RTO Insider

Your Eyes and Ears on the Organized Electric Markets

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ISSN 2377-8016 : Volume 2020/Issue 28 July 14, 2020

FERC Storage Order Survives State Challenge

States, Utilities Rebuffed on Order 841

By Robert Mullin

Energy storage advocates scored a key victory Friday when the D.C. Circuit Court of Appeals rejected challenges to FERC rules that restrict states from prohibiting behind-the-meter storage resources from participating in organized wholesale electricity markets.

State regulators, utilities and public power groups last year petitioned the court to overturn the provisions of FERC Order 841 that require states to provide energy storage resources (ESRs) connected to distribution systems full access to federally regulated energy markets, calling the rules "arbitrary and capricious" and "not in accordance with law." (See *States, Public Power Challenge FERC Storage Rule*.)

The National Association of Regulatory Utility Commissioners spearheaded the challenge, with the Edison Electric Institute, the American Public Power Association, the National Rural Electric Cooperative Association and

AES battery storage | *AES*

American Municipal Power filing a separate complaint.

The D.C. Circuit's decision was unsurprising given the three-judge panel's evident skepticism about the petitioners' arguments during a May proceeding. (See *DC Circuit Skeptical of NARUC Challenge to FERC Order 841*.)

"Petitioners argue FERC is offsides in Order No. 841 by prohibiting states from barring

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FERC Seeks 90-day Delay on Tolling Ruling (p.9)

Calif. Rushing Microgrids for Fire Season Shutoffs

Hydrogen Fuel Cells Key to Longer Duration Needs, Advocate Says

By Hudson Sangree

California is moving quickly to adopt microgrids to store wind and solar energy and to provide electricity during public safety power shutoffs (PSPS) in wildfire season, but long-term energy storage and resilience remain problems, panelists said last week at a California Energy Commission workshop on "Assessing the Future Role for Microgrids."

Leaders of the CEC, the California Public Utilities Commission and CAISO met in three sessions over two days during the *workshop*, hearing from panelists and presenters on the challenges and promise of microgrids: small-scale generation and distribution systems that can power a single building or a whole community.

Over a total of six hours, participants discussed using microgrids to offset fire-prevention blackouts starting this fall and, in

Continued on page 12

FERC TECHNICAL CONFERENCE: COVID-19'S IMPACT ON THE ENERGY INDUSTRY

Electricity Industry Seeks Regulatory Certainty

COVID-19's Demand Destruction a Key Concern

By Tom Kleckner

Philip Moeller, EEI | *FERC*

Former FERC Commissioner Philip Moeller told the current commissioners last week that demand destruction is the electricity industry's primary concern during the COVID-19 crisis.

Moeller, now executive vice president of the Edison Electric Institute's business operations group and regulatory affairs, said that the longer it takes to flatten the curve of coronavirus cases, decreasing demand becomes a larger problem.

"I don't know how long [the recovery will take], but if demand stays lower for an extended period of time, that takes on added risk," he said during a panel on access to capital Thursday, the second day of a commission technical conference on the pandemic's impact on the energy industry. "The cost of equity is higher, and despite the lower interest rates, that is a risk the market has put into the price of capital."

In June, EEI *asked* FERC for expedited action

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Panelists: COVID-19 Impact on Tx Planning Unclear (p.5)

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Monitor Says MISO Needs Higher Reserve Margin (p.17)

PJM Dusts off 'State Agreement' Tx Approach (p.22)

PJM Stakeholders OK PMU Requirement (p.26)

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2020 Annual Subscription Rates:

Plan	Price
Newsletter PDF Only	$1,450
Newsletter PDF Plus Web	$2,000

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Correction

Due to an editing error, an article in last week's newsletter (*Panelists Probe Racial Disparities in Energy Industry*) used the incorrect pronouns to describe two of the speakers quoted. Dana Harmon and Fisayo Fadelu, both women, were mistakenly described using "he."

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COVID-19's Impact on the Energy Industry

Electricity Industry Seeks Regulatory Certainty

COVID-19's Demand Destruction a Key Concern

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on the Notice of Inquiry the commission opened on return on equity policies last year (PL19-4). (See *FERC Opens Inquiries into Tx Incentives, ROE Policies*.)

"We hope FERC comes up with policy that helps with stability [and] continues to attract [capital] needed to build [transmission] infrastructure," Moeller said. "It's getting more and more difficult to build major energy projects. It's worth remembering that all transmission projects, regardless of who develops them … [go] through a vigorous process. Whether it's the engineering contract or the construction contract, those are laborious projects in themselves before a project gets the greenlight to go ahead."

CAISO General Counsel Roger Collanton, speaking for the ISO/RTO Council, said liquidity is the most immediate concern for market participants.

"COVID-19 has caused some disruption in the financial markets, which could affect liquidity sources for market participants to cover their positions," he said. "In addition, some market participants' revenue streams may be impacted by declining loads and nonpayment for retail services. This does not mean we can relax our monitoring of credit risk. We must remain even more vigilant during these uncertain times."

Collanton said the grid operators monitor for credit downgrades and unexpected default rates that could lead to lower amounts of unsecured credit limits. Market participants whose credit ratings fall beneath investment grade would be forced to post only secured forms of collateral for all outstanding liabilities without an allowance for unsecured credit, he said.

"The majority of the market participants qualifying for unsecured credit use only a fraction of their limit to handle the day-to-day variances in their outstanding liabilities," Collanton said. "However, if a market participant's declining financial health has led to the elimination of unsecured credit limits in wholesale electricity markets, it has likely led to elimination of unsecured credit in other markets, which could begin to pose a liquidity problem."

He noted FERC has recently allowed some RTOs to impose higher credit requirements on market participants that may pose a higher credit risk.

FERC Commissioner Bernard McNamee | *FERC*

"Some market participants' revenue streams may be impacted by declining loads and nonpayment for retail services. This does not mean we can relax our monitoring of credit risk. We must remain even more vigilant during these uncertain times."

—CAISO General Counsel Roger Collanton

"In part, this discretion will allow these ISOs/RTOs to assess the positions of market participants that may not operate physical assets and may create asymmetric risks between themselves and the rest of the market," Collanton said.

He suggested the commission remind state regulatory commissions to monitor load-serving entities' financial health and the importance of maintaining credit protections.

Asked by Commissioner Bernard McNamee whether infrastructure investments will continue given the pandemic, American Electric Power's Antonio Smyth, senior vice president of transmission ventures, strategy and policy, noted that his company has already shifted $500 million of capital spending from 2020 to 2021.

"This really highlights and underscores the importance of the commission continuing to adopt solid ROE policies and mechanisms that are put in place to allow us to continue to invest," Smyth said. "If we don't invest today, we'll certainly suffer the consequence tomorrow."

Christine Tezak, managing director of ClearView Energy Partners, noted the energy sector is not immune from movements in the

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global economy.

"This is not leaving anyone untouched," she said. "Where the commission is going to need to exercise its discretion is discerning where there are developing problems. These are cyclical markets, and the commission needs to recognize it would be asking itself to accomplish a superhuman feat to predict all cyclicality in cyclical markets. I think there's good faith on Wall Street that state regulators are going to work with utilities and work on recovery of bad debt over some period of time."

Kinder Morgan President Kimberly Dang said access to capital has improved since the Federal Reserve's market interventions in March and April, but it has gotten more expensive.

"That has unleashed uncertainty into the industry," she said. "Projects are more difficult to get done in this environment, and that's going to drive up required returns. Needed projects are not getting built. We need as much certainty as possible. We can't have contractors sitting on the right of way."

I think there's good faith on Wall Street that state regulators are going to work with utilities and work on recovery of bad debt over some period of time."

—Christine Tezak, managing director of ClearView Energy Partners

Several other panelists weighed in on the danger of regulatory uncertainty.

"The power industry has done a phenomenal job in maintaining reliability and keeping the lights on. I believe we have the tools to manage through right now," NRG Energy CEO Mauricio Gutierrez said. "The biggest risk, when I talk to investors, is regulatory risk and regulatory intervention. Changing the rules in middle of the game is the biggest risk to investing in the power grid."

"Our industry is the most capital-intensive industry in America," Moeller said. "Because of the long-term nature of these investments, we appreciate the extent to which the commission is working to provide that certainty, so we can provide reliable, safe electricity."

Smyth reminded the commission of the transmission system's "vital, reliable service, which goes back to the base ROE."

"We believe the commission should continue with its work to adopt a sound ROE policy," he said. "On the incentives front, well-crafted ROE policies will ensure the grid works for customers, both today and in the future."

Duke Energy CFO Steve Young closed the panel discussion by complimenting FERC on its "very fair and balanced view" of the risk associated with building, owning and operating long-term infrastructure.

"Having a healthy respect for that risk, as they set ROEs and recovery policy, is very valuable," he said. "That allows us to effectively raise capital and gives the investor confidence. They've done a good job of that over the years."

Gas Sector Finds Some Capital Available

Another panel Thursday explored the COVID-19 pandemic's effect on natural gas and oil supply, demand, transportation and infrastructure planning.

Anatol Feygin, chief commercial officer for LNG giant Cheniere Energy, told McNamee the natural gas industry finds itself in a "very challenging time." Some sectors have ready access to the capital markets, but others don't, he said.

"Parts of the industry fall under the infrastructure umbrella where, in a low-interest-rate environment, it has plenty of capital. Hundreds of billions of dollars have been raised on the infrastructure side of world," Feygin said. "The upstream space is working to morph its business model and economics … to offer the types of return that are attracting … investment. It's a difficult transition."

Changing the rules in middle of the game is the biggest risk to investing in the power grid."

—NRG Energy CEO Mauricio Gutierrez

Several panelists said the rapid growth of COVID-19 cases and the ensuing lockdowns caught them off-guard, in contrast with the 2008-2009 financial crisis.

"In 2008 and 2009, we could kind of see that coming a little bit. There was more time to react to it and more time to recover," said Gary Gibson, CEO of City Utilities of Springfield (Mo.). With the COVID-19 crisis, "we saw some pretty immediate changes in our industry and what consumers were doing. Going forward, we still have issues of when we could shut down again. If we continue in that direction, we'll see more demand destruction that will continue for several years."

"There were some lessons learned previously," he continued, "but we're learning new lessons now."

"In 2008, when the economy recovered and our industry's access to capital was still there, it transformed our industry to be the world lead for gas production," said EQT CEO Toby Rice, alluding to the shale drilling revolution. "Now, with a lack of returns, there's very cautious thinking. A lot of people have concerns whether that access to capital returns for the energy industry. We have to ensure we still have access to capital to keep our economy strong, our energy cheap, improve the environment and enhance the national security of our country. We have to be more efficient, to allow the market to be more efficient." ■

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Panelists: COVID-19 Impact on Tx Planning Unclear

'Paradigm Shift' or Business as Usual?

By Robert Mullin

The COVID-19 pandemic has added an extra layer of complexity to near-term electricity demand forecasting, but energy companies and policymakers must avoid drawing hasty conclusions about its long-term impact on the electricity sector, industry officials told FERC on Wednesday.

"My key takeaway for you is that COVID-19 must not be viewed by our industry as a rationale to halt progress and defer planning and reform," LS Power CEO Paul Segal said during a panel focused on the pandemic's effects on transmission planning and system forecasting, part of a two-day virtual FERC technical conference focused on pandemic-related issues for the energy sector.

"I worry that the easy takeaway from our very recent experience will lead the industry to extrapolate forward to an environment with lower demand," he said.

Segal thinks "the most difficult economic parts of COVID-19 are hopefully behind us" because of the fiscal stimulus enacted by Congress and aggressive actions taken by the Federal Reserve to rescue financial markets from "freefall," which opened credit markets to even the most "impacted" economic sectors such as airlines and cruise line companies.

"I expect within a year, our perception of COVID-19 will be very different because we learn how to live with it," Segal said. "Our actions will change the trajectory of the disease, [and] we will learn how to treat the symptoms to reduce severity and/or immunize against it.

Paul Segal, LS Power | *FERC*

"It would be dangerous" to rely too heavily on the recent experience of declining electricity demand to predict new trends in energy use in the U.S., he said, cautioning that "events like COVID-19 tend to trigger paradigm shifts."

"Today there are many paradigm shifts happening all at once. That leaves us needing to consider a number of questions about how these changes will impact demand and usage patterns for electricity," Segal said.

One "key" shift? The way people work, with more staff working from home and "less densification" in offices.

"Fundamentally, I expect this to lead to the less efficient use of space and, as a result, the less efficient use of energy, including electricity," Segal said. "Office electrical systems will need to run perhaps at a modestly lower capacity level than might've been required otherwise, but more people will be at home, and this will lead to the use of electricity to heat, cool and light the home when previously it might've been unoccupied. In the aggregate, this may result in a meaningful increase in electric demand, in the intermediate term."

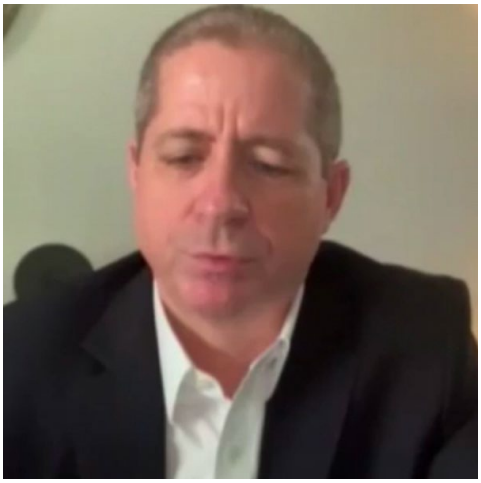
Working from home could also drive consumption of natural gas, which could be problematic for areas like New England, where supplies can become constrained during winter, producing knock-on effects that can be "non-linear and multifactorial," which "can often be derivative of one another."

"For example, the recent [economic] collapse has crushed drilling for oil in many shale plays," Segal said. "The indirect consequence will be the reduction in the availability of essentially free, associated natural gas. Natural gas prices will need to incentivize more drilling for natural gas as we move forward, and it's conceivable that in this new paradigm, we will have natural gas prices move into a range that's persistently 50% higher than what we would've expected them to be before COVID-19."

That would translate into higher electricity prices, which could in turn improve the economic fortunes of coal and nuclear power plants enough to prompt a political response for increased green energy investment.

Time to Invest

Segal's advice to the commission was fitting for the CEO of competitive transmission developer: In short, clear the way for the construction of new transmission to aid in economic recovery and relief.



Curt Morgan, Vistra Energy | *FERC*

"As we focus on the road back, we should keep in mind that affordable electricity to a large extent is a function, to a large extent, of transmission grid optimization," he said. "Competitive procurement in regional planning of transmission must remain a priority as we tackle affordability going forward. The regional planning process must be robust enough to enable the RTOs to plan for and facilitate the construction of the power grid of the future, one that anticipates and supports states' evolving energy investment policies and goals, rather than sitting idly by while every element of yesterday's aging grid is simply rebuilt and replaced with the same facilities that have reached the end of their useful lives."

Vistra Energy CEO Curt Morgan similarly took up the importance of FERC continuing to foster competition in response to economic decline, but with the differing spin of the head of competitive generation company that's been critical of state support for favored renewable resources.

"The multitude of market-rule changes in FERC jurisdictional markets over the last several years, many driven by out-of-market activities, and the unpredictable and uneven pace with which these changes are implemented, have created a sector-specific risk for integrated competitive energy companies like Vistra and created questions in the minds of investors about our sector," he said.

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Morgan — whose company supported FERC's controversial decision last year to apply PJM's minimum offer price rule to new state-subsidized resources — encouraged the commission to "remain supportive of competitive markets and ensure all resources compete on a level playing field." (See *PJM's Season of Change not Over yet*.)

But he counseled FERC against pushing the industry to respond too quickly in response to the pandemic.

"We expect that until we get a vaccine or an effective therapeutic, it is going to be an uneven economy with fits and starts, but our advice in this is not to take the early effects of COVID and extrapolate this too far into the future," he said. "We don't know enough about what's going to happen, and we certainly don't want to contribute to long-term ripple effects."

Gil Quiniones, NYPA | *FERC*

Gil Quiniones, CEO of the New York Power Authority, expressed concern that the economic downturn could pose challenges for New York's efforts to generate 70% of its electricity from renewables by 2030 and have a carbon-free grid by 2040. As one of the original epicenters of the pandemic, the state experienced a 10% decline in electric load at the height of the outbreak, Quiniones noted.

"In addition, New York state's strong economy, the prime driver of the state's electric load, has seen a decline, and might not return to 2019 levels for quite some time," he said. "This reduction in load and the uncertain pace of recovery will have a direct effect on planning the much-needed expansion and upgrades to major power infrastructure. While transmission planning might be difficult, now is the time to invest in the power grid, to meet clean energy goals and to help restart the economy."

