the number of units (whether one or more) that constitute the scale identified in the periodic review."

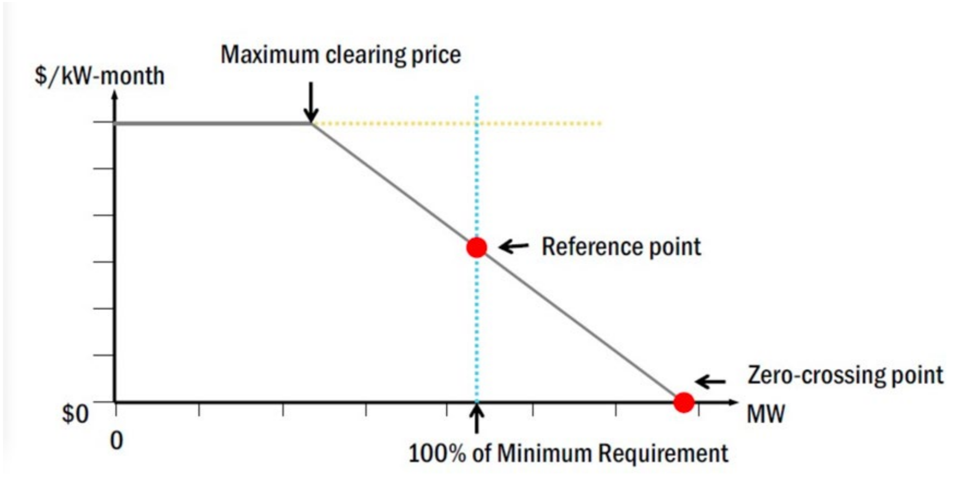
New York's Climate Leadership and Community Protection Act (CLCPA) requires state load to be served by 100% zero-emission resources by 2040, prompting NYISO to adopt a 17-year amortization period as representing the average period of years between the beginning of each capability year covered by the 2021-2025 DCR and the new law's compliance deadline.

The Independent Power Producers of New York (IPPNY) wanted an even lower, 15-year amortization period, arguing that the proposed H-class turbine will not be able to operate beyond 2040 because of the law and that there was no evidence to support NYISO's assertion that the hypothetical peaking facility could retrofit and operate beyond the statutory deadline.

The ISO's Market Monitoring Unit said that a 17-year amortization period would result in "excessively high demand curves and increase net CONE between 4.8 and 10.2% depending on the zone."

Myth and Markets

The commission also said it found NYISO's



| NYISO

proposal to continue to model dual-fuel capability for the peaking facility used in establishing the G-J Locality (Lower Hudson Valley and New York City) demand curve to be just and reasonable.

"Although there are no mandatory dual-fuel capability requirements in the G-J Locality, we agree with NYISO that a developer likely would include dual-fuel capability in a new peaking facility in the G-J Locality," the commission said.

NYISO's tariff requires that the proxy unit used to establish its ICAP demand curves reflect the resource with technology that results in the lowest fixed costs and highest variable costs among all other units' technology that are economically viable.

In a partial dissent, FERC Chairman Richard Glick argued that "NYISO has not established that in the G-J Locality, a dual-fuel unit better satisfies that tariff provision than a gas-only unit connected directly to an interstate natural gas pipeline, which the record suggests could potentially have lower fixed costs while remaining economically viable." He added that "the present record simply is not sufficient to answer the question one way or another. Accordingly, I would set this aspect of NYISO's proposal for hearing."

Though she did not join with Glick, Commissioner Allison Clements made similar arguments in her partial dissent over the proxy unit issue.

Glick also said that NYISO's demand curve reset and its central role in its planning shows how far the ISO has moved from ordinary market economics.

"The administrative exercise of arguing about the cost attributes of a mythical power plant is about as far afield from market competition as anything I can imagine," Glick said.

He agreed that the just and reasonable amortization period is 20 years, but he urged NYISO to consider adopting a different proxy unit or other more holistic reforms in light of New York's greenhouse gas reduction goals.

"Although it is by no means certain that what are currently gas-fired resources will retire by 2040, it is clear that they will make up a smaller and smaller share of the resource mix. Before long, a gas-fired resource may no longer represent a likely new entrant, even when reserve margins are tight. NYISO would be well served to take a hard look at whether it makes sense to anchor its demand curve to a resource that is unlikely to enter the market and whether it should instead take steps to better align the capacity market's principal parameters with the goals of the state in which it operates," Glick said.

In a joint partial dissent, Commissioners James Danly and Neil Chatterjee disagreed with the majority's rejection of the 17-year amortization period, citing the New York climate law.

"The majority cites the 'speculative assumption that all fossil-fueled resources will cease operation in 2040,'" Danly wrote. "I find this to be puzzling. Though no one can predict the future, no one disputes that this is what New York's statute requires. ■

PJM News

FERC Seeks Comments on PJM Capacity Market

By Michael Yoder

FERC is asking for stakeholder comments regarding its technical conference last month on capacity markets and the role of PJM's expanded minimum offer price rule (MOPR) in its market (*AD21-10*).

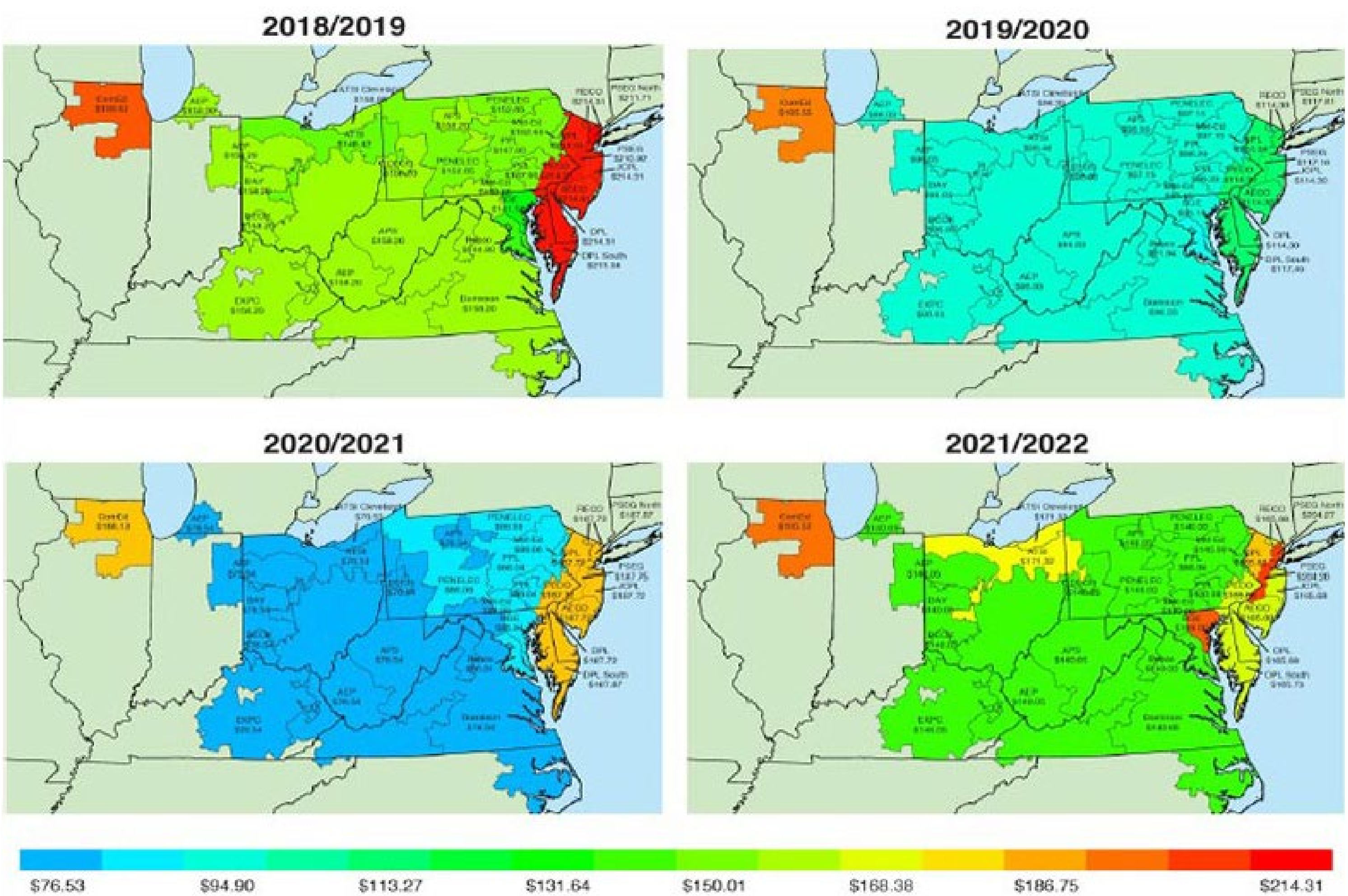
The conference, which took place March 23, featured discussions on the role of capacity market designs in PJM, ISO-NE and NYISO and the ways state policies are impacting the entry and exit of new resources into the markets. Both FERC Chair Richard Glick and PJM CEO Manu Asthana said during discussions that the MOPR is "not sustainable" because it is hampering state efforts to decarbonize. (See *PJM MOPR in the Crosshairs at FERC Tech Conference*.)

Participants in the conference considered the implications of retaining the controversial MOPR in the PJM market and also alternatives that could replace it.