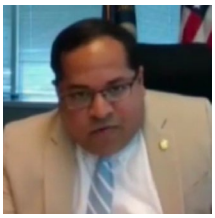
"Practically speaking, we don't see this as having a long-term planning impact," MISO President Clair Moeller said, adding that load in his RTO's footprint has been flat since 2007.

"The dominant transmission we are building is to accommodate the change in generation fleet. We do not see our members changing those plans, so at this point in time, we don't see a need to adjust any of our planning practices — but of course we'll keep that front and center because that's one of the more important parts of what we do," he said.

'Fluid' Situation

Moeller also told commissioners that MISO's load profiles have flattened since the outset of the pandemic, reducing the need to ramp the system to meet demand.

"That contrasts significantly with polar vortex kinds of problems, where the ramp problem is exacerbated by the cold-weather events," he said. "We only have four months of experience with this event. We expect the situation to continue to be fluid into the future."



Neil Chatterjee, FERC | *FERC*

FERC Chair Neil Chatterjee asked Moeller to elaborate on how the pandemic might affect RTOs' approach to short- and long-term load forecasting.

Clair Moeller, MISO | *FERC*

"We only have four months of experience with this event. We expect the situation to continue to be fluid into the future."

—MISO President Clair Moeller

Moeller said that the self-learning neural network software most grid operators rely on for forecasting struggled at the outset of the pandemic because it lacked an applicable history for producing short-term forecast under new conditions.

"The forecasts that we initially provided typically were for too much capacity to be on rather than not enough, so while the mistakes were important in terms of efficiency, they didn't have a negative impact on reliability at all because typically we would start one unit too many rather that one unit too few," Moeller said, adding that the forecasting tools eventually learned to adjust to the new patterns.

"The change from shutdown to reopening is more gradual, so we're not seeing the kinds of errors as the economy reopens that we saw when it shut down suddenly," he said.

Moeller said the pandemic has not yet provoked MISO to make any changes to its long-term load forecasting.

"We continue to think that challenges to the electric system [will] have to do with the change in resources, mostly, and then the question around the electrification of transportation is an important one in a five-[to] 10-year kind of time horizon," he said.

Richard Glick, FERC | *FERC*

'Every Kernel'

FERC Commissioner Richard Glick asked

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the panelists if they felt RTOs and ISOs have been transparent enough in the how they have updated their load forecasting processes.

"I think the processes are reasonably transparent," Segal said. "What I worry about is there can be a tendency to fall back on tools that have been used in the past, and I think we're in an environment that needs to consider a much broader range of possibilities. We're going to be OK if we have too much generation and too much transmission capacity. We're going to have big problems if we're surprised and have less generation available than we need."

Morgan said his biggest concern regarding forecasting was "really trying to extrapolate anything meaningful going forward from the effects of a virus, where human behavior — such as not wearing a mask or going into a large crowd — can change what's happening in a given state within a couple of weeks."

Morgan said Vistra is "looking for every bit and every kernel of information" from government officials and state utility commissions to identify as early as possible whether states are going to shut down or put in stay-at-home measures again.

"Because this thing is so fluid right now ... you can't really extrapolate off of it at all," he said.

Chatterjee asked Public Utilities Commission of Ohio Chair Sam Randazzo what he and his colleagues "have been thinking about most during this time."

Sam Randazzo, PUCO | *FERC*

"The global observation that I would make is that we're not dealing with an energy infrastructure problem; we're dealing with a public health problem," Randazzo said, adding that regulators can best contribute to addressing the health emergency by providing "flexibility" to those on the front lines of contending with the pandemic.

> **"Human behavior — such as not wearing a mask or going into a large crowd — can change what's happening in a given state within a couple of weeks."**
>
> — Vistra Energy CEO Curt Morgan

"From a planning perspective, the pandemic scenario is really a people problem: You've got to have enough people; you've got to take care of your people — the human resources that you need — because the virus affects human resources," he said. "So, if you can tell me the public health scenario that we'll be dealing with tomorrow, we can probably then plan from an infrastructure and resource perspective what we can do to contribute to a positive resolution to the public health emergency."

In response to Chatterjee's question about what industrial energy consumers are taking away from the pandemic experience, Electricity Consumers Resource Council (ELCON) CEO Travis Fisher expressed concern that while his member companies "are taking cuts where needed," those in the utility space are "basically keeping their plans the same."

"I'm a little bit concerned about that because the costs of the transition that those folks are undertaking ... are ultimately going to fall on consumers like ELCON members," Fisher said.

Responding to Chatterjee's question about what impact the pandemic has had on the Western U.S., Stefan Bird, CEO of PacifiCorp's Pacific Power subsidiary, specifically addressed his company's position.

Stefan Bird, Pacific Power | *FERC*

"COVID, for us, has not much impact on our ability to deliver our core mission of reliability, affordability and safe service of electricity while we continue to radically change our portfolio," Bird said, noting that PacifiCorp has the advantage of drawing on resources from a 10-state footprint.

"I would argue the most expensive route would be to isolate yourself on an island and limit your options. And, thankfully in the West, we've got this tremendous abundance of low-cost resources, but they are very diverse," he said.

Bird also said the pandemic has had no effect on PacifiCorp's ability to prepare for the looming wildfire season. "There's been no impact to our efforts to really dramatically increase our resilience and hardening efforts," he said. ■

FERC/Federal News

FERC Storage Order Survives State Challenge

States, Utilities Rebuffed on Order 841

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electric storage resources on their distribution and retail systems from participating in federal markets. We find no foul here, so we deny the petitions," Judge Robert Wilkins wrote on behalf of the panel.

In Order 841-A, FERC denied rehearing of Order 841's express lack of a state opt-out for behind-the-meter retail ESRs, arguing that its authority to regulate RTO/ISO markets gave it "authority to determine which resources are eligible to participate" in those markets.

In its arguments before the court, Wilkins noted, "FERC emphasized, again, that Order No. 841 did 'not specify any terms of sale at retail,' but a state may not 'broadly prohibit all retail customers from participating in RTO/ISO markets,' since states cannot … intrude on the commission's jurisdiction by prohibiting all consumers from selling into the wholesale market.'"

The court agreed with FERC's contention that "Order No. 841 does not modify states' authority to regulate the distribution system, including the terms of access, provided that they do not aim directly at the RTO/ISO markets."

"Order No. 841 solely targets the manner in which an ESR may participate in wholesale markets," the court wrote. "This action is intentionally designed to increase wholesale competition, thereby reducing wholesale rates. Keeping the gates open to all types of ESRs — regardless of their interconnection points in the electric energy systems — ensures that technological advances in energy storage are fully realized in the marketplace, and efficient energy storage leads to greater competition, thereby reducing wholesale rates."

Even NARUC acknowledged the potential benefits from local ESRs participating in wholesale markets, the court said.

"If 'directly affecting' wholesale rates were a target, this program hits the bullseye," the court wrote.

In rejecting the petitioners' complaints that the lack of an opt-out provision violates states' authority to regulate their distribution systems, the court acknowledged "there is little doubt that favorable participation models will lure local ESRs to the federal marketplace," requiring use of those systems. Still, "nothing in Order No. 841 directly regulates those distribution systems. … States remain equipped with every tool they possessed prior to Order No. 841 to manage their facilities and systems," the court said.

"But because FERC has the exclusive authority to determine who may participate in the wholesale markets, the Supremacy Clause — not Order No. 841 — requires that states not interfere" with those markets, the court found.

In that vein, the court rebuffed NARUC's contention that local ESRs cannot participate in federally regulated wholesale markets — and therefore do not fall under FERC's authority — until they can navigate state-regulated facilities.

"Any state effort that aims directly at destroying FERC's jurisdiction by 'necessarily deal[ing] with matters which directly affect the ability of the [commission] to regulate comprehensively and effectively' over that which it has exclusive jurisdiction 'invalidly invade[s] the federal agency's exclusive domain,'" the court said, citing precedent from 1962's *Northern Natural Gas Company* decision.

The court also pointed out that under Order 841, states keep their authority to prohibit ESRs from simultaneously participating in interstate and intrastate markets.

"States retain their authority to impose safety and reliability requirements without interference from FERC, and ESRs must still obtain all requisite permits, agreements and other documentation necessary to participate in federal wholesale markets, all of which may lawfully hinder FERC's goal of making the federal markets more friendly to local ESRs," the court said.

The court additionally acknowledged that individual states will be free to challenge the rules "applied to their own state regulations or imposed conditions."

"Petitioners are likely correct that litigation will follow as states try to navigate this line, but such is the nature of facial challenges," the court wrote.

Renewable energy and storage advocates applauded the decision.

"This is an enormous step for energy storage, with the affirmation that energy storage connected at the distribution level must have the option to access wholesale markets, allowing homes and businesses to contribute to the resiliency, efficiency, sustainability and affordability of the grid," Energy Storage Association CEO Kelly Speakes-Backman said in a statement. "This latest affirmation of Order 841 is especially important as it ensures energy storage can contribute all its values to the grid, regardless of its connection point. As our electric system becomes more modernized and distributed, we are seeing the regulatory frameworks at both the wholesale and retail levels adjust to that reality."

"During a time of great uncertainty over the scope of the Federal Power Act, today the court rightfully recognized the important role energy storage plays in our nation's wholesale electricity markets," American Council on Renewable Energy CEO Gregory Wetstone said in a statement. "This decision will provide the clarity necessary to widely deploy energy storage, an essential component to securing the carbon-free grid we need to properly combat the climate crisis."

FERC Chair Neil Chatterjee also expressed pleasure with the ruling, saying the removal of market barriers for storage has been one of his "top priorities."

"I have said repeatedly that I think … we may look down the road and say [Order 841] was one of the single most significant … actions taken by a government agency to address carbon mitigation and the transition to a clean energy future. And so, if in fact our initial read of this decision is correct, this is a very significant victory indeed," Chatterjee said.

Plaintiffs in the case were predictably dissatisfied with the outcome.

"We are, of course, disappointed in the court's decision," said NARUC Director of Communications and Public Affairs Regina Davis. "We are still reviewing the opinion and weighing our options at this time. We may issue a formal statement [this] week after we've had time to review today's decision."

"We believe that the jurisdiction over local distribution facilities left to state and local authorities under the Federal Power Act includes the authority to determine whether those facilities may be used by electric storage resources to access FERC-regulated wholesale markets," said APPA General Counsel Delia Patterson. "Although APPA is encouraged that the court emphasizes that state and local regulators retain authority to impose safety, reliability and other requirements on storage resources' use of the distribution system to access wholesale markets, the inability to adopt a clear prohibition on such use is likely to lead to further litigation over particular state and local requirements, as the court acknowledges." ■

FERC/Federal News

FERC Seeks 90-day Delay on Tolling Ruling

By Rich Heidorn Jr.

FERC has asked the D.C. Circuit Court of Appeals to give it 90 days to respond to the court's June 30 order barring the commission's use of tolling orders to delay judicial review of its rulings under the Natural Gas Act.

The commission's *motion* July 6 said the delay would give it time to respond to the order overturning "the commission's decades-old, judicially sanctioned rehearing process" and consider whether to seek a review by the Supreme Court.

The court ordered its clerk to issue a mandate in the case on July 7, but the court had not filed the mandate nor responded to FERC's motion as of Monday.

In the meantime, the Sierra Club and others filed a response opposing FERC's request, saying the commission "presents no compelling reasons for staying the issuance of the mandate, thereby creating further delay and allowing FERC to continue its unfair and unlawful practice."

No More Stopping the Clock

The D.C. Circuit's 10-1 *ruling* concluded that FERC's use of tolling orders to stop the 30-day clock for acting on rehearing requests improperly prevents litigants from appealing commission rulings indefinitely even as it allows gas pipeline companies to seize property under eminent domain and begin construction (Allegheny Defense Project, et al. v. FERC, 17-1098). (See *D.C. Circuit Rejects FERC on Tolling Orders*.)

The court said it had erred since 1969 when it first ruled that issuing a tolling order meant that FERC had "acted upon" the request under the language of the NGA and that parties must wait until the commission's review of the request is complete before seeking judicial relief.

FERC routinely issues tolling orders to buy itself more time to consider rehearing requests because both the NGA and the Federal Power Act deem such requests denied if it does not act on them within 30 days.

In the face of increased criticism of its use of tolling orders, FERC on June 9 issued a rulemaking saying it will no longer permit gas pipeline developers to begin construction until it acts on the merits of any rehearing requests (Order 871, *RM20-15*). (See *FERC Revises Pipeline Policy on Landowner Concerns*.)

The new rule followed Chairman Neil Chatterjee's September 2019 pledge that FERC would seek to reduce tolling orders and act on landowner rehearing requests within 30 days. In February, the chairman announced the creation of a new rehearing section within the Office of the General Counsel to expedite action.

In its motion, however, FERC noted that the impact of the court's June decision "extends well beyond landowner cases and affects all requests for rehearing under the Natural Gas Act and presumably those under the Federal Power Act as well."

It said tolling orders "allow the commission to manage its large case load," noting the commission averages more than 1,100 orders and 285 rehearing requests annually.

Circuit Split?

FERC said it needed time to analyze the court's conclusion that while an order granting rehearing solely for the purpose of further consideration does not prevent a rehearing request from being deemed denied, the NGA does not require the commission to resolve the merits of rehearing requests within 30 days. The court wrote that the NGA's reference to

E. Barrett Prettyman Federal Courthouse, home of the D.C. Circuit Court of Appeals | *HSU Builders*

FERC/Federal News

acting on a rehearing request requires "some substantive engagement with the application" but not necessarily a "deci[sion] [on] the rehearing application."

The court declined, however, to address whether FERC could issue interim orders that grant rehearing for further consideration coupled with a request for supplemental briefing or further hearing processes.

"A stay of the court's mandate would afford the commission time to consider how to revise its processes and allocate its resources so that it can fulfill its statutory role on rehearing in the absence of these interim orders," FERC said.

The commission said the D.C. Circuit previously read the act as requiring it to actually decide the merits of rehearing requests within 30 days. "In addition, every other court of appeals to consider the issue has determined that the term 'act' encompasses tolling orders that grant rehearing for further consideration," FERC said.

It noted Judge Karen LeCraft Henderson's dissent, which said the decision "creates a circuit split that could force the Supreme Court to weigh in."

"Whether the court's conclusion as to the plain language of Natural Gas Act Section 717r(a) warrants Supreme Court review is something that the commission and the solicitor general will need time to consider without the added burden of the court's decision immediately taking effect," FERC said.

A stay would not harm rehearing petitioners because of its commitment to bar construction during the rehearing process and because district courts can hold eminent domain proceedings in abeyance while rehearing is pending, it said.

In addition to filing the motion for more time, FERC also is seeking a legislative response to the order. On July 2, Chatterjee, a Republican, and Commissioner Richard Glick, a Democrat, issued a statement asking Congress "to consider providing FERC with a reasonable amount of additional time to act on rehearing requests involving orders under both the Natural Gas Act and the Federal Power Act."

Pipeline Opponents: Reject Stay

In their *filing* in opposition Wednesday, the Sierra Club, landowners Hilltop Hollow LP and pipeline opponents *Allegheny Defense Project* said FERC had failed to meet the requirements for a stay: a reasonable probability that four Supreme Court justices would vote to hear FERC's appeal; a significant possibility that the court would reverse the D.C. Circuit; and a likelihood of irreparable harm if the stay is denied.

"FERC exaggerates the consequences of issuing the mandate. Complying with the plain language of the Natural Gas Act will not preclude FERC from 'manag[ing] its large case load,'" they said.

They also rejected FERC's assurance that district courts could protect landowners during the stay by holding eminent domain actions in abeyance while rehearing is pending or after appeals are filed.

They noted that a district court granted the pipeline company immediate possession of the properties in the case that resulted in the D.C. Circuit order, even though the landowners' rehearing request was pending before FERC.

"The fact that district courts are not precluded from staying condemnation proceedings pending a FERC rehearing or after a petition for judicial review is filed does not guarantee that district courts will actually hold eminent domain actions in abeyance in such circumstances, and the United States District Court for the Eastern District of Pennsylvania's decision in this case demonstrates that, in practice, district courts do not do so." ■

CAISO/West News

Calif. Energy Commission OKs $22M for Storage

Other Grants Fund 'Second-life' EV Battery Storage Systems

By Hudson Sangree

The California Energy Commission approved $22 million in grants Wednesday to fund long-term energy storage projects, considered key to the state's decarbonization goals, and another $6 million to test the possibilities of using repurposed electric vehicle batteries for solar storage.

The long-term storage grants included $13 million to Native American tribes to test systems that could deliver stored solar and wind power for hours longer than lithium-ion batteries.

"The importance of sustained investments in this space can't be understated," CEC Vice Chair Janea Scott said.

The funding is vital "to help push this type of technology forward and to really be looking in the storage space at long-term of 'what's the next step,' so we're always just a little out ahead of where we're trying to push the technology as we go in our quest toward 100% clean energy," Scott said.

The CEC funds energy research through its Electric Program Investment Charge (EPIC) grant program. California load-serving entities are required by Senate Bill 100 to provide retail customers with 100% clean energy by 2045.

Commissioners voted unanimously Wednesday to award $7.3 million to the Rincon Band of Luiseño Indians in San Diego County to connect solar arrays to a vanadium redox flow battery, which uses tanks of chemicals, and a flywheel storage system. Each storage method will provide 400 kW of load for up to 12 hours, creating a microgrid that will power a wastewater treatment plant and a public emergency shelter, among other buildings, the tribe said.

The Rincon Band of Luiseño Indians in San Diego County received $7.3 million in grants for long-term storage projects. | *Rincon Band of Luiseño Indians*

Several other tribes won grants to integrate flow batteries and flywheels with solar arrays.

Indian Energy, a Native American-owned company that provides energy solutions to tribes and the military, won a $5 million grant to install a zinc hybrid cathode battery, a flow battery and a mechanical flywheel at Marine Corps Base Camp Pendleton, north of San Diego.

Antelope Valley Water Storage, in the Mojave Desert northeast of Los Angeles, was given $2 million to fund an aquifer pumped-hydro system, which stores water underground to produce hydroelectric power when solar goes offline at night.

The CEC is funding research on using second-life EV batteries for energy storage. | *BMW*

Used-car Batteries

The commission also funded projects that will test "retired" EV batteries for use in stationary storage systems.

Technicians remove EV batteries near the end of their useful life, but many can still hold a charge. Connected together to store solar power, the batteries create a microgrid while avoiding waste. BMW is among the companies that have experimented with "second-life" car batteries on a large scale in Europe.

The CEC awarded $2.8 million to the San Diego State University Research Foundation to pair second-life EV batteries with a solar photovoltaic system. Rejoule was given $2.9 million "to develop novel battery grading tools to more quickly and accurately assess the health of repurposed EV batteries for stationary storage."

"With California leading the nation in electric vehicle acceptance, [it] will have the largest opportunity to fully utilize these batteries that have substantial energy left for stationary use," Mike Gravely, research program manager at the Energy Commission, told the commissioners. ■

CAISO/West News

Calif. Rushing Microgrids for Fire Season Shutoffs

Hydrogen Fuel Cells Key to Longer Duration Needs, Advocate Says

Continued from page 1

the longer term, to store renewable power and make up for possible capacity shortfalls during the switch from natural gas plants to renewable resources in the next three years.

Senate Bill 100, passed in 2018, requires load-serving entities to provide only zero-carbon electricity to retail customers by 2045.

"Microgrids are one of the tools that will help the state get to our 100% clean energy standard in the most efficient and equitable way possible," said CEC Vice Chair Janea Scott, who led the sessions.

CPUC President Marybel Batjer said she's worried about Pacific Gas and Electric's plan to use diesel generators to supply electricity during PSPS events this summer and fall. PG&E intends to connect hundreds of diesel generators at substations to supply customers during the shutoffs.

"I am concerned that this wildfire season, we will see a lot of diesel generation used to ensure resiliency, and we have to get to a cleaner and quieter form of resiliency backup power," Batjer said.

Neil Millar, CAISO's vice president for transmission planning and infrastructure development, said it was important for the ISO to learn about the "different flavors of microgrids that are evolving" and to ensure "our existing processes are adequate for accommodating them."

CAISO and the CPUC are working to manage the connection of microgrids to the statewide grid and to include microgrids in the state's resource planning process, he noted.

Fast-tracked Measures

Senate Bill 1339, passed in 2018, directed the CPUC to "facilitate the commercialization of microgrids for distribution customers of large electrical corporations" by Dec. 1.

In response, the CPUC established a new section in its Energy Division focused on microgrids and fast-tracked *rulemaking* to speed the connection of microgrids in anticipation of this year's fire season, which typically lasts from late summer through November.

In June, it adopted a proposed decision ordering investor-owned utilities to streamline and expedite interconnection processes for microgrid resilience projects and to work with local and tribal governments to bring the projects online by late summer, in time for the anticipated power shutoffs. (See *California PUC Approves Microgrids, Fire Plans*.)

Stone Edge Farm in Sonoma County, Calif., uses an electrolyzer and hydrogen fuel cells to store solar energy for use during the winter rainy season. | *Stone Edge Farm*

The CPUC directed energy storage facilities to import power from the grid prior to PSPS events. It permitted PG&E to upgrade substations and install diesel generators, but only for the 2020 fire season. And it ordered IOUs to increase staffing to hasten microgrid interconnections.

"We're really focused on … fast-tracking near-term strategies and actions we can put in place in time for this year's wildfire season," PUC Senior Analyst Jessica Tse said during the first microgrid workshop session on July 7.

Beyond the next few months, the CPUC and CEC are seeking ways to build microgrids that use wind and solar with battery storage to ride out power outages. (See *CPUC Proposal Would Promote Microgrids*.)

The CEC is funding millions of dollars in pilot projects to find microgrid solutions that can be replicated and installed on a larger scale. The projects are on military bases and tribal lands, at ports and airports, in industrial settings and wastewater treatment plants, and in low-income and disadvantaged communities.

Projects recently approved include $6 million to determine if it might be feasible to use banks of batteries that have been removed from electric vehicles, but still have plenty of useful life, for storage in microgrids. With 750,00 EVs sold so far, and millions more expected to hit California roads in the next decade, there will be a lot of used batteries, CEC Chair David Hochschild said. (See *Calif. Energy Commission OKs $22M for Storage*.)

In another CEC-funded project, the city of Fremont is using solar and battery storage to allow critical facilities such as fire stations to "island" from the grid for up to three hours. But local jurisdictions need the ability to provide power while disconnected from the grid for longer periods, said Rachel DiFranco, the city's sustainability manager.

PG&E's fire-safety blackouts in the fall of 2019, affecting hundreds of thousands of customers, lasted for days at a time. (See *CPUC Orders Changes to PG&E Shutoff Rules*.)

Earthquakes and wildfires could sever ties to the grid for even longer periods, said Rosa Vivian Fernández, CEO of the San Benito Health Foundation, a small clinic that serves thousands of farmworkers in the city of Hollister. In August 2019, San Benito became the first health care facility in California to run entirely on its own zero-carbon microgrid using a rooftop solar array and lithium-ion battery storage.

Fernandez said she learned from visiting Puerto Rico after Hurricane Maria in 2017 that health care facilities could be disconnected from power for weeks, unable to serve patients.

"When disaster strikes … [you] may have severe damage to infrastructure," she said during

CAISO/West News

the first of Thursday's two workshop sessions.

Seth Baruch, director of energy and utilities for health care giant Kaiser Permanente, explained why Kaiser had decided to install microgrids at a growing number of its facilities.

In 2018, the Kaiser Permanente Richmond Medical Center was the first hospital in California to install a renewable-energy microgrid for backup power during outages. Hospitals generally use diesel generators for emergency power, but Kaiser is pursuing microgrids as it seeks to become carbon neutral and because diesel fuel can run short in emergencies, Baruch said.

"When you need diesel, everyone needs diesel," he said. With power shutoffs and potential surges in COVID-19 cases, Kaiser wants to ensure its facilities have power "24/7" for days at a time, he said.

Hydrogen Fuel Cells

The need for microgrids that can supply long-term backup power prompted a discussion Thursday, during the workshop's final session, on deploying microgrids that use hydrogen fuel cells, which produce electricity through an electrochemical reaction of hydrogen and oxygen.

Lithium-ion batteries can only provide power for short-duration outages. Fuel cells can provide power indefinitely given a supply of hydrogen and oxygen produced by separating water into its components with a solar-powered electrolyzer, advocates said Thursday.

Stone Edge Farm, a 16-acre Sonoma County winery, has a microgrid with solar panels, batteries, an electrolyzer that produces hydrogen from rainwater and a bank of hydrogen fuel cells, winery owner Mac McQuown told commissioners.

"Our objective in our microgrid is to be independent of the utility grid 24/7, 365," McQuown said.

Microgrids using fuel cells power a low-income housing community in Brooklyn, a college in Bridgeport, Conn., and a high school and fire stations in Woodbury, Conn., said Jack Brouwer, director of the *National Fuel Cell Research Center* at the University of California, Irvine.

"Fuel cells have this opportunity to do that because they have very high power capabilities to power a whole community," Brouwer said.

The big problem is cost. In applications such as microgrids, fuel cells produce electricity at $4,000 or more per kilowatt, the NFCRC says on its website. Fuel cells would be competitive in providing power for stationary loads if they reach an installed cost of $1,500 or less per kilowatt, it says.

Current research is seeking to reduce costs by using less expensive materials and producing fuel cells on a larger scale, the NFCRC says.

Brouwer said using hydrogen technology in conjunction with wind, solar and battery storage is another way to make fuel cells more practical. Existing natural gas pipelines might also be able to carry hydrogen, but that idea has proven controversial among clean-energy advocates who want to do away with natural gas entirely, he said.

Still, he said, California may ultimately need hydrogen fuel cells to provide electricity during long outages and to meet its ambitious decarbonization goals.

Hydrogen can "deliver resilience for weeks on end," Brouwer said, and "the solution to get all the way to zero [carbon] needs something like fuel cells and hydrogen."

Millar, with CAISO, said he agreed. "The solution here isn't one or the other; it's all of the above," he said. ■

The city of Fremont, Calif., employs solar and battery storage to power critical facilities such as fire stations. | *City of Fremont*

ERCOT News

ERCOT Briefs

Members Approve Unaffiliated Directors' Nominations, Bylaw Amendments

ERCOT said last week that its corporate members have approved the elections of two unaffiliated directors, the re-election of a third unaffiliated director and amendments to the grid operator's amended and restated bylaws.

Staff conducted a ballot vote "to resolve the items" before a scheduled Friday special meeting of corporate or voting members. They received enough votes to pass each of the four motions on July 2 and canceled the special meeting.

ERCOT plans to file the three director nominations for approval with the Texas Public Utility Commission this week. It expects approval in early November.

Sally Talberg, Michigan PSC | © *RTO Insider*

The Board of Directors in June approved Michigan Public Service Commission Chair Sally Talberg and retired ISO–NE General Counsel Ray Hepper to three-year terms as unaffiliated directors. The board also approved Terry Bulger for a second term as an unaffiliated director when his current term expires next March. (See "Michigan PSC's Talberg Among Director Nominees," *ERCOT Board of Directors Briefs: June 9, 2020*.)

Board Chair Craven Crowell, Vice Chair Judy Walsh and Director Karl Pfirrmann all roll off the board when their terms expire at the end of this year.

Wind energy was responsible for almost a quarter of ERCOT's energy production in June. | *Apex Clean Energy*

ERCOT has already filed the bylaw amendments with the PUC for its expedited approval (*50918*). That should come by July 31, according to the docket's procedural schedule. The amendments address the need and processes for teleconference meetings under social-distancing requirements related to the COVID-19 pandemic.

Demand, Temps on the Rise

June's peak demand in ERCOT's footprint came within 116 MW of last June's peak, a sign that consumer demand and summer heat are nearing normal levels. The grid operator recorded a peak demand of 68,043 MW during the hour ending at 6 p.m. on June 8. Peak demand last June was 68,159 MW.

Gas-fired resources accounted for 40.9% of the energy produced during the month, with wind energy responsible for 23.34%. Coal resources provided 16.6% of ERCOT's energy in June.

The grid operator on Monday fell short of an all-time peak demand, coming within 800 MW of last year's record. ERCOT set a new all-time peak of 74.8 GW last year and has predicted a new mark of 75.2 GW this year, almost 1.5 GW less than staff predicted before Texas began locking down in March.

A heat wave continues to bake the Southwest and has brought triple-digit temperatures to much of Texas. ■

— Tom Kleckner

ISO-NE News

RI Seeks to Lead with 100% Renewable Goal

By Michael Kuser

Rhode Island may meet its goal of using 100% renewable electricity by 2030, but that doesn't mean the rest of New England can do the same.

So heard more than 150 people Thursday at a virtual public meeting on how the state's Office of Energy Resources (OER) is working with the Brattle Group to develop a plan by year-end to achieve a 100% clean grid by the end of the decade.

"The two most significant barriers to accelerated renewable growth are the following: One is sustainability and affordability from a consumer perspective," OER Commissioner Nicholas Ucci said. "The other major challenge is sustainable siting."

The state, which had 95 MW of clean energy in 2016, has increased its share almost tenfold to 920 MW as of the first quarter of 2020, Ucci said.

The OER is conducting a study that should be released in December that looks at opportunities for solar development on greyfields and brownfields, landfills and carports, all to ease the burden of siting for developers, he said.

The state is also looking forward to the 400-MW Revolution Wind offshore wind project, which will supply 25% of its electricity when it goes online in a few years, Ucci said.

Nicole Verdi, deputy chief of staff to Gov. Gina Raimondo, referred to climate change as a threat to the very existence of the low-lying Ocean State.

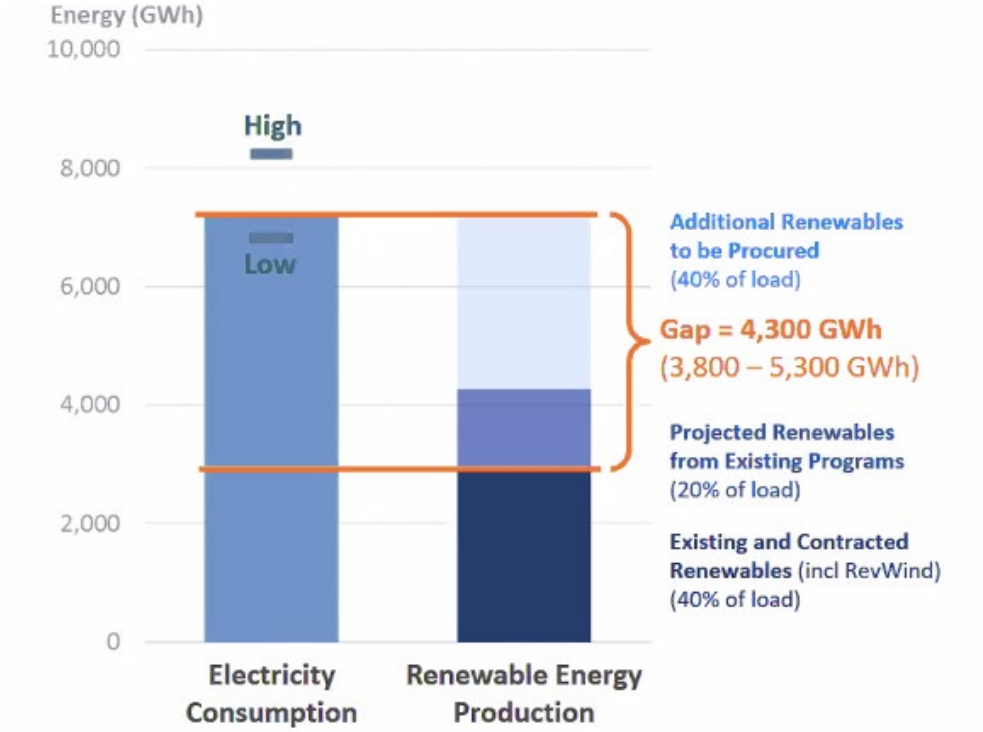
"Rhode Island is warming at the fastest rate of any state in the continental U.S.," Verdi said. "Our sea levels rise faster each year, and we are rapidly approaching the point of no return."

If the status quo persists, sea levels could rise as much as 10 feet by the end of this century, she said.

"Let me paint a picture of how disastrous this could be. A 10-foot rise in our sea level would turn Little Compton, Portsmouth and Tiverton into a chain of small islands," Verdi said. "A 5-foot rise would give the state house a moat."

Decarbonize Everything

Raimondo signed an executive *order* in January committing the state to be powered by 100% renewable electricity by the end of the decade



Brattle Group preliminary analysis shows Rhode Island will have a gap of 4,300 GWh in clean power production a decade from now. | *The Brattle Group*

and directing the OER to conduct economic and energy market analyses in order to develop workable policies and programs.

"This is a very aggressive goal, more so than any other U.S. states have put in place," said Brattle principal Dean Murphy in opening the day's *presentation*. "Achieving 100% renewable electricity by 2030 is the focus of this study, but it's important to keep in context that the 100-by-30 goal is really just one step toward the larger and longer-term economy-wide goal of 80% reduction in greenhouse gas emissions by 2050."

Brattle last month delivered a similar *study* to NYISO concluding that New York's ambitious clean energy goal of having the first grid in the country to reach 100% emissions-free electricity will require an "astonishing" 80 GW of new generation by 2040. (See *'Astonishing' Buildout Needed for Clean NY Grid*.)

Electrifying most heating uses and most transportation would roughly double the demand for electricity over the next few decades, "and of course, you haven't decarbonized the heating or transportation sector unless you've also decarbonized electricity," Murphy said. "That gives a sense of why decarbonizing electricity is important: first to get the carbon out of the existing electricity sector, and then to provide carbon-free generation to power other sectors as a way of decarbonizing those."