In a notice issued April 5, FERC invited "all interested persons" to file comments on several different topics in the technical conference. Stakeholders are being encouraged to limit feedback to 24 questions highlighted in a *supplemental notice* for the conference issued on March 16, including the goals of centralized capacity markets in the eastern RTOs/ISOs and the long-term implications of continuing with the status quo MOPR framework for PJM.

The commission is also asking for responses to 22 different questions specifically regarding PJM's capacity market. Some of the questions include whether maintaining the MOPR would result in over-procurement of capacity, what the benefits of the MOPR on the market are and what exemptions should be considered in a targeted MOPR.

FERC said comments need to be submitted by April 26; reply comments are due by May 10. The commission said the comments on the first 24 questions should not exceed 25 pages and reply comments should not exceed 15 pages. The initial and reply comments to the PJM-specific questions are not subject to page limitations. ■



| Monitoring Analytics

PJM News

PJM to File Black Start Proposal Without Members' Endorsement

By Michael Yoder

PJM intends to unilaterally file a proposal with FERC regarding the contentious black start unit testing issue, without the endorsed of the Members Committee.

PJM CEO Manu Asthana | © *RTO Insider*

In a *letter* issued April 5, PJM CEO Manu Asthana said the RTO will file the *proposal*, sponsored by the PJM Industrial Customer Coalition and Exelon, "with the recognition" that it failed to reach the necessary 66% sector-weighted threshold for endorsement at the MC on March 29. The proposal — aimed at addressing black start unit involuntary termination, substitution rules, capital recovery factor (CRF) and minimum tank suction level — received a *vote* of 3.17 (63.4%). (See *Black Start Fails in Final PJM MC Vote*.)

Asthana was responding to a separate *letter* sent to the PJM Board of Managers on March 31 by Old Dominion Electric Cooperative and American Municipal Power. The groups said they supported aspects of the proposal that provide reliability improvements to black start service.

"Stakeholders across the spectrum concurred with your perspective that the reliability aspects of the proposal were improvements and should be approved," Asthana said in his letter.

ODEC and AMP ultimately voted against the proposal at the MC meeting because, they said, of its treatment of capital recovery factors (CRFs) is "unduly discriminatory."

The CRF issue was the most disputed in discussions throughout the stakeholder process, as members voted to *amend* the issue charge at the December Operating Committee meeting to align with language in the problem statement after it was discovered the two documents did not match, leading to heated debates. (See *Vote on PJM Black Start Compensation Deferred*.)

Independent Market Monitor Joe Bowring said the CRF table was originally created in 2007 and included incorrect assumptions. Stakeholders argued the CRF values are higher than they should be under the lower corporate tax rate under the 2017 federal tax law, leading to overcompensation for black start units.

Black start unit owners and other stakeholders asserted that any changes to the CRF table should only be applied prospectively and any rates currently in place should remain changed.

Asthana said PJM and the board was conscious of the "controversy" of the proposal "regarding the application of the new rules to units that had previously received a black start commitment."

There was "significant" discussion among members regarding the application of the new rate and commitment period to the existing black start resources in the stakeholder process, Asthana said, with many black start service providers asserting that they had "relied upon the existing CRF rate in making their investment decisions and that there was insufficient indication that the CRF would change and under what circumstances."

"PJM was persuaded by the arguments advanced by the black start service providers that the new rate should be applied only to the new black start units but understands that it is important to get these issues before FERC for resolution," Asthana said in his letter. ■

Tasley, a single-unit 33 MW industrial gas turbine that began commercial operation in 1972 in Tasley, Va., is a black start-capable unit. | *Calpine*

PJM News

PJM MIC Briefs

Reactive Power Discussed

PJM stakeholders questioned whether a proposal addressing compensation for reactive power supply and voltage control service should be delayed because of several other important issues on which members are working.

Jim Davis, Dominion Energy | *© RTO Insider LLC*

Jim Davis, regulatory and market policy strategic adviser for Dominion Energy, *provided* a second first read of a *problem statement* and *issue charge* first presented at the Market Implementation Committee meeting in March. (See "Reactive Supply Compensation," *PJM MIC Briefs: March 10, 2021*.) Davis said the "great discussion" on the issue at the MIC allowed Dominion to make changes to the issue charge.

PJM transmission customers pay for reactive power as an ancillary service under Schedule 2 of the tariff, and generation owners must submit a filing to FERC under Federal Power Act Section 205 to seek compensation. The existing rate mechanism is time-consuming for generation owners, developers and transmission customers, Davis said, exposing them to litigation costs in the defense or challenge of the requested rates.

Dominion proposed several key work activities in the issue charge, including studying the existing rate filing process, reviewing the inputs for determining revenues and examining the recovery mechanisms in other RTOs and ISOs. It also calls for discussing improvements to the cost recovery process and examining alternative mechanisms.

Some stakeholders requested that the key work activities include education and discussion to "identify potential gaming risks" for reactive power, Davis said. Dominion also added language to the issue charge that if gaming risks are identified, stakeholders would develop "protective provisions" to be included in a cost recovery mechanism.

Davis said stakeholders also questioned the timing of the issue, so Dominion extended the time for completion from June to August.

"We recognize there's a lot on stakeholders' plates these days," Davis said.

Paul Sotkiewicz of E-Cubed Policy Associates asked how a generator could game reactive power.

| *© RTO Insider LLC*

Paul Sotkiewicz, E-Cubed Policy Associates | *© RTO Insider LLC*

Davis said there's a concern that if a generation owner doesn't like a rate that FERC approved or that the proceedings weren't going in its favor, it could then elect to use the existing stated rate. "We thought that was a valid concern."

Sotkiewicz said he recognized the importance of addressing the issue, but he wondered if it was the right time to take on extra stakeholder discussions because of pending FERC decisions and the significant work being done on the capacity market.

Michael Cocco, ODEC | *© RTO Insider LLC*

Michael Cocco, senior director of RTO and regulatory affairs for Old Dominion Electric Cooperative (ODEC), said he thought the issue charge would require any proposed solutions to create obligations on both buyers and sellers. Cocco said he didn't think the proposal would provide the option for sellers to submit a Section 205 filing with FERC, essentially creating a potential floor rate.

ODEC was also concerned the issue may not be broad enough because it exempts existing generators who have reactive power service rates already submitted with the commission, Cocco said, and that the issue charge "seems to be limiting" discussions.

"We would want more of a market solution that looks at need and competition for these services," Cocco said.

Davis said the intent was not to "prescribe a solution" in the issue charge, but to establish key work activities to have a "meaningful discussion" by all stakeholders to examine how the process works.

"We may not come to a solution, or we may come to something that's very similar to ISO-NE," Davis said. "In the end, if we decide that the existing methodology is appropriate, then so be it."

Independent Market Monitor Joe Bowring reviewed an alternate *problem statement* and *issue charge* addressing the issue. The proposal largely mirrored Dominion's language with some

PJM News

proposed additions.

PJM Monitor Joe Bowring | © RTO Insider LLC

Bowring pointed out that customers pay $355 million per year in separate reactive capacity charges and, currently, the costs of reactive are only partially integrated into the capacity market. He said 100% of the capacity costs of generating units are included in the cost of new entry, offset by a defined amount of reactive revenues, which is less than the levels currently paid, and that there is no reason to have a separate payment outside the capacity market.

Bowring said the Monitor wanted to point out some of the problems seen with the current process, make it "more efficient and more effective" and include the potential to recover capital costs related to reactive power through a market mechanism. He said stakeholders are spending a great deal of time and effort at FERC in "endless settlement conferences" regarding reactive power.

"It would be great to streamline that process," Bowring said.

Dominion's issue charge was "relatively non-controversial," he said, but the Monitor's version aims to add clarity and more education on topics, including the fundamentals of planning for reactive capability and the coordination of planning with the competitive PJM market design.

Sotkiewicz said he had some objections to the language in the Monitor's proposal. He didn't oppose the proposed education, but he said many of the proposed issues for clarification "aren't going to be clarified."

"I think this goes a step too far and gets into the capacity market," Sotkiewicz said.

Bowring said he doesn't know why there would be objections to clarification of the issue and believes it "won't take very long" to get some clarity in the issue by raising questions.

Sharon Midgley, Exelon | © RTO Insider LLC

Sharon Midgley of Exelon said she felt the Monitor's issue charge is "very broad" and "very comprehensive" and would be more time consuming to address. Midgley said there are other strategic issues members are working on, including the minimum offer price rule and energy pricing, that will take up valuable discussion time in the stakeholder process.

Midgley asked if Bowring thinks reactive power is a "top five" issue that stakeholders should be addressing this year or if it could be held off on.

Bowring said the Monitor has contemplated bringing the issue forward before but has chosen not to because of more pressing issues.

"We're OK with putting it off for a while," Bowring said. "I don't think it makes sense to put it off forever, but fitting it in an appropriate spot of priority is fine with us."

The committee will vote on the proposals at its May meeting.

Fast-start Pricing Manual Revisions

PJM presented the committee with an update on proposed manual revisions stemming from a FERC order late last year on fast-start pricing.

Nicole Militello, senior engineer of real-time market operations, *provided* a first read of updates to *Manual 11: Energy & Ancillary Services Market Operations* and *Manual 18: PJM Capacity Market*. Rebecca Stadelmeyer, manager of market settlements development, provided a first read of proposed changes to *Manual 28: Operating Agreement Accounting*.

FERC in December ordered PJM to make several changes to its tariff, including relaxing fast-start resources' economic minimum operating limits and allowing resources to reflect their commitment costs in their prices. (See *FERC Drops Fast-Start NOPR; Orders PJM, SPP, NYISO Changes*.)

PJM responded to the order on Feb. 16, Militello said, requesting a response by this Friday. She said that if PJM receives a "clean" approval by then, it will implement the order on May 1 and conduct a second read of the manual changes in May at the MIC and the Markets and Reliability Committee meetings. If PJM doesn't receive notification from FERC or has to make additional compliance filings, Militello said, the RTO will delay the second reading.

In Manual 11, PJM created new sections on fast-start capable resources, the fast-start capable adjustment process and eligible fast-start resources. In total, Militello said, PJM updated or created 21 sections in Manual 11 to provide clarity on how fast-start pricing will impact the current business rules.

Militello said Manual 18 had only minor changes, including a clarification that the scheduled megawatts used for excusal and bonus purposes in performance assessment interval settlement calculation will use dispatch run LMP.

Stadelmeyer said the Manual 28 updates include changes for dispatch differential lost opportunity cost credits and double counting of commitment costs.

Monitoring Analytics' Catherine Tyler said the Monitor is "carefully reviewing" the manual changes, especially those for Manual 11. She said there are potential situations that may occur in which prices "don't make sense given the outcomes happening in the market."

Some of the changes in Manual 11 are "highly consequential," Tyler said, including sections on verification of offers greater than $1,000/MWh and how reserves will be cleared and priced.

"There is a great need for clarity and transparency here because market participants are going to have questions once they see the different market outcomes with fast-start," Tyler said.

Virtual Combined Cycles

Becky Robinson of Vistra provided a first read of a *problem statement* and *issue charge* addressing regulation for virtual combined cycle units.

Robinson said units that are "virtually" modeled by PJM can sometimes receive regulation awards from the market clearing engine that vary, which Vistra has been experiencing with some of its units.

The issue charge proposes several high-level work activities, Robinson said, including education on the operational and technical difficulties of operating virtually modeled combined cycle units with different regulation assignments and brainstorming possible solutions to ensure that regulation awards are consistent.

Robinson said Vistra wanted to scope the issue charge to be "targeted" because it's a specific and technical issue.

"We don't think of this as a broad policy issue," Robinson said. "We don't need to put another big item on stakeholder's plates right now."

The committee will vote on the proposal at its May meeting. ■

— Michael Yoder

PJM PC/TEAC Briefs

Planning Committee

ICSA Vote Delayed

PJM delayed a vote on a proposal for changes to the *pro forma* interconnection construction service agreement (ICSA) after stakeholders at last week's Planning Committee meeting asked the RTO to take more time and use clearer language.

Mark Sims, PJM | © RTO Insider LLC

Mark Sims, PJM manager of infrastructure coordination, *reviewed* the proposed *problem statement*, *issue charge* and *tariff* revisions addressing the RTO's concerns associated with the ICSA's lack of language on supersedure and its current automatic termination provision. Sims presented the issue in March at the PC meeting and later brought it to the Markets and Reliability Committee for a first read. (See "Interconnection Construction Service Agreement," *PJM PC/TEAC Briefs: March 9, 2021*, and "ICSA First Read," *PJM MRC/MC Briefs: March 29, 2021*.)

Sims said the growing interconnection queue volume has created the need for dealing with the issue. PJM wants to "remain focused on efficiency," Sims said, and have identified improvements in two areas of tariff Attachment P that deal with ICSAs.

Section 1 does not contain *pro forma* language that considers when an ICSA supersedes an already effective agreement, Sims said, causing "increased administrative burden" for PJM.

The tariff provides for automatic termination of an ICSA upon the occurrence of certain conditions, he said, which can occur without PJM's knowledge. The conditions include completion of construction of all interconnection facilities, a transfer of title, final payment of all costs or delivery of final as-built drawings to the transmission owner. Sims said PJM wants TOs to notify them when the conditions have been met.

PJM received little feedback regarding the supersedure language, Sims said, but stakeholders had several comments regarding the termination provision. Sims said PJM is "revisiting" the tariff language and have engaged in several conversations with stakeholders.

"Our goal is to make it as unburdensome as possible, quick and easy, straightforward and accomplish a solution for the problem we're trying to fix," Sims said.

Pulin Shah, Exelon | © RTO Insider LLC

Pulin Shah, director of transmission strategy and contracts for Exelon, asked if there was an "urgent need" by PJM to make the changes. Shah said the language in the issue charge would benefit from another month to discuss its implementation and details, making stakeholders "more comfortable" with the proposed solution. "We need to fully understand what this is going to entail."

Sims said PJM didn't see an urgent need for endorsement and was open to a delay.

Carl Johnson of the PJM Public Power Coalition said he would like to see the RTO have more discussions with TOs and "accommodate" any concerns with the language. Johnson said TOs will ultimately be the stakeholders filing comments with FERC if they aren't satisfied with the tariff language that's endorsed, so it was important to address problems up front.

Alex Stern, PSEG | © RTO Insider LLC

Alex Stern, director of RTO strategy for PSEG Services, had provided a *friendly amendment* to the proposed tariff language at the March MRC meeting. The amendment proposed that the notification obligation be "reciprocal" so that PJM would provide written notice to the interconnected TO and customer generator that the ICSA has been canceled with FERC.

PSEG has been working with PJM to come up with a compromise, Stern said, but they haven't been able to reach an agreement. "If we can fix this by taking a little bit more time, that would make sense."

CIR Issue Charge Endorsed

Stakeholders endorsed an issue charge aimed at addressing the capacity interconnection rights (CIRs) of variable resources. The measure passed with 99% support, as only one member voted "no" on the issue charge.

Jonathan Kern | © RTO Insider LLC

Jonathan Kern of PJM *reviewed* the *problem statement* and *issue charge*. Kern said the RTO made extensive revisions to both documents after receiving "significant stakeholder feedback" when the issue was first presented at the February PC meeting. (See "Capacity Interconnection Rights," *PJM PC/TEAC Briefs: Feb. 9, 2021*.)

The RTO engaged in one-on-one discussions with several different stakeholders, who said several items in the key work activities of the issue charge were out of scope and recommended further modifications, Kern said.

Changes include making the effective load-carrying capability (ELCC) analysis, other than those required to incorporate CIRs as inputs to the ELCC calculations, as an out-of-scope item. Kern said the primary reason for the change was to clarify that the bulk of the ELCC analysis will be out of scope in discussions and to specify which portions of the analysis will be in scope.

A second change was making alterations to how PJM conducts its market and operation functions out of scope in the issue charge. Kern said direct inputs that are provided by and processes that are overseen by System Planning to support the market and operation functions will be considered in scope.

PJM also removed items related to winter CIRs and energy and capacity market considerations.

Kern said PJM will now hold a series of monthly discussions with the PC to develop and propose changes to the applicable manuals and governing documents by the end of the year. He said PJM will hold educational sessions and discuss and develop proposals from April to October and present a proposal to the MRC in November.

Interconnection Process Reform Endorsed

Members unanimously endorsed PJM's proposal to address challenges caused by the increasing interconnection queue volume.

Jason Connell, director of infrastructure planning for PJM, *reviewed* the *problem statement* and *issue charge* first brought to the PC last month.

PJM News

(See "PJM Proposes Effort to Respond to Interconnection Volume," *PJM PC/TEAC Briefs: March 9, 2021*.)

Jason Connell, PJM | *© RTO Insider LLC*

Connell said the interconnection queue volume has more than tripled over the past three years, with PJM going from accepting around 400 projects per year to more than 1,000 in 2020 and even more slated for 2021.

The on-time rates of feasibility and system impact studies have continually improved, Connell said, but the backlog of requests has increased, causing concern for PJM and its stakeholders as the RTO has had to divert resources to finish studies by deadlines.

PJM proposed several key work activities in the issue charge, including interconnection studies, cost responsibility, interim operation and agreements, requirements for new service requests and other opportunities that can "positively impact" the current and future interconnection queue backlog.

Stakeholders suggested a clearer delineation of the "cost responsibility" key work activity at last month's PC meeting, Connell said, describing it instead as "cost concerns" and splitting discussions between project cost estimates and the cost responsibility for network upgrades.

A suggestion of incorporating a target date for having the issue completed was also added to the issue charge. Connell said PJM would like to have the issue finalized by the end of 2021 and have a FERC filing by January 2022.

Ken Foladare of Tangibl said he would "strongly" recommend against having a set deadline and timeline to complete the issue. Foladare said FERC has not given PJM a deadline, so it shouldn't arbitrarily be rushed.

The interconnection process needs to be examined carefully, Foladare said.

"This is going to affect way too many things," Foladare said, "and at the end of the day, there's a lot of dollars involved as well."

Connell said the concept of having a target date was to give PJM and stakeholders a goal to work toward but that it is not firm. He said PJM is still deciding whether to use a task force for reporting to the PC or scheduling special sessions of the PC to deal with the interconnection issue.

"We are not going to compromise a good process for a time limit," Connell said.

New Service Reviewed Again

Connell also *provided* a second first read of the *problem statement* and *issue charge* and reviewed draft tariff *language* outlining the RTO's proposed "quick fix" to extend its deadline for responding to new service requests. PJM received several comments from stakeholders at the March PC meeting and worked to address issues, Connell said. (See "New Service Requests," *PJM PC/TEAC Briefs: March 9, 2021*.)