Daniel Collins, director of government affairs at the New England Power Generators Association, asked whether the study will consider carbon pricing as a potential solution to meet the 2030 goal and beyond. "The executive order mentions leveraging market competition, which would presumably make carbon pricing a viable policy option," he said in a written question. "I also note that OER is conducting a separate study on carbon pricing, albeit with a different consultant."

"As you note, carbon pricing is being studied elsewhere," Ucci responded. "However, OER will consider the lessons learned through both studies and integrate where appropriate. Indirectly, any future carbon pricing scheme could produce revenues that might ultimately be invested in new clean energy resources, e.g. local solar, energy efficiency, etc. That type of outcome, if it came to pass, would be consistent with our analytical framework here."

Cadmus Group and Synapse Energy Economics delivered a preliminary *assessment* on their carbon pricing study for OER in May and expect to issue a proposed mechanism for

ISO-NE News

carbon pricing by the end of this summer.

Encouraging Renewables

Murphy said the report's "'gap' refers to the amount of additional renewables that you'd need by 2030 to meet 100%, additional beyond where we are now, beyond the commitments that have already been made. We are not identifying those mechanisms by which additional renewables could be procured or provided to get to 100%."

National Grid, the state's main utility, reported at a seminar last month on its decarbonization efforts. (See *NE Utilities Lay out Strategies for Net-zero Emissions*.)

The utility's Renewable Energy Growth (REG) *program* supports the development of distributed generation projects with wind, solar, hydropower and anaerobic digestion — and has a separate *program* for homeowners and small business operators installing facilities 25 kW and smaller.

In addition, the state runs its own solar *marketplace* to help residents install solar panels on their property.

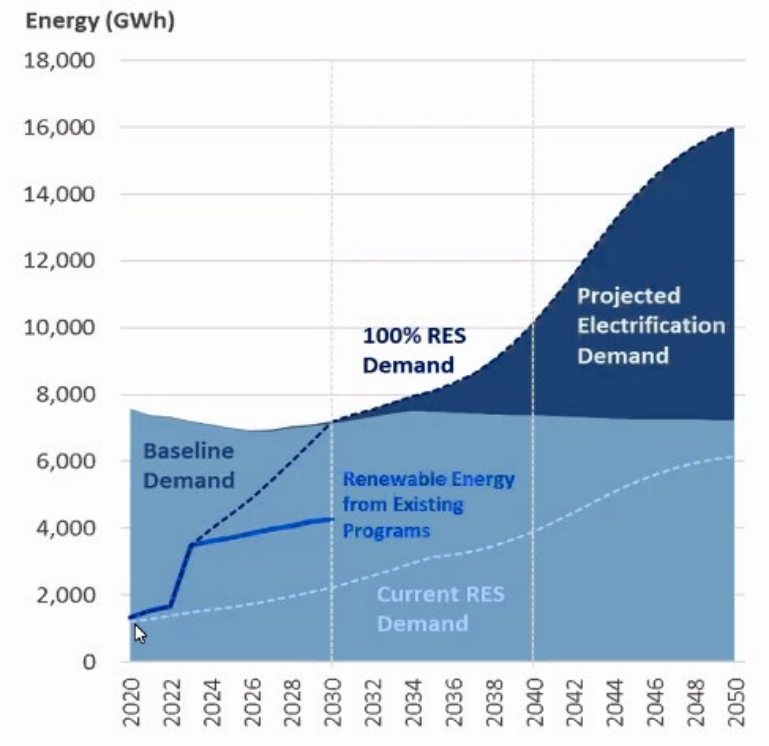
Rhode Island can lead New England by example, said Jürgen Weiss, another principal with Brattle.

"The climate leadership role could be making sure Rhode Island helps push down greenhouse gas emissions as much as possible to avoid the worst consequences of climate change," Weiss said.

Another more narrow goal is to make sure that the policies that get implemented lead to the decarbonization of the power sector, which seems obvious, but there are factors that need to be considered to ensure the outcome, he said.

"Any policies implemented should lead to additional greenhouse gas emission reductions in the power sector — reductions that would not have occurred absent the policies," Weiss said.

He said state policies may not result in additional GHG emissions reductions if compliance happens through an alternative compliance agreement, or "out clause."



Rhode Island 2020-2050 Projection | *The Brattle Group*

Theoretically, the trade of renewable energy credits and certificates could lead to emissions reductions in Texas, but not in Rhode Island, so policymakers should be aware of all the details, Weiss said.

Another policy consideration is to make sure that 100% of load is counted, "which is easier said than done, for not all demand for electricity in Rhode Island is metered, such as a diesel generator in the backyard that's only used for emergencies," Weiss said.

An industrial facility might have its own generator, the most typical example being a combined heat and power plant, so decarbonizing 100% means capturing all the elements, he said.

Especially after 2030, moving to electrify transportation, heating and cooling will not get the region to net-zero emissions unless the power sector continues to decarbonize, Weiss said.

A renewable energy standard "is a good starting point, but it's not enough. ... We need additional resources," he said. ■

MISO News

Monitor Says MISO Needs Higher Reserve Margin

By Amanda Durish Cook

MISO's Independent Market Monitor said the RTO would be better served by an even higher planning reserve margin, two days after it recorded its first emergency of the summer.

Monitor David Patton said the grid operator should be using a 20% planning reserve margin requirement instead of the current 18% requirement that was in place when it called a maximum generation event on July 7. MISO's planning reserve margin has climbed steadily in recent years; in 2017, it was just under 16%.

Speaking during a Market Subcommittee teleconference Thursday, Patton said part of the problem is MISO does not assume that planned generation outages and derates occur in the summer months.

But MISO is wrong there, he said.

Had it accounted for historical planned and unreported summertime outages, MISO would find its 18% margin requirement would look more like 11%, Patton said. If the RTO only included load-modifying resources that have lead times of two hours or less, that margin would fall to 8%, he said.

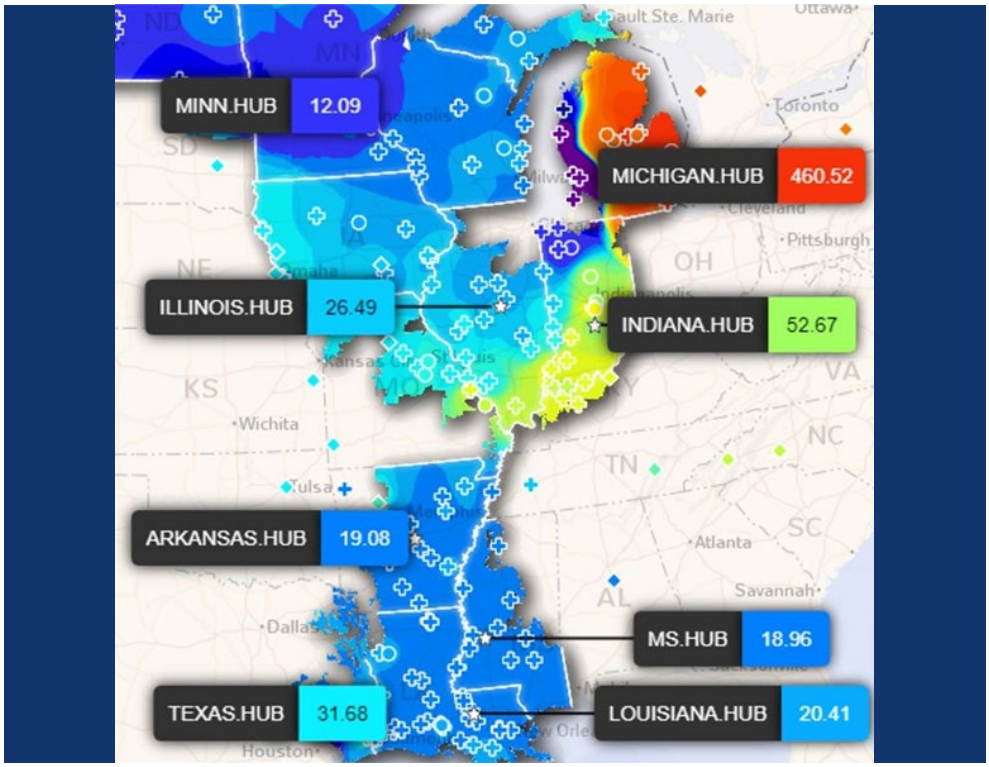
MISO currently allows LMRs with lead times as long as 12 hours to participate in its capacity market. The RTO recently filed with FERC to reduce the capacity credits those LMRs receive. (See *MISO Offers Concession on LMR Capacity Credit Plan*.)

Patton said he would be "comfortable significantly reducing LMR accreditation to a two-hour" notification time. He said LMRs with six-hour notification needs provide "almost no reliability value" and wondered why they were being treated comparably with more valuable resources.

"It is the case that MISO has made improvements to notify LMRs to be ready ahead of time. And that's good. But it's still the case that MISO cannot see emergencies that far in advance," he said.

Patton said excluding planned outages from reserve margin planning and accrediting long-lead LMRs contributes to the footprint's tight conditions.

"We're not as adequate as we think we are," he said. "I think we're adequate for this summer, but improving how we accredit capacity and price shortages will be increasingly important."



MISO real-time prices at 3 p.m. ET July 9 | *MISO*

Patton also said MISO needs higher pricing during shortages, especially as more intermittent resources are introduced into the resource mix.

"I'm not sure that we need new [market] products as much as we need really good shortage pricing," he said.

Another Emergency Declaration

The Monitor's recommendations were delivered as much of MISO Midwest was gripped by a persistent heat wave.

The high temperatures prompted MISO to issue a maximum generation *emergency* about 1-5:30 p.m. July 7 for its Northern and Central regions.

LMPs at the Michigan hub exceeded $400/MWh on July 7 and neared $700/MWh around 3 p.m. Thursday. MISO's peak load topped out at just over 114 GW on Thursday. The RTO had planned for a 120-GW peak that day.

MISO first issued a hot-weather alert and capacity advisory on July 1 and a conservative operations declaration beginning July 6. Conservative operations — where MISO requests that all transmission and generation outages be put on hold, if possible — were in effect through Friday.

MISO imported capacity from PJM during the July 7 emergency, even as the PJM region was also experiencing stifling heat.

Patton said MISO is mostly saved from capacity deficiencies during hotter-than-normal weather combined with low wind output by its "substantial" import capability from its footprint's neighbors. He said imports are "utilized to avoid shortages in all the hottest conditions."

He also reminded stakeholders that MISO still has a "theoretically flawed" capacity market where demand doesn't set capacity's reliability value. MISO's vertical demand curve causes resources to prematurely retire, he said.

Patton also noted that MISO had several warm days with air conditioning demand in March and April. He said spring load would have been slightly higher than average but for the languishing demand introduced by COVID-19 pandemic-related lockdowns.

MISO executives said they will prepare data on and a review of the July 7 emergency event for the Reliability Subcommittee meeting July 30. ■

MISO News

MISO Closer to Seasonal Capacity, Reliability Reqs

By Amanda Durish Cook

MISO will evaluate the merits of defining new seasonal reliability criteria and implementing a sub-annual capacity construct, stakeholders learned Wednesday.

The new evaluation stage is another, more formal step toward creating a seasonal capacity construct. The RTO has repeatedly said it is considering defining unique system reliability requirements for the footprint because of analyses that signal an emerging wintertime loss-of-load risk.

The move could have MISO issuing sub-annual reserve margins based on seasons, beyond NERC's annual reliability standards. The RTO plans to publish a white paper on reliability needs in the third quarter.

Brattle Group Principal Sam Newell told stakeholders that supply shortage risks are shifting from the summer peak.

"As MISO looks to a future with more wind and solar and less coal and seasonal mothballing, the risks will continue to shift," Newell said during a Resource Adequacy Subcommittee conference call Wednesday.

Some stakeholders have said seasonal reliability criteria could infringe on states' jurisdiction over resource adequacy and told MISO the existing annual local clearing requirements and planning reserve margins it provides are sufficient. (See *Stakeholders Split on Potential MISO RA Requirements*.)

But on July 7, 11 utilities and power organizations urged MISO in a *letter* to move ahead with a sub-annual capacity construct. The group — including Xcel Energy, Ameren, DTE Energy, Consumers Energy and WEC Energy Group — said the RTO should pursue a segmented capacity auction and capacity resource accreditation changes based on seasons or months.

"The reliability risks facing the MISO footprint have been plainly identified, appropriately articulated to stakeholders and demonstrated by the significant number of emergency actions taken by MISO operators since June 1, 2016," the group wrote. "The transition to a sub-annual capacity construct would provide MISO and stakeholders with the ability to procure more tailored capacity commitments to address non-summer capacity risk."

MISO also added another maximum generation *emergency* event to its tally July 7 for its Northern and Central regions, as much of MISO Midwest was gripped by a persistent heat wave.

This year's resource adequacy survey conducted by MISO and the Organization of MISO States indicated that the RTO could face a 400-MW capacity shortfall as early as 2022, and the next five years could contain surpluses as high as 12.5 GW or deficits as steep as 6.8 GW. (See *OMS-MISO Survey Sees Uncertain Supply Future*.)

MISO Executive Vice President of Market and Grid Strategy Richard Doying said change in some form is inevitable for the Planning Resource Auction. He said the capacity auction needs to send signals to buy or build generation when appropriate.

"I don't believe we can say, 'Most load is covered, so we're good,'" Doying said. "It's a varied landscape that we need to navigate here." ■

MISO News

Coal Org Pushes Back on Self-commit Study

By Amanda Durish Cook

Coal trade organization America's Power has countered a recent Union of Concerned Scientists analysis that claimed coal generation self-commitments are unnecessarily costing Midwestern ratepayers millions.

The group, formerly known as the American Coalition for Clean Coal Electricity, said that far from conducting uneconomic behavior, MISO's coal units closely follow energy demand. The group said that in 2018, changes in electricity demand and coal generation output correlated about 87% of the time, regardless of utility or whether MISO issued dispatch instructions. It also said the percentage was the same as natural-gas fired generation in the footprint.

"Not only are coal-fired generating units run economically, they are run according to market demand as much any other type of generation in MISO," America's Power said in its rebuttal, released June 25 and titled "*Never Let the Truth Get in the Way of a Good Story*."

"Self-committing coal-fired power plants is not a trick to rip off ratepayers," it said. "Rather, it benefits ratepayers and helps maintain the reliability of the electricity grid."

UCS' June analysis concluded that coal plant self-commitments saddled Midwest electricity customers with $350 million in avoidable costs in 2018. The study also said individual ratepayers could have saved an average $60 apiece over the year if the most efficient existing resources in MISO were deployed instead of coal plant self-scheduling. UCS used the study to make a case for state regulators to open investigatory dockets into utilities that exhibit high costs. (See *UCS Analysis Knocks Coal Self-commitments*.)

MISO has *said* about 90% of energy from its coal is either from economic commitments or economically dispatched above the units' economic minimum levels.

"Some claim that self-commitment of coal-fired resources results in prolonged run times and uneconomic outcomes for end-use customers," MISO said in an April *report*. "Further, they say self-commitment distorts the markets by allowing coal units to displace lower-cost renewables and other resources from the grid. In fact, the vast majority of all self-committed coal generation in MISO is actually dispatched economically — meaning it is the lowest-cost resource option that MISO markets have available at the time to serve load."

MISO Executive Director of Market Operations Shawn McFarlane said most self-committed, coal-fired energy is dispatched economically.

"We try to minimize any uneconomic dispatch … taking into account operational constraints," McFarlane said during the Market Subcommittee meeting in May.

Monitor to Weigh in

On Thursday, MISO's Independent Market Monitor David Patton told the MSC that he will publish his own report on coal self-commitments next month, but he doesn't anticipate alerting staff and stakeholders to a problem.

Coal resources that offer in the day-ahead market as must-run are overwhelmingly offered economically, Patton said. He said 98% of available offline coal units offered economically in the day-ahead market this spring, up from 89% last year.

"As gas prices fall, it's becoming harder to predict when it will be economic for coal resources to run," Patton said. Offering in must-run status prevent the units from incurring expensive cycling costs when they're decommitted and brought back online later, he said. ■

| *America's Power*

MISO News

MISO Market Platform Replacement Project up $20M

By Amanda Durish Cook

MISO's market platform upgrade project is $20 million over budget as staff and vendors navigate the intricacies of replacing a decades-old system and pandemic-related supply chain issues.

The project's costs have risen to nearly $160 million, up from the $140 million projected last year. MISO Executive Director of Digital Strategy Jeff Bladen said the increase is largely because of the complexities of swapping out system components that couldn't be foreseen two years ago.

Jeff Bladen, MISO | © *RTO Insider*

Speaking during Thursday's Market Subcommittee meeting, Bladen also said implementing MISO's new private cloud server was held up by the ongoing coronavirus pandemic's interruptions of the supply chain. The new private cloud will house the modular platform, replacing the current server-based platform. (See *Test Phase Approaches for MISO Market Platform*.)