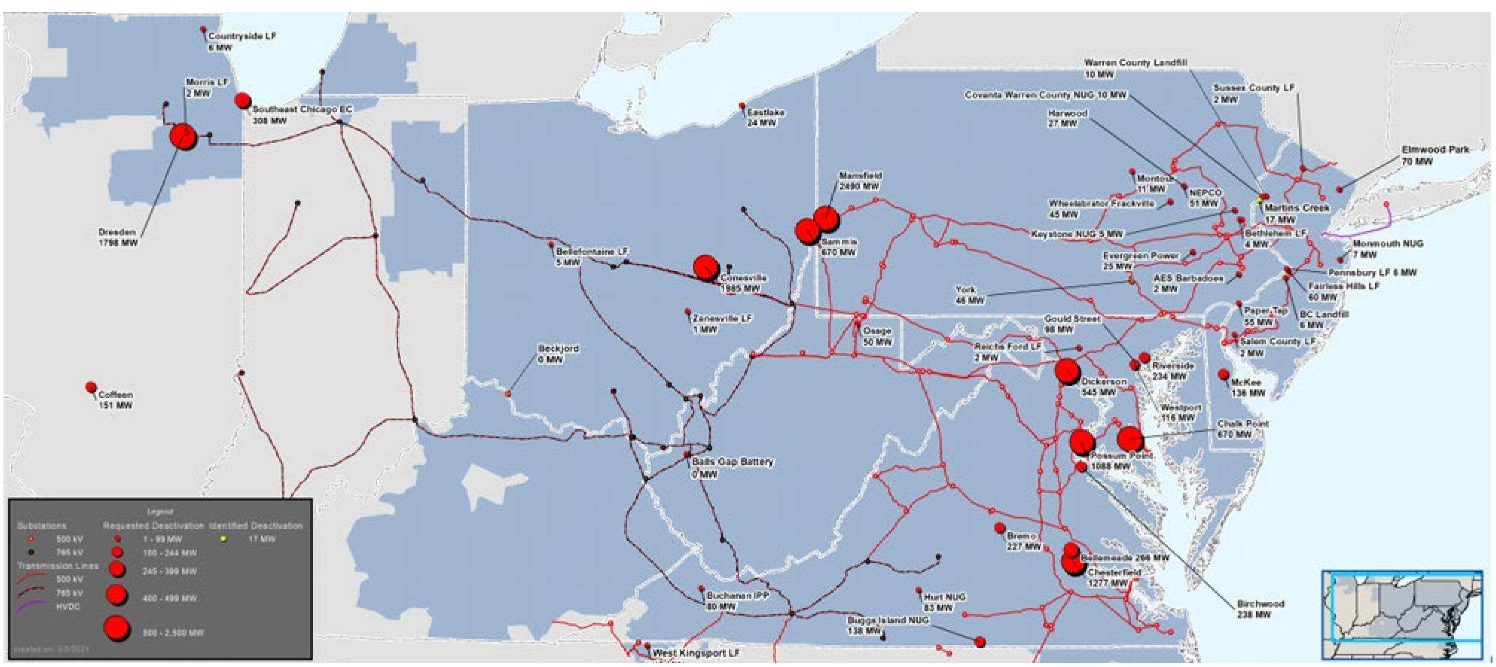
"We think we've arrived at a good solution to be agreeable to all folks," Connell said.

PJM processes new service requests under several parts of the tariff, Connell said, with the RTO administering two new queue windows each year: one from April 1 to Sept. 30, and another from Oct. 1 to March 31.

Connell said the tariff currently establishes "tight time frames" requiring PJM to review a new service request and issue a notice of any deficiencies within five business days. In turn, he said, interconnection customers are required to respond to a deficiency notice within 10 business days, and PJM is provided an additional five business days to review the response to the deficiency notice.

PJM typically receives 50% or more of the total number of new service requests during the last month of a queue window, Connell said, with most of the requests submitted during the last week or on the last day of the window. He said the short window impacts the ability of PJM employees to perform reviews on time, leading the RTO to seek waivers from FERC to extend the deadline.

In the queue window that ended in September, Connell said, 340 of the 563 new service requests were filed in the last week, including 247 on the last day. Connell said the latest queue window that ended March 31 will have



PJM generation deactivation map | *PJM*

PJM News

about 700 new service requests.

PJM's proposed solution is to change the five-day deadline to 15, Connell said, or to "use reasonable efforts to do so as soon thereafter as practicable."

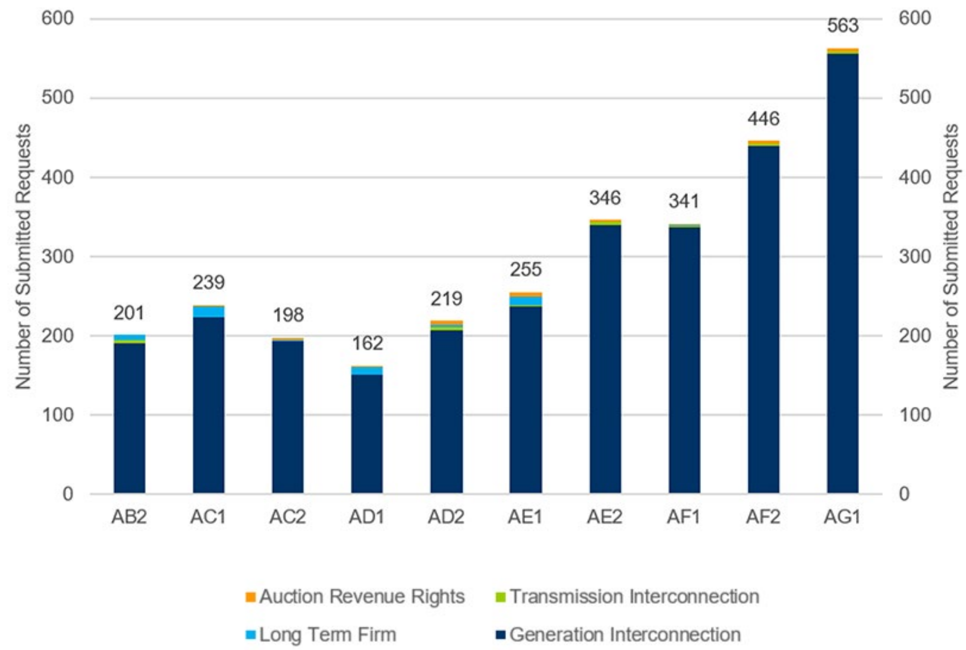
Stakeholder feedback from the March PC meeting included moving up the closing of the new service queue by about three weeks to allow more review time of the applications by PJM. Impacted stakeholders indicated the new deadline would not affect the model build cycle and analysis of TOs.

Connell said the proposed solution would also provide PJM 15 business days to review the interconnection customer's response to the deficiency notice.

Stern said he appreciated PJM incorporating stakeholder feedback into the issue charge. He said the previous proposal could have created more backups.

"This revised approach seems like a win-win-win," Stern said. "It's probably a win for the queue applicants, those with queue study responsibilities and for PJM."

PJM will seek endorsement at the May PC meeting.



Number of new PJM service requests in the most recent new services queue windows | *PJM*

Transmission Expansion Advisory Committee

Offshore Transmission Study Update

Matthew Bernstein, state policy solutions analyst for PJM, provided an *update* on the offshore transmission scenario study during last week's Transmission Expansion Advisory Committee meeting. Bernstein first updated the committee of the work being done to analyze the regional transmission solutions to accommodate state offshore wind goals. (See *PJM States Exploring 6 Scenarios in OSW Tx Study*.)

PJM was originally looking at six different scenarios for analysis, Bernstein said, but settled on five during the final analysis process.

Scenario 1 is being called a "short-term scenario," Bernstein said, with a timeline extending to 2027 and includes an OSW injection set of 9,020 MW at various locations on the system. It also includes modeling that factors in generator deactivations and state policy goals through 2027.

Scenarios 2 to 5 have a timeline extending to 2035, Bernstein said, and include injection ranges between 17,620 and 19,620 MW. The four scenarios also include increased locational variability in the injection points.

Bernstein said the injections for the scenarios are "slightly higher" than the currently announced state policies for OSW generation. He said the study will allow PJM to model what the system can handle in addition to what has already been announced.

Based on the initial study findings and feedback from states, Bernstein said, PJM may study up to five additional scenarios. He said the RTO will present results of the scenario studies when they're completed, which is anticipated in the second half of 2021.

Martins Creek Power Plant in Northampton County, Pa. | *Talen Energy*

Generation Deactivation Notification

Phil Yum, of PJM's system planning modeling and support department, *provided* an update on recent generation deactivation notifications, including a request to deactivate the Martins Creek Power Plant Unit 4, a 17.3-MW oil and gas generation unit on the Delaware River in Northampton County, Pa., in the PPL transmission zone. The deactivation is scheduled to take place by May 31, 2022.

Yum said both PJM and PPL did not identify any reliability impacts or violations from the deactivation of the unit, which Talen Energy owns. ■

— Michael Yoder

PJM News

PJM Operating Committee Briefs

IROL-CIP Cost Recovery Endorsed

PJM stakeholders unanimously endorsed an issue charge aimed at developing a cost recovery mechanism for generators forced to upgrade their facilities to comply with certain NERC Critical Infrastructure Protection (CIP) standards regarding interconnection reliability operating limits (IROLs).

Darrell Frogg, senior engineer for generation at PJM, *reviewed* the *problem statement* and *issue charge* of the proposal at last week's Operating Committee meeting. He first presented the issue at the March OC meeting. (See "Cost Recovery for 'IROL-critical' Generators?" *PJM Operating Committee Briefs: March 11, 2021*.)

PJM proposed allowing generators deemed critical for determining interconnection reliability operating limits to recover required upgrade costs. An IROL is any system operating limit that, if exceeded, could jeopardize the entire grid.

Frogg said PJM is required to develop a list of "IROL-critical" facilities in the fall, and generators on the list may then be required to upgrade their units to meet reliability requirements. He said PJM is solely responsible for creating the list, and generation owners have no control over the IROL-critical designation.

PJM made the proposal on behalf of generator owners because the classification of a generator as IROL-critical is considered critical energy and electric infrastructure information.

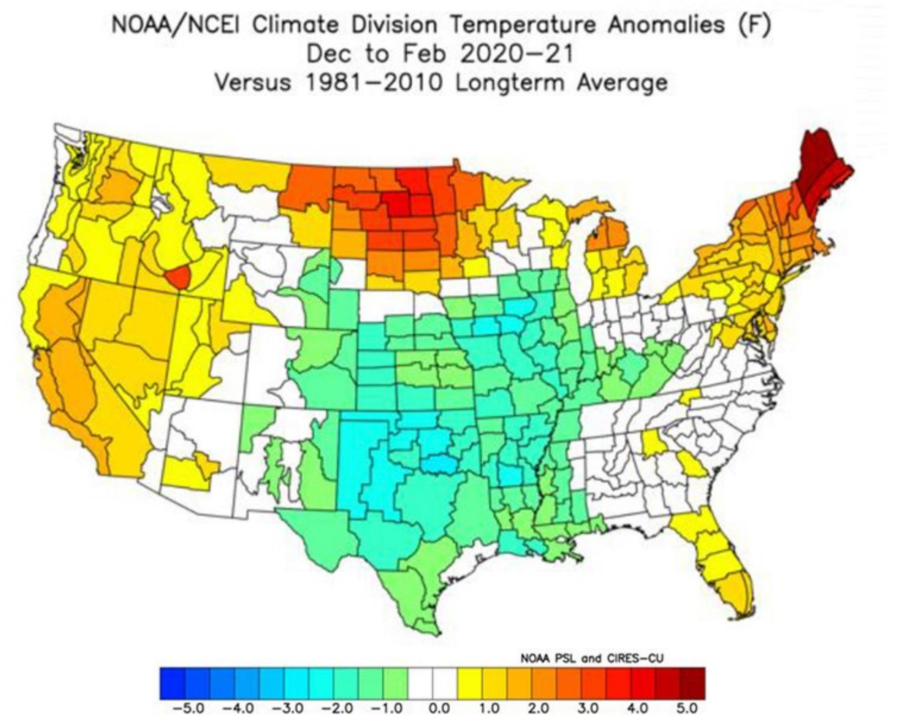
"We want to get the generation owners the opportunity to recover costs before the next annual list is created in the fall," Frogg said.

With the endorsement of the issue charge, stakeholders will study the relevant CIP standards, review how a generator's status is determined by PJM and consider the types of costs that generators incur from being designated. Stakeholders will look at how other RTOs and ISOs have addressed the issue, such as ISO-NE's mechanism approved by FERC last May. (See *FERC OKs Payment Rules for IROL Facilities*.) Stakeholders will also discuss which costs should be recovered and how, and ensure the entire process is transparent.

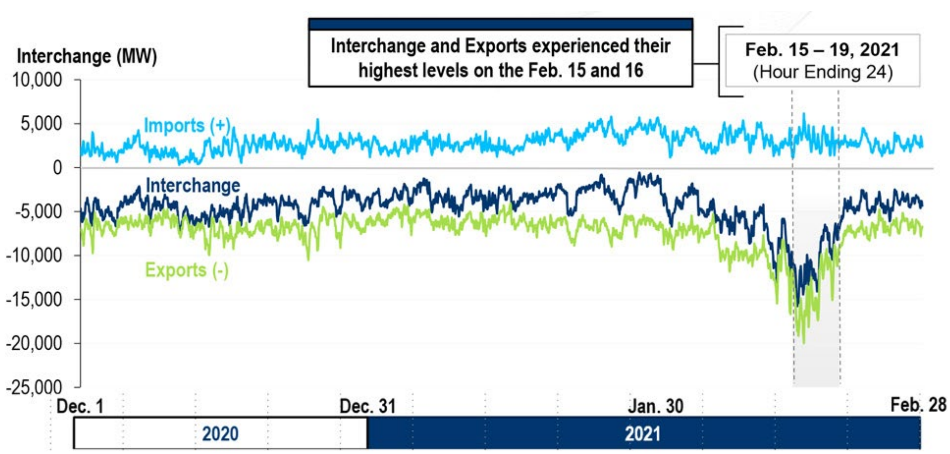
Frogg said work on the issue is expected to take three to six months with a recommendation brought to the Markets and Reliability Committee at the end of the process. The Market Implementation Committee will be updated on the work since some of the issues are related to that committee.

In response to a question from Becky Robinson of Vistra, Frogg said PJM isn't seeking to complete the work ahead of deadline because it anticipates adding an unusually high number of IROL-critical facilities to the list in the fall.

"There could usually be a fluctuation of one or two units, but there's nothing significant," Frogg said.



| NOAA/NCEI

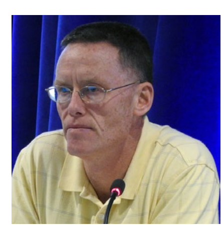


| PJM

COVID-19 Update

Stakeholders questioned PJM officials about the RTO's stance on the vaccination of staff for COVID-19.

Paul McGlynn of PJM said as the infection rates started to drop in early March, PJM decided to end the sequestration of its control room operators at the end of the month.



Paul McGlynn, PJM | © RTO Insider LLC

The RTO began se-

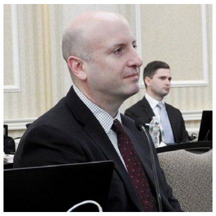
PJM News

questration of critical staff in early December as case numbers were increasing, McGlynn said, rotating staff in and out of sequestration monthly.

Control room staff continue to be split between two locations and are practicing social distancing protocols and enhanced cleaning processes, McGlynn said. A third emergency control room set up at the beginning of the pandemic continues to be available if necessary and can be converted to real-time operations from its current training purposes within a few hours.

"Today we're currently in our normal configuration, operating out of the two main control rooms," McGlynn said. "Hopefully we're done with sequestering staff at this stage of the game."

As far as vaccinations, McGlynn said, access to shots is "improving" while the demand remains high. He said most PJM staff are eligible to be vaccinated.


Greg Poulos, CAPS | © RTO Insider LLC

Greg Poulos, executive director of the Consumer Advocates of the PJM States (CAPS), asked what importance PJM is placing on staff receiving the vaccine and the impact on reopening the RTO's campus. Poulos also asked if the vaccine will be mandatory.

McGlynn said that while PJM took early steps to ensure availability of the vaccine to essential staff, it not requiring employees to receive the vaccine.

Paul Sotkiewicz of E-Cubed Policy Associates said he was "concerned" by PJM's stance of not mandating vaccination and asked whether that could create a potential health and safety problem.

McGlynn said PJM has taken the position that it cannot require employees to be vaccinated. As long as protocols remain in place, including social distancing, the RTO will be able to manage the situation safely, he said.

"There's a lot of reasons why people choose to be vaccinated, and there's a lot of reasons why people choose not to be vaccinated," McGlynn said.

Sotkiewicz said universities in the Northeast are requiring students to receive a vaccine to come back to campuses in the fall. He said because of PJM's importance in the reliability of maintaining the grid, it would be "perfectly reasonable" to require vaccines for at least essential staff.

"I'm concerned this is setting us up for potential problems down the road," Sotkiewicz said.

Rank	Date	Hour Ending	Total Interchange	Total Exports	Total Imports
1	Monday, February 15, 2021	15	-15,763	-18,607	2,844
2	Monday, February 15, 2021	18	-15,394	-19,128	3,734
3	Monday, February 15, 2021	16	-15,169	-17,842	2,673
4	Monday, February 15, 2021	14	-14,999	-17,822	2,823
5	Monday, February 15, 2021	13	-14,733	-17,817	3,084
6	Monday, February 15, 2021	17	-14,632	-17,467	2,835
7	Tuesday, February 16, 2021	6	-14,427	-18,941	4,514
8	Monday, February 15, 2021	19	-14,240	-18,357	4,117
9	Wednesday, February 17, 2021	18	-14,082	-16,504	2,422
10	Tuesday, February 16, 2021	7	-14,076	-18,962	4,886
2020/21 Winter Average			-4,521	-7,354	2,834

Top 10 interchange hours — Winter 2020/21 | *PJM*

Winter Operations Review


Rebecca Carroll, PJM | *© RTO Insider LLC*

Rebecca Carroll of PJM *reviewed* the 2020-21 winter operations summary, including the impacts on the RTO from the unprecedented energy emergencies in ERCOT, SPP and MISO in February.

Temperatures in most of the PJM footprint were average or slightly above normal during the winter, while the RTO's western zones were below average, Carroll said.

Four cold weather alerts were issued during the season, all in February. The alerts occurred primarily in PJM's western zones, and only two coincided with the mid-month cold snap that gripped much of the middle of the country.

During Washington's Birthday week, the Midwest faced temperatures that dipped as much as 28 degrees below normal lows, while most of PJM's footprint was spared the extreme cold, experiencing lows much closer to normal.

Carroll said PJM's real-time LMPs averaged $29.79/MWh, much lower than previous winters that experienced significant weather-related events, including the 2014 polar vortex ($72.50/MWh) and the January 2018 cold snap ($46.66/MWh). Last winter LMPs hit an all-time low of $21.31/MWh as PJM experienced mild temperatures for most of the season.