"We are moving ahead," Bladen said. "We have been impacted by that to some degree in the buildout of the private cloud."

Bladen said the private cloud will probably be online later this month, a month later than the RTO anticipated pre-pandemic.

MISO Director Baljit Dail said that even with the cost increase of the project, the cost-benefit is "still significant."

"I think it's important to remember that the legacy system was installed in 2009. It's over a decade old," Dail said at MISO's June board meeting. He said staff stretched the original platform as far as they could, adding software and market products to keep up with a changing grid.

Bladen said the existing system's architecture was originally designed for PJM in the mid-1990s.

MISO is replacing the platform gradually, turning off core elements of the old system one at a time and replacing them with new microservers. The day-ahead market is set to go live on the new platform in 2023.

"We've started down this path in earnest, with actual coding as we speak," Bladen told stakeholders.

The old market platform will be completely retired in 2026. However, the bulk of the replacement will be complete by late 2024, Bladen said. The real-time market will likely go live on the new platform in early 2025.

Additionally, the new market participant interface test environment has been open since April and will be until June 2021. Parallel operations of the new and old interfaces will take place July-October 2021.

"We have seen some traffic and activity, but several companies have not tested it yet," MISO Senior IT Director Curtis Reister said. ■

NYISO News

Community Shared Solar Grows in NYC

By Michael Kuser

New York continues to be a pioneer in expanding access to community solar for low- and moderate-income people, and the New York City Housing Authority (NYCHA) is a powerful agent in that effort, with more clients than the population of most U.S. cities.

NYCHA has a commercial solar program and a residential one, the ACCESSolar *program*, which aim to install 25 MW of renewable energy on its properties by 2025, generally at less than 40 kW per building, Chris White, an associate with the housing authority's capital projects/sustainability program, told more than 100 people Thursday in a virtual meeting hosted by Sustainable CUNY at the City University of New York.

The housing authority completed its first round of solicitations last year, with the pandemic greatly disrupting the progress so far in 2020, he said.

"Right now, we're trying to work through COVID, wrap up some lease agreements and get our first projects constructed. We're hoping that our first solar panels will be in construction in the next couple of months ... and hopeful that we're going to have our next round of solar opportunities probably around the end of this year," White said.

The solar program aims to generate revenue, use underutilized spaces, provide job training and green jobs for residents, and reduce energy costs for those who live in NYCHA housing, *Section 8* voucher holders and other low- and moderate-income people across the city, White said.

The housing authority serves about 400,000 people in 176,000 apartments and another 200,000 people through its voucher program, the largest numbers of any city in the country, and gets special reduced electricity rates from the New York Power Authority, he said. (See *New York City Ramps Up Community Solar*.)

Ron Reisman, NYC solar partnership manager for Sustainable CUNY, said the organization has been supporting NYCHA's program from the beginning three years ago with technical assistance, assessments, proposal evaluations and other services.

Sustainable CUNY developed the New York solar *map* and portal, which includes a calculator to help residents find the solar potential of their homes or businesses. It includes links to resources on permitting, interconnections, zoning, financing and other topics related to solar and storage, Reisman said. The organization supports both renewable energy development on the university's campus properties and for New York's distributed generation framework, he said.

Sharing Benefits

"Supporting the NYCHA initiative is part of our overall mission to expand the deployment of solar in New York City, and energy storage as well, in a way that all New Yorkers can take advantage of energy, environmental and economic benefits," Reisman said.

The National Renewable Energy Laboratory's *webpage* on low- and moderate-income solar policy basics notes that community solar is attractive to many regardless of income, because shading and inadequate roof conditions make solar unsuitable for nearly three-quarters of the residential rooftops in the U.S.

The lab says several jurisdictions have begun exploring community solar to expand solar access to low- and moderate-income communities, and mentions New York as one of four states — California, Colorado and Oregon are the others — that have enacted low-income carve-outs as part of their community solar policies.

The New York Public Service Commission's 2015 order establishing net metering gave special consideration to projects that promised 20% participation by low-income people (*15-E-0082*).

"We're very excited about the work we're doing installing solar at the [NYCHA's] Carver Houses," said Charles Callaway of WE ACT for Environmental Justice, who also has a seat on the state's 22-member Climate Action Council. "If we weren't in this pandemic of COVID-19, we'd probably be in the buildings."

His organization is looking to recruit a couple buildings in East Harlem into the solar program and working to get residents the cost estimates needed to move forward on installing solar panels.

"Getting people the information they need to sign up for community solar is very important," Callaway said. "We've tried a couple of strategies around just doing street outreach."

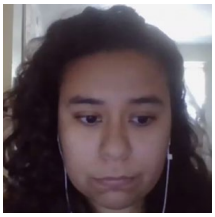
Callaway reported some low-income people being fearful of innovative clean energy programs after having been "scammed" by unethical energy service companies, a practice that the PSC has cracked down on repeatedly in recent years. (See *NYPSC Reins in ESCOs, Expands Community DG*.)

The mayor's office works with *Sustainable CUNY* and the *NYC Economic Development Corporation* to expand access to the benefits of solar energy and other forms of renewable energy. Programs include *Solarize NYC* — for community group purchasing — and a related program called *Shared Solar NYC*.

Juan Parra, Solar One | *CUNY*

Juan Parra, community solar program manager with Solar One, an environmental education nonprofit in the city, said his organization is involved in two active projects now: a 685-kW project in Sunset Park, on the roof of the Brooklyn Army Terminal, and NYCHA's ACCESSolar.

"We're implementing workforce training opportunities, so we're not just training folks in solar installation skills, but actually making commitments with the installer to hire them as part of the solar installations for these projects," Parra said. "We're excited that training is going to start next week."



Daphany Sanchez, Kinetic Communities | *CUNY*

Daphany Sanchez of Kinetic Communities Consulting worked with NYCHA on the solar project and said the housing authority is working in Harlem to learn how to scale community solar for small businesses and local nonprofits.

"Community-based organizations have done outreach in the past, so when we talk about community solar outreach, the concerns are around how do we ensure these are truly low- and moderate-income people, how do we capture that information, when in reality such organizations" have secured the same personal information for housing, health and education, Sanchez said. "It is not new." ■

PJM News

PJM Dusts off 'State Agreement' Tx Approach

Potential Means for Connecting Offshore Wind

By Michael Yoder and Rich Heidorn Jr.

With Virginia, Maryland and New Jersey committed to building almost 10 GW of offshore wind, PJM is dusting off a never-used mechanism that would allow states to pay for transmission needed to achieve public policy goals.

FERC *approved* PJM's "state agreement approach" in the RTO's first Order 1000 compliance filing in 2013, saying it was "supplemental to PJM's proposal to consider transmission needs driven by public policy requirements, and not needed for compliance."

The approach allows individual or groups of states to submit a transmission project for study by PJM, even if it does not qualify as a reliability or market efficiency initiative under the RTO's Tariff. The project would be included in the Regional Transmission Expansion Plan as a supplemental project or baseline state public policy project — which could trigger a competitive solicitation — if the states agree to pay for it.

During a *presentation* at the Planning Committee meeting July 7, Mark Sims, infrastructure coordination manager, cited several types of projects that could use the approach, including meeting renewable energy goals, emission reduction, grid hardening and supporting electric vehicles.

Because the state agreement approach has never been deployed, Sims said PJM officials thought it would be beneficial to provide stakeholders with education on it. The presentation came a week after the RTO's announcement of its new State Policy Solutions group. (See *PJM to Work with States on Policy Goals in New Group*.)

Sims said the state agreement approach is addressed in *Schedule 12 (B)* of the Tariff, *Manual 14B* and *Schedule 6* of the Operating Agreement.

Sue Glatz, PJM director of infrastructure planning, said many generation public policy projects have been developed through the generator interconnection process. "That will continue in the future," she said. "However, there are other routes that can be [taken], and that's what we're talking about today, recognizing that some of these public policies now may be on a larger scale."

Glatz noted that FERC has scheduled an Oct. 27 technical conference on offshore wind. The commission said it will "discuss whether existing commission transmission, interconnection and merchant transmission facility frameworks in RTOs/ISOs can accommodate anticipated growth in offshore wind generation in an efficient and effective manner that safeguards open-access transmission principles." (See *FERC Announces Tech Conferences on Carbon, OSW*.)

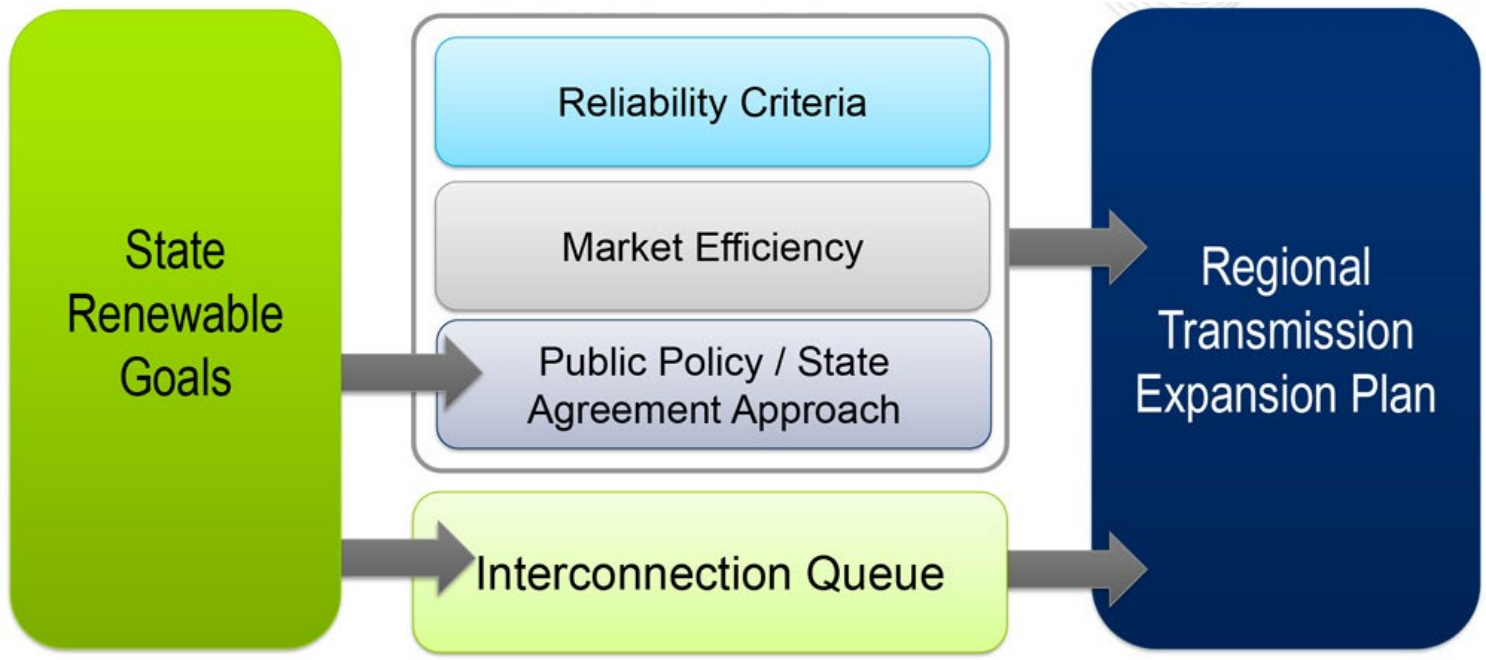
Maryland last year approved an offshore wind target of 1,200 MW by 2030. In March, Virginia lawmakers approved a target of 5,200 MW by 2034. In 2018, New Jersey lawmakers set a target of 3,500 MW by 2030; Gov. Phil Murphy issued an executive order last November to increase the target to 7,500 MW by 2035.

Gregory Carmean, executive director of the Organization of PJM States Inc., emphasized that the state agreement approach is one avenue available to the states but was not approved by FERC as meeting PJM's obligation under Order 1000 to plan transmission for public policy needs.

"FERC has said that's a supplemental process. It's nice [if] the states want to do that, but that doesn't meet [PJM's] Order 1000 obligations," Carmean said.

Sims said PJM plans on conducting at least two more informational sessions on the state agreement approach, including one in August and September.

"We want to introduce the [state agreement] topic today and get feedback on what there may be questions about," Glatz said. ■



Public policy in the PJM planning process | *PJM*

PJM News

Pa. House Passes Bill Limiting RGGI Entry

By Michael Yoder

The Pennsylvania House of Representatives voted Wednesday to pass a bill limiting the state's entry into the Regional Greenhouse Gas Initiative (RGGI), but experts expect the state will ultimately enter the environmental compact despite concerns from legislators.

House Bill *2025* passed by a bipartisan majority of 130-71. It would require the legislature's approval before Pennsylvania can enter any multistate program like RGGI that imposes taxes. The Department of Environmental Protection would need to submit "a description of the economic and fiscal impacts that would result" from joining such a program to aid the legislature in its decision.

The bill would also require legislative authorization before the state can impose a carbon tax on employers engaged in electric generation, manufacturing or other industries.

Gov. Tom Wolf signed an *executive order* in October directing the DEP to develop a rulemaking for joining RGGI by July 31; citing the pandemic, Wolf provided the department with a six-week extension, to Sept. 15. His authority to issue such an order has been continually challenged by the Republican-controlled legislature. (See *GOP Continues Opposition to Pa. RGGI Plans*.)

"This bill gives a voice back to the people by allowing those of us who represent them to have say in this process," Rep. Jim Struzzi, the bill's primary sponsor, said during Wednesday's House session and vote. "The action to enter RGGI would have serious ramifications on Pennsylvania businesses, jobs, energy prices and future economic opportunities that are not being considered by the governor."

RGGI, which includes New York and the six New England states, currently has three PJM states: Delaware, Maryland and New Jersey. On Wednesday, Virginia Gov. Ralph Northam *announced* that the state had finalized a rule in preparation for it joining the compact on Jan. 1. (See *PJM Panel Weighs Impact of Pa., Va. Joining RGGI*.)

The bill now goes before the State Senate for consideration, with sessions scheduled for Monday and today. The body may take up the House bill or consider its companion bill, Senate Bill *950*, which currently has 20 Republican sponsors, representing 40% of the 50-seat chamber.

Rep. Jim Struzzi speaks June 8 before the vote on his bill limiting Pennsylvania's entry into the Regional Greenhouse Gas Initiative. | *Pa. House*

During Wednesday's session, House Majority Leader Kerry Benninghoff (R) said that of the nine states that have already entered into RGGI, all of them voted to join through votes in their respective legislatures. Benninghoff also called RGGI a "job killing" measure that will drive high-paying jobs out of Pennsylvania and into Ohio and West Virginia, the state's two neighbors that are neither part of nor considering joining the compact.

"No governor has the authority to rule by the swipe of a pen without the input or the consent of the people of Pennsylvania," Benninghoff said. "No governor has the authority to implement a tax, and no governor has the authority to enter into a binding compact or agreement. That authority lies with the people of Pennsylvania and the members of this chamber sent by the people."

Rep. Leanne Krueger (D), a supporter of RGGI, said H.B. 2025 was an attempt to downplay the significance of reducing carbon dioxide emissions in Pennsylvania and at the same time scare people into thinking the actions of joining the group will harm them financially.

"Joining RGGI is the biggest climate action that Pennsylvania will have ever taken, the biggest environmental action certainly of my generation," Krueger said in comments after the bill passed. "And yet we're facing a bill that would stop the governor in his tracks and not allow us to join this common-sense" market.

Outside View

Despite Wednesday's vote, outside observers said Pennsylvania still stands a strong chance of joining RGGI.

ClearView Energy Partners predicted in a report that Wolf is guaranteed to veto any bills passed by the legislature overriding his executive order. And although Wednesday's bill passed with bipartisan support, ClearView said there most likely won't be enough votes to overcome a veto.

ClearView said legislators may rely on a strategy of inserting H.B. 2025 language into November's budget, forcing Wolf to take a stand on budget debates. However, it pointed out Wolf has line-item veto authority over the budget and has used his power before to reject abortion language inserted in last year's budget.

Another possible Republican strategy, according to ClearView, is a legal challenge, as legislators have argued that Wolf's executive order did not cite specific provisions within the *Pennsylvania Air Pollution Control Act*, which does not describe CO_2 as a "pollutant." ■

PJM News

PJM Operating Committee Briefs

DIMA Quick Fix Endorsed

The PJM Operating Committee on Thursday unanimously endorsed a "quick fix" solution to give transmission owners access to the Dispatch Interactive Map Application (DIMA), a geospatial situational awareness program that RTO dispatchers have used since 2014.

Ed Kovler, PJM's senior lead business solutions architect, *presented* and reviewed the *problem statement* and *issue charge* on expanding access to DIMA, which allows operators to see the location of problems on the grid in real time. The quick fix was first presented at the June 4 OC meeting. (See "Dispatch Interactive Map Application," *PJM Operating Committee Briefs: June 4, 2020*.)