Carroll said the "magnitude of exports" constituted the biggest story for PJM during the emergency, with the RTO exporting about 16,000 MW on average compared with the more typical 5,000 MW.

During the top-10 peak hours, interchange activity was more than three times above the 2020/21 winter average with PJM exporting more than five times as many megawatts as it was importing, she said. Exports during the cold snap were 2.5 times higher than the 2020/21 winter average, with 68% going to MISO, she said. The 1.6 TWh of exports during the event accounted for 10% off PJM's entire winter exports.

Carroll called the export numbers "remarkable."

Manual 03 First Read

Lagy Mathew of PJM *provided* a first read of changes to Manual 03: Transmission Operations, which are part of a periodic review. Mathew said substantial changes were proposed for the manual, including the addition of Attachment G: Transmission Outage Ticket Best Practices.

Section 3.4.2 and 3.5.4 regarding the nuclear plant interface requirement (NPIR) language changes for eDART nuclear voltage limits also saw significant changes, Mathew said, and PJM received feedback from stakeholders who said they were not ready to implement the changes in their operations.

Mathew said the updated language was not available at the OC meeting because it was still being reviewed by staff. He said PJM plans to bring the updated manual language for a first read at the April Markets and Reliability Committee meeting.

Sharon Midgley of Exelon said she was "not comfortable" with PJM considering the presentation a first read without making the language available for review by stakeholders. Midgley said Exelon is still working on potential implementation of the NPIR language changes and wants to review the language to determine the exact impacts. ■

— Michael Yoder

SPP News

SPP MMU Quarterly Report Focuses on Winter Storms

Continued from page 1

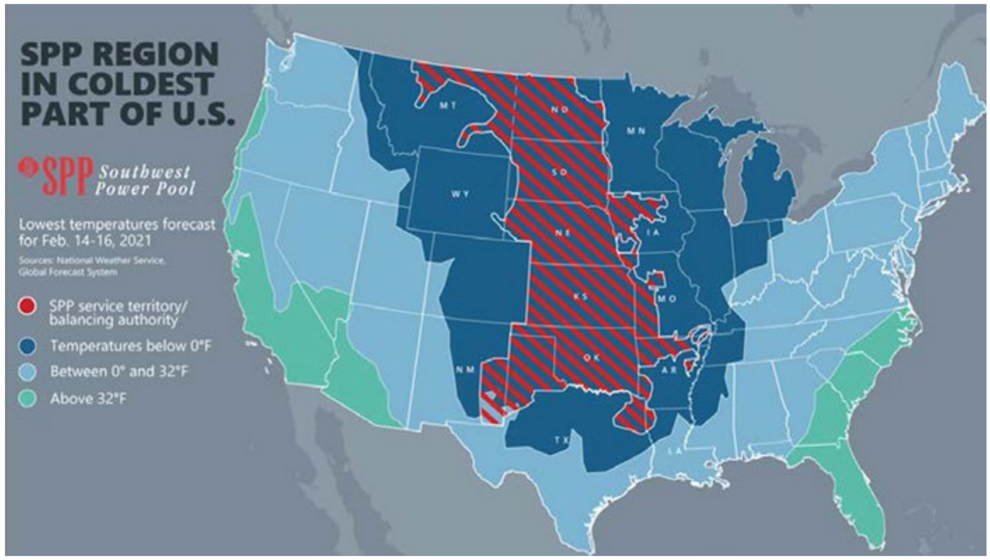
$186.82/MWh in February.

The generation outages were driven by fuel-supply constraints, icing and other weather-related issues. Gas-fired plants competed with high demand for residential heating as wellheads, pipelines and pumping stations froze over. The MMU said natural gas plant outages peaked at more than 25 GW on Feb. 18, including both simple and combined cycle plants.

Wind resources were hampered by an icing event Feb. 7-8 and were slow to recover because of the low temperatures. More than 11 GW of wind generation were offline on Feb. 8, but about 3 GW were back online during the height of the storm.

SPP's generation was boosted by imports from MISO and PJM, but those decreased because of transmission congestion and the RTOs' own emergency needs.

The tight conditions resulted in energy offers above SPP's $1,000/MWh safety-net offer cap beginning Feb. 11. SPP's tariff allows such offers under FERC Order 831, but the Monitor must verify the offers before they can be used in the market-clearing process or eligible for make-whole payments. Uncapped real-time prices exceeded $10,000/MWh on Feb. 18,



Snow, ice and record low temperatures settled over SPP's 14-state footprint in February. | *SPP MMU*

when supply was at 40.3 GW, and peaked at $6,302/MWh on Feb. 15, when supply was 45.9 GW.

The MMU commended SPP and market participants for delivering power despite unprecedented demand and supply conditions that stressed the market. It said it is continuing to evaluate market performance and behavior and will present lessons learned and recommendations as part of SPP's comprehensive winter review process before the Board of Directors in July. (See *SPP Launches Review of Storm Response*.)

"We look forward to continuing to educate stakeholders on the market implications on this event and improving the market going forward," the Monitor said.

The MMU will host a webinar to discuss the winter report at 2 p.m. this Thursday. ■

SPP News

6th Western Utility Interested in SPP Membership

By Tom Kleckner

SPP said Friday that a planned expansion into the West has attracted another potential member in the Colorado River Storage Project (CRSP).

The grid operator, which has launched two other services in the Western Interconnection since 2019, said it received a letter from CRSP expressing interest in evaluating membership in the RTO. A member of the Western Area Power Administration, the utility joins five other entities that have already asked SPP to provide information about RTO membership services in the West.

CSRP already participates in both of SPP's contract-based Western services: Western Reliability Coordination and the Western Energy Imbalance Service (WEIS) market. It joins Basin Electric Power Cooperative, Deseret Power Electric Cooperative, the Municipal Energy Agency of Nebraska (MEAN), Tri-State Generation and Transmission Association, and WAPA's Upper Great Plains-West and Loveland Area Projects, which reached out to SPP in November. (See *Western Utilities Eye RTO Membership in SPP*.)

The companies are currently working with SPP staff to evaluate the terms, costs and benefits of putting their Western facilities under the RTO's tariff. As members, they would benefit from day-ahead wholesale electricity market administration, transmission planning, reliability coordination, resource adequacy and other services, the grid operator said.

Basin Electric, MEAN, Tri-State and WAPA's UGP-East are already SPP members, having joined in 2015 when they placed their Eastern Interconnection facilities under the RTO's tariff.

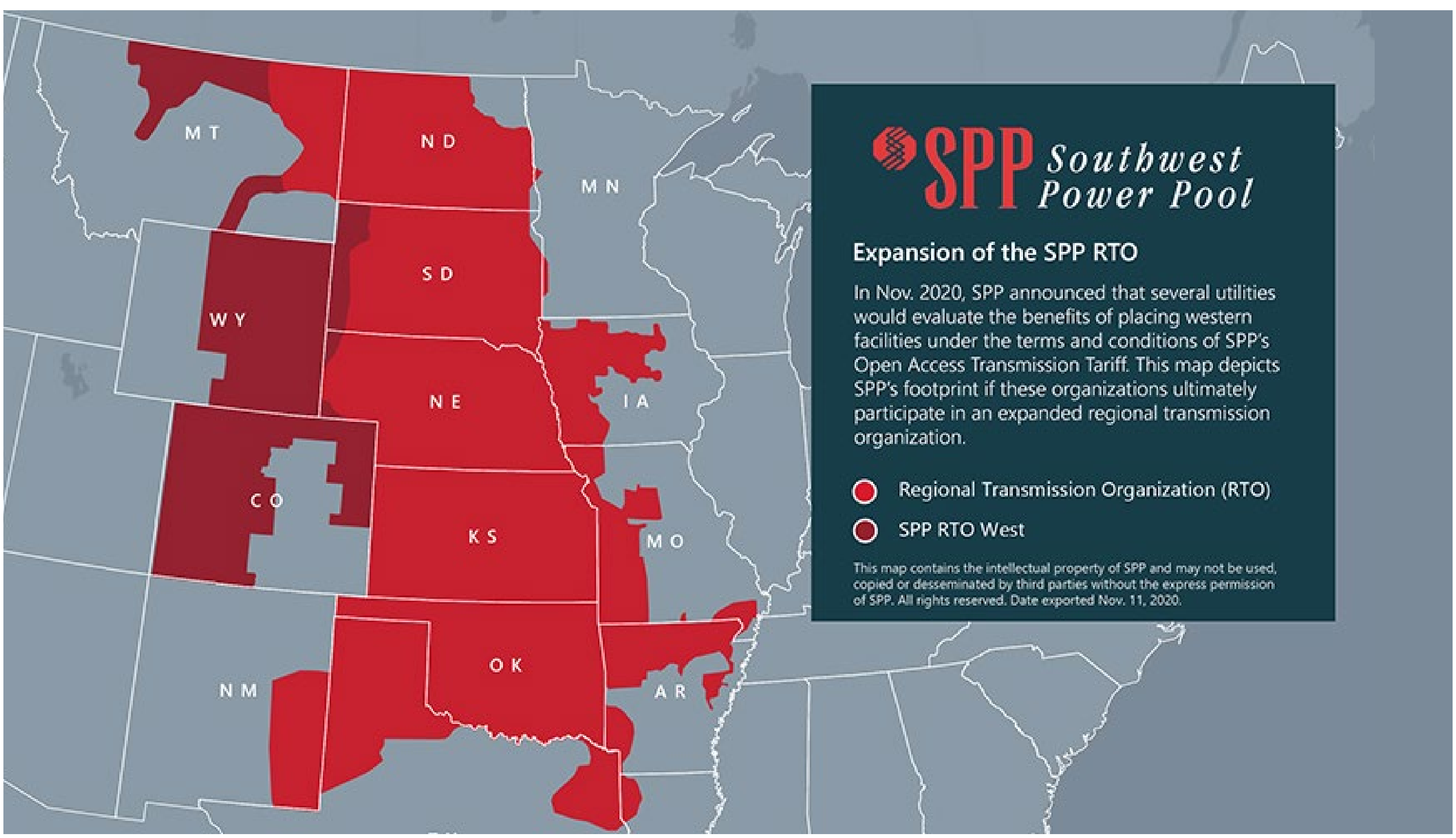
WAPA interim Administrator and CEO Tracey LeBeau said joining SPP's exploratory effort is a "logical next step" for CRSP as it evaluates how to maintain relevance with its customers and communities.