John Sturgeon of Duke Energy said his company is supportive of TOs having access to DIMA. He asked if there has been any discussion by PJM on the cost of the program and if costs will be passed off to all TOs.

Kovler said PJM had initially considered charging for access to the application, but a decision was made to open it to all TOs at no additional cost. He said costs will be integrated into PJM's budget.

Tonja Wicks of Duquesne Light Co. asked if confidential information could be added to DIMA and if TOs will be informed by PJM before any changes in information access are made.

Kovler said there are no plans to add any information beyond what has already been demonstrated. The RTO would have to develop a governance process if additional data is added in the future, he added.

PJM plans to present the DIMA issue charge at the July and August Markets and Reliability Committee meetings and the September Members Committee meeting. If endorsed, the Operating Agreement changes will be sent to FERC in September for approval.

COVID-19 Operations Update

Pennsylvania's move to the "green phase" for reopening from the COVID-19 shutdown has not had a major impact on PJM's operations, Paul McGlynn told the committee in an update on the RTO's pandemic *operations plan*.

McGlynn said most staff continue to telecommute, while control room workers have gone back to a "normal configuration" of two control rooms. He said procedures augmenting operations support staff during critical operating periods have been established.

The current procedures will be in place through at least Labor Day, McGlynn said, and PJM staff will continue to monitor infections in the area and adjust operating plans as needed.

"The PJM plan is flexible and cautious," McGlynn said.

Stakeholders asked about the year-end deadline PJM instituted for market operations centers that interact with the RTO to operate remotely from their main offices and whether any consideration is being given by the RTO to extending the deadline, as many businesses will continue to operate remotely into 2021.

Mike Bryson of PJM said there were certain compliance concerns regarding keeping the deadline open-ended, but he said extending the deadline should not be an issue if it's needed.

DIMA geospatial overview | *PJM*

PJM News

Synchronous Reserve Review

Rebecca Carroll, PJM's dispatch director, reviewed the *findings* from the RTO's inquiry into why shortage pricing was not triggered during a June 3 incident when synchronized reserves fell short in real time. The report was requested by several stakeholders at the June OC meeting.

Carroll said PJM's synchronous reserves dipped below the requirement by about 50 MW for about four minutes, from 4:02 to 4:05 p.m. ET.

Real-time security-constrained economic dispatch (RT SCED) case approvals can commit additional reserves to meet the requirement based on the available resources in a 10-minute look-ahead, she said. Real-time synchronized reserves involve an instantaneous calculation of available reserves.

The phenomenon seen on June 3 happens "occasionally," Carroll said, where generation is either not following the base points sent by PJM or load comes in higher than the forecast. Carroll said the reserves were being fully met by Tier 1 resources at the time and that PJM saw a "significant amount" of Tier 1 generators that were over-generating.

Carroll said generation dispatchers received an alarm the second reserves dipped below the reserve requirement and were able to commit additional condensers to restore the reserves to the requirement.

Gary Greiner, director of market policy for Public Service Enterprise Group, suggested PJM should use both Tier 1 and 2 resources to avoid what happened June 3. "When you have diversity in supply, you can better address situations like this where you're over-generating," he said.

Carroll replied that the decision to go with Tier 1 resources is solely based on economics. If there's enough Tier 1 reserves, she said, the RT SCED engine will use that to solve any problems because it's the cheapest.

The issue will not exist when Tier 1 is eliminated because of FERC's ruling in May approving PJM's proposed energy price formation revisions that consolidate Tier 1 and 2 reserve products, she said. (See *FERC Approves PJM Reserve Market Overhaul*.)

Black Start Fuel Requirements Update

David Schweizer, PJM's manager of generation, provided an *update* on the work plan for the fuel requirements for black start resources. The work was put on hiatus in March pending refining of proposals and costs with stakeholders. (See *PJM Backs off Black Start Fuel Rule*.)

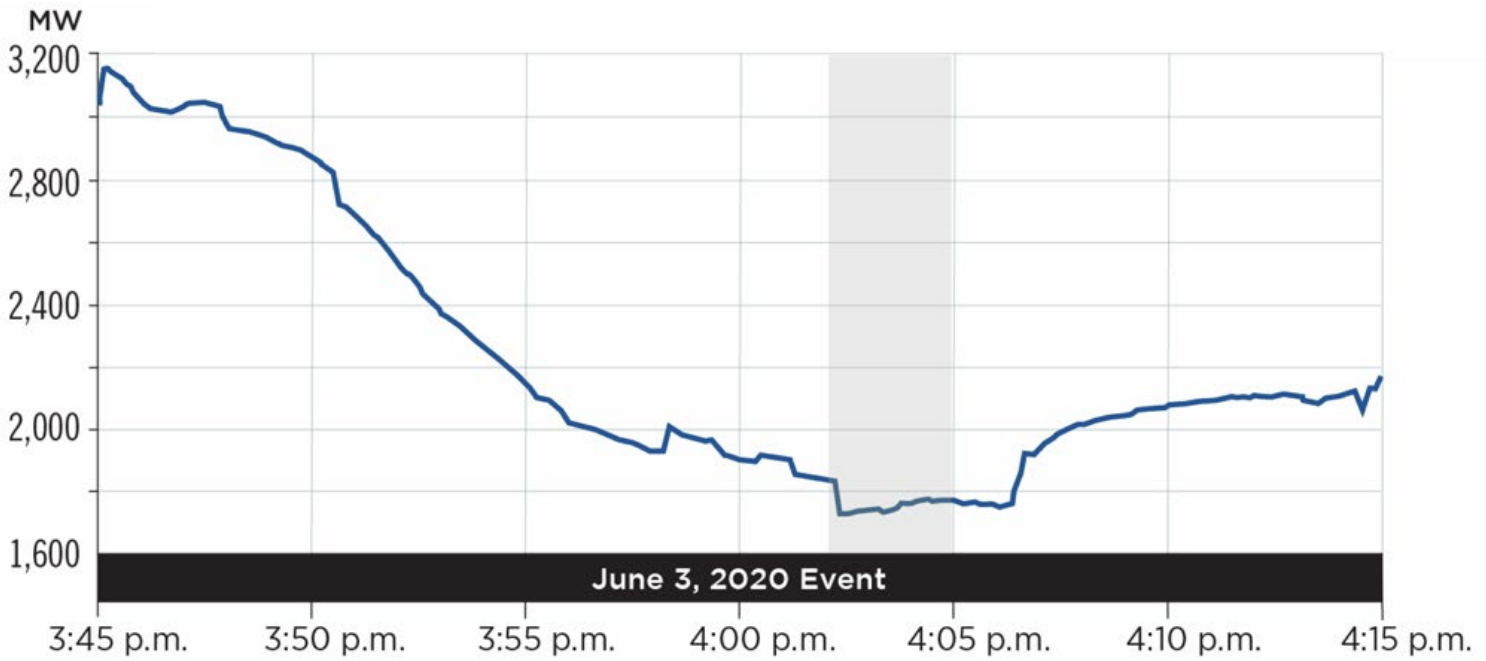
Schweizer said the intent of additional analysis was to provide further supporting information and to better inform stakeholders regarding the impact of any of the packages proposed.

Technical analysis being done by PJM is focusing on enhancing the previous restoration impact analysis, Schweizer said, which looked at the incremental increase in restoration time analysis if non-fuel-assured black start resources are unavailable during a restoration event.

PJM is also investigating potential gas pipeline and supply issues impacting restoration, Schweizer said, including studying the impacts of the loss of power to gas compressor stations.

Schweizer said work was delayed in the spring because of the COVID-19 pandemic, but PJM hopes to have its analysis done and to restart the stakeholder process by the end of 2020. ■

— Michael Yoder



PJM's synchronous reserves dipped below the requirement by about 50 MW for about four minutes, from 4:02 to 4:05 p.m. ET. on June 3. | *PJM*

PJM News

PJM Stakeholders OK PMU Requirement

By Michael Yoder

PJM stakeholders endorsed "quick-fix" manual revisions to expand the use of synchrophasors and make them a requirement for certain projects under the Regional Transmission Expansion Plan (RTEP).

The revisions, which have been debated for several months at the Planning Committee, passed with 89% support and 136 "yes" votes at the committee's meeting July 7. Members were originally scheduled to vote at last month's PC meeting, but several stakeholders raised objections over PJM's proposals. (See *PMU Vote Delayed by PJM*.)

Dave Souder, PJM's senior director of system planning, said the proposed solution was modified based on stakeholder feedback over the last month. Souder said language was changed to indicate the synchrophasor requirements will only apply to new baseline and supplemental projects presented to the Transmission Expansion Advisory Committee or the subregional RTEP committees for inclusion in the RTEP after June 1, 2021.

Shaun Murphy of PJM *reviewed* the *problem statement*, *issue charge* and *proposed solution* of language in Manual 1 and Manual 14B requiring synchrophasors — also known as phasor measurement units (PMUs).

For new substations with three or more non-radial transmission lines at 100 kV or above, synchrophasor measurement signals will be required for:

- bus voltages at 100 kV and above;
- line-terminal voltage and current values for transmission lines at 100 kV and above;
- high-side/low-side voltage and current values for transformers at 100 kV and above; and
- dynamic reactive device power output (SVC, STATCOM and synchronous condensers).

Adrien Ford, ODEC | © *RTO Insider*

The manual language adds a PMU Placement Strategy (PPS) including placement targets and required operational dates for the devices needed to support PJM's real-time synchrophasor applications.

Murphy said PJM's vision for the "grid of the future" includes a system with full observability of all equipment of 100 kV and above and that synchrophasors are a key part of that. He pointed out the benefits of PMUs, including the ability to detect grid disturbances from oscillation events and equipment failures in real time and the ability for detailed analysis after a major outage.

The installation of PMUs was a recommendation following the Northeast blackout of 2003, Murphy said, an event that lasted for four days, impacted 50 million people and carried an estimated cost of $6 billion.

Costs Questioned

PJM estimates costs of about $8 million for as many as 80 PMU installation projects annually based on historical numbers of substation projects proposed in the RTEP process. The RTO said it costs about $120,000 to make a substation "PMU ready" in addition to the $10,000 cost for a single PMU.

Delaware Deputy Public Advocate Ruth Ann Price said she was still not clear as to how many PMUs the RTO is looking to install.

Souder said the most recent query of the PJM energy management system found 4,100 substations at 100 kV and above. PJM currently has about 400 PMUs in place, he said, most of them installed between 2009 and 2013 with funding from the U.S. Department of Energy's Smart Grid Investment Grant.

PJM's approach is to do PMU installation in a "cost-effective manner," Souder said, focusing on substation projects where PMUs can be built into the engineering and design stage rather than having to go back to retrofit a substation.

Souder said PJM has also committed to re-evaluating its PMU strategy every five years to move forward selectively when enough synchrophasors are in place to provide accurate, real-time information. Souder said the installation process will take at least 10 years to get to a point of system effectiveness, but not all of the 4,100 substations that fit the installation criteria will need to have PMUs for the monitoring system to work.

Dave Souder, PJM | © *RTO Insider*

Stakeholder Opinions

Dave Mabry of the PJM Industrial Customer Coalition said he still had concerns that the proposed manual language will increase the justification of supplemental projects, which are reserved for incumbent transmission owners and not subject to competitive bidding.

Greg Poulos, executive director of the Consumer Advocates of the PJM States, said the advocates are very supportive of innovation but are concerned by the cost-benefit analysis. He said the installation of smart meters over the last decade has been an expensive endeavor whose cost has outweighed the benefits in some cases.

"As those who will be paying for this, the cost-benefit is going to be the number one question I get," Poulos said.

Adrien Ford of Old Dominion Electric Cooperative said she went into the PC meeting last month expecting to endorse the proposed manual revisions but was glad to take more time after additional questions were raised by stakeholders. Ford said the extra month of discussions with PJM over the manual language led to important changes that made the solution stronger.

"I think this is a good example of collaboration between stakeholders and PJM to get the manuals strengthened with input," Ford said. ■

PJM News

PJM MIC Briefs

Subcommittee Consolidation

PJM stakeholders unanimously endorsed the sunsetting of a longstanding subcommittee on intermittent resources and accepted the charter of a new committee with a broader mandate at Wednesday's Market Implementation Committee meeting.

Scott Baker, PJM | © RTO Insider

Scott Baker, PJM business solutions engineer, presented the *sunset* of the Intermittent Resources Subcommittee (IRS) and the *charter* for the Distributed Energy Resources and Inverter-based Resources Subcommittee (DIRS). The issue was presented for a first read at last month's MIC meeting. (See "Solar-Battery Hybrids," *PJM MIC Briefs: June 3, 2020*.)

The IRS originated as the Intermittent Resources Working Group (IRWG) in 2008 to address *issues* regarding operations and reliability, energy markets, capacity markets and interconnections, Baker said, and proved to be an "invaluable forum" for discussing issues related to renewable energy, especially as such resources were starting to multiply within PJM.

The new DIRS will be a stakeholder forum on distributed energy resources — defined as energy storage and generation connected to the distribution system and inverter-based wind, solar and storage. With the MIC's approval, it may also investigate issues related to other resources that are not conventional thermal units, such as run-of-river hydro, pumped storage hydro and fuel cells.

Baker said any solution coming through the new subcommittee will be shaped by the Planning and Operating committees when the solution impacts planning and operations.

One stakeholder said he remembers problems with PJM's Demand Response Working Group in the early 2000s that "took on a life of its own," coming up with rule changes that were brought to the higher-level committees and were ultimately voted down. He said he wanted to make sure the same issue wouldn't happen with the DIRS.

PJM's Dave Anders said the DR group existed before problem statements and issue charges were a concept, leading to the problems the stakeholder brought up. Anders said that subcommittees can now approve their own issue charges as long as they're within the scope of their charter, and the DIRS wouldn't have to come to the MIC for approval of an issue charge.

Dave Anders, PJM | © RTO Insider

The first meeting for the DIRS is scheduled for Aug. 3.

PRD Credits Disposition

Members unanimously approved an issue charge to address a disconnect in PJM's settlement rules regarding payment for price-responsive demand (PRD).

PJM's settlement rules call for revenues associated with PRD to be credited to the load-serving entity for an area and do not address the roles of electric distribution companies (EDCs) or curtailment service provider (CSPs), meaning some LSEs are paid for PRD service supplied by EDCs and CSPs.

Sharon Midgley, Exelon | © RTO Insider

Sharon Midgley of Exelon provided a second read of the *problem statement* and *issue charge* calling for the MIC to consider changes to the payment mechanism. PRD providers represent retail customers that have the capability to reduce load in response to prices.

PJM has an increasing share of load responsive to changing wholesale prices as a result of the implementation of dynamic and time-differentiated retail rates and utility investment in advanced metering infrastructure. Several EDCs cleared PRD as a capacity resource for the first time for the 2020/21 delivery year.

The work effort is expected to take six to nine months, Midgley said, with changes implemented in advance of the 2021/22 delivery year.

Performance Assessment Interval Settlement Endorsed

Stakeholders endorsed an *issue charge* to increase the transparency of settlement calculations for capacity nonperformance charges, with one member voting against the measure in an acclamation vote.

Governing language on the measurement and settlement of performance assessment intervals (PAIs) were drafted as part of the Capacity Performance initiative in 2014, but the first PAI that resulted in settlement did not occur until Oct. 2, 2019. PJM staff said the first settlement indicated the governing documents weren't clear or detailed enough to provide sufficient transparency into the process.

Susan Kenney of PJM *reviewed* the *problem statement* and issue charge for the initiative, which is expected to last six months.

In March, PJM released a *report* on the PAI settlements as an addendum to its *review* of the October event, when an abnormal heat wave led to emergency procedures and the first call on demand response resources in more than five years. (See *PJM, Stakeholders Baffled by DR event*.)

The incident resulted in $8.2 million in nonperformance charges.

Kenney said special sessions of the MIC will start in September. PJM says there is a lack of clarity on the identification of assessed resources; the calculation of real-time reserve and regulation assignments; calculations for scheduled megawatts; and accounting for resources with both Reliability Pricing Model and fixed resource requirement commitments.

Members balked at a change PJM agreed to make to the issue charge as a result of discussions with the Independent Market Monitor after the first reading at the June MIC meeting.

The inserted issue charge language states, "Rule clarifications developed through this problem statement/issue charge will be documented in the appropriate agreement or PJM manual and, if necessary, used to recalculate prior PAI settlements as applicable."

Kenney said PJM doesn't anticipate the need to resettle any prior PAI settlements after work on the issue charge is completed but acknowledged it could occur.

Gary Greiner, PSEG | © RTO Insider

Gary Greiner, director of market policy for

PJM News

Public Service Enterprise Group, said the additional language didn't seem like something that needed to be included in an issue charge. Greiner said PAI resettlements can always happen if discrepancies are uncovered.

"It seems out of place here, and I would prefer to strike the language," Greiner said.

Midgley supported Greiner's comments and said the stakeholder process should be focused on prospective changes. Midgley said the inserted language seemed "inappropriate."

Monitor Joe Bowring said he disagreed with the removal of the language from the issue charge. He said the language was meant as a clarification and to put stakeholders "on notice" that resettlements could happen after work is completed.

PJM decided to remove the language before the issue charge was brought to a vote.

MOPR Subsidy Guidance

Paul Scheidecker, PJM senior lead engineer, teamed up with Alexandra Salaneck of Monitoring Analytics to provide an *overview* of the "guidance document" the RTO and the Monitor will provide capacity providers to identify which programs they consider state subsidies under the expanded minimum offer price rule (MOPR).

Scheidecker said PJM and the Monitor will create and update the list of subsidy programs based on information provided by capacity market sellers. She said the guidance document is not intended to be legal advice; capacity market sellers will be responsible for certifying whether a capacity resource is subject to a state subsidy.

Requests for program reviews will be submitted through the Monitor's Member Information Reporting Application (MIRA) system, Scheidecker said, with PJM and the Monitor reviewing all requests collaboratively. A public notice of all MOPR determinations will be posted on PJM's website, Scheidecker said.

Where PJM and the Monitor come to different conclusions, both determinations will be noted.

ARR/FTR Market Task Force Update

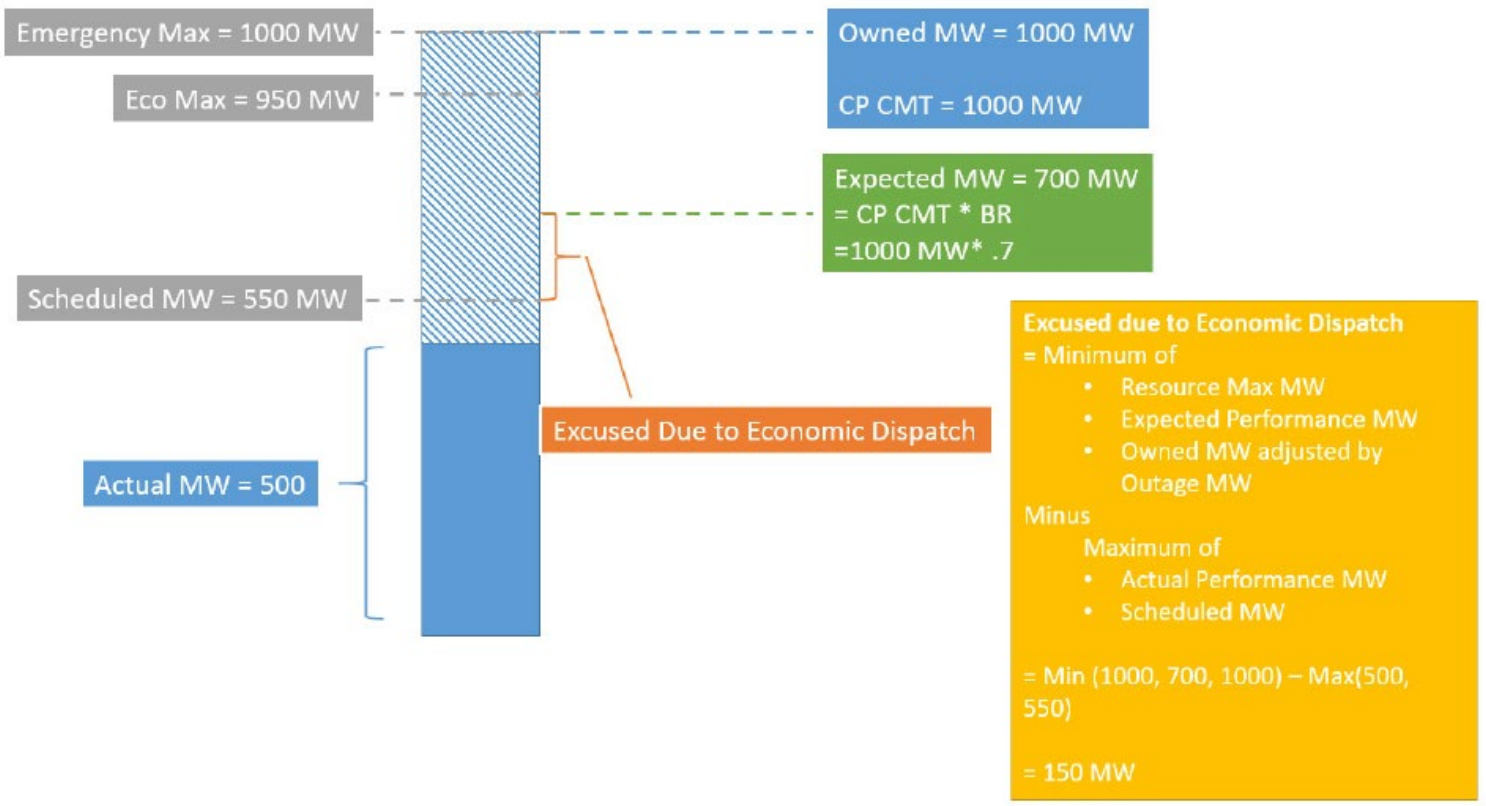
PJM's Anders provided an update on the *ARR/FTR Market Task Force*, telling stakeholders that the RTO has issued a request for an independent consultant to do a review of the auction revenue rights and financial transmission rights market constructs.

The hiring of a consultant was one of the recommendations in last year's independent consultant *report* on the GreenHat Energy default. The review is anticipated to take 12 weeks. (See *PJM Revises Consultant Scope for ARR/FTR Review*.)

Anders said PJM is now looking for feedback from stakeholders to decide if the ARR/FTR Market Task Force should go on hiatus as the consultant review is conducted or to continue work. Anders said a nonbinding *poll* is now open on PJM's website, and the responses will be used to form the task force's recommendation to the MIC regarding the next steps for the group.

Poll *responses* are due by 5 p.m. ET this Thursday. Both voting and affiliate members are allowed to respond once each to the poll. ■

— Michael Yoder



Nonperformance assessment settlement calculation | *PJM*

PJM News

PJM PC/TEAC Briefs

Planning Committee

Load Model Selection

PJM is recommending a 13-year load model using data from 2002 to 2014 for the 2020 reserve requirement study (RRS), a change from the 10-year model (2003-2012) that has been used for the last several years.

Patricio Rocha Garrido of PJM's resource adequacy department *presented* the Planning Committee the results of the RTO's load model selection process, which analyzed 105 different load model candidates for the 2020 RRS for the 2024/25 delivery year. Rocha Garrido said the analysis is based on the *2020 PJM Load Forecast Report* released in January.

Stakeholders will vote on endorsing the load model at the August PC meeting.

The load model candidates were compared to PJM's "coincident peak 1" (CP1) distribution analysis, Rocha Garrido said, which represents the highest load expected for the forecast year, using two separate approaches. The previously selected load model was not one of the top candidates this year, Rocha Garrido said, because of a new CP1 distribution analysis.

PJM is also again making the recommendation to switch the peak week for the MISO, NYISO, TVA and VACAR regions, known as the "world" in the analysis, to a different week in July that doesn't coincide with its own peak. Rocha Garrido said the switch in world peak week is performed to match historical diversity observed between PJM and nearby regions.

Consultant James Wilson said he agrees with PJM's methodology and that there is little relevance to whether the world and PJM happen to peak in the same week. Wilson said that what matters is whether the world peak happens in the same hour or a short period of hours as PJM's peak.

American Electric Power's David Canter said stakeholders are trying to figure out the impacts of the COVID-19 pandemic on the load forecast. Canter asked if PJM plans to use the latest approved load forecast as a starting point for future load analysis or if alternative updated load forecasts could be used in cases where a major unforeseen circumstance like the current pandemic has happened.

Rocha Garrido said he would talk to fellow PJM colleagues to get their opinion on Canter's question and provide an answer at the next PC meeting on Aug. 4. He said analysts have seen no major impacts in the load model released in January compared to current data changes from the pandemic.

Manual 14 Changes

Onyinye Caven of PJM *presented* a first read of changes to Manuals *14A*, *14B* and *14G*, which incorporate Tariff changes from the RTO's second Order 845 compliance filing.

FERC required PJM to add language on how the RTO handles surplus interconnection service and incorporation of technological advancements in its interconnection process. (See *FERC OKs Most of PJM Order 845 Compliance Filing*.)

The changes include new sections detailing the requirements for surplus interconnection requests and related definitions. They also include a new definition of permissible technological advancements and a section outlining the evaluation procedure.

PJM is seeking endorsement of the manual changes at the August PC meeting and a final endorsement at the Aug. 20 Markets and Reliability Committee meeting.

Attachment M-3 Update

Aaron Berner of PJM provided an *update* on changes since October 2019 to the information exchange process used by transmission owners planning supplemental projects under Tariff *Attachment M-3*.

Berner said PJM has changed its slide revision process for presentations at committee meetings based on stakeholder requests. Slides, including those of proposed supplemental transmission projects presented at the

Estimated impact of COVID-19 on daily peak and energy | *PJM*

PJM News

Transmission Expansion Advisory Committee, now have red lines to show what was changed, Berner said. Projects with larger changes will have both the original and new slide posted.

Efforts are also underway to create an interactive map of proposed projects that is automated and updated in real time to give better insight into what is being proposed in an area of the system. Berner said the current presentation of maps involves manual insertion of objects in a database that results in a "static map."

PJM is expanding its documentation to help its engineers in managing the M-3 process, including tracking the age of M-3 needs.

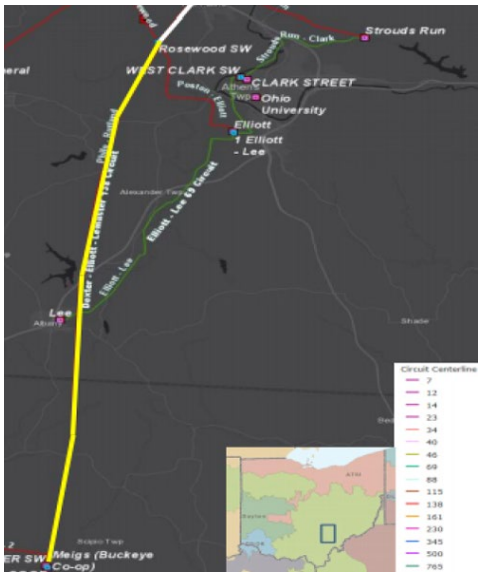
Multiple action items previously identified as issues are still being looked at, Berner said, including requests to improve outage tracking on slides, posting TO contact information.

COVID-19 Load Impacts

Weekday load peaks have dropped 8.2% (about 7,700 MW) since the COVID-19 pandemic lockdowns began March 23, PJM's Andrew Gledhill told the PC in a *presentation*.

Recent peak impacts have "noticeably eased" because of the relaxation of stay-at-home restrictions and increased air conditioning loads from hotter summer temperatures, Gledhill said.

The average energy reduction has been 8% since March 23. The "drag" on energy use — down 8% since March 23 — has also lessened but not as much as the impact on peak use, Gledhill said. The energy impact now exceeds the impact on the peak.



AEP's Homer City transformer project is still on track with its $7 million estimate despite a scope change. | *PJM*

Transmission Expansion Advisory Committee

Reliability Analysis Update

Berner provided the TEAC with an *update* on the 2020 Regional Transmission Expansion Plan (RTEP) reliability analysis, highlighting a cost and scope change for the Windsor switching station in the Dominion Energy transmission zone in Virginia. Berner said the project, which was last presented to PJM in August of 2017, includes building a new 230/115-kV switching station connecting to a 230-kV network line.

As Dominion started examining the project, Berner said, issues were found in relation to maintenance outages with the proposed design and an end-of-life criteria issue. Berner said the station wouldn't be able to back feed to deliver energy to customers in the area because of the design.

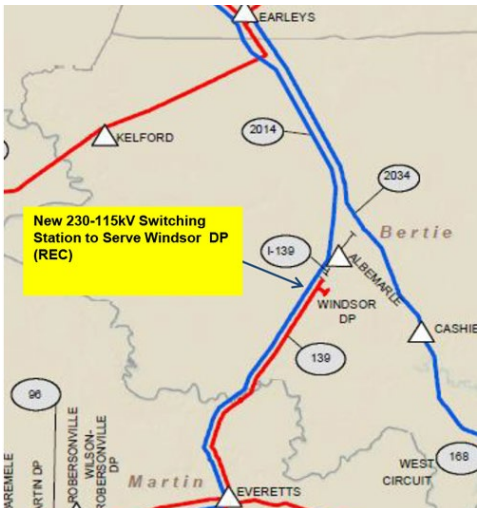
The project change includes moving from three single-phase 30 MVA, 230/115-kV transformers and a spare to two three-phase 84-MVA, 230/115-kV transformers. Berner said the change increases the scope cost from $11.5 million to $17.4 million with an in-service date by December of 2022.

Ed Tatum of American Municipal Power asked Berner for the reason for the move from 90 MVA to 84 MVA in the transformers to serve load. Tatum said it seemed like a "major change in philosophy" by Dominion to move from four single-phase to two three-phase transformers.

Kyle Hannah of Dominion said the change had nothing to do with the amount of load to be served to the customers and more with how to maintain service to the customers when maintenance switching is being done and from feedback from field operations workers to install a more efficient design.

Berner also highlighted a scope change on the 345/230-kV Homer City transformer project in the Penelec transmission zone in Pennsylvania. The project called for a new 345-kV breaker string with three 345-kV breakers at Homer City and moving the north autotransformer connection to the new breaker string.

Concerns arose as a result of the review of the substation, Berner said, resulting in the installation of one new 345-kV breaker and to relocate the 345-kV Homer City-Mainesburg line terminal and 345/230-kV Homer City north transformer terminal. Berner said there is no cost increase for the change in the $7 million project, and the required in-service date remains June 2021.



The cost of Dominion Energy's new Windsor switching station has increased from $11.5 million to $17.4 million. | *PJM*

RTEP Windows Open

The 2020 RTEP window for solutions to reliability violations under PJM, NERC, SERC Reliability, ReliabilityFirst and local TO criteria opened July 1, Berner said, and will remain open for 60 days until Aug. 31. Berner said as of the day of the meeting, about 290 eligible flowgates had been posted in the window with some possible additions to be made within the week.

PJM also opened a second RTEP window for an end-of-life issue on the 500-kV Doubs-Goose Creek transmission line in the Dominion transmission zone. The 30-day RTEP window was also opened on July 1.

The project, which was presented at last month's TEAC meeting, involves replacing steel lattice structures along the approximately 18-mile-long line. A third-party assessment determined that the towers have corroded to a point of instability and could result in failure and a collapse of the line if left unaddressed.

Tatum asked why two RTEP windows are being opened at the same time.

Berner said the 30-day window is an immediate-need issue and that PJM has leeway in the timing of immediate-need projects through the Operating Agreement.

"Because of the state of the line, we have to move forward as quickly as possible," Berner said. ■

— Michael Yoder

SPP News

Colo. ALJ Proposes $235M Exit Fee for United Power

Tri-State Seeks $1.25B

By Tom Kleckner

A Colorado administrative law judge on Friday recommended to the state's Public Utilities Commission that it accept United Power's exit-fee methodology in its long-running dispute with Tri-State Generation and Transmission Association, saying United and fellow complainant La Plata Electric Association (LPEA) were treated in a "discriminatory manner" (*19F-0620E, 19F-0621E*.)

Under the recommended methodology, United would pay Tri-State $234.8 million, a figure United said was "comparable" to payments made by other members leaving the cooperative. Tri-State had proposed a charge of $1.25 billion, an amount that would have resulted in an "unfair windfall" to the association's remaining members, United said.

LPEA would pay almost $97 million to leave Tri-State under the ALJ's recommendation. The cooperative has not been offered an exit fee by Tri-State.

FERC in June accepted Tri-State's proposed contract-termination payment (CTP) methodology for filing but also set hearing and settlement judge procedures. The commission said it could not resolve issues of material fact based on the existing record and that the CTP methodology had not been shown to be just and reasonable (*ER20-1559*). (See *FERC Sets Tri-State's Exit-fee Rules for Hearing*.)

United in May *filed* a lawsuit in a Colorado county district court against what it called a "civil conspiracy" to deprive state regulators of jurisdiction over Tri-State's exit fees. That proceeding is pending, but a Colorado ALJ in the meantime rejected Tri-State's defense that the PUC lacks jurisdiction.

Tri-State CEO Duane Highley | *Tri-State G&T*

An ALJ's judgment favors United Power's exit-fee formula in its tiff with Tri-State G&T. | *United Power*

The parties have 20 days to file exceptions to last week's decision, after which the PUC will then consider the complaint.

United has been trying for more than two years to arrange an exit from Tri-State before its wholesale service contract expires in 2050.

"We recognize this is just the next step in a long process," said Bryant Robbins, acting United CEO, in a *statement*. "It's our goal to provide reliable power to every family and business we serve, and to provide that power at a cost that makes sense. We carefully considered our obligations to Tri-State and developed what we believed was a fair exit cost."