"Any decision to move forward with final negotiations for SPP RTO membership for CRSP or any WAPA region will be consistent with our statutory requirements and involve the appropriate public processes," she said.

"SPP already has a strong partnership and history of successful collaboration with WAPA. … This expression of interest from their CRSP is a welcome affirmation of our belief that the Western Interconnection stands to gain tremendous value through services like those we can provide them," SPP CEO Barbara Sugg said.

The RTO said it expects its wholesale market, resource adequacy program and other regionalized services will help Western members reach their renewable energy goals and reinforce system reliability. Those joining SPP would receive $25 million in annual adjusted production cost savings and revenues from off-system sales, according to a Brattle Group study. Current members would realize $24 million in savings resulting from the expansion of SPP's market, transmission network and generation fleet, according to the study. (See *SPP Stakeholders Dig into WEIS Market Study*.)

SPP gained a foothold in the West in 2019 with the rollout of its RC service. It successfully launched the WEIS in February. ■



SPP's RTO West would expand the grid operator's 14-state footprint. | *SPP*

Company Briefs

Eversource Appoints New CEO

Eversource Energy last week announced the appointment of Joe Nolan as the company's new CEO, effective May 5. He will succeed Jim Judge, who will become the company's executive chairman.

During his 35-year career at Eversource, Nolan has held leadership roles in customer service, government and regulatory affairs, community relations and corporate strategy. He is also the leader of the Eversource-Orsted joint venture, which plans to develop at least 4,000 MW of offshore wind capacity.

Judge will oversee strategic and investment planning, along with investor and industry relations.

More: *Hartford Courant*

JPMorgan Secretly Emailed Trump Admin About Bailing Out Oil Industry

The environmental group Friends of the Earth recently obtained emails from last April between JPMorgan Chase and top Treasury Department officials through a Freedom of Information Request and subsequent lawsuit. In the emails, JPMorgan appears to be requesting changes to government lending programs meant to help smaller and medium-sized businesses weather the economic fallout of the COVID-19 pandemic.

In March 2020, Congress passed the Coronavirus Aid, Relief and Economic Security Act, providing $454 billion to the Federal Reserve to support businesses. Three weeks after the law passed, a JPMorgan executive forwarded an email to then-Treasury Deputy Secretary Justin Muzinich that included a discussion of the ways the government could directly support bailouts for the oil and gas sector and protect banks exposed to heavy losses because of falling oil prices.

In a statement, JPMorgan said it "engaged with the government to provide feedback on the Main Street Lending Program broadly and across all industries" and that the email was sent to the Treasury deputy secretary in error.

More: *Mother Jones*

Samsung SDI to Supply Battery Cells to EV Startup Rivian

Electric vehicle startup Rivian said last week that South Korean manufacturer Samsung SDI Co Limited will supply battery cells for its vehicles.

Rivian, which hopes to put an electric pickup and SUV in production this year, said it had been working with Samsung throughout the process of developing the battery cells.

More: *Reuters*

Federal Briefs

Biden Taps Expert in Native American Law as Top Interior Lawyer

President Joe Biden last week nominated Native American law expert **Robert Anderson** to be solicitor of the Interior Department. The solicitor is the chief attorney for the department, legal adviser to the secretary and oversees 430 attorneys and other staff.

A leading figure in Native American law, Anderson has written that tribes should have more influence in federal decisions that affect their land and people.

Anderson has been the Interior's principal deputy solicitor since Biden took office on Jan. 20. The Senate will have to confirm his new role.

More: *Minnesota Reformer*

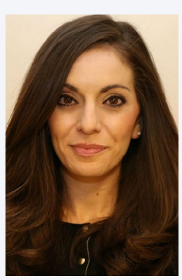
Court Tosses Trump Rule Limiting Emissions Regulations

A panel of federal appeals judges in Washington, D.C., last week rejected a Trump administration rule that would have prevented the EPA from setting greenhouse gas limits on multiple, polluting industries.

The rule, finalized just before Trump left office, allows greenhouse gas limits on power plants and exempts activities such as oil and gas production and iron and steel manufacturing. The regulation said only sectors whose pollution makes up more than 3% of the country's greenhouse gas emissions are "considered to contribute significantly to dangerous air pollution," however EPA calculations determined that between 2.5 and 3% of U.S. greenhouse gas emissions come from the oil and gas sector.

More: *The Hill*

Glick Names Venuto, Smaczniak to FERC Leadership Positions



FERC Chairman Richard Glick last week named **Sarah Venuto** as director of the Office of External Affairs and Kim Smaczniak as a special counsel in the Office of General Counsel.

Venuto has expertise in political and legislative strategy, coalition building and federal policy with a focus in energy, environment and natural resources. She served as the Democratic staff director for the Senate Energy and Natural Resources Committee. Before that she was chief counsel to Sen. Joe Manchin.

Smaczniak comes to FERC from the Clean Energy Program at Earthjustice, where she served as managing attorney and oversaw the program's litigation strategy at the state and federal level.

More: *FERC*

Interior Bolsters OSW by Revoking Trump-era Legal Opinion

The Interior Department last week bolstered offshore wind energy by revoking a legal opinion issued during the Trump administration. Principal Deputy Solicitor Robert Anderson issued an opinion that reversed the Trump-era view that the department should err "on the side of less interference rather than more interference" in fishing when it comes to offshore wind activities.

Anderson said the Interior secretary should seek to "strike a rational balance" between various interests. He also argued that Trump solicitor Daniel Jorjani's opinion "failed to note" that the law also says that the "interference with reasonable uses" is followed by the phrase "(as determined by the Secretary)," which he argued gives the secretary discretion to decide.

More: *The Hill*

NOAA: CO_2, Methane Emissions Surged in 2020 Despite Pandemic

National Oceanic and Atmospheric Administration research suggests carbon dioxide and methane emissions surged in 2020 despite COVID-19 shutdowns.

Data collected at remote sampling locations indicated the global surface average for CO_2 was 412.5 parts per million last year – a 2.6 ppm increase – the fifth-highest global increase rate on record for a single year. Meanwhile, atmospheric methane's annual increase was 14.7 parts per billion, the largest in the 37 years the administration has measured it.

The NOAA said preliminary estimates are usually slightly higher than final calculations but expects the increase to remain among the largest ever recorded.

More: *The Hill*

Ohio Energy Giants Haven't Paid Federal Income Taxes in Years

Three Ohio energy companies, FirstEnergy, AEP and Duke Energy, had negative effective tax rates and have not paid federal income taxes since the 2017 Trump tax cuts, according to the Institute on Taxation and Economic Policy.

The paper, which analyzed tax disclosures in the corporations' annual reports, found that 55 profitable companies didn't pay any federal income tax in 2020, and 26 hadn't paid any in the three years since the Tax Cuts and Jobs Act.

FirstEnergy netted almost $3.7 billion before taxes in the past three years, yet it's allowed to show a loss for tax purposes. That's because the company can use "bonus depreciation," a rule that allows it to write off the cost of a capital project immediately as opposed to gradually through its useful life.

AEP earned almost $6 billion before taxes in the past three years but did not pay federal income tax. However, spokesman Scott Blake said the company paid $70 million in other federal taxes in 2020 alone. While Duke has paid no federal income tax on nearly $8 billion in pre-tax earnings since 2017, spokeswoman Catherine Hope Butler said it paid $2 billion in state and local taxes in 2020.

More: *Ohio Capital Journal*

Petition Claims Solar Fixed Charges Violate PURPA

A petition filed to FERC by four owners of small PV systems and the Alabama nonprofit GASP asked the commission to invalidate solar fixed charges they claim are discriminatory and illegal under PURPA law.

The petition asks FERC to compel the Alabama Public Service Commission to order Alabama Power to set non-discriminatory rates for electricity sales to owners of rooftop solar and other "qualifying facilities," a term defined by PURPA. The petitioners' systems range in size from 2 to 6 kW and are qualifying facilities that are exempt from certification filing requirements.

Since 2013 Alabama Power has charged a monthly fee for service to customers who have solar power. The petitioners maintain that the utility's fixed charges violate PURPA regulations, which prohibit rates for sales of electricity that discriminate against qualifying facilities.

More: *pv magazine*

Venture Global's LNG Pipeline Cleared for Service

FERC last week authorized Venture Global LNG to place into service a liquefied natural gas pipeline to deliver feed gas to the company's Calcasieu Pass export facility, currently under construction in Louisiana.

In its request submitted last month, Venture Global said the pipeline was mechanically complete and would be ready to flow gas by April 7. The 24-mile, 42-inch-diameter pipeline extends eastward from the Calcasieu Pass LNG facility to Grand Chenier. There, it interconnects with TC Energy's ANR Pipeline, Enbridge's Texas Eastern Transmission system and EnLink Midstream's Bridgeline system.

According to Venture Global, the 10 million metric ton/year Calcasieu Pass project is expected to come online in 2022.

More: *Natural Gas Intelligence*

State Briefs

CALIFORNIA

LA City Council Urges State to Close Playa del Rey Gas Facility

The Los Angeles City Council last week voted unanimously to approve a resolution in support of legislation or administrative action that would help close the Playa del Rey natural gas storage facility. The resolution calls on the state to set up a transition process and timeline for the shutdown.

The SoCalGas facility provides only about 1% of the total natural gas storage across California, yet a potential leak could affect thousands of nearby homes, the Los Angeles International Airport, students and staff at Loyola Marymount University and employees at Silicone Beach. The area has a risk of tsunami and wildfire, making the facility "particularly dangerous to the health and safety of people in Los Angeles," according to the resolution.

A 2018 report from the California Council on Science and Technology revealed the Playa del Rey site "stands out as a facility with relatively higher risk to health and safety than the other facilities in California."

More: *Los Angeles Daily News*

IDAHO

Legislation Would Double EV Registration Fees

The House Ways and Means Committee last week voted 4-3 along party lines for a potential public hearing on a bill that would more than double the costs to register electric vehicles.

The bill would raise the registration fee from $140 to $300. However, EV owners could opt to pay 2.5 cents per mile instead.

Rep. Joe Palmer (R) said the $300 figure was based on the amount of gas tax paid by someone who drove 12,000 to 15,000 miles annually in a vehicle getting 20 miles per gallon.

More: *The Associated Press*

INDIANA

Pulaski County Commissioners Finalize Solar Regulation Updates

Pulaski County Commissioners last week finalized updates to the county's solar farm regulations and approved amendments to its Unified Development Ordinance. The adjustments increase setback and screening requirements, among other things.

Commissioner Chuck Mellon raised concerns that some "excessive language" could discourage developers from coming to the country. However, Building Department Assistant Karla Pemberton said developers seemed to accept the increased setbacks.

More: *WKVI*

URC Fines CenterPoint for Pipeline Violations

The Utility Regulatory Commission last week fined CenterPoint Energy $894,000 for natural gas pipeline violations committed in 2019 when the utility was known as Vectren.

The fine stems from the company failing to locate or mark its pipelines within two days of gas line excavations.

It is not the first time CenterPoint has paid a fine for pipeline violations. Last year, the utility paid a $584,000 for violations from 2018, and paid $736,000 in 2018 for violations in 2017.

More: *Houston Chronicle*

KANSAS

Gov. Kelly Signs Bill Encouraging Tx Construction Transparency

Gov. Laura Kelly last week signed a bill that will require utilities to take specific steps before exercising eminent domain to build a transmission line.

House Bill 2321 requires companies to complete the following before construction: notify the city where the project is proposed at least six months before construction and present preliminary plans, including the locations and dimensions of the project; conduct an open house with sufficient notice to the community to allow affected landowners to provide public comment; and obtain any required permits.

More: *WIBW*

Some Solar Customers to Get Refunds

The Corporation Commission last week ruled on two petitions, one of which said solar customers who paid demand charges should get refunds. The petitions are linked to a February order directing Evergy to put its residential distributed generation customers back on a standard rate design eliminating a demand charge.

In a two-part petition for reconsideration, Vote Solar, Climate & Energy Project and the Sierra Club requested the commission reconsider its earlier decision of not requiring Evergy to refund customers for charges collected under the previous rate. The commission reviewed the case and decided refunds are warranted.

More: *KSN News*

MISSOURI

Ameren Seeks Rate Increase

Ameren last week filed a rate increase request with the Public Service Commission, as it looks to increase its revenues by $300 million a year.

The increase would amount to 12% of the company's annual electric rate revenues, according to the filing. The company hopes to cover billions of dollars recently invested in grid upgrades and new wind facilities.

The proposed adjustments would raise bills for an average residential customer by about $12 per month. The company also filed for a rate increase for its natural gas customers, which would be enough to raise $9.4 million more a year, or about $4 more a month for residents.

More: *St. Louis Post-Dispatch*

MONTANA

Senate Republicans Advance Colstrip Bill

Senate Republicans last week voted 30-19 to approve a bill that will obligate NorthWestern Energy customers to pay off the undepreciated value of the Colstrip Power Plant regardless of whether it continues to operate. The bill also provides a formula for determining the customer debt for additional shares.

NorthWestern, which bought into Colstrip in 2007 for $187 million, originally said the plant would run until 2042, but now says it will likely close in 2025. Customers owe a substantial amount of debt for the company's share at $272.4 million, which is down from $407 million when consumers were put on a 33-year payment plan in 2009.

The most critical analysis of the bill comes from the Public Service Commission, which would be limited in scrutinizing expenses passed onto customers. Less than six months ago, the PSC rejected billing customers more than $4.4 million, concluding NorthWestern failed to prove the costs related to 77 days of malfunctions were prudent. The bill would relieve NorthWestern of having to prove the expenses were justified.

The bill will get another vote in the Senate before going to the House.

More: *Billings Gazette*

NEVADA

Utilities Object to Bill Aimed at Reducing Natural Gas Use

Utilities and business groups, including NV Energy and Southwest Gas, are opposing a bill that would lay the groundwork for the state's eventual transition away from natural gas.

As originally introduced, Assembly Bill 380 would have required an incremental decrease in the amount of natural gas used in homes and commercial buildings until eliminating its use by 2050. However, those year-by-year reductions were removed from the proposal through an amendment that would require the Public Utilities Commission to open an investigatory docket that would study the role of natural gas to reduce greenhouse gas emissions. Also, a process would be put in place that would force gas utilities to prove any expansion or infrastructure replacement plans make "economic and environmental sense."

More: *Las Vegas Review-Journal*

NEW YORK

NYSERDA Board Appoints New President, CEO

NYSERDA last week announced Doreen M. Harris as the authority's new president and CEO.

Harris had been appointed acting president and CEO in June 2020, succeeding Alicia Barton, who is now the CEO of FirstLight Power.

Harris has more than 20 years of experience in public and private sector leadership roles. Prior to NYSERDA, she served in executive, technical and policy positions, most recently as the vice president of Large-Scale Renewables.

More: *NYSERDA*

OHIO

Man Arrested Outside of Perry Nuclear Plant

A Michigan man who drove to the Perry Nuclear Power Plant and claimed he had a bomb was arrested last week.

The Lake County Sheriff's Office said that a 33-year-old man from Adrian, Mich., drove to the entrance of the plant around 6 p.m. last Wednesday and refused to leave. He told officers he had a bomb in the trailer attached to his truck, although no bomb was found.

The man could face false alarms and aggravated trespassing charges.

More: *The Associated Press*

TEXAS

CPS Energy Adding Bill Credits for Deep Freeze

CPS Energy last week announced it will begin providing bill credits in April or May bills for customers affected by power outages during the February winter storm.

The utility also said it will issue one-time credits to San Antonians who experienced outages for more than 24 hours. According to estimates by CPS, 251,606 customers experienced outages of 24 hours or more.

More: *My San Antonio*

Wind Generates Most Power in March

Wind generated the most electricity (39%) in the power grid in March, according to the EIA, with analysts saying it was the first time wind topped gas-fired generation.

The wind total out-generated gas (30%), coal (15%), nuclear (12%) and solar (4%).

More: *Reuters*

VIRGINIA

Isle of Wight's Planning Commission OKs Solar Farm

The Isle of Wight Planning Commission recently voted 7-3 to approve a planned 240-MW solar farm that, when completed, will span 1,750 acres.

Cavalier Solar, the developer of the project, had applied for a conditional use permit, as the parcels are zoned for rural agricultural conservation. The application includes a request from the owners of the six parcels to withdraw their properties from the Moonlight Agricultural/Forestal District.

The matter will head to the county Board of Supervisors on April 15. If approved, Cavalier will become Isle of Wight's fifth solar farm.

More: *The Smithfield Times*

WASHINGTON

Pacific Northwest Ports Unveil Pact to Cut Emissions

The ports of Seattle and Tacoma, their Northwest Seaport Alliance container shipping joint venture and the Vancouver Fraser Port Authority in Canada last week said they are adopting a voluntary joint plan to phase out emissions by 2050.

Company leaders said they will seek to meet their targets through changes in equipment, fuels and port infrastructure. Their "Northwest Ports Clean Air Strategy" plan covers six sectors of the ports' activities: ocean-going vessels; cargo-handling equipment; trucks; harbor vessels; railway operations; and port administration and tenant facilities.

More: *Puget Sound Business Journal*

WEST VIRGINIA

Senate Approves Solar PPA Bill

The Senate last week voted 33-1 to approve a bill designed to encourage retail customer investment in solar energy by exempting power purchase agreements from the state Public Service Commission's jurisdiction.

An amended version of House Bill 3310 says solar energy facilities located on and designed to meet only the electrical needs of the premises of a retail customer do not constitute a public service, nor is the output subject to a power purchase agreement with the retail electric customer. The bill also has no tax credit provisions and does not provide any state subsidies.

PSC Chair Charlotte Lane said her agency supports the bill.

The bill will go before the House of Delegates for concurrence.

More: *Charleston Gazette-Mail*