In a competing *statement*, Tri-State CEO Duane Highley said efforts "to protect the interests of all our cooperative members and their electricity consumers" will continue before the PUC and FERC, and he issued a warning to the cooperative's members.

"If this decision is allowed to stand, more than $1 billion in costs will be unjustly added to our members' electricity bills in Colorado, Nebraska, New Mexico and Wyoming," Highley said.

"In an effort to save money for themselves, United Power and LPEA are a step closer to forcing costs they agreed to pay onto smaller, less wealthy utilities and their rural consumers."

Tri-State said the recommendation would result in a contract termination figure "that is far below any fair value" of the two utilities' contracts and "well below" their share of the association's debts and other obligations. It said United's share of its outstanding debt and other obligations is approximately $762 million.

The association also noted that United and La Plata both "freely signed" long-term power contracts with it in 2007 and agreed to share the supply costs with other utility members. It also said the CTP methodology was developed by its utility members and that they all can participate in the FERC settlement and hearing process.

The two utilities are among Tri-State's three largest members. United is the largest, with about 15% of electric demand thanks to its 93,000 members in Denver's northern suburbs. La Plata is the third largest among Tri-State's 42 distribution utility members, with more than 34,000 members in southern Colorado. ■

Company Briefs

Capital Dynamics, Tenaska Partner on Solar Development

Capital Dynamics said last week it will partner with Tenaska to develop a 4.8-GW solar portfolio in the Midwest and the Southeast. The two aim to develop 24 projects that are expected to come online by 2023.

Capital Dynamics this year has bought 353 MW of solar from Coronal Energy, invested in 8minute Solar Energy's 400-MW Eland solar-plus-storage project, and partnered with 8minute on another, 387-MW solar-plus-storage plant.

For Tenaska, the deal follows another large-scale sale to Spain's Acciona last year, with Acciona buying 3 GW of solar and 1 GW of solar-plus-storage in the U.S.

More: *GreenTech Media*

EV Maker Rivian Raises $2.5B in New Funding

Rivian Automotive, the electric-truck startup backed by Amazon and Ford, last week raised $2.5 billion in new funding from a group of investors led by T. Rowe Price Associates. Other investors included Soros Fund Management, Coatue, Fidelity Management & Research and Baron Capital Group.

The company hopes to launch its R1T plug-in pickup and R1S sport utility vehicle next year. They will be produced at a former Mitsubishi Motors plant in Illinois.

The battery-powered vehicle venture has raised roughly $5.3 billion since last year.

More: *Bloomberg*

PG&E Announces New Risk and Safety Leadership

Pacific Gas and Electric last week announced changes to its risk and safety leadership structure, including bringing back Sumeet Singh as the senior vice president and chief risk officer. Singh, who was previously vice president of PG&E's Community Wildfire Safety Program through 2019, will have oversight over all risk management related to the utility's operations and public safety, effective Aug. 1.

Stephen Cairns, who currently serves as CRO, will transition to chief audit officer. Cairns will report to PG&E Corp. CFO Jason Wells.

Francisco Benavides, who currently serves as vice president and chief safety officer, will be elevated to senior vice president, effective immediately. Benavides was appointed to the role in February 2020 and will continue reporting to interim CEO Bill Smith.

More: *PG&E*

Sunrun to Buy Vivint Solar

Sunrun last week said it will buy Vivint Solar for about $1.46 billion in an all-stock deal. The deal, which was unanimously approved by the companies' boards, is valued at $3.2 billion including debt.

Vivint shareholders will receive 0.55 of Sunrun common stock for each share held, representing a premium of 10.4% to Vivint's July 6 close.

The deal is expected to close by the fourth quarter of this year.

More: *Reuters*

Talen Energy Plants Could be Foreclosed

Talen Energy last week said its 1,080-MW facility in Athens, N.Y., and its 360-MW plant in Charlton, Mass., could be acquired by creditors under a plan for the company to emerge from Chapter 11 bankruptcy. The natural gas plants are going into Chapter 11 for the second time since Talen took ownership and third time overall since 2014.

The two units filed for bankruptcy protection in June, saying historically low natural gas prices and a sustained drop in demand have hurt its bottom line. The company now intends to reduce its $585 million debt by relinquishing ownership to senior creditors.

Spokesperson Taryne Williams said Talen does not believe the restructuring will adversely affect its liquidity or operations.

More: *The Morning Call*

Federal Briefs

BPA to Give Price Break to Struggling Northwest Utilities

The Bonneville Power Administration has proposed giving more than 140 Northwest utilities hindered by the COVID-19 pandemic a collective $3 million-per-month price break.

The decision, which still requires FERC approval, would suspend a charge meant to help BPA build up financial reserves. The reserve charge had been scheduled to remain in effect until Oct. 1. 2021. The Public Power Council, which represents the Pacific Northwest's utilities, sent a letter to BPA in May requesting the charge be suspended.

"Maintaining reserves is a staple of financial strength," BPA CFO Michelle Manary said. "But given the significant challenges customers are facing, we agree this is not the time to be building up cash reserves."

More: *The Seattle Times*

EIA Says US Power Use to Drop by Record Amount in 2020

U.S. electricity consumption is projected to fall by a record of 4.3% in 2020 because of the COVID-19 pandemic, the Energy Information Administration said last week in its Short-Term Energy Outlook. If consumption falls as expected, it would be the first time since 2012 that total demand has declined for two straight years.

EIA projects total U.S. power demand to drop to 3,730 billion kWh this year, down from 3,896 billion kWh in 2019. However, the agency believes it will bounce back next year to 3,785 billion kWh.

More: *Reuters*

Brouillette Approves 1st West Coast LNG Export Terminal

Energy Secretary **Dan Brouillette** last week signed an order authorizing the proposed Jordan Cove LNG export terminal in Coos Bay, Ore., which would target markets in Asia as part of the Trump administration's push to promote U.S. oil and gas production and export.

Brouillette said the project "encapsulates what the Trump administration has been working hard on for the past three years — providing reliable, affordable and cleaner-burning natural gas to our allies around the world." The terminal would have federal authority to export up to 1.08 Bcfd of natural gas.

Oregon officials, including Gov. Kate Brown, say state approval is still needed before the project can move forward.

More: *The Associated Press*

Judge Allows Elm Springs Wind Farm Fraud Case to Proceed

U.S. District Judge **Timothy L. Brooks** last week refused to dismiss criminal charges against Jody Douglas Davis and Phillip Vincent Ridings, who are charged with multiple counts of wire fraud, aiding and abetting wire fraud, money laundering, and aiding and abetting money laundering.

Davis and Ridings, of Dragonfly Industries International in Frisco, Texas, allegedly scammed six investors of a proposed Elm Springs, Ark., wind farm project out of between $13,000 and $300,000, according to their indictment. The two allegedly intentionally misled investors about the financial viability of the project and potential returns on investment. They allegedly hid bank accounts from accountants and used investor money to buy a luxury vehicle, pay fitness club fees, go to Walt Disney World and put a down payment on a home.

Both men have entered not guilty pleas. They will be tried together on Sept. 20 in Fayetteville, N.C.

More: *Northwest Arkansas Democrat Gazette*

Supreme Court Reinstates Fast-track Pipeline Permitting

The Supreme Court last week reinstated the use of a permit that is used to fast-track pipeline construction, except in the case of the Keystone XL pipeline.

A lower court ruled in April that the Army Corps of Engineers did not follow environmental requirements when it reissued the Nationwide Permit 12 for the Keystone pipeline, preventing it from being used across the country. However, on July 6, the high court allowed the permit to go back into effect for most pipelines. Still, it refused to renew the use of the permit for the Keystone pipeline.

More: *The Hill*

UN Chief Urges End to Coal Financing

U.N. Secretary-General Antonio Guterres spoke at a virtual clean energy transition summit of 40 countries representing 80% greenhouse gas emissions last week, urging them to stop financing coal and pledge not to build new coal-fired power plants to enable a global shift to clean energy.

Although China, the world's second-largest economy and biggest coal producer, said it was committed to an efficient low-carbon development of the energy sector, a study found the country has nearly 250 GW of coal-fired power under development, more than the U.S.' entire coal-fired capacity.

Meanwhile, U.S. Energy Secretary Dan Brouillette opposed any ban on fuels that produce emissions. "Renewables by themselves cannot ensure the reliable flow of electricity in any nation," he said. "Simply stated, every nation can benefit from a wider mix of fuels to keep its grid running."

More: *Reuters*

State Briefs

ARIZONA

TEP Plans to End Coal Use by 2032

Tucson Electric Power last week said it intends to stop buying electricity from its two coal-fired units at its Springerville Generating Station by 2032 and will increase its renewable energy load share to more than 70% by 2035.

TEP, who had already planned to start up two wind farms and a solar storage plant next year, still plans on adding 2,000 MW of renewable capacity by 2035. The utility's plan, which has been submitted to the Arizona Corporation Commission, aims to reduce TEP's carbon dioxide emissions 80% by 2035 compared with 2005 levels.

Last year, TEP got just 13% of its electricity from renewables.

More: *Tucson.com*

COLORADO

Craig Station Coal Plant Retirement Date Set

The wave of coal-fired plant closures continued last week as the owners of Craig Station Unit 2 announced it will be retired in 2028.

Unit 2 has a capacity of 410 MW and, together with the 427-MW Unit 1, comprise the Yampa Project, jointly owned by PacifiCorp, Platte River Power Authority, Salt River Project, Tri-State Generation and Transmission Association and Xcel Energy-Colorado. The owners in 2016 *announced* Unit 1's retirement by 2026. Craig Unit 3 is slated for closure by 2030 and is owned by Tri-State, which operates all three of the facilities' units.

Platte River, Tri-State and Colorado Springs Utilities have all announced coal plant closures this year. That will leave Xcel as the only owner of coal resources that will be operating after 2030: Comanche Generating Station Unit 3, Hayden Generating Station and Pawnee Generating Station.

More: *Tri-State*

INDIANA

Comment Period for NIPSCO Bailly Plant Underway

EPA last week opened the 45-day public

comment period for the proposed cleanup plan of Area C of Northern Indiana Public Service Co.'s Bailly Generating Station in Chesterton.

Area C includes former coal ash disposal areas that threaten wildlife with boron contamination. The cleanup proposal includes the excavation and removal of 92,000 cubic yards of coal ash. The ash would be taken to a lined landfill on the grounds of the Schahfer Generating Station in Wheatfield.

EPA will also host a virtual question and answer session Aug. 3. The comment period ends Aug. 19.

More: *EPA*

MAINE

Gov. Mills Signs Deal with Hydro-Québec

Gov. **Janet Mills** last week announced a $170 million deal with Hydro-Québec to provide discounted electricity through Central Maine Power's proposed New England Clean Energy Connect transmission project, though opponents of the project said it would largely benefit industrial users.

Under the agreement, Hydro-Québec will provide up to 500 GWh a year to the state based on the 1,200-MW capacity of the project. The amount could drop if the project's capacity is reduced. The deal also requires the Mills administration and Hydro-Québec to either negotiate a 20-year power purchase agreement with one or more buyers at a discounted rate by the end of 2021, or the company will pay $40 million in installments over 20 years to an entity picked by the state.

The proposed $1 billion transmission project would bring Canadian hydropower to ISO-NE and includes 53 miles of new rights of way and upgrades to existing lines.

More: *Bangor Daily News*

MICHIGAN

Midland County Wind Project Approved

DTE Energy

The Public Service Commission last week approved DTE Energy's Meridian Wind Park. Despite the greenlight, DTE must still obtain special-use permits from Porter and Mount Haley in Midland County and Jonesfield in Saginaw County.

Supervisors from two of the involved townships said there are still decisions to be made and opportunities for the public to get involved. The planning commissions can also add qualifiers and conditions to the application depending on concerns from residents.

DTE said it hopes to complete the wind park in 2021.

More: *Midland Daily News*

MISSOURI

Appeals Court Backs Sale of Green Belt Express Tx Line

The state Court of Appeals Western District last week ruled in favor of the proposed Green Belt Express transmission line, saying the Public Service Commission's earlier decision to approve the sale was necessary for Invenergy to buy the rights to construct the line and supply power to the public.

"The commission found that Grain Belt will not selectively sell to particular retail customers, but the electricity it transmits will serve the general public," the court ruled. "We find that the commission had the statutory authority to approve the sale of Grain Belt to Invenergy."

Attorneys for the Eastern Missouri Landowners Alliance argued that the PSC did not have jurisdiction to approve the sale and claimed the state should not allow a private company to use eminent domain to acquire land for the towers. In its ruling, the court said the project will primarily use a pole design with a smaller footprint.

More: *St. Louis Post-Dispatch*

NORTH DAOKTA

Tesla Superchargers Operating in Bismarck, Other Cities

Tesla Superchargers recently came online along Interstate 94 in Dickinson, Jamestown, Fargo and Bismarck.

TESLA

Bismarck currently has eight Superchargers but is in the process of constructing two Level 3 DC fast-chargers at the airport and the Bismarck-Mandan Convention and Visitors Bureau. Eight other cities plan to build fast-chargers as well.

The state is the last in the continental U.S. to get a Supercharger, which only work with Tesla's electric vehicles.

More: *The Bismarck Tribune*

SOUTH CAROLINA

Judge Approves $192M Settlement over Failed Nuclear Project

In a virtual meeting last week, U.S. District Court Judge Margaret Seymour signed off on a $192.5 million settlement between the former shareholders of SCANA and Dominion Energy, the company's new owner. The settlement stems from the failed V.C. Summer nuclear expansion project.

The payout to SCANA's investors, which took months to negotiate, will include $160 million in cash. The remaining $32.5 million will be covered by cash or Dominion stock. Seymour called the settlement fair and reasonable, considering the uncertainty SCANA's former shareholders would face if they pushed the case to trial.

A separate settlement between Dominion and SCANA's former electric customers was approved last year. A similar settlement between Santee Cooper and its electric ratepayers awaits approval in state court.

More: *The Post and Courier*

TENNESSEE

TVA Makes MLGW Offer to Stay with Authority

TVA

In an attempt to keep Memphis Light, Gas and Water as a customer, the Tennessee Valley Authority last week offered to double its employee headcount in Memphis, spend $135 million on energy efficiency and urban revitalizations, and purchase MLGW's transmission system for $400 million.

TVA CEO Jeff Lyash made the pitch to the Memphis City Council, which will likely make the final decision. Lyash's presentation came a day after the public comment period for MLGW's integrated resource plan. The plan could lead to the utility asking the private sector how much it would cost to supply the city with power for the next 20 years.

More: *The Commercial Appeal*

VIRGINIA

Supreme Court Upholds Blocking Walmart from Retail Choice

The Supreme Court last week put an end to

Walmart's effort to buy energy from companies other than state utilities when it upheld an earlier decision by the State Corporation Commission blocking such an attempt.

Walmart attempted to use one of three "loopholes" in state coding, which allows a customer with multiple sites that collectively use more than 5 MW to combine those loads and buy energy from a nonutility if doing so doesn't harm remaining customers or go against the public interest. However, Justice Arthur Kelsey said the case boils down to the conclusion that the commission believes now is not a good time to grant these petitions.

The company in December 2017 tried to use the loophole for more than 160 stores using about 91 MW, but regulators denied the request, saying it would increase monthly bills for remaining ratepayers. The company then asked regulators to reconsider a scaled-down version of its original request, but the commission again rejected the request.

More: *Virginia Mercury*

WISCONSIN

Utilities to Refund $28.3M in Fuel Savings

The Public Service Commission last week unanimously ordered Alliant Energy, Xcel Energy and Wisconsin Public Service to return about $28.3 million in fuel cost savings to customers in September. Madison Gas and Electric will be allowed to keep about $1.5 million in funds while it negotiates with consumer advocates on rates for the next two years, although if it does not reach a settlement by Aug. 31, it will have to refund the money in October.

Under state law, actual fuel costs can vary up to 2% from the estimates. If actual costs fall below the threshold, utilities must refund the difference, plus interest. If actual costs go above, utilities can collect it from ratepayers. We Energies reported actual costs were 0.85% below forecast, meaning it can keep its $6.3 million difference.

More: *Wisconsin State Journal*

WYOMING

Regulators Approve 1st New Coal Mine in Decades

The Department of Environmental Quality last week said it will issue a coal mining permit to Brook Mining to construct the state's first new coal mine in nearly 50 years. The permit will allow the company to mine north of Sheridan.

"Our staff put an incredible amount of time and effort into reviewing this application and ensuring that all laws, rules and regulations were followed," Department of Environmental Quality Director Todd Parfitt said. "As a result of the careful review by [Land Quality Division] staff and in consideration of comments received by the public, additional conditions were added to ensure the environment, the public and Wyoming's interests are appropriately protected."

As part of the permit, Brook will need to post a $1.4 million bond for future cleanup before it can start mining.

More: *Casper Star-Tribune